The challenges of Eastern Europe

A country selection & market entry advice for Dirkse Milieutechniek

Master thesis Business Administration
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Doutsje Aukes

Summary

DMT is a company that operates in the technical environmental sector and is interested in exporting their products/ services (equipment and systems for air treatment and (bio) gas desulphurization) to Eastern Europe. DMT is mainly interested in the countries: Croatia, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, and Slovenia. Therefore the objective of this research is: First, to determine which countries in Eastern Europe are most suitable for market entry purposes for DMT. Secondly, to determine which market entry strategy for DMT is most appropriate in the selected countries for DMT.

The following problem definition was formulated:

What are the most promising East European countries for DMT and what market entry strategy should DMT follow in these countries?

In order to investigate the problem the following research questions are defined:
R1 Which internal factors are involved in the country entry decision process?
R2 Which external factors are involved in the country entry decision process?
R3 Which country is most suitable for market entry purposes?
R4 What is the competitive mix of the company in the selected country?
R5 How should the product or service be marketed?

The organizational characteristics of DMT are investigated with the help of the 7S model, value chain model, and the research of Manolova. Looking at the organizational characteristics the following conclusions are drawn: The organizational structure, the operations, the high technical level of the employees, the use of agents and distributors, the management style, international orientation, and the environmental perception show that there is a willingness to internationalize to a certain extent. DMT is wiling to operate internationally but in the near future it does not have the means to operate internationally other than exporting. Simultaneously with the organizational characteristics the product/ industry characteristics are investigated. Cavusgil's conceptual framework and Baker's practical criteria are the theoretical backbone in this part of the research. De products and services the research focuses on are: soil, gas, and air treatment products. The factors which influence the country selection process are: the uniqueness, the high technology level, the branch, the durability, and the industrial focus of the products and services.

The external market factors are adapted to the unique character of the company and product/ industry factors. The country screening model of Ball is used as the basis of the research. Two types of external market factors are important. Firstly, general information concerning safety and stability issues, legislation and communication. Secondly, sector information concerning business sector, environmental problems, demand, and end users information.

After investigating the organizational, product/ industry factors and analyzing seven country profiles using the selection framework of Kotabe it is evident that Slovenia is the most suitable country for export purposes. The countries Czech Republic, Lithuania, and Estonia are interesting markets as well. Croatia, Latvia and Slovakia are not interesting at the moment. The competitive mix of Slovenia which is investigated with the help of the theories of Porter and Austin shows positive factors. There is a growing demand for DMT products and services. The government, business groups, and NGO's are supporting companies who are operating in the environmental sector. The research shows that competition is not so severe in the desulphurisation and the odour treatment area. However, the risk of new entrants is high. The Slovenian environmental market is relatively unknown, but due to attention of organizations like EVD and the VLM this might change rapidly. The marketing mix is developed with the help of the theories of Pride and Goldsmith. Due to DMT's organizational structure and the external market factors in Slovenia the best way to distribute DMT's products is by using agents and distributors. It is advised that DMT standardizes and outsources as much as possible concerning the products, services, promotion, and pricing factors. In this way they stay focused on their core activities being pilot research, engineering and project realization, service and maintenance, and air flow and odour measurements.

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BIO	Biological
DMT	Dirkse Milieutechniek
EcoFund	Environmental Development Fund
ECOTEC	ECOTEC Research and Consulting Limited
ECO	Ecological
EVD	Agency for International Business and Cooperation
EU	European Union
GLOBE	Global Leadership and Organizational Behaviour Effectiveness Research
IFAT	International Trade Fair for Environment, Waste Water and Waste Disposal
LIFE	The Financial Instrument for the Environment
NEPP	National Environmental Protection Program
NGO	Non Governmental Organization
REC	Research Environmental Centre
USA	United States of America
VLM	Dutch Association of Suppliers of Environmental Equipment and Technology

1 Introduction

1.1 Background

In the rapidly growing market there are huge opportunities for environmental technology and services. The world market for environmental goods and services is currently estimated US$ 515 billion. At the heart of this environmental industry is the environmental technology industry. The key driver for this sector is the investment required by environmental legislation, supplemented increasingly by other policy measures such as fiscal instruments. Legislation leads to early introduction of high environmental standards and creates a strong home market from which to export to the growing international markets *(Eusetsa, 2006).*

According to E. Nab (Sales Manager DMT) there is heavy competition in the environmental sector in Western Europe. Due to strict regulations most West European companies already invested heavily in environmental technology. Taking also into account that environmental products have a long duration time one can conclude that the environmental market is crowded in Western Europe. In order to survive companies need to find new market opportunities *(Nab, 2006).*

One of these companies is Dirkse Milieutechniek (DMT), a company that is specialized in solving environmental problems in the areas gas, water, and soil. DMT supplies equipment and systems for air treatment, odour abatement, (bio) gas desulphurisation, groundwater purification, soil remediation, and wastewater treatment. DMT operates internationally but is mainly focused on West European countries like: Belgium, Germany, and Luxembourg. Like other Western companies DMT faces the threat that its home market is almost saturated *(DMT, 2006).*

DMT believes that there are new market opportunities in Eastern Europe. The reason for this is that: due to increasing environmental awareness, European regulation, tourism, and environmental standards of West European companies, Eastern Europe needs to focus on environmental issues. This will create market potential for DMT. They are mostly interested in the countries Croatia, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, and Slovenia.

DMT wants to export knowledge and products for air treatment and (bio) gas treatment to these countries. They prefer to use agents and distributors who trade in environmental equipment, contractors being active in the environmental sector or consultants being active with environmental products. These agents and distributors need to be familiar with the environmental problems, current legislation, and anticipated changes of the target country *(Nab, 2006).*

Objective: The objective of this assignment is two folded. The researcher first needs to determine which countries in Eastern Europe for DMT are most suitable for market entry purposes. Secondly the researcher needs to determine which market entry strategy for DMT is most appropriate in the selected countries.

1.2 Problem formulation

Based upon the background of the research and the formulated objective, the problem formulation is defined as followed:

What are the most promising East European countries for DMT and what market entry strategy should DMT follow in these countries?

The following aspects are considered in order to come to a well-defined problem formulation:

- *East European countries:* DMT is mostly interested in the countries: Croatia, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, and Slovenia. Therefore this investigation will focus on these countries;
- *DMT market entry purposes:* DMT offers a wide range of products and services: research, development, consultancy and design, rental of equipment and installations, engineering, and contacting service and maintenance. One of the goals of this assignment is to investigate

which countries offer the best opportunities and are most profitable for air treatment and (bio) gas desulphurisation products and services DMT offers;

- *Market entry strategy:* A market entry strategy is a comprehensive plan. It sets forth the objectives, goals, resources, and policies that will guide a company's international business operations over a future period long enough to achieve sustainable growth in world markets *(Root, 1994*).

1.3 Research questions

This research focuses on market entry strategies, a problem which is often dealt with in the following way: formulating the internal factors, formulating the external factors, analyzing internal and external factors, deciding on the right entry mode, and implementation. This research follows the same structure. To answer the problem formulation seven East European countries are screened and analyzed. Helping to develop effective market entry strategies, along with total familiarity with the external environment managers must examine their enterprises' internal situation. For this reason the first research question is formulated:

R1 Which internal factors are involved in the country entry decision process?

An external analysis allows gaining insight in the communities served. It is of vital importance that the right external market factors are used. For this reason the second research question is formulated:

R2 Which external factors are involved in the country entry decision process?

Not all countries offer the same opportunities. DMT is only interested in the countries with the highest potential. In order to make comparison possible all countries are analyzed, weighted and ranked in importance. The third research question offers the conclusion of this process.

R3 Which country is most suitable for market entry purposes?

A more detailed knowledge about the most suitable country for market entry purposes is necessary. The country profile will be extended with further information. The fourth research question offers detailed information about the competitive characteristics of the selected country.

R4 What are the competitive/ market characteristics of the selected country?

When the internal and the external environment are clear the marketing mix is developed. The marketing mix consists of a set of strategy decisions made for the purpose of satisfying the customers in a target market. The fifth research question focuses on the marketing mix.

R5 How should the product or service be marketed?

1.4 Research approach

In this section the research approach is discussed. It describes and explains how the study project has been carried out and why the used research methods are chosen. The layout of the research approach is based on the research process onion *(Saunders* et al, 2003*).*

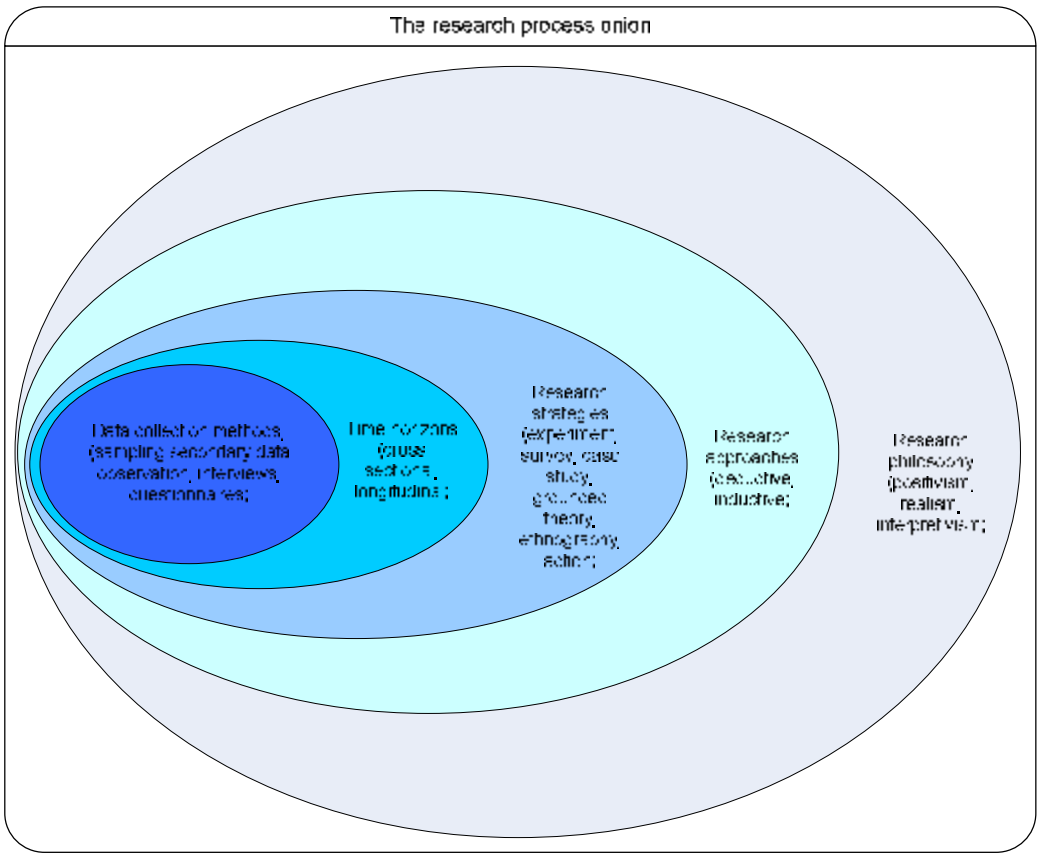

Figure 1.1 The research process union, source: Saunders, 2003

Research philosophy. Before starting the empirical data collection the philosophical perspectives are determined. Basically, there are two main approaches: The approach of the positivistic school and the approach of the hermeneutic school. The positivistic school builds on a natural science ideal. It searches for the laws in nature that can explain whatever is being studied. The hermeneutic school builds on an interpretative ideal. It searches for meaning that is given to something accepting that the meaning can be different depending on who is interpreting the message. Although it is not possible to state that the research is located at one of these extremes. It tends to be a more hermeneutical point of view. The interpretation of the founded information is based on personal and cultural backgrounds *(Gummesson, 2000).*

Research tool. Next the research tool is determined. In order to find out which research tool should be used it is important to know the difference between inductive and deductive research. When using the inductive research method one assumes that there are no valid theories existing and tries to write new theories. With a deductive research method already theories and methods are found and one is testing which method is most suitable. In this research enough theories related to the subject are found. For this reason a deductive research is carried out (*Gummesson, 2000).*

Research strategy. This research is defined as a case study, a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence (*Saunders et al, 2003).* The case study is a qualitative research, which covers a wide range of approaches. It is based on samples that provide insight and understanding of the problem setting *(King et al, 1994).*

Time horizons. At first the research is mainly descriptive. The objective is to portray an accurate profile of persons, events or situations which is the first screen of the country selection model. The researcher will fill out a desk research. At a later stage the research turns more explorative. *(Saunders et al, 2003).*

Data collection methods. Primary, secondary, and tertiary data are used. Tertiary information like indexes, abstracts, and catalogues are used in order to ease the search for information. To answer the first research question: "Which internal factors are involved in the country entry decision process?" mostly primary data is used. Most information is gathered by emails and interviews. The second research question: "Which external factors are involved in the country entry decision process?" is answered with the help of primary, secondary, and tertiary data. Most information is found by using information from the Internet. More detailed information is gathered with the help of interviews carried out at the EVD, embassies, and branch organizations. The third research question: "Which country is most suitable for export purposes?" will be answered with the information gathered previously. The fourth research question: "What are the competitive/ market characteristics of the selected country?" is answered by using secondary data and the information gathered previously. The fifth research question: "How should the product or service be marketed?" will be based on primary and secondary data *(Aaker et al, 1995).*

1.5 Research structure

In this section an overview of the research is presented in the research structure. This structure is in alignment with the research questions. The research structure is as followed:

In advance of the actual research the research plan and the theoretical framework are established.

- *Research plan*. After getting a general idea of the research a research plan is established. In this section the objectives, problem formulation, research questions, research approach, and the research structure are determined. It helps to structure the research and gives a guideline throughout the entire research;
- *Theoretical framework*. The theoretical framework gives an overview of the relevant models and is divided into five sections: theories which support the company factors, theories which support product/ industry factors, theories which support the external analysis, theories which support the competitive analysis, and theories which support the marketing mix.

When a good image about the research plan and the relevant theories is present the research continues with the general analysis. This analysis focuses simultaneously on the internal and external factors.

- *Internal analysis*. During this step an internal analysis is carried out which provides insight in the internal factors. In this section the first research question: "Which internal factors are involved in the country entry decision process?" is answered;
- *External market analysis*. During this step a country analysis will be carried out. An external analysis allows gaining insight in the communities served. In this section the second research question "Which external factors are involved in the country entry decision process? "is answered.

The general analysis provides all information needed for this section; the country analysis and the country selection.

- *Country analysis and country selection.* In this section the country profiles will be analyzed and evaluated. During this evaluation the internal factors are kept in mind. In this way the third research question "Which country is most suitable for market entry purposes?" is answered.

After the country selection the research is elaborated with an in depth analysis of the competitive factors. At first this analysis is performed for one country. When the competitive situation is unfavourable the research will be continued with another country.

- *Competitive mix*. In this section the competitive mix is determined by evaluating the company factors, product/ industry factors and the external market. This gives an answer on the fourth research question: "What are the competitive/ market characteristics of the selected country?"

At last some ideas about how the products and services should be marketed are presented in the marketing mix.

- *Marketing mix*. On basis of the final selection a marketing mix needs to be written. It gives an answer on the fifth research question: "How should the product or service be marketed?"

The research structure is presented in the figure below:

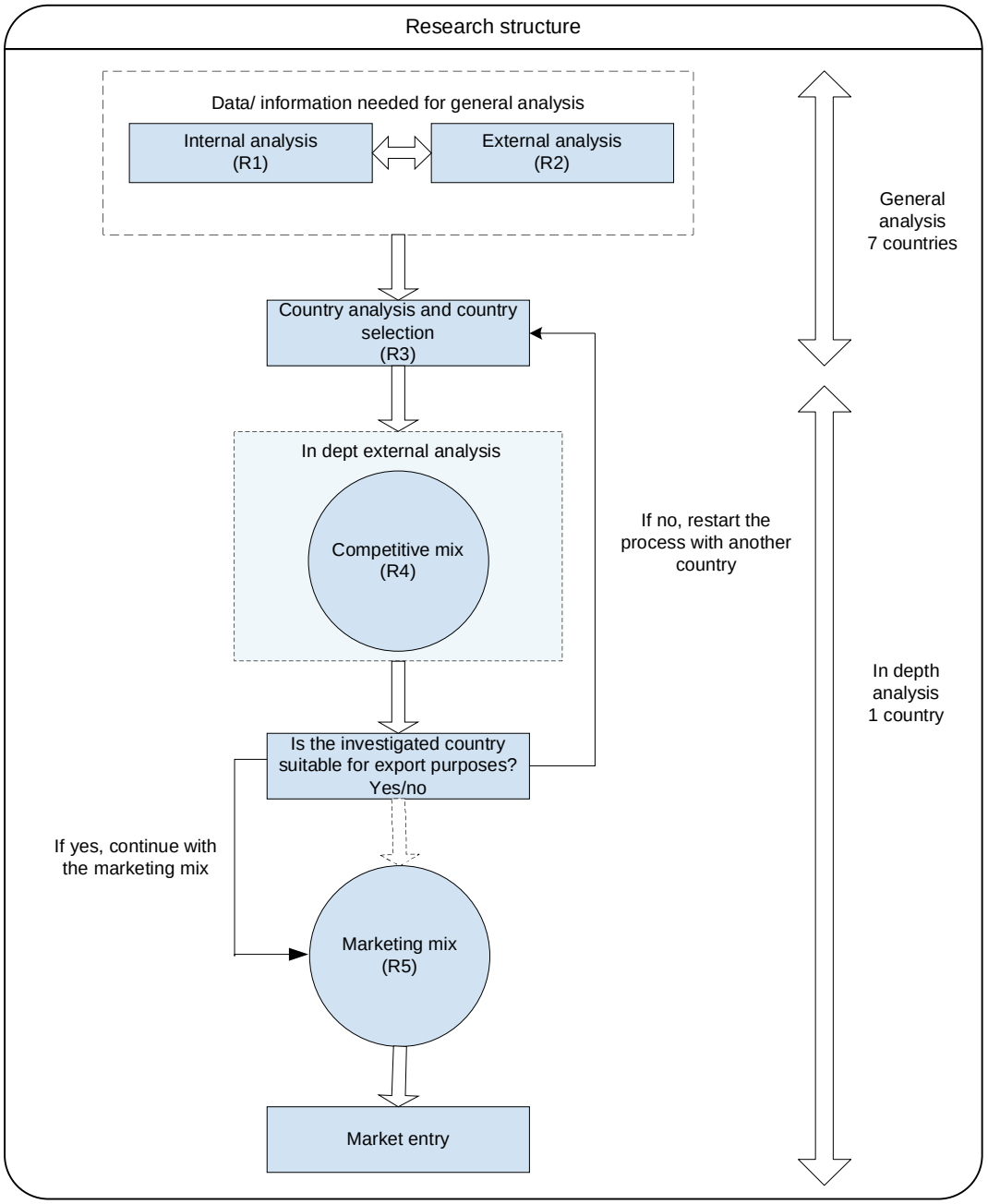

Figure 1.2 Research structure

2 Theories

A theoretical framework of models, tools, and theories needs to be applied in order to answer the problem formulation:

What are the most promising East European countries for DMT and what market entry strategy should DMT follow in these countries?

A company's choice of which country to enter combined with its entry mode for a product/target country is the net result of internal and external factors. Often these factors are conflicting. The differences, difficulties in measuring their strength and the need to plan their direction over a future planning period combine to make the entry mode decision a difficult and complex process. The theories used are the foundation of the research and will help to understand how this decision is made. In this chapter the theories used are defined, analyzed and adapted in order to fit the research.

2.1 Internal analysis (company factors)

To develop effective exporting strategies, along with total familiarity with the external environment managers must examine their enterprises' internal conditions. They must conduct an internal review to become familiar with the company's internal situation. The firm's internal conditions also affect how it enters a foreign market *(Root,1994).* The aim of this section is finding theories which help answering the first research question: "Which internal factors are involved in the country entry decision process?"

2.1.1 Mc Kinsey

The company factors joined with the willingness to commit them to foreign market development reveal the degree of company's commitment towards internationalization. It is shown by: the role accorded to foreign markets in the corporate strategy, the status of the international organization, and the attitudes of managers. It also helps to determine which entry options are open *(Root, 1994).* The theories of three authors, Mc Kinsey, Coulter, and Manolova *(Peters et al, 1982, Coulter, 2005, Manolova et al, 2002)* are examined.

The 7S-model gives a characterization of the organization that is intended to provide a company with a framework which generates value within its overall organization. The seven different dimensions are strategy, structure, systems, staff, style, skills, and shared values. The factor strategy considers the external environment, like costumers and competition. The other dimensions focus on the internal organization of the company, especially how divisions and departments are structured *(Peters et al, 1982).*

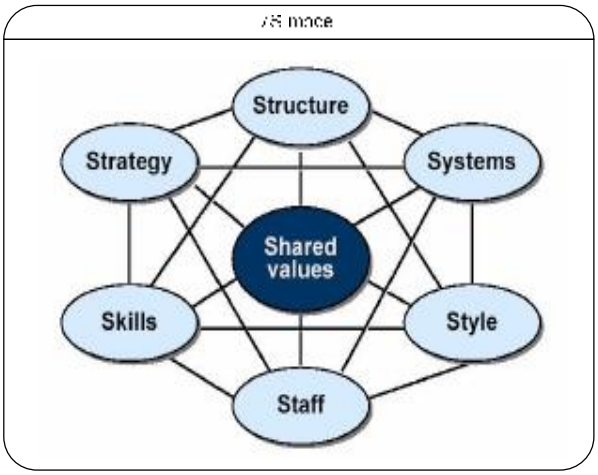

Figure 2.1 7S-model, source: Peters et al, 1982

The 7S-model will be used to get a general overview of the internal factors of the company. Although this model focuses on the organization's functional activities, it does not provide the link between

organizational activities and the creation of customer value. In order to get more depth in the internal analysis Coulter's value chain model is used.

2.1.2 Coulter

According to M. Coulter *(Coulter, 2005)* the internal analysis consist of resources, which can be divided in financial, physical, human, intangible, structural and cultural dimensions, organizational capabilities, and core competences. One way of performing an internal analysis is by carrying out a value chain analysis, which can be defined as a systematic way of examining all the organization's functional activities and how they create customer value. The value chain, which was originally developed by M. Porter, divides the chain in primary activities, which are those activities that actually create customer value and support activities, which support the primary activities as well as each other. The figure below shows how these activities are related to each other *(Coulter, 2005).*

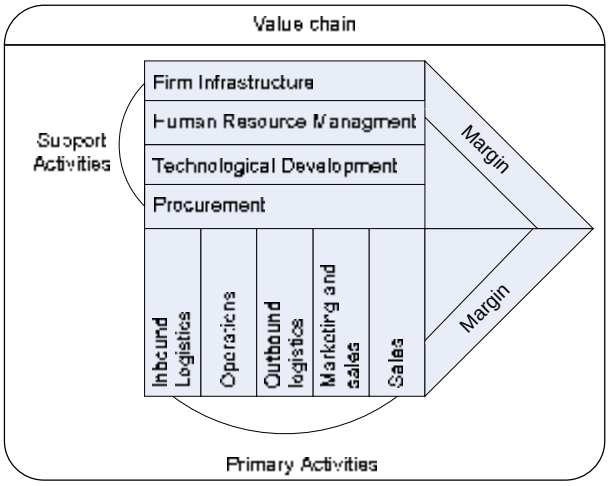

Figure 2.2 Value chain, source: Coulter, 2005

Not all factors of Coulter's value chain are relevant for this research because the value chain model focuses on production companies. The factors that deal with this (inbound and outbound logistics) are excluded from the research. The factor human resource management will focus on the capabilities of the employees. The focus of the research is not on DMT's infrastructure, so this factor will be left out of further investigation. Both the 7S-model and the value chain model do not focus on commitment factors towards internationalization. Because this research explores the possibilities of conducting business abroad the research of Manolova is included in the research.

2.1.3 Manolova

The literature on small firm internationalization suggests that the dimension human capital distinguishes between internationalized and non internationalized firms. It significantly influences the firm's survival and growth. There are three factors, namely:

- *International business skills*. High experiential knowledge of the managers/ owners and low perceived environmental uncertainties are important determinants of small firm internationalization. Also the degree of international experience of the top management team is an important feature;
- *International orientation*. The more international oriented the manager, the more likely they will participate in export activities. The international orientation is comprised of dimensions such as psychic distance to foreign markets, knowledge of foreign languages, willingness to travel abroad, and risk tolerance;
- *Environmental perceptions.* The impact of environmental perception is huge. Exporters tend to perceive less environmental risk, both in the domestic and international business environments than non-exporters.

Internationalization is a factor of perceptions not of demographics. A small firm will likely to internationalize under the following conditions: First, the owner or manager perceives that there is a

lower level of environmental uncertainty in a particular international market. Second, the owner or manager perceives that there is the skill set to internationalize *(Manolova et al, 2002).* The factors will be included in the research by adding these factors into the intangible assets in figure 2.3. The factor international business skills will be added at human resource management in figure 2.3.

2.1.4 Application theory

The theories combined result in the model presented below. This model will be the basis of the internal analysis, company profile and will help to answer the first research question: "Which internal factors are involved in the country entry decision process?"

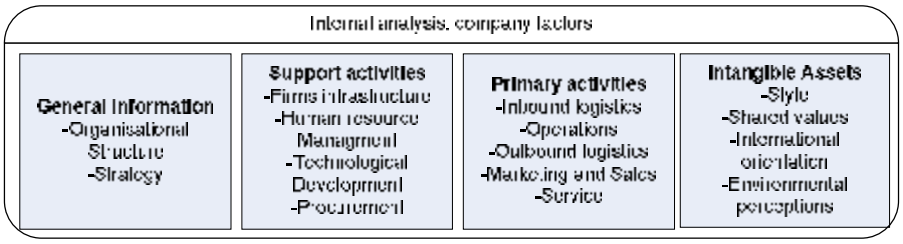

Figure 2.3 Internal analysis, company factors1

In the internal analysis, company profile the model will be used in the following way:

General information

- *Operational structure*. The basic organization of the company and its departments;
- *Strategy*. The mission, vision, and company objectives.

These factors will be answered by searching the DMT website, brochures, and other internal documents.

Support activities

- *Human resource management*. Staff, (international) skills;
- *Technological development*. Research and development, quality of facilities, labour, etc;
- *Procurement*. Long term relationships with agents, efficiency and effectiveness of procedures, alternative sources.

These factors will be answered with the help of interviews with the Sales Manager and the Secretary of DMT.

Primary activities

- *Operations*. Productivity, plant layout, production control systems;
- *Marketing and sales*. Distribution channels, marketing research, present image of the company, and market segments;
- *Service*. In time, effectively and efficiently delivery of products & services. Customer input, handling complaints, product warranty, customer education, replacement parts, and repair services.

These factors will be answered with the help of interviews with the Sales Manager and the Secretary of DMT. Also information is found on the DMT website, brochures and other internal documents.

Intangible assets

- *Style*. The management style;
- *Shared values*. The values and beliefs of the company. Ultimately they guide employees towards 'valued' behaviour;
- *International orientation*. Psychic distance to foreign markets, knowledge of foreign language, willingness to travel abroad, and risk tolerance;
- *Environmental perception*. Environmental risk.

These factors will be answered with the help of interviews with the Sales Manager and the Secretary of DMT.

2.2 Internal analysis (product/ industry factors)

Not only the company factors itself are of importance, also the product/ industry factors play a vital role in the internal analysis *(Root, 1994, Cavusgil 1993).* Therefore, the product factors are examined as well. One of the most critical elements in planning internationally is the choice of product or service. When a company has only one product to assess it only needs to decide whether or not the product is suitable. But when a company has more products, like DMT, the company needs to decide which of the products is the best candidate for expansion abroad *(Root, 1994).* Another important issue is to what extent the product should be adapted towards the host country demands. In the theoretical analysis several checklists are examined *(Root, 1994, Baker, 1986).* For this research Baker's checklist *(Baker, 1986)* is most suitable. After that Cavusgil's conceptual framework *(Cavusgil et al, 1993)* is used in order to get an international view.

2.2.1 Baker

Baker *(Baker et al, 1986)* developed a checklist which includes evaluation criteria that reflect the most important new product dimensions or considerations presented in the literature. Although the research is not based on new product dimensions, the checklist can also be used in case of entering a foreign country because the product is new to the country.

Factors:

- *Social factors*. Legality, safety, environmental impact, and societal impact;
- *Business risk factors*. Functional feasibility, production feasibility, stage of development, investment costs, payback period, profitability, research and development, and marketing research;
- *Demand analysis*. Potential market, potential sales, trend of demand, stability of demand, and product life cycle product line potential;
- *Market acceptance factors*. Compatibility, learning, need, dependence, visibility, promotion, distribution, and service;
- *Competitive factors.* Appearance, function, durability, price, existing competition, protection *(Baker et al, 1986).*

Baker's factors do not focus on the international context. In order the get a more international view Cavusgil's conceptual framework *(Cavusgil et al, 1993)* is used.

2.2.2 Cavusgil

Cavusgil *(Cavusgil et al, 1993)* developed a conceptual framework of product adaptation in export ventures. It integrates the diverse perspectives on the issue of standardization versus adaptation. Cavusgil's framework exists of three pillars which are explained below:

- *Product & industry characteristics*. There are four variables in this section. Technology orientation of industry refers to the extent to which the industry is considered to be a technology intensive industry. Cultural specificity of the product is defined as the extent that the product is adapted to the needs of a culture. Product uniqueness is defined as the degree to which the product is made to satisfy unique needs and purposes. Type of product refers to the classification of the product in terms of industrial goods versus consumer goods;
- *Company characteristics*. There are three variables that play an important role in the company characteristics. Firm's international experience refers to the amount of experience management has accumulated as an international business player. Export sales goal for the venture, the volume objective management has set for the export purposes. Entry scope pertains to whether a product is exported to a single foreign market or multiple foreign markets;
- *Export market characteristics*. Similarity of legal regulations refers to the similarity of the regulations between the host and home country. Market competitiveness is the intensity of competition that the export venture encountered in the export market. Product familiarity of export customers relates to the question: Are export customers familiar with the product *(Cavusgil et al, 1993)*?

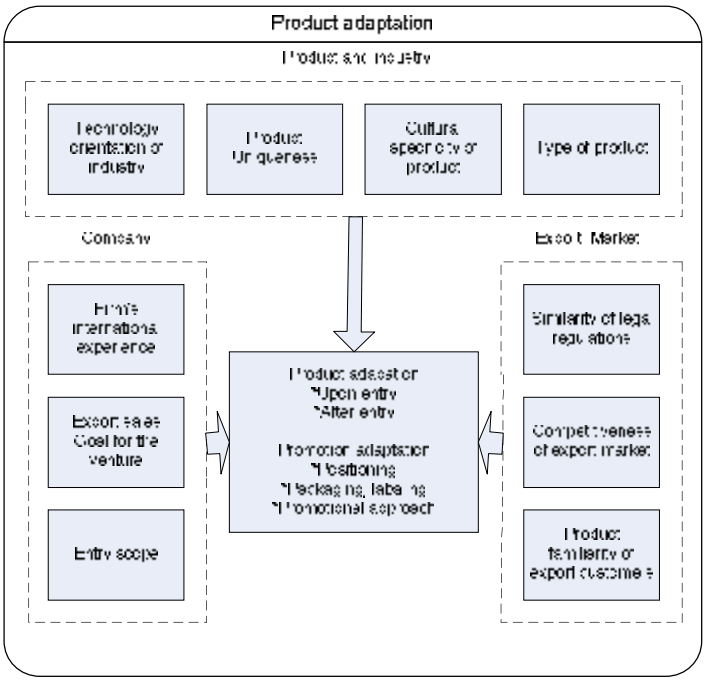

Figure 2.4 Product adaptation, source: Cavusgil et al, 1993

Basically, Baker's factors are practical criteria for the three different pillars in Cavusgil's conceptual framework. For this reason, Baker's factors will be integrated in Cavusgil's framework. Screening entry markets and screening suitable products happens simultaneously. Therefore there is some overlap between this model and the external models and company commitment models. The pillar company characteristics is part of the company commitment factors and the pillar market characteristics is part of the external analysis. These two pillars will be carried out in respectively section 2.1 and section 2.3.

2.2.3 Application theory

The theories combined result in the model presented below. This model will be the basis of the product/industry profile, internal analysis and will help to answer the first research question: "Which internal factors are involved in the country entry decision process?"

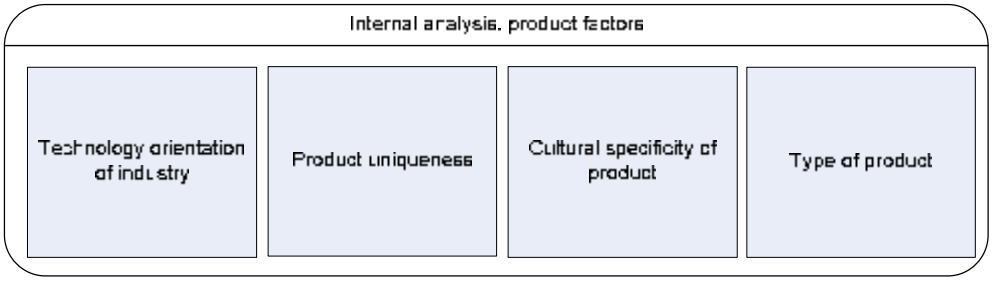

Figure 2.5 Internal analysis, product/ industry factors1

The following criteria for the variables are used:

- *Technology orientation of industry*. Technology intensity. Information will be used from the website of ECOTEC;
- *Product uniqueness*. Appearance, function, durability, universal versus individual needs. This factor will be answered with the help of interviews with the Sales Manager and the Secretary of DMT. Also information is found on the DMT's website, brochures etc.;
- *Cultural specificity of product*. Legality, safety, environmental impact, societal impact. This factor will be answered with the help of interviews with the Sales Manager and the Secretary

of DMT. Also information is found on the DMT's website, brochures, and other internal documents;
- *Type of product*. Industrial versus consumer products, physical attributes. This factor will be answered with the help of interviews with the Sales Manager and the Secretary of DMT. Also information is found on the DMT's website, brochures, and other internal documents.

2.3 External analysis

A good understanding of the company and product factors helps with determining the factors of the external analysis. The internal analysis and external analysis depend on each other. Learning and understanding the market is vital to the success of the practice. An external analysis allows gaining insight into the communities serviced. The theories used will provide the backbone in answering the second research questions "Which external factors are involved in the country entry decision process?" In this section the theories of Ball and Hibbert are examined. These theories will be combined and adapted towards the internal analysis. Note: Normally the external analysis is carried out for one specific country. In this research seven countries are evaluated. For this reason the external analysis is divided in two parts: a general analysis which will be conducted in this section and an in depth analysis which will be carried out in the competitive analysis. The general analysis will be carried out for all countries. After the general analysis the countries are compared and one country is selected for further in depth research.

2.3.1 Ball

Market screening is a method of market analysis and assessment that permits managers to identify markets by eliminating those judged to be less attractive. According to Ball *(Ball et al, 2004)* there are six different stages, namely:
- *Basic need potential*. Initial screening based on the basic need potential to determine if there is market potential. The basic need potential of certain products depend on various physical forces, such as climate, topography, and natural resources;
- *Financial and economic forces*. Second screening based on the financial and economic forces. Trends in inflation, exchange, interest rates, credit availability, paying habits of customers, and rates of return are considered;
- *Political and legal forces*. The elements of the political and legal forces that can eliminate a nation from further consideration are numerous. Think about entry barriers, profit remittance barriers, and policy stability. In this section sources of these aspects are investigated;
- *Socio cultural forces*. A screening of the candidate countries on the basis of socio cultural factors is carried out;
- *Competitive forces*. In the fifth screening the analyst needs to find out which of the countries seem to be the best prospects for the firm's products. By examining the competitive forces the analyst outlines a competitive profile;
- *Final selection*. In the final selection an executive of the firm should visit those countries that still appear to be good prospects. Field trips, face to face contacts, trade missions, and trade fairs can be used *(Ball et al, 2004).*

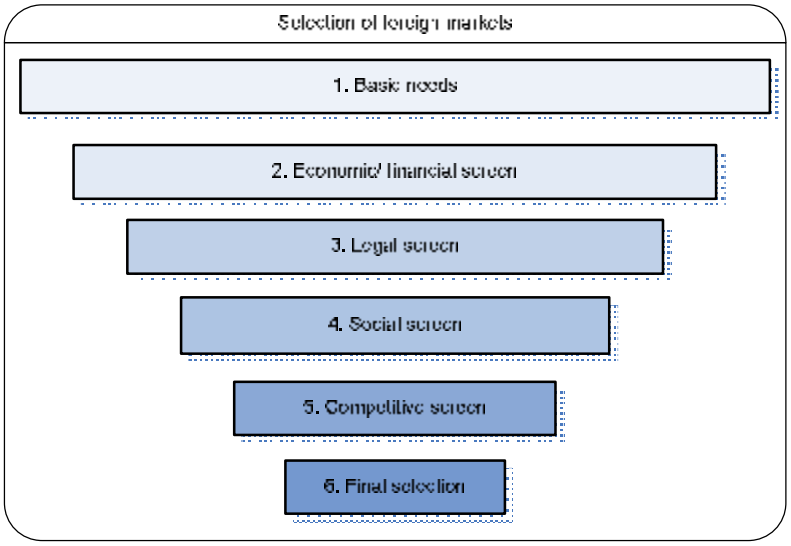

Figure 2.6 Selection of external markets, source: Ball et al, 2005

Important factors concerning the market in which the sector operates and the technological development are not included. Hibbert's research *(Hibbert et al, 1996).* provides help in this context.

2.3.2 Hibbert

Hibbert *(Hibbert et al, 1996).* divides the environmental analysis as followed:

- *Market ecology*. This enables to understand two key elements of the environment: communications risk and cultural distance;
- *Political and demographic research*. Research is needed into political factors that impact directly on marketing policies. Management must possess political judgement to assess both market potential and investment climate. Demographic research is needed due to the fact that these effects directly influences purchasing patterns, which have a direct impact on the organization and cost of marketing communications;
- *Socio economic factors*. Examples of socio-economic factors are: levels of disposable and per capita income, centres of purchasing influence, new industrial development projects/zones, availability, mobility and quality of labour, distribution of income, structure of social classes, balance of payments positions, terms of trade, government fiscal policies;
- *Technology factors*. These factors refer to the level to which society in the target market has developed any technology in manufacturing and distribution. The extent of demand in a country market is determined by the stage of economic and industrial development achieved;
- *Cultural factors*. Factors that are made up of many different features of society. Examples are education levels, social systems and social behaviour, levels of technical and managerial expertise, language and literature, customs, beliefs and attitudes, arts, religion, social and consumption values;
- *Marketing potential and financial appraisal*. Research market and sales potential, factors affecting demand, and financial appraisal *(Hibbert et al, 1996).*

In this research the country screening framework of Ball will be the basis of the research because it provides a complete and easy comparable framework. The framework needs to be adapted because the sequence of the different screens is not suitable due to the fact that the line of business of DMT is rather specific, the products are custom made, and part of the product (services DMT provides) is intangible. The environmental sector is mostly driven by legislation and politics instead of market forces. For this reason the legal and political forces are valued more important and will become the second and third screen. The economic forces will be the fourth screen instead of the second screen. In Ball's framework the technical factors (Hibbert) are not included. This factor will be added after the economic screen. The marketing potential/ sector information (Hibbert) which is important for custom made products will be included in the economic screen. The competitive screen will be examined separately because this screen will be focused on the industrial level instead of the national level.

2.3.3 Application theory

The theories combined result in the model presented below. This model will be the basis of the external analysis and will help to answer the second research question: "Which external factors are involved in the country entry decision process?"

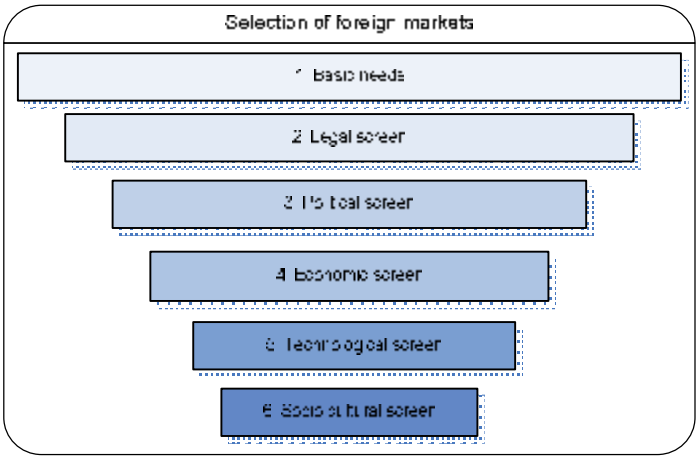

Figure 2.7 Selection of foreign markets1

The factors are split up in criteria so DMT can create a greater understanding of the countries investigated. The criteria need to be in congruence with the internal analysis. The following criteria will be investigated and analyzed in the external market factors (chapter 5):

Below all factors and their criteria are presented which are derived from Ball's research and Hibbert's research:

- *Basic needs.* *Population size and growth; the growth or shrinking of a population which influences the market size. *Age structure; the mortality and fertility rates. *Urbanization; growth or decline of urban centres due to natural increases as well as migration from the country side. *Migration*;* temporary immigrants, internal rural-urban migration. *Geography; stronger parts, larger engines, stronger packing, extra transportation costs, higher sales expanse, customer mobility. *Climate. *Environmental problems. *Environmental business sector; establishment and the development of the environmental business sector;
- *Legal screen.** Law system*;* the general characteristics and strengths and weaknesses of the law system. *Trade laws, economic and political trade controls. *Environmental laws; laws concerning air and desulphurisation treatment. *Banking and finance; the banking system of a specific country. *Macroeconomic policies; the monetary, fiscal and exchange policies a government pursues. *Taxation*;* the taxation system a country handles and how it influences business. *Corruption; the corruption level of a country. *Crime; the crime level of a country;
- *Political screen.* *Ideology*;* the socioeconomic ideology, ranging from communism to capitalism. *Institutions; the number of political parties, bureaucracies and other political organizations. *Government intervention; the degree the government intervenes with the market economy. *Environmental priorities; the environmental priorities of the government. *Government programs; Government loans, subsidies, or training programs to support export activities and specific domestic industries. *Political stability*;* events such as riots, revolutions, or government upheavals that affect the operations of an international company;
- *Economic screen*. *Natural resources. *GDP, inflation, exchange rate. *Environmental expenditures; the country expenditures in the environmental sector. *Demand for environmental technologies. *Major end-users. *Major suppliers. *Foreign trade zones/ free ports. *Infrastructure;
- *Technological screen*. *Technology level; what is the technology level and what are the causes of the technology level? *Technological development; government restrictions, the extent that modern technology is employed. *Property rights. *Telecommunications; extent of communication present (internet);
- *Socio cultural screen*. *Language; languages spoken. *Religion. *Education; education level. *Business etiquette.

All seven countries are examined with the help of these criteria. The complete country profiles are presented in the appendix.

2.4 Country selection process

The environmental indicators are answered and rated. The overall score is computed with the help of Kotabe's selection frame *(Kotabe et al, 2000)*. In this way the third research question is answered: "Which country is most suitable for export purposes?"

2.4.1 Kotabe

Kotabe *(Kotabe et al, 2000)* offers a selection frame. The goal of this frame is to minimize the mistakes of ignoring countries that offer viable opportunities for the products and wasting time on countries that offer no or little potential. Kotabe distinguishes a four step procedure that can be employed for the screening process:

- *Step 1. Indicator selection and data collection*. The company selects a set of environmental indicators that are critical. They are to a large degree driven by the strategic objectives spelled out in the company's global mission;
- *Step 2. Determine the importance of country indicators*. Determination of the importance weights of each of the different country indicators identified in the previous step;
- *Step 3. Rate the countries in the pool on each indicator*. Each country gets a score of each of the indicators;
- *Step 4. Compute overall score for each country.* Derivation of an overall score for each prospect country *(Kotabe et al, 2000).*

One need to be cautious that this method is based on subjective judgments while appearing to be precise.

2.4.2 Application theory

Based on Kotabe's research a selection framework is conducted. In chapter 4 the critical external market factors are determined. After that the importance of the country external market factors are determined by weights. The following rating system is used:

- 0 of no importance (left out of further research);
- 1 of little importance for the country selection process;
- 2 of moderate importance for the country selection process;
- 3 of high importance for the country selection process.

In order to minimize bias the selected countries are weighted in three different ways. First of all the criteria will be analyzed according DMT suggested weight factors, secondly all criteria will be analyzed according to the researcher's weight factors, and thirdly the factors will be analyzed excluding weight factors.

Each criterion will be measured according to the following rating system. The criterion scores:

- -1 when the outcome is negative for DMT;
- 0 when the outcome is moderate for DMT;
- 1 when the outcome is positive for DMT.

The weights and the measurements of the country indicators will be multiplied. All these scores will be added which results in the total country end score. This results in the fact that each country has three different total scores:

- The total score using the weight factors of DMT;
- The total score using the weight factors of the researcher;
- The total score using no weight factors.

These scores will be added and divided by three which will provide the overall total score. This score will be used at the country selection process.

2.5 Competitive mix

This section helps answering the fourth research question: "What are the competitive/ market characteristics of the selected country?" In order to answer the fourth research question the theories of Porter and Austin are used *(Porter, 1981, Austin, 1990).*

2.5.1 Porter

The basis of competition and its intensity derive largely from the interplay of five competitive forces: present competitors, potential competitors, the bargaining power of buyers or customers, the bargaining power of suppliers, and substitute products. Collectively, on an interactive basis they determine the industry's long-term attractiveness. By evaluating the competitive environment Porter's model which consists of the following five factors is used *(Porter, 1981)*:

- *Industry competitors*. The form of the rivalry among existing firms within the industry;
- *Potential entrants*. A new industry entry which add new capacity to the industry, bringing with them a desire to gain market share and making competition more intense;
- *Substitutes*. Alternative product types that perform essentially the same function;
- *Suppliers.* The supplier's bargaining power;
- *Buyers*. The buyer's bargaining power. A customer's look for reduced prices, improved product quality, and added services, which can effect competition *(Porter, 1981).*

Porter's competitive forces model is used to get a general overview of the competitive environment DMT will encounter. Not all factors are important. The factor suppliers is irrelevant for this research because DMT does not buy products in the target country. It will only export to the target country. The factor substitutes does not play an important role either because this research will only evaluate the type of product not the product itself. All products are customer made and differ from each other. During the data search the focus will be on organizations who operate in the same area of DMT, their products are more likely not the same. For this reason this factor will not be evaluated in the research. Only using Porter's model is not sophisticated enough because the key driver for the environmental technology industry is the environmental legislation, supplemented with other policy measures such as fiscal instruments. Combined with the fact that the investigated country used to be communistic and that governments play a relatively large role in, the government is a distinctive actor which may not be ignored. For this reason Porter's model is extended with Austin's research.

2.5.2 Austin

Austin *(Austin, 1990).* adapted and extended Porter's model by including the government as shaper of the competitive environment. He argues that their actions often substitute and change the dynamics of the market forces in an industry. He says that there are next to the government five categories of industry actors in developing countries:

- *State owned enterprises*. Enterprises which directly produce goods and services in the marketplace;
- *Business groups*. Institutional form of economic concentration;
- *Local non business-group firms and cooperatives*. Family-based firms, corporations and cooperatives who operate in many sectors and generally have strong links to the government;
- *Informal sector*. Numbers of small enterprises that operate by individuals or families and are not legally constituted;
- *Multinational corporations.* Foreign originated companies with international links *(Austin, 1990).*

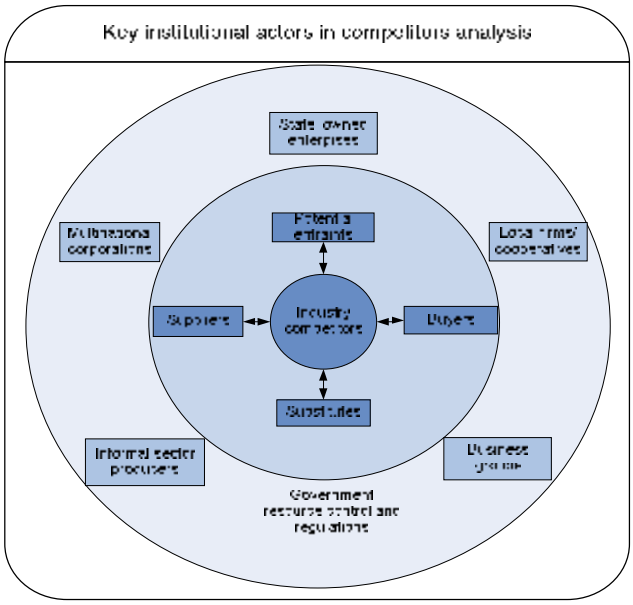

Figure 2.8 Key institutional actors in competitors' analysis1, source: Austin

2.5.3 Application theory

The theories combined result in the factors presented below. These factors are the basis of the competitive mix and will help to answer the fourth research question: "What are the competitive/ market characteristics of the selected country?"

The models combined result in the following factors in competitive analysis:

- *Government*. Information about the resources control and regulations in order to determine the challenges and opportunities of DMT;
- *Present competitors.* Identify the direct competitors (Dutch and world wide) on the products on the areas desulphurisation, removal of harmful or odorous materials from air flows and process gasses, general overview of the Slovenian sector;
- *Potential competitors*. Broadly identify potential competitors (Dutch and world wide) on the area of air pollution control and treatment;
- *Buyers*. Direct customers (buyers, distributors, trading partners), purchasing decision makers;
- *Business groups*. The business groups and their challenges and opportunities.

Information will be found by desk research using the websites of Kompass, the export helpdesk for developing countries of the European Union, and the EVD. Further information is obtained through interviews with the EVD, Chamber of Commerce *(Twente Veluwe).* Slovenian Embassy, and VLM.

2.6 Marketing mix

When the internal environment, the external environment, and the competitive mix are clear the marketing mix is developed. The marketing mix consists of a set of strategy decisions made in the areas of product, promotion, pricing, and distribution for the purpose of satisfying customers in a target market. Although the basic functions of domestic and international marketing are the same, the international markets served often differ widely because of the great variations in the uncontrollable environmental forces. Especially medium sized and small companies like DMT prefer to standardize the marketing mix, so they can employ the same marketing mix in all operations because standardization can produce significant cost savings. However, standardization is seldom as easy as it seems. The extent of standardisation depends on the type of product, the environmental forces, and the degree of market penetration desired by management *(Ball, 2004).* Keeping these factors in mind this section focuses on answering the fifth research question: "How should the product or service be marketed?" By answering this research question the theories of Pride and Goldsmith are used.

2.6.1 Pride

According to Pride *(Pride et al, 1985)* the marketing mix consist of the external marketing analysis, marketing plan and the buyer. He views this with an outside, middle and an inside circle. In the outside circle the external marketing analysis is examined. In this research the external marketing analysis is done in the external analysis part. The middle circle consists of the actual marketing plan and the inner circle is the buyer who should be the centre of the marketing mix *(Pride et al, 1985).*

Marketing mix:

- *Product.* The nature of the products the business concentrates on. The breadth or diversity of product lines, the general level of technical sophistication of those products, and the target level of product quality;
- *Place.* The way to make products available in the desired quantities to as many customers as possible and to hold the total inventory, transportation, and storage costs as low as possible;
- *Promotion*. The form of communication between the company and the potential client;
- *Price*. Price is often used as a competitive tool. What should be the appropriate price compared with the competitors *(Pride et al, 1985)*?

DMT is also service oriented. In addition to the need to make decisions and to create strategies regarding product, price, promotion, and place managers should ad personnel, physical assets, and procedures to the original marketing mix. Managers also need to consider the extent to which they should personalise the product. For this reason the research of Goldsmith is added to the research.

