

Quality of Processes in Collis

Master thesis of Mark van Beek

Author	Mark van Beek (Collis)
Version	1.0
Date	30-10-2012
Status	Final

Document data

Project Owner	Mark van Beek
Project Manager	Mark van Beek
Project Code	N.A.
Document Title	Quality of Processes in Collis, Subtitle (in doc properties)
File Name	Afstudeerverslag
Archive Name	
Key Words	
Status	Draft
Distribution	Collis BoD, Collis QM, UTwente

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Version history

Version	Date	Status	Author
1.0	30-10-2012	Final	Mark van Beek

Change history

Version	Date	Changes

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MANAGEMENT SUMMARY

The internal audit performed within Collis (against the quality standards as described in ISO 9001:2008) has revealed that the quality of the management processes within Collis are overall in line with ISO 9001:2008.

The 'paper' processes within Collis are for a large part in line with the contents of ISO 9001:2008, with the exception of a regular check on so-called 'critical suppliers'. For this, a new process has been defined that describes a quarterly check on the performance of these suppliers, performed by the respective 'corporate account managers' within Collis. This is a new quality process, and is checked for correct execution by the Quality Manager.

Next to this, the execution of the described Collis processes has been checked, for the corporate processes, I found that three (parts) of processes are not performed to the described standards, alternations have been made / the processes have been adjusted to close the gap between organizational practice and the described organizational procedures. In the described Collis generic processes, six non-conformities have been found. These have also been addressed in the same way as the corporate processes.

ISO 9001:2008 follows a PDCA-cycle, which is the basis for a continuously improving management system. As a part of this PDCA-cycle, we also look at all the findings from previous years, and see if they have received proper follow-up or if they are still relevant. One point remained open, and has been included in the improvement process after the internal / external audit.

Next to this, for the future scope of audits within Collis, we advise to take a more focused approach, where the internal auditor places special focus on one or two departments / business functions and explores in-depth the current state of quality. This is opposite to the current way of auditing where the total management system is audited, but not in-depth.

1 INTRODUCTION TO THESIS

This thesis is written by Mark van Beek, as the closing chapter of my study Business Administration at the University of Twente. For this thesis I have done an internship at Collis BV, a Dutch company situated in Leiden that specializes in 'secure transaction technology'. During my internship, my main task has been to perform an internal audit against the standards of ISO 9001:2008. This is an international standard that describes a best practice for quality in management processes.

I start with a description of the company, and the business problem. This is followed by an introduction to the performed internal audit, an introduction to the ISO organization, and an introduction to ISO 9001:2008. Following, the methods of auditing, the actual auditing as well as the results and the follow-up of the audit are discussed. We conclude with directions for the audit in the coming years.

2 INTRODUCTION COLLIS BV

2.1 About Collis BV

Collis BV (founded in 1997 in Leiden, the Netherlands) is a market leader in secure transfer technology. Collis offers consulting services, training courses and test tools for the payment, government, transport and mobile markets. Collis operates in four markets, these are; Payments, e-Ticketing, Mobile / NFC, and ID Management. Their head office is located in Leiden, The Netherlands. Collis is however a global oriented company and has subsidiaries in Singapore, Minneapolis, Paris, Dubai, Great Britain, Turkey, and Helsinki. For every market and service or product, the core of the offering from Collis is 'Secure Transaction Expertise'.



Figure 1: Collis Competence Wheel 2011(website Collis)

The area of interest for this master thesis is exclusively Collis BV Leiden, and not the worldwide subsidiaries. Also, as will be further discussed in this thesis, the focus lies on the management processes within Collis BV Leiden (which is where most management activities and all top-management activities take place), and therefore transcends the different business units, products or services and markets.

2.2 Business problem Collis BV

Collis BV is ISO 9001:2008 certified, and has been ISO 9001 certified since 2003. ISO 9001:2008 is an international standard for general quality management (source: <http://www.nen.nl/web/ISO-9001-2.htm>), and is instituted by the International Organization for Standardization (ISO). The ISO organization is a network of international standards institutes in 163 countries, with one member per country, and is situated in Geneva, Switzerland.

Collis BV wishes to remain ISO 9001 certified in the future, and in order to remain certified, a tri-annual audit has to be performed by an external auditor. During this audit, the (management) processes of Collis are being examined whether they meet the prescribed standards in ISO 9001. This external audit usually takes place in June or July at Collis, and is being performed by a certified ISO-controller from DNV (Det Norske Veritas). During this audit, all processes that are not (entirely) up to ISO 9001 standards are reported as 'findings', which will later be given a priority status (high vs. low priority).

Before the external audit, Collis performs an internal audit. This internal audit is being performed under the supervision of the quality manager at Collis. The goal of this internal audit is to prepare Collis for the external audit, by comparing the processes of Collis with documented working procedures and the ISO 9001:2008 norm, and taking corrective actions if necessary before the external audit.

The design, execution, analysis plus reporting of findings, and the implementation of corrective measures for the 2012 internal audit of ISO 9001:2008 is the business problem Collis has asked me to take responsibility for.

2.3 Recent developments and future goals of Collis

Collis BV is a successful company in the market domain, which is demonstrated by a growth in revenue and profitability every year, for the last ten years. Given that Collis is a consultancy firm where consultant are paid per hour work performed for a client, the growth in revenue implies that there is also a growth in the number of consultants. A clear demonstration of this is the fact that for 2012, 90 new employees are being sought by Collis. In the first four months of 2012, 23 new employees have already started working at Collis. On a current total of around 200 employees, this means that Collis is a rapidly growing company.

Another major recent development within Collis is that they have been acquired by the American company UL (United Laborites). The announcement of this acquisition was made on the second of April this year; the integration of Collis and UL has not yet started. UL has announced to the employees of Collis that they are striving for 'light touch' integration. What this means has however not been fully explicated.

For the coming two to three years at least, the growth of revenue and company size is expected to continue. The two main drivers for this expectation are 1) the market potential still untouched by Collis, and 2) the new direct links to companies within the UL family, some of which are potential customers for Collis in the near future.

The expected growth in company size and the upcoming integration of Collis into the UL family are two telltales that Collis BV needs to critically assess whether 1) their current operations and management system function at this moment (due to the rapid growth of the recent past), and 2) will continue to function in the future to ensure a healthy and durable growth in the future.

3 STRUCTURE OF DOCUMENT

3.1 Major outline

My work for Collis has been to prepare and conduct an internal audit to assess whether the current management processes at Collis meet the standards as described in ISO 9001.

This means that in the first part of the thesis, the trajectory of the audit for recertification of ISO9001:2008 will be described, explained, and discussed. In the second part of the thesis, I will describe the follow-up of the internal audit.

3.1.1 Scope and goal of my Master Thesis

The original scope for my Master thesis was to investigate how ISO9001 (quality of management processes) and ISO27001 (a standard for information security) relate to each other, what their common ground is, if there are contradictory elements and how these ISO's can best be implemented and controlled for simultaneously. ISO 27001 prescribes what requirements an organization must have in place to ensure information security. Information security is seen here as the confidentiality, integrity, and availability of information at (in this instance) Collis. The ISO27001 project has covered the majority of my day-to-day activities at Collis after the first two months at Collis (the first two months I have been working on ISO9001). Although ISO27001 is extremely interesting and relevant for an organization such as Collis, we exclude it from the scope of this master thesis.

3.1.2 Reasons for altering the scope of my Master Thesis

The implementation and successful accreditation of ISO27001 was originally planned to take place before the end of August. Because of internal developments at Collis this has been shifted to February 2013. The goal for my Master thesis completion was in September 2012. This would mean a gap of six months between my aspired graduation date and the certification of ISO27001.

ISO9001:2008 INTERNAL AUDIT

What is the current quality of the management processes at Collis BV?

4 INTRODUCTION TO INTERNAL AUDIT

This first part of the research conducted for this Master Thesis focuses on the current quality of the management processes in place at Collis. Management processes are those processes of planning, implementing, and controlling activities that involve human, financial, and material resources. These processes are mapped and documented within Collis in compliance with the ISO9001:2008 standard.

For assessing the current quality of management processes, we use the Collis Documented Working Processes and the quality standards as described in the ISO9001:2008 guideline. The assessment of the quality of the management processes has been evaluated twice at Collis. First, an internal audit has been performed (by myself). Second, an external audit was performed by DNV as part of the official recertification process for ISO9001:2008. The results of the external audit will be described after my conclusions of the current quality of the management processes at Collis.

5 INTRODUCTION TO ISO STANDARDS

5.1 The International Organization for Standardization

In 1946, delegates from 25 countries met at the Institute of Civil Engineers in London and decided to create a new international organization 'to facilitate the international coordination and unification of industrial standards'. (Text copied from <http://www.iso.org/iso/home/about.htm>).