2.6.2 Goldsmith

Goldsmith adds parallel of the original concept product, price, place, promotion a service path:

- *Personnel*. How many personnel, salient characteristics, training rewarding etc;
- *Physical assets*. Store décor, uniforms, music, scent, signage;
- *Procedures*. Blueprinting, degree of customer participation, automation, queuing *(Goldsmith, 1999).*

2.6.3 Application theory

The theories combined result in the model presented below. This model will be the basis of the marketing mix and will help to answer the sixth research question: “How should the product or service be marketed?”

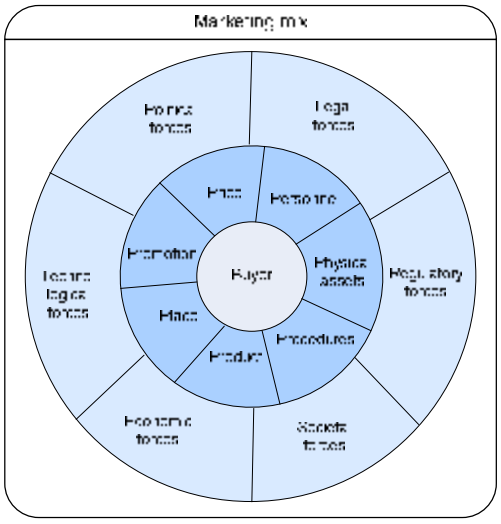

Figure 2.9 Marketing mix1, source: Goldsmith

The focus is on investigating the internal and external environment. The marketing mix will only be examined generally. The marketing pillars will be examined in the following way:

- *Product*: Climate conditions, difficult terrain, unique selling attributes or competitive advantages, required product modifications, product characteristics, quality characteristics, product specifications standard, labelling, packaging, and markings language;
- *Place*. Market characteristics, product characteristics, company characteristics, middlemen characteristics, and choice of distribution channel *(Ball, 2004);*
- *Promotion*. This section is answered by using Root's planning model which exists of six factors: How much to say, whom to say it to, why to say it, what to say, which channel to say it through, and how to say it. Each of these factors will be answered *(Root, 1994);*
- *Price*. In this section the following questions will be answered: how sensitive is the sales volume of the candidate products in relation to its price in the target market? What is the role of price in the foreign marketing plan? What should be the price to middlemen in the target market? How should the final-buyer price be influenced or controlled? Should there be flexibility in tactical pricing? Will the pricing policy by legal in the target country? *(Root, 1994)*;
- *Personnel*. Cultural differences between the Netherlands and Slovenia are analyzed on the following factors: achievement performance orientation, future orientation, assertiveness, gender egalitarianism, humane orientation, power distance, family collectivism, and uncertainty avoidance *(Koopman, 1999).* Also an overview of the general business etiquette is presented;
- *Physical assets*. DMT consumers will most likely not come to the office because it is too far away. At the physical assets DMT website, brochure and business cards will be examined. Also attention is given to the preferred appearance of the employees while being in Slovenia;
- *Procedures*. No information present.

Theoretical overview

All theories combined resulted in the end model showed below. The model is used throughout the research.

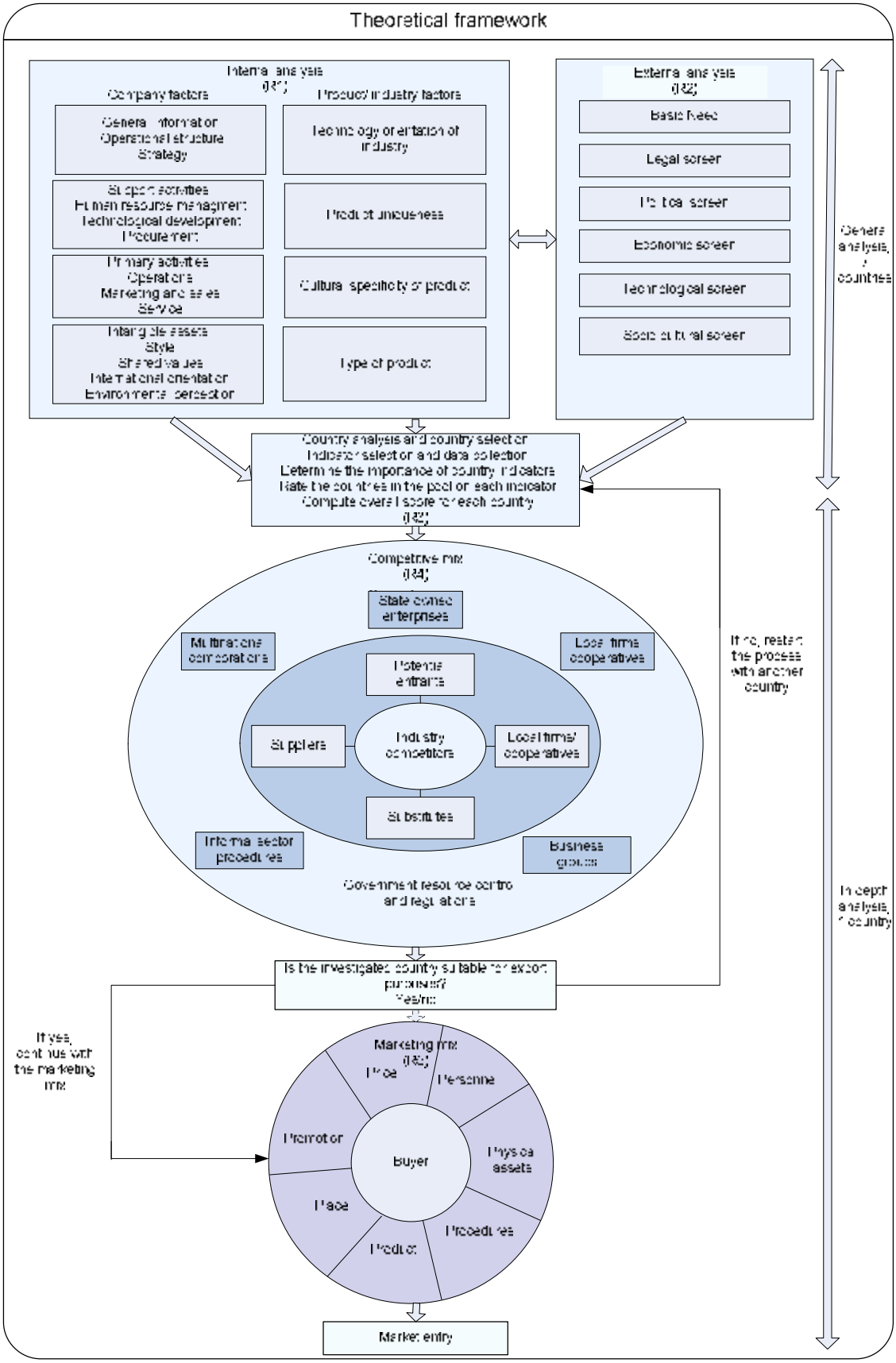
Theoretical framework
Internal analysis
(3.1)
Company factors
Product/industry factors
General information
Operational structure
Strategy
Technology orientation of industry
Strategic activities
Human resource management
Technological development
Procurement
Product uniqueness
Primary activities
Operations
Marketing and sales
Service
Cultural specificity of product
Intangible assets
Style
Shared values
International orientation
Environmental perception
Type of product
External analysis
(3.2)
Basic need
Legal screen
Political screen
Economic screen
Technological screen
Social cultural screen
General analysis, x countries
Country analysis and country selection
Indicator selection and data collection
Determine the importance of country indicators
Rate the countries in the pool on each indicator
Compute overall score for each country
(3.3)
Competitive mix
(3.4)
State owned enterprises
Multinational corporations
Local firms/ cooperatives
Potential entrants
Suppliers
Industry competitors
Local firms/ cooperatives
Substitutes
Informal sector procedures
Business groups
Government resources control and regulations
If no, restart the process with another country
In depth analysis, 1 country
Is the investigated country suitable for export purposes?
Yes/no
If yes, continue with the marketing mix
Marketing mix
(3.5)
Price
Personnel
Promotion
Buyer
Physical assets
Place
Procedures
Product
Market entry

Figure 2.10 Theoretical framework

3 Internal analysis

3.1 Company factors

The aim of this chapter is finding an answer on the first research question: “Which internal factors are involved in the country entry decision process?” The research question is answered with the help of the structure presented below. This model is part of the theoretical framework (figure 2.10).

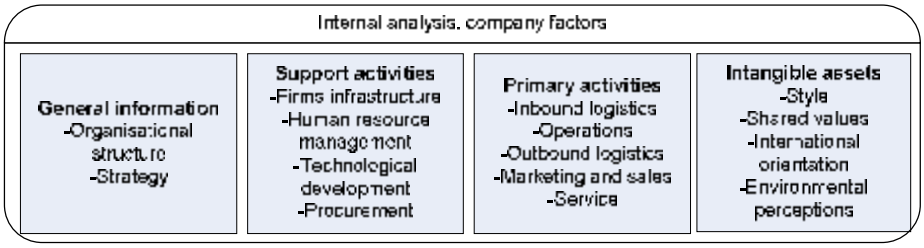

Figure 3.1 Internal analysis, company factors2

3.1.1 General information

Operational structure

Due to the character of the products DMT offers the organization mainly consists of highly educated specialists. This results in the following organization structure:

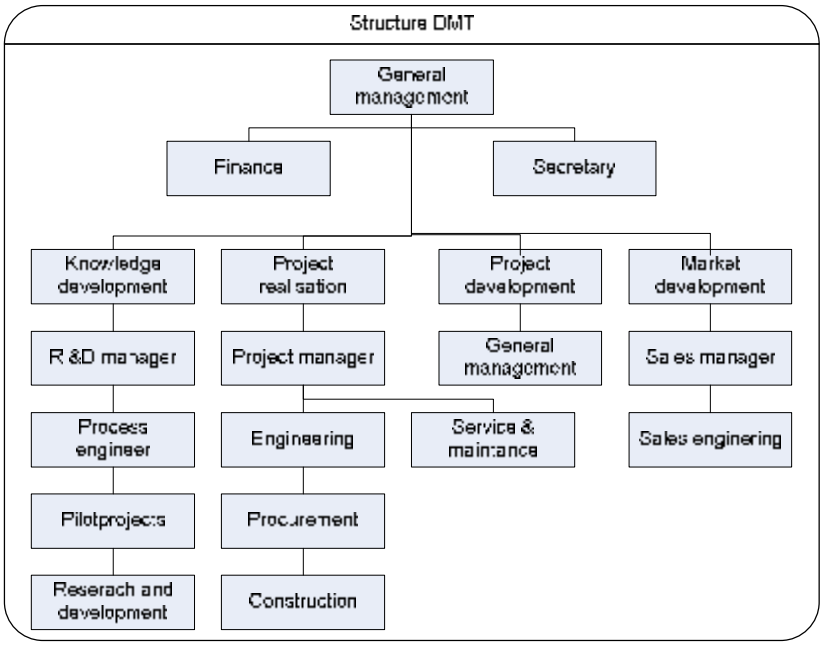

Figure 3.2 Structure DMT

Strategy

DMT focuses on tailor made jobs in which seeking of new ways and solutions are not avoided. In short: the problem is analyzed, the technique is explained and the problem is solved. DMT offers a wide range of products and services: research, development, consultancy and design, rental of equipment and installations, engineering and contacting, service and maintenance. DMT supplies equipment and systems for air treatment, odour abatement, (bio) gas desulphurization, groundwater purification, soil remediation and wastewater treatment. The goal of DMT is not to be the lowest on the

market, but to offer installations with a good price/quality ratio and a high standard service. DMT is looking for clients who want a full service supplier who solves their environmental problems including the necessary quarantines. This results in the following mission and vision:

Business philosophy. Being the contractor for assignments but also simultaneously bearing responsibility for the final outcome. This way, the best price/ quality result is achieved. DMT strives to find appropriate solutions for environmental technological questions.

Mission. According to DMT all too often, the existing technologies and concepts do not provide the solution that one is seeking. Fortunately there are companies that can create innovative solutions. Therefore DMT has the following mission: "To evolve with the costumer in order to improve the performances of their products and services who are individually tailored to the customers needs."

Vision. DMT is a flexible full-service organization that gives the client's desires a central place. They approach environmental engineering, questions with all the available knowledge and skills, fully service orientated and with the backup of more than 20 years of experience. The process engineers and project supervisors are on a daily basis active throughout the world in order to resolve together with the client the environmental questions.

Summarised DMT focuses on customer-specific exploration toward new or better solutions. A clear concept is when the search for technically intelligent solutions is linked to an efficient and consequently cost effective manner of work. The operating procedures of DMT are based on partnership. As they put it: "We share your thoughts and find the solutions that best contribute to your enterprise and its operations."

3.1.2 Support activities

DMT is a small and flexible business of approximately ten employees. DMT obtains information through internet, branch organizations, trade fairs, and trade missions. There are also businesses who contact DMT but most customers are found through agents and distributors. They are not actively looking for information because they recon it is not really necessary because people find them.

Human resource management

Most staff is well educated (MBO, HBO, WO level) Within DMT the following functions are present:

- *Managing director*. Manages the entire organization. He is responsible for the policy and strategy within the company. Writing the yearly budget, sales and acquisitions plans, and is responsible for the results. Responsible for the quality systems (ISO) and the personnel policy. Decides on investments, recruits new jobs, extents, and controls DMT's network and represents the company externally;
- *Sales manager*. Coordinates tasks of sales engineers and project leaders. Designs and implements the yearly sales and acquisition plan/ prognoses. Collects information about competitors, provide strategies based on market information. Gives advice about product development, buying equipment, and hiring personnel. Obtaining orders, making contact with potential and existing clients. Translating problem formulations into technical concepts in coordination with the process and project engineers and assisting in promotion activities;
- *Secretary.* Administrates the direction, sales and personnel archives. Responsible for the general agenda and making appointments, responsible for the phone and fax, and writing notes during meetings;
- *Project manager.* Assists and informs the managing director. Responsible for project realization, coordination and takes care of all the preparations of a project. Rents materials, transport and subcontractors. Identifies and registers improvements. Writes company instructions, gives technical advice to clients, assist with writing the budgets, coordinates the periodic project meetings within the company, guards the quality and planning of the projects;
- *Technical draughtsman*. Assists and accompanies the realization of the projects and is also responsible of the technical realization of potential projects. Designing outline-drawing and images in the information stadium and for general documentation purposes;

- *Drawing constructer.* Assists and helps with the accomplishment of project, responsible for the technical realization of the projects, instructs engineers of draughtsman. Specialist on the subject of technical draughts work and drawing office automation;
- *Process technologist*. Caries out investigation and development programs independently. Is responsible for all investigation, development and process design related activities. Gives training and education to personnel of the principal, and organizes internal education programs;
- *Project engineer*. Is responsible for the technical and logistic realization of the projects. Develops detailed specifications, fills in datasheets, writes drawings and design activities.

Current positions filled:

- Managing director: E.H.M. Dirkse;
- Sales manager: E.B. Nab;
- Project manager: P. Folkertsma;
- Process engineer: W.J. Poeste;
- Process technologist: R. Lems, M.A. Mohammad;
- Project engineer, technical draughtsman: W. Ritsma;
- Project engineer: E & I. J.A. Mandos;
- Secretary: C. Steneker.

The languages spoken by the company's staff are Dutch, English and German. Also the internet site and brochures are offered in these languages.

Technological development

Dirkse Milieutechniek (DMT) has a wide expertise in design, installation, and maintenance of modern air treatment equipment in the industry and on sewer water purification plants. The supply programme contains a lot of possibilities and techniques, both physical-chemical and biological. DMT supplies equipment and systems for air treatment, odour abatement, (bio) gas desulphurization, groundwater purification, soil remediation, and waste water treatment. DMT expertise lies in:

- Air treatment and odour abatement;
- (Bio) gas desulphurization;
- Groundwater and soil (bio)remediation;
- (Waste) Water treatment and aeration systems.

One of the core competences of DMT is that they offer a complete package which combines building and advice. The client comes with an environmental problem to DMT and DMT will define the problem, design the product, and provide the solution. DMT is an innovative company. They develop, monitor, and fine tune projects in a constant manner. When looking at the employee functions one can find two project engineers, one process engineer and a process technologist. This is due through the innovative character of the company.

Procurement

DMT operates through agents and distributors. They have agents and distributors in each country they operate in. DMT tries to establish long-term relationships.

3.1.3 Primary activities

Operations

In their field DMT has grown into a multidisciplinary, international, and leading company with important reference projects. Clients are contracting the specialists of DMT environmental technology for a very wide range of environmental problems. Their experts analyze the problem and advise the customer for the best solution. They have a client minded look for new solutions and possibilities; a clear concept in which DMT combines the search for technical intelligent solutions with an efficient and therefore competitive way of project realization.

When exporting abroad DMT currently uses two distribution methods: Directly via an agent or indirectly via big contractors in environmental sector. The agent/ distributor DMT looks for needs to be:

- A contractor active in the environmental sector or trader of environmental equipment or a consultant active with environmental projects;
- Need to be familiar with environmental problems as well as the current legislation and anticipated changes;
- Need to be good in identifying potential customers as well as estimating the environmental problems of these customers;
- Have a preferable size of 10 a 15 employees or being a smaller business unit of a larger company;
- The contact person is preferably a decision manager of the Board of Directors;
- Be familiar with home market, habits and language.

The agent is free in making his own marketing and price policy as long as the results are sophisticated. Normally, DMT sets the basic price and the percentage is set by the agent or distributor.

Marketing and sales

DMT advertises their products in a limited amount. They visit trade fairs and they have brochures in several languages. Furthermore, they use their webpage *(www.dirkse-milieutechniek.com)* which offers their products in English, German, and Dutch.

Services

Often DMT's products are custom made; the products are adapted towards the customer's wishes. For this reason the costumer input is large. Service and maintenance is done by the agent or distributor or by DMT. They prefer to have business to business contacts and exclusivity will likely not be granted given the broad range of services and the large potential customer group.

3.1.4 Intangible assets

Style

DMT has a democratic management style. Although the Managing Director has its own room he is easy accessible. Everybody calls each other with their first name (inside the company). Because it is a small company all people are working together. Company structures are not really obvious while working and everybody is threaded the same way. DMT can be called a professional company.

International orientation

DMT is international orientated. This is visible in the brochures and the webpage which are offered in three languages, namely: English, German, and Dutch. DMT already operates in several countries, like Germany, France, Belgium, Luxembourg, and Poland. Employees are multi linguistic. Most employees speak Dutch, English, and German.

Environmental perception

Some of the employees are often abroad. They hardly view physical distance to Eastern Europe. Most foreign trips are to West European countries. The step to East European countries does not seem big. The company is willing to take a certain risk.

3.1.5 Conclusions

When looking at the operational structure and the strategy one can see the following things: Firstly, comparing the operational structure with the current position filled it shows that many functions are not filled at the moment. Vacancies need to be filled in the near future. Secondly, DMT's strategy: focus on customer specific exploration toward new or better solutions. This results in the following implications for the research:

- There is not much room for internationalisation and special projects in the organizational structure. This might indicate that indeed DMT should focus on using agents and distributors;
- The strategy does not focus on internationalisation or searching customers. For the entry decision DMT should look at export first.

DMT's staff is technical educated and speaks next to their mother tongue German and English. DMT has a wide expertise in design, installation, and maintenance of equipment. The core competence is that they offer a complete package. This results in the following implications for the research:

- The people in the investigated countries need to speak English, Dutch, or German. Otherwise communication is impossible;
- The technical level of the employees result in the fact the employees have high expertise in finding technical solutions. The employees should stay focussed on this aspect which might implicate that marketing and sales should be partly done elsewhere;
- The research needs to make clear if the investigated countries are ready for the high technology products of DMT.

DMT uses the following distribution methods: Directly via an agent or indirectly via big contractors in the environmental sector which results in the following implication for the research:

- Preferably DMT operates through agents and big contractors. One of the focus points of this research should be if this is possible in the investigated countries;

The management style, international orientation, and the environmental perception all give positive indications towards internationalisation which results in the following implication for the research:

- There is a willingness to internationalize further and to investigate the possibilities to export towards Eastern Europe which gives the research a positive start off.

In relations with the market entry strategy this results in the following implications: First of all there is the willingness and capability to do business abroad. Unfortunately, due to the size of the company, the organizational structure, and the fact that not all positions are filled DMT is limited in market entry strategies. Looking at the company factors exporting is most suitable market entry strategy.

3.2 Internal analysis, product/ industry factors

The aim of this chapter is finding an answer on the first research question: "Which internal factors are involved in the country entry decision process?'" The research question will be answered with the help of the structure presented below. This model is part of the theoretical framework (figure 2,10).

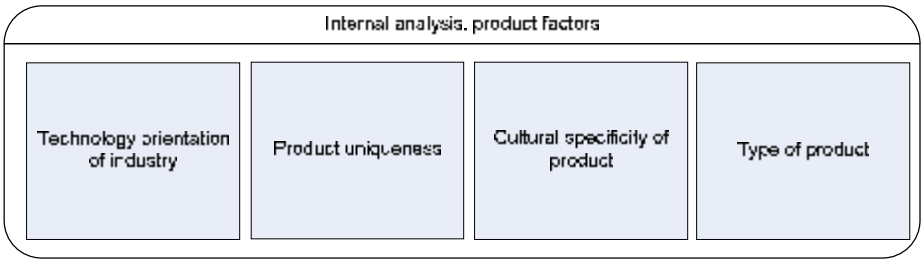

Figure 3.3 Internal analysis, product/ industry factors2

3.2.1 Type of product

DMT focuses on three pillars soil, gas and air, and water treatment. Due to the fact that most water treatment installations are rather large and need to be build abroad these are less attractive for exporting purposes. Therefore this research will focus on soil, gas and air treatment. The products DMT offers are fully custom made and in compliance with the project specifications. For this reason it is difficult to provide a detailed product description.

(Bio) gas desulphurisation. Increasing environmental awareness has lead to more stringent regulations for sulphur dioxide emissions. It has stimulated the use of biogas, landfill gas, and sour natural gas for energy and heat production. Both developments demand flexible and cheap desulphurisation processes with low operating costs and low discharge of chemical waste. The gasses have damaging components like sulphur. These components need to be removed. DMT has expertise in the purification, conversation, and upgrading of the gasses. DMT processes are based on physical, chemical, and biological principles. DMT offers technical and economic evaluation of the (bio)

sulphurex process for relevant application, basic and detailed engineering of a desuplhurisation plant and a full service package for treatment of gas stream.

Removal of harmful or odorous materials from air-flows and process gasses. DMT designs and builds all types of air and gas scrubbers. They also provide complete odour abating plants and total solutions to solve nearly every air pollution problem. Worldwide DMT has realised solutions for odour abatement and air treatment based on biological, chemical, physical and thermal technologies. DMT offers the design, engineering, construction, installation, and maintenance of air treatment plants. For abating gas- and air pollution there are several methods available. The best suited method depends on the quantity of air that must be purified and the required purification output. The possible extensions of the production capacity and the government regulation that can be expected in the close future also play a major role.

3.2.2 Technology orientation of industry

Europe's eco-industries account for one-third of the global market and already make up over 2% of EU gross domestic product. Total EU eco-industry supplies some 183 billion euros of goods and services a year. Of this amount 127 billion euros are spend on pollution management and cleaner technologies eco- industries. Investment in eco-industries reach in the EU each year totals 54 billion euro. The share of capital investment has fallen across many EU member states, particularly in larger markets. This has implications for the domestic eco-industries within these member states. Firms might look elsewhere for capital equipment sales. The private sector is increasingly important in driving pollution management expenditure rising from 45% of total expenditure in 1994 and 59% by 1999 household expenditure remains 5% of the total expenditures.

In the new EU countries, the demand for environmental technology can not be fully met by domestic production in the next 5 a 10 years. There will be a continued demand for environmental technology investments. EU firms will establish joint ventures or fully owned subsidiaries with domestic countries. The export trade with the new member countries and candidate countries will increase. In particular, candidate country exports of end-of-pipe technologies are likely to increase, coinciding with a shift of EU exports towards cleaner technologies. The Dutch Eco-industries are very export focussed, with 45 percent of products and 10 percent of services exported. A rather large size of the Dutch Eco-industry goes to destinations outside the EU *(ECOTEC, 2000).*

The ecological development in technology is intense but for a large part driven by legislation, policies and funding. For example, the "Environmental Technologies Action Plan" is the cornerstone of EU policy on eco-innovation. It covers a range of measures including given higher priority to green technologies in the EU's research and development framework programme. Also the new "Competitiveness and Innovation Programme' for 2007-2013, offering risk and venture capital to fund research and development plays an important factor. Companies can also get finance through the Structural Funds, the European Investment Bank and the LIFE programme.

There are several factors that increase the urgency of finding new, greener technologies. The rate of climate change demands renewable energy sources that produce fewer greenhouse gas emissions. Pollution of the living environment, air, water, and soil is damaging human health and causing mounting economic costs. The exhaustion of natural resources and the related loss of biodiversity mean alternatives have to be found *(http://ec.europa.eu/)*.

3.2.3 Product uniqueness

DMT offers a wide variety of products and services:

- Research, development, consultancy, and design;
- Engineering and contracting;
- Rental of equipment, and installations;
- Service and maintenance;
- Pilot testing;
- Equipment and projects.

DMT focuses on industrialised products. Most products DMT offer are custom made and designed for individual needs. Most of DMT's customers are other companies who deal with an environmental problem. The products have a high durability rate, so once build only repair and maintenance costs are necessary.

3.2.4 Cultural specificity of product

The Netherlands has high environmental legislation and safety standards. The Dutch regulation is often more strict than the European standards. DMT fulfils the Dutch and with it the European requirements. For this reason DMT does not expect having problems entering East European countries because their products meet the regulation and safety requirements of these particular countries. There is a risk that DMT products are over qualified and more expensive than domestic products, because the domestic products do not need to cope with the strict European regulation.

The environmental and societal impact of the products and services are rather big. One of the aims of ecological products is that they are cleaner for the environment. For example: the air and gas products and services focuses on the removal of harmful or odorous materials from air-flows and process gasses. This has a positive impact on the environment, the air is getting cleaner. On the societal impact, the people do not breathe in harmful or odorous gasses. Also the use of biogas, landfill gas, and sour natural gas for energy and heat production has a good influence on the environmental and societal impact because it gives an alternative for the use of more harmful gasses.

3.2.5 Conclusions

The research will focus on (bio) gas desulphurisation and air treatment products. All products are fully custom made and in compliance with the wishes of the client. This results in the fact that there is no similarity between the products of DMT. Looking at DMT's products one can say that DMT sells a solution to a problem in the area of soil, gas and air treatment rather than a physical product itself. This results in the following implications for this research:

- Part of DMT products consists of service and advice which makes it difficult to describe and explain the products DMT sells. This might lead to difficulties by writing a competitors analysis and marketing the products;
- The products are custom made. The used theories in the external analysis are based on mass production and do not fit custom made products. These theories need to be adapted. Another consequence is that custom made products are more difficult to compare which will have negative consequences for the competitor's analysis.

Looking at the technology orientation of the industry one can conclude that DMT operates in a high technology orientated business. The eco-industry is sophisticated and relatively small. Although there are high potential and demand the sector is driven on legislation, policies, and funding. This results in the following implications:

- Due to the high technology level it might be difficult for an outsider to fully understand the product;
- The industry differs from other industries because it is based on legislation, policies, and funding. This means that the external analysis and the marketing process need to be adapted towards this fact. Changes in legislation and policies have high influences on the demand.

DMT products are industrial focused, durable, and designed for individual needs which results in the following implications:

- Because DMT offers a unique product, fully custom made the company does not have problems with differentiating their products from others;
- The durability of the product results in the fact that DMT needs to move to other markets if the demand is saturated. Only maintenance and repair will continue in saturated markets;
- Because the products are industrial focused the appearance is of less importance. This research does not need to take this factor into account.

Looking at the cultural specificity of DMT products fulfil high environmental legislation and safety standards. The ecological products have a high environmental and societal impact. This results in the following implications:

- DMT hardly needs to adapt their products to the wishes of the investigated countries because they already meet European requirements. DMT's products are for industrial purposes which need less adaptation than products for consumer purposes;
- One of the main reasons why companies buy DMT products is that they have to due to government intervention. When the governments of the countries are not willing to invest in a cleaner environment there is no business for DMT.

Due to these factors the country selection criteria and the country selection process market to be adapted.

4 External market factors

The aim of this chapter is providing an answer on the second research question: “Which external factors are involved in the country entry decision process?” The research question is answered with the help of the structure presented below. This model is part of the theoretical framework (figure 2.10).

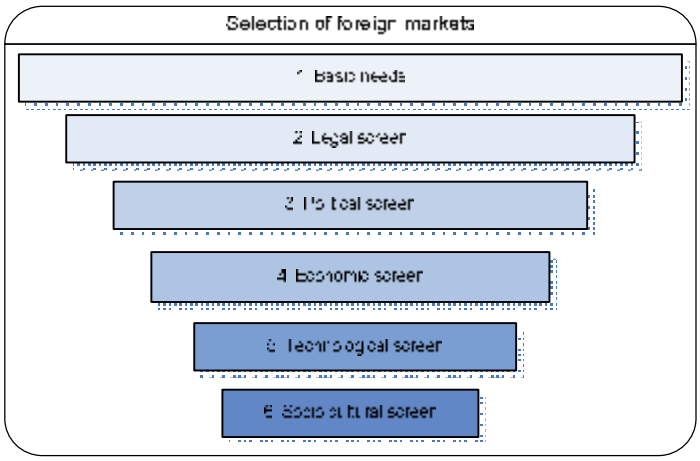

Figure 4.1 Selection of foreign markets2

In the theoretical part of the research criteria for the external analysis are presented which are in congruence with the internal analysis. Some factors are only used in order to get an understanding of the investigated countries. Others are also used to differentiate between the countries. Together with DMT it is decided which criteria are used as general information and which criteria are used in the country selection process.

4.1 Basic needs

Basic needs is the initial screening based on the basic need potential to determine if there is market potential.

- *Population size and growth*. The growth or shrinking of a population which influences the market size. DMT’s products are custom made by which the population size is off less importance. This criterion is only used to get a general understanding of the country and does not play a significant role in further investigation;
- *Age structure*. The mortality and fertility rates. DMT’s products do not correlate with the age structure. This criterion is only used to get a general understanding of the country and does not play a significant role in further investigation;
- *Urbanization*. Growth or decline of urban centres due to natural increases as well as migration from the country side. Some of DMT products are of more use in urban areas because they are for example dealing with smell removal. Others are of more use in rural areas. This criterion is used to get a general understanding;
- *Migration.* Temporary immigrants and internal rural-urban migration. All products are industrial and custom made. Mass production by which a large customer size is needed is no part of the company strategy. This criterion is only used in order to get a general understanding of the country;
- *Geography*. Stronger parts, larger engines, stronger packing, extra transportation costs, higher sales expanse, customer mobility. DMT needs to take this criterion into account but it does not play a vital role in the decision process. This criterion is only used in order to get a general understanding of the country;
- *Climate*. These conditions can result in extra insulation, mildew protection, extra cooling capability, extra costs etc *(Austin*, 1990). DMT needs to take this criterion into account but it does not play a vital role in the decision process;

- *Environmental problems*. This criterion shows if the environmental problems of a specific country correlate with the products DMT produces. This criterion is used in the country selection process;
- *Environmental business sector.* This criterion shows the establishment and the development of the environmental business sector. This criterion is used in the country selection process.

4.2 Legal screen

The legal screen is the second screening based on the legal forces of a country.

- *Law system.* The general characteristics and strengths and weaknesses of the law system. While doing business abroad DMT gets involved with foreign law systems. When the legal, regulatory and accounting systems are not consistent with the Dutch system it is more difficult to do business. This criterion is used in the country selection process;
- *Trade laws.* Economic and political trade controls. Tariffs and nontariff barriers, embargoes and sanctions, export license requirements. DMT needs to examine the trade laws because it might not be possible or profitable to export to certain countries due to the trade laws, import duties and restrictions *(Kotabe, et al, 2000)*. This criterion is used in the country selection process;
- *Environmental laws.* When the environmental laws are unfavourable there is no business to establish. This criterion is used in the country selection process;
- *Banking and finance*. The banking system of a specific country. This is of valuable importance for DMT because they will make transactions. This criterion is used in the country selection process;
- *Macro economic policies*. The monetary, fiscal and exchange policies a government pursues ill affect the stability of its currency. DMT needs to examine the policies because it might not be profitable to export to certain countries due to these policies *(Kotabe, et al, 2000).* This criterion is used in the country selection process;
- *Taxation.* The taxation system a country handles and how it influences DMT. DMT focuses on trade which means that the taxes are on account of the costumers. This criterion is only used in order to get a general understanding of the country;
- *Corruption*. The corruption level of a country. DMT might get involved with corruption if they do business in certain countries. This criterion is used in the country selection process;
- *Crime.* It is difficult and dangerous to do business if there is a lot of crime. This criterion is used in the country selection process.

4.3 Political screen

The elements of the political forces that can eliminate a nation from further consideration are numerous. In this research the following factors will be analyzed.

- *Ideology.* The ideology does not play an important role, as long as the government is stable and DMT is able to conduct business. This criterion is only used in order to get a general understanding of the country;
- *Institutions*. The number of political parties, bureaucracies, and other political organizations. This criterion only provides a general knowledge of the political system and plays no important role in the country selection process;
- *Government intervention*. The degree the government intervenes with the market economy. DMT prefers to work in a free market economy. This criterion is used in the country selection process;
- *Environmental priorities*. This criterion shows the environmental priorities of the government. It gives an indication if there is a demand or a future demand for DMT 's products. This criterion is used in the country selection process;
- *Government programs*. Government loans, subsidies, or training programs to support export activities and specific domestic industries. These programs can support DMT export activities. This criterion plays no vital role in the country selection process *(Kotabe et al, 2000*);
- *Political stability.* Events such as riots, revolutions, or government upheavals that affect the operations of an international company. Instability causes DMT higher uncertainty, adds to indirect costs, causes planning problems and leads to centralization of authority. This criterion is used in the country selection process *(Daft, 2004).*

4.4 Economic screen

In the economic screen the analyst can use market indicators, economic data used to measure relative market strengths of countries or geographic areas.

- *Natural resources*. This criterion is of no direct influence of DMT businesses and plays no important role in the country selection process;
- *GDP*, *inflation, exchange rate.* DMT will only conduct business in their currency. This criterion is only used to get a general understanding of the country*;*
- *Environmental expenditures.* This indicator gives an overview of the country expenditures in the environmental sector. This criterion is only used in order to get a general understanding of the country;
- *Demand for environmental technologies*. For DMT it is of vital importance if there is a demand for their products. This criterion is used in the country selection process;
- *Major end-users*. This indicator shows if a country's end users are in line with DMT end users. DMT has a broad range of end users. This criterion is used in the country selection process;
- *Major suppliers.* This indicator gives an overview of the major suppliers of a country. It also shows indications of country's trade with foreign firms. This criterion will be used in the country selection process;
- *Foreign trade zones/ free ports*. These zones and ports are only of use for the inhabitants of the specific country and will not influence DMT choice of doing business in a country. This criterion plays no important role in the country selection process;
- *Infrastructure*. In order to get the products to the right place a good infrastructure would be helpful, but it does not really influence the choices of DMT. This criterion plays no important role in the country selection process.

4.5 Technological screen

The technological screen is the fifth screen and is based on the technological forces of a country.

- *Technology level*. DMT provides instructions and services this criterion will only used as general information;
- *Technological development*. Government restrictions, the extent that modern technology is employed. The technological development does not play vital role in the country selection process;
- *Property rights.* It is almost impossible to protect DMT products. For this reason this information is only used as general information;
- *Telecommunications*. DMT operates through telecommunications mainly. DMT needs to communicate through phone, internet etc. This criterion is used in the country selection process *(Boyed et al, 1996)*.

4.6 Socio cultural screen

A screening of the candidate countries on the basis of socio cultural factors is carried out.

- *Language*. Linguistic diversity carries implications for marketing, promotion, and advertising strategies as well as communication. DMT needs to be able to communicate in English or German. This criterion is used in the country selection process;
- *Religion*. DMT products are industrial and religion only influences the business etiquette. This criterion plays no important role in the country selection process;
- *Education*. Ability to comprehend instructions, ability to use product. This criterion plays no important role in the country selection process because DMT will educate the agents and distributors when necessary;
- *Business etiquette*; DMT will have a competitive advantage if they know the business etiquette of a particular country. DMT will take the business etiquette into account but it does not influence DMT's country decision. This criterion plays no important role in the country selection process.

4.7 Conclusions

In this chapter criteria are investigated. Many criteria are used as general information in order to get an impression of the country; others are used for the country selection process. DMT (E. Nab) decided which criteria are used as general information and which will be used in the country selection process.

From the criteria described in paragraphs 4.1 till 4.6 the following criteria are used in the country selection process:

- Environmental problems;
- Environmental business sector;
- Law system;
- Banking and finance;
- Macro economic policies;
- Corruption;
- Crime;
- Government intervention;
- Environmental priorities;
- Political stability;
- Environmental expenditures;
- Demand for environmental technologies;
- Major end users;
- Major suppliers;
- Telecommunications;
- Language.

With the help of these criteria seven countries are analyzed. For each criterion the same sources are used. In order to minimize subjectivity external rating systems like the political stability index *(http://humandevelopment.bu.edu)*, economic freedom index, *(http://www.heritage.org)* and the transparency international *(http://www.heritage.org)* are used. These indexes also make comparison and rating easier. The use of the same sources and rating systems resulted in the fact that the criteria are comparable and enabled a solid country selection process. The country profiles can be found back in the appendixes.

Reflecting on the theory one can say that too many criteria are not used as country selection criteria. The main reason for this is that DMT does business with custom made and industrial products and that the theories used are not specifically written for this purpose. Criteria like population size, population growth and technology level are of less importance in this context. In this specific research two levels of criteria are important for custom made products, namely:

- General information concerning safety and stability issues, legislation, and communication;
- Branch information concerning, business sector, environmental problems, demand, and end users.

5 Country selection process

Not all countries offer the same opportunities. DMT is only interested in the countries with the highest potential. In order to make comparison possible all countries need to be analyzed, weighted, and ranked in importance. The third research question offers the conclusion of this process: "Which country is most suitable for market entry purposes?"

The countries are analyzed and selected with the help of the following steps:

- Indicator selection and data collection;
- Determine the importance of the country indicators;
- Rate the countries in the pool on each indicator;
- Compute an overall score for each country.

These factors are part of the theoretical framework (figure 2.10).

The overall scores are expressed as round numbers; the average scores are expressed as a two decimals numbers. The following table provides an overview of the criteria, weights and measurement indicators:

Criteria	Weight DMT	Weight res.	Measurement
Env. problems	3	3	This criterion scores 1 if there are signs of environmental problems which fit with DMT's products, it scores -1 if it does not fit with DMT's products and it scores 0 if it does not fit but might fit in the near future.
Env. business sector	2	1	This criterion scores 1 if there is a strong development, 0 if there is a moderate development, -1 if there is no or little development in the environmental business sector measurable.
Law system	2	3	This criterion is measured with the help of the economic freedom index. A measurement of 1.5 points or lower results in a score 1. A measurement of 3.0 points or higher results in a score -1, a measurement in between results in a score 0.
Trade laws	2	3	This criterion is measured with the help of the economic freedom index. A measurement of 1.5 points or lower results in a score 1. A measurement of 3.0 points or higher results in a score -1, a measurement in between results in a score 0.
Env. laws	3	3	This criterion scores 1 if the environmental laws are in congruence with DMT's strategy, -1 if they are not in congruence with DMT's strategy and 0 if the laws do not really fit but there are positive signs for the near future.
Banking and finance	1	1	This criterion is measured with the help of the economic freedom index. A measurement of 1.5 points or lower results in a score 1. A measurement of 3.0 points or higher results in a score -1, a measurement in between results in a score 0.
Macro economic policy	2	3	This criterion is measured with the help of the macro economic policy measurement. When the score is higher than 3.90 a country gets 1 point, when the score is between the 3.70 and the 3.90 the country gets 0 points and when the score is lower than 3.70 the country gets -1 point for this criterion.
Corrup-tion	2	3	This criterion is measured with the help of the corruption index. When the score is higher than 5.0 the score is evaluated with a 1, when the score is in between the 5.0 and the 4.0 the score is evaluated with a 0, when the score is lower than 4.0 the score is evaluated with -1.
Crime	2	2	This criterion is measured with the help of the crime index. When the score is higher than 75 the criterion gets 1 point, when the score is lower than 60 the criterion gets -1 point and when the score is between the 60 and 75 the criterion gets 0 points.
Gov. inter-vention	2	2	This criterion is measured with the help of the economic freedom index. A measurement of 1.5 points or lower results in a score 1. A measurement of 3.0 points or higher results in a score -1. And a measurement in between result in a score 0.
Env. priorities	3	3	When the environmental priorities of a country are in line with the areas DMT operates in a country receives 1 point, otherwise it receives -1 point. When the

			environmental priorities are partly inline or might be in line in the future it will receive 0 points.
Demand for env. tech.	3	3	When there are indicators that there is a demand for DMT products the country is evaluated with 1 point, when there are no indicators at all the country gets -1 point. When the chances are left in the middle the country is evaluated with 0 points.
Major end users	2	2	When the end users of a country are in line with the DMT's end users the country receives 1 point, when they are not in line the country receives -1 point and when a country scores in the middle it receives 0 points.
Major suppliers	1	1	When there are many foreign suppliers in all environmental sectors (so the country is open for suppliers) the country gets 1 point, when there are no foreign suppliers the country gets -1 point and when there are a few foreign suppliers the country gets 0 points.
Political stability	3	3	This criterion is measured with the help of the political stability index. When a country scores higher than 0.90 the country receives 1 point, when a country scores between the 0.70 and 0.90 it receives 0 points, and when a country scores below the 0.70 it scores -1 point.
Telecom-muni-cations	3	3	When there is a good developed telecommunications structure and a high use of the Internet the country is evaluated with a 1, when this is not the case the country is evaluated with -1 and when the country scores in the middle it is evaluated with a 0.
Lan-guage	3	2	When there is a good understanding of the English or German language the country is rated with a 1, when there is a moderate understanding of the English or German language the country is rated with a 0, when there is a bad understanding of the English or German language the country is rated with -1.

Table 5.1: Weight factors

Below the country scores are summarized. Complete and detailed country scores can be found in the appendix. Also information about the way the scoring is conducted is included in this appendix.

5.1 Croatia

Due to the resent war the environment is severely damaged. Unfortunately, the priorities are at different sectors at the moment; environmental issues come at a later stage. For this reason the environmental business sector is not developed at the moment. Another problem is the instability of the country.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score Average
Env. problems	3	3	-1	-3	-3	-2,33
Env. business sector	2	1	-1	-2	-1	-1.33
Law system	2	3	-1	-2	-3	-2
Trade laws	2	3	0	0	0	0
Env. Laws	3	3	0	0	0	0
Banking and finance	1	1	1	1	1	1
Macro economic pol.	2	3	0	0	0	0
Corruption	2	3	-1	-2	-3	-2
Crime	2	2	1	2	2	1.67
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	-1	-3	-3	-2.33
Demand for env. tech.	3	3	-1	-3	-3	-2.33
Major end users	2	2	-	-	-	-
Major suppliers	1	1	-	-	-	-
Political stability	3	3	-	-	-	-
Telecommunications	3	3	0	0	0	0
Language	3	2	1	3	2	2
Total			**-3**	**-9**	**-11**	**-8**

Table 5.2: Scores Croatia

5.2 Czech Republic

The Czech Republic is an interesting country for DMT. The environmental business sector is developing steady and the law systems are in place. There is a high demand for environmental technologies and there are good overall telecommunications. Unfortunately, the country is relatively unstable.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score average
Env. problems	3	3	0	0	0	0
Env. business sector	2	1	1	2	1	1.33
Law system	2	3	-1	-2	-3	-2
Trade laws	2	3	0	0	0	0
Env. laws	3	3	0	0	0	0
Banking and finance	1	1	1	1	1	1
Macro economic policy	2	3	0	0	0	0
Corruption	2	3	-1	-2	-3	-2
Crime	2	2	0	0	0	0
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	0	0	0	0
Demand for env. tech.	3	3	1	3	3	2.33
Major end users	2	2	1	2	2	1.67
Major suppliers	1	1	0	0	0	0
Political stability	3	3	1	3	3	2.33
Telecommunications	3	3	1	3	3	2.33
Language	3	2	1	3	2	2
Total			**5**	**13**	**9**	**9**

Table 5.3: Scores Czech Republic

5.3 Estonia

Estonia is also an interesting country for DMT. The country is very stable and has a low corruption and crime rate. Estonia scores moderate on important issues like environmental priorities, demand for environmental technologies, and environmental problems in general. Unfortunately, the environmental laws are not completely in place yet.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score average
Env. problems	3	3	0	0	0	0
Env. business sector	2	1	1	2	2	1.67
Law system	2	3	0	0	0	0
Trade laws	2	3	0	0	0	0
Env. laws	3	3	-1	-3	-3	-2.33
Banking and finance	1	1	1	1	1	1
Macro economic policy	2	3	1	2	3	2
Corruption	2	3	1	2	3	2
Crime	2	2	1	2	2	1.67
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	0	0	0	0
Political stability	3	3	1	3	3	2.33
Demand for env. tech.	2	2	0	0	0	0
Major end users	1	1	1	1	1	1
Major suppliers	3	3	0	0	0	0
Telecommunications	3	3	1	3	3	2.33
Language	3	2	0	0	0	0
Total			**7**	**13**	**15**	**12**

Table 5.4: Scores Estonia

5.4 Latvia

The environmental laws are not in place and there are no environmental problems in DMT's interest yet. The country scores moderate on general issues like stability aspects. Corruption remains a problem. The environmental business sector is developing steady so there might be opportunities in the future.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score average
Env. problems	3	3	-1	-3	-3	-2.33
Env. business sector	2	1	1	2	2	1.67
Law system	2	3	-1	-2	-3	-2
Trade laws	2	3	0	0	0	0
Env. laws	3	3	-1	-3	-3	-2.33
Banking and finance	1	1	0	0	0	0
Macro economic policy	2	3	1	2	3	2
Corruption	2	3	-1	-2	-3	-2
Crime	2	2	0	0	0	0
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	1	3	3	2.33
Demand for env. tech.	3	3	0	0	0	0
Major end users	2	2	1	2	2	1.67
Major suppliers	1	1	1	1	1	1
Political stability	3	3	0	0	0	0
Telecommunications	3	3	0	0	0	0
Language	3	2	0	0	0	0
Total			**1**	**0**	**-1**	**0**

Table 5.5: Scores Latvia

5.5 Lithuania

There is a market for the air sector in Lithuania. The environmental sector is increasing rapidly and there is a high demand. Another positive factor is the stability of the country. A remaining problem is the legal sector.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score average
Env. problems	3	3	1	3	3	2.33
Env. business sector	2	1	1	2	1	1.33
Law system	2	3	-1	-2	-3	-2
Trade laws	2	3	0	0	0	0
Env. laws	3	3	0	0	0	0
Banking and finance	1	1	1	1	1	1
Macro economic policy	2	3	1	2	3	2
Corruption	2	3	0	0	0	0
Crime	2	2	0	0	0	0
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	0	0	0	0
Demand for env. tech.	3	3	1	3	3	2.33
Major end users	2	2	1	2	2	1.67
Major suppliers	1	1	1	1	1	1
Political stability	3	3	1	3	3	2.33
Telecommunications	3	3	-1	-3	-3	-2.33
Language	3	2	0	0	0	0
Total			**6**	**12**	**11**	**10**

Table 5.6: Scores Lithuania

5.6 Slovakia

The environmental business sector is well developed. Unfortunately, the environment is not a high priority for the government. Other problems are the weakness of the macro economic policy and the high corruption rate. Telecommunications are highly developed and there is a good understanding of German and English.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score average
Env. problems	3	3	0	0	0	0
Env. business sector	2	1	1	2	2	1.67
Law system	2	3	0	0	0	0
Trade laws	2	3	1	2	3	2
Env. laws	3	3	-1	-3	-3	-2.33
Banking and finance	1	1	0	0	0	0
Macro economic policy	2	3	-1	-2	-3	-2
Corruption	2	3	-1	-2	-3	-2
Crime	2	2	1	2	2	1.67
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	-1	-3	-3	-2.33
Demand for env. tech.	3	3	0	0	0	0
Major end users	2	2	0	0	0	0
Major suppliers	1	1	0	0	0	0
Political stability	3	3	1	3	3	2.33
Telecommunications	3	3	1	3	3	2.33
Language	3	2	1	**3**	2	2
Total			**2**	**5**	**3**	**3**

Table 5.7: Scores Slovakia

5.7 Slovenia

Slovenia is an interesting country for DMT; there are good business opportunities. There is a high demand for environmental technologies and the environmental sector is well developed. The country is relatively stable and English and German is well understood. One negative aspect is that the environment is not high on the priority list of the government.

Criteria	Weight DMT	Weight res.	Score	Score DMT	Score res.	Score average
Env. problems	3	3	1	3	3	2.33
Env. business sector	2	1	1	2	2	1.67
Law system	2	3	0	0	0	0
Trade laws	2	3	0	0	0	0
Env. laws	3	3	0	0	0	0
Banking and finance	1	1	-1	-1	-1	-1
Macro economic policy	2	3	1	2	3	2
Corruption	2	3	1	2	3	2
Crime	2	2	0	0	0	0
Gov. intervention	2	2	0	0	0	0
Env. priorities	3	3	-1	-3	-3	-2.33
Political stability	3	3	1	3	3	2.33
Demand for env. tech.	2	2	1	2	2	1.67
Major end users	1	1	1	1	1	1
Major suppliers	3	3	1	3	3	2.33
Telecommunications	3	3	0	0	0	0
Language	3	2	1	3	2	2
Total			**7**	**17**	**18**	**14**

Table 5.8: Scores Slovenia

5.8 Conclusions

Summarised the following table is constructed. The table presents the countries' average scores on each criterion.

Criteria	Croatia	Czech Republic	Estonia	Latvia	Lithuania	Slovakia	Slovenia
Env. problems	-2,33	0	0	-2.33	2.33	0	2.33
Env. business Sector	-1.33	1.33	1.67	1.67	1.33	1.67	1.67
Law System	-2	-2	0	-1.67	-2	0	0
Trade laws	0	0	0	0	0	2	0
Env. laws	0	0	-2.33	-1.67	0	-2.33	0
Banking and finance	1	1	1	0	1	0	-1
Macro ec. Policy	0	0	2	2	2	-2	2
Corruption	-2	-2	2	-2	0	-2	2
Crime	1.67	0	2	0	0	1.67	0
Gov. intervention	0	0	0	0	0	0	0
Env. priorities	-2.33	0	0	2.33	0	-2.33	-2.33
Political stability	-2.33	2.33	2.33	0	2.33	0	2.33
Demand for env. tech.	0	1.67	0	1.67	1.67	0	1.67
Major end users	0	0	1	1	1	0	1
Major suppliers	0	2.33	0	0	2.33	2.33	2.33
Telecommunications	0	2.33	2.33	0	-2.33	2.33	0
Language	2	2	0	0	0	2	2
Total	**-8**	**9**	**12**	**0**	**10**	**3**	**14**

Table 5.9: Overall scores

Looking at these scores it is clear that Croatia is lagging behind in comparison with the other countries. The main reason for this is that the country is in the process of building up its country after the war. Another problem was that it was difficult to obtain Croatian country information. There is also a rather big gap between the countries Latvia and Slovakia and the other countries. These countries score particularly low on the areas: environmental problems, the enforcement of the European legislation and corruption. This indicates that these two countries are not of the highest interest for DMT.

The scores of the countries Czech Republic and Lithuania are rather similar. They both have positive factors and are worth wile investigating further. Unfortunately, there is only enough time to investigate one country. The countries Slovenia and Estonia stand out. Both countries have positive aspects like a good developed environmental business sector and macro economic and political stability. In comparison Estonia scores better on the criteria environmental priorities, telecommunications, and crime; Slovenia scores better on the criteria business opportunities DMT, environmental laws, and demand for environmental technologies. Because Slovenia scores better on these factors, criteria which are of vital importance for market entry purposes, this investigation will concentrate on Slovenia.

6 Competitive analysis

In this section a competitive analysis of Slovenia is performed. The aim of this chapter is providing an answer on the fourth research question: "What are the competitive/ market characteristics of the selected country?" The research question will be answered with the help of the model presented below. This model is part of the theoretical framework (figure 2.10).

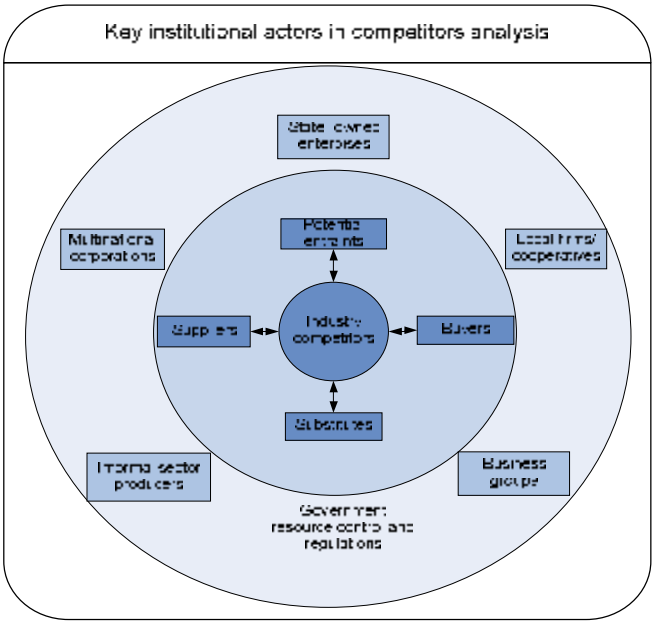

Figure 6.1: Key institutional actors in competitors analysis2 source: Austin, 1990

6.1 Government

Slovenia joined the EU and harmonised the environmental laws and can compete with other countries on the EU funding. A large amount of public tenders are published concerning waste management, water purification and recycling.

Goals on the environment are:

- Building modern centres for the assimilation of waste and implementing modern techniques on the area of waste recycling;
- Renew existing and rebuild new water clearing centres for private and public use;
- Sustainable use of energy. Preventing pollution of air, soil and water *(www.evd.nl)*.

Organization, planning, management, and maintenance of municipal infrastructure facilities (water supply systems, sever network treatment facilities, waste management facilities) are in domain of municipalities. Public utility services ensure the basic material conditions for life and work in settlements. Spatial and other diversity, the pattern of distribution on other characteristics in Slovenia exert a powerful influence on the scope, structure, and organization of municipal services. Utility services differ to a fair extent in many aspects, by the number of activities performed in individual areas, the amount of products and services provided the concentration of networks, facilities and equipment, the forms of organization of activities, and the source and amount of available funds. More than other community supply systems, sever, treatment and waste management facilities are characterised by the underdevelopment and fragmentation of the systems *(Ministry of Environment and Spatial Planning, 2006).*

Local municipalities have increased shares in their budgets for environmental projects from 4.19 percent in 2002 to 5.76 percent in 2004. The Ecological Development Fund contributed $21 million for environmental infrastructure projects in municipalities in 2004 and an additional $18 million for the

industry projects. Slovenia's national budget plans to allocate $240 million for all environmental-related projects in 2006, $280 million in 2007, and $304 million in 2008 *(U.S. commercial service, 2006).*
The Environmental Protection Act stipulated that a National Environmental Protection Program (NEPP) is developed. The NEPP should in particular cover: environmental stress and its impact on the health of the population; the assessment of the state of the environment and natural resources, and the risks to which they are exposed; long term projections of environmental trends and conditions; attainable goals and methods for their realization; the necessary financial means for achieving the goals set; priority tasks and projects; analysis of expected costs and benefits; and guidelines for the technical development of environmental protection activities and public services.

Under the Environmental Protection Act, the Environmental Development Fund of Slovenia was established. The Slovenian EcoFund is generally regarded as one of the best funds of this type in Central and Eastern Europe. The Fund operates as a non-profit financial organization providing soft loans for environmental projects on preferential terms. The project funding opportunities are publicly announced, and the funding is awarded through tendering procedures. The priorities of the Fund reflect the priorities outlined in the Environmental Protection Act, and include air pollution abatement, phasing out of ozone-depleting substances, municipal infrastructure development, and programs for the reduction of industrial pollution. The non-governmental sector is among the most important partners of the state with regard to the fulfilment of collective needs. In Slovenia the process in which in addition to the public sector there is also a non-public sector including non-governmental organizations, is still in development *(http://www.rec.org)*.

6.2 Present competitors

On both fairs the Aquatech Amsterdam (world's leading trade exhibition for process, drinking and waste water) *(catalogue Aquatech Amsterdam 2006*) and the IFAT (International Trade fair for Environment, Waste Water and Waste Disposal) *(catalogue IFAT, 2002)* more than forty nationalities were present. This shows that the environmental sector is a global business. For this reason first the competitors on a global level are presented. After that the investigation concentrates on the Dutch competitors and finally the Slovenian environmental market. The products DMT wants to export focus on desulphurisation and the removal of harmful or odorous materials. For this reason only the competitors in these areas are investigated.

Information about companies active in the environmental sector is fragmented. In this investigation the Environmental Export portal, Dutch Association of Suppliers of Environmental Equipment and Technology (VLM), and the Research Environmental Centre (REC) are used.

According to the environmental export portal there are around 1060 companies active in the air and climate business worldwide. Of these 1060 companies 490 companies focus on: air pollution control and treatment. All these companies are in a direct or indirect manner competitors of DMT. Below an overview of the areas within air pollution control and treatment are presented:

• Absorption, neutralization, precipitation (64 comp.)	• Flue gas desulphurisation (11 comp.)
• Activated carbon (42 comp.);	• Gas cooling (7 comp.)
• Biological treatment (22 comp.)	• Hot gas filtration (7 comp.)
• Catalytic oxidation (59 comp.)	• Oxidation (84 comp.)
• Catalytic reduction (18 comp.)	• Physical treatment (275 comp.)
• Ceramic filters (10 comp.);	• Regenerative catalytic oxidation (3 comp.)
• Chemical oxidation (1 comp.)	• Regenerative thermal oxidation (9 comp.)
• Chemical treatment (108 comp.)	• Scrubbing (102 comp.)
• Concentrators (10 comp.)	• Selective catalytic reduction (6 comp.)
• Conveying and bulk handling systems (4 comp.)	• Selective non-catalytic reduction (6 comp.)
• Electrostatic precipitation (27 comp.)	• Thermal oxidation (56 comp.)
• Extraction (32 comp.)	• Tower packing (7 comp.)
• Filtration (182 comp.)	• Used equipment (5 comp.)

Table 6.1:Environmental companies focussing on air pollution control and treatment, catalogue Aquatech Amsterdam 2006

Companies active in the area of biological treatment (22 companies) and flue gas desulphurisation (11 companies) are direct competitors of DMT because they focus on the same type of products. Of these 33 companies 12 companies are only located in the USA; they do not operate in Europe and are unknown by the DMT employees. The 21 companies left are European based or have subsidiaries in Europe. These companies are all direct competitors of DMT. Only one of these companies is located in Eastern Europe (Czech Republic). More details about these companies are presented in the appendix *(http://www.environmental-expert.com)*. At the IFAT; International Trade fair for Environment, Waste Water and Waste Disposal 110 companies who operated in the air sector were present. 14 of these companies are producing the same type of products and services *(IFAT, 2002).*

Most of the Dutch environmental companies are member of the Dutch Association of Suppliers of Environmental Equipment and Technology (VLM). Out of the 100 members 14 companies focus on air and gas treatment. All of these companies are direct competitors of DMT and all operate on an international base. However, none of these companies operate in Slovenia at the moment. An overview of these companies is presented in the appendix *(http://www.vlm.fme.nl)*.

The Slovenian environmental business sector is comprised of more than 250 companies that provide a wide range of environmental services and technologies. While the majority of environmental companies are quite young (52 percent were established after 1990) more than a third are older companies established before 1980. Almost all of the environmental businesses founded after 1990 are privately owned. Most of the environmental companies in Slovenia are small enterprises. The environmental technology market in Slovenia is geared primarily toward providing technical services, which accounted for 40 percent of total revenues. The next major source of income is the manufacture of environmental technologies, which accounted for 26 percent of revenues. Testing and monitoring accounted for 15 percent of total revenues. Analysis by media shows that water and wastewater activities and waste-related activities each generated 30 percent of total revenues. This was followed by air-related and energy-related activities, which generated 9 percent and 7 percent of revenues, respectively. Non-media specific revenues (e.g. consultant activities that include more than one media) amounted for 24 percent of revenues. With regard to foreign cooperation, 13 percent of the environmental businesses operates in a joint-venture with a foreign partner *(http://www.rec.org)*.

Due to fragmented information of authorities, the lack of a branch organization in this area, and the fact that it is a relatively new sector in Slovenia it was difficult to obtain reliable information. According to the Research Environmental Centre there are 18 main players active in the air sector in Slovenia. Five of the companies are direct competitors of DMT: AE & E (desulphurization technology), Drager (Air sampling), Koch and Albano (Flue gas scrubbers), H&B (Gas-emission measurement) and Siemens (Gas-emission measurement). More information is presented in the appendix *(http://www.rec.org)*.

6.3 Potential competitors

First of all, the opportunities in the environmental business sector in Slovenia are well recognized. The environmental sector is evaluated as a high potential area by the EVD and the VLM. Although little information is present and the sector is in its child shoes, these organizations are focussing on the area and are busy with obtaining information, organising match making and business trips *(T. van Spankeren, manager VLM*).

Due to this attention the risk of potential competition in Slovenia is large. The risk on the largest scale is that companies who are already operating in the environmental branch start operating in the sector air. The areas water, air and soil are related with each other and often overlap between these sectors is already present. There are no indicators about the size of this group. Another risk is that some of the companies who already operate in the area of air pollution control and treatment area (490 companies) may decide that it is valuable to operate in the area of desulphurisation and the removal of harmful or odorous materials from air flows and process gasses as well (460 companies). The third risk is that companies outside the European Union and without subsidiaries within the European Union discover the Eastern European market. At the Aquatech Amsterdam 2006 12 of these companies were present in the area of DMT's export products. The fourth risk is that companies who are already operating in Slovenia will focus on similar activities as DMT. The last risk the ability or the future ability

of the Slovenian companies to develop products in the same area. There are no indicators about the size of this group.

6.4 Potential buyers

Overall, the demand for environmental technologies in Slovenia is moderate, with only a handful of technologies in high demand. Demand for air-related technologies is moderate. Growth in demand is expected for technologies related to air sampling and laboratory analysis equipment for both gaseous emissions and ambient air; those technologies for emission abatement and cleaner production (e.g. the use of natural gas as source of energy); and equipment for air pollution control and flue gas purification (e.g. filters, scrubbers, etc.).

Demand for energy-related technologies is moderate. Higher demand for energy-related technologies is expected in the energy and power generation sector than in other industrial sectors. Growing demand is noted for alternative (non-CFC) refrigerants, while other areas where demand was expected to increase included technologies for heat recovery and energy savings (e.g. insulation) in the energy sector; new and efficient energy and heat generation systems; and retrofitting and rehabilitation of existing energy systems in both power generation and other industrial sectors. Alternative or renewable energy systems (e.g. geothermal, biomass, and solar) are other possible growth areas.

Two third of the Slovenian buyers depend on the use of best-technology or best-practice criteria when making purchasing decisions. High product quality is considered the most important strength of foreign environmental technologies. Among other highly ranked qualities are their reliability, durability, and good value for money. The lack of reliable product information, and the relatively high cost of foreign technology are the most significant barriers to buying environmental technologies from abroad. Other barriers include the difficulties in ensuring authorized after-sales technical service and maintenance, too little information about suppliers, and the non-suitability of products to the local conditions and technical culture (*http://www.rec.org*).

6.5 Business groups, NGO's and branch organizations

In the area of environmental protection there are over 150 organizations. More than two third of these organizations also carry out other activities, whilst with regard to the environment they mainly deal with training and education, collection and provision of information on the environment. There are around 7000 environmental activists in Slovenia, while NGOs have over 12000 members. Implementation of legislation programmes and plans relating to environment protection is guaranteed by state institutions as well as the civil society *(http://www.rec.org)*.

One of these companies is the Regional Environmental Centre for Central and Eastern Europe (REC) The REC implements its environmental projects within eleven basic organizational units called programmes and funds. Another association is the Environmental Protection Association within the Chamber of Commerce and Industry of Slovenia.

6.6 Conclusions

Information about the environmental sector is scattered and difficult to obtain. For this reason it was impossible to provide a complete overview of DMT's competitors worldwide and specifically Slovenia. With the present information a few conclusions are drawn:

The Slovenian government is one of the biggest players in the environmental branch, all the municipal infrastructures facilities like: water supply systems, sever network treatment facilities, and waste management facilities are in the domain of the municipalities. However, DMT does not focus on these types of products and for this reason the state-owned enterprises are no competitors of DMT. In fact the government is a customer of DMT because they need products of DMT. Furthermore, they create business opportunities due to legislation and environmental programs. They developed a National Environmental Program (NEPP) and the Environmental Development Fund, the Ecofund. Due to this governmental attention the demand for environmental products will increase, which is a positive sign for DMT.

DMT faces competition from all around the world. Looking at the information of the environmental export portal the competition in the environmental branch is strong. But in the area's DMT focuses on the competition is not so severe. In the area of biological treatment 22 companies and in the area of flue gas desulphurisation 25 companies are active. Only 34 of these companies are active in Europe, and none in Slovenia. This indicates that there are opportunities for DMT. Also the information of the Dutch Association of Suppliers of Environmental Equipment and Technology and the Research Environmental Centre do not show large number of competitors in the air and gas treatment sector in Slovenia. This can indicate two things: there is no market for the type of product or the market in Slovenia is not discovered yet.

The risk of potential competition is large. The Slovenian environmental market is relatively unknown, but due to attention of organizations like EVD and the VLM this might change rapidly. If DMT is interested in exporting to Slovenia they should start soon, so they will have first mover advantages.

The demand for air-related technologies is moderate. However, growth in demand is expected for products DMT focuses on like equipment for air pollution control and flue gas purification. These are positive signals for DMT.

There are numerous business groups and Non Government Organizations present in the sector. Most of them carry out activities like training, collection, and provision of information on the environment. These companies are no competitors of DMT but support organizations like DMT. The attention keeps the government focused on the subject.

Overall, the competitive mix is mainly positive. There is a growing demand for DMT products and services and the competition is not so severe at the moment. The government, business groups, and NGO's are supporting companies who operate in the environmental sector. However, there is a serious treat of potential competitors which should be closely monitored.

Opportunities	Threats
Legislation and environmental programs increase the demand for environmental products	No market for DMT's products (no exact data is found)
Relatively small competition in the type of product and in the Slovenian market	Risk of potential competition from companies who start focusing on the air sector and DMT's products worldwide,
Relatively small attention for the Slovenian market, first mover advantages. (Slovenia is a new market and is not discovered yet)	Risk of potential competition from foreign companies who discover the market
Growth in demand is expected for the type of products DMT focuses on	Risk of Slovenian companies who gain technological knowledge and will be able to duplicate the products in the near future

Table 6.2 Opportunities and treats

7 Marketing mix

Companies who adapt their marketing mix towards the culture, language, and social ties of the business environment in Slovenia will create certain competitive advantages. The aim of this chapter is providing an answer on the fifth research question: “How should the product or service be marketed?’’ The research question is answered with the help of the model presented below. This model is part of the theoretical framework (figure 2.10).

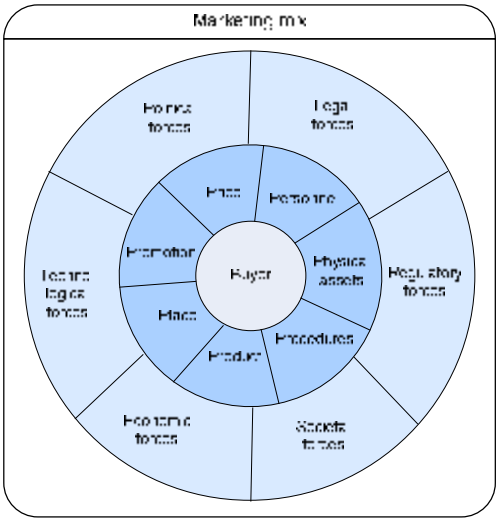

Figure 7.1 Marketing mix2, source: Goldsmith

It is essential that business market managers recognize that prospective customer firms have a buying orientation, as these firms afford managers the fewest degrees of freedom for creating sharing value. Buying is the most narrowly focused purchasing orientation *(Anderson, et all, 1999).*

7.1 Product

DMT’s export products and services focus on (bio) gas desulphurisation and equipment and air treatment equipment. The competitive advantage of these products is that DMT has the know-how, experience and offers the total package. DMT focuses on tailor made jobs in which seeking of new ways and solutions are not avoided. So DMT is looking for clients who want a full service supplier who solves their environmental problems. Clients are contracting DMT for a very wide range of environmental problems, which local companies cannot solve.

DMT sells industrialised products. Most products DMT offers are for industrial use and are customer made. If product changes are required, they may be cosmetic, such as printing instruction plates in another language *(Ball, 2004).* Because products are customer made, all cultural wishes concerning colour, instructions for use, language, style, technical complexity etc. of the client can be included in the product. When doing business in Slovenia DMT needs to pay extra attention to the physical forces. Slovenia has a Mediterranean climate on the coast, continental climate with mild to hot summers and cold winters in the plateaus and valleys to the east. The majority of Slovenian terrain is hilly or mountainous. Concerning the environmental regulation DMT fulfils the Dutch and with it the European requirements. On this aspect DMT should not have any problems.

When DMT exports a physical product they need to provide the following labelling information in Slovene with their products: title of the products, full address of the manufacturer, full address of the importer, net quantity, weight, volume, information, and other warnings important for the customer. Because DMT sells technical complicated products they must also include instructions for use, the manufacturer’s specifications, list of authorized maintenance offices, a warranty, and other applicable data. Goods and services imported for sale in Slovenia must comply with prescribed standards and

technical regulations and be certified by an authorized institution. Certificates issued abroad are valid in Slovenia if the issuing authority and the local issuing institution have a mutual recognition agreement. Technical instructions, a written guaranty statement, and instructions for use must be enclosed with technical goods and consumer durables imported into Slovenia. In addition, the importer must guarantee the servicing of products and supply of spare parts. If a contract with a foreign person, regulations of a foreign country, a bilateral, or international agreement requires that goods (to be exported or imported) be shipped with documents certified by a competent authority, the Chamber of Economy of Slovenia or an authorized customs organization is the competent authority. If the regulations of the country in which the documents are to be used stipulate that the documents have to be issued by a state body, the Ministry of Foreign Affairs is the competent issuing authority in the Republic of Slovenia *(US Commercial Service, 1996).*

Sales service, after sale services, and customer support are relatively poorly developed as marketing tools in Slovenia. Good after-sales service is recognized as strength of foreign technologies *(www.rec.org).* Because one of DMT focus points is service and maintenance DMT should give extra attention to this area and include it as a marketing tool.

7.2 Place

The factors that influence the selection of market channel may be classified in four categories: market characteristics, product characteristics, company characteristics, and middlemen's characteristics *(Ball, 2004).*

Market characteristics. There is not a system in place which ensures a wide publicly available access to information in Slovenia. This is caused by poor channels for dissemination, lack of traditional market information, frequently changing structures of state institutions, liberal approach to deadlines and commitments, and poorly paid officials often treat information as commodity. This results in the fact that most environmental companies rely only on personal contacts. Half of the companies belong to any professional association, a few companies refer to a business chamber and publications hardly reach the environmental companies. For a foreign firm to compete effectively it is almost essential to enter the market through an experienced local business partner. In most cases, the technical and environmental skills of local environmental professionals are well developed, and many firms are increasingly professional in their management and marketing approach *(http://www.rec.org).*

Product characteristics. According to Root *(Root, 1994)* sales to original equipment manufacturers, governments and high priced industrial products are often sold directly because the firm is dealing with a few customers and large money value. Also when the product is highly technical, like DMT's products, it may be impossible to obtain knowledgeable middlemen, and DMT needs to sell directly through own distribution channels. Another option is that DMT will educate and train middlemen; this is what DMT did in the past *(Root, 1994).*

Company characteristics. A firm that has adequate financial and managerial resources is in a good position to employ its own sales force or agents. DMT is a small company who does not have the financial and managerial power to distribute their own products. Also they do not have experiences with selling to Slovenia *(Root, 1994)*.

Middlemen's characteristics. DMT needs middlemen that will service, promote and eventually warehouse its products. There are a large number of merchants, agents, intermediaries, wholesalers, and retailers available in Slovenia. Since 1990, when the transition to a market economy began, foreign trade has ceased to be the exclusive domain of a few specialized companies. Today, any firm may carry out both foreign and domestic trade. There are good partners available but care should be exercised. Most companies have little experience in the free market. Due to the high costs and a low working capital in time payment to suppliers is an increasing problem *(http://www.rec.org).*

Combining these four factors with the fact that DMT is only interested in exporting (so no contractual or investment entry modes) suggest that the following export mode should be used: agents and distributors. Preferably this organization should be a contractor active in the environmental sector or trader of environmental equipment or a consultant active with environmental projects, need to be familiar with environmental problems as well as the current legislation and anticipated changes, need

to be good in identifying potential customers as well as estimating the environmental problems of these customers and need to familiar with home market, habits, and language.

Sometimes DMT participates in public tenders; this is also one of the possibilities in Slovenia. The country has recently enacted public procurement legislation that requires the announcement of tenders for all planned acquisitions involving the use of public money. A tender announcement including project specifications, selection criteria, and deadlines must be published in an official public procurement bulletin. The tenders are publicised on the public procurement bulletins; the Uradni list RS (Official Gazette of the Republic of Slovenia) Note: a current problem is that deadlines can be set too early after tender announcement, forcing potential bidders to abandon responses unless they have advance knowledge of the project. Many opportunities are missed because they are belatedly announced or not at all *(http://www.rec.org).*

7.3 Promotion

DMT sells industrial goods which need a lower promotion effort than consumer goods. Sellers of industrial goods do not have to create psychological benefits in the minds of buyers through promotion; they can appeal to rational buying motives by communicating information mostly on products features, performance and costs. The target audience exists off: companies who producing biogas and facing problems with the desulphurisation of the process, companies who facing smell and odour problems in the production process and agents who are willing to sell DMT products. The dominant theme or appeal that DMT wants to communicate to the target audience is: DMT, your partner and specialist and DMT for innovative environmental technology *(Root, 1994).*

DMT promotes and sells their products and services first of all by visiting trade fairs, attaining match making programs and going on business trips organised by the Dutch Association of Suppliers of Environmental Equipment and Technology. Secondly by the website and brochures, so clients can find them. And thirdly by using agents and distributors, who can make contact between DMT and the customers. This is in congruence with the way buyers gather their information prior to buying environmental technology in Slovenia, which include personal and professional relations, participation in fairs and exhibitions, brochures and leaflets distributed at trade shows, and catalogues and directories purchased during shows, fairs and conferences *(http://www.rec.org).*

There are two environment-related trade events in Slovenia:

- EKO sejem, Celje (March, biannual)
- Tehnika za Okolje, Ljubljana (October biannual) (Dutch embassy Ljubljana)

Furthermore, the Dutch Association of Suppliers of Environmental Equipment and Technology and the EVD are organising a business trip with match making programs to Slovenia. This trip is planned at the end of 2007 *(interview EVD).*

For a large extent DMT operates through agents. The agent is free in making his own marketing method as long as the results are good enough. At this point precaution is necessary, most companies have little experience in the free market *(www.evd.nl).* DMT should be involved and work closely together with the agent. DMT needs to monitor the promotion tools used and protect the promotional messages: DMT, your partner and specialist and DMT for innovative environmental technology.

Concerning the promotional tools, DMT standardized their promotion articles and offers the same brochure and website in three languages (Dutch, English and German) for businesses all around the world. For capital goods or business to business marketing where targets are more homogeneous in their needs and products are of industrial purposes standardized promotion is most likely to work *(Burnett, 1998*). DMT should use the same strategy in Slovenia because:

- The product is sold for industrial purposes, in which cultural influences have less impact;
- The good understanding of the English and German language and the knowledge of the West European culture by Slovenian businessmen makes adaptation less important;
- DMT does not have the time, money and personnel to adapt the promotion method towards the culture of each specific country.

Due to the fact that the agent will partly use its own marketing tools, the promotional tools will get a local touch. Before distributing the brochures DMT needs to make sure that there are no cultural misunderstandings in the brochure concerning, use of colour, words, and layout. DMT can ask the agent, or a special agency to command on the brochure.

7.4 Price

Pricing market offerings within the home market is a vexing enough task for most business market managers. Pricing across borders often is even more daunting. Firms in the initial foreign market entry and local or national market expansion phases of international market development have the primary concern of pricing relative to local competitors *(Anderson, et all, 1999).*.

The products and services DMT develops have a high technical and innovative character. DMT is less interested in the low-tech technologies and has no problems if these products are produced domestically. DMT tries to differentiate with other companies by being a specialist, they have knowledge other suppliers miss and therefore they can ask higher prices. According to DMT the existing technologies and concepts often do not provide for the solution that one is seeking. The strategy of DMT is not to be the lowest on the market, but to offer installations with a good price/ quality ratio and a high standard service. DMT applies a full cost pricing strategy which is the sum of total unit costs attributed to a product and a profit margin. When doing business with agents often DMT sets the basic price and the percentage is set by the agent or distributor. They do not try to control or influence the final-buyer price.

The price level in Slovenia is relatively high due to the high cost of labour and lack of competition in certain sectors. The market generally determines prices. The government also controls the prices of oil, electricity, natural gas, railway transport, and some other products *(US Commercial Service)*. Looking at the demand side of the story most environmental technology end users (municipalities, businesses) select the cheapest technology available on the market that enables them to meet the required standards. Both municipalities, as well as businesses must meet environmental standards (and corresponding deadlines) set by environmental enforcement bodies. At the same time, they are coping with pressing economic issues which are usually perceived as more important. Thus, they try to find the cheapest environmental technology providing a minimum level of compliance. At this point local manufacturers of environmental technologies enjoy the unparalleled advantages of cheaper products, lower transportation costs and lower installation costs. Many end-users importing only the crucial "hi-tech" components (e.g. pumps, aerators), the bulk of construction work and low-tech technologies based on domestically-produced equipment. Foreign suppliers should consider creating conditions that would offset the disadvantage of the high price. It may be possible to offer longer payment periods, better credit conditions, or even, in some cases, to enter "shared savings scheme" agreements *(http://www.rec.org)*.

DMT should keep on focussing on the hi-tech components in Slovenia. It is suggested that they use a skimming-price strategy, which sets a relatively high entry price with the intent to earn quick profits before rivals gain the knowledge in order to respond with substitute products at a lower price. In this way they continue to use full-cost pricing which is the sum of total unit costs attributed to a product and a profit margin. In this case, the role of price in the marketing is a rather passive one *(Root, 1994).* They can look into the possibilities of offer longer payment periods, better credit conditions, or even, in some cases, to enter "shared savings scheme" agreements in order to sell their products.

7.5 Personnel

Cross cultural communication is the lifeblood of international management. But any time a message crosses cultural boundaries, there is a potential for misunderstanding arising from largely unconsciousness cultural differences. Communication can be successful in conveying an intended meaning only when the sender's perceptual field, his experience of the world is congruent with the receiver's perceptual field *(Root, 1994).* According to DMT cultural differences did not play an important role in the country selection process because they can adapt to it. The employees of DMT are used working abroad and are multi linguistic. However, they do not have a lot of experiences in Eastern Europe.

Below the countries the Netherlands and Slovenia are compared with each other. For this comparison the GLOBE study is used, which evaluated 62 societies on the factors: achievement performance orientation, future orientation, assertiveness, institutional collectivism, gender egalitarianism, humane orientation, power distance, in group collectivism, and uncertainty avoidance *(House, 2004).*

Factor	Netherlands	Slovenia
Achievement performance orientation (low rank high achievement orientation, high rank low achievement orientation)	19	51
Future orientation (low rank high future orientation, high rank low future orientation.)	4	43
Assertiveness (low rank less assertive, high rank more assertive)	18	24
Institutional collectivism (low rank more collective, high rank less collective)	20	34
Gender egalitarianism (low rank female oriented, high rank male oriented)	27	6
Humane orientation (low rank more humane oriented, high rank less humane oriented)	43	45
Power distance (low rank greater power stratification, high rank smaller power stratification)	58	23
In group collectivism (low rank greater collective orientation, high rank smaller collective orientation)	57	31
Uncertainty avoidance (low rank greater uncertainty avoidance, high rank smaller uncertainty avoidance)	12	43

Table 7.1: Score cultural factors

The countries score different on achievement performance; the Netherlands ranks 19 and Slovenia ranks 51. This means that the Dutch are more focussed on improvement and excellence. Managers are encouraging/ rewarding performance and improvement. The Slovenes are less achievement oriented this can cause problems, because DMT might aspect too much input from the Slovenes. The Netherlands ranks 4 and Slovenia ranks 43 on future orientation. This means that the Dutch tend to have more future-oriented behaviour such as delaying gratification, planning and investing in the future. DMT wants to work closely together with the Slovenian customers. This difference can cause problems in the planning of the process. The countries rank similar on assertiveness, the Netherlands ranks 18 and Slovenia ranks 24. This factor includes the degree to which individuals are assertive, confrontational, and aggressive in their relationships with other.

The Netherlands ranks 20 and Slovenia ranks 34 on institutional collectivism; this is a slight difference of 14 points. Institutional collectivism is the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action. Because collectivism mainly focuses on internal affairs, this factor has no huge influence in the relationship between DMT and the Slovenian customers. In gender orientation the masculine societies value factors like success, money, status symbols. Social sex roles are separated; men are tuff, self maintained, women are soft and engaged in five quality issues. In feminine societies, social sex roles overlap each other; men and women are modest and soft, quality of life is important. The Netherlands ranks 27 and Slovenia ranks 6 on gender egalitarianism. DMT employees should keep in mind that Slovenia is more female oriented and that the female values like negotiating and compromises are very important.

The scores of the two countries are rather similar on the factor humane orientation; the Netherlands ranks 43 and Slovenia ranks 45. In general this means that people have the same attitude towards being fair, generous caring and kind to others. No problems should occur in this factor. On power distance there is a difference of 35 points between the two countries; the Netherlands ranks 58 and Slovenia ranks 23. In Slovenia the power is unequally shared in comparison with the Netherlands. This can be seen back in the fact that decision making is concentrated at the senior level. There is hardly any delegation of authority. Business should be conducted with the general manager or someone who has clearly acknowledged power *(http://strategis.ic.gc.ca)*. Collectivism is the degree to which individuals express pride, loyalty and cohesiveness in their organizations and families. The Netherlands ranks 57 and Slovenia ranks 31 on in-group-collectivism, this is a difference of 26 points. This means that the Dutch are more individualistic than the Slovenians, DMT employees can expect more group behaviour and should express a little more loyalty and pride towards DMT and their

customers as usual. Slovenes place a premium on personal contacts and correspondence and visits play significant roles in the conduct of business. The Netherlands ranks 12 and Slovenia ranks 43 on uncertainty avoidance, which is the extent to which a society, organization, or group relies on social norms, rules and procedures to alleviate unpredictability of future events. This means that the Dutch lead a more structured life than the Slovenians. The Slovenian customers might not be used to the rules and procedures of DMT *(House, 2004).*

7.6 Physical assets

DMT is exporting their products abroad; due to the distance consumers and agents will most likely not visit the office. Factors like: store décor and music which are part of DMT internal environment do not play an important factor. However, there are physical factor which travel along with the employees which are examined in the section below.

Products. Because of the distance it is not likely that customers and agents will visit the office of DMT. The appearance of the products is more important. One of the ways DMT will build it is image through its products.

Promotional material. Another way customers and agents receive an image of DMT is through its brochure and webpage. DMT brochure is on a sophisticated level, a good image about the company and the products is presented. The website of DMT is not actively used and outdated. The references all date from 2003 and no news items are presented this year. A more active role of the website is advised. The language used in the brochure and website might be difficult to understand for Slovenian businessmen. The use of short and simple sentences is advised.

Business cards. It is customary to exchange business cards during meetings. DMT should continue to use their business cards as promotion material. DMT expertises, products and services are outlined on the business card. DMT should adapt the business cards towards the Slovenian culture. The titles and functions should be used before instead of behind a person's name. When possible the business cards should be translated into Slovenian.

Gifts. It is common to give gifts after business meetings in Slovenia. Acceptable gifts for business meetings are items for the office, pens (including pens with the company logo) as well as selected wines. DMT can use this tradition and present the company on the gifts.

Employees. Costumers and agents receive their main impression of the company through the employees. DMT's employees need to keep in mind that there are other business etiquettes in Slovenia. The employees should use titles such as doctor or professor. The employees should be acceptable dressed for business meetings. Dress code for the first business meeting is conservative: a dark-coloured suit with tie for men, and a suit or dress for women.

7.7 Conclusions

DMT is a small company; they have limited power and financial means to adapt the marketing mix towards the market and culture of each single market. For their interest it is best to standardize as much as possible. In this way they can stay focused on their core activities.

The best way to distribute DMT's products is through agents and distributors. DMT should use middlemen that will service, promote and eventually warehouse its products. These people have more knowledge about the market and in this way DMT can stay focused on their core activities. It might be impossible to obtain knowledgeable middlemen; in that case it is advised that DMT should educate and train agents. The products do not need to be adapted to the Slovenian culture because DMT sells industrialised products and services. Most products DMT offer are custom made and designed for individual needs. Basically, DMT only needs to adapt their labelling and instructions because they need to be written in the Slovenian language.

It is also advised to keep the promotion strategy the same; standardizing website and brochures and promoting the products by visiting trade fairs, attaining match making programs, and attaining business trips. This tactic is in congruence with the way buyers gather their information prior to buying

environmental technology in Slovenia. Eventually, for extra service they can translate the website and brochures in Slovenian. The role of price should be passive. Slovenian clients are interested in DMT's products and services because DMT has knowledge others lack. It is suggested that they use a skimming-price strategy, which sets a relatively high entry price with the intent to earn quick profits before rivals gain the knowledge to respond with substitute products at a lower price.

DMT needs to be aware of the cultural differences between the Netherlands and Slovenia. This will be of influence on the way business is conducted. There are cultural differences in the area's achievement orientation, future orientation, institutional collectivism, power distance, in-group-collectivism, and uncertainty avoidance. Another factor that DMT needs to be aware of is the fact that products, promotional material, business cards, gifts, and the way employees dress and behave provide an image of the company DMT.

8 Conclusions and recommendations

When writing the conclusions one needs to come back to the point where the research started; the problem formulation:

What are the most promising East European countries for DMT and what market entry strategy should DMT follow in these countries?

In order to answer the problem formulation the research questions need to be answered.

R1 Which internal factors are involved in the country entry decision process?
R2 Which external factors are involved in the country entry decision process?
R3 Which country is most suitable for market entry purposes?
R4 What is the competitive mix of the company in the selected country?
R5 How should the product or service be marketed?

8.1 General conclusions

The most promising countries to do business with in Eastern Europe are Slovenia, followed by Czech Republic, Estonia, and Lithuania. The market entry strategy DMT should use is exporting with the help of agents and distributors. This answer to the problem formulation is conducted by answering the research questions in the following way:

R1. Which internal factors are involved in the country entry decision process?
The organizational characteristics of DMT like the organizational structure, the operations, the high technical level of the employees, the use of agents and distributors as a distribution method, the management style, international orientation, and the environmental perception show that there is a willingness to internationalize to a certain extent. They are willing to operate internationally but in the near future they do not have the wish or the means to operate internationally other than exporting.

The products and services the research focuses on are soil, gas, and air treatment products. All products are custom made and in compliance with the wishes of the client. The factors which influence the country selection process are: the uniqueness, the high technology level, the sector, the durability, and the industrial focus of the products and services. These factors result in the following implications:

- The present theories of the external analysis are mainly based on consumer products instead of industrial products. These theories need to be extended;
- The present theories of the external analysis are mainly based on mass production and do not fit custom made products. These theories need to be extended;
- The industry differs from other industries because it is based on legislation, policies and funding. This means that the external analysis and the marketing process need to be adapted towards this factor.

R2. Which external factors are involved in the country entry decision process?
The theories involving the external market factors need to be extended because of the unique character of the products/services and the sector DMT operates in. In this research all factors which generally indicate market size, economic level, and technology level are useful for background information but are of no importance in the selection process. Another decision made in consultation with DMT is that factors to which DMT can adapt are of no vital importance in the country selection process. For this research the conclusion is made that two levels of criteria are important. Firstly, general information concerning safety and stability issues, legislation, and communication. Secondly, sector information concerning business sector, environmental problems, demand, and end users information. An overview of the external market factors used in this research is presented below. Note: these factors are used in this research; there is no theoretical evidence which proves that these factors can be used in other researches.

General information
- Law system;
- Trade laws;
- Environmental laws;
- Banking and finance;
- Macro economic policy;
- Corruption;
- Crime;
- Government intervention;
- Political stability;
- Telecommunications;
- Language.

Sector information
- Environmental problems;
- Environmental business sector;
- Environmental priorities;
- Demand for environmental technologies;
- Major end users;
- Major suppliers.

R3. Which country is most suitable for market entry purposes?
Slovenia is the most suitable country for export purposes. The country has the highest score and scores positive on important criteria like demand for environmental technology, environmental problems, language, and factors which measure the stability and safety of the country. Only two negative aspects became visible in the country analysis: the banking and finance and the environmental priorities of the government. The countries Czech Republic, Lithuania, and Estonia are interesting markets as well. They all have positive sides and are worth investigating further. Croatia, Latvia, and Slovakia are not interesting markets at the moment.

R4. What is the competitive mix of the company in the selected country?
Overall, the competitive mix of Slovenia is mainly positive. There is a growing demand for DMT products and services. The government, business groups, and NGO are supporting companies who are operating in the environmental sector. The research shows that competition is not so severe in the desulphurisation and the odour treatment area; approximately 40 companies are active in this area and none of the investigated companies is active in Slovenia. This indicates that there are opportunities for DMT. The risk of potential competition is large. The Slovenian environmental market is relatively unknown, but due to attention of organizations like EVD and the VLM this might change rapidly. If DMT is interested in exporting to Slovenia they should start soon, so they will have first mover advantages.

R5. How should the product or service be marketed?
Due to DMT's organizational structure and the external market factors in Slovenia the best way to distribute DMT's products is by agents and distributors. It is advised that DMT standardizes and outsources as much as possible concerning the products, services, promotion, and pricing factors. In this way they can stay focused on their core activities. When doing business DMT needs to be aware of the cultural differences between the Netherlands and Slovenia. This will be of influence on the way business is conducted.

8.2 Reflections and critics

The thesis offers a country screening model adapted towards the organizational, product, sector characteristics and the wishes of DMT. In the model 17 factors, which are influencing the country selection process, are analyzed and rated. In order to make comparison possible and reliable standardised indexes and websites were used as much as possible.

For the following factors standardized indexes are used: The factors law system, trade laws, banking and finance, macro economic policy, and government intervention are measured with the help of the economic freedom index *(http://www.heritage.org)*. The factor corruption is measured with the help of the corruption index *(http://ww1.transparency.org)*. The factor crime is measured with the help of the crime index *(http://humandevelopment.bu.edu)* and the factor political stability with the help of the political stability index *(http://humandevelopment.bu.edu)*. For the factors environmental laws, environmental problems, environmental business sector, environmental priorities, demand for environmental technologies, major end users in the environmental sector and major suppliers in the environmental sector environmental country reports are used. This data consists of text instead of ratings and this makes

comparing countries more difficult and subjective. By using data from the same source bias is minimized. In this research environmental country reports conducted by the Regional Environmental Centre are used. Data for the general factors telecommunication and language is obtained by using the website of the EVD. The advantages of the model are: the model is quick in use, information is found easily by the use of certain websites, countries are comparable due to the use of standardized indexes and the model can be used world wide.

Many theories are written about the country screening process. The specificity of the company, product and sector characteristics made the thesis challenging. There were some difficulties with melting the theories together into one fitting theoretical framework. The main question kept in mind during this process is: "What are the influences of the company, product and sector characteristics on the country screening process?" This gives the thesis a rather explorative character.

Most country screening theories suggest that all countries should be included in the country screening process and that countries should be eliminated according to the different stages of the process. In contradiction with the theories this research focuses on multiple countries, namely: Croatia, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, and Slovenia. The entire country screening process (except the competitors mix) is carried out for all countries because of the limited amount of countries in the beginning of the country screening process.

In order to answer the question: "Which country is most suitable for export purposes?" a rating system was conducted in which all the country screening factors were valued in importance. The importance of the factors and the ultimate country score on these factors are subjective. It is impossible to exclude all subjectivity from a qualitative research but the subjectivity was minimized in the following way: The importance of the factors was analyzed in three different ways: according to the DMT weight factors, according to the researcher's weight factors, and excluding the weight factors. The score of the factors was measured with the help of beforehand defined scoring definitions and standardized indexes. In this way confidence about the results was created. After the country screening process the research concentrated on Slovenia because it had the highest score. Looking at the results Slovenia is not the only interesting market to investigate in. The countries Czech Republic, Lithuania, and Estonia have also very positive scores. Due to a lack of time it is not possible to investigate these countries further.

There were problems in performing a competitor's analysis in Slovenia. Reasons for this are: that there is not a system in place which ensures publicly available access to information, the specificity of the sector and product, and the lack of first hand information (personal visit to the country). Because of this lack of information it was impossible to provide a complete overview of the competitors in this sector. Information is gathered from four different sources, IFAT, Environmental Export Portal, Dutch Association of Suppliers of Environmental Equipment, and Technology and the Research Environmental Centre. Unfortunately, this information did not correlate and can only be used as an indication.

The focus of this research is on investigating the internal and external environment. The marketing mix was examined generally; ideas and suggestions about how the company should enter the Slovenian market, to what extent the company should adapt their products and processes, what cultural differences will be present etc. are presented. There is not enough time to write a complete marketing mix. When interested in exporting to Slovenia information should be gathered in a different way by joining on business trips, visiting trade fairs etc.

8.3 Recommendations

The following recommendations for DMT are listed:

- When interested in a foreign market use the country screening model. It is a fast way to get some indications of the specific market;
- There are enough indicators that Slovenia is an interesting market to export to. DMT should look further in the possibilities of exporting to Slovenia. Contacts are established with the Dutch embassy in Slovenia which DMT can use. Furthermore, they can join the COETC (Centraal en Oost Europa Trade Club) which is part of the Dutch Chamber of Commerce, contact is already established. They can visit trade fairs and join organized business trips in

order to get in touch with agents and distributors. These trips will be organized by the EVD and VLM in 2008;
- There are indicators that the Czech Republic, Estonia, and Lithuania are interesting markets to export to. DMT should look further in the possibilities of exporting to these markets. They can use the same leads offered for Slovenia;
- Because of the inefficiency of the Slovenian information system one need to rely on personal contacts. For this reason it is essential to enter the market through an experienced local business partner. DMT should visit the Slovenian trade fairs, and join the organized business trip in order to get in contact with agents and distributors;
- There were problems in performing a competitor's analysis in Slovenia due to lack of time, no correlation between the information of the different sources used, and the inefficiency of the Slovenian information system. If DMT visits Slovenia a new competitor analysis should be conducted.

8.4 Suggestions for further research

Many theories are written about the country screening process. Most theories are rather general and do not take organizational, sector, and product characteristics into account. For this reason little is known about the influences of these characteristics on the country screening process. Throughout the research it became clear that the specificity of the company, sector, and product factors have influences on the country screening process. Some of the country screening factors were of little use in this specific set up and could only be used as background information. During this research the following information was valued important. Firstly, general information concerning safety and stability issues, legislation and communication. Secondly, sector information concerning business sector, environmental problems, demand and end users information. This research provides an explorative answer on the question: "How should the country screening process be conducted under these specific conditions (company factors, environmental sector, industrial and custom made products)?"

- Further research should be conducted on the influences of the type of product on the screening factors.
- Further research should be conducted on the influences of the type of production process on the screening factors.
- Further research should be conducted on the influences of the sector on the screening factors.

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http://www.vm.ee/estonia, Ministry of Foreign Affairs Estonia

http://www.vlada.si, Government of the Republic of Slovenia

http://www.vlm.fme.nl, Dutch Association of Suppliers of Environmental Equipment and Technology

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Appendix 1 Country profile: Croatia

Basic needs

Population size

Croatia has a population of 4,551,000 inhabitants *(http://en.wikipedia.org)*.

Growth

Population growth rate: -0.03 in the year 2006-07-18
Birth rate: 8.75 births/ 1000 population
Death rate: 10.98 deaths/ 1000 population
(http://en.wikipedia.org)

Age structure

0-14 years: 16.2 percent (male 373,638/female 354,261)
15-64 years: 67 percent (male 1,497,958/female 1,515,314)
65 years and over: 16.8 percent (male 288,480/female 465,098) (2006 est.)
(http://en.wikipedia.org)

Urbanization

The population distribution (per area types has an almost opposite form: about 66 percent of the population lives in urban, about 15 percent in transitional urbanized, and about 19 percent in rural areas. By continuing the process of uncontrolled population concentration the gab will be increased, which makes it quite clear that the key of the problem lies in restoring the basic functions of the rural areas. This will be done in the following manner:
Through revival of rural areas by their characteristic activities, only at a higher technological level;

- By developing industrial production based on autochthonous resources;
- By opening new workplaces and encouraging double callings for the population in these areas;
- By encouraging commerce centres using goods for functional purposes;
- By dislocating respective branch state offices;
- By stimulating evaluation of work in rural areas, and by a public affirmation of the quality and way of life in rural areas *(http://www.unhabitat.org)*.

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	2 076	2 106	2 001	1 981	1 914	1 806
Urban population (thousands)	2 441	2 563	2 505	2 570	2 617	2 648
Percentage urban (%)	54.0	54.9	55.6	56.5	57.8	59.5

(http://esa.un.org)

Migration

In 2005, there were 14.230 persons that immigrated to the Republic of Croatia, and 6.012 persons emigrated from the Republic of Croatia. The Republic of Croatia had a positive net migration with foreign countries for the whole period from 1996 to 2005 (the number of immigrants was higher then the number of emigrants) and in 2005 the net migration amounted to 8.218. In 2005, there were 94.0 percent Croatian citizens and 6.0 percent foreigners that immigrated into the Republic of Croatia, while 91.6 percent Croatian citizens and 2.8 percent foreigners emigrated abroad. Out of the total number of immigrants, there were 58.7 percent persons who arrived from Bosnia and Herzegovina. Out of the total number of emigrants from the Republic of Croatia, 44.2 percent persons departed to Serbia and Montenegro and 17.5 percent persons departed to Bosnia and Herzegovina. The greatest share in the total number of persons that immigrated to the Republic of Croatia was recorded in the City of Zagreb (16.2 percent) and the County of Split-Dalmatia (16.1 percent). The largest share of emigrants from the Republic of Croatia to foreign countries was again in the City of Zagreb (17.4 percent), followed by the County of Sisak-Moslavina (11.7 percent) and the County of Osijek-Baranja (10.1 percent) *(http://www.dzs.hr)*.

Geography

Croatia is situated between central, southern and eastern Europe. It has a rather peculiar shape that resembles a crescent or a horseshoe which helps account for its many neighours. Its mainland territory is split in two non-contiguous parts by the short costline of Bosnia and Herzegovina around Neum.

Its terrain is diverse, containing:

- Plains, lakes and rolling hills in the continental north and northeast;
- Densely wooded mountains in Lika and Gorski Kotar;
- Rocky coastlines on the Adriatic Sea *(http://en.wikipedia.org)*.

Climate

Croatia has a mixture of climates. In the north and east it is continental, Mediterranean along the coast and a semi-highland climate in the south-central region *(http://en.wikipedia.org)*.

Environmental problems

The environment is severely damaged. Water pollution and waste collection and assimilation are the biggest problems at the moment. Water Quality management is getting more imported. Only 60 percent of the population is connected with a drinking water system and only 6 percent of the dirt water is cleaned. Less than 50 percent of the communities arranged the collection of waste. Also the environmental regulations are not in congruence with the EU *(www.evd.nl)*.

Environmental business sector

The recent war and a lack of government commitment to the environment have slowed the development of Croatia's environmental business sector. It is estimated that fewer than 200 companies provide environmental services or technologies. Croatian companies are generally outfitted with all types of modern office equipment. Telephone, personal computers, fax machines and printers are standard equipment in the firms surveyed. For the most part, environmental companies in Croatia are small. More than half of the companies surveyed employ fewer than five full-time employees, while only 8 percent employ more than 50 full-time workers. The highest portion of income was received from waste-related activities (40 percent), followed by water and wastewater-related activities and air and energy related activities. Other activities, such as industrial noise and safety, EMS, EIA, etc., accounted for 17 percent of total annual revenues. 14 percent of the survey respondents in Croatia had a joint-venture with a foreign company. The countries of the top three joint-venture partners were Germany and the United States (four joint-ventures each) and Austria (three joint-ventures). *(http://www.rec.org)*.

In the following period before the date of the official EU membership, the Republic of Croatia must accept in general all the EU standards, guidelines and models on environment protection management. The employment of accepted EU standards will surely enable a much wider use of technologies in environment protection, and especially in waste management, compared to the current situation in the regulations which identify all generally accepted environment protection standards of the developed EU and world countries. However, they do not define the manners of implementation and employment precisely and clearly enough.

In the future, the EU standards will be most easily approached probably in the field of air protection Already today all the air protection laws have been mostly harmonized with the technical directives and guidelines of EU stipulating the border values of substances out of stationary and mobile pollution sources, substances damaging the atmosphere and ways and technical guidelines of air and atmosphere protection *(www.evd.nl)*.

Legal screen

Law system

Croatia's bureaucracy remains entrenched, and red tape abounds. The Economist Intelligence Unit reports that the government has implemented two programs to promote the creation of small businesses. However, these efforts have not produced as much investment as expected since bureaucracy remains onerous, as high costs to start new businesses, burdensome administrative regulations, and occasional monopolistic or oligopolistic situations challenge new entrepreneurs. The EIU cites high wage costs and restrictive labour laws as impediments to business activity and reports that corruption seems to be a source of worry for foreign businesses. Often, gratuities are requested to

speed up the process." Croatia scores 4.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Current legal, regulatory, and accounting systems are not fully consistent with international norms. Croatia's commitment to adopt EU laws, norms, and practices, as well as the obligations of its IMF Stand-by Arrangement, World Bank structural adjustment loans, and WTO membership—commit Croatia to increase transparency and to equitable application of laws to both domestic and foreign businesses. Transparency in developing legislation and regulation are hampered by an inefficient public administration, a lack of intra-governmental coordination, and reliance on expert advice from national champions, potentially giving the latter a privileged position in influencing new regulations.

Both the Racan and Sanader governments have made tremendous progress purging the crony capitalism culture that characterized Tudjman-era privatization and regulation. Nevertheless, bureaucracy remains onerous, as high costs to start new businesses, burdensome administrative regulations, and occasional monopolistic or oligopolistic situations challenge new entrepreneurs. The World Bank estimates the registering a new business requires 12 steps and 49 days at a cost (relative to per capita income) below the regional average but above the OECD average.