The International Organization for Standardization) is a worldwide developer of voluntary international standards. In 2012, ISO has developed and published more than 19.000 international standards. ISO9001 is one of these standards. These standards cover almost all aspects of technology and business. The International standards created by ISO give specifications for products, services, and good practice. The aim of ISO is to make industry more efficient and effective, and also break down barriers to international trade (<http://www.iso.org/iso/home/about.htm>).

5.2 Introduction to ISO 9001:2008

ISO9001:2008 focuses on general quality management (*source: <http://www.nen.nl/web/ISO-9001-2.htm>*). The conception of this international standard for general quality management took place in 1979, when a so-called 'technical committee' was approved by the ISO-organization. This technical committee consisted of twenty active member countries (P-members), and fourteen countries opted to follow the work as observers (O-members). In 1987 the committee published its first standards (*source: http://www.iso.org/iso/iso_catalogue/management_standards/quality_management/origins_and_iso_tc176.htm*).

The latest version of the ISO9001 has been published in 2008 (hence the name, ISO9001:2008). It consists of standards and guidelines relating to quality management systems and related supporting activities. It provides a set of standardized requirements for a

quality management system, regardless of what the user organization does, its size, or whether it is in the private, or public sector. (source: http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/quality_management/iso_9000_essentials.html). The ISO is applicable for all types of organizations, globally. ISO manages this broad applicability by laying down what requirements a quality system must meet, but does not dictate how they should be met in any particular organization.

The International Organization for Standardization (ISO) has indicated eight quality management principles on which the quality management system standards of the ISO9001:2008 are based. These principles are derived from the collective experience and knowledge of the international experts who participate in the ISO Technical Committee for ISO9001 (ISO/TC 176, Quality management and quality assurance); and can be used as a framework to guide the organization towards improving performance. (source: http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/quality_management/qmp.htm).

The eight principles are:

- 1) Customer focus
- 2) Leadership
- 3) Involvement of people
- 4) Process approach
- 5) System approach to management
- 6) Continual improvement
- 7) Factual approach to decision making
- 8) Mutually beneficial supplier relations

The formal requirements that are stated in ISO9001:2008 all originate from one or more of the abovementioned principles.

5.3 Two examples of ISO 9001:2008 requirements

To give a good impression of how to implement ISO9001:2008, I will give two examples of the actual implementation of ISO9001 currently in place at Collis. First we will look at two formal requirements that have to be met in the quality management system by Collis according to the official norm (this ISO 9001:2008 requirements that are dictated in the ISO 900:2008 norm), and then we take a look at how these requirements are met / covered in the organization. Just describing a process (the process following from a requirement by the ISO 9001:2008 norms) does not make Collis ISO 9001:2008 compliant, for the processes also need to be executed and managed appropriately. Establishing and documenting these processes is however the basis for becoming ISO 9001:2008 compliant.

5.3.1 Example 1 – Customer satisfaction

ISO9001:2008 requirement as stated by ISO.

<u>Subject:</u>	Monitoring and measuring – <i>Customer satisfaction</i>
<u>Requirement:</u>	‘One of the performance measures of the quality management system is the monitoring of clients’ perception of the performance of your organization. The methods for obtaining and using this information need to be defined.’

Collis process that covers the formal requirement from ISO

On the next page, the process that ensures that evaluations (this is the tool chosen for monitoring and measuring, see subject above) are performed within Collis is stated. This is the formal process currently in place at Collis that describes the procedure, and the decisions that are made that result in the performing of client evaluations.