While the regulatory system does not specifically discriminate against foreign investors, certain large national (and in some cases, foreign) companies often exert substantial influence over regulation to the detriment of new entrants. In registration of new drugs, local firms' applications take considerably less time to be processed. A lack of coordination within the government frequently means laws and regulations are not debated or cleared through other ministries or agencies. While foreign investors are seldom given a chance to comment on new regulations, neither are most Croatian investors. This leads to confusing and badly drafted legislation or regulations, which are subject to frequent changes and delays in implementation, or no implementation *(http://www.state.gov)*.

Trade laws

Import Tariffs: Customs tariffs currently range between 0 and 17.6 percent for industrial products with the majority subject to rates of 0 to 10%. The average tariff for industrial goods is about 3% and for agricultural goods 22-24%. Compound duties (ad valorem plus specific custom duty) are applied to a number of agricultural and food products. Maximum ad valorem duty is 64% and, where compound duty is applied, maximum ad valorem component is 15%. Under the WTO umbrella, Croatia is a signatory of the International Technology Agreement that provides for free import of information technology equipment. Import quotas have been phased-out.

Trade Barriers: The American Embassy in Zagreb has received no complaints from U.S. exporters on trade barriers in Croatia nor is it aware of any.

Import Requirements and Documentation: A Croatian importer is responsible for providing the required import documentation, which consists of common trade, transport, and customs documents, as well as certificates required for quality control and licenses where appropriate. The single Administrative Document (SAD) that is used by EU and most other countries is the key customs document in Croatia as well. Imported products are subject to quality control by market inspection officials. These officials are employed by the State Inspectorate to ensure that imported goods comply with Croatian standards, whether they are appropriately labelled and packed, and whether they have required documentation or quality certificates. The products subject to quality control are those in which improper quality may not be obvious or may be dangerous for the consumer (and include most food and agricultural products, furniture, cement, textile, electric and gas appliances, agricultural equipment, etc). These products must pass quality control testing before they are put on the market (i.e. at manufacturer’s or importer’s warehouse). When applicable, products also have to pass sanitary, phytopathologic, or veterinary control.

Prohibited and Restricted Imports. There are no prohibited imports. Import licenses are required for arms/ammunition, military and police equipment, mobile radio sets, drugs, narcotics, antiquities, precious metals, waste, nuclear technology, chemical weapons’ ingredients, and substances harmful to the ozone layer Import licenses are required for a few products originating in countries which are not members of the WTO (for iron tubes and bars, and fertilizers). Import licenses are issued by the Ministry of Economy.

According to the World Bank, Croatia's weighted average tariff rate in 2004 was 3.3 percent, down from the 9.8 percent for 2001. Non-tariff barriers include strict testing and certification requirements for

some imports and corruption in customs. Croatia scores 2.5 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental laws

In 1994, a new environmental protection law was passed by the Croatian parliament stating the main goals and principles of environmental protection in the country. Issues outlined in the environmental protection law include:

- Institutionalization of environmental protection at national and local levels;
- Environmental impact assessment procedures;
- The environmental information system, environmental monitoring and pollution inventory;
- Earmarked funds and other funds to finance environmental protection;
- Polluter pays principle;
- Methods for environmental monitoring and inspection;
- Obligation to develop environmental strategies, policies and programs; and
- Environmental protection measures that encourage the use of environmentally sound products and technologies.

To date there is sufficient institutional capacity only in a few environmental areas, and few specific regulations and standards have been implemented. In particular, the most comprehensive regulations can be found in the fields of water protection and environmental impact assessment. Besides specific environmental regulations, there are more than 400 regulations relating to the environment but with little coverage of environmental issues. In addition, national environmental protection issues are also incorporated in the Physical Plan and in several strategies, such as the Strategy for Water and the Agricultural Strategy. In general, the legislative basis of environmental protection is fragmented, does not address specific urgent problems, and lacks regulatory coordination. There are also major gaps in regulations, and a large part of the regulations are inappropriate or outdated. In particular, there is a lack of systematic environmental monitoring, and the clear definitions of rights, liabilities, responsibilities, control, financing and charges. Overall, environmental regulation is weak, and major improvements will be required to bring the country up to date with current EU standards *(http://www.rec.org)*.

Environment protection regulations (Low on Environment Protection, Law on Waste and executive decrees on waste, Law on Air Quality Protection and other regulations) currently in force in the Republic of Croatia define environment protection standards which have been accepted and are being carried out in other developed countries of the world and of the EU *(www.evd.nl)*.

Banking and finance

The European Bank for Reconstruction and Development reports that Croatia's banking sector is 91 percent foreign-owned, stable, and competitive. The government owns the Croatian Bank for Reconstruction and Development. Two large commercial banks, Zagrebacka Banka and Privredna Banka Zagrab, hold nearly half of total bank assets. The central bank adopted regulations in 2004 to constrain the rapid growth of foreign banks' foreign currency borrowing to finance profitable lending in Croatia. A law passed in 2001 brought banking regulations more closely into harmonization with European Union standards—for example, by raising capital adequacy requirements. "The industry has seen significant consolidation in the past several years," reports the EIU. "The number of banks fell from 60 at end-1998 to 45 by mid-2003, and to 40 by mid-2004."

Croatia scores 2.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Macro economic policy

The CNB decided to tighten its monetary policy in 2003. It announced that commercial banks, which increase their domestic placements more than 16 percent in 2003, would be penalised with the obligatory purchase of low-yielding CNB bills (in effect, required reserve). In addition the former ratio between claims and obligations in foreign currency was extended and tightened. The idea was to discourage domestic credit growth financed by foreign borrowing. After CNB bills in kuna reached records levels in March 2003, the CNB decided to discourage their further sales by offering bellow market interest rates. This resulted in a huge increase in excess liquidity, which was mopped up by further increase in kuna part of required reserved levied on foreign liabilities. In 2004 the penalties for fast growing banks were revoked. Further changes in reserve requirement immobilised a larger part of

required reserves. Regular weekly auctions of CNB bills in kuna with the duration of 35 days were terminated and left to the discretion of the CNB, while CNB bills in foreign currency were completely abolished *(http://www.hnb.hr)*.

The total fiscal and quasi-fiscal adjustment of 2¾ percentage points of GDP targeted for 2004-05 is ambitious. The government has shown its commitment by the decision to postpone the planned VAT rate reduction. But given the uncertainties surrounding the short-term outlook, the authorities should stand ready to adjust fiscal targets as needed to secure the macroeconomic objectives of the program. "The measures to enhance transparency, control quasi-fiscal activities, and improve expenditure and debt management are welcome. To sustain the fiscal adjustment, the government will need to undertake significant expenditure reforms in the context of a medium-term expenditure plan. This would also enable it to achieve its goals of reducing the tax burden and adjusting spending priorities in order to meet EU accession-related needs. To achieve these goals, the government should focus on reducing the share of current spending, which is relatively high in Croatia *(http://www.imf.org)*.

Croatia scores 3.38 on the macroeconomic environment index, which means that the country is relatively unstable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

Croatia's top income tax rate is 45 percent. The top corporate tax rate is 20 percent. In 2004, according to the International Monetary Fund, government expenditures as a share of GDP decreased 1.1 percentage points to 51.6 percent, compared to a 1.3 percentage point increase in 2003. As a result, Croatia's fiscal burden of government score is 0.2 point better this year. Croatia scores 2.8 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

- Profit tax, 20 percent
- Income tax, 15, 25 and 35 percent, depending on the amount of income
- Value added tax, 22 percent, apart from exemptions which are 0%
- Transfer of property tax, 5 percent
- Inheritance of gifts tax, 5 percent
- Luxury goods tax, 30 percent and so on *(http://us.mfa.hr)*

Corruption

Corruption remains a problem in Croatia, but great improvements have been made since the late 1990s. The Sanader government took office pledging that there would be no "untouchables." Several nominations for assistant minister posts were withdrawn after allegations of corruption were raised -- an encouraging sign. A new parliamentary Commission for the Prevention of Conflict of Interest was established in 2003, and formed in 2004. Its first year of existence was dogged by political infighting and an overly broad mandate that limited its effectiveness. For the first time officials had to publicly declare their assets. The investigation of a former Foreign Minister (and president of one of the parties in the ruling coalition) pointed up the failings of the investigative and judicial systems, but was encouragingly free of political interference.

The new index, published today by Transparency International (TI), the world's leading non-governmental organisation fighting corruption, ranks 102 countries. Seventy countries - including many of the world's most poverty-stricken - score less than 5 out of a clean score of 10. Countries with a score of higher than 9, with very low levels of perceived corruption, are predominantly rich countries. On the corruption perception index Croatia scores 3.8 and ranks 51 *(http://ww1.transparency.org)*.

Crime

Croatia scores 79. Average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

Politics of Croatia takes place in a framework of a **parliamentary representative democratic republic**, whereby the **Prime Minister of Croatia** is the **head of government**, and of a pluriform multi-party system. **Executive power** is exercised by the government. **Legislative power** is vested in both the **Croatian Government** (Vlada) and the **Croatian Parliament** (Sabor). The **Judiciary** is independent of the executive and the legislature. It adopted its current constitution on **December 22**, **1990**, and declared independence from **Yugoslavia** on **June 25**, **1991** *(http://en.wikipedia.org)*.

Institutions

The main executive power of Croatian state is the **government** (in Croatian: "vlada"), presided by the **Prime Minister**. The government ministers (the cabinet) are appointed by the prime minister with the consent of the **Parliament**. The prime minister is the head of government, appointed by the President with the consent of the Parliament who takes his duty when Parliament gives its consent by absolute majority of all representatives. *(http://en.wikipedia.org)*.

The National institutions are the office of the President, Parliament of the Republic of Croatiea, Government of the Republic of Croatia, Ministry of Agriculture and Forestry, Veterinary Administration, Ministry of Culture, Ministry of Defence, Ministry of Economy, Ministry of Education and Sport, Ministry of Environmental Protection and Regional Planning, Ministry for European Integration, Ministry of Finance, Ministry of Foreign Affairs, Ministry for Handicraft, Small and Medium-sized Enterprises, Ministry of Health, Ministry of Labour and Social Welfare, Ministry of Public Works, Reconstruction and Construction, Ministry of Science and Technology, Ministry of Maritime Affairs, Transport and Communications, Ministry of Tourism, Office for National Security, StateOffice for Statistics, State Office for Intellectual Property, State Office for Standardization and Metrology, Hydro=meteorological State, Croation Agency for Investment Promotion, Croatian Information Documentation Referral Agency etc *(http://www.heritage.org)*.

Government Intervention

Based on data from Croatia's Central Bureau of Statistics, the government consumed 19.9 percent of GDP in 2004, down from the 21.25 percent reported in the 2005 Index. As a result, Croatia's government intervention score is 0.5 point better this year. In 2003, based on data from the Economist Intelligence Unit, Croatia received 2.52 percent of its total revenues from state-owned enterprises and government ownership of property. Croatia scores 2.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental Priorities

Croatia's environmental situation is to some extent different from that of other Central and Eastern European countries. On one hand, the wartime destruction of chemical plants, oil refineries and numerous water and wastewater networks increased the environmental problems. On the other hand, the closure of heavily damaged polluting industrial plants improved the environmental situation. Croatia is giving little attention to environmental protection issues. Environmental priorities are currently set without any comprehensive strategy and instead are mainly in response to the most pressing environmental problems causing threats to human health.

However, over the past few years some priority was given to the quality and availability of environmental information. The State Directorate for Environmental Protection has established an Information System for the Environment program designed to support decision making in environmental regulation and protection. The system contains information on pollution levels, selected information on the state of the environment, expert and scientific information from various institutions and documentation and information related to environmental protection issues. Furthermore, priority was given to the protection of sea and surface water, consistent with the fact that the most extensive parts of environmental legislation are dedicated to water protection issues.

One of the major environmental problems facing Croatia is still a lack of proper waste management. Municipal and industrial waste is dumped on open dumpsites, jeopardizing soil and groundwater. The problem mainly stems from the lack of appropriate landfill sites, incomplete legislation and illegal dumping of all kinds of waste. The major direct environmental investments so far have focused on water protection issues and include the construction of sewage systems and wastewater treatment

facilities. In the future, major spending can be expected on waste management projects and perhaps air and nature protection. However, the lack of accurate data makes it extremely difficult to predict the magnitude of spending that is likely to take place *(http://www.rec.org)*.

Government programs

Croatia does not currently operate a state environmental protection fund nor do such funds exist on regional or local levels.

Political stability

The political instability index rates Croatia with 0,56. The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability *(http://humandevelopment.bu.edu)*.

Economic screen

Natural resources
Croatia's natural resources are: copper, pyrites, asbestos, gypsum, timber, salt, marble, clay earth pigment *(http://www.cia.gov)*.

Exchange rate

Kuna per US dollar - 5.9473 (2005), 6.0358 (2004), 6.7035 (2003), 7.8687 (2002), 8.34 (2001) *(https://www.cia.gov)*.

Gross domestic product

GDP (purchasing power parity)	$55.76 billion
GDP (official exchange rate)	$34.94 billion
GDP (real growth rate)	4 percent
GDP per capita	$11.600

(https://www.cia.gov).

Inflation

Inflation rate (consumer prices)	3.3 percent

(https://www.cia.gov).

Environmental expenditures

Because of the unfavourable economic situation, followed by the introduction of restrictive controls on total income and strict limits on the establishment of funds for specific purposes, environmental investments are comparatively low in Croatia. The State Directorate for Environment roughly estimated the total was USD 152 million in 1995. However, this figure has to be taken with caution because comprehensive data on environmental expenditures is not collected in Croatia, and it can be assumed that non-environmental expenditures are included in this figure. Environmental funding is very limited in Croatia, and in general it is extremely difficult to obtain funds from the central budget. However, funding is still required to establish a monitoring system for air and water, to develop projects for solid and hazardous waste management, to clean up the main polluted rivers and the Adriatic Sea, and to reconstruct water supply and sewage networks. The environment is not treated as a priority by either the government or the public. This is evident in the small amount of environmental funding derived from state or municipal budgets *(http://www.rec.org)*.

Demand for environmental technologies

Unfortunately, there is no information available about this issue.

Major end-users

Unfortunately, there is no information available about this issue.

Major suppliers

Unfortunately, there is no information available about this issue.

Foreign trade zones/ free ports

The government of Croatia is dedicated to promote Free Trade Zones, especially in war-affected areas. Special incentives are offered to users of FTZs. A Law on Free Trade Zones was adopted in June 1996. According to this law, a foreign-owned or domestic company in a foreign trade zone (FTZs) may engage in manufacturing, wholesale but not retail trade, foreign trade, banking and other financial activities. New laws on free trade zones and industrial parks, which were being considered at the time of the last Investment Climate Statement, have been withdrawn and are being redrafted. Article 24 of the Law on Profit Tax also covers business in Free Trade Zones. FTZ users are eligible for the following benefits: waiver of tariff on imported products; a user of the zone who constructs or participates in construction of infrastructure projects in the zone worth HRK 1 million (about $1350,000) or more, is exempted from paying corporate tax during the first five years of operation in the zone; other users in the zone pay corporate tax in the amount of 50 percent of the regular rate (i.e., 10 percent instead of 20 percent); zones are exempted from any Croatian emergency measures or other restrictions pertaining to foreign trade or hard currency transactions. Users of the zones may freely store their goods and production equipment in the zones. Goods that are not intended for trade on the Croatian market or for domestic consumption are fully exempt from custom duties or taxes. Goods that are imported into Croatia will be taxed and assessed duties per the value of the production materials imported for the product and not per the value of the finished product. The following seventeen locations are currently FTZS: Buje, Krapina-Zagorje, Osijek, Rijeka, Sibenik, Slavonski Brod, Split, Splitsko-Dalmatinska County, Obrovac, Ploce, Pula, Kukuljanovo, Varazdin, Zagreb, Bjelovar, Podunavlje - Vukovar, Vukovarsko-Srijemska County *(http://www.state.gov)*.

Technological screen

Technology level

Technology Index Rank	43/80
ICT Subindex	37/80
Innovation Subindex	50/80
Technology Transfer Subindex	35/80

(http://www.weforum.org).

Technological development

Despite of improvements in the procurement of equipment Croatian research still lacks up-to-date equipment and that which does exist is often provided through international co-operation projects. Croatia particularly lacks, equipment of major scale, and compensates this through international cooperation schemes (e.g. with CERN, and other European centres) *(http://ec.europa.eu/research)*.

Property rights

Concerning the exploitation of the results, Intellectual property protection and patenting are regulated by the Patent Act and related acts. This area is under the responsibility of the Croatian State Intellectual Property Office (CSIPO). Since October 2003 there is a new legal framework for intellectual property. In October 2003 the Croatian Parliament has passed the following acts in this area: Copyright and Related Rights Act, Patent Act, Trademark Act, Act on Industrial Designs, Act on Indications of Origins of Products and Services, and the Act on Protection of Topographies of Semiconductor Products. They respect both WIPO international agreements and EU directives. There is a need to raise awareness of the importance and the role which intellectual property creation and protection play in modern industrialized societies. The National Programme of the Republic of Croatia for the Association to the European Union in 2004 (the Official Gazette 37/2004) includes measures regarding the intellectual property matters. In spite of the significant efforts of CSIPO in the field and around sixty patent agents registered at CSIPO it is very hard to obtain strategic advice in this field, especially when research and technology is involved. Commercial companies have been slowly building up some in-house basic intellectual property knowledge, but only two companies in Croatia have presently full fledged intellectual property departments.

Research institutions (including Ministry of Science, Education and Sports) have very modest capability in the intellectual property protection accompanied with the almost total absence of IPR strategy and policies. Since MSES recognized that as the serious limitation factor of commercialization of research results, academic entrepreneurship, and public-private partnership, the CARDS project on establishing IPR infrastructure has been initiated and accepted. Assistance in managing and counselling in the field of research and management is not developed in Croatia *(http://ec.europa.eu)*.

The court system is cumbersome and inefficient. According to the U.S. Department of Commerce, "Huge case backlogs mean that business disputes can go unresolved for years; some investors have chosen to insist that contract arbitration take place outside of Croatia. The Government of Croatia has made a commitment to reinvigorate its efforts to reform the judiciary, but much remains to be done." The same source reports that the government's "anti-corruption plan also involves reform of the judiciary, one of the areas most in need of reform, according to the prime minister." Croatia scores 4.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Telecommunications

Croatia has good overall telecommunications infrastructure, with good international, national and local distribution. Needed improvements, though important, are not hindering the development of high quality networks throughout the country. The presence of an extensive national fibre-optic network with modern switching equipment gives Croatia an important prerequisite to a competitive advantage for wireless telephone and Internet service markets. In addition, Croatia has technically competent, highly educated labour *(http://ec.europa.eu)*.

There are 1.3 million people who use the Internet, this is 29.3% of the population. 47% of the working poplaton, 38% students and 15% other. Despite the growth of the Internet use, Croatia lays behind *(www.evd.nl)*.

Socio cultural screen

Language

Croatian 96.1%, Serbian 1%, other and undesignated 2.9%, including Italian, Hungarian, Czech, Slovak, and German *(http://en.wikipedia.org)*. English is a general business language. Elderly people often speak German *(www.evd.nl)*,

Religion

Roman Catholic 87.8%, Orthodox 4.4%, other Christian 0.4%, Muslim 1.3%, other and unspecified 0.9%, none 5.2% *(http://en.wikipedia.org)*.

Education

The school system in Croatia is experiencing both difficulties and change. Because of various circumstances, the process of educational democratisation has not really got underway yet. Croatia clearly desires inclusion in European integration, which will decisively influence the political decision-making process. These decisions cannot in and of themselves bring about significant change in the school system, but they can free the schools of politicisation and bureaucratic pressure and thereby create space for human creativity. With the coming of peace, the little problems of life will move onto the public agenda, and we believe that especially parents and teachers will finally see the problems of children and then change the schools to meet their needs as people. This is a very difficult path with many very small steps. But these steps will be taken. In Croatia there are today many small activities that slowly but surely are breaking down the old walls to open up a new perspective *(http://www-gewi.kfunigraz.ac.at/csbsc/)*.

Business etiquette

In many ways one of the more conservative areas of the former Yugoslav Federation, Croatia tends towards formal business protocol, but this image of Western-style efficiency is often belied by the fact that things go very slowly on account of the cumbersome bureaucracy. Communication, however, is no problem as English and German are widely used as second languages. Business cards including professional or academic titles should be exchanged just after formal introductions. There is also a large number of local agents, advisers, consultants and, to a lesser extent, lawyers, willing to act for foreign companies, but none should be engaged before being thoroughly checked in advance. Croatia has created a more liberal framework for foreign investments so that foreign investors are guaranteed special rights and incentives for investing in Croatia. Office hours: Mon-Fri 0800-
1600

The business culture of Croatia is Western. The Croatians travelled a lot and know the West European habits of doing business. When doing business it is best to visit the country and know something about the country and the culture. Often first contact is rather reserved.

In Croatia people often eat a hot meal during the afternoon. Lunches are definitely related with doing business, but they are used to get to know each other. Drinking and smoking are normal during these lunches. In business the surnames are used. Often the business partner says that you can use the first name, because the surname is too difficult to pronounce. Still keep saying mister and madam.

Decisions are taken slowly and not at a first meeting. Business is accomplished after a reinsurance of the Croatian company. Telephonic appointments need to be reinsured by fax. Croatian people do not like to wait so come in time. Business gift are common but do not over do it. Flowers, souvenirs, and promotion articles are good options. *(http://destinia.com)*.

Appendix 2 Country profile: Czech Republic

Basic needs

Population size

Czech Republic has a population: of 10230060 million inhabitants in the year 2006 *(http://en.wikipedia.org)*.

Growth

Population growth rate: −	-0.05 in the year 2006
Birth rate:	9.67 births/1,000 population
Death rate:	10.54 deaths/1,000 population

(http://en.wikipedia.org).

Age structure

0-14 years:	14.7 percent (male 773,028; female 731,833)
15-64 years:	71.1 percent (male 3,651,018; female 3,627,006)
65 years and over:	14.2 percent (male 565,374; female 892,879)

(*http://en.wikipedia.org)*

Urbanization

The population is evenly spread through the Czech Republic. About 20 per cent of the inhabitants live in the five main cities and 35 per cent lives in town with more than 50.000 inhabitants. The rest of the population lives in rural areas *(www.evd.nl)*.

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	2 556	2 620	2 671	2 706	2 688	2 612
Urban population (thousands)	7 750	7 711	7 597	7 513	7 471	7 454
Percentage urban (%)	75.2	74.6	74.0	73.5	73.5	74.0

(http://www.un.org/esa/)

Migration

The Czech population is multinational. There are many nationalities living in Czech Republic, among them: Polish, German, Moravian, Silesian, and Ukrainian people *(**www.evd.nl**)*. The Czech Republic has transformed in the last 15 years from a land of emigration to one of transit and immigration. Out of a total population of 10.2 million, 252,000 people (or 2.5 percent) in the Czech Republic in 2004 were legal immigrants. In 1993, this figure stood at just 0.8 percent. The number of illegal immigrants is estimated at 300.000 to 340.000. (*http://www.migrationinformation.org)*.

Geography

The Czech landscape is quite varied; **Bohemia** to the west consists of a basin, drained by the **Elbe** (**Czech**: *Labe*) and **Vltava** rivers, surrounded by mostly low mountains such as the **Sudeten** with its part **Krkonoše**, where one also finds the highest point in the country, the **Sněžka** at 1,602 **metres** (5,256 **ft**). **Moravia**, the eastern part, is also quite hilly and is drained predominantly by the **Morava** river, but also contains the source of the **Oder** (**Czech**: *Odra*) river. Water from the landlocked Czech Republic flows to three different seas: the **North Sea**, **Baltic Sea** and **Black Sea** *(http://en.wikipedia.org)*.

Climate

The local **climate** is **temperate** with warm summers and cold, cloudy, humid winters, typified by a mixture of maritime and continental influences *(http://en.wikipedia.org)*.

Environmental problems

Significant environmental damage was sustained in the past, especially in the mining districts of northern Bohemia and the industrial areas of northern Moravia. The construction of a nuclear power plant at Temelin, and severe air pollution in industrial and urban areas are the most frequently cited environmental problems. A major source of air pollution is the energy and power generation sector, (currently, 60 percent of energy generation is based on coal-fired plants). Several universal issues

applicable to most environmental sectors and which influence project opportunities were frequently cited. The most common problems interestingly include: lack of capital for environmental projects, incomplete or changing legislation and inconsistent enforcement, and lack of interest in environmental management systems and other environmental compliance programs. As this research focuses on air and energy sectors these sectors are highlighted.

Currently, air pollution control projects focus on fuel conversion (switching to natural gas) in local heating stations. Gas heating is gradually being introduced in individual family houses, and, in some areas, in businesses as well. Overall, however, state initiatives to increase gas usage have until now had only a marginal effect due to the lack of funding, other municipalities/. On-site measurement of air emissions is not yet a pressing issue, as legislation does not force polluters to install devices for continuous monitoring. Also, small stationary sources of pollution are not regulated at this time. Air emissions from mobile sources have a strong negative impact on air quality, and aggravate local air pollution problems, especially in large cities. For instance, Prague introduced a partial vehicle ban, and some towns in north Bohemia experience heavy pollution from traffic as well. Car service checks are not stringent, and the technical state of the country's vehicle fleet is poor. Even if the Czech Republic were to introduce exhaust emissions controls and tried to ensure that fuels and regulations conformed with EU standards, enforcement would be difficult

Few environmental firms are accustomed to considering energy issues as a part of the environmental sector. Priority areas in the sector include the conversion of most of the current small and medium-sized heating stations from coal-burning to gas use; the reconstruction of larger heating stations in order to also use them for electricity generation; and modernization and construction of new small energy sources. The latter group includes the implementation of water hydroturbines, solar energy use (on a small scale), landfill gas utilization, wind mills, and other energy sources. As fees for energy (electricity, heat, gas, other fuels) steadily rise, energy saving issues should become more important within the forthcoming years. (regional, environmental countries *(http://www.rec.org)*.

Environmental business sector

The Czech environmental market is developing steadily with an estimated 600 companies providing environmental products or services. Most environmental companies operate as private enterprises and more than 90 percent were created within the last five years. The sector is comprised of mainly small companies with more than half of the companies reporting less than 20 full-time employees. The high percentage of small firms resulted in low turnover figures. The market is oriented towards the production of environment-related products, with this activity capturing 44 percent of total company revenues. The greatest market existed for environmental products related to the treatment of municipal and industrial waste water.

The second highest revenue generating activity was technical services (35 percent). The highest demand was for engineering and planning activities related to municipal water treatment. For general consulting activities, industrial solid waste management topped the list. Laboratory activities (testing and monitoring) were third, capturing about 12 percent of company revenues. Project management and research and teaching activities generated relatively low incomes. When looking at media specific areas, water related activities generated the most revenues for Czech companies at 39 percent. This area was followed by solid waste-related activities at 21 percent and then air-related activities at 13 percent.

Czech companies were the most active in international markets as 7 out of 10 reported earning income from abroad. Furthermore, 60 percent of companies reportedly worked with foreign partners on joint projects and 15 percent were engaged in joint ventures with foreign partners. The impact of the dynamic changes in this market was reflected in the high demand from Czech companies for environmental information and advanced professional training. The most requested topics included information on environmental regulations, financing environmental projects and new environmental technologies *(http://www.rec.org)*.

There have been many developments in the area of environmental improvement, but there is still a lot to do, also after the entry to the European Union. All environment legislation, except three areas, needs to be translated to the national context. Mostly attention is given to implementing and sustaining of the environment legislation. The priorities are in congruence with Sixth European Action Plan Environment. They are defined as followed: sustainable use of natural resources, protecting of the water supply, improvement of the amount of rubbish and treatment of rubbish, protect the environment against human activities, improve environmental standards and the quality of life, protect the climate

and limit COs, protect nature, landscape, biodiversity and stimulating the awareness of the environment by the population.

Due to the implementation of the EU legislation, there is a huge demand for Western knowledge and advanced, payable technology. Especially the need of expertise in the area of sustainable energy (biomass) At the moment wood is used as energy source because the electricity and gas are getting more expensive. By the end of 2010 the alternative energy sources should be 8 percent of the total amount *(www.evd.nl)*.

Legal screen

Law system

Red tape and bureaucratic corruption are still big problems. According to the U.S. Department of Commerce, "bureaucracy and unnecessary red tape remain sources of complaints by both domestic and foreign investors. Delays and allegations of corruption are common, especially in the process of registering companies and changes to corporate structure, and are of particular concern to foreign companies operating in the Czech Republic." The Economist Intelligence Unit reports that "firms must meet myriad local standards on health, hygiene, ventilation, and utilities use, among others." In addition, "to establish a company or change a registration, bundles of documents stamped by notaries have to be submitted to a special judge at a regional court." As a result, companies are almost forced to hire lawyers and bribe officials to complete the process. The Czech Republic scores 3.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Tax, labor, environment, health and safety, and other laws generally do not distort or impede investment. Policy frameworks are consistent with a market economy. All laws and regulations are published before they enter into force. Opportunities for prior consultation on pending regulations exist, and all interested parties, including foreign entities, can participate. A biannual governmental plan of legislative and non-legislative work is available on the Internet, along with information on draft laws and regulations (often only in Czech language). Comments can be and are made by business associations, consumer groups and other non-governmental organizations, including the American Chamber of Commerce. *(http://www.state.gov)*.

Trade laws

The legal environment for economic and trade activities has substantially improved in the Czech Republic over the last five years. In addressing the recession, the Czech Government took significant steps to enhance the economic climate, both through domestic reform and by further trade and investment liberalization. The legal environment for economic and trade activities has also substantially improved since the Czech Republic's previous Trade Policy Review in 1996. A broadly coherent body of commercial and trade law is now in place. Much of the progress can be attributed to the Czech Republic's goal of accession to the European Union (EU). EU harmonization, which requires absorption of the EU acquits communitarian, has proved to act as a catalyst to speed up the implementation of the reform agenda. While the legal environment is good on paper, it appears that weaknesses in the dispute resolution system continue to be a problem. The slow functioning of the overburdened commercial courts and weak enforcement has been identified as factors hampering the business environment. *(http://www.wto.org)*.

The Czech Republic adopted the trade policies of the European Union when it joined the EU in May 2004. The common EU weighted average external tariff was 7.3 percent in 2003, based on World Bank data. In the 2005 Index, based on World Bank data, the Czech Republic had a tariff of 4.1 percent. According to the World Trade Organization and the U.S. Trade Representative, the EU imposes non-tariff trade barriers through a complex regulatory system and export subsidies. Based on its adoption of EU trade policies, and on the revised trade factor methodology, the Czech Republic's trade policy score is 0.5 point better this year. The Czech Republic scores 2.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental laws

The Czech Republic has many laws for environmental protection that include both command and control mechanisms and market-based incentives. However, enforcement of these regulations is still weak and enforcement audits are infrequently conducted. Therefore, most industrial institutions are not upgrading equipment due to environmental laws.

Environmental laws

- New acts on chemical safety;
- New act on genetically treated organisms management;
- New act on the regulation of trade in endangered and protected species;
- New act on the phase-out of ozone depleting substances;
- New act on waste water charges;
- Amending the Waste Management Act.

Economic instruments

- revising waste disposal, air and water pollution charges;
- introducing tradable emission rights.

Information instruments

- Completing an integrated environment monitoring and information system
- Enforcing the National Eco-labeling Program ;
- Introducing a new environmental statistics and accounting system *(http://www.rec.org)*.

Banking and finance

Following the 1990s banking crises and subsequent privatization, the government has no stake in the banking sector, and foreign owners now control 90 percent of Czech banking assets. According to the Economist Intelligence Unit, "Most of the largest banks are now owned and operated by large Western European financial groups from France, Belgium, Germany and Austria. Through these and other acquisitions, foreign firms have come to dominate the local markets for banking, brokerage, insurance, pension-fund management and other financial services." Subject to approval by the central bank, a foreign bank may establish a wholly owned bank, buy into an existing bank, or open a branch. The Czech Republic's "universal" banking license allows nearly all banks to operate anywhere in the country and in all types of banking activities. The sector remains burdened by a weak bankruptcy framework and a backlog of bankruptcy claims. The Czech Republic scores 1.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Macro economic policy

Monetary policy has switched to headline inflation targeting to increase transparency and credibility The government does not handle monetary restrictions; money can be transferred in and out the country without any limit. All branches of worldwide major banks and financial institutions operate in the Czech Republic. (*http://www.hlbi.com)* The government regulates the foreign exchange regulation in order to protect the state's balance of payments and foreign exchange economy. In spite of the processing liberalization of the Czech financial markets, there is still supervision by the Central Bank. The foreign exchange regime was liberalized on the authority of the Foreign Exchange Act. *(http://www.oecd.org)*. The government is considering a side-ranging public expenditure reform. They first reschedule the expensive pension policy need to be rescheduled. Additional fiscal stimulus is budgeted and future fiscal prospects remain worrying, as the spending liabilities of the pension and health system. The Czech Republic is now a country with a heavy tax burden exceeding the average of the low income OECD countries by more than 5 percentage points of GDP These high taxes, which are distorting economic choices and risk eroding business and work incentives, should therefore be lowered *(http://www.oecd.org)*.

Czech Republic scores 3.77 on the macroeconomic environment index, which means that the country is relatively unstable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

Trading branches are usually taxable on actual profits as is recorded in their double entry bookkeeping in the same manner as Czech companies. Dividends, interest, royalties and rental payments paid by a Czech subsidiary to a foreign parent are generally subject to withholding tax, except in situation where these payments are exempt under the EU directive regime. Dividends from EU subsidiaries are tax exempt when received. Dividends received from other entities from the EU and subsidiaries from non-EU countries are subject to 15 percent tax when received.

The value added tax in the Czech Republic is a tax on transactions and is essentially a tax on consumption. The final consumer bears the tax on the purchase of goods and services. A person that has no seat place of business, or establishment in the Czech Republic is obliged to register for Czech VAT when it conducts its first economic activity in the Czech Republic, subject to some exceptions. VAT is administered by the relevant Financial Authority. Complete and detailed record must be kept for VAT purposes for 10 years after the end of a taxable period. The standard VAT rate is 19% on the sale of goods and services and the reduced rate of 5% on the sale of certain goods such as food, pharmaceuticals, printed books and certain services. VAT can be recovered by businesses on all goods and services. Further information can be found on the Chamber of Tax Advisers of the Czech Republic.

Corporate income tax is levied on corporate entities, including joint-stook companies, limited liability companies and limited partnership. Taxable profit is based on accounting profit which is calculated according to Czech accounting laws and practice. However tax liability is calculated using the taxable profit with adjustments for certain items. The tax is approximately 26% *(http://www.hlbi.com)*.

The Czech Republic's top income tax rate is 32 percent. In January 2005, the top corporate tax rate was cut to 26 percent from 28 percent. In 2004, government expenditures as a share of GDP decreased by 7.3 percentage points to 45.9 percent, compared to a 6.3 percentage point increase in 2003. On net, the Czech Republic's fiscal burden of government score is 1.1 points better this year. The Czech Republic scores 2.5 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Corruption

Current law makes both giving and receiving bribes criminal acts, regardless of the actor's nationality. Jail sentences have been increased to up to eight years for officials, with stiffer penalties for bribery previously enacted by Parliament. Bribes cannot be deducted from taxes. Law enforcement authorities are responsible for combating corruption. These laws are applied equally to Czech and foreign investors. The Czech Republic ratified the OECD anti-bribery convention in January 2000.

While there has been no lack of public accusations and suspicions of bribery, only a few cases have reached the prosecution and conviction stage. Allegations of corruption are most pervasive in connection with the court-controlled system of company registration and the police. Such allegations have also been raised in the course of recent privatizations and government procurements. A new government procurement law, required for EU accession, is intended to curb illegal activities in this sphere. The Transparency International chapter in the Czech Republic actively conducts public information campaigns through distribution of posters and has given numerous broadcast and print media interviews on corruption and bribery cases. In 2004, the government proposed legislative changes and other actions to reduce corruption in public life *(http://www.state.gov/e/eb/ifd/2005/42007.htm)*.

The new index, published today by Transparency International (TI), the world's leading non-governmental organization fighting corruption, ranks 102 countries. Many of the world's most poverty-stricken - score less than 5 out of a clean score of 10. Countries with a score of higher than 9, with very low levels of perceived corruption, are predominantly rich countries, On the corruption perception index Czech Republic scores 3.7 and ranks 52 *(http://ww1.transparency.org)*.

Crime

Czech Republic scores: 73. Average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

The Czech Republic is a parliamentary representative democratic republic whose head of state is a president. This president, Vaclav Klaus, is elected by a joint session of the parliament for a five-year term. He is the formal head of state and has limited power. His most important powers are to return laws to the parliament, nominate constitutional court judges for Senate's approval and dissolve the parliament under certain special and rare conditions. He is also responsible for appointing the prime minister as well as the other members of the cabinet on a proposal by the prime minister. The prime minister is the head of the government and has considerable powers. He sets the agenda for most

foreign and domestic policy, mobilize the parliamentary majority, and choose governmental ministers. The Czech Republic has a multi-party system. For the elections of 2006 a total of 31 Czech parties and movements will compete. This is due to the low cost of registering a political entity, approximately 500 euros *(http://en.wikipedia.org/wiki/)*.

Institutions

Political parties (June 2002 election): Czech Social Democratic Party (CSSD), 70 seats; Civic Democratic Party (ODS), 58 seats; Communist Party of Bohemia and Moravia (KSCM), 41 seats; Christian and Democratic Union-Czechoslovak Peoples Party (KDU-CSL), 21 seats; Freedom Union (US), 10 seats *(http://en.wikipedia.org)*.

Government intervention

Data from the central bank indicate that the government consumed 22.7 percent of GDP in 2004. In 2003, according to the International Monetary Fund, the Czech Republic received 2.53 percent of its total revenues from state-owned enterprises and government ownership of property. The Czech Republic scores 2.5 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental priorities

The decline in environmental quality was either stopped or slowed down, and in some cases improved. For example, sulphur dioxide, nitrogen oxide and dust emissions were reduced by 24 percent, 23 percent and 30 percent, respectively. Greenhouse gases emissions decreased considerably. Surface water quality also improved as the Czech government built new waste water treatment plants and incorporated advanced technologies. In the Elbe River basin alone, new treatment plants serve about three million users.

The Czech government bases their environmental policy on five basic principles:

- Principle of Sustainable Development;
- Precautionary Principle;
- "Polluter pays" Principle;
- Best Available Technology Principle;
- Principle of Acceptable Level of Environmental Risks.

The strategic goals of the policy are:

- To ensure the quality of the environment is comparable with the current average level of the OECD states, by 2015 - 2020.

The Czech Republic has promised to harmonize European Union environmental standards. This will increase the demand for pollution control technology and equipment that meets EU standards.

Government programs

The Czech government has some support programs. For example: activities in the area of alternative energy and other priorities of the Czech environmental policy are supported by the State Environmental Fund (SEF). Since the first of April 2005 these programs are on a hold because there were too many project requests.

Since 2004 the EU Cohesion Fund financed environmental projects in the Czech Republic. Before ISPA programs financed these projects. The projects are situated in the area of waste pipe systems and water cleaning installations *(www.evd.nl)*.

Political stability

The Czech politics are turbulent, but at the moment in stable water. In the past few years there have been many politic leaders. The position of the financial sector strengthened last year, aided by the growth of the domestic economy. Both the real economy and the financial sector are becoming increasingly interconnected with the external environment. The domestic financial market is greatly affected by developments on global and regional markets. The acceleration in lending in a phase of economic recovery may lead to higher future risks, which could materialize particularly in the event of an economic downturn.

On the political stability index of Kaufmann Lithuania scores 1.02. The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability (*http://humandevelopment.bu.edu/)*.

Economic screen

Natural resources

The natural resources of the Czech Republic are: Coal, coke, timber, lignite, uranium, magnesite *(http://www.state.gov)*.

Exchange rate

Koruny per US dollar - 23.957 (2005), 25.7 (2004), 28.209 (2003), 32.739 (2002), 38.035 (2001) *(https://www.cia.gov)*.

Gross domestic product

GDP (purchasing power parity)	$199.4 billion
GDP (official exchange rate)	$109.4 billion
GDP (real growth rate)	6 per cent
GDP per capita	$29.500

(https://www.cia.gov)

Inflation

Inflation rate (consumer prices)	2.0 percent

(https://www.cia.gov)

Expenditures on environmental technology

Spending on environmental protection in the Czech Republic has been stable over recent years, at between 2 and 3 percent of GDP. Two major environmental priorities include air pollution control projects, accounting for more than a half of environmental expenditures, and water management projects, which account for more than a third of total environmental spendings.

Air pollution from large stationary sources is still considered the most important cause of environmental damage, and money is continuously allocated for air protection projects in the energy and power generation sector. Between 50 and 60 percent of electricity generation in the Czech Republic is still based on burning coal or lignite. The installation of desulfurization units and other equipment in the largest coal-burning power plants is under way, and this accounts for a major portion of investments in air pollution control. Emissions of NOx are to be reduced by half, and for carbon monoxide, by a quarter. The estimated cost of the program to the year 2000 stands at about 126 billion crowns (USD 4.4 billion) *(http://www.rec.org)*.

Demand for environmental technology

In the majority of sectors, the demand for environmental technologies was estimated to be between "moderate and slowly growing" and "high and likely to grow." Generally, technologies for water and wastewater treatment were ranked among the most needed, followed by technologies for waste management, air, and energy. Demand for noise, vibration and occupational health and safety technologies were low.

Demand for air-related technologies was moderate. In high demand were technologies for air pollution control/flue gas purification equipment (e.g. filters, scrubbers). Growth in demand was expected for air sampling/laboratory analysis equipment for gaseous emissions; and continuous-basis monitoring equipment for ambient air. In the researcher's opinion, additional comments are necessary to elaborate on the situation presented above. Air quality has a strong impact on the health of the general public and on the state of environment, and technologies reducing gaseous emissions occupy a significant part of the market at present. The current market demand for environmental technologies can be ranked as follows:

- Air pollution control technologies;
- Emissions/ambient air monitoring equipment, and air sampling, and;
- Emission abatement/cleaner production technologies.

Air pollution control technologies are represented by scrubbers, other fuel gas purification units, and by large and sophisticated systems to reduce the emission of solid particles, sulphur dioxide, carbon

oxide etc. By far the largest sums of money are being invested in this technology category, and the trend is expected to continue for several years to come. Technologies for combustion conversion from coal to natural gas, and/or cogeneration technologies that reduce emissions are in demand at present, and demand is expected to grow in the near future. In contrast, cleaner production technologies are not in high demand now, but may be of greater importance once the enforcement of air related legislation becomes more stringent.

Overall, demand for energy-related environmental technologies was moderate. In no single technology class was demand found to be high. Increasing demand was expected for technologies related to the retrofitting and rehabilitation of existing systems for both the energy sector and other industrial sectors, followed by alternative (non-CFC) refrigerants. Demand for other technologies in this sector was low to moderate. Rehabilitation and retrofitting of existing energy systems and the improvements in process management and control are currently under way, and can be expected to continue. New and efficient energy and heat generation systems are already being introduced on a small scale, and will become more important in the near future.

Energy-saving technologies and alternative energy sources are not currently in high demand, although demand is expected to grow within the next few years. At present, aside from meeting environmental compliance requirements, energy generating companies are not forced to implement any significant energy-saving measures, largely because they are paid for energy supplied and not that saved. However, within the next few years rising fees for energy use will increase the demand for energy efficient/saving technologies among industrial users. Alternative energy is a marginal area in the Czech Republic, particularly since the country does not have abundant sources of renewable energy. Those that do exist (e.g. solar, wind, geothermal energy) are to be found scattered across the country *(http://www.rec.org)*.

Major end-users

The major end-users of environmental technologies for air pollution control are operators of heating stations and power plants. Most power plants are owned by CEZ, the largest enterprise in the Czech Republic, in which the state still retains a majority share. Ownership of local heating stations varies, some are owned by former state enterprises that have become joint-stock companies, while others are private, or are owned by municipalities. The second largest group of end-users includes various industries. Among the most significant sectors are metallurgy, chemical, pharmaceutical, engineering, glass, and other industrial branches. Neither small, stationary pollution sources (domestic family housing) nor mobile sources (vehicles) are among significant end-users of air pollution control equipment. This is mainly because they are not currently subject to targeted regulations. The structure of major end-users in the energy sector is: power plants and heat generating stations, followed by other industrial sectors with high energy consumption. This situation is mainly driven by the national environmental policy, focusing on large stationary sources of air pollution. Increasing interest in energy-saving measures is expected from various industrial users and from municipalities as energy prices increase *(http://www.rec.org)*.

Major suppliers

Generally, German, Austrian, Dutch, and Scandinavian companies are considered to be the most active in the environmental technology market in the Czech Republic, followed by American, Danish, French and British firms. The presence of environmental companies from Canada, Italy, Poland and Switzerland is also noticeable but not as significant as those mentioned above. Firms from other countries (Spain, Republic of Ireland, Hungary, Japan) are known by a few interviewed parties. Their participation in environmental projects in the Czech Republic is limited.

Germany, Austria, and other Western countries (Western Europe, the U.S., Canada and Japan) are regarded as producers of quality environmental technologies (although some experienced local customers do not always share this opinion). Generally, the presence of foreign firms is most significant in waste management. Foreign firms are also active in wastewater treatment, and, to a smaller degree, in air pollution control. Energy and air pollution sectors are primarily dominated by German technologies, followed by Austrian and American products.

Some large foreign companies have established Czech subsidiaries, and are very active in waste salvage and disposal practices. Some foreign firms have also established joint-stock companies with municipalities. In many environmental sectors, foreign companies do not have an established presence in the Czech Republic. Some foreign firms rather actively pursue direct sales. The system of licensed technology sales is satisfactory and effective. Other notable cases include sales of

environmentally-friendly fertilizers for agriculture, chemicals for wastewater treatment systems, tap water treatment systems, air filters, lab equipment etc. Interestingly, in several cases, formerly foreign co-owned firms have been bought out by the local partner after two or three years of collaboration. In some cases, joint-ventures collapsed as a result of unsuccessful collaboration - either a local counterpart used foreign financial assistance and support excessively while returning very little, or the expectations of a foreign partner were too high and the local partner was not able to meet them *(http://www.rec.org)*.

Foreign-trade zones and free ports

Czech law permits foreign investors involved in joint ventures to take advantage of commercial or industrial customs-free zones into which goods may be imported and later exported without depositing customs duty. Duties need be paid only in the event that the goods brought into the free zone are introduced into the local economy. The investment incentive package also permits duty-free import of high tech goods and creation of additional foreign-trade zones.

Currently authorized foreign trade zones in the Czech Republic are Cheb, Ostrava, Pardubice, Prague (2), Zlin, Trinec, Bor u Tachova, Frantiskov nad Ploucnici and Hradec Kralove. Rules for operations within a commercial or industrial customs-free zone are the same as in the EU *(http://www.state.gov)*.

Infrastructure

The Czech Republic possesses one of the most advanced transport network in Central and Eastern Europe. Its geographical position at the very centre of Europe makes it a natural crossroads for major transit corridors. An extensive network of transport routes serves not only the Czech Republic but also links neighboring and other European countries, and the density of the transport network ranks the Czech Republic among the most advanced countries. The significance of the Czech Republic as a transit country has grown since the Czech Republic became a member of the Single Market of the EU, covering the area of existing and new members from Central and Eastern Europe *(http://www.czechinvest.org)*.

Technological screen

Technology level

Technology Index Rank	20/80
ICT Subindex	28/80
Innovation Subindex	42/80
Technology Transfer Subindex	4/80

(http://www.weforum.org)

Technological development

The government aims at: Technology centres, development and innovations. Development and innovations of high-tech products and technologies, provided that there is the expectation that the results of the development and innovation work will be carried forward and used in production, regular changes to product, production series, manufacturing processes technologies; Business support services. Business support services are services with high added value and support employment of qualified experts in software development centres, expert solution centres, high-tech repair centres, shared services centres, centres of customer support (e.g. call – centres) and regional *(http://www.czechinvest.org)*.

Property rights

Existing legislation guarantees protection of all forms of property rights, both intellectual and physical. Secured interests in land (mortgages) and in personal property are permitted. Major amendments to the Commercial Code came into force in 2001 that strengthen protection of creditors and minority shareholders. The law includes detailed provisions for mergers and places time limits on decisions by the authorities on registering of companies. New laws on auditing and on accounting were also enacted. These laws include the use of international accounting standards (IAS) for consolidated corporate groups.

The Czech Republic is a signatory to the Bern, Paris, and Universal Copyright Conventions. In 2001, the government ratified the WIPO Copyright Treaty and the WIPO Treaty on Performances and Phonograms. Domestic legislation protects all intellectual property rights, including patents, copyrights, trademarks, and semiconductor chip layout design. Amendments to the trademark law and the copyright law have brought Czech law into compliance with relevant EU directives and WTO

TRIPs requirements. Changes to the civil procedure code, effective January 1, 2001, provide for ex parte search and seizure in enforcement actions. The Czech Republic increased copyright protection for literary works from 50 to 70 years, effective December 1, 2000, and boosted the powers of the customs service and the Czech Commercial Inspection to seize counterfeit goods. The Embassy continues to work with U.S. industry and Czech government officials to further improve enforcement of intellectual property rights *(http://www.state.gov/e/eb/ifd/2005/42007.htm)*.

The Economist Intelligence Unit reports that "contractual agreements are generally secure in the Czech Republic." According to the U.S. Department of Commerce, however, "The judiciary is independent, but decisions may vary from court to court. Commercial disputes, particularly those related to bankruptcy proceedings, can drag on for years. Companies' registration is in the hands of the courts and is sometimes slow and overly complicated." The Czech Republic scores 2.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Telecommunications

On telecommunication, the Czech Republic has made further progress and has achieved a good level of alignment concerning the development of the telecommunications infrastructure and diversification of the market. Full market liberalisation remains to be achieved and the independence of the regulatory authority needs to be ensured *(European Commission, 2002).* On The Czech telecommunications market, one of the most highly developed and most liberalized in Central and Eastern Europe, is distinguished by the growth of demand for data, internet and other services to the detriment of voice services. The number of subscribers of mobile networks is constantly increasing, albeit at a slower pace than in previous years. In 2004, the density of subscribers of publicly In the scope of development and practical usage of information technologies in the Czech Republic, there is a typical difference between companies and households. The use of modern information technologies and communications technologies by households has until now been below the European Union average, even though development has been significantly accelerated in the past year. Business, however, has achieved comparable and even above-average rates. In comparison with the countries of Central and Eastern Europe, the Czech Republic belongs among the best equipped for access to electronic-communications and information-technology services. Solely private businesses operate in the electronic-communications sector. The number of users of high-speed internet access is quickly and constantly growing, and prices of high-speed internet access are falling. As of 1 July 2005, there were approximately 607,000 high-speed connections (using various technologies), which represents penetration of 5.9 percent. Services utilizing metal telephone cables and ADSL equipment are accompanied by relatively intensive use of alternative access technologies such as television cable distribution with the respective modems and radio fixed connection. *(http://www.czechinvest.org)*

Socio cultural screen

Language

The majority (95%) of the inhabitants of the Czech Republic are ethnically and linguistically Czech. The older generation speaks German and the younger generation English. Czech normally do not tell if they didn't understand something. A translator often is a good choice. *(www.evd.nl)*

Religion

Major religions in the Czech Republic are (**2001** census): **Roman Catholic** (26.7%), **Evangelical Church of Czech Brethren** (1.1%), **Czechoslovak Hussite Church** (1.0%), **Jehovah's Witnesses** (0.22%), **Czech and Slovak Orthodox Church** (0.22%), other (2.8%). 58.9% is nonreligious, 8.8% gave no answer. 39 per cent of the population is atheist, another 39 per cent Catholic and 12 per cent Protestant and other *(http://en.wikipedia.org)*.