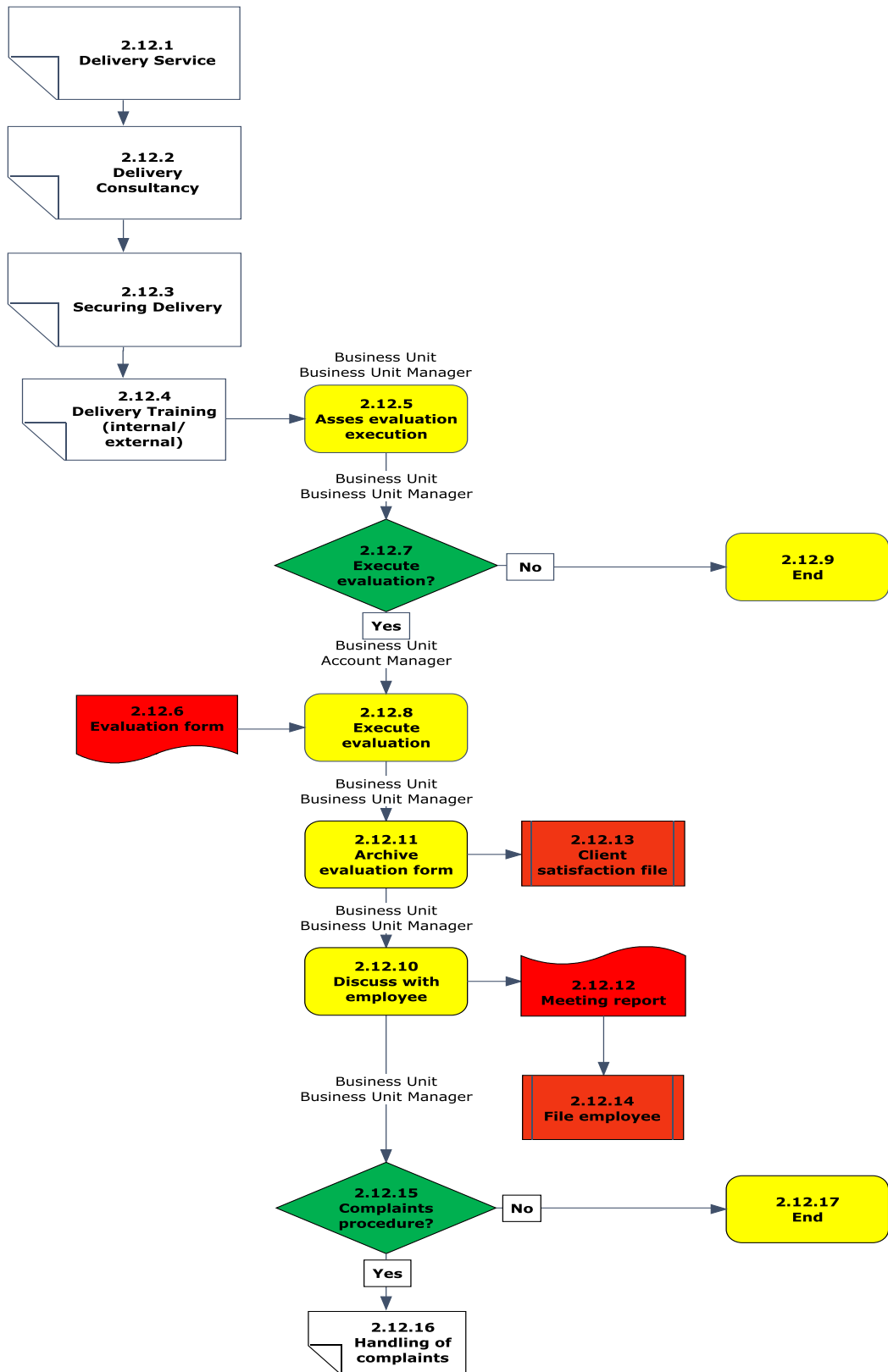


Figure 2: Closure

5.3.2 Example 2 – Quality control

ISO 9001:2008 requirement as stated by ISO:

Subject: Documentation requirements – *General Requirements*
Requirement: ‘The documentation of the quality management system must contain: a) a documented statement of the quality policy and quality goals, b) a quality handbook, and c) documented procedures and registrations necessary for this international norm.’

Collis processes that covers the formal requirement from ISO

For the above requirement, Collis has instated two formal processes. The first focuses on compliance of the quality system; and the second on the maintenance of the quality system. The aim of both procedures is (among other goals such as to measure compliance to quality standards) to maintain the quality documentation and update where necessary

1. Quality system – Compliance

Formal process Collis (1):

This process focuses on the compliance of the working method at Collis for the different processes as described in the Collis process manual.

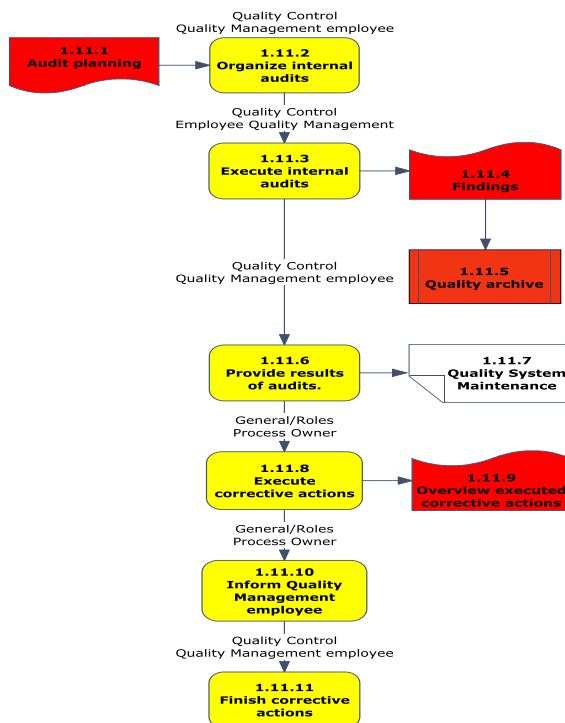
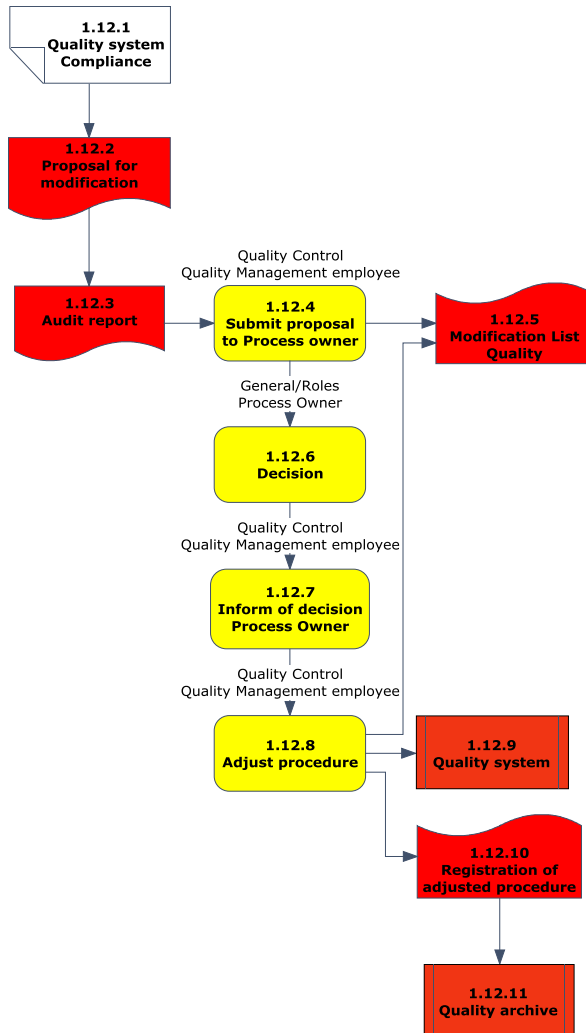


Figure 3: Quality System - compliance

2. Quality system – Maintenance



Formal process Collis (2):

This process focuses on the maintenance of the working method at Collis for the different processes as described in the Collis process manual.

Figure 4: Quality system - Maintenance

Other ISO9001:2008 requirements

The two examples of ISO9001 norms given above and the way that Collis has implemented and formalized processes to meet the requirements as stated in ISO9001:2008 give a representative impression of how the various norms stated in ISO9001:2008 are covered by Collis.

6 INTERNAL AUDIT FOR ISO 9001:2008

6.1 Performing the Internal Audit

The internal audit is performed under the supervision of the quality manager at Collis. The goal of the internal audit is to make an assessment of the current quality of the management processes in place at Collis. The quality manager is responsible for the quality of these processes, and compliance to ISO 9001:2008 is one of the major responsibilities of the quality manager. The results of the internal audit are used to improve the quality of the processes; this is also the responsibility of the quality manager. The norm of ISO 9001:2008 is leading in assessing the quality of the Collis Documented Working Processes. Compliance to the norm does not only mean incorporating the ISO 9001:2008 norms into the documented working procedures, but also ensuring that these processes are followed in the day-to-day operations.

6.2 What has been audited?

The internal audit was prepared using three different quality-assessment approaches, each of which represents a different scope for assessing the quality of Collis procedures, ensuring a thorough examination of the quality of these procedures. The procedures are:

- Sanity check on ISO 9001:2008 norm and the Collis Documented Working Procedures; are all of the norms stated in ISO 9001:2008 reflected in the documented Collis working procedures?
- Audit on Collis ISO 9001:2008 processes - Does the way of working within Collis reflect the documented working procedures?
- What areas need to be given special attention due to findings from previous audits (external audit from last three years and the internal audit performed in 2011)?

Using these three angles, the 'to-check' list for the internal audit has been composed.