Education

Czech educational system has a long-time traditions and it is legacy from prominent educationalist Jan Amos Komensky. Since the time of Maria Theresa Empress (in 17th century) in Central Europe there is the compulsory education.

- Kindergarten - educational system from 3 to 6 years
- Elementary School – from 6 to 11 years – 1st - 5th classes
- Basic School - from 11 to 15 years – 6th – 9th classes
- Secondary school – from 15 to 19 years - 1st – 4th classes
- Tertiary education – from 19 to 24 years - 1st – 5th classes

- Postgraduate study – from 24 year

Compulsory school attendance lasts nine years. It is possible that pupils can go from 5th class to eight-year secondary school or from 7th class to six-year secondary school *(http://www.newnet.sk)*.

Business etiquette

In the Czech Republic the family is the centre of the social structure. Therefore the obligation to the family is a person's first priority. Czechs appear to be private people until you get to know them. Once a personal relationship is developed the Czechs open up a bit. They act never overly emotional. Although always polite they are formal and reserved, they seldom move to a first-name basis with people outside their extended family or very close friends. Czechs prize forward thinking, logical, practical and efficiency. They are careful planners, in both one's business and personal life. The prefer rules and regulations which allow people to know what is expected and to plan their life accordingly.

If invited to a Czech's house arrive on time, remove the shoes, and expect to be treated with great honour and respect, dress modestly and well. Do not discuss business because Czechs separate their personal with their business life. Table manners are rather formal and continental. Do not begin eating until the hostess starts. Always refuse second helpings the first time they are offered. Wait for the hostess to insist. Compliment the meal while you are eating this allows the hostess to discuss the food and the preparation. Bring a gift along, a box of chocolates, a bottle of wine or good brandy is good options. Gifts are usually opened when received.

When doing business with Czechs initial meetings are formal and reserved. The first meeting is used to get to know each other, expect some small talk before business is discussed. It takes several business associates to become familiar and appear comfortable and friendly. Most greetings include handshakes, direct eye contact and the appropriate greeting for the time of day. First names and greetings should not be used until invited because they are signs of friendship. Moving to the informal without an invitation insults the person and may be viewed as an attempt to humiliate them. This offer to move informal is generally offered by the woman, the older person, or the person with the higher status. At business meetings appointments are mandatory and should be made in advance. Business is hierarchical and conducted slowly. Be punctual during meetings, this is taken extremely serious. Politeness prevents many Czechs from giving an absolute no. Presentations should be accurate, detailed and thorough. Try to use charts and figures to back up your claim and try to maintain direct eye contact while speaking. Many people leave for their country cottages on Friday afternoon, so do not schedule meetings during this time. Also many businesses are closed during August. Letters should be addressed to the company not a specific person.

The Czechs are both formal and rather indirect in their communication. They try not to offend someone and often try to protect someone's feelings. They do not like to confront someone and try to use an indirect approach *(http://www.kwintessential.co.uk)*.

Appendix 3 Country profile: Estonia

Basic needs

Population size

Estonia's population consists of 1,408,556 inhabitants *(http://en.wikipedia.org)*.

Growth

Population growth rate	-0.59 percent in the year 2006
Birth rate	8.45 births/1,000 population
Death rate	13.55 deaths/1,000 population

(http://en.wikipedia.org).

Age structure

0-14 years:	18 percent (male 129,204; female 124,269)
15-64 years:	68 percent (male 466,960; female 503,233)
65 years and over:	14 percent (male 67,781; female 140,024) (2000 est.)

(http://en.wikipedia.org).

Urbanization

In Estonia, as in the rest of the world, the most striking feature is the increasing prominence of towns. 69 per cent of the Estonian population lives in towns, and 68 per cent in regional centres in Harju, East Viru, Tartu and Pärnu counties. The most densely populated are the northern and coastal areas. Three of the five biggest Estonian towns are also located there: Tallinn, Narva and Kohtla-Järve, encompassing the majority of the population, industrial potential, transport network and economic activity. A peculiar aspect of the post-WW II intensive urbanisation and industrialisation was the fact that these processes occurred due to immigration from other Soviet republics *(http://www.estonica.org)*.

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	457	434	419	411	402	386
Urban population (thousands)	1 127	1 012	948	919	908	906
Percentage urban (%)	71.1	70.0	69.4	69.1	69.3	70.1

(http://esa.un.org)

Migration

During the Soviet era, the population grew steadily, fueled largely by in-migration from other areas of the Soviet Union. During the 1950s and 1960s, net in-migration accounted for more than 60 percent of the total population growth. In recent years, net migration has reversed, with some 84,000 people, mostly Russians, having left between 1989 and 1993. In the mid-1990s, these trends were continuing, though more slowly. Since 1992 Estonia has been offering financial assistance to people wishing to resettle in Russia. However, the vast majority of local Russians were not inclined to leave Estonia. The reverse flow of migration is thought to have contributed in the early 1990s to a slight rise in the Estonian proportion of the population. In 1989 Estonians constituted only 61.5 percent of the population, while Russians made up 30.3 percent, Ukrainians 3.1 percent, Belorussians 1.7 percent, and Finns 1.1 percent; Jews, Tatars, Germans, Latvians, and Poles constituted the remaining 2.3 percent. This was in sharp contrast to 1934, when Estonians represented 88.2 percent of the population and Russians only 8.2 percent. This demographic shift was a major concern for Estonians, who feared losing control of their own country *(http://www.country-data.coml)*.

Geography

Estonia is a low, flat country covering 45,226 square kilometers. Estonia has a long, shallow coastline (1,393 kilometers) along the Baltic Sea, with 1,520 islands dotting the shore. The two largest islands are Saaremaa (literally, island land), at 2,673 square kilometres, and Hiiumaa, at 989 square kilometres. The two islands are favourite Estonian vacation spots. The country's highest point, Suur Munamägi (Egg Mountain), is in the hilly southeast and reaches 318 meters above sea level. Estonia is covered by about 18000 km² of forest. Arable land amounts to about 9260 km². Meadows cover about 2520 km², and pastureland covers about 1810 km². There are more than 1,400 natural and

artificial lakes in Estonia. The largest of them, Lake Peipsi (3,555 km²), forms much of the border between Estonia and Russia. Located in central Estonia, Võrtsjärv is the second-largest lake (270 km²). The Narva and Emajõgi are among the most important of the country's many rivers *(http://en.wikipedia.org)*.

Climate

Estonia has a temperate climate, with four seasons of near-equal length. Average temperatures range from 16.3 °C on the Baltic islands to 17.1 °C inland in July, the warmest month, and from -3.5 °C on the Baltic islands to -7.6 °C inland in February, the coldest month. Precipitation averages 568 millimetres per year and is heaviest in late summer (*http://en.wikipedia.org*).

Environmental problems

Estonian environmental problems include: pollution of ambient and urban air; past pollution caused by industrial, agricultural and military activities; decreases in water quantity and quality; irrational use, pollution and eutrophication of surface water bodies and deterioration of fish stocks; inappropriate waste and hazardous waste management; threats to biological and landscape diversity; and poor consideration of environmental and public health issues within the built-up environment. The primary regional environmental problems are confined to municipal wastewater treatment and waste management issues. According to the environmental officials of four counties (Voru, Parnu, Jogeva and Laane), wastewater treatment is the most significant problem in Estonia. The second most important problem is clearly related to waste management (particularly hazardous waste), the lack of modern environmentally sound landfills, and site operation, which fails to comply with environmental requirements and good management practices. Opinions were mixed in defining the third most acute environmental problem and ranged from improving the condition of past polluted areas, improving the drinking water quality, and renovating wastewater treatment facilities and sewers and sewerage systems.

Expenditures on improving ambient air quality have remained stable over a three-year period, a remarkable increase in investment can be seen in water and soil protection activities. The major target area of these expenditures has been western Estonia, largely owing to World Bank assistance, in the construction and renovation of wastewater treatment plants in the Municipalities of Laane County (the Haapsalu-project).

Air:

- Major air pollution from extensive oil-shale burning. Expeccted to continue at current rate for the next 20 years;
- Dust emissions from Kuna Nordic Cement As factory, including 1.500 tons of klinkr dust emitted annually. Levels are expected to decrease by as much as 200-300 tons per year.

Energy:

- S02 and C02 emissions from power plants, expected to remain a significant problem for the next 10 – 15 years *(http://www.rec.org)*.

Environmental business sector

Environmental technology providers are generally sales and technical-engineering companies offering limited consulting services. Environmental consulting is only in the early stages of development at present and is predominantly focused in the fields of environmental impact and site assessment. The Estonian companies providing environmental technologies are not highly specialized but offer a wide range of technologies and services. This is a result of the developing market, where the potential niches are not yet covered and specialization would not provide substantial enough levels of revenue to survive. The low demand for environmental technologies by end-users was emphasized by suppliers as well.

Several larger companies have emerged whose main activity is related to the construction or reconstruction of systems such as heating or sewerage systems. These larger companies are able to sell their products more effectively. Environmental consulting services entered the Estonian market during 1992-1993. A driving force behind the establishment of consulting units was the adoption of the Government Regulation. Environmental auditing is another rapidly developing field of environmental business activity. The opening up of the European markets has encouraged enterprises to work toward the quality standard ISO 9000. *(http://www.rec.orgl)*.

Estonia's EU approximation process and the increased access to EU markets for Estonian producers are the major reasons behind the introduction of environmentally sound and effective technologies that meet EU standards and regulations. Estonian products marketed in European markets should comply with very high quality standards, and thus the modernization of technologies is increasingly becoming an important issue for producers. The environmental aspects of production and marketing have become more transparent in recent years. All these issues indicate the continued expansion and development of the environmental business sector *(http://www.rec.org)*.

Legal screen

Law system

Estonia has a post-Soviet criminal code introduced in 1992, based on civil law system, with no judicial review of legislative acts. Legal chancellor, appointed by Riigikogu, provides guidance on constitutionality of laws but has no powers of adjudication. Criminal justice administered by local first-level courts as well as second-level appellate courts. Final appeal may be made to National Court, which sits in Tartu. Court system comprises rural and city, as well as administrative, courts (first-level); district courts (second-level); and National Court, highest court in land.

According to the economic freedom index Estonia scores 2.0. Regulations in Estonia are transparent and evenly applied. The government is increasingly using the Internet to reduce the bureaucracy. However, due to the small size of Estonia's commercial community, instances of favouritism are not uncommon despite the regulations and procedures that are designed to limit it." It takes from two to three weeks, on average, to obtain a permit to start a business, reports the Embassy of Estonia *(http://www.heritage.org)*.

Tax, labour, health and safety laws and policies have been crafted to encourage investment. While there is always room for more, the level of foreign direct investment per capita suggests that Estonia has been successful in designing a legal framework that attracts rather than discourages foreign investment. Estonia’s bureaucratic procedures are considered far more streamlined and transparent than those of other countries in the region *(http://www.state.gov)*.

Trade laws

Estonia adopted the trade policies of the European Union when it joined the EU in May 2004. The common EU weighted average external tariff was 1.3 percent in 2003, based on World Bank data. In the 2005 Index, based on World Bank data, Estonia had a tariff of 0.053 percent. According to the World Trade Organization and the U.S. Trade Representative, the EU imposes non-tariff trade barriers through a complex regulatory system and export subsidies. Based on its adoption of EU trade policies, and on the revised trade factor methodology, Estonia's trade policy score is 1 point worse this year. Estonia scores 2.0 according to the economic freedom index *(http://www.heritage.org)*.

Environmental laws

The framework law on environmental issues dates back to 1990. As previously mentioned, the primary document for environmental policy is the Estonian National Environmental Strategy. The National Environmental Action Plan (NEAP) is being prepared, with some 10 working groups drafting concrete actions and financial proposals in a similar number of areas. The Act on Sustainable Development forms the framework for the sustainable use of resources by industry. It also states the need to conduct environmental impact assessments prior to project development, to develop policy documents and strategies, and stresses the importance of environmental management and environmental auditing at the corporate level.

By the end of 1995, approximately 70 percent of all legal acts necessary to regulate the use of natural resources, environmental protection and spatial planning in Estonia had been adopted. In the forthcoming few years, primary emphasis will be placed on the efficient organization of the legislative process, the systematization of legal acts, and the implementation of necessary measures for accession to the EU. To achieve this goal, the NES states, it is necessary:

- To regulate those areas not currently regulated;
- To integrate relevant environmental concerns into economic objectives and then into economic and social legislation;
- To draw up and harmonize legal acts consistent with the EU's White Book by 1997;
- To carry out an analysis of legal acts in order to identify contradictions, variances and imbalances, and to propose amendments to current legislation;
- To establish environmental liabilities;

- To approximate Estonian legislative acts to those of the EU, and to integrate them into an Environmental Code by 2005 *(http://www.rec.org)*.

Banking and finance

Estonia's sound, prudently regulated banking sector is considered the strongest and most developed in the Baltic States. "At the end of 2004," reports the Economist Intelligence Unit, "Estonia had six commercial banks, three foreign bank branches and six representative offices of foreign banks." Its universal banking system allows banks to engage in a wide range of financial activities, including insurance, leasing, and brokerage services. The government welcomes foreign participation in the banking sector, which is dominated by foreign banks. According to the U.S. Department of Commerce, The Estonian banking system is dominated by two foreign controlled banking groups: Hansapank (Swedbank) and Uhispank (Skandinaviska Enskilda Banken). Estonia's largest bank in terms of assets and market share, Hansabank, became 100 percent owned by Sweden's Swedbank in April 2005. The Embassy of Estonia reports that the government does not have a stake in any bank. The U.S. Department of Commerce characterizes Estonia's financial sector as "modern and efficient. Credit is allocated on market terms and foreign investors are able to obtain credit on the local market." Estonia scores 1.0 on the economic freedom index *(http://www.heritage.org)*.

Macro economic policy

The new Estonian currency became the foundation for rational development of the economy. Money began to have clear value; the currency supply could be controlled from Tallinn, not Moscow; and long-term investment decisions could be made with greater confidence by both the state and private enterprise. The president of the central bank, Siim Kallas, made "hard money" the benchmark of his policy. Estonia has a currency board system pegging its kroon to the euro. From 1995 to 2004, Estonia's weighted average annual rate of inflation was 2.81 percent. Estonia scores 1.0 on the economic freedom index *(http://www.heritage.org)*.

Since the monetary reform in 1992 the Estonian monetary system is based on a currency board arrangement. Initially Estonian kroon (EEK) was fixed with the DEM, but since January 1, 1999 the kroon is fixed with euro at EUR 1 = EEK 15.65. Estonia maintains an exchange system that is free on restrictions on payments and transfers for current international transactions. There are also no restrictions on capital transactions

Fiscal policy in Estonia is characterised by wider revenue handling and narrower cost handling on all budget levels compared to international practices. Any kind of borrowing as well as surpluses of previous years have been accounted for as income, in other words deficit financing sources have been added to current revenue. It is customary not to show investments from government foreign borrowing as expenditures. Reimbursements of loan principals is equalised with other expenses *(http://www.eestipank.info)*

Estonia scores 4,06 on the macroeconomic environment index, which means that the country is relatively unstable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

The Estonian tax system with its flat 23% rate (which will be reduced to 20% by the year 2009) Individual taxation is one of the most liberal tax regimes in the world. Moreover, the new Law on Income Tax provides that undistributed profits of the companies are not subject to income taxation, regardless whether invested or merely retained.

The existing state taxes are:

- Income tax: 23 percent;
- Value-added tax (VAT): 18 percent;
- Social tax (social security contributions - state pension and health insurance): 33 percent;
- Unemployment insurance tax: 0.3 percent employer + 0,6 percent employee;
- Excise taxes (tobacco, alcoholic beverages, motor fuel, motor vehicles, packages);
- Gambling tax;
- Land tax.

Estonia does not impose any gift, inheritance or estate taxes. Various transactions may be subject to payment of state fees (stamp duties). Local governments have the authority to impose local taxes, but

effectively only few municipalities have introduced local taxes, in particular: sales tax, boat tax, advertisement tax, tax on closure of streets and roads, motor vehicle tax, entertainment tax, tax for keeping the animals and parking charge *(http://www.investinestonia.com)*.

In 2004, based on data from the central bank, government expenditures as a share of GDP increased 1.9 percentage points to 37.7 percent, compared to a 0.5 percentage point increase in 2003. Estonia scores 2.0 in the economic freedom index *(http://www.heritage.org)*.

Corruption

Estonia has laws, regulations, and penalties to combat corruption and while corruption is not unknown, it has generally not been a major problem faced by foreign investors. Instead, foreign companies have often found it difficult to insinuate themselves into the local commercial community where many Estonian executives have known one another since childhood and often help one another out in ways that make it difficult for outsiders to compete effectively. Both offering and taking bribes are criminal offences. While "payments" that exceed the services rendered are not unknown, and "conflict of interest" is not a well-understood issue, surveys of American and other non-Estonian businesses have shown the issues of corruption and/or protection rackets are not a major concern for these companies. Transparency International ranks Estonia 31st out of 146 countries. Among members of the European Union Estonia places 15th, together with Slovenia, and is thus considered one of the least corrupt countries among the EU newcomers *(http://www.state.gov)*.

Crime

Estonia scores: 38. Average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

Estonia is a constitutional democracy, with a president elected by its unicameral parliament (elections every four years). The government or the executive branch is formed by the prime minister, nominated by the president, and a total of 14 ministers. The government is appointed by the president after approval by the parliament *(http://en.wikipedia.org)*.

Institutions

Unicameral Estonian parliament has 101 members and is elected for four years. Twelve parties contested the 101 mandates available in the elections, but only six of them gained the required five per cent vote threshold to qualify for the distribution of mandates. These six parties are ranked below by their number of MP's. There are 11 MPs who have left different party factions and are not members of any faction.

Parties are: Estonian Centre Party, Estonian Reform Party, Estonian People's Union, Pro Partria Union. Estonian Social Democratic Party *(http://www.vm.ee/estonia)*.

Government intervention

According to the Statistical Office of Estonia, the government consumed 19 percent of GDP in 2004. In the same year, based on data from the Ministry of Finance, Estonia received 4.42 percent of its total revenues from state-owned enterprises and government ownership of property. Estonia scores 2.0 on the economic freedom index. *(http://www.heritage.org)*.

Environmental priorities

The main causes of environmental degradation are associated with the use of outdated technologies, the consumption of large volumes of raw materials and the subsequent generation of large quantities of waste. These problems are combined with low levels of public awareness and an under-developed and environmentally unfriendly technical infrastructure, and they are exacerbated by the lack of financial resources and management instruments.

- Promotion of environmental awareness. To preserve and stimulate the Estonian tradition of environmental awareness, promote public participation in environmental decision making, active environmental protection and supervision, to support further development and to encourage future generations to adopt environmentally sound consumption habits;

- Clean technologies. To promote the use of natural resources, raw materials and energy in a rational and sustainable way, and the reduction of pollution and generation of waste;
- Reduction of the adverse environmental effects of the energy sector. To reduce the environmental impacts of the energy sector, steer the direction of energy policies towards energy efficient technology development programs, promote more extensive use of renewable energy resources and reduction of greenhouse gas emissions, and to include all environment-related costs of energy consumption in the energy price;
- Improvement of air quality. To reduce emissions of air pollutants, focusing primarily on substances causing climate change and ozone depletion, and on pollution that originates from transport;
- Reduction of waste generation and improvement of waste management. To support the sustainable use of raw materials, reduce waste generation, stimulate waste recycling, minimize the pollution caused by waste, reduce the areas contaminated by waste, and improve waste management, paying special attention to hazardous waste;
- Elimination of past pollution. To eliminate past pollution and rejuvenate damaged landscapes;
- Better use and protection of ground water resources. To maintain good quality groundwater resources as well as their sustainable use and protection;
- Protection of surface water bodies and coastal seas. To maintain the ecological balance of surface water bodies and coastal seas, the natural generation of fish stocks, and aquatic flora and fauna by the rational use of water bodies;
- Maintenance of landscapes and biodiversity. To ensure the preservation of viable populations of local plant and animal species, natural and semi-natural communities and landscapes typical of Estonia;
- Improvement of the quality of built environment. Bringing the state of the built environment into conformity with the principles of health protection and sustainable development *(http://www.rec.org)*.

Government programs

According to the allocation of resources by the Estonian Environmental Fund in 1996 the majority of funds (some 42 percent of the total annual budget) were spent on the water protection program, which also comprises municipal wastewater treatment facility construction *(http://www.rec.org)*.

Political Stability

On the political stability index of Kaufman Estonia scores 0.98 The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability. Estonia has not experienced any politically motivated damage to projects or installations. The political instability index rates Estonia 0.98 *(http://humandevelopment.bu.edu)*.

Economic screen

Natural resources

Natural resources of Estonia are: shale oil (kukersite), **peat**, **phosphorite**, **amber**, **cambrian blue clay**, limestone, **dolomite** and arable land. *(http://en.wikipedia.org)*.

Exchange rate

Krooni per US dollar - 12.584 (2005), 12.596 (2004), 13.856 (2003), 16.612 (2002), 17.478 (2001). The krooni is pegged to the euro *(https://www.cia.gov)*.

Gross domestic product

GDP (purchasing power parity)	$22.29 billion
GDP (official exchange rate)	$12.19 billion
GDP (real growth rate)	9.6 per cent
GDP per capita	$16,700

(https://www.cia.gov)

Inflation

Inflation rate (consumer prices) 4%
(https://www.cia.gov)

Environmental expenditures

The total state budget for direct environmental investments and expenditures has remained virtually unchanged for 1996-1997 (USD 9.59 million and USD 8.94 million, respectively). Approximately 80 percent of annual environmental investments are channelled into the construction of new municipal wastewater treatment plants and associated sewers. Between 7 and 17 percent of the state budget for investments goes toward the renovation of existing plants and networks, while environmental monitoring costs also form a significant share of environmental expenditures (26-36 percent, or USD 780,000-830,000 annually). The trend that can be observed is that investments by enterprises are significantly increasing while investments from local governments, despite increasing are declining as a percentage of the total environmental expenditure. Over half of the total environmental expenditures made by enterprises and municipalities were channelled into water and soil protection. Enterprises also spent a significant amount on the air sector (end-of-pipe technologies and emission control) while municipalities spread the remainder of their expenditure evenly among waste, air and other sectors *(http://www.rec.org)*.

Demand for environmental technologies

Technologies related to wastewater and energy are ranked as the most in demand, followed by water supply, waste management, and air. Within the air sector the demand for air pollution control technologies was ranked moderate. The highest demand among air technologies was identified for emission abatement/cleaner production equipment. Growing demand is expected for instrumentation and process control/software, air sampling/ laboratory analysis and air pollution control/flue gas purification equipment. Air quality has a significant impact on human health and the state of the environment, and those technologies aimed at reducing gaseous emissions currently have a significant place in the market, particularly since Estonia is cited as one of the top polluters of air per capita in Europe. Transport is one of the greatest sources of air pollution, followed by power plant emissions. As a result, a number of the National Environmental Strategy (NES) priorities relate to the reduction of air pollution, and this combined with the fact that Estonia is a party to the U.N. Framework Convention on Climate Change means it must therefore decrease its emissions. This indicates that demand for air pollution reduction technologies will at least remain the same or increase in coming years. Air pollution reduction technologies come in the form of scrubbers, filters, and large sophisticated systems aimed at reducing the emission of solid particles, sulfur dioxide, carbon monoxide etc. The highest demand was indicated for emission abatement and cleaner production technologies; however, demand is expected to rise in the areas of instrumentation and process control/software, followed by air sampling and laboratory analysis and air pollution control/flue gas purification equipment.

The energy sector received high demand for technologies relating to new/efficient energy and heating systems and retrofitting/rehabilitation of existing systems, with increased demand expected for process management and control in the power generation sector. Demand is also expected to rise for heat recovery and energy saving technologies in the future. Demand in the power generation sector was high for new/efficient energy and heat generation systems as well as for the retrofitting/rehabilitation of existing systems. Increased demand is expected in the future for process management and control and heat recovery and energy saving technologies. As for other industrial sectors, they pointed to demand for process management and control technologies followed by the retrofitting/rehabilitation of existing systems. Technologies where demand is expected to grow in other industrial sectors included heat recovery and energy saving technologies. Demand for other technologies was significantly lower *(http://www.rec.org)*.

Major end-users

By and large, the majority of end-users are municipalities. Industrial companies form the second largest group of end-users of environmental technologies. The major end-users of technologies for air pollution control are the mining industry, followed by the transportation industry. Mobile sources of pollution from transport continue to increase in Estonia. Power generation companies are the largest end-users of energy-related technologies in Estonia. Other significant end-users include manufacturing, heavy industry and the pulp and paper industry. As in other sectors, as energy prices rise, energy efficiency will become increasingly important *(http://www.rec.org)*.

Major suppliers

Estonian environmental technology suppliers could be largely classified as product vendors rather than providers of "full services" (selling, consulting, maintenance). The relationship between the buyer and the seller typically ends with the sale of the product. However, end-users (buyers) indicated that further assistance, especially with regard to service maintenance, is required. It is fairly difficult to

establish which companies are active in the Estonian market. The Estonian environmental technology market is still relatively small. In any given year, one or two major projects can make up most of the annual turnover of a company. This is especially true for air pollution or water purification equipment suppliers, where the largest projects have been the construction of the Tallinn water purification plant and fly ash removal equipment for power plants. Generally speaking, domestic environmental technology providers are small and medium-sized businesses that have only been operational for the past 5-10 years. This is a result of the fairly recent restructuring of the country which included extensive privatization. Domestic producers do the majority of their business within their own country, while a select few export within the Baltics and to Central and Eastern Europe. Many local environmental technology companies are involved in joint-ventures and other business relationships with companies from abroad. The future of the environmental business sector in Estonia is certain to show growth. Demand for technologies in all sectors of the environment is expected to remain the same or grow in the coming years.

There is little representation from any country besides Finland and Sweden. Their presence is mainly focused on the water sector, with a few companies active in the waste and energy sectors. In the air and energy sectors, foreign firms do not have a significant presence in the market. A large share of foreign technologies is sold on the market by retail trade companies which represent several foreign producers. Retail traders' work in various ways, for instance they can establish a subsidiary of a foreign producer, or a local sales organization might be granted the right to represent a certain company. Retail trade companies are often quite specialized, for example, in indoor air ventilation, heating and cooling, water supply and sewage systems. These companies have the necessary experience in meeting customers needs and in providing excellent service *(http://www.rec.orgl)*.

Foreign trade zones/ free ports

According to the Customs Act free zones can be established on the customs territory by order of the Government of the Republic. Concerning import and export duties, taxes and trade policy measures established for regulating importation, goods in a free zone are considered as being outside the customs territory. As a rule customs procedures are not applied to these goods. A free zone is a territory where the VAT and excise duties (as well as possible fees for customs services) do not have to be paid on goods imported and later exported. In Estonia free zones have been established in Muuga (near Tallinn), Sillamae (North-East Estonia), and Valga (South Estonia). The main supervisory authority responsible for monitoring and checking the movement of goods in (or in and out of) free zones is the Estonian Tax and Customs Board (governed by the Ministry of Finance). There are ID requirements for companies and individuals using the zone *(http://www.state.gov)*.

Infrastructure

Estonia has continued to make steady progress in both aligning and implementing legislation including the establishment of an independent Air traffic investigations department. There is a need to complete alignment in the railway sector, implement the social acquits in the road sector and improve maritime safety. In energy progress has been made in removing market price distortions, improving regulation and nuclear safety. Estonia should continue to align legislation, in particular as regards the internal electricity and gas markets, develop renewable energy sources and further strengthen the energy market regulator. More generally, in terms of industrial policy Estonia should complete the process of industrial restructuring by focusing on the oil shale sector *(European Union, 2002)*.

Technological screen

Technology level

Technology index Rank	14/80
ICT Subindex	23/80
Innovation Subindex	28/80
Technology Transfer Subindex	11/80

(http://www.weforum.org)

Technological development

In 1994, under the EU 4th Framework Programme of R&D activities, Estonia first entered international R&D cooperation as a free market competitor. Five years later it became associated with the 5th Framework Programme, which put almost all its R&D activities in an essential new perspective. Suddenly, although in tough competition with European research centres and large-scale enterprises, financial resources that were dozens of time larger than those that Estonia as used to became available for R&D projects *(http://www.riigikantselei.ee)*.

Property rights

Secured interests in property are recognized and enforced. Mortgages are quite common for both residential and commercial property and leasing as a means of financing is widespread and efficient. The legal system protects and facilitates acquisition and disposition of all property rights, including land, buildings, and mortgages. The long and complicated process of restitution is almost complete, including the area of non-residential real properties. The Estonian legal system adequately protects property rights, including intellectual property, patterns, copyrights, trademarks, trade secrets and industrial design. Estonia adheres to the Berne Convention, WIPO and TRIPS, the Rome Convention and the Geneva Convention on the Protection of the Rights of Producers. Estonian legislation fully complies with EU directives granting protection to authors, performing artists, record producers, and broadcasting organizations. In 2002 Estonia withdrew its reservation on Article 12 of the Rome Convention, thus extending equal treatment to domestic and foreign phonogram producers *(http://www.state.gov)*.

Estonia's judiciary is independent and insulated from government influence. Property rights and contracts are enforced by the courts. In the past, judicial decisions were occasionally arbitrary and indifferent to the law. Such decisions are increasingly rare." The Economist Intelligence Unit reports that "Estonia has continued to strengthen its judicial procedures since gaining EU membership, including adopting a new code of criminal procedure in 2004." Estonia scores 2.0 on the Economic freedom index *(http://www.heritage.org)*.

Telecommunications

Estonian telecommunications sector is one of the most developed in Central and Eastern Europe. In recent years, the number of fixed phone lines has decreased as many consumers switched from fixed phones to mobile phones. Meanwhile, new possibilities offered via fixed subscriber's line have come into service. International analysts consider Estonia to be the leader in Eastern Europe for broadband DSL access. In terms of DSL penetration per telephone lines, Estonia ranks presently among the top ten in the world.

Internet usage surveys show that 54 percent of 6-74 year old Estonians are using the Internet, which means that the community using the Internet has reached 648 000 people. Compared to the previous year, an additional 4 percent of the Estonian population of the aforementioned age group i.e. 27 000 people have become Internet users *(http://www.vm.eet)*.

Socio cultural screen

Language

Languages: Official language Estonian; Russian, Ukrainian, Belarusian, Finnish, and other languages also used *(http://en.wikipedia.org)*. The business language is English. The older generation (often in leading positions) only speaks their mother language which makes communication difficult *(www.evd.nl)*.

Religion

Traditional religion of the Estonians is the Christian belief in the form the Evangelical **Lutheran** confession (as in many other countries in Scandinavia). Less than a third of the population define themselves as believers, of those the majority are Lutheran, whereas the Russian minority is Eastern Orthodox. Ancient equinoctial heathen traditions are held in high regard. Today, about 32 percent of the population is member of a church or religious group, thereof:

- 14.8 percent Estonian Evangelical Lutheran Church;
- 13.9 percent Orthodox;
- ca. 10,000 Muslims;
- ca. 6,000 Baptists;
- ca. 3,500 Roman-Catholics.

(http://en.wikipedia.org)

Education

In addition to a restructuring of curricula, the government began a reorganization of the secondary school system with the goal of increasing specialization among the country's high schools. Estonian-language schools offer twelve years of education--nine elementary and three secondary. Education in Russian-language schools lasts eleven years. Under a 1993 law, education was made compulsory up to the ninth grade. Estonia's vocational education network is also extensive, with seventy-seven schools across the country and about 26,000 students in 1993. Literacy is nearly universal.

Estonia's system of higher education centers on six universities. Higher education was restructured in the early 1990s into a four-year system after the five-year Soviet system was dropped. A new degree structure comparable to the Western one of baccalaureate, master's, and doctoral degrees was established. With the help of exchange programs and guest lecturers from the West, new programs were begun in economics, business, foreign languages, religion, political science, and sociology *(http://countrystudies.us/).*

Business etiquette

When doing business in Estonia one will note that greetings are formal and rather reserved. There are certain protocols that should be observed such as men initiating greetings with women and the younger with the older. A good firm handshake accompanied with direct eye contact is the norm. The most common greeting is "tere" (hello). Estonians as a person, especially in business, can come across as slightly cool and detached. This is merely an extension of their leaning towards being level headed and not displaying emotions so do not misinterpret a lack of smiles as unfriendliness. As a culture that still respects hierarchy it is important to show due deference to those in senior positions when doing business in Estonia. Titles are therefore very important. Use "Härra" (Mr.), "Prova" (Mrs.), or "Preili" (Miss) followed by the surname. Business cards are essential but there is no ritual surrounding their exchange. It is always a nice gesture to have one side translated into the local language.

Estonians are direct communicators. They say what they mean and mean what they say. However, there is a certain diplomacy in their communication style which means they will temper their comments if they feel it could harm a relationship or cause someone embarrassment. Silence is often used to collect thoughts in order to respond to delicate questions. Conversations at the start of a relationship will be pragmatic and reserved. Estonians are not emotive speakers and may find those that are overbearing. A certain level of professionalism and respect should always be demonstrated until a relationship warms up, so politeness is key when doing business in Estonia. It is important to always keep to your word and deliver on what you promise. Failure to do so will damage your reputation. Try your best to mirror the Estonian preference for tactful language in tricky situations so as not to cause individuals embarrassment. Never lose your temper or raise your voice as this will damage your standing.

Meetings in Estonian are formal. It is proper etiquette for the most senior figure of the team will usually open proceedings with a short speech and introductions. Similarly the most senior member of the other team should give a short speech thanking their hosts and introducing themselves. Small talk, if it occurs, is short and simple. Prior to doing business in Estonia and having a meeting it is recommended to send an agenda. If possible, have all written materials translated. Presentations should be a blend of visual and oral information backed with accurate figures. Estonians do not appreciated hype, exaggerated claims or gimmicks. Good eye contact with all the attendees is important.

Decisions are made at the top in any business and it will take more than one meeting to accomplish tangible results. The key to success is a good, firm proposal that offers long-term gains accompanied by a building of trust. It generally takes several meetings to reach a decision. When negotiating Estonians can be direct to the point of bluntness and may appear quite stubborn. Always maintain your cool *(http://www.kwintessential.co.uk).*

Appendix 4 Country profile: Latvia

Basic needs

Population size

Latvia has a population: of 2,306,306 inhabitants *(http://en.wikipedia.org)*.

Growth

Population growth rate:	-0.71 percent
Birth rate:	8.9 birth/ 1000 inhabitants
Death rate:	13.7 deaths/ 1000 inhabitants

(http://en.wikipedia.org).

Age structure

0-14 years:	15 percent (male 177,223; female 169,241)
15-64 years:	69 percent (male 772,496; female 823,410)
65 years and over:	16 percent (male 118,035; female 245,901)

(http://en.wikipedia.org).

Urbanization

Latvia was one of the most urbanized republics of the former Soviet Union, reaching an urbanization rate of 71 percent in 1990. Subsequently, the rate of urbanization decreased and was estimated to be 69.5 percent in 1992. Part of the reason for the decline no doubt can be found in the out-migration of non-Latvians to other republics. It seems probable, as well, that a slight shift back to rural areas occurred as a result of the start-up of some 50,000 private farms *(http://www.country-data.coml)*.

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	834	781	758	742	716	680
Urban population (thousands)	1 879	1 717	1 615	1 565	1 533	1 510
Percentage urban (%)	69.3	68.8	68.1	67.8	68.2	68.9

(http://esa.un.org)

Migration

Historically, **Latvia** had a fairly large German, Russian, Jewish and Polish minorities, the demographics shifted dramatically in the 20th Century due to the world wars, the repatriation of the Baltic Germans, the Holocaust, and the Soviet occupation so today only the Russian minority, which has tripled in numbers ever since **1935**, remains important. The share of ethnic Latvians had fallen from 77 percent (1,467,035) in 1935 to 52 percent (1,387,757) in 1989. In 2005 there were even fewer Latvians than in 1989, though their share of the population was larger - 1,357,099 (58.8 percent of the inhabitants). People, who arrived in Latvia during the Soviet era, and their descendants born before 1991, must naturalize to receive Latvian citizenship. Children born to residents after the restoration of independence in 1991 automatically receive citizenship. Over 100 000 persons have been naturalized as Latvian citizens in recent years. Latvians and Livonians, the indigenous peoples of Latvia, are now less than 60% of the population. **Livonians** are the other indigenous ethnic group, with about 100 of them remaining. Some **Latgalians** consider themselves as a group separate from Latvians but the predominant view is that Latgallians are a distinctive subgroup of Latvians *(http://www.country-data.com)*.

Ethnic groups: **Latvians** 58.9 percent, **Russians** 29.6 percent, **Belarusians** 4.1 percent, **Ukrainians** 2.7 percent, **Poles** 2.5 percent, **Lithuanians** 1.4 percent, other 0.8 percent (2005) *(http://en.wikipedia.org)*.

Geography

Large parts of Latvia are covered by forests, and the country has over 12,000 small rivers and over 3,000 lakes. Most of the country consists of fertile, low-lying plains with some hills in the east, the highest point being the Gaiziņkalns at 1,020 feet (311 m). An inlet of the Baltic Sea, the shallow Gulf of Riga is situated in the northwest of the country. The capital city Riga is located on the shores of this inlet, where the River Daugava flows into it. Other major cities include Daugavpils further upriver and Liepāja along the Baltic coast. *(http://en.wikipedia.org)*.

Climate

Latvia's northern location matches Labrador's latitude. In the summer, daylight hours are much longer and in the winter much shorter. In December it is still pitch dark at 9:00 A.M., and daylight disappears before 4:00 P.M. Average temperatures in winter are reasonably mild, ranging in January from -2.8°C in Liepaja, on the western coast, to -6.6°C in the south eastern town of Daugavpils. July temperatures range from 16.7°C in Liepaja to 17.6°C in Daugavpils. Latvia's proximity to the sea brings high levels of humidity and precipitation, with average annual precipitation of 566 millimetres in Riga. There are on average of 180 days per year have precipitation, forty-four days have fog, and only seventy-two days are sunny. Continuous snow cover lasts eighty-two days, and the frost-free period lasts 177 days. *(http://en.wikipedia.org)*.

Environmental problems

The need to prioritize various complex environmental problems is recognized within the National Environmental Policy Plan (NEPP) so the Government can concentrate all its attention, effort and funds in these areas. The top 10 problems are as follows:

- *Transboundary Pollution*. The levels of transboundary emissions of sulphur and nitrogen oxides entering Latvia was double that domestically produced;
- *Transboundary Water Pollution*. Latvia's largest rivers have their origins in neighbouring countries, thus some 53 percent of the discharge from Latvian rivers to the Baltic Sea originates beyond the country's borders. This carries the accompanying pollution produced in neighbouring countries and poses a direct threat to the health of Latvia's residents;
- *Eutrophication of Watercourses and Degradation of Water Ecosystems*. Serious harm to Latvia's natural aquatic ecosystems and habitats has occurred not only in their aquatic zones but also in their littoral and riparian zones through hydro-construction, amelioration and other previous activities;
- *Risks Created by Economic Activities* .The identification of hazards and the control of hazardous objects are tasks undertaken by various institutions. Instruments for the implementation of the concept "controllable risk" have been developed including various laws, registrations, permit systems, monitoring, risk assessments and safety reports;
- *Environmental Impact of Waste*. Waste can be a complex problem, and with the quantity of hazardous waste expected to rise, preventive measures are required;
- *Environmental Impact of Transport*. Among the measures and instruments necessary to curb environmental impact are the development of transport infrastructure, regulation and optimization of types and flows of transport, emission of hazardous substances and reduction of noise, and the implementation of a system for the final disposal of substances (such as lubricants, coolants, etc.) and spare parts used in the course of vehicle operation;
- *Environmental Impact of Agriculture*. The environmental effects of agriculture have decreased in line with the closure of large scale enterprises. A reduction in the levels of nitrogen, phosphorus and other biogenous substances from fertilizers by up to 50 percent is planned by 2010;
- *Loss of Biodiversity*. Latvia has successfully maintained a rich level of biodiversity, although further measures need to be taken to protect this, including the protection of species in situ and ex situ, the protection and restoration of migratory habits, and improvements to the network of protected areas;
- *Landscape Degradation*. The effects of many years of degradation by human settlements, conflict, and industrialization have adversely affected the Latvian landscape. Measures to clean up and restore the land to its previous state are required. However, national consciousness to environmental issues must be raised as a prerequisite for sustainable development;
- *Nonsustainable Use of Natural Resources*. Measures to ensure the sustainable use of natural resources are needed including the establishment of a resource management system; optimization of production mechanisms and elaboration of sectoral programs that include economizing on resources, substituting exhaustible with alternative energy sources, and the promotion and introduction of environmentally friendly consumption;
- *Poor Quality Drinking Water*. Latvia possesses adequate water resources to provide its entire population with drinking water. Both surface water (53 percent) and groundwater (47 percent) are used for water supply and different measures are planned in the future to increase and improve the groundwater supply.

The three main environmental problems identified by companies in order of significance were hazardous waste (disposal and treatment), wastewater (treatment) and air pollution caused by boiler houses. Other forthcoming issues of importance included the substitution of oil consumption in heating

systems for gas and the implementation of cogeneration processes, industrial and household waste collection and treatment, industrial waste treatment, dehydration of wastewater sludge, elimination of emissions and the reduction and purification of wastewater *(http://www.rec.org)*.

Environmental business sector

Companies offer environmental services that include consulting, training, information and data processing, as well as various environmental technologies. The companies selected deal with the elaboration and implementation of different environmental technologies or provide the corresponding equipment for environmental quality and pollution control and analysis, pollution prevention and reduction, treatment of water and waste, recycling and disposal and remediation of polluted territories. 73 percent of the environmental businesses surveyed are privately owned, 7 percent are of mixed ownership and 11 percent are state-owned. Those state institutions playing an important role in the environmental service sector include the Latvian Environment Data Center and the National Environmental Health Center. Privately owned environmental businesses are generally small or medium-sized and have generally been privatized in the past few years. The majority of private companies are based on former state bodies (including research or education institutions) and enterprises. 40 percent of the selected environmental businesses were established from the human resources and technical background of former research or education institutions, for example Virsma Ltd., Baltic Scientific Instruments Ltd., and the Latvian Society of Heat and Gas and Water Technology Engineers.

Approximately 30 percent are new companies, some of which have grown from former environmental businesses. Around 45 percent of the selected companies are considered small (with up to 10 members of staff), 50 percent are medium- sized companies (with 10-60 staff members), and 5 percent have more than 60 staff members. The environmental businesses surveyed tended to be established within the past 2-8 years. Approximately 50 percent of the companies are only 2-3 years old, 25 percent are 4-5 years old and the last 25 percent are more than 6 years old. More than 80 percent of the selected companies have an annual turnover of more than USD 170,000, 25 percent of these companies have an annual turnover of more than USD 850,000. Generally speaking, a majority of companies are interested in cooperating with foreign partners and foreign investors. Only the state institutions interviewed failed to indicate an interest in foreign investments, perhaps because their income resources tend to be more reliable *(http://www.rec.org)*.

Legal screen

Law system

Since the beginning of 1990's, Latvia's legal system has proceeded through a transition from the socialist law to the European civil law. The transition has experienced varying pace in different segments of the law. Difficulties arose due to former negligence with regard to universal human rights and democratic legal principles that were absent in the socialist legal tradition. Even though most legal texts have been either replaced or extensively amended, socialist legal traditions and practice linger on in some spheres such as public administration

Latvia has a three level court system district or city courts, regional courts and the Supreme Court. These courts have jurisdiction on civil, criminal and administrative cases. The establishment of a special administrative court system is planned with the entry into force of the law on administrative process. District or city courts are the courts of first instance. There are 34 district or city courts in Latvia. Regional courts function as appeal courts and as the courts of first instance for larger civil lawsuits and particular kinds of serious criminal cases. Latvia has five regional courts. All regional courts have separate departments for civil and criminal cases.

The Supreme Court functions as the court of cassation (only the application of the law rather than the subject matter is reviewed) and as the court of appeal for cases where regional courts have served as the first instance. The Supreme Court is divided into two chambers of appeal and the Senate (the instance of cassation). One of the chambers of appeal deals with criminal matters and the other with civil matters. Also the Senate has separate subdivisions for dealing with civil and criminal matters. The Plenum of the Supreme Court may adopt legally binding explanation with regard to the application of the law (the Plenum is a body that comprises all Supreme Court judges). The Plenum also expresses an opinion on whether there are grounds for the dismissal of the President of the Supreme Court or the dismissal of the Public Prosecutor General. The Saeima approves the President of the Supreme Court from among judges upon the proposal of the Cabinet of Ministers. The President of the Supreme Court is approved for the tenure of seven years *(http://www.balticdata.info)*.

Establishing a business is relatively easy, but some regulations are confusing and contradictory, leading to a lack of transparency. According to the U.S. Department of Commerce, "Government bureaucracy, corruption and organized crime, typical of the old Soviet Bloc countries, have been the main impediments to trade and investment in Latvia. In addition, it is often alleged that bribe-taking ranging from low-level bureaucrats in a position to delay or speed up bureaucratic procedures, to high-level officials involved in awarding government contracts is not uncommon. Labour laws are somewhat rigid. Latvia scores: 3.0 according to the Index of Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Trade laws

Latvia adopted the trade policies of the European Union when it joined the EU in May 2004. The common EU weighted average external tariff was 1.3 percent in 2003, based on World Bank data. According to the World Trade Organization and the U.S. Trade Representative, the EU imposes non-tariff trade barriers through a complex regulatory system and export subsidies. Based on its adoption of EU trade policies, and on the revised trade factor methodology Latvia scores 2.0 on the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

With Latvia's accession to the European Union, the aquis commaunitaire has been adopted, although certain transitional rules remain in place and the process of practical implementation may still be deficient in some areas. For both investors and merchants, Latvia has become part of the European Taxation and Customs Union as part of the Single Market. Trade with member states is so subject to EU and implementing domestic legislation only, while trade with countries outside the EU has come under a largely new regime defined by EU legislation and treaties *(http://europa.eu.intm)*.

Environmental laws

The framework Law on Environmental Protection is the basic law that calls for environmental protection and which includes basic provisions and program guidelines on the rights of the population to a certain quality of human environment, information on the state of the environment, measures for the resolution of a number of environmental problems, environmental protection control, liability for environmental violations, international cooperation in environmental protection, the distribution of responsibilities in environmental protection and other issues.

The Republic of Latvia's Laws on Environmental Impact Assessment and on State Environmental Inspection are currently being drafted. Further framework environmental legislation includes the Laws on Hazardous Waste, Protected Areas and various regulations concerning environmental management. The body of environmental laws and regulations and government instructions has also increased as a result of the EU accession process. The introduction of the polluter-pays principle into legislation means environmental considerations must be factored into all economic activities. The Law on the Natural Resource Tax of 1995 calls for the implementation of the following economic instruments:
Introduction of the term "environment unfriendly product" for products such as coal, fuel, CFCs, etc.;

- Increased taxation rates for environmental pollution;
- Issuing of emission licenses, crediting of taxes, and taxes on carbon dioxide collected as VAT on fuel.
- Air: The most important legislative acts in the field of air quality protection include the Air Protection Law of 1981 and the Regulations on the Protection of the Ozone Layer of 1997. The law is complemented by many standards on air quality as well as instructions and other subordinated legislation. It applies to both stationary and mobile sources of air pollution.

However, it has to be noted that the law seems to be accorded rather poor attention since it was not intended for today's market economy. While limits for air pollution in the form of permits can be applied, these are not accompanied by a deeper analysis on how to minimize pollution in the most cost-efficient manner. Thus, several new statutes are expected to be adopted in the future, including Regulations on Air Quality Standards, Regulations on the Procedure of the Control of Air Quality, Instructions on Emission Programs in Latvia, and Regulations on Normative Emissions from Stationary Pollution Sources *(http://www.rec.org)*.

Banking and finance

Banking crises in 1995 and 1998 led to the liquidation and consolidation of a number of Latvia's banks. The banking system has largely recovered, and regulations now require minimum accounting and financial standards, minimum capital requirements, restrictions on exposure, and open foreign exchange positions. A foreign non–European Economic Area bank may open a branch in Latvia if its capital is equal to at least the minimum capital required by law (EUR 5 million) and, if the bank is not licensed in a country that is a member of the World Trade Organization, it has been operating for at least three years. In 2004, 22 banks and one branch of a foreign bank were operating in Latvia. Banking standards and requirements apply equally to foreign and domestic banks, and foreign banks are welcome; according to the Economist Intelligence Unit, only one large bank is not owned by a West European bank. The Latvian government reports that it is sole owner of the JSC Hipoteku banka (the Mortgage Bank), which accounted for 4 percent of total banking assets at the end of 2004. All other commercial banking institutions are privately held. Latvia scores 2.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.orgm)*.

Macro economic policy

Latvia scores: 2.0 according to the Economic Freedom Index. From 1995 to 2004, Latvia's weighted average annual rate of inflation was 4.90 percent, up from the 2.64 percent from 1994 to 2003 reported in the 2005 Index. As a result, Latvia's monetary policy score is 1 point worse this year. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*. On July 21, 2005 the Cabinet of Ministers adopted decision to establish Governmental Committee for the Introduction of the European Union Single Currency in Latvia, which has the task of working out the plan of necessary measures in order to ensure the successful accession of Latvia to the Euro zone *(http://www.em.gov.lv)*. The Bank of Latvia's monetary policy aims at maintaining exchange rate stability and controlling the amount of banks' reserves so as to limit excessive lending. The exchange rate policy of the Bank of Latvia is similar to that of a currency board, and the monetary base is backed by gold and foreign currency reserves *(http://www.latvianbanks.com)*.

The implemented fiscal policy in Latvia envisages gradual decrease of the general government budget deficit, ensuring formation of a balanced budget in the long term. The government has agreed to set the general government budget deficit in 2006 at 1.5% of GDP. A gradual decrease of the budget deficit in the following years has been foreseen. The Cabinet of Ministers has resolved to review substantially the positions of the state fiscal and budget policy, ensuring efficient and fair spending of the government budget resources.

Main planned activities for 2005-2008 in the area of fiscal policy (Guidelines 1 and 3).

- To fulfil the Maastricht fiscal criterion and ensure efficient budget spending (responsible institution: Ministry of Finance);
- By reducing the general government budget deficit gradually, ensuring the formation of a balanced budget in the long term;
- By introducing medium-term (3-5 years) budget planning. To introduce strategic planning in the ministries in order to ensure purposeful development and efficient spending of the government budget resources;
- By examining the expedience and efficiency of the budget programmes, to prevent the inexpedient spending of the budget *(http://www.em.gov)*.

Latvia scores 3.89 on the macroeconomic environment index, which means that the country is relatively stable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

Latvia scores: 2.3 according to the Index of Economic Freedom Index. Latvia has a flat income tax rate of 25 percent. The corporate tax rate is 15 percent. In 2004, according to the Ministry of Finance, government expenditures as a share of GDP increased 0.7 percentage point to 40.4 percent, compared to the 1.1 percentage point increase in 2003. On net, Latvia's fiscal burden of government score is 0.2 point worse this year. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Latvia has the following taxes;

- Corporate income tax, including withholding tax 15 percent;
- Value added tax 18, 5 or 0 percent;
- Gambling & lottery tax;
- Social insurance;
- Personal income tax;
- Real estate tax;
- Natural resources tax;
- Exciswe tax;
- Customs duties;
- Car & Motorcycle tax *(http://www.liaa.gov.lv)*.

Corruption

The latest report on world corruption by Transparency International shows that Latvia is the second most corrupt country in the EU. The new index, published today by Transparency International (TI), the world's leading non-governmental organisation fighting corruption, ranks 102 countries. Seventy countries - including many of the world's most poverty-stricken - score less than 5 out of a clean score of 10. Countries with a score of higher than 9, with very low levels of perceived corruption, are predominantly rich countries. On the corruption perception index Latvia scores 3.7 and ranks 52 *(http://ww1.transparency.org)*.