6.3 Scope of the internal audit

The internal audit will cover every key management process within Collis. These processes can be divided in 'corporate' and 'generic' processes. The corporate processes are the processes at top-management or at staff level, and not directly related to the output of the organization. The generic processes are related to the primary output of Collis, the employees of Collis and also cover the alignment processes of Collis to adapt to and prepare for the future. Below is a list of all the corporate and generic processes identified within Collis. Note: this distinction between corporate and generic processes is not prescribed by the ISO 9001:2008 norm, but is the result of a choice Collis management has made.

1	Corporate Processes Collis BV
1.1	Year Plan (05-07-2011)
1.2	Delivery Management Information (05-07-2011)
1.3	Evaluate / edit Management Information (05-07-2011)
1.4	Purchase and payment (05-07-2011)
1.5	Invoicing (05-07-2011)
1.6	Salary processing (05-07-2011)
1.7	Debtors Management (05-07-2011)
1.8	System Administration - Corporate (05-07-2011)
1.9	Evaluate System Administration
1.10	Time registration (05-07-2011)
1.11	Quality System – Compliance (05-07-2011)
1.12	Quality System - Maintenance (05-07-2011)
2	Generic Processes Collis
2.1	Marketing (including PR) (05-07-2011)
2.2	Quotation/Contract (05-07-2011)
2.3	Delivery Standard Products (05-07-2011)
2.4	Delivery Customized Projects (01-06-2012)
2.5	Delivery Service (05-07-2011)
2.6	Delivery Consultancy (05-07-2011)
2.7	Delivery FAS-TC Services (05-07-2011)
2.8	Delivery training (internal/external) (05-07-2011)
2.9	Delivery releases (05-07-2011)
2.10	Resource Allocation (05-07-2011)
2.11	Securing Delivery (05-07-2011)
2.12	Closure (05-07-2011)
2.13	Innovation for products and services (01-06-2012)
2.14	Contracts employee (05-07-2011)
2.15	Employee development (05-07-2011)
2.16	Employee leaving company (01-06-2012)
2.17	Handling of complaints (05-07-2011)
2.18	Corrective measures (05-07-2011)
2.19	Preventive measures (01-06-2012)

The above mentioned scope is broad enough to examine the quality of the current processes at Collis; it covers all the aspects of the ISO 9001:2008 norm. Quality is seen here as the degree to which the eight quality principles described earlier are covered in current operations. This means that the ISO 9001 standard and the internal audit performed to assess whether the current operations meet those standards can be compared to taking a picture of an object, and assessing the quality of the object (using the picture) to predefined guidelines, derived from best practices.

6.4 How was auditing done?

The actual auditing was done using different techniques, which were dependent on the process audited. These techniques consisted of:

- Interviews with employees; often existing of an assessment of whether or not they were able to give me information and explanations on processes that they are supposed to have knowledge of.
- Administrative samples; for some processes information has to be stored and kept available. Was this information available, complete and correct?
- Checking procedures with employees; asking employees how they perform their work, and comparing this with the documented procedures.

6.5 When was auditing done?

The auditing took place in the second week of May, and has taken one week to finish. After that, the process of completing the internal audit findings, report, and follow-up actions has taken one month.

7 CONDUCTING THE INTERNAL AUDIT

7.1 Step 1 – The ISO9001:2008 norm

The first step of the internal audit was to study the official ISO9001:2008 norm and get a clear picture of what all the demands / requirements concerning quality of management processes are, as described in the norm. The result of this step was a document that stated all the requirements and demands that Collis has in order to meet the minimum quality demands as stated in the ISO-norm. This document has been the basis for performing the internal audit.

7.2 Step 2 – Comparison of norm versus Collis Documented Working Procedures

I have compared the document from step 1 (the list of demands / requirements Collis has to meet to comply with the ISO-norms) to the written-down processes of Collis as described in the Collis Documented Working Procedures. These working procedures are a first requirement of the ISO9001:2008 compliance, as the core processes of Collis need to be documented and available companywide.

A first check to see whether or not Collis is compliant with the norms of ISO9001:2008 is to check if their documented working procedures cover all the demands / requirements that are stated in the official norm.

This process has taken two full days to complete, and has been done as follows; for every demand that was identified in step 1 of the internal audit, I checked whether I could find a documented process that ensured that the demand was fulfilled / covered.

The result of the analysis, which is the basis for further research during the internal audit are as follows (I have only presented the findings that showed non-conformity):

Findings from comparing Collis Procedures with the ISO9001:2008-standard

#	ISO-Norm	Finding	Who?	How to find out current procedures
1	4.2.2 A --> de organisatie moet een kwaliteitshandboek opzetten en bijhouden, waarin het onderwerp en toepassingbeid van het kwaliteitsmanagementsysteem met inbegrip van de bijzonderheden van en rechtvaardiging voor eventuele uitsluitingen.	Er zijn geen vermeldingen naar de genoemde bijzonderheden en rechtvaardigingen voor uitsluitingen.	Everyone	To be found out by interviewing different managers
2	4.2.4 D, E, F en G --> Er moet een gedocumenteerde procedure worden vastgesteld om te definiëren welke beheersmaatregelen nodig zijn om:			
d)	te bewerkstelligen dat voor van toepassing zijnde documenten relevante versies beschikbaar zijn op werkplekken;	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteits-verantwoordelijke
e)	te bewerkstelligen dat documenten leesbaar en gemakkelijk herkenbaar blijven;	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteits-verantwoordelijke
f)	te bewerkstelligen dat documenten van externe oorsprong waarvan de organisatie heeft bepaald dat ze nodig zijn voor de planning en uitvoering van het kwaliteitsmanagementsysteem, worden geïdentificeerd en de distributie ervan wordt beheerst	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteits-verantwoordelijke
g)	onbedoeld gebruik van vervallen documenten te voorkomen, en geschikte identificatie toe te passen als ze om welke reden dan ook worden bewaard.	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteits-verantwoordelijke
3	5.5.2 --> De directie moet een lid van het management van de organisatie benoemen dat, ongeacht overige verantwoordelijkheden, de verantwoordelijkheid en bevoegdheid moet hebben om:			
a)	Te bewerkstelligen dat processen die nodig zijn voor het kwaliteitsmanagementsysteem zijn vastgesteld, ingevoerd en worden onderhouden;	In de beschreven processen van Collis is dit niet terug te vinden	CEO	Ask CEO
b)	Te rapporteren aan de directie over de prestaties van het kwaliteitsmanagementsysteem en eventuele noodzaak voor verbetering	In de beschreven processen van Collis is dit niet terug te vinden	CEO	Ask CEO
c)	Te bewerkstelligen dat het bewustzijn van de eisen van klanten binnen de gehele organisatie wordt bevorderd	In de beschreven processen van Collis is dit niet terug te vinden	CEO	Ask CEO

- 6.2.1 --> *Personeel dat werkzaamheden uitvoert die van invloed kunnen zijn op het voldoen aan*
- 4** *producteisen, moet bekwaam zijn, gebaseerd op passende opleiding, training, vaardigheden en ervaring.*
- 7.4.2 --> *Inkoopgegevens moeten het in te kopen product beschrijven. En De organisatie moet de*
- 5** *geschiktheid van gespecificeerde inkoop-eisen bewerkstelligen alvorens deze kenbaar te maken aan de leverancier.*
- | | | | | |
|----|---|--------------------------------|-----|-----------------|
| a) | Eisen voor goedkeuring van het product, procedures, processen en uitrusting | Processen zijn niet beschreven | ROY | Ask BU-Managers |
| b) | Eisen voor kwalificatie van personeel; | Processen zijn niet beschreven | ROY | Ask BU-Managers |
| c) | Eisen vanuit het kwaliteitsmanagementsysteem. | Processen zijn niet beschreven | ROY | Ask BU-Managers |
- Niet direct een proces kunnen vinden, tenzij dit proces 2,14,3 is. MELISSA Ask HRM how this is done

An issue when composing this list was that the demands / requirements stated in the norm are on the whole quite vague and could often be explained in multiple ways. To counter this problem, I decided to categorize the demands / requirements for ISO9001:2008 into three categories, being;

- 1) This requirement has been met, see process / activity X
- 2) This requirement has been met if process / activity X or Y corresponds with this requirement
- 3) This requirement has not been met after conducting an initial comparison between the norm and the documented Collis working procedures.

The first category findings needed no further investigation, and these processes were reported to meet the quality criteria of ISO9001:2008 on paper. The second and third category findings required extra attention. The goal was to find out whether the requirements were indeed covered by the Collis documented working procedures, or if the documented working procedures did not fully meet the required quality standards.

The analysis showed that the majority of the requirements stated in ISO9001:2008 were covered in the Collis documented working procedures. These required no further investigation. I had identified four requirements that could or could not have been met by the Collis documented working procedures depending on interpretation of 1) the norm, or 2) the documented working procedures, and one norm stated by ISO that was not covered in the documented working procedures.