Crime

Latvia has a crime rate of 62 which is an average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

Politics of Latvia takes place in a framework of a **parliamentary representative democratic republic**, whereby the **Prime Minister** is the **head of government**, and of a pluriform multi-party system. The **President** holds a primarily ceremonial role as Head of State. **Executive power** is exercised by the government. **Legislative power** is vested in both the **government** and parliament, the **Saeima**. The **Judiciary** is independent of the executive and the legislature *(http://en.wikipedia.org)*.

Institutions

The government has the following bodies, prime minister, defence, foreign affairs, economics, finance, interior, education and science, culture, transport, justice, environment, agriculture, welfare, health, regional development and local governments, children and family affairs, special assignments for society integration affairs, special assignments for electronic government affairs *(http://en.wikipedia.org)*.

Parties in Latvia: First Party of Latvia or LPP, For Human Rights in a United Latvia or PCTVL, For the Fatherland and Freedom/Latvian National Independence Movement or TB/LNNK, Harmony Center or SC, Latvian Green Party or ZZS, Latvian Farmer's Union or LZS, Latvian Social Democratic Workers Party (Social Democrats) or LSDSP, Latvian Socialist Party or LSP, Latvia's Way or LC, New Democrats or JD, New Era Party or JL, People's Harmony Party or TSP, People's Party or TP, Social Democratic Union or SDS
(http://www.cia.gov).

Government intervention

The Central Statistics Bureau reports that the government consumed 20.9 percent of GDP in 2004. In 2003, according to the International Monetary Fund's Government Financial Statistics CD–ROM, Latvia received 1.9 percent of its total revenues from state-owned enterprises and government ownership of property. Latvia scores 2.5 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental priorities

The National Environmental Protection Plan (NEPP) /112/ for Latvia was approved by the government in 1995. The plan identifies a set of priorities for investments in the environmental sector, namely:

water supply and wastewater treatment, waste management (including hazardous waste treatment), nature protection, air protection (energy and transport), and sustainable development projects. Another indication of the priority areas for environmental protection can be obtained through the revenues and expenses structure of the Environmental Protection Fund, which while not significant, will grow in the future as an important source of state financing for environmental protection *(http://www.rec.org)*.

Government programs

The Environmental Protection Fund was created in September 1996 to support environmental projects. The Latvian Environmental Investment Fund (LEIF) was established to pool domestic earmarked resources, and foreign bilateral and multilateral funding. The target of these investments are public and private environmental projects, that are in accordance with the guidelines of the National Environmental Protection Policy (NEPP) and the National Environmental Action Program (NEAP). The Municipal Development Fund was established as one of the three subprojects of the joint "Development of Communal Service" project between the Republic of Latvia and the World Bank. The major goal of the Fund is to mobilize and offer financial resources to local governments/municipalities for investments in local government infrastructure projects. Thus the Municipal Development Fund is an additional source of revenue for municipalities to finance their projects according to the Law on Municipalities. The tasks of the Fund also include identifying project opportunities and building municipal capacity through assistance in project design, assessment, and implementation. Investment programs are realized through program rationalization and the use of rational criteria for the geographical and sectoral distribution of resources. The Fund is especially suited to provide assistance to small local governments/municipalities that do not have sufficient administrative skills or access to financial resources *(http://www.rec.org)*.

Political stability

The Political Stability index measures a score of 0.82. This gives a perception of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including terrorism. The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability. *(http://humandevelopment.bu.edu)*

Economic screen

Natural resources

Latvia cannot claim valuable natural resources. Nevertheless, the abundant presence of such materials as limestone for cement, gypsum, high-quality clay, dolomite, peat, and construction materials, including gravel and sand, satisfy local needs. Fish from the Baltic Sea is another potential export resource export. Amber, million-year-old chunks of petrified pine pitch, is often found on the beaches of the Baltic Sea and is in high demand for jewelry. It has also had a symbolic impact on the country, which is often called Dzimtarzeme, or Amberland. The future may hold potentially more valuable resources if oil fields are discovered in Latvian territorial waters, as some geologists have predicted *(http://worldfacts.us)*.

Exchange rate

Lati per US dollar - 0.5647 (2005), 0.5402 (2004), 0.5715 (2003), 0.6182 (2002), 0.6279 (2001) (*https://www.cia.gov)*.

Gross domestic product

GDP (purchasing power parity)	$30.29billion
GDP (official exchange rate)	$14.43billion
GDP (real growth rate)	7.10.2 per cent
GDP per capita	$13,200

(https://www.cia.gov).

Inflation

Inflation rate (consumer prices) 5.9 percent
(https://www.cia.gov).

Environmental expenditures

Environmental expenditures in Latvia totalled USD 27.6 million in 1996 or 0.5 percent of GDP. This figure has declined over recent years. The decline is perhaps distorted by the fact that accurate data on expenditures is difficult to obtain as it is collected from many different institutions and not always compiled. An approximate distribution of 1996 expenditures is as follows: 83 percent for water and wastewater, 8 percent for air, 5 percent for waste (specifically land protection from pollution by industrial and municipal waste) and 4 percent for other various sectors. The large share of water and wastewater treatment in environmental expenditures, significant in recent years, is mainly due to the fact that municipalities have been forced to invest in water and wastewater treatment. The sector has therefore become the main recipient of municipal funds invested in the environment. The trend is expected to continue in the near future *(http://www.rec.org)*.

Demand for environmental technologies

The demand for environmental technologies in Latvia is ranked between moderate and high. Higher demand is noted in the waste management and energy sectors, followed by moderate demand for water, wastewater and air related technologies.

Within the air sector, the demand for air pollution control technologies was ranked moderate to low. The highest demand among air technologies was for air pollution control/flue gas purification equipment (e.g. filters, scrubbers). Growing demand can be expected for instrumentation and process control/software as well as air sampling/laboratory analysis equipment.. The moderate demand for flue gas treatment equipment is in slight disagreement with the relatively low share of investments in the air pollution control sector The moderate demand may therefore be related to the poor efficiency of treatment equipment (a number of which are already outdated and depreciated). However, the low levels of investments may be related to an unwillingness to upgrade equipment, or when making a decision the necessary investments are directed to other sectors considered to be more important (for example, waste, wastewater treatment, energy).

Overall, the demand for energy-related environmental technologies is ranked between high in the power generation sub sector and moderate in the industry sub sector. The energy sector requires environmental technologies predominantly for heat recovery and energy savings, new/efficient energy and heat generation systems and retrofitting and rehabilitation of existing systems as well as process management and control. Growth is expected in the same above areas for other industries as with the power generation sector. The relatively low ranking given by industry can be explained by the current restructuring processes in the industrial sector, the decreases in production, and the limited resources of enterprises to purchase environmental technologies. At the same time, a number of successfully functioning, privatized enterprises are investing fairly large amounts of money in the reconstruction of their energy systems. In the industrial sector, the highest demand is given to heat recovery and energy savings. It is expected that as energy prices rise in the future, there will be an increase in demand for energy efficient/saving technologies among industrial users. High demand among municipalities is identified for heat recovery and energy saving technologies, new/efficient energy and heat operation systems, and retrofitting/rehabilitation of the existing systems. The high demand in these areas is fuelled by poor efficiency and large energy losses in the existing heat supply systems, creating pricing problems for consumers. Municipalities have made some investments in energy related technologies and will continue to do so even though their financial resources are restricted. Moderate demand was indicated among municipalities for alternative/renewable energy systems. This is caused by the fuel conversion in heating plants to local wood resources and the potential development of small hydropower stations on a number of small Latvian rivers. Alternative/renewable energy system technologies are not ranked as important by the industry sector at the moment. Alternative refrigerants are currently ranked low in both sectors; however, demand for them may increase due to the new Regulations on Ozone Layer Protection, effective since the end of 1997. Of particular interest is the demand for technologies in the Latvian power sector. A number of feasibility studies and estimates have been carried out, and the rehabilitation of two existing thermal power plants and the construction of new plants are recognized as priorities in the development of the state energy sector. However, the purchase and use of the new technologies will depend on the restructuring and privatization of the sector *(http://www.rec.org)*.

Major end-users

Overall, the primary buyers and environmental technology end-users are the municipalities. The legal basis for this is the Law on Municipalities, which places, among other things, the management of most environmental sectors in the jurisdiction of municipalities. The law determines the following duties of municipalities with regard to environmental technologies: water supply and sewerage; heat supply;

waste collection, transport, disposal and treatment; wastewater collection, drainage and treatment; organization of public services and facilities; and care for sanitation. The next largest end-users are industrial companies. As a rule, they are represented mainly by the food industry, an industrial branch that is one of the most successful today in Latvia. Most enterprises are privately owned or are involved in joint-ventures.

The major end-users of environmental technologies for air pollution control are industrial companies (40 percent). The primary industries active in this sector are chemistry, pharmaceutical, building material manufacturers, metallurgical operators and railway transport. The majority of end-users in these sectors are companies that have already been privatized and restructured. A number of industrial enterprises in Latvia are still being privatized and therefore future opportunities are good. Due to the decreased production of Latvian companies during the transition period, consumption and air emissions have been low. Thus, it is reasonable to expect that air emissions will rise once development restarts (estimated at 30 percent) and with it a corresponding rise in the demand for air-related technologies. The largest source of air pollution is traffic. At the moment, the traffic sector is not considered a significant end-user since the implementation of legislative norms on air pollution in the traffic sector is not well-developed. Analysis of air pollution from mobile sources identifies a current need for the development and implementation of air monitoring systems in cities.

There are three major end-users of energy technologies: municipalities (40 percent), industrial companies (28 percent), and energy producers. The total energy losses in the transformation and transmission sector are estimated at 15 percent of total energy resource consumption in Latvia. The food and beverage, timber, metallurgy, chemical, and nonmetallurgy (cement, glass) industries are among those most interested in energy technologies. Due to the increase of energy prices, the private sector is increasingly interested in energy saving measures and the renovation of existing heat supply systems.

The ownership of district heating systems varies between municipalities and privately-owned stations. Within these systems, losses of up to 30 percent have been discovered. Renovation of district heating systems and conversion to local fuels are the major priorities today. The end-user potential of the Latvian power production sector may be identified more accurately after the restructuring and privatization process has been completed. *(http://www.rec.org)*.

Major suppliers

The largest share of environmental technologies offered by local suppliers relate to water. The supply of technologies with regard to waste and energy is considered moderate. The smallest supply of local environmental technologies relate to air pollution control and detection. The environmental technology market in the air sector is not yet developed. One of the main reasons for this are the shortcomings of the penalty system, under which companies are not compelled to meet national standards. A small number of local technology providers have the capacity and expertise to monitor air pollution emissions, but the sector still experiences low demand.

Companies working in the energy sector are concentrated in the optimization of energy generation (Rupnicprojekts, and Filter Ltd.), construction of boiler houses (Orions), consulting units, and innovative energy technologies (Ekodoma). Until recently, there were very few foreign environmental technology companies operating in Latvia *(http://www.rec.org)*.

Infrastructure

The main problems of Latvian transport systems are related to high depreciation of road and railway infrastructure, insufficient carrying capacity in several segments, insufficient capacity of access roads to the largest ports and the Riga International Airport, and inadequate level of road safety. The most essential traffic shortcomings in Riga (where about one third of the country's population lives) are: depreciation of infrastructure, inefficient connections of bridges to the street network, poorly organised traffic and outdated technical means for traffic regulation. Improvement and development of the quality of international transport corridors and an increase in the load carrying capacity of road surfaces and bridges in accordance with EU requirements, is a substantial precondition for improvement of traffic safety, in order to achieve a 50% reduction in the number of traffic accident deaths by 2010 in comparison with 2002, which is a target set up in the Verona Declaration *(http://www.em.gov.lv)*.

Technological screen

Technology Level

Technology Index Rank	29
ICT subindex	35
Technology Transfer subindex	16
Innovation subindex	26

(http://www.weforum.org)

Technological development

The national innovation system of Latvia is poorly developed at present and does not provide the innovation capacity required to increase the competitiveness of the state. Only 18.6% of all enterprises on average are innovative, while in the EU countries the average indicator is 45%. The number of national patents is small (approximately 100-150 patents are issued every year), and their importance, from the point of view of competitiveness in the world, is not high. At present, Latvia considerably lags behind the economically developed countries in the number of patents per 1000 people *(http://www.em.gov.lv)*.

Property rights

Latvia's constitution provides for an independent judiciary, which in practice is inefficient. The Economist Intelligence Unit reports that "judicial institutions enjoy independence from political influence, but are regarded as inefficient, with long delays in court hearings and enforcement of decisions. Judges are under-qualified and overworked." According to the U.S. Department of Commerce, "improvements in the judicial system are needed to accelerate the adjudication of cases, to strengthen the enforcement of court decisions, and to upgrade professional standards." Latvia scores 3.0 point on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Telecommunications

More than 1 million Internet users where active in 2005. One third of the inhabitants have access to the Internet and around 80% of them have a permanent connection. *(www.evd.nl)*

Language

The official language of Latvia is Latvian. Russian is also common spoken *(http://en.wikipedia.org)*. A large part of the business community speaks English. There are many managers, especially the older generation, who does not speak English *(www.evd.nl.)*

Religion

The common Religions are: **Lutheran**, **Roman Catholic**, **Russian Orthodox** *(http://en.wikipedia.org)*.

Education

In 1989 only ninety-six out of 1,000 Latvians completed higher education, compared with 115 out of 1,000 for the entire population. It is difficult to compete in entrance examinations after attending schools in rural areas where there are regular official interruptions in the fall for harvesting and in the spring for planting. Distances and poor transportation networks provide another obstacle to completing secondary school. Most institutions of higher learning are located in Riga. Unless one has relatives or friends there, it is difficult to find living accommodations. Student residences can cater to only a small proportion of applicants.

One of the unique aspects of the Latvian education system was the introduction during the 1960s of schools with two languages of instruction, Latvian and Russian, in which each group held classes in its own language. About a third of all schoolchildren went to these schools, and the others attended the purely Latvian or Russian schools. Extracurricular activities and parent-teacher events were expected to be held together, and almost inevitably they were conducted in Russian because of the imbalance in language knowledge. These schools did not foster interethnic friendship, as originally hoped, and they were being phased out in post-Soviet Latvia. In the 1993-94 school year, sixty-nine out of 574 such primary schools remained *(http://countrystudies.us)*.

Business etiquette

When doing business in Latvia handshakes are the custom. It is important that you shake hands with everyone when you enter a meeting. It is not uncommon for individuals who are already acquainted to share a brief embrace, or, a kiss on the cheek. As soon as the handshakes are over, it is custom for individuals who are not already acquainted to exchange business cards. It is recommended that you have one side of your business card translated into Latvian. It is good manners to address someone with their professional or academic title if they have one. If not, then you should apply the relevant honorific title of 'Kungs' to address a male and 'Kundze' to address a woman. Although business casual is becoming more acceptable in Latvia, formal business dress is still the norm. Men are advised to wear a dark suit whilst women are advised to wear either a suit or, a conservative dress.

When doing business in Latvia you will notice that Latvians are not particularly emotive speakers and they are sometimes perceived by non-Latvians as being cold or austere on the first meeting. They are also fairly reserved and do not have a problem with 'awkward silences'. Latvians are extremely courteous in their communication and perceive interrupting others as bad manners. It is important therefore, that you give meeting attendees ample time to complete what they are saying before speaking. Latvians are fairly direct in their communication and will often 'say what they mean'. However, they will also moderate what they say to avoid potential offence. When doing business in Latvia you should follow suit therefore, and ensure that you do not say anything within either the confines of the meeting or outside the meeting which could be perceived as critical of another individual. It is also the norm in Latvia not to furnish speech with non essential information. You many notice therefore that Latvian meeting attendees become irritated if you add unnecessary information into your speech and fail to speak succinctly and to the point.

The Latvian meeting is a fairly formal affair and agendas are followed throughout. The most senior Latvian attendee will typically make an opening speech which should then be followed by a speech from the most senior member of your visiting party. He / She will then take the lead in directing the meeting and overseeing the decision making process. Since decision making comes from 'the top', this can sometimes make the process fairly lengthy. Latvians often use time as a negotiation tactic and it is recommended therefore that you are cautious in respect to making it known if you are under any time constraints as they may use this to their advantage. Before doing business in Latvia ensure your proposals are backed up with materials which summarise and rationalise your proposals. This material should be purely relevant and succinct. It should also be translated into Latvian *(http://www.kwintessential.co.uk)*.

Appendix 5 Country profile: Lithuania

Basic needs

Population size

Lithuania has a population: of 3.412 million inhabitants in the year 200 *(http://en.wikipedia.org)*.

Growth

Population growth rate: 0.3 percent in the year 2006
Birth rate: 8.75 births/1,000 population)
Death rate: 10.98 deaths/1,000 population *(http://en.wikipedia.org)*.

Age Structure

0–14 years: 15.5 percent (male 284,888; female 270,458)
15–64 years: 69.1 percent (male 1,210,557; female 1,265,542)
65 years and over: 15.5 percent (male 190,496; female 363,965) (2006 est.) *(http://en.wikipedia.org)*.

Urbanization

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	1 199	1 187	1 155	1 148	1 128	1 090
Urban population (thousands)	2 499	2 441	2 344	2 284	2 231	2 197
Percentage urban (%)	67.6	67.3	67.0	66.6	66.4	66.8

(http://esa.un.org)

Migration

Lithuania among the **Baltic States** has the most homogeneous population. According to the census conducted in 2001, 83.45 percent of the population identified themselves as **Lithuanians**, 6.74 percent as **Poles**, 6.31 percent as **Russians**, 1.23 percent as **Belarusians**, 2.27 percent as member of other ethnic groups. Such a high percentage of ethnic Lithuanians might be influenced by the fact that in the early 1990's newly established government of Lithuania decided to grant citizenship to anyone who lived in Lithuania and who wished to have Lithuanian citizenship *(http://en.wikipedia.org)*.

Under Soviet rule, especially in the last decade, one-half or more of the annual population increase resulted from immigration, primarily from Russia. But this situation has changed. More people emigrate to former Soviet republics than arrive from them, and more people leave for the West than come from there. In 1990 Lithuania's net migration loss to former Soviet republics was 6,345. Loss to the West includes Jewish emigration. Gains from the West include returning Americans and Canadians of Lithuanian descent *(http://www.country-data.com)*.

Geography

Lithuania is situated in northern **Europe** and is the largest and most populous of the **Baltic states**, it has around 99 **kilometres** (61.5 **mi**) of sandy coastline, of which only about 38 kilometres (24 mi) faces the open **Baltic Sea**. Lithuania's major warm-water port of **Klaipėda** lies at the narrow mouth of **Curonian Lagoon** (Lithuanian: Kuršių marios), a shallow lagoon extending south to **Kaliningrad**. The main river, the **Nemunas**, and some of its tributaries carry international shipping vessels. The Lithuanian landscape is glacially flat, except for **morainic** hills in the western uplands and eastern highlands that are no higher than 300 metres (1,000 **ft**), with the highest point being found at **Juozapinės** at 292 metres (958 ft). The terrain features numerous lakes, **Lake Vištytis** for example, swamps, and a mixed forest zone covers 30% of the country. The **climate** lies between maritime and continental, with wet, moderate winters and summers. According to some geographers, Lithuania's capital, **Vilnius**, lies a few kilometres south of the **geographical centre of Europe** *(http://en.wikipedia.org)*.

Climate

The country's climate, which ranges between maritime and continental, is relatively mild. Average temperatures on the coast are 1.6 **°C** in January and 17.8 °C in July. In Vilnius the average

temperatures are 2.1 °C in January and 18.1 °C in July. Average annual precipitation is 717 millimeters on the coast and 490 millimeters in the eastern part of the country. The growing season lasts 202 days in the western part of the country and 169 days in the eastern part *(http://en.wikipedia.org)*.

Environmental problems

The most critical environmental problems are related to the treatment of wastewater, wastewater minimization and water supply. The majority of domestic wastewater in cities is discharged into rivers after mechanical treatment following insufficient biological treatment. In 1996, approximately 252 million cubic meters of wastewater was discharged to surface water bodies. Of this amount, 39.5 percent was treated to match the requirements of discharge standards, 43.8 percent was insufficiently treated and 16.7 percent was discharged completely untreated. Therefore, construction of wastewater treatment facilities remains the highest priority for investment.

Atmospheric pollution in Lithuania has declined in recent years. Lithuania still experiences acid rain, ozone layer depletion and climate change and as in most other nations, this tends to be caused by transport, energy and industry. Mobile pollution sources (road transport, agriculture, construction vehicles, railway, civil aviation, the ocean and river fleets) emit approximately 362,000 tons of pollutants into the atmosphere each year, and they are the major sources of atmospheric pollution in Lithuania. Air pollution treatment equipment at industrial companies in Lithuania could reduce the total polluted emissions by up to 98 percent; however, many pollutants are untreated because companies do not own the specialized equipment necessary for the removal of certain materials such as gaseous and liquid mixtures. Therefore, air pollution treatment equipment reduces approximately 48 percent of all emissions. The emission of pollutants by stationary sources to the atmosphere totals an estimated 148,893 tons per year.

The emission of pollutants into the atmosphere decreased in comparison with 1993. Emissions from stationary pollution sources declined by 25 percent, with emissions from Akmenes Cementas decreasing by 5,700 tons and emissions from the Achema company decreasing by 200 tons. In many cases, the reduction in emissions was caused by a general reduction in production volumes. Furthermore, industrial companies started to operate air pollution treatment equipment. In contrast, some other companies' volumes of emissions have actually increased due to increases in production.

Air pollution reduction/stabilization analysis has revealed two major trends: increasing transport emissions and increasing pollution from industrial and energy sources whose output is increasing. In order to prevent any worsening of the situation, urgent measures must be adopted to ensure that permissible levels of pollutant emissions and concentrations are not exceeded, and that international obligations regarding air protection can be met. For the reduction of air pollution from mobile sources, it is necessary to improve fuel quality, introduce vehicles that meet EU standards, and to introduce optimal transport stream regulation systems.

To meet EU standards, it is necessary to proceed quickly with the finalization of legislation for the regulation of emissions and to implement energy saving measures. It is also necessary to promote the use of cleaner fuels and the introduction of advanced production and pollutant treatment technologies for the regulation of atmospheric pollution from the energy sector and industry. It would also be necessary to revise the financing scheme for environmental protection measures and to strengthen the environmental investment fund that would provide more favourable conditions for the implementation of environmental protection measures for enforcement purposes.

Environmental policy coordination and integration, the reorganization of environmental legislation, and the creation of an effective Environment Impact Assessment Program are key issues for the future in Lithuania. To prevent the growth of new pollution sources, education and institutional strengthening, as well as enforcement of environmental legislation, is required *(http://www.rec.org)*.

Environmental business sector

The majority of environmental businesses in Lithuania is privately owned (65 percent) or is being privatized. State-owned companies have bureaucratic system that hinders them from operating like normal businesses, and they expressed a desire to switch to private ownership.

Three-quarters of environmental businesses in Lithuania were established after 1990. Many of these companies were renamed or re-established as a result of the political changes, hence their relatively young age. Most Lithuanian environmental businesses offer services (88 percent), either in addition to or instead of environmental technologies. Some of those Lithuanian companies offering environmental

technologies and services have already entered other markets abroad, such as Russia, Belarus, Ukraine and Poland; however, income obtained from foreign activities rarely exceeds 25 percent of total annual turnover.

The majority of environmental businesses comprises fewer than 50 employees (67 percent) and therefore can be considered small to medium-sized. One-fifth of the surveyed environmental businesses have more than 100 employees. These companies have generally been operating in Lithuania for at least 30 years *(http://www.rec.org)*.

Legal screen

Law system

According to the U.S. Department of Commerce business in Lithuania is still fairly heavily regulated. Investors and lawyers complain that many laws and regulations are vague, confusing, and often contradictory. The government gives the business community little advance notice of new legislation, and still less opportunity for comment." The same source reports that small and medium entrepreneurs "describe lower level bureaucrats as rigid, unhelpful, corrupt, and often abusive. The Lithuanian press is replete with stories of tax inspectors, economic police, and customs officials who make unreasonable demands on small businesses. Many companies agree that the government appears to be biased in favour of big business. Environmental and labour laws are established along the lines of EU regulation. Lithuania scores 3.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Transparency of The Regulatory System: Business in Lithuania is still fairly heavily regulated. More than 50 agencies regulate the business environment and possess the legal standing to close a business. Investors and lawyers complain that many laws and regulations are vague, confusing, and often contradictory.

U.S. corporate representatives have noted lengthy bureaucratic procedures to obtain customs clearances and other certifications. The Executive Director of the local Investors' Forum noted that it takes approximately 20 days to start a business in Lithuania *(http://www.state.gov)*.

Trade laws

Lithuania adopted the trade policies of the European Union when it joined the EU in May 2004. The common EU weighted average external tariff was 1.3 percent in 2003, based on World Bank data. According to the World Trade Organization and the U.S. Trade Representative, the EU imposes non-tariff trade barriers through a complex regulatory system and export subsidies. The U.S. Department of Commerce reports licensing requirements on some goods beyond EU requirements. Based on its adoption of EU trade policies, and on the revised trade factor methodology, Lithuania's trade policy score is unchanged. Lithuania scores 2.0 on the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental laws

There are currently eight laws in Lithuania directly related to environmental protection. The General Environmental Protection Law, passed in 1992, serves as the central framework law and presents the basic principles of environmental protection: sustainable development, environmental policy integration, the "polluter-pays" principle, pollution prevention, multi-stakeholder partnerships, compensation for pollution damage, and access to information.

The Law on Waste Management has been submitted to Parliament for review, and regulations for hazardous waste management are currently being prepared. Some of the former Soviet Union legislation on waste management is still valid in Lithuania; however, regulations for waste management planning and organization will be introduced once the Law on Waste Management has been passed. The pollution prevention principle is embodied in the draft Law on Environmental Impact Assessment, which has been submitted to Parliament for consideration. The main principle underlying the Law on Taxes on the State's Natural Resources (passed in March 1991) and the Law on Taxes Charged for Pollution (passed in April 1991) is the "polluter pays." These laws are gradually being modified in order to harmonize them with EU requirements.

The following instruments are applied in environmental protection policy:

- Taxes on natural resources ensure the economic and rational use of the state's natural resources;
- Pollution taxes and penalties provide incentives for the reduction of pollution and adverse impacts on the environment. This instrument serves as a mechanism for raising funds for the implementation of environmental protection measures and as an incentive to introduce cleaner production technologies for the use of less harmful materials and for producing less waste;
- Civil proceedings and penalties are applied for the violation of municipal and hazardous waste management requirements; Some other instruments, such as profit tax breaks, soft loans, etc., are also being used.

In May 1995, an Order on the Eco-Labeling of Products was approved with the aim of reducing environmental impact during the whole life cycle of a product. The order is also consistent with the EU. The Ministry of Environmental Protection ensures enforcement through its regional divisions. Fee collection is not comprehensive, however, and compliance is often difficult to ensure as the number of small and medium-sized companies continues to grow and monitoring becomes more difficult. All eight environmental protection departments have laboratories that render their services to environmental protection inspectors. Local authorities undertake a number of functions in ensuring the adoption of environmental legislation. The system of integrated pollution prevention control is under consideration, with a unified permit system being discussed. The proposed permit would be valid for air and water pollution and for the use of natural resources. Regional departments of the Ministry of Environmental Protection would issue permits once the system has been approved *(http://www.rec.org)*.

Banking and finance

Lithuania's banking system has recovered from its collapse in 1995 and emerged relatively unscathed from the Russian financial crisis in 1998. The crisis led to consolidation as the number of commercial banks fell from 28 in 1995 to 10 as of January 2004. "The sector is already highly concentrated," reports the Economist Intelligence Unit. "The share of total assets held by the three largest banks (Vilniaus Bankas, Hansabankas and Nord/LB Lietuva) was 75 percent as of the beginning of December 2004." Scandinavian banks dominate the banking sector, in which foreign banks accounted for just under 90 percent of banking capital as of October 2004. Privatization of Zemes Ukio Bankas (LZUB), Lithuania's last remaining state-owned bank, was completed on March 19, 2002. According to the U.S. Department of Commerce, "Government policies do not interfere in the free flow of financial resources or the allocation of credit." Lithuania scores 1.0 on the economic freedom index *(http://www.heritage.org)*.

Macro economic policy

The main objective of monetary policy is maintaining price stability that is implemented by selecting the anchor currency in line with the provisions of the existing legislation. A fixed exchange rate in a small and open economy, such as Lithuania, helps to achieve relative price stability over a long-term. In addition, the litas peg to the euro will accelerate Lithuania’s integration to and convergence with the European Union Member States *(http://www.lb.lt/eng/about/policy.html)*.

Lithuania has operated under a currency board arrangement (CBA) anchored on the deutsche mark/euro and the U.S. dollar, respectively; Lithuania switched to a euro anchor in February 2002. After a sharp initial contraction, growth in the Baltics resumed in 1994 and was among the highest in transition economies in 1997. Despite the liberalization of most prices, inflation was quickly brought under control and is converging toward levels prevailing in the EU. External current account deficits have been quite large since 1994, but large inflows of foreign direct investment (FDI) covered much of the domestic saving-investment gap. The rapid recovery from the Russian financial crisis in 1998 testifies to the resilience of the Baltics to external shocks *(http://www.imf.org)*

Lithuania scores 4.06 on the macroeconomic environment index, which means that the country is relatively stable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

The government reduced the corporate profit tax on January 1, 2004 to 15 percent, and plans to eliminate the turnover tax, currently at 1 percent, in mid-2005. It is also considering reducing the personal income tax from the current 33 percent to 30 percent. Local analysts have drawn our attention to the fact that while the corporate tax is low, the total tax burden remains high, since companies must pay a 31 percent social security tax on wages. The government is considering a

proposal from the Investors' Forum to limit payment of social security tax to the first LTL 5,000 (USD 1900) of an employee's salary. Analysts have noted that a foreign bank extending a loan to finance a company would need to pay a ten percent withholding tax, twice the rate a Lithuanian bank would have to pay *(http://www.state.gov)*.

In 2004, according to the Embassy of Lithuania, government expenditures as a share of GDP increased 0.6 percentage point to 34.7 percent, compared to the 0.2 percentage point decrease in 2003. On net, Lithuania's fiscal burden of government score is 0.4 point better this year. Lithuania scores 2.4 on the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Corruption

Most large foreign investors report that senior officials are often very helpful in solving problems. The Investors' Forum, which counts large corporations among its members, reports no outstanding issues with corruption. The small and medium enterprise (SME) sector holds a different perspective on the Lithuanian bureaucracy, however. These businessmen describe lower level bureaucrats as rigid, unhelpful, corrupt, often abusive, and sometimes displaying an anti-business attitude. The Lithuanian press is replete with stories of tax inspectors, economic police, and customs officials who make unreasonable demands on small businesses. Many companies agree that the government appears to be biased in favour of big business, which are seen as a ready source of capital and employment, in spite of the existence of several official programs to promote SMEs *(http://www.state.gov)*.

The new index, published today by Transparency International (TI), the world's leading non-governmental organisation fighting corruption, ranks 102 countries. Seventy countries score less than 5 out of a clean score of 10. Countries with a score of higher than 9, with very low levels of perceived corruption, are predominantly rich countries. On the corruption perception index Lithuania scores 4.8 and ranks 36 overall *(http://ww1.transparency.org)*.

Crime

Lithuania scores: 67. Average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

Lithuania has a compromise **semi-presidential system**. The Lithuanian **head of state** is the **President**, elected directly for a five-year term, maximum two terms consecutively. The post of President is largely ceremonial with functions of overseeing foreign affairs and national security policy. The President is also the commander-in-chief. The President, on the approval of the Parliament of the Republic of Lithuania, also appoints the **prime minister** and on the latter's nomination, appoints the rest of the **cabinet**, as well as a number of other top civil servants and the judges for all courts. Judges of the **Constitutional** Court), who serve for nine year terms, are appointed by the President (three judges), the Chairman of the Parliament of the Republic of Lithuania. (three judges) and the chairman of the Supreme Court (three judges) *(http://en.wikipedia.org)*.

Institutions

President of The Republic of Lithuania, **Seimas** - Parliament of the Republic of Lithuania, **Government** of The Republic of Lithuania, **Constitutional Court**, **Ministry of Agriculture**, **Ministry of Culture** , **Ministry of Economics**, **Ministry of Education and Science**, **Ministry of Environment**, **Ministry of Finance**, **Ministry of Foreign Affairs** , **Ministry of Health Care**, **Ministry of Interior**, **Ministry of Justice**, **Ministry of National Defence**, **Ministry of Social Security and Labour**, **Ministry of Transport and Communications** *(http://en.wikipedia.org/)*.

Lithuania's parties are: Electoral Action of Lithuanian Poles, Farmer's and New Democracy Union, Homeland Union/Conservative Party or TS, Labor Party, Liberal and Center Political Group, Liberal Democratic Party, Liberal Political Group; Lithuanian Christian Democrats or LKD , Lithuanian People's Union for a Fair Lithuania; Lithuanian Social Democratic Coalition consists of the Lithuanian Democratic Labor Party or LDDP and the Lithuanian Social Democratic Party or LSDP; Social Liberals (New Union), Social Union of Christian Conservatives, Young Lithuania and New Nationalists *(https://www.cia.gov)*.

Government intervention

Based on data from the Bank of Lithuania, the government consumed 17.5 percent of GDP in 2004. In 2003, according to the International Monetary Fund's Government Financial Statistics CD–ROM, Lithuania received 2.71 percent of its total revenues from state-owned enterprises and government ownership of property. Lithuania scores 2.0 on government intervention on the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental priorities

The Lithuanian Environmental Strategy /117/, prepared with the support of the EU's PHARE Programme, has identified the following five priority areas: water protection, waste management, protection of soil from pollution, air protection and protection from physical pollution. Greater emphasis is now placed on the reduction of water pollution and on waste management than on more traditional areas such as air pollution *(http://www.rec.org)*.

Government programs

The Lithuanian State Fund for Nature Protection falls under the jurisdiction of the Ministry of Environmental Protection. Fines are charged for the violation of environmental protection laws and are allocated to this Fund along with those penalties collected under the Law on Taxes on State Natural Resources and the Law on Taxes on Environmental Pollution. Charges for the violation of hunting rules, accidental discharges of pollutants into air or water, illegal disposal of waste, damage to trees, etc. are also channelled into the Fund. The State Fund's financial resources are distributed to the following three areas: 30 percent as compensation for damage caused to the environment, for the construction and supervision of environmental investments, for the elimination of pollution sources, and for increasing natural resources; 40 percent for drafting environmental protection programs and standards, and for ensuring ecological education, training, publishing, information, environmental impact assessment, etc.; 30 percent for bonuses to environmental employees and public volunteers.
Applications for project financing must be sent to the Ministry of Environmental Protection. The applications are reviewed by the Fund's council, established by a Ministerial Order *(http://www.rec.org)*.

Political stability

Lithuania has not witnessed any recent incidents involving politically motivated damage to projects and/or installations. There have been no nascent insurrections, belligerent neighbours, or other politically motivated activities *(http://www.state.gov)*.

On the political stability index of Kaufmann Lithuania scores 0.93. The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability (*http://humandevelopment.bu.edu)*.

Economic screen

Natural resources

Lithuania's natural resources are peat and arable land *(http://worldfacts.us)*.

Exchange rate

Litai per US dollar - 2.774 (2005), 2.7806 (2004), 3.0609 (2003), 3.677 (2002), 4 (2001) (*https://www.cia.gov)*.

Gross domestic product

GDP (purchasing power parity)	$49.21 billion
GDP (official exchange rate)	$23.5 billion
GDP (real growth rate)	7.5 per cent
GDP per capita	$13,700

(https://www.cia.gov)

Inflation

Inflation rate (consumer prices)	2.6 percent

(https://www.cia.gov)

Environmental expenditures

Total investment in environmental protection in Lithuania was 0.71 percent of Gross Domestic Product (GDP) in 1994, 0.62 percent in 1995 and 0.4 percent in 1996 /111/. The major portion of investment in environmental protection was directed toward the protection of water resources, which has accounted for more than 90 percent in recent years.

TABLE 4.2: TOTAL MATERIAL INVESTMENT IN ENVIRONMENTAL PROTECTION (AT CURRENT PRICES, USD MLN)

Category	1994	1995	1996
Water resources protection	28.4	35.5	29.0
Air protection	0.5	0.8	1.8
Protection of earth, forest, and fish resources	1.2	0.4	0.4
Total	30.1	36.7	31.2
GDP	4,245.2	5,957.3	7,778.8
Share of GDP (%)	0.7	0.6	0.4

Source: /111/ Statistical Yearbook of Lithuania, 1997

Demand for environmental technologies

Generally speaking, the demand for all kinds of environmental technologies in Lithuania is high. Technologies related to air quality, wastewater, and waste and energy were given to be high in demand while water related technologies were accorded only moderate demand. The supply of environmental technologies in the majority of sectors was deemed to be satisfactory but in some cases was thought to be inadequate.

In the air sector, the greatest demand for environmental technologies was indicated for emission abatement/cleaner production technologies, followed by instrumentation and process control/software equipment. Demand is expected to grow for air sampling/laboratory analysis and air pollution control/flue gas purification equipment. The demand for environmental technologies in the air sector reveals emission abatement/cleaner production technologies as those most in demand. This result is obtained both within industrial and municipal sectors and is based on the fact that these technologies are not extensively used in the Lithuanian market in comparison with other sectors. Therefore, demand figures indicate a growth in importance for related technologies.

Instrumentation and process control/software development equipment is also in demand among industrial companies. This is due to the fact that more than 60 percent of the technologies in use in the industrial market are old-fashioned (i.e. implemented before 1980). The modernization of these technologies will require significant time and financial resources. Air sampling and laboratory analysis equipment is also in demand, because industrial companies legally have to perform air sampling and analyses several times per year. In many cases companies do not operate in their own laboratories and do not possess the necessary equipment and therefore invite independent authorities to fulfil these tasks. Companies such as the chemical plant Achema or the thermal electric power station in Kaunas require continuous air monitoring and have their own air sampling/laboratory analysis. Air pollution control/flue gas purification remains a critical problem for industry and is reflected in the demand for filters, scrubbers and other gas purification equipment, especially units for the reduction of solid particle emissions to air.

The energy sector ranked high in terms of overall demand. The technologies needed the most by both the power generation and other industrial sectors include new/efficient energy and heat generation systems; technologies for the retrofitting/rehabilitation of existing systems; and heat recovery and energy savings. Increased demand is anticipated for instrumentation and process management and control equipment. The greatest demand was outlined for new/efficient energy and heat generation systems (indicated by industrial companies and municipalities) and for the retrofitting/rehabilitation of existing systems (indicated by environmental businesses). This difference could be explained by the fact that industry and municipalities would like to switch to more effective forms of energy generation, while the current limited financial resources do not allow for implementation. The rehabilitation of existing systems is therefore today's alternative, with lower investment required and acceptable

results. Environmental businesses and municipalities show high demand for heat recovery and energy saving technologies for use in other industrial sectors. Industrial companies show high demand for new/efficient energy and heat generation systems. Environmental businesses indicated high demand for instrumentation equipment, which indicates the lack of control and measuring devices in use, especially in industry.

The lowest demand in the energy sector is to be found in two groups: alternative (non-CFC) refrigerants and alternative/renewable energy systems. Environmental businesses and industry stated the low interest in these technologies was due to Lithuanian climate and geology. Solar and geothermal energy have no real application in Lithuania, with the exception of a small area (Klaipeda region) near the Baltic Sea, which can use geothermal energy. The low interest in alternative (non CFC) refrigerants is because cooling systems are mainly used by the food industry. The general demand for other environmental technologies is higher than average because it has been influenced by the large interest in the energy sector (a critical issue in Lithuania). The level of interest from municipalities is higher than that from other respondents. Within the next few years, the energy sector will remain active. Energy saving technology, and therefore the rehabilitation of existing systems, will dominate, particularly as prices for energy continue to rise. Another growth sector for technologies are the new/efficient energy and heat generation systems, although this tends to depend largely on the general financial status of industry *(http://www.rec.org)*.

Major end-users

Overall, the majority of end-users are municipalities, although industry makes up a significant share of environmental technology purchasers.

Operators of power plants and heat generation stations are the major end-users of air pollution control technologies. This sector is mainly controlled by the state, even in cases where a plant or station is a joint-stock company with some private stockholders and a majority share controlled by the state or by municipalities. It is important to mention that since all regulations and decisions are adopted by the state or by municipal authorities, the demand for environmental air technologies depends almost entirely on the decision making.

The second major group of end-users in this sector are industrial companies, including chemical, textile, pharmaceutical and glass manufacturers. With regard to mobile sources of air pollution (vehicles), demand among end-users tends to depend on the economic changes taking place in Lithuania. There is an increasing tendency to switch from old vehicles manufactured with lower air pollution control requirements to newer vehicles produced according to the European standards. State authorities control air pollution by issuing restrictions for carbon dioxide and lead emissions, and this creates a basis for growing demand of air technologies in the near future.

Energy related environmental technology suppliers have a wide range of end-users. The list, in order of priority, consists of power and heat generation plants, the chemical industry, the textile and food industries, and other industrial companies. Municipalities are also significant end-users in this sector because they tend to operate power generation facilities (usually for district heating) and energy supply companies. Because energy prices are rising, interest for environmental technologies in the energy sector will also probably rise *(http://www.rec.org)*.

Major suppliers

Local companies supply environmental services (design, laboratory analysis, research, consulting, etc.) but not environmental technologies. The use of foreign environmental technologies in Lithuania tends to result from the forming of joint-ventures with local representatives. Each sector has its own suppliers that tend to include local providers.

Companies from Germany, Denmark, Sweden, Finland, Poland and Belgium are considered to be the most active in the environmental technology market in Lithuania, followed by firms from the United States, Canada and Great Britain. This situation can be explained by several factors. As already mentioned, the majority of environmental projects in Lithuania are financed by the EC, World Bank, PHARE Programme and others. When a Western country offers credit to the Lithuanian government for a specific project or area of development, it is usually understood that project input would also come from the donating country. This creates favourable conditions for companies from the donating country to enter the market. Northern and Central European countries are the most active in granting credit and in offering finance to the Baltic States. This explains the large market share belonging to companies from Western Europe *(http://www.rec.org)*.

Foreign trade zones/free ports

Lithuania has Free Economic Zones (FEZ) in the cities of Klaipeda, Kaunas and Siauliai. Klaipeda is the country's largest seaport, Kaunas is an air, road, and rail hub, and Siauliai hosts the largest airport in the Baltics. Business conditions in the zones favour investment in manufacturing and exports. Companies operating within the zones enjoy:

- 80 percent corporate tax reduction for the first five years of operation, and 50% for the next five years;
- Exemption from customs taxes;
- Exemption from Value Added Tax; and
- A 50 percent discount on land leases.

There are currently four businesses operating in the Klaipeda FEZ. This largest of Lithuania's zones, with 130 million euros (USD 174 million) in total foreign investment, has signed contracts with four more enterprises to begin operations in 2005. Companies operating in the FEZ receive the same legal guarantees as those operating elsewhere. Parliament approved a law on the fundamentals of free economic zones on June 28, 1995 that regulates conditions for the establishment of free trade zones and the legal status of firms operating in such zones. Lithuania's EU Accession agreement permits the indefinite operation of existing FEZs, but precludes the establishment of new ones *(http://www.state.gov)*.

Infrastructure

Legislation in the transport sector is now to a great extent in line with the acquits, although further efforts are needed as regards rail transport. The relevant framework laws are in place and only a limited amount of implementing legislation remains to be implemented. Administrative structures are largely in place, but need further strengthening in the energy sector. Lithuania has achieved a high level of legislative alignment, while administrative structures are largely in place but need further strengthening. Progress regarding the internal energy market has been good *(European Union, 2002)*.

Technological screen

Technology level

Technology Index Rank	40/80
ICT Subindex	46/80
Innovation Subindex	33/80
Technology Transfer Subindex	32/80

(http://www.weforum.org)

Technological development

With regard to research and technological development (RTD), Lithuania has been associated with the **Fifth Framework Programme** since October 1999. It has also expressed interest in being associated with the Sixth Framework Programme (2002-2006). In March 2000 a law on higher education was adopted, principally regulating the research activities of higher education institutes. In October 2001, a plan for the restructuring of State science and higher education institutions was approved by the government. In January 2002, a group of experts was set up to evaluate the systems of State science and higher education institutions and to determine the priority trends of science and science-applied activities. Progress has also been made in strengthening cooperation between research and development institutions and SMEs. A concept paper on science and technology parks was adopted and widely discussed by the academic and business communities. A new science and technology park, IT Visoriai, is being set up in Vilnius. The memorandum establishing a science and technology park in Kaunas was signed in January 2002. However, Lithuania will need to increase gross domestic expenditure on RTD. Promoting research in Lithuania will, in particular, require a further increase in business expenditure on research and development, i.e. spending by industry, small and medium-sized enterprises and the private sector in general. Lithuania must also introduce legislation to facilitate the creation of high-tech business, in particular to attract foreign investment *(http://europa.eu)*.

Property rights

Although Lithuania amended its Copyright Law in 2003 to bring it in line with the EU copyright directive, penalties for confiscated pirated software and media worth less than LTL 12,500 (USD 4,800) remain low. The rate of CD piracy in 2003, estimated at between 55-85 percent of all sales, was high. The software piracy rate in 2003 (58 percent) was also high. Law enforcement efforts against pirates improved in 2004, with the number of seized pirated CDs increasing fourfold. The Lithuanian Music Industry Association reported that the Criminal Police closed six Internet sites in

2004 for illegally distributing films, computer games, music and software that had not yet reached retail outlets *(http://www.state.gov)*.

According to the U.S. Department of State, "The Constitution provides for an independent judiciary, and the government generally respected this provision in practice." The European Bank for Reconstruction and Development reports that "weakness of the judicial system is viewed as a deterrent for foreign investors to enforce their rights in local courts." However, reports the Economist Intelligence Unit, "EU accession has played a major role in reforming the judicial system, including strengthening its independence and streamlining proceedings to clear up the backlog of criminal cases." Lithuania scores 3.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Telecommunications

In the area of telecommunications, Lithuania has reached a good level of alignment but implementing legislation remains to be transposed. Administrative capacities are in place but not yet fully operational. The independence of the Communication regulatory authority has been substantially strengthened. Further efforts remain to be made on completing legislative alignment and preparing for full liberalisation and strengthening the administrative capacity of the regulator *(European Union, 2002.)* In Lithuania computers are mainly used by businesses. Circa 85% of the companies use computers. 25% of the population uses the Internet *(www.evd.nl)*.

Socio cultural screen

Language

The **Lithuanian language**, uses the **Latin alphabet**, has been the only official language of Lithuania again since 1989. The Soviet era had imposed the official use of Russian, so most Lithuanians speak Russian as a second language while the resident Slavic populace generally speaks Russian or Polish as their first language. The younger generation usually speaks English, learned from school and the Internet, as their second language. *(http://en.wikipedia.org)*. The business language is English. A large part of the business community speaks English. Many often elderly business managers speak only their mother tongue *(www.evd.nl)*.

Religion

The historically predominant religion is **Roman Catholicism**. The **Roman Catholic Church** has been the majority confession since the **Christianization** of Lithuania in the **14th century**. No less than 79% of Lithuanians are Roman Catholic. The **Roman Catholic** Church used to be an influential factor in the country, and some priests actively led the resistance against the Communist regime and, after independence was regained, against socialism and **liberalism**, especially in ethical questions.

The diverse Protestant community (1.9 % of the total population) is much smaller than the Roman Catholic Church; Protestants are scattered all over the northern and western parts of Lithuania. Lithuania was historically positioned in between the two German-controlled states of **Livonia** to the north and the Protestant **formerly monastic, Teutonic State of Prussia** to its south. From those two regions in 16th century **Lutheran** Protestantism started to spread into the country. After **1945 Lutheranism** in the country has declined. **Baptist** and **Calvinist** and other Protestant churches, have attempted to convert members into their faiths since **1990**. The country also has minority communities of **Eastern Orthodoxy** (mainly among the **Russian** minority), to which about 4.9 % of the total population belong, as well as of **Judaism**, **Islam** and **Karaism** (an ancient offshoot of Judaism represented by a long-standing community in **Trakai**), which together make up for another 1.6 % of the population *(http://en.wikipedia.org)*.

Education

The population of Lithuania is highly educated. Virtually all those in the age-group fifteen to thirty-nine have completed basic schooling. The average level of education, however, gradually drops for those older than forty. Large numbers of students attend special schools and schools of higher education. In 1993 Lithuania had 67.3 students per 1,000 population in universities and other institutions of higher education, and 46.4 in vocational schools. These numbers compared with 25.9 and 49.0, respectively, for Estonian and Latvian university students and 18.6 and 36.1 for vocational school students. Lithuania had 106 university graduates per 1,000 population. Enrolment rates compared favourably with those in Western Europe. Lithuania had a literacy rate of 99 percent in 1994 *(http://countrystudies.us)*.

Business etiquette

Meeting and greeting. The most common greeting is the handshake, with direct eye contact, and a smile. Once a relationship has been established, greetings may become more unreserved and include a hug. Wait for your Lithuanian friends to determine when your friendship has reached this level of intimacy. People are addressed by their honorific title and their surname. Wait until invited before moving to a first name basis.

Gift giving etiquette. If invited to a Lithuanian's home, bring wine, flowers, or sweets to the hostess. Give an odd number of flowers. Do not give chrysanthemums - they are used in funerals. Do not give white flowers, they are reserved for weddings. Gifts are generally opened when received.

Dining etiquette. Table manners are quite relaxed in Lithuania. Wait to be told where to sit. Table manners are Continental - hold the fork in the left hand and the knife in the right while eating. Always keep your hands visible when eating. Keep your wrists resting on the edge of the table. Take small amounts of food initially so you may accept second helpings. Try everything. Napkins are kept on the table, not on the lap. To indicate you have not finished eating, cross your knife and fork on your plate. When you have finished eating, place your knife and fork across your plate with the prongs facing down and the handles facing to the right. The host offers the first toast. Toasting is generally done with hard liquor and not wine or beer. You should reciprocate with your own toast later in the meal.

Business etiquette basics. When conducting business, err on the side of formality and adhere to conservative etiquette and protocol. There are marked differences between young entrepreneurs and older businesspeople. Younger businesspeople generally have a less bureaucratic approach and are eager to do what is required to close a deal.

Building relationships & communication. Lithuanians prefer face-to-face meetings, as they need to build relationships of mutual understanding. They prefer to turn business relationships into friendships. Accept offers of hospitality and reciprocate, as this is the sign of a true friend. Once a friendship has developed, Lithuanians are willing to discuss business. It is important to make your initial contact with a high-ranking person who is in a position to make a decision. In many ways this is still a hierarchical culture, so showing respect and deference to people of authority is recommended. Although they are industrious and hard working, most Lithuanians are very modest. People who brag are deemed arrogant. At the same time, Lithuanians are impressed by titles of authority and advanced university degrees, so it is a good idea to let them know your status within your company. Lithuanians speak softly. They are not particularly emotive speakers. They do not touch others while speaking and can appear standoffish and reserved upon the initial meeting. It is important that you do not display anger, even if frustrated by the excessive bureaucracy. They do not interrupt others while they are speaking, and patiently wait for their turn. Many Lithuanian companies adhere to a hierarchical structure. In such cases, senior-level businessmen only speak with people of their same rank. More junior members of a team should not address a senior-ranking Lithuanian businessperson directly, as it is seen as a breach of etiquette.

Business Meetings & negotiations. Appointments are necessary and should be scheduled 2 to 3 weeks in advance. Send a list of the people who will be attending and their titles so the Lithuanians can assemble a team of similar level people. Confirm the meeting when you arrive and again the day before the meeting, since meetings are sometimes cancelled on short notice. Arrive on time for meetings. Punctuality is important. Meetings are formal. There will be a period of small-talk while your colleagues get to know you and decide if you are the type of person with whom they wish to enter into a business relationship. Wait to be told where to sit. In many cases you will be seated across from someone of a similar level. Presentations should be thorough, clear, and concise and include back-up analysis to support your position. Expect to discuss each point thoroughly before moving on to the next. Business moves slowly due to the bureaucratic nature of society. Be prepared to meet with several lower levels of people before getting to the actual decision maker. Lithuanians often use time as a tactic, especially if they know that you have a deadline. Be cautious about letting your business colleagues know that you are under time pressure or they will delay even more. Lithuanians will not be rushed into making a deal. They must think it is in their best interest before agreeing. Meetings often conclude with a summary of the discussion and a toast to future dealings *(http://www.kwintessential.co.uk)*.

Appendix 6 Country profile: Slovakia

Basic needs

Population size

The population size of Slovakia is 5,439,448 *(http://en.wikipedia.org)*.

Growth

Population growth rate:	0.14 percent in the year 2006
Birth rate:	10.1 births/1,000 population)
Death rate:	9.22 deaths/1,000 population

(http://en.wikipedia.org).

Age structure

0–14 years:	17.8 percent (male 495,316; female 471,823)
15–64 years:	63.1 percent (male 1,903,335; female 1,924,065)
65 years and over:	18 percent (male 238,912; female 396,582)

(http://en.wikipedia.org).

Urbanization

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	2 287	2 331	2 362	2 365	2 333	2 262
Urban population (thousands)	2 969	3 033	3 038	3 036	3 066	3 122
Percentage urban (%)	56.5	56.5	56.3	56.2	56.8	58.0

(http://esa.un.org)

Migration

Slovakia has a multinational population which is build up as followed: The majority of the 5.3 million inhabitants of **Slovakia** are **Slovak** (85.8 percent). **Hungarians** are the largest ethnic minority (9.7 percent) and are concentrated in the southern and eastern regions of Slovakia. Other ethnic groups include **Roma**, **Czechs**, **Rusyns**, **Ukrainians**, **Germans**, and Poles. There live 0.3 migrant(s)/1,000 population (2006 est.) The number of immigrants is expected to grow as Slovakia will cease to be a transit country and become a target country. The current 1,000 immigrants a year should rise to about 5,000 a year *(http://www.globalaging.org)*.

Since 1996, migration flows in Slovakia have been significantly increasing, mainly from economically weaker and politically unstable countries. First there were foreigners coming from Balkan countries and some countries of the former Soviet Union, now the foreigners from Asia (mainly from Afghanistan) prevail. The Slovak Republic has become a “buffer zone” between Schengen countries and the risky world areas, which are traditional sources of emigration to Europe *(http://lgi.osi.hu)*.

Geography

The Slovak landscape is noted primarily for its mountainous nature, with the **Carpathian Mountains** extending across most of the northern half of the country. Amongst them are the high peaks of the **Tatra mountains**, where High Tatras are a popular **skiing** destination and home to many scenic lakes and valleys as well as the highest point in Slovakia, the **Gerlachovský štít** at 2,655 metres (8,711 **ft**). Lowlands are found in the southwestern (along the **Danube**) and southeastern parts of Slovakia. Major Slovak rivers, besides the **Danube**, are the **Váh** and the **Hron** *(http://en.wikipedia.org)*.

Climate

Slovakia has a continental climate, with four distinct seasons. Winters are typically cold and dry, while summers tend to be hot and humid. The average daily temperature range in Bratislava is -3° to 2° C (27° to 36° F) in January and 16° to 26° C (61° to 79° F) in July; temperatures tend to be cooler in the mountains. Bratislava receives an average of about 650 mm (about 26 in) of precipitation annually. In areas of high altitude, snow is often present for as many as 130 days each *(http://www.southtravels.com)*.

Environmental problems

There are specific environmental problems, which include: heavily polluted sites; air pollution from coal and lignite-fired power stations; poor water quality and lack of wastewater treatment facilities (70 percent of the population is connected to drinking water supply, while only 50 percent of the population is connected to sewage treatment systems); groundwater contamination by industrial plants; improper storage of hazardous waste; existence of heavily polluted regions with compounded environmental problems. Problems with the existing system for environmental protection, which include: lack of information about environmental projects, incomplete legislation, and poor dissemination of information. Issues related to the financing of environmental projects, especially for high-quality and expensive environmental technologies. In this context, insufficient economic tools on the one hand, and the failure to use all the possibilities provided for in legislation on the other, were often mentioned. In the area of air and energy the following problems do occur.

- Installation of desulphurization equipment at the coal-fired power plant in Zemianske Kostolany;
- Replacement of the boilers in the Zemianske Kostolany power plant with fluidized bed boilers;
- Co-generation power plants in Bratislava, Presov and Kosice;
- Switching to natural gas as the energy source in the sugar factory at Rimavska Sobota;
- Introduction of heating oil with a sulphur content of less than 1 percent;
- Use of geothermal energy in selected areas of Slovakia *(http://www.rec.org)*.

Environmental business sector

An accurate estimate of the current environmental market in Slovakia does not exist. The accumulation of environmental problems has increased so-called environmental liability, which, in line with currently applicable legislation for remediation is estimated at SK 100-130 billion (approx. USD 4.3 billion) in industry alone. This comprises absolute environmental liabilities including old landfills, polluted water sources, damaged forests, contaminated soil, and relative environmental liabilities, the latter including expenditures for replacing environmentally harmful methods of manufacturing with environmentally safe ones (e.g. elimination of pollution sources) and the construction of facilities (wastewater treatment plants, separators, filters, managed landfills, etc.) to reduce or eliminate the further release of undesirable, noxious substances into the environment. These liabilities themselves shall result in increased health care expenditures, losses resulting from high sickness rates, reduced durability of materials, erosion and contamination and the consequences of changes in the gene pool and disruption of stable ecosystems in the landscape."

To give at least some indication of the size of the environmental technology market in Slovakia, one can assume that about 75 percent of environmental expenditures are allocated for environmental technologies. Environmental products and services are a rapidly developing sector of the economy in Slovakia Since the socio-economic changes of the early '90s, and the related economic recession, many Slovak firms collapsed or lost their markets in the former eastern bloc countries. The industrial framework, built up over the years, has collapsed, and many qualified engineers and scientists have become unemployed.

Nonetheless after the initial adjustment period, business activity in the environmental market has increased significantly. The annual growth in the number of environmental companies since the early nineties averages some 50 percent. Some firms have been created through the entrepreneurial skills of individuals others resulted from the fragmentation of larger enterprises and privatization, while many manufacturing companies completely changed their names and orientation. The competitiveness of Slovak companies is increasing, although it is largely based on lower price levels and the good knowledge of the domestic market and conditions.

Concerning the environment Slovakia did not made any positive moves. But since its part of the EU it needs to take steps. Slovakia made progress in adapting its legislation towards the European legislation. Unfortunately the legislation is not applied yet. Slovakia will invest 11 billion euros in the environment sector; most of it is needed to connect the houses on waste pipes *(http://www.rec.org)*.

Legal screen

Law system

The civil law system is based on Austro-Hungarian codes. The legal code was modified to comply with the obligations of Organization on Security and Cooperation in Europe (OSCE) and to expunge the Marxist-Leninist legal theory. Slovakia accepts the compulsory ICJ jurisdiction with reservations. Slovakia has completed its legislative alignment with the Customs Union and has in principle,

developed and reinforced the necessary administrative capacity. Attention should continue to be paid to the enforcement of the transposed legislation *(http://en.wikipedia.org)*

In 2004, according to the World Bank, the Slovak Republic made the greatest improvement in the business environment of any nation by deregulating and cutting taxes. Nevertheless, lack of transparency, the persistence of red tape, and excessive and inefficient bureaucracy continue. The U.S. Department of Commerce reports that "transparency and predictability have been a problem on many issues involving investors" and that the amount of time involved in buying land and obtaining building permits can be significant. The Economist Intelligence Unit reports that the government "enacted a comprehensive overhaul of the Labor Code in 2003. As a result, employers have gained greater flexibility in hiring and firing employees. Slovakia scores 3.0 in the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Trade laws

The Slovak Republic adopted the trade policies of the European Union when it joined the EU in May 2004. The common EU weighted average external tariff was 1.3 percent in 2003, based on World Bank data. In the 2005 Index, the Slovak Republic had a tariff of 6.1 percent. According to the World Trade Organization and the U.S. Trade Representative, the EU imposes non-tariff trade barriers through a complex regulatory system and export subsidies.

Based on its adoption of EU trade policies, and on the revised trade factor methodology, the Slovak Republic's trade policy score is 1 point better this year. The Slovak Republic scores 2.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental legislation

Regulatory enforcement is still relatively weak in the Slovak Republic. The government collects less than one-third of all environmental fines and charges it imposes on polluters. Since the April 1993 Ministerial Conference in Lucerne several important steps have been taken to improve the situation. First, the Slovak Republic clearly declared its intention to solve complex environmental problems and established a framework for carrying this out.

A second important step is the process of harmonizing Slovak legislation with that of the EU. Several significant acts on air, waste and nature protection, and the Act on Environmental Impact Assessment, have been adopted. New acts on water protection and ozone layer protection are under preparation. The civil law system is based on Austro-Hungarian codes. The legal code was modified to comply with the obligations of Organization on Security and Cooperation in Europe (OSCE) and to expunge the Marxist-Leninist legal theory. Slovakia accepts the compulsory ICJ jurisdiction with reservations. Slovakia has completed its legislative alignment with the Customs Union and has in principle, developed and reinforced the necessary administrative capacity. Attention should continue to be paid to the enforcement of the transposed legislation *(http://en.wikipedia.org)*.

Banking and finance

The Slovak Republic has implemented an aggressive privatization program for its state-owned banks. According to First Initiative, "The banking sector underwent a series of structural [changes] between 2001 and 2004, including the elimination of financially weak banks and the privatization of the three largest state-owned banks. Privatizations have left a large number of non-performing loans to be resolved by the Slovak Consolidation Agency. As of June 2004, the banking sector was comprised of 18 Slovak-incorporated commercial banks and numerous branches of three foreign-owned banks." The government has privatized its larger and medium-sized state-owned banks and retains control of two small banks, Postova Banka and Banka Slovakia, both of which are up for privatization and have received bids by foreign banks. According to the Economist Intelligence Unit, "Foreign capital already controls nearly 100 percent of banking assets." Interest rates have been completely liberalized, and credit limits have been abolished. The capital market is relatively new and still small, with most trading involving government bonds. Slovakia scores 1.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Macro economic policy

Changes to the monetary policy framework focus policies on inflation goals. The National Bank of Slovakia's (NBS) new inflation-targeting framework is expected to increase transparency and

contribute to more forward-looking inflation expectations, hopefully breaking the inertia observed so far in nominal wage increases. The publication of inflation projections was an important step in making monetary policy more transparent and improving communications. Thus, to improve transparency, NBS publication of its quarterly forecasts should be extended to end-year forecasts, in line with the definition of its targets. Also, the NBS should continue with efforts to make private sector wage-setting more forward looking.

The projected fiscal stance in 2005 provides appropriate support to disinflation objectives. Slovakia expect the general government deficit in 2005 to reach about 3.4 percent of GDP (4.2 percent of GDP including second pillar costs), in line with the budget. Higher-than-expected participation in the second pillar pension system has doubled pension cost estimates and overall social security contribution collections will fall short of budget due to administrative difficulties. However, tax collections are in line with the budget, savings are expected on the expenditure side, and net EU transfers are projected below budget (½ percent of GDP instead of the budgeted 1⅓ percent). Should this happen, the budgeted neutral stance will turn into a negative fiscal impulse for the year as a whole *(http://www.imf.org)*.

Slovakia scores 3.64 on the macroeconomic environment index, which means that the country is relatively unstable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

With respect to taxation, Slovakia has reached a good level of alignment and the reform of its tax administration is ongoing. Modernisation and strengthening of the tax administration needs to be reinforced as the general tax collection remains weak. The Slovak Republic has a flat income tax rate of 19 percent. The top corporate tax rate is also a flat rate of 19 percent. In 2004, according to the Ministry of Finance, government expenditures as a share of GDP decreased by 1.5 percentage points to 40.6 percent, compared to the 3.2 percentage point decrease in 2003 *(http://www.heritage.org)*.

Slovakia's direct taxes are personal income tax, corporate income tax, real estate transfer tax, real estate tax and road tax. The indirect taxes are value added tax and excise taxes. Value Added Tax in Slovak Republic includes one unified tax rate of 19% applied for all taxable suppliers *(http://www.sario.sk)*.

Corruption

In 1998 the Dzurinda government proclaimed the fight against corruption to be a priority. Since then the goes has drafted a national anti-corruption program, appointed a corruption steering committee, amended the criminal code in attempts to strengthen law enforcement, approved a law modernizing public procurement, and enacted a strong freedom of information act. The press has taken a more active role in reporting corruption and public awareness has increased the Slovak chapter of TI is active and has participated in public tenders. Slovakia is a signatory to the OECD convention on battling bribery and to give or accept bribes is a criminal act *(http://www.state.gov)*.

The new index, published today by Transparency International (TI), the world's leading non-governmental organisation fighting corruption, ranks 102 countries. Seventy countries - including many of the world's most poverty-stricken - score less than 5 out of a clean score of 10.. Countries with a score of higher than 9, with very low levels of perceived corruption, are predominantly rich countries. On the corruption perception index Lithuania scores 3.7 and ranks 52 overall. *(://ww1.transparency.org)*

Crime

Slovakia scores: 82. The index consists of an average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

Politics of Slovakia takes place in a framework of a **parliamentary representative democratic republic**, whereby the **Prime Minister** is the **head of government**, and of a pluriform multi-party system. The **President** holds a primarily ceremonial role as Head of State. **Executive power** is exercised by the government. **Legislative power** is vested in both the **government** and parliament, the **Saeima**. The **Judiciary** is independent of the executive and the legislature *(http://en.wikipedia.org)*.

Institutions

The prime Minister of the Slovak Republic, ministry for the European Integration, Human Rights and minorities, ministry for Finance, ministry for Economy, ministry for Justice, ministry of Foreign Affairs, ministry for Defence, ministry of Interior, ministry of Culture, ministry for Health care, ministry for Education, ministry for Labour, Social Affairs and Family, ministry for Environment, ministry for Soil Management, ministry of Transport, Post and Telecommunications, ministry for Construction and Regional Development *(http://en.wikipedia.org)*.

Slovakia's parties are: Christian Democratic Movement or KDH, Direction (Smer), Free Forum, Movement for Democracy or HZD, People's Party - Movement for a Democratic Slovakia or LS-HZDS, New Citizens Alliance or ANO, Party of the Hungarian Coalition or SMK, People's Union or LU, Slovak Communist Party or KSS, Slovak Democratic and Christian Union or SDKU, Slovak National Party or SNS *(https://www.cia.gov)*.

Government intervention

Based on data from the Slovak Monetary Policy Department, the government consumed 19.4 percent of GDP in 2004. In 2003, according to the International Monetary Fund's Government Financial Statistics CD–ROM, the Slovak Republic received 3.17 percent of its total revenues from state-owned enterprises and government ownership of property. The Slovak Republic scores 2.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental priorities

Similar to other Central and Eastern European countries, the Slovak Republic is undergoing an economic transition that brings with it a number of difficult tasks, such as reviving the economy, reducing unemployment and creating new systems for health care, education and social security. However, the government's Program Declaration lists environmental protection as a priority.

- The state of the environment is reflected in the health and quality of life of the nation. where life expectancy is five to seven years less than in developed countries;
- global environmental security and protection of the atmosphere against pollutants;
- an adequate supply of drinking water and reduction of water pollution to acceptable levels;
- soil conservation and the purity of foodstuffs and other products;
- proper disposal or utilization of waste and minimization of its production;
- preservation of biodiversity, conservation and rational use of natural resources, and optimizing land use.

The government recently identified the need to conduct environmental audits in the privatization procedure. Like other countries, the Slovak Republic is struggling with privatization issues, such as how to assign environmental liability from formerly state-owned enterprises and how to factor remediation cost into the purchase price. The state of the environment in Slovakia has improved over the last five years as a result of declining industrial production. Slovakia has reduced the emission of sulphur dioxide by 58 percent compared to the year 1980. However, it still produces approximately 325,000 tons of sulphurs dioxide per year, mostly generated by heating and power plants. Energy production, including heating, accounts for 64 percent of the total emission of pollutants into the atmosphere, and vehicular traffic contributes 19.5 percent. Pollution of surface and ground water is an extensive problem in 16 districts.

The waste management system in the Slovak Republic is one of its most under-developed areas. Prior to 1991, only 5 percent of recorded landfills were licensed and, in most cases, different categories of waste were disposed together (hazardous, special, etc.). According to Waste Act 238/1991, waste generators are responsible for managing their own waste and municipalities are responsible for municipal waste. This act and subsequent legislation also define duties for both generators and state administrative agencies responsible for waste management *(http://www.rec.org)*.

Government programs

The National Environmental Action Plan (NEAP) was developed in 1995 as an instrument for the implementation of the priorities of the State Environmental Policy. The NEAP defines the necessary legislative, organizational and educational measures, and investment priorities needed to achieve the adopted goals. The plan which was developed based on environmental information provided by relevant Ministries and regional administrative units, includes 38 regional programs prepared for the original administrative districts.

The Slovak State Environmental Fund was set up by Law No. 128/1991 Zb. The funding priorities of the Fund are based on the State Environmental Policy and the National Environmental Action Plan. The allocation of financial resources has to be approved by the Ministry of Environment after the evaluation and approval of proposals submitted to the Fund's Council. The Fund's support is available in the form of subsidies, grants, loans, and supplementary funding for the payment of interest. Applicants can request support for investment and non-investment projects related to the protection of the environment. *(http://www.rec.org).*

Political stability

On the political stability index of Kaufmann Lithuania scores 0.82. The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability (*http://humandevelopment.bu.edu).*

Economic screen

Natural resources

Slovakia's natural resources are: brown coal and lignite; small amounts of iron ore, copper and manganese ore; salt; arable land *(http://www.cia.gov)*

Exchange rate

Koruny per US dollar - 31.018 (2005), 32.257 (2004), 36.773 (2003), 45.327 (2002), 48.355 (2001) *(https://www.cia.gov).*

Gross domestic product

GDP (purchasing power parity)	$87.32 billion
GDP (official exchange rate)	$43.07 billion
GDP (real growth rate)	5.5 per cent
GDP per capita	$16.100

(https://www.cia.gov).

Inflation

Inflation rate (consumer prices)	2.7 percent

(https://www.cia.gov).

Environmental expenditures

Total environmental expenditures in the Slovak Republic, the lowest of all four countries, was approximately USD 173 million in 1993. The Slovak government supports environmental investments and projects through the State Environmental Fund. At present, this fund only supports small and medium-scale investments that include waste water treatment plants and potable water infrastructure projects.

The State Environmental Fund receives money from state budget donations (36.8 percent), waste water charges (33.3 percent), air emission charges (25.4 percent) and solid waste payments (2.5 percent). The Fund had a total of USD 35 million for 1994; only one in twenty applicants received funding. The new Act on the State Environmental Fund is now prepared for submission to the Cabinet in the second half of 1995. According to this act, the Fund would be restructured into a revolving fund, creating larger financial resources.

The main impediment to increasing environmental investment is limited government guarantees. Environmental investments are generally less profitable and less attractive for foreign investors, and are considered long term. That is why most foreign assistance loans require governmental guarantees, often 1.5 to 2 times the size of the loan. Because Slovakia has a tight state budget, a young banking sector, and has not been able to recover all past environmental damages, the government simply cannot afford to guarantee all necessary projects *(http://www.rec.org).*

Demand for environmental technologies

Demand for environmental technologies in Slovakia varied by sector. High and growing demand was identified for technologies related to waste management, and water and wastewater. Demand for

environmental technologies related to energy and air quality was moderate and demand for noise, vibration and OHS technologies was low.

Demand in the air sector was found to be moderate, with technologies related to gaseous emissions in higher demand than products related to ambient air. High demand was identified for instrumentation and process control/software for gaseous emissions. Growing demand was expected for technologies related to emission abatement and cleaner production; equipment for air sampling/laboratory analysis for both ambient air and gaseous emissions; and air pollution control/flue gas purification equipment. Demand for air pollution control equipment in the energy sector is likely to grow due to upcoming new and stricter regulations on air High demand was identified for instrumentation, and process control/software for gaseous emissions. Increasing demand was expected for technologies related to emission abatement and cleaner production; equipment for air sampling/laboratory analysis for both ambient air and gaseous emissions; and air pollution control/flue gas purification equipment. It is worth to note that demand for air pollution control in the energy sector is likely to grow due to upcoming new and stricter regulations on air emissions.

Demand for energy-related technologies was generally moderate. Specific technologies in high demand included: new/efficient energy and heat generation systems; and alternative (non-CFC) refrigerants. Growing demand was expected for instrumentation; process management and control equipment; and, in "other industrial sectors" for technologies related to retrofitting and rehabilitation of existing systems. Surprisingly, only moderate demand was identified for heat recovery and energy savings technologies, and for retrofitting and rehabilitation of existing systems in the energy sector. Demand for technologies related to noise, vibration, and occupational health and safety was low. Specific technologies in high demand included: new/efficient energy and heat generation systems; and alternative (non-CFC) refrigerants. Growing demand was expected for instrumentation; process management and control equipment; and technologies related to retrofitting and rehabilitation of existing systems *(http://www.rec.org)*.

Major end-users

The chemical industry and the energy sector are the major end-users of environmental technologies in most categories. Local governments (municipalities) are an important user of technologies related to water and wastewater, and to waste management. The mineral mining and processing industry is a significant end-user of waste management and energy-related technologies *(http://www.rec.org)*.

Major suppliers

Foreign companies in Slovakia seem to be most active in the water and wastewater sector, followed by waste and energy. Air pollution controls, and noise, vibration and OHS are represented to a lesser degree. German companies are most active in the water and wastewater sector, followed by Czech, American, and French suppliers. Danish, Austrian, and French firms seem to dominate among foreign companies in the waste sector, while in the energy sector, German and American presence is notable. In the remaining two categories, only a few foreign companies were identified. The majority of foreign companies are located in Bratislava, the national capital. Most of the comments on competitive strengths and weaknesses of suppliers focused on good product quality and reliability and high prices respectively *(http://www.rec.org)*.

Foreign trade zones/free ports

Currently there are four free customs zones in Slovakia. Zilina in the north, Banska Bystrica in the centre, Trencin in the west, and Kosice in the east. There are no geographic limitations where free customs zones or warehouses can be located. In general, existing zones do not play a significant role in Slovakia's economy and are not an important factor in attracting foreign investment. Instead of free customs zones or free customs warehouses, a regime of inward processing is commonly employed in Slovakia. This allows goods to pass through one or more processing operations within a customs territory in one of two ways. First, foreign goods intended for re-export from the customs territory in the form of compensatory products without being subject to import duties or commercial policy measures to a free circulation regime with repayment or remission of the import duties chargeable on such goods, if they are exported from the customs territory in the form of compensatory products *(http://www.state.gov)*.

Infrastructure

Early on, Slovakia became aware of the importance of adapting its transportation network to present world needs. At the end of 1996, highways represented only 1% of the road system (198 km.). Thanks to an ambitious project, the Slovakian government vowed to catch up and make Slovakia, in several

years, a crossroads between the East and the West: Construction of 460 km. of highways by the year 2005 (with the help of the European Investment Bank); Electrification of the entire rail system by the year 2010 and construction of a supplementary high-speed rail system between Bratislava and the Vienna Airport and to Poland and the Ukraine; Modernization of the airports at Bratislava, Košice, Zilina and Sliac. *(http://www.slovakia.org)*.

Technological screen

Technology level

Technology Index Rank	14/80
ICT Subindex	23/80
Innovation Subindex	28/80
Technology Transfer Subindex	11/80

(http://www.weforum.org).

Technological development

Slovakia has a high-level research and development sector which has been rapidly rationalised due to substantial reductions in government support. Since July 1997, the Slovak Government has declared its interest in pursuing the policies initiated in the field of research and technological development. Since September 1999, Slovakia has been fully associated with the **Fifth Framework Programme** for Research and Technological Development, as well as the Euratom Framework Programme. It has also expressed interest in being associated with the **Sixth Framework Programme** (2002-2006). Research is a priority objective in the Slovak National Programme for the Adoption of the acquis.

In February 2002, the legal framework was enhanced by the Act on Science and Technology and the Act on the Slovak Academy of Sciences. The National Council also adopted the new Act on University Education in February 2002. The Agency for the Support of Science and Technology continued to work effectively.

Despite this considerable progress, the Commission's 2002 report stresses that Slovakia will have to increase gross domestic expenditure on RTD in order to develop the sector further and ensure that it is fully integrated into the European Research Area. The private sector, including SMEs, should also be encouraged to participate more actively in RTD. Lastly, the Commission's 2003 report notes that Slovakia meets the commitments arising from the accession negotiations and will therefore be able to implement the acquis as from accession.
(http://www.europa.eu).

Property rights

Inventions. According to the Law No. 435/2001 Coll. on Patents, Supplementary Protection Certificates and on Amendment of Some Acts (The Patent Act), patents shall be granted for inventions which are new, involve an inventive step and are susceptible of industrial application after carrying out the formaly-legal and substantive examination. The term of the validity of a patent shall be 20 years as from the filing date of the patent application. The prerequisite of the duration of the patent validity is the payment of maintenance fees.

Trademarks. The Law No. 174/1988 of the Coll. on Trademarks in the wording of the National Council of the Slovak Republic No. 90/1993 of the Coll. of laws states the conditions for the so called registration ability of a trademark. A trademark shall be verbal, figurative, three-dimensional or combined denomination, which is capable of distinguishing goods and services of various manufacturers or suppliers of services. In addition, the Law specifies in detail exclusions of denominations from the Register as well as denominations that could not be a trademark. The application for the registration of a trademark may be filed by the legal entity or physical person carrying out permitted economic activity in the corresponding field. The term of the registration of a trademark shall be 10 years as from the filing date of the application for a trademark.

Utility Models. Since the year 1992 it has been possible to protect as utility models technical solutions which are new, exceed the framework of the mere professional ability and are susceptible of industrial application according to the Law No. 478/1992 of the Coll. on Utility Models in the wording of the Law of the National Council of the Slovak Republic No. 90/1992 of the Coll. of laws. The term of a utility model registration shall be 4 years as from the filing date of the application for a utility model and may be extended for a maximum of two three-year periods upon the request of the owner of a utility model.

Industrial Designs. According to the Law No. 527/1990 Coll. on Inventions, Industrial Designs and Rationalisation Proposals in a wording of the Law of the National Council of the Slovak Republic No. 90/1990 Coll. applications of industrial designs are subject to formal, legal and substantive examination. The main condition for entry of an industrial design to the Register and for issuing the certificate is the world novelty and industrial applicability of the outward appearance of a product. Record of an industrial design to the Register is valid for 5 years from the date of filing an application for an industrial design. On the request of the holder of an industrial design this time limit may be extended twice as a maximum, every time for another 5 years *(http://www.quazell.com)*

According to the U.S. Department of Commerce, "The legal system enforces property and contractual rights, but decisions may take years, thus limiting the utility of the courts for dispute resolution. Slovak courts recognize and enforce foreign judgments, subject to the same delays. A bankruptcy law exists but has not been as effective as needed and enforcement remains erratic." In addition, "There is a conviction in business circles that corruption still persists [as] a significant factor in the court system." The Slovak Republic scores 3.0 on the Economic Freedom Index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*

Telecommunications

According the European Commission Slovakia has reached a high level and administrative structure in the area of telecommunications and information technologies. Thorough completion of legislative alignment and further strengthening of administrative structure as well as proper separation of regulatory and operational functions are needed. The evaluation of the economic implications of full implementation of the universal service acquits is awaited. *(European Union, 2002)* The use of internet has increased. There are 2,5 million internet uses in Slovakia in the year 2005, this abut 50% of the population. ISDN the digital network modem is mostly used *(www.evd.nl)*.

Socio cultural screen

Language

Slovak (slovenčina, slovenský jazyk) is an Indo-European language belonging to the West Slavic languages (together with Czech, Polish and Sorbian). Slovak is especially close to Czech.Slovak (official) 83.9%, Hungarian 10.7%, Roma 1.8%, Ukrainian 1%, other or unspecified 2.6% (2001 census) *(http://en.wikipedia.org)*. Around Bratislava English is more accessible. Outside this area Germen is a better option. The older generation speaks a little German and the younger generation learns English at school (*www.evd.nl*).

Religion

About 60 percent of Slovaks consider themselves Roman Catholics. Protestant churches, including the Lutheran Church, the Slovak Evangelical Church, and the Reformed Christian Church, are also common, and the Orthodox and Uniate churches maintain active followings among the Ruthenians and Ukrainians of Eastern Slovakia. Most of Slovakia's Jewish community was decimated during World War II in the Holocaust. Religion plays a major role in everyday life in Slovakia, with 73 percent of Slovaks claim church membership. Even under the Communist system, which explicitly opposed religious practice, the majority of Slovaks baptized their children and were married and buried according to religious traditions *(http://en.wikipedia.org)*.

Education

Despite the current lack of money, primary and secondary education is at a quite high level compared to many countries of the world. A major deficiency is insufficient promotion of independent thinking and student initiative, a complete absence of creative learning, unreformed and outdated teaching material, methods and syllabi inherited from the former communist educational system, and relatively low remuneration of teachers, leading to a decrease of the number of qualified (and of well qualified) teachers especially below the university level (see the statistics section for some pay figures). University-level schools, unable to provide sufficient pay to get real experts and motivated teachers, are rather mediocre compared to other countries, usually promote pure swatting and use outdated texts and other material. Some reforms of all educational levels, including the introduction of school fees for universities, are said to be in preparation and could be carried out after the next parliamentary elections (to be held 2005). Nonetheless, Slovakia has thus far managed to avoid the excessive **brain-drain** that has plagued most post-**Soviet** states *(http://en.wikipedia.org)*.

Business etiquette

Slovaks maintain a typically Western distance (about three feet) when conversing. Greetings are expected, and consist of "good morning," "good day," and "good evening." "Good night" is reserved for the last leave taking of the evening. Both men and women shake right hands with acquaintances and newly introduced strangers, and men and women may kiss close friends and relatives on both cheeks during greeting and leave taking. For business and other professional activities, men are expected to wear suits and ties, while women still adhere to a code that involves dresses or two-piece suits with skirts or skirts and blouses. Lunches tend to be lengthy with several courses served because the noon meal is the main meal of the day. During a visit to a home, food and drink are immediately placed on the table. Refreshments are supposed to be accepted graciously, and emptied plates and glasses are refilled promptly. It is customary to bring flowers, food (cakes), or a beverage when visiting people's homes. Business lunches and home visits are likely to include the offer of alcoholic beverages. Women usually can refuse politely and request a soft drink or hot tea. Men are expected to drink but may decline if they are driving.

It is worth paying attention to the following points at business meetings in Slovakia: Slovak dress and behaviour are a combination of the accepted practices in the United States and Eastern Europe. It is not the custom to use a person's first name on first addressing them. Instead, use a title such as: Doctor, Engineer, etc. Some business people have a good command of English. Nevertheless, German is better understood. Occasionally effective conduct of a meeting may make use of the services of an interpreter to translate into English.

Acceptable gifts for business meetings are items for the office, quality pens (including pens with your company logo) as well as specially selected wines. It is recommended to start a business meeting with polite conversation of a general nature, accompanied by a toast with a local alcoholic drink. Only after that, should the conversation turn to business matters. On receiving an invitation to a home, luxury chocolate, a scarf for the hostess or flowers is a welcome gift. Business decisions, including minor ones, are occasionally taken by a limited number of managers or even by one person acting alone. There are difficulties in obtaining an answer to a fax or email. It is advisable to back up faxes and emails with a letter that confirms any intended meeting. Similarly, after the meeting, it is advisable to send a letter with a summary of the main points raised at the meeting. Try to avoid business meetings in the months of July and August or around the times of national holidays *(http://www.worldwide-tax.com)*.

Appendix 7 Country profile: Slovenia

Basic needs

Population size

Slovenia has a population of 2 million inhabitants *(http://en.wikipedia.org)*.

Growth

Population growth rate: -0.05.
Birth rate: 8.98 births/1000
Death rate: 10.31 deaths/1000 population
(http://en.wikipedia.org).

Age structure

0-14 years: 13.8 percent (male 143,079/female 135,050)
15-64 years: 70.5 percent (male 714,393/female 702,950)
65 years and over: 15.7 percent (male 121,280/female 193,595) (2006 est.)
(http://en.wikipedia.org)

Urbanization

Indicator	1990	1995	2000	2005	2010	2015
Rural population (thousands)	956	970	969	963	943	907
Urban population (thousands)	971	994	998	1 004	1 016	1 035
Percentage urban (%)	50.4	50.6	50.8	51.0	51.9	53.3

(http://esa.un.org)

Migration

The majority of the population are Slovenes (1,631,363 - 83.1 percent - 2002 census), Italians (2,258 - 2002 census) and Hungarians (6,243 - 2002 census) are considered indigenous minorities with rights protected under the Constitution. Other ethnic groups - which mostly arrived in Slovenia after WWII as economic immigrants - identify themselves as Croats, Serbs, Muslims, Yugoslavs, and Macedonians. Montenegrins and Albanians. There are Slovenian indigenous minorities in Italy, Austria and in Hungary. Ethnic Slovenes living outside the national border number between 250,000 and 400,000 (depending on the inclusion of second and other generations) with the vast majority of them living overseas and in the countries of the EU 0.88 migrant(s)/1,000 population (2006 est.) *(http://www.uvi.si)*.

Geography

Slovenia is situated in **Central Europe** touching the **Alps** and bordering the **Mediterranean**. The **Alps**, including the **Julian Alps**, the **Kamnik-Savinja Alps** and the **Karavanke** chain, as well as the **Pohorje**, dominate Northern Slovenia along its long border to **Austria**. Slovenia's **Adriatic** coastline streches approximately 50 kilometers (39 mi.) from **Italy** to **Croatia**. On the **Pannonian plain** to the East and Northeast, toward the **Croatian** and **Hungarian** borders, the landscape is essentially flat. However, the majority of Slovenian terrain is hilly or mountainous, with around 90% of the surface 200 meters or more above sea level *(http://en.wikipedia.org)*.

Climate

Slovenia has a Mediterranean climate on the coast, continental climate with mild to hot summers and cold winters in the plateaus and valleys to the east *(http://en.wikipedia.org)*.

Environmental problems

The overall state of the environment is not poor. The seven most important environmental problems (based on the number of occasions each problem was listed) are as follows:
Inadequate waste disposal sites (now requiring remediation) and the need for new waste disposal sites;

- Pollution of surface and groundwater by municipal and industrial wastewater;
- Pollution of potable water sources from agriculture;
- Air pollution from industrial furnaces and household fireplaces;
- Air pollution from industry due to the lack of flue gas cleaning facilities;
- Air pollution from traffic;
- Accumulation of hazardous waste requiring treatment and removal *(http://www.rec.org)*.

Environmental business sector

The Slovenian environmental business sector is comprised of more than 250 companies that provide a wide range of environmental services and technologies. While the majority of environmental companies are quite young - 52 percent were established after 1990 - more than a third are older companies established before 1980. Almost all of the environmental businesses founded after 1990 are privately owned. In general, surveyed companies are outfitted with all types of modern office equipment. Telephones, personal computers, fax machines and printers are standard equipment in the firms surveyed. Interestingly, more than half of the surveyed businesses use cellular phones, and a third have access to e-mail. Most of the environmental companies in Slovenia are small enterprises. The environmental technology market in Slovenia is geared primarily toward providing technical services, which accounted for 40 percent of total revenues. The next major source of income is the manufacture of environmental technologies, which accounted for 26 percent of revenues. Testing and monitoring accounted for 15 percent of total revenues.

Analysis by media shows that water and wastewater activities and waste-related activities each generated 30 percent of total revenues. This was followed by air-related and energy-related activities, which generated 9 percent and 7 percent of revenues, respectively. Non-media specific revenues (e.g. consultant activities that include more than one media, like EMS, EIA, environmental planning, industrial safety and noise control, etc.) amounted for 24 percent of revenues. With regard to foreign cooperation, 13 percent of the environmental businesses operate a joint-venture with a foreign partner. As expected, the top three countries from which survey respondents found joint-venture partners were Austria (four joint-ventures), Germany (three joint-ventures) and Croatia (two joint-ventures) *(http://www.rec.org)*.

Legal screen

Law system

Slovenia has a well-developed, structured legal system. It is based on a five-tier (district, regional, appeals, supreme, and administrative) court system. These courts deal with a vast array of legal cases including criminal, domestic relations, land disputes, contracts, and other business-related issues and probate. A separate social and labour court with regional, appeals, and supreme courts, deals strictly with labour disputes, pensions, and other social welfare claims. Similar to most European countries, Slovenia also has a Constitutional Court that hears complaints alleging violations of human rights and personal freedoms, expresses its opinions on the constitutionality of international agreements and state statutes, and deals with other high profile political issues. In keeping with European legal standards, in 1997 the Slovene Parliament established an administrative court to handle disputes among local authorities, between state and local authorities, and between local authorities and executors of public authority *(http://www.state.gov)*.

It is becoming easier to establish a business as the government has undertaken regulatory reform, although an entrenched and sometimes inefficient bureaucracy continues to hinder business development. The same source reports that corruption exists on a "minor scale." The government has made progress in reforming public administration and identifying and reducing red tape. Lithuania scores 2.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Trade laws

The Slovenian standards vary very often as compared to the European ones. Generally the importer must adapt himself to the Slovenian rules: the characteristics of the product must be described in Slovene, the country of origin must be indicated along with weight and ingredients (among others). The Health Institute and the Veterinary Faculty supply lots of information concerning the field of health and cost of laboratory analysis. As for the information relating to packing, information can be obtained from the National Testing Laboratory *(http://www.fita.org)*.

Slovenia adopted the trade policies of the European Union when it joined the EU in May 2004. The common EU weighted average external tariff was 1.3 percent in 2003, based on World Bank data. According to the World Trade Organization and the U.S. Trade Representative, the EU imposes non-tariff trade barriers through a complex regulatory system and export subsidies. Based on the adoption of EU trade policies, and on the revised trade factor methodology, Slovenia's trade policy score is unchanged. Lithuania scores 2.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental laws

The fundamental legal instrument for environmental protection in Slovenia is the Environmental Protection Act, which was established in 1993 and which functions as the general environmental code covering the most important environmental activities. In addition, the Act works as an umbrella for other legal instruments such as directives, regulations and standards which are prepared by different levels of government. The main issues covered by the Act are the basic principles of environmental protection aimed at sustainable development.

The general structure of environmental legislation follows the pattern of the Slovenian legal system, and its hierarchy of legal sources begins with the constitution, followed by basic environmental legislation (e.g. the Environmental Protection Act of 1993) and subordinate regulations and decrees covering individual aspects of environmental protection. A legislative framework regarding air and water pollution is already in place. There is still a lack of legislation covering waste management. The most important state bodies involved in environmental legislation are the Parliament, which passes the basic legislation; the Ministry of the Environment and Regional Planning, which is responsible for regulatory measures and control; the Environmental Protection Council, which adopts positions, informs the public, etc.; the Institute for Environmental Protection, which was established within the Ministry of the Environment and Regional Planning; and the local authorities, which deal with environmental protection issues on the local level.

Slovenian officials are putting great effort into harmonizing national environmental legislation with EU standards, but gaps still remain, especially in sector and enforcement legislation. Also, there is not enough information available regarding the degree of compliance with recent legislation. It is known, however, that levels of compliance are still below the EU norm in many key areas, such as the industrial and energy sectors in municipal and hazardous wastes. The country's efforts to force compliance with regulations have focused mainly on water quality and have neglected many other important areas, including product-related directives as well as waste directives. In the future, more attention will also need to be paid to the agricultural sector, which poses significant environmental threats; to creating directives to deal with air, waste and water; to the Integrated Pollution Prevention and Control (IPPC) directive; and to establishing funding sources for projects related to water, air and waste management *(http://www.rec.org)*.

Banking and finance

"The banking system is relatively well developed by central European standards," reports the Economist Intelligence Unit. "The system is sound, well capitalised and with a low proportion of nonperforming loans." According to First Initiative, "The banking sector is well developed and concentrated, with the three largest banks controlling approximately 50% of banking sector assets. Approximately 20 commercial banks and two savings institutions are operational as of 2004. Pressure by the European Union and other international organizations prompted the privatization of a number of formerly state-owned banks. The Slovenian embassy reports that the government partially owns two banks—Nova kreditna banka Maribor d.d. (90 percent) and Nova Ljubljanska banka d.d. (35.6 percent). However, the May 10, 2005, Financial Times reports that only one-third of Slovenia's banking assets are private and that the state effectively directs the three largest banks—Nova Ljubljanska, Nova Kreditna Banka Maribor, and Abanka, which control over half of total banking assets. Lithuania scores 3.0 in the economic freedom index. The higher the score on a factor, the

greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Macro economic policy

On 28 June 2004 Slovenia entered the Exchange Rate Mechanism ERM II which ensures the stability of the SIT/EUR exchange rate in agreement with the competent European institutions. The central rate has been set at 239,640 SIT for 1 EUR. The actual exchange rate can vary around central parity within the agreed standard fluctuation band, which is +/- 15 percent. The central parity of the tolar against the euro was determined by negotiations and is based on common views about long-term stability of the tolar by the Bank of Slovenia, the Slovene government, the European central bank and the ministers of finance of the Eurosystem Member States, and the ministers and central bank governors of the Member States participating in the ERM II. The European Commission participated in negotiations *(http://www.bsi.si)*.

From 1995 to 2004, Slovenia's weighted average annual rate of inflation was 4.62 percent, down from the 6.41 percent from 1994 to 2003 reported in the 2005 Index. As a result, Slovenia's monetary policy score is 1 point better this year. Lithuania scores 2.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys (*http://www.heritage.org*).

The economic objectives of the finance ministry are focused on fulfillment of the Maastricht criteria and on adoption of the euro, while at the same time maintaining a stable macroeconomic environment, and achieving above-average (relative to the EU) economic growth and competitiveness. At the same time the ministry will strive to eliminate the national deficit by 2008 by reducing the proportion of budget spending in GDP, neutralising the financial effects of the new financial perspective (NFP) and by restructuring budget spending (*http://www.vlada.si)*.

Slovenia scores 3.95 on the macroeconomic environment index, which means that the country is relatively stable. The macroeconomic environment index = 1/2 macroeconomic stability subindex + 1/4 country credit rating1 in March 2002 + 1/4 government expenditure2 in 2001 *(http://humandevelopment.bu.edu/)*.

Taxation

Slovenia's top income tax rate is 50 percent. The top corporate tax rate is 25 percent. In 2004, according to the Embassy of Slovenia, government expenditures as a share of GDP increased 0.4 percentage point to 43.1 percent, compared to the 0.5 percentage point decrease in 2003. On net, Slovenia's fiscal burden of government score is 0.2 point worse this year. Slovenia scores 3.6 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Corruption

The state prosecutor's office is responsible for the enforcement of the foregoing anti-bribery provisions. The number of cases of actual bribery is small and is generally limited to instances involving inspection and tax collection. Although the prosecutor's office may suspect bribery and related corruption practices in government procurement offices, obtaining evidence is difficult, thereby making it equally difficult to prosecute. Corruption in Slovenia is on a relatively minor scale, although 2001 saw Slovenia's first serious scandal involving a high public official convicted of accepting a bribe *(http://www.state.gov)*.

The new index, published today by Transparency International (TI), the world's leading non-governmental organization fighting corruption, ranks 102 countries. Seventy countries - including many of the world's most poverty-stricken - score less than 5 out of a clean score of 10. Countries with a score of higher than 9, with very low levels of perceived corruption, are predominantly rich countries. On the corruption perception index Lithuania scores 6.0 and ranks 27 overall *(http://ww1.transparency.org)*.

Crime

Slovenia scores: 74. Average score of scores for rates of homicide and for other violent crimes (average score for rape, robbery and assault rates). A higher value indicates a lower value of crime *(http://humandevelopment.bu.edu)*.

Political screen

Ideology

Politics of Slovenia takes place in a framework of a **parliamentary representative democratic republic**, whereby the **Prime Minister of Slovenia** is the **head of government**, and of a pluriform multi-party system. **Executive power** is exercised by the government. **Legislative power** is vested in both the **government** and parliament. The **Judiciary** is independent of the executive and the legislature *(http://en.wikipedia.org.)*.

Institutions

Slovenian parties are: Slovenian Democratic Party or SDS, Liberal Dmocracy of Slovenia or LDS, United List of Social Democrats, ZLSD, New Slovenia or NSI, Slovenian People's Party or SLS, Slovenian National Party or SNS, Democratic Party of Pensioners of Slovenia or DeSUS, Active Slovenia, Slovenia is Ours or SJN, Youth Party of Slovenia or SMS, Hungarian and Italian ethnic minorities *(http://en.wikipedia.org)*.

Government intervention

According to the Embassy of Slovenia, the government consumed 19.8 percent of GDP in 2004, down from the 20.2 percent reported in the 2005 Index. As a result, Slovenia's government intervention score is 0.5 point better this year. In 2003, according to the International Monetary Fund's Government Financial Statistics CD–ROM, Slovenia received 2.33 percent of its total revenues from state-owned enterprises and government ownership of property. Lithuania scores 2.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Environmental priorities

The following priority areas were identified in the Ministry of Environment:

- Protecting inland and ground water quality with appropriate wastewater treatment and discharge control, and water resource protection;
- Waste disposal and treatment, including the development of an integrated strategy, remediation and clean up of existing landfills, reducing waste generation and increasing the levels of recycling, and measures in the field of industrial and special waste management;
- Coordinating environmental protection with existing practices in the European Union;
- Introducing environmental protection into individual sector policies and determining the measures for monitoring their enforcement; and
- Establishing an information system for environmental protection and a coordinated system for collection of environmental data.

It is interesting to note that the focus on water protection and waste management is well reflected in the breakdown of the environmental revenues of the environmental business sector in Slovenia. *(http://www.rec.org)*.

Government programs

The Environmental Protection Act stipulated that a National Environmental Protection Program (NEPP) be developed. The NEPP should in particular cover: environmental stress and its impact on the health of the population; the assessment of the state of the environment and natural resources, and the risks to which they are exposed; long term projections of environmental trends and conditions; attainable goals and methods for their realization; the necessary financial means for achieving the goals set; priority tasks and projects; analysis of expected costs and benefits; and guidelines for the technical development of environmental protection activities and public services. The NEPP should be divided into global, national, regional and local fields of activity, and is expected to include short, medium, and long-term policy targets together with a list of the major environmental problems facing the country. The NEPP also focuses attention on the conditions necessary for its effective implementation, including the expected costs, which are estimated to be about 1.5 percent of GDP annually (currently standing at approximately 0.8 percent of GDP).

Under the Environmental Protection Act, the Environmental Development Fund of Slovenia (hereafter, the EcoFund) was established, with an initial capital of USD 100,000. In 1994 the capital was increased to USD 15.5 million through the transfer of repayment and interest from 277 loans previously administered by the Ministry of Environment. The Slovenian EcoFund is generally regarded as one of the best funds of this type in Central and Eastern Europe. The Fund operates as a non-profit

financial organization providing soft loans for environmental projects on preferential terms. The project funding opportunities are publicly announced, and the funding is awarded through tendering procedures. The priorities of the Fund reflect the priorities outlined in the Environmental Protection Act, and include air pollution abatement, phasing out of ozone-depleting substances, municipal infrastructure development, and programs for the reduction of industrial pollution *(http://www.rec.org)*.

Political stability

Slovenia has privatised its economy, stabilised inflation and wage growth, halted the rising unemployment, strengthened its currency, relaxed the flow of capital, and modernised its taxation system. Slovenia is experiencing stable growth of its gross domestic product and, according to Dun & Bradstreet's analysis of risk levels in all countries in transition, Slovenia has the lowest level of risk in both commercial and political standards *(http://www.uvi.si)*.

On the political stability index of Kaufmann Lithuania scores 1.21. The choice of units for governance ensures that the estimates of governance have a mean of zero, a standard deviation of one, and range from around –2.5 to around 2.5. Higher or positive values indicate greater political stability (*http://humandevelopment.bu.edu)*.

Economic screen

Natural resources

Slovenia's natural resources are: lignite coal, lead, zinc, mercury, uranium, silver, hydropower, forests *(http://www.cia.gov)*.

Exchange rate

Tolars per US dollar - 192.71 (2005), 192.38 (2004), 207.11 (2003), 240.25 (2002), 242.75 (2001) (*https://www.cia.gov)*.

Gross domestic product

GDP (purchasing power parity)	$43.36 billion
GDP (official exchange rate)	$35.21billion
GDP (real growth rate)	3.9 percent
GDP per capita	$21.600

(https://www.cia.gov).

Inflation

Inflation rate (consumer prices)	2.4 percent

(https://www.cia.gov).

Environmental expenditures

Slovene environmental expenditures are financed mainly through the state budget, local governments and municipalities, the National Environmental Protection Fund and spending from the private sector (e.g. enterprises and external sources). The PHARE Programme is one of the biggest foreign contributors of funding in Slovenia and has contributed more than USD 110 million since 1992. However, these contributions were only partly related to environmental projects, in particular, for the construction of wastewater treatment plants and sewage networks, industrial sanitation and coastal management programs. Additional financial aid was provided by the EBRD and the World Bank, which financed the conversion of domestic and small commercial heaters from coal to natural gas. Further donors include the governments of Austria, the Netherlands, the United Kingdom and France, all of which support various programs in the public and private sector.

Co-funding of environmental investments is also a common scheme in Slovenia. Under this arrangement, the government supports environmental projects of businesses for up to 30 percent of their total investments. Projects are chosen based on a public tender. Between 1991 and 1994, annual co-funding increased from USD 1.7 million to USD 4 million. The main condition of co-funded projects is that they must ensure direct reduction of emissions. Total spending on environmental protection in Slovenia was approximately 1.0 percent of the gross domestic product in 1994, and it decreased to 0.8 percent of GDP in 1995 and 1996.

An increase in environmental expenditure can be expected over the next few years as a result of efforts to harmonize local environmental legislation and policy with EU standards. According to a study prepared for the EU in 1997 entitled "Assessing the Costs of CEE Approximation with EU

Environmental Directives," the total annual cost of compliance in the major environmental sectors (e.g. air, wastewater and waste) are estimated to exceed USD 152 million in Slovenia. The bulk of that money is expected to be spent on purchasing new environmental technologies and on updating old systems. Environmental investments from the private sector will also increase significantly due to provisions in the privatization law that allow companies to reserve long-term funds for investments in environmental protection *(http://www.rec.org)*.

Demand for environmental technologies

Overall, the demand for environmental technologies in Slovenia was moderate, with only a handful of technologies in high demand. However, when interpreting the results, one should bear in mind that the overall state of the environment is not as poor as in other countries of the region, and that some important environmental problems have already been solved in recent years.

Demand for air-related technologies was moderate. Growth in demand was expected for technologies related to air sampling and laboratory analysis equipment for both gaseous emissions and ambient air; those technologies for emission abatement and cleaner production (e.g. the use of natural gas as source of energy); and equipment for air pollution control and flue gas purification (e.g. filters, scrubbers, etc.).

Demand for energy-related technologies was moderate. Higher demand for energy-related technologies was expected in the "energy and power generation sector" than in "other industrial sectors." Growing demand was noted for alternative (non-CFC) refrigerants, while other areas where demand was expected to increase included technologies for heat recovery and energy savings (e.g. insulation) in the energy sector; new and efficient energy and heat generation systems; and retrofitting and rehabilitation of existing energy systems in both power generation and other industrial sectors. Alternative or renewable energy systems (e.g. geothermal, biomass, and solar) were deemed other possible growth areas *(http://www.rec.org)*.

Major end users

Major Environmental Technology End-Users in technology categories, the municipal services, including municipal power generation, were indicated as major end-users of environmental technologies. In the air, water, and waste sectors, municipal services were followed by relevant types of industries such as chemical, mining, wood, and food processing. As might be expected, the transport industry and mining industry are the major users in the noise and vibration sector. Industry in general is also an important user of environmental technologies related to energy *(http://www.rec.org)*.

Major suppliers

The highest numbers of foreign firms were active in the air, water and wastewater sectors, followed by the waste sector. The responses also indicate that German firms are by far the most active, followed by Austrian companies, and then by American, Swiss, Italian and French firms. Overall, German technologies were the best rated among the foreign products on the environmental technology market. The next best rated products were technologies from Austria and the US, while in the water sector suppliers from The Netherlands, and in air sectors suppliers from Japan received high rating for technologies. High ratings for some other suppliers (i.e., Great Britain, Canada, and Denmark) cannot be given substantial consideration because they were all obtained on the basis of only one response *(http://www.rec.org)*.

Foreign trade zones

There are two kinds of Free Trade Zones in Slovenia: Free Economic Zones and Free Customs Zones. Free economic zones (FEZ) exist in Koper and Maribor. FEZs may be established by one or more domestic legal persons. The founders must provide the resources necessary for the establishment and commencement of operation, as well as suitable technical, organizational, ecological, and other conditions for the performance of business activities.

The following activities may be performed within free zones: production and services; wholesale trade; banking and other financial services; and insurance and reinsurance regarding the above mentioned activities. The agreement on establishment of free economic zones is subject to governmental approval within 30 days of submitting the application. The founder must also obtain an operating license and a customs authority decision on the fulfilment of conditions for performing customs inspection in the free zone. According to the Economic Zones Act, the Parliament adopted the Decree on Economic Zones, outlining the procedures for obtaining all necessary permits for the establishment and operation of FEZs. Foreign persons may only establish FEZs through forming a company

registered in Slovenia. Foreign persons may, however, operate in FEZs by concluding a contract with the domestic company that established the particular free economic zone. Foreign persons may also be eligible to apply for FEZ after gaining permanent residency of Slovenia.

Slovenia's Free Customs Zones (FCZs) are located in Celje, Ljubljana, Maribor, Nova Gorica, Sezana, and Koper. FCZs may be established by one or more domestic legal persons after obtaining governmental approval and may be used by their founders or by other domestic and foreign legal persons by contractual agreement. Under the Customs Act, subjects operating in FCZs are not liable for payment of customs duties, nor are they subject to other trade policy measures until goods are released into free circulation. Customs authorities must be previously notified of the performance of the above-mentioned activities. Activities in FCZs must not endanger health, life, or the environment. Goods that leave a FCZ may be re- exported from the customs territory or taken to another part of the customs territory after payment of customs duties (*http://www.state.gov)*.

Infrastructure

Slovenia has a well-developed road network, and ambitious plans are underway for extension of the motorway system. The National Motorway Construction Programme envisages the completion and improvement of motorways and other roads in mainly two directions: east - west from Šentilj to Koper with exits, and to the Italian border (406 kilometres), and north - south from the Karavanke Tunnel on the Austrian border to Obrežje on the Croatian border (113 kilometres). The railroad network (with 1,228 km of railways, 504 km of which are electrified) has all the necessary links to neighbouring countries. Air traffic is conducted from three international airports (Ljubljana, Maribor and Portorož). Adria Airways is the national air carrier; Ljubljana is regularly connected with all major European airports. There is a large freight port in Koper, which has become an important gateway to Central Europe in recent years *(http://www.uvi.si)*.

Technological screen

Technology level

Technology Index Rank	25/80
ICT Subindex	26/80
Innovation Subindex	24/80
Technology Transfer Subindex	38/80

(http://www.weforum.org)

Technology development

Slovenia has placed the 14th most innovative country among all 25 EU member states, according to the European Innovation Scoreboard (EIS). Moreover, Slovenia came second among the ten new member states, being outperformed only by Estonia, according to the EIS report. Slovenia's innovation performance is relatively well-balanced, with no major discrepancies in different innovation categories, with the exception of intellectual property rights. With improvements in several crucial areas and a good foundation in innovators, the country has the ability to rapidly improve its performance, the report adds. The EIS indicators which determine a country's rank are distributed among five categories that measure innovation performance. The report pinpoints Slovenia's best performance in the first category, namely the innovation drivers, which measure the structural conditions required for innovation potential. The country's excellent result is due to extensive life-long learning programmes and above-average results for youth education. Slovenia also did exceptionally well in the second category (knowledge creation), as its business R&D stood at 0.90 percent of GDP in 2003 (71 percent of the EU average). However, the country also faces several challenges, with the main issue pinpointed as the below-average levels of ICT investment (83 percent of the EU average with no sign of improvement). Moreover, the country spends a below-average amount of money on innovation, reaching 61 percent of the EU average, in addition to being faced with a drop in numbers of science and engineering graduates, which fell to 71 percent of the EU average in 2003. Due to these troubles the country has been placed in the "catching up" group of countries, the third best out of four categories *(http://www.uvi.si)*.

Property rights

In Slovenia, the duration of validity of a patent is twenty years. However, at the end of the ninth year during the period of validity, the owner of the patent must prove that his patent corresponds to the initial criteria furnished. If not, the patent is not valid. It is also possible to acquire a patent valid for 10 years. The characteristics of this patent are as follows: the procedure is flexible and the concept of innovation is toned down. These rules are applied in Slovenia. As for foreign companies, Slovenia

follows the Paris Convention. This means that a foreign company having applied for a patent in one of the signatory countries also benefits from the protection of its patent in Slovenia within one year. Moreover, Slovenia is signatory to the European Patent Organisation. That is to say that the owner of the patent who is a member of that organisation can extend protection of his patent to different countries (members of that organisation too) by paying registration charges. He can therefore do so in Slovenia, by paying about 200 DEM to a Slovenian office. Rules on patents are consequently the same as the Slovenian ones. As for trademarks, their protection is valid for ten years and can also be renewed. Trademark counterfeiting can be contested only three years after its registration. Slovenia is a member of the Madrid Convention. The registration of Trademarks is international: the features of protection are also applicable in Slovenia, but only after registration of the trade mark in a Slovenian Office. The rules are the same as those for other trademarks registered in the country. Industrial designs and models get protection for ten years. The Slovenian protection is limited to an aesthetic character.

The designations of origin. This is a concept that is used by many in Slovenia. The institution responsible for recognition of these Controlled Designations of origin (AOC/CDO) is the Economic Chamber of Slovenia. As for industrial property, Slovenia concedes the same rights of protection as the European Union subsequent to the signature to an agreement of co-operation between the two parties *(**http://www.fita.org**)*. Private property is guaranteed by Slovenia's constitution. The Slovenian court system is marred by inadequate staffing and slow procedural progress and is in need of further reform." The EIU also reports that investors are usually frustrated about the weak protection afforded by the judiciary. Slovenia scores 3.0 in the economic freedom index. The higher the score on a factor, the greater the level of government interference in the economy, and the less economic freedom a country enjoys *(http://www.heritage.org)*.

Telecommunications

In comparison with other Eastern European countries Slovenia is in first place in the development of telecommunications. According to data from the International Telecommunications Union (ITU) Slovenia is last among Western European countries in relation to the state of development of its telecommunications and first among Eastern European ones. Slovenia is expected to catch up rapidly with the EU, especially in the field of mobile telephony, where the ITU ranks our country alongside developed nations. In comparison with Europe most information-telecommunications technology indicators put Slovenia at the European average and it excels in the spread and penetration of personal computers as well as its openness to adopting new technologies. Almost a fifth of all households have Internet access and 40 percent have their own computer. Thanks to the openness of the society to new technologies, the relatively low price of telephone access and Arnes' promotional policies, the Internet was quick to spread in Slovenia, with a rate of adoption right among the highest in Europe. Computer literate users adopted the Internet early on, but the situation is not as good among the rest of the population. Slovenes spend an average of approximately 3 to 4 minutes on the Internet per day, mostly on foreign Web pages. The potential exists for 60,000 to 80,000 new users every year. To expedite the rate of growth in Internet usage, additional activities are necessary, which will make the Internet desirable to the computer-illiterate. Approximately 170,000 Slovenes have their own electronic address. Only a small number of active Internet users in Slovenia are also active in e-business. Only a tenth of these users make any online purchases each year and the same holds true for the share of people using e-banking. Comparable numbers are also evident in numerous other European countries, but in the most developed countries the share of e-activities already exceeds 50 percent *(http://www.uvi.si.)*

Socio cultural screen

Language

Slovak (*slovenčina*, *slovenský jazyk*) is an **Indo-European language** belonging to the **West Slavic languages** (together with **Czech**, **Polish** and **Sorbian**). Slovak is especially close to Czech *(http://en.wikipedia.org)*. Mostly used languages are German and English in the business sector. Do not assume that an English or German person is present. Ask for information about this issue *(www.evd.nl)*.

Religion

The Slovak constitution guarantees **freedom of religion**. The majority of Slovak citizens (60.3%) practice **Roman Catholicism**; the second-largest group consider themselves atheists (9.7%). About 8.4% are Protestants, and 4.1% are Orthodox. About 2,300 **Jews** remain of the estimated pre-**WWII** population of 120,000 *(http://en.wikipedia.org)*.

Education

All state-run educational institutions have suffered from a lack of funding since the fall of **communism**, i.e. from the early **1990s** onward. School fees for university-level schools have been prepared for years, but the parliament has been unable to pass legislation requiring them due to strong citizen opposition. Many state-financed schools of higher education finance themselves by means of various semi-legal "extraordinary" and "auxiliary" fees, etc. Corruption is a widespread problem, possibly becoming endemic in academic circles (i.e. paying for term exams, entrance tests, etc.). Despite the current lack of money, primary and secondary education is at a quite high level compared to many countries of the world. A major deficiency is insufficient promotion of independent thinking and student initiative, a complete absence of creative learning, unreformed and outdated teaching material, methods and syllabi inherited from the former communist educational system, and relatively low remuneration of teachers, leading to a decrease of the number of qualified (and of well qualified) teachers especially below the university level (see the statistics section for some pay figures). University-level schools, unable to provide sufficient pay to get real experts and motivated teachers, are rather mediocre compared to other countries, usually promote pure swotting and use outdated texts and other material. Some reforms of all educational levels, including the introduction of school fees for universities, are said to be in preparation and could be carried out after the next parliamentary elections (to be held 2005). Nonetheless, Slovakia has thus far managed to avoid the excessive **brain-drain** that has plagued most post-**Soviet** states *(http://en.wikipedia.org)*.

Business etiquette

In general, business behavior in Slovenia is similar to that in the rest of Europe; particularly to Germany and Austria. An handshake before and after a meeting is customary and acceptable. Care should be taken to shake hands with everyone present at a meeting. It is customary to shake hands first with the women that are present. During a first meeting, be careful to observe the organizational status of all the Slovenians present. It is also the custom use hosts' titles, such as "Doctor" or "Professor", before their names. Immediately after shaking hands at the start of the meeting, it is customary to exchange business cards. See that you have a sufficient quantity of business cards. The acceptable dress for a business meeting is a business suit for men. Women are recommended to dress fashionably, but not loudly. Most business people in large cities in Slovenia have a good command of English and some are fluent in German and Italian as well. Acceptable gifts for business meetings are items for the office, pens (including pens with your company logo) as well as selected wines. It takes some time to be able to fix a meeting. Confirm in advance, before the meeting, by fax or letter, that the meeting will take place. You are recommended to avoid business meetings in the months of July and August or around the times of national holidays *(http://www.worldwide-tax.com)*.

Appendix 8 Country scores

Results Croatia

Criteria		Weight DMT	Weight res.	Score	Score DMT	Score res.	Score av.
Env. Problems	The environment is highly damaged. The country first need to build up its country. Environmental issues come at a later stage, The problems in this sector are too severe for DMT's products.	3	3	-1	-3	-3	-2,33
Env. Business Sector	There is low development at the moment. The main problem is that companies are outfitted with modern equipment. EU regulation will enable much wider use of environmental technologies in the future.	2	1	-1	-2	-1	-1.33
Law System	Score 4.0 on the Economic Freedom Index.	2	3	-1	-2	-3	-2
Trade Laws	Score 2.5 on the Economic Freedom Index.	2	3	0	0	0	0
Env. Laws	The laws in place are in congruence with the EU. The insufficient enforcement of existing legislation seriously hinder the development of Croatia's environmental business sector.	3	3	0	0	0	0
Banking and Finance	Score 1.0 on the Economic Freedom Index.	1	1	1	1	1	1
Macro Economic Policy	Croatia scores 3.38 on the macroeconomic environment index, which means that the country is relatively unstable.	2	3	0	0	0	0
Corruption	Score 3.8, rank 51.	2	3	-1	-2	-3	-2
Crime	Croatia scores 79.	2	2	1	2	2	1.67
Gov. Interv.	Score 2.0 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	Environmental priorities are currently set without any comprehensive strategy and instead are mainly in response to the most pressing environmental problems causing threats to human health.	3	3	-1	-3	-3	-2.33
Demand for Env. Tech.	information available about this issue.	3	3	-1	-3	-3	-2.33
Major End Users	Unfortunately, there is no information available about this issue.	2	2	-	0	-	0
Major Suppliers	Unfortunately, there is no information available about this issue.	1	1	-	0	-	0
Political Stability	Score 0.56 on the Political Stability Index	3	3	-	0	-	0
Telecom	Good overall telecommunication, 47% of the working population uses the Internet.	3	3	0	0	0	0
Language	Croatian. English is a general business language.	3	2	1	3	2	2
Total				**-3**	**-9**	**-11**	

Table Appendix 8.1: Results Croatia

Results Czech Republic

Criteria		Weight DMT	Weight res.	Score	Score DMT	Score res.	Score av.
Env. Problems	There are environmental problems in the area air but the problems this sector are not in the interest of DMT products yet. (first the heavy pollution needs to be treated) The energy sector develops moderate, modernization and construction of new energy sources are needed.	3	3	0	0	0	0
Env. Business Sector	The environmental sector is developing steady. Due to EU legislation there is a high demand for western knowledge, especially in the area of sustainable energy (biomass).	2	1	1	2	1	1.33
Law System	Score 3.0 on the Economic Freedom Index.	2	3	-1	-2	-3	-2
Trade Laws	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Env. Laws	The environmental laws are in place; however the enforcement is still very weak.	3	3	0	0	0	0
Banking and Finance	Score 1.0 on the Economic Freedom Index.	1	1	1	1	1	1
Macro Economic Policy	Czech Republic scores 3.77 on the macroeconomic environment index, which means that the country is relatively unstable.	2	3	0	0	0	0
Corruption	Score 3.7, rank 52.	2	3	-1	-2	-3	-2
Crime	Czech Republic scores: 73.	2	2	0	0	0	0
Gov. Interv.	Score 2.5 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	The Czech Republic has promised to harmonize European Union environmental standards. This will increase the demand for pollution control technology and equipment that meets EU standards. Especially attention is given to the decrease in sulphur dioxide emissions. At this stage the attention of the state is mostly towards the heavy pollution areas but this might change in the future.	3	3	0	0	0	0
Demand for Env. Tech.	Demand between moderately and high. There is a demand for emission abatement/cleaner production technologies. Scrubbers, other gas purification units, and by large and sophisticated systems to reduce the emission of solid particles, sulphur dioxide, carbon oxide etc. are in high demand. Energy-saving technologies, and alternative energy sources are not currently in high demand.	3	3	1	3	3	2.33
Major End Users	The major end-users are operators of heating stations and power plants. Secondly, metallurgy, chemical, pharmaceutical, engineering, glass, and other industrial branches.	2	2	1	2	2	1.67
Major Suppliers	Western European companies, but in many sectors foreign companies did not establish presence yet.	1	1	0	0	0	0
Political Stability	Score 1.02 on the Political Stability Index.	3	3	1	3	3	2.33
Telecom	There is a good level of	3	3	1	3	3	2.33

	telecommunications.						
Language	Czech, Older generation understanding German, younger generation understanding English.	3	2	1	3	2	2
Total				**5**	**13**	**9**	

Table Appendix 8.2: Results Czech Republic

Results Estonia

Criteria		Weight DMT	Weight res.	Score	Score DMT	Score res.	Score av.
Env. Problems	Estonian environmental problems are severe and mostly in the area's of wastewater and waste management in general. However, air quality improvement is a focus point. There are indicators that the problems the air sector are not in DMT's interest yet. The country needs to solve the heavy pollution first.	3	3	0	0	0	0
Env. Business Sector	Continued expansion and development of the environmental business sector. Environmental technology providers are generally sales and technical-engineering companies offering limited consulting services. Estonia's EU approximation process causes for Estonian producers the introduction of environmentally sound and effective technologies that meet EU standards and regulations.	2	1	1	2	2	1.67
Law System	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Trade Laws	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Env. Laws	The legislation still needs to be harmonized with the EU.	3	3	-1	-3	-3	-2.33
Banking and Finance	Score 1.0 on the Economic Freedom Index.	1	1	1	1	1	1
Macro Economic Policy	Estonia scores 4,06 on the macroeconomic environment index, which means that the country is relatively stable.	2	3	1	2	3	2
Corruption	Score 5.6, rate 29.	2	3	1	2	3	2
Crime	Crime rate 38.	2	2	-1	-2	-2	-2
Gov. Interv.	Score 2.0 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	The state has a broad focus. For DMT interesting priority: To reduce emissions of air pollutants, focusing primarily on substances causing climate change and ozone depletion, and on pollution that originates from transport.	3	3	0	0	0	0
Political Stability	Score 0.98 on the Political Stability Index.	3	3	1	3	3	2.33
Demand for Env. Tech.	There is a moderate demand in general. The highest demand among air technologies was identified for emission abatement/cleaner production equipment. Growing demand is expected for instrumentation and process control/software, air sampling/ laboratory analysis and air pollution control/flue gas purification	2	2	0	0	0	0

	equipment. The demand for alternative energy is low.						
Major End Users	End users are municipalities, mining industry, transport industry, manufacturing, heavy industry and the pulp and paper industry.	1	1	1	1	1	1
Major Suppliers	Estonian environmental technology suppliers could be largely classified as product vendors. There is little representation from any country besides Finland and Sweden.	3	3	0	0	0	0
Telecom	Estonian telecommunications sector is one of the most developed in Central and Eastern Europe. 54 percent of 6-74 year old Estonians are using the Internet.	3	3	1	3	3	2.33
Language	Estonian, Russian, The business language is English. The older generation (often in leading positions) only speak their mother language.	3	2	0	0	0	0
Total				**5**	**9**	**11**	

Table Appendix 8.3: Results Estonia

Results Latvia

Criteria		Weight DMT	Weight res.	Score	Score DMT	Score res.	Score av.
Env. Problems	The three main environmental problems identified are hazardous waste (disposal and treatment), wastewater (treatment) and air pollution caused by boiler houses There are no environmental problems of DMT's interest rated	3	3	-1	-3	-3	-2.33
Env. Business Sector	The sector is increasing. Most companies are less than five years old. Companies offer environmental services that include consulting, training, information and data processing, as well as various environmental technologies.	2	1	1	2	2	1.67
Law System	Score 3.0 on the Economic Freedom Index.	2	3	-1	-2	-3	-1.67
Trade Laws	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Env. Laws	The majority of environmental standards and norms are still based on former Soviet regulations. The laws are in the process of being harmonized to EU standards.	3	3	-1	-3	-3	-1.67
Banking and Finance	Score 2.0 on the Economic Freedom Index.	1	1	0	0	0	0
Macro Economic Policy	Latvia scores 3.89 on the macroeconomic environment index, which means that the country is relatively stable.	2	3	1	2	3	2
Corruption	Score 3.7, rank 52.	2	3	-1	-2	-3	-2
Crime	Crime rate 62.	2	2	0	0	0	0
Gov. Interv.	Score 2.5 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	Priorities for investments: water supply and wastewater treatment, waste management (including hazardous waste treatment), nature protection, air protection (energy and transport), and sustainable development projects.	3	3	1	3	3	2.33

Demand for Env. Tech.	The demand for environmental technologies in Latvia is ranked between moderate and high. The highest demand among air technologies was for air pollution control/flue gas purification equipment (e.g. filters, scrubbers).	3	3	0	0	0	0
Major End Users	Overall, the primary buyers and environmental technology end-users are the municipalities, chemistry, pharmaceutical, building material manufacturers, metallurgical operators and railway transport.	2	2	1	2	2	1.67
Major Suppliers	The largest share of environmental technologies offered by local suppliers relate to water. The supply of technologies with regard to waste and energy is considered moderate. The smallest supply of local environmental technologies relate to air pollution control and detection. Until recently, there were very few foreign environmental technology companies operating in Latvia.	1	1	1	1	1	1
Political Stability	Political stability index scores 0.82.	3	3	0	0	0	0
Telecom	One third of the population has access to the Internet.	3	3	0	0	0	0
Language	Latvian and Russian are commonly spoken. English is used as business language but often elderly managers do not speak a foreign language.	3	2	0	0	0	0
Total				**1**	**0**	**-1**	

Table Appendix 8.4: Results Latvia

Results Lithuania

Criteria		Weight DMT	Weight res.	Score	Score DMT	Score res.	Score Av.
Env. Problems	The most critical environmental problems are related to the treatment of wastewater, wastewater minimization and water supply. But there is a market in the air sector as well. Many pollutants are untreated because companies do not own the specialized equipment necessary for the removal of certain materials such as gaseous and liquid mixtures.	3	3	1	3	3	2.33
Env. Business Sector	The sector is rapidly increasing and relatively young. It mostly consists of small and privately owned enterprises. Most Lithuanian environmental businesses offer services (88 percent), either in addition to or instead of environmental technologies	2	1	1	2	1	1.33
Law System	Score 3.0 on the Economic Freedom Index	2	3	-1	-2	-3	-2
Trade Laws	Score 2.0 on the Economic Freedom Index	2	3	0	0	0	0
Env. Laws	The laws are gradually being modified in order to harmonize them with EU requirements. The Ministry of Environmental Protection ensures enforcement through its regional divisions.	3	3	0	0	0	0
Banking and	Score 1.0 on the Economic Freedom Index	1	1	1	1	1	1

Finance							
Macro Economic Policy	Lithuania scores 4.06 on the macroeconomic environment index, which means that the country is relatively stable.	2	3	1	2	3	2
Corruption	Score 4.8, rank 36.	2	3	0	0	0	0
Crime	Lithuania scores 67.	2	2	0	0	0	0
Gov. Interv.	Score 2.0 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	Five priority areas: water protection, waste management, protection of soil from pollution, air protection and protection from physical pollution. Greater emphasis is now placed on the reduction of water pollution and on waste management than on more traditional areas such as air pollution.	3	3	0	0	0	0
Demand for Env. Tech.	Generally speaking, the demand for environmental technologies in Lithuania is high. In the air sector, the greatest demand for environmental technologies was indicated for emission abatement/cleaner production technologies. The lowest demand in the energy sector is to be found in two groups: alternative (non-CFC) refrigerants and alternative/renewable energy systems.	3	3	1	3	3	2.33
Major End Users	Overall, the majority of end-users are municipalities, although industry: like industrial companies, including chemical, textile, pharmaceutical and glass manufacturers make up a significant share of environmental technology purchasers.	2	2	1	2	2	1.67
Major Suppliers	Local companies supply environmental services but not environmental technologies. The use of foreign environmental technologies in Lithuania tends to result from the forming of joint-ventures with local representatives. Each sector has its own suppliers that tend to include local providers.	1	1	1	1	1	1
Political Stability	Score 0.93 on the Political Stability Index.	3	3	1	3	3	2.33
Telecom	Lithuania has reached a good level of alignment but implementing legislation remains to be transposed. 25% of the population uses the Internet.	3	3	-1	-3	-3	-2.33
Language	Lithuanian. English is the business language. Often elderly managers only speak their mother tongue.	3	2	0	0	0	0
Total				**6**	**12**	**11**	

Table Appendix 8.5: Results Lithuania

Results Slovakia

Criteria		Weight DMT	Weight inv.	Score	Score DMT	Score res.	Score av.
Env. Problems	Problems are heavily polluted sites, air pollution, and existence of heavily polluted regions with compounded environmental problems, but the problems of the air sector are not in	3	3	0	0	0	0

	DMT interest yet. The country first needs too solve the heavy pollution. The report stated that desulphurization equipment is needed; this might be a lead for DMT.						
Env. Business Sector	Business activity in the environmental market has increased significantly. The annual growth in the number of environmental companies since the early nineties averages some 50 percent.	2	1	1	2	2	1.67
Law System	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Trade Laws	Score 1.0 on the Economic Freedom Index.	2	3	1	2	3	2
Env. Laws	Slovakia is in the process of harmonizing their legislation with the EU. Regulatory enforcement is still relatively weak.	3	3	-1	-3	-3	-2.33
Banking and Finance	Score 2.5 on the Economic Freedom Index.	1	1	0	0	0	0
Macro Economic Policy	Slovakia scores 3.64 on the macroeconomic environment index, which means that the country is relatively unstable.	2	3	-1	-2	-3	-2
Corruption	Score 3.7 rank 52.	2	3	-1	-2	-3	-2
Crime	Slovakia scores: 82.	2	2	1	2	2	1.67
Gov. Interv.	Score 2.0 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	The state put the environment in general as a priority, but first the attention goes to health and life issues. The environmental priorities of the state do not relate with DMT's products.	3	3	-1	-3	-3	-2.33
Demand for Env. Tech.	0.82 on the Political Stability Index.	3	3	0	0	0	0
Major End Users	Demand for environmental technologies related to energy and air quality was moderate. Demand for air pollution control equipment in the energy sector is likely to grow due to upcoming new and stricter regulations on air.	2	2	0	0	0	0
Major Suppliers	The chemical industry and the energy sector are the major end-users of environmental technologies in most categories.	1	1	0	0	0	0
Political Stability	There are West European suppliers active in the market. Suppliers focused on good product quality and reliability and high prices respectively.	3	3	1	3	3	2.33
Telecom	High level and good structure. 50% of the population uses Internet.	3	3	1	3	3	2.33
Language	Slovak, Around Bratislava English is a good option, outside the area German is a better option	3	2	1	**3**	2	**2**
Total				**2**	**5**	**3**	

Table Appendix 8.6: Results Slovakia

Results Slovenia

Criteria		Weight DMT	Weight Inv.	Score	Score DMT	Score res	Score av.
Env. Problems	Slovenia suffers from air and waste problems but the environment is not	3	3	1	3	3	2.33

	too heavily damaged. This might be a good business opportunity for DMT because DMT products come in place when the severe pollution is cleaned already.						
Env. Business Sector	The business sector increased significantly. The environmental technology market in Slovenia is geared primarily toward providing technical services. The next major source of income is the manufacture of environmental technologies. Testing and monitoring is another source.	2	1	1	2	2	1.67
Law System	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Trade Laws	Score 2.0 on the Economic Freedom Index.	2	3	0	0	0	0
Env. Laws	Slovenian officials are putting great effort into harmonizing national environmental legislation with EU standards, but gaps still remain. The country's efforts to force compliance with regulations have focused mainly on water quality and have neglected many other important areas.	3	3	0	0	0	0
Banking and Finance	Score 3.0 on the Economic Freedom Index.	1	1	-1	-1	-1	-1
Macro Economic Policy	Slovenia scores 3.95 on the macroeconomic environment index, which means that the country is relatively stable.	2	3	1	2	3	2
Corruption	Score 6.0, rank 27.	2	3	1	2	3	2
Crime	Slovenia scores: 74.	2	2	0	0	0	0
Gov. Interv.	Score 2.0 on the Economic Freedom Index.	2	2	0	0	0	0
Env. Priorities	The state focuses on water and waste. This does not correlate with the export products of DMT.	3	3	-1	-3	-3	-2.33
Political Stability	Score 1.21 on the Political Stability Index.	3	3	1	3	3	2.33
Demand for Env. Tech.	Demand is moderate/ high. Growth in demand was expected for technologies related to air sampling and laboratory analysis equipment for both gaseous emissions and ambient air; those technologies for emission abatement and cleaner production. Alternative or renewable energy systems (e.g. geothermal, biomass, and solar) are a growing market.	2	2	1	2	2	1.67
Major End Users	Municipal services, chemical, mining, wood, and food processing.	1	1	1	1	1	1
Major Suppliers	High degree of foreign suppliers in all sectors.	3	3	1	3	3	2.33
Telecom	The telecommunications are in development. 50% of the inhabitants use the Internet.	3	3	0	0	0	0
Language	Most people speak Slovak. In business English and German are common languages.	3	2	1	3	2	2
Total				**7**	**17**	**18**	

Table Appendix 8.7: Results Slovenia

Overall Results

Below the overall results are presented. The neutral score means that there are no weighting factors included, DMT means that DMT's weighting factors are included and Res. means that the researcher's factors are included. At the total score all scores are added.

Criteria	Croatia	Czech Republic	Estonia	Latvia	Lithuania	Slovakia	Slovenia
Env. Problems	-2,33	0	0	-2.33	2.33	0	2.33
Env. Business Sector	-1.33	1.33	1.67	1.67	1.33	1.67	1.67
Law System	-2	-2	0	-1.67	-2	0	0
Trade Laws	0	0	0	0	0	2	0
Env. Laws	0	0	-2.33	-1.67	0	-2.33	0
Banking and Finance	1	1	1	0	1	0	-1
Macro Economic Policy	0	0	2	2	2	-2	2
Corruption	-2	-2	2	-2	0	-2	2
Crime	1.67	0	-2	0	0	1.67	0
Gov. Interv.	0	0	0	0	0	0	0
Env. Priorities	-2.33	0	0	2.33	0	-2.33	-2.33
Political Stability	-2.33	2.33	2.33	0	2.33	0	2.33
Demand for Env. Tech.	0	1.67	0	1.67	1.67	0	1.67
Major End Users	0	0	1	1	1	0	1
Major Suppliers	0	2.33	0	0	2.33	2.33	2.33
Telecom	0	2.33	2.33	0	-2.33	2.33	0
Language	2	2	0	0	0	2	2
Total							

Table Appendix 8.8: Overall results

Appendix 9 Competitors analyses

IDMT's competitors in the air sector are presented in this appendix. Information about companies active in the environmental branch is fragmented; it is impossible to find a complete overview of the entire sector. For this reason three different sources are used, namely: the environmental export portal, the Dutch Association of Suppliers of Environmental Equipment and Technology, and the Regional Environmental Centre.

Leading companies in the air sector world wide

The first table shows the leading companies in the air sector world wide. Because of the huge amount of companies active in the air sector the overview focuses on the companies who are active in the biological treatment and the desulphurisation area. DMT is active in these areas. Competitors are found with the help of the Environmental Export portal.

Company name	Description	Home country
Biological Treatments		
Lenntech Water Treatment and Air Purification	Lenntech Water Treatment and Air Purification is a manufacturer and solutions provider for industrial water purification and air treatment problems. Lenntech always offers its clients a spectrum of environmentally friendly technologies for each issue. Each proposed technology is compared both technically and economically with each other. Lenntech supplies water and air treatment systems.	Netherlands, locations all around the world
DELTA NEU	DELTA NEU designs, manufactures and sells product based solutions for industrial applications, including: ventilation to clean the working environment by collecting gaseous pollutants (fumes, steam and various emissions), dust control of industrial installations, using media for dry filtration (sleeves, cartridge, envelope, rigid) or dynamic scrubbing for wet processes and process waste	France, locations all around the world
Pure air solutions bv	Pure air solutions is designer and supplier of excellent biological air treatment systems for the removal of odour, VOC`s or sulphur compounds: sophisticated and technically perfect. The success stems from creativity, devotion and enthusiasm. The needs and expectations of the customers are the guiding principle behind the approach.	Netherlands. Also an location in England, internationally operating
Lantec	Lantec Products designs and manufactures ceramic, plastic, and metal packing used in air and water cleaning technology. Lantec's solutions for pollution control include heat recovery media in RTOs, odor control scrubbing and biotrickling filter media,, water treatment media and oil-water separation media. Lantec is renowned for its engineering expertise and technical support.	Netherlands, internationally oriented
PRD Tech, Inc	PRD Tech's specialty is in the design/build and installation of biotrickling filter system for treatment of odors and volatile organic compounds (VOCs). The applications range from municipal sewage/wastewater treatment systems to a wide spectrum of several other industrial processes and manufacturing operations. PRD Tech provides technical expertise on biological treatment processes for soil and air.	USA, no additional information found
Paques	Paques is a world-class player in the field of high-quality purification systems. Paques develops and builds high-quality purification systems for cleaning water, gases and air to ensure that industrial processes are as clean and cost-effective as possible. Paques is the leader in the field of anaerobic purification plants.	Netherlands, international oriented
EnSolve Biosystems	EnSolve Biosystems provides innovative, proprietary solutions to the maritime, industrial and consumer markets, using biotechnology. Our markets include: ships needing effective bilge water cleanup - at lower cost, industries and consumers looking for `green` surfactants and cleaners, warehouses and industrial sites needing improved air filtration, and environmental consultants searching for effective bioremediation solutions.	USA, no other locations
Bio Reaction Industries	Bio Reaction Industries (BRI) was founded to develop, manufacture and market products that biologically digest VOC's created by a variety of generators including: industry, military bases, municipalities and waste treatment facilities utilizing a	USA, no other locations

	patented biofiltration system. The company has taken an age old technology utilized in Europe for decades and transformed biofiltration into a modular, reliable, cost effective solution for not just odor control, but VOC control applications, and in some cases recycling or reducing solid wastes.	
Phoenix Bio Systems Inc	Phoenix Bio-Systems, Inc. (PBS) specializes in the development and application of biological systems for Resource Recovery. Phoenix's mission is to provide cost-effective Bio-systems for the treatment, conservation, and recycling of water, air, material and energy resources. They provide engineered systems and services to industrial, agricultural, and municipal markets. Phoenix Bio-Systems has experience and expertise in all phases of Biological Process and Biochemical Engineering.	USA, mainly operating in America
Colchester Engineering Systems	Design, manufacture and installation of noise control and ventilation systems, principally associated with the diesel generator set industry but also for other types of noise and ventilation problems. Also, environmental biotechnology applications for VOC treatments.	UK, no further information found
Clean Air Systems	Clean Air Systems, Inc. (CLASSI) will custom design, fabricate, install, supply products and service enzyme bioaerosol based odor control treatment systems at your facility and we guarantee satisfactory performance. CLASSI uses Enzymes, Biological Catalysts and Microbial Blends to create enzyme-bioaerosols for the cost effective abatement of nuisance Mal-Odors and Air Toxic Emissions.	USA, tries
Biothane	Biothane Corporation along with it`s Dutch subsidiary company, Biothane Systems International, supply highly efficient, reliable biological technologies to solve industrial wastewater treatment problems on a worldwide basis. Both companies have design-build capability to offer to the customer complete engineered turnkey, solutions while remaining flexible to support limited scope interfacing with the companies own engineer.	USA, International company, also locations in EU
Waterlink	Waterlink is an international provider of integrated water and air purification solutions for industrial and municipal customers. They serve our clients through a network of operating offices and independent sales organizations located throughout the world. They are a leading international provider of products, equipment, systems, and services relating to activated carbon and its many uses for water and air purification, solvent recovery, odor control, and chemical processing. Approximately 250 employees work from 12 operating locations in 2 countries.	USA, no further information found
Monsanto Enviro-Chem systems	Monsanto Enviro-Chem Systems is a leading expert in air pollution control technologies, specializing in gas cleaning, VOC (volatile organic compounds) abatement, odor control, and indoor oil mist collection. Every year, a growing number of companies turn to Enviro-Chem for solutions in the production of sulfuric acid and the control of industrial air pollution. For nearly 70 years we have worked with our customers to develop a design, engineering and construction organization that excels in project management and product quality.	USA, International company, also locations in EU
TASK Environmental Engineering	TASK Environmental Engineering is specialized in the realization of environmental projects, mainly for small to medium-sized companies. According to the customer`s needs we build turn-key plants, we take care of the complete renovation and/or optimization of your existing waste water treatment or air pollution/odour control plant. We also supply specific equipment, such as jet aeration systems, scrubbers, dissolved air flotation, chemical dosing units, neutralisation units, lamellar decantors, thickeners.	Belgium, no other locations
Crawford Equipment and Engineering Company	Crawford Equipment & Engineering Company manufacturers a variety of packaged combustion systems that are utilized to incinerate or oxidize various types of waste, odors and air pollutants. These systems are designed for a wide range of industrial and commercial uses, which include: animal, pathological and human cremation/incineration, medical/bio-hazardous/infectious waste incineration, general solid waste incineration, and the control of volatile organic compounds (VOC's) and hazardous air pollutants (HAPS) emitted from industrial processes.	USA, no further information found

Airx Laboratories	Airx Laboratories have been solving odor problems for over 28 years in hospitals, schools, office buildings and municipal facilities. For the odor control in waste disposal, Airx Laboratories offers the RX66 Bio-Enzymatic Odor Digester. Live, yet safe bacteria produce enzymes to digest odor causing matter.	USA, no further information found
Donau Carbon	Donau Carbon offers over 80 years of experience in plant engineering & contracting and in supply of activated carbon. DC has designed and built more than 2000 air pollution abatement systems and waste treatment plants world-wide. The portfolio comprises exhaust air, natural gas and waste gas purification, solvent recovery plants, incineration plants for solid, liquid and gaseous waste. DC supplies all kind of adsorbents, mixed powdered sorbents, filter material and related service (impregnation, replacement, sieving etc.).	Germany, international company operates globally
Rauschert Industries	Rauschert Industries, Inc. supplies a complete range of tower packings (plastic, ceramic, metal, carbon), tower internals (plastic, ceramic, metal, FRP, graphite) and mass transfer trays (metal, plastic) for packed tower equipment. These are available in a wide variety of configurations and sizes. Rauschert Industries, Inc. also supplies thermoplastic biological media as well as ceramic heat exchange media for regenerative thermal oxidizer (RTO) and regenerative catalytic oxidizer equipment. All products we sell are supported by our highly qualified staff.	USA, also has a location within Europe
Bohn Biofilter	Odor and Air Emissions Control. Soil biofilters- high efficiency, long filter life, and dependable operation. Performance guaruntees for 99% H2S removal and all nuisance odors.	USA
HOBIOFILTER SARL	Compact biofiltercontainer of 10 to 40 feet with an integrated central technique.	Switserland
Desulphurisation		
Epcon	Epcon Industrial Systems, LP serves the world`s environmental needs with innovative air pollution control systems and industrial heat processing equipment. For more than 25 years, we have provided customers worldwide with quality systems based on state-of-the-art technology. Our proximity to the Port of Houston makes international shipping from our 150,000-sq. ft. manufacturing facility easy.	USA, no further information found
TurboSonic Inc	TurboSonic Inc. provides industry with state-of-the-art air pollution control equipment and products for enhancing the performance of industrial process equipment. Our customers are meeting stringent regulations, increasing production, recovering valuable by-products, and improving community relations. TurboSonic has developed a suite of proven technologies, including: SonicKleen(TM) Wet Electrost.	Canada, international company but no locations in EU
Philadelphia Mixing Solutions	Philadelphia Mixing Solutions has earned its world-renowned reputation by providing solutions to the mixing industry that reduce maintenance costs, improve operating efficiency, and eliminate unplanned downtime. Recognized as the leader in optimizing your wastewater and aeration mixing applications, the company proves their efficient mixing solutions through unmatched application knowledge.	USA, no further information found
GAS Technology	Gas Technology Products Division of MCRS has a complete portfolio of hydrogen sulfide (H2S) removal products and processes, liquid or solid media, disposable or regenerable catalyst systems, for aerobic or anaerobic gas streams, to sweeten gas streams containing any concentration and amount of H2S. GTP's H2S removal solutions are applicable to all types of gas streams, including refinery fuel gas.	USA, International company, also locations in EU
Tecnia	TECNIA is an Integration Engineering Company, providing solutions from starting projects and studies, to turn-key plants in several environmental fields, from water and wastewater facilities, sludge and waste solids handling and treatment, gases and air cleaning, industrial equipment and processes and plant automation and control. Environmental processes for water, wastewater treatment, air and gas.	Portugal, operates internationally
WOW Energies	WOW Energies offers energy efficiency and pollution reduction technologies. The Company owns the patented technology called the Cascading Closed Loop Cycle (`CCLC`), a breakthrough in energy efficiency that generates electricity from nearly any heat source, including the waste heat that is exhausted into the	USA, no information found

	atmosphere by almost every industry that consumes fuel.	
Babcock-Hitachi Europe GmbH	BHE products are based on a track record going back over 100 years in power plant engineering. As a result, their customers' investments rest on a long-term assured technical foundation. The range of products for gas cleaning for power plants comprises the complete gas cleaning including flue gas desulfurization systems (FGD) and NOx control systems (DeNOx). These systems are installed downstream of steam generators fired with fossil fuels such as hard coal, brown coal, oil and Orimulsion.	Germany, operates internationally
Chemoprojekt	Chemoprojekt, a. s. is Czech Design, Engineering and Contracting company, which has been operating since its foundation in 1950 as a leading supplier for the organic and inorganic chemistry sector, petrochemistry, crude oil refining, natural gas processing, pulp and paper production, power generation and environmental protection. Through direct cooperation in environmental protection programs with Czech Utility Companies, Chemoprojekt, a.s. participated in engineering, construction and procurement of many Desulphurization Units, Precipitators and Fly Ash handling projects.	Czech Republic
CANSOLV	Cansolv Technologies Inc. (CTI) offers solutions for reducing stationary source air pollution. The CANSOLV® SO2 Scrubbing System is our core commercial product. It is presently the world's leading regenerable SO2 control technology. CTI is currently developing new technologies for NOx and CO2 control. The AquaNOX process is currently in the development phase with field pilot testing. Furthermore, we have used our considerable SO2 scrubbing experience to develop a CO2 capture process that promises low cost.	Canada, International company, also locations in EU
Ducon	Today, Ducon`s complete line of air pollution control equipment is used to remove particulate, flyash, sulfur dioxide, hydrogen sulfide, hydrogen chloride, Dioxins, Mercury, odors, VOC`s, submicron particles, fumes,	USA, International company, also locations in EU

Table Appendix 9.1: Leading companies in the air sector world wide

Another source is the IFAT; the international trade fair for environment, waste water and waste disposal: water, sewage, refuse and recycling. The following companies operate in the same area as DMT.

Company name	Description	Home country
ATZ Evus	ATZ is an independent research institution located in Sulzbach-Rosenberg. They develop innovative concepts for decentralized energy production from biomass and waste and on solutions for wear and corrosion problems in conversion systems for these materials	Germany
BEKA Baier + Köppel GmbH +Co.	Biological system for the treatment of waste air, exhaust gas, sewage and waste. As well suitable for disinfection, disinsection and air condition technology. Development of application-specific solutions, which proof their efficiency by sensor and analysis techniques directly at the customer's site.	Germany, International operating
Bilfinger Berger Umwelt GmbH	Bilfinger Berger AG focuses on preventing or eliminate environmental damage rapidly and enduringly, without losing sight of the costs. By so doing they are able to safeguard the fundamental elements of life and economic prosperity for future generations	Germany
Bioscience Europe B.V.	Fornix BioSciences is a biotechnology company involved in the development, manufacturing and marketing of Biopharmaceuticals and related products.	Netherlands
Donau Carbon GmbH & Co. KG	Consulting, engineering and delivery of exhaust air, process gas and waste gas purification plants, plants for solvent recovery as well as incineration plants for solid, liquid and gaseous waste	Multinational company
Ekolution	Histosol OP-Bio 10 is a ready-to-use liquid bacterial formulation specifically designed to provide improved waste degradation and control odours for residential, municipal, and heavy industrial wastewater applications with high Biological Oxygen Dema	Netherlands
Fuchs Gas- und Wassertechnik GmbH	**FUCHS offers a wide spectrum of effective odour control technologies for application on wastewater treatment plants and other facilities.**	Germany
HAASE Energietechnik	HAASE cogeneration plants (CHP plants) generate electricity and	Germany, but

AG	heat from alternative sources of energy - i.e. biogas, landfill gas, sludge gas - or from natural gas. In Germany and abroad, we have many clients among landfill operators, electric utility companies, industrial enterprises, residential parks, and industrial parks.	operating internationally
Lantec Products	Lantec Products designs and manufactures ceramic, plastic, and metal packing used in air and water cleaning technology. Lantec's solutions for pollution control include heat recovery media in RTOs, odor control scrubbing and biotrickling filter media, water treatment media and oil-water separation media. Lantec is renowned for its engineering expertise and technical support.	Netherlands
Likusta Umwelttechnik GmbH	They have been engaged in environmental technology as manufacturers of facilities and apparatuses for treatment of water / waste water as well as exhaust air purification Operates in the fields of: Environmental technology, operating technics, utilities engineering, manufacturing technics and electrical engineering.	Germany
Paques B.V.	For more than fifteen years Paques has developed and produced high-quality, cost-effective purification systems for water, gases and air, using innovative biotechnology. Our aim is to provide solutions to industrial problems with our extensive range of purification techniques. The added value of the treatment process is most important, such as the re-use of water, the generation of energy by the conversion of residual organic compounds and the reclamation of valuable substances from the waste water. This way, we bridge the gap between environmental responsibility and economic progress.	Netherlands, operating internationally
Tholander Abfulttechnik GmbH	THOLANDER offers solutions for almost every off-gas problem. They have experience in the treatment of waste gases from: Food processing, tobacco processing, waste water and sludge treatment, waste management, circuit board production, tanneries	Germany
Up to date Umwelttechnik AG Waterleau	Waste air treatment and odor control using cold plasma technology (patented world-wide). We are specialised in the treatment of waste air with relatively low concentration of pollutants and offer several processes	Switserland
Wessel- Unwelttechnik GmbH	The company focuses on exhaust air purification and water treatment. They offer turn-key systems to solve a wide variety of environmental protection problems.	Germany

Table Appendix 9.2: Leading companies in the air sector world wide2

Leading companies in the air sector in The Netherlands

The second table shows the leading companies in the air sector in The Netherlands. Information is found with the help of the Dutch Association of Suppliers of Environmental Equipment and Technology

Company	Description
AEROX B.V.	AEROX B.V. offers innovative products for industrial odour control. As a turn-key supplier and producer of high-quality technology, with worldwide exports, the goal of the company is to supply it's customers with the 'Best Available Technology' for odour control. AEROX invests in Research and Development to set the benchmark for the market, both now and in the future. AEROX is focused on environmental positive applications for industrial odour control.
Askové Milieutechniek B.V	Askové, since 1965 the name Askové has been synonymous with high performance thermoplastic process equipment and turn-key solutions in a wide range of applications: chemical industry, electroplating, food and beverage sector, semiconductors, microelectronics, medical and pharmaceutical industry, environmental processes, waste (water) treatment, air pollution control, odor abatement
Kiekens	Kiekens products B.V. is a machine-factory, established in 1907, and specialised in air and environmental technology. Kiekens Products is manufacturer of industrial vacuum cleaners, modular dust extraction installations and industrial fans in accordance with filtration standards and complying with the most recent environmental and safety requirements, as well as provider of maintenance and service. Kiekens Products, an international operating organisation with an extensive sales and service network, supplies to all branches of industry, service industry and the agricultural sector. Although based on serial production, Kiekens can supply a customer specific solution for every (dust) problem, because of the unique modular concept and at the same time maintain an optimal relation between price and performance
KWB bv	KWB b.v. focuses on water treatment in swimming pools, air pollution control and odor abatement, etc
Leijco	Leijco is an environment technical advisery agency. Specialties are emission of VOS, air

	pollution control, odor abatement.
CAP Engineering B.V.	More than 25 years of experience in designing manufacturing and installing of air pollution control systems and special manufacturing equipment. Products are: wet air pollution control systems: gas-absorption scrubbers venturi scrubbers ejectorscrubbers, HEAF high efficiency air filtration systems for filtration of (sticky) aerosols, incinerators for thermal oxidation of waste gases, dedusting systems, coolers, demisters, cleaning lines galvanizing lines and penetrating lines, drying systems, filters, vessels and tanks, extract systems, glove boxes
Optimum	OPTIMUM Environmental & Energy Technologies b.v. is an engineering contracting company, specialised in: industrial air and flue gas purification systems, supply of catalyst for air pollution control, small scale waste and biomass incineration plants, waste heat recovery plants, innovative boiler solutions.
Paques	For more than fifteen years Paques has developed and produced high-quality, cost-effective purification systems for water, gases and air, using innovative biotechnology. Our aim is to provide solutions to industrial problems with our extensive range of purification techniques. The added value of the treatment process is most important, such as the re-use of water, the generation of energy by the conversion of residual organic compounds and the reclamation of valuable substances from the waste water. This way, we bridge the gap between environmental responsibility and economic progress.
Polacel	Since 1975 Polacel BV has designed and constructed equipment for heat and mass transfer. During these 25 years Polacel has become leader in the Benelux-market for evaporative cooling towers. Besides the building of cooling towers, Polacel is manufacturer of equipment for gas absorption for the industrial market
Pure Air Sollutions	Pure Air Solutions is a European company specialised in biological air purification, with a unique position in the market. Built on 15 years of experience, we offer proven, state of the art solutions for the treatment of odour and VOC emissions. Pure Air Solutions: develops, designs and installs biological air treatment systems, offers maintenance and service programs for technical, environmental installations, gives advice and support on technical environmental issues, refills and offers solutions to optimise existing bio-installations, provides biological support mediums for new and existing biofilters.
Dahlman Filtertechnology	Dahlman Filtertechnology develops produces and sells complete filter systems for treatment of: intake air for gas turbines and compressors, process air for installations in the chemical and petrochemical industries having to meet strict emission limits, liquids and gasses for the chemical and petrochemical industries as well as the pharmaceutical and food industries, Modern well equipped offices and approximately 10.000 m2 of production facilities house some 100 employees directly connected with the development engineering sales and production of filter systems.
Uniqfill Air B.V.	Uniqfill Air BV is an independent subsidiary of Uniqfill International BV, which focuses on the use of advanced technology for the removal of environmental pollutants - in particular alkaline and acid compounds such as chlorine, ammonia, fluorine and hydrocarbons - from contaminated air and liquids.
Ventilex	Filter systems for example flue gas purification provided with auxiliary equipment combined with heat exchangers and CO-combustion.

Table Appendix 9.3: Leading companies in the air sector in The Netherlands

Leading companies in the air sector active in Slovenia

The third table provides information about companies active in Slovenia in the environmental branch. Information is found with the help of the Research Environmental Centre.

Company name	Description	Home country
AE & E	Desulphurization technology, Complete service	Austria
MLU Vienna	Monitoring equipment, Complete service	Austria
Airmotec	Automatic measurement instrumentation, High product quality	Switzerland
Rotronic	Humidity detectors, Good quality	Switzerland
ANSYCO, Karlsruhe	On-line measurement instrumentation, Only producer of portable IR spectrometers	Germany
Bayer Diagnostic, Munchen	Flue gas monitoring equipment, High product quality	Germany
Bernath Atomic	Portable equipment for TOC measurement,	Germany
Drager	Air sampling, Complete service	Germany
ENVTEC	O_2 detectors, Leading producers	Germany
H & B	Gas-emission measurement, Long tradition	Germany
Hartman & Braun	Flue gas monitoring equipment, High product quality	Germany
SICK	Dust-emission measurement,	Germany
Siemens	Gas-emission measurement, Complete service	Germany
TESTO	Emission measurement, Complete service	Germany
Koch Albano	Flue gas scrubbers, High product quality	Italy
Kipp & Zowen	Solar flux detectors, Good quality	Netherlands

Hewlett Packard	Analytical instrumentation, Good product quality and complete service	United States
Setra	Atmospheric pressure detectors, Good quality	United States

Table Appendix 9.4: Leading companies in the air sector active in Slovenia