The first step of follow-up consisted of an interview with the Quality Manager at Collis, Erwin Jansen. The quality manager is supposed to possess extensive knowledge of the company's procedures, which he uses to improve ISO9001:2008 compliance. For the second category findings (requirements that were indeed met if process / activity X or Y corresponded with this requirement), I asked Erwin to give his opinion on whether the requirements of ISO were indeed met by the documented working procedures. He indicated that in all five cases where compliance could be seen as dubious, Collis indeed was compliant to the norm. Satisfactory

explanations and / or clarifications were presented to me, and the four dubious cases of compliance to the official norm were reported as being met in the documented working procedures in the report of the internal audit.

The four points of dubious compliance in the documented working procedures have not been altered or clarified to avoid any future confusion during internal or extra audits. This may seem a strange choice, but has a clear rationale. The documented working procedures are derived from the way that work was being done at Collis, with as little alteration from this way of working as possible. When documented properly, in 9 out of 10 cases the existing way of working was compliant with ISO-norms during the first certification for ISO9001:2000 (which is the predecessor of ISO9001:2008) in 2003. The aim is to model the Collis working procedures to the actual way of working, and model the actual way of working to the 'paper' way of working. The advantages of this approach are that there is likely to be less resistance from the personnel of Collis during implementation, and operations can run and keep running as they were. This means that although the documented working procedures might be dubious in certain aspects concerning ISO compliance, adjusting the way of working (to more clearly meet ISO-norms) was not an option, for the way of working is leading in the goal of becoming ISO compliant, and not the official norm or the documented working procedures.

For further investigation into the ISO-requirement that Collis was not compliant to with the Collis Documented working procedures, I also first approached the Quality Manager. I explained what the ISO norm said Collis had to do (comply to), and that I was not able to find Collis meeting the requirement looking at the Documented Working Procedures. After going through the Collis Documented Working Procedures with the quality manager, we concluded that Collis did not meet the requirement stated in the norm, at least not in the 'paper' processes of Collis. This was the first finding presented in comparing the norm to the official documented working procedures, being; *de organisatie moet een kwaliteitshandboek opzetten en bijhouden, waarin het onderwerp en toepassingbeid van het kwaliteitsmanagementsysteem met inbegrip van de bijzonderheden van en rechtvaardiging voor eventuele uitsluitingen.*

Although Collis has extensive quality documentation (the Collis Documented Working Procedures are a part of this quality documentation) they do not have a statement of exclusion that states if any exclusions are made to the norm, on what grounds, and why this is beneficial to Collis without compromising quality. This could either mean that there are no exceptions to the norm, or that exceptions to the norm are not documented. After checking this with the quality manager, he told me that up until last year (2011), there were two exclusions from the norm. These exclusions were for articles 7.1 and 7.5.4 of the norm.

ISO 9001:2008 norm 7.1:

7.1 Planning van het realiseren van het product

De organisatie moet de processen die nodig zijn voor het realiseren van het product plannen en ontwikkelen. Planning van de productrealisatie moet consistent zijn met de eisen van de andere processen van het kwaliteitsmanagementsysteem (zie 4.1). Bij het plannen van de productrealisatie moet de organisatie, voor zover van toepassing, het volgende bepalen:

- a) kwaliteitsdoelstellingen en eisen voor het product;*
- b) de noodzaak om processen vast te stellen en documenten op te stellen en om middelen beschikbaar te stellen die specifiek zijn voor het product;*
- c) de vereiste productspecifieke verificatie, validatie, monitoring, meting, keurings- en beproevingsactiviteiten, en de aanvaardingscriteria voor het product;*
- d) registraties die nodig zijn om het bewijs te leveren dat de realisatieprocessen en het resulterende product voldoen aan de eisen (zie 4.2.4).*

ISO 9001:2008 norm 7.5.4:

7.5.4 Eigendom van de klant

De organisatie moet zorgvuldig omgaan met eigendom van de klant wanneer dit door de organisatie wordt beheerd of gebruikt. De organisatie moet eigendom van de klant dat is geleverd voor gebruik of om deel uit te maken van het product, identificeren, verifiëren, beschermen en bewaren. Indien enig klanteneigendom verloren gaat, wordt beschadigd of

anderszins ongeschikt wordt geacht voor gebruik, dan moet de organisatie dit rapporteren aan de klant en registraties daarvan bijhouden (zie 4.2.4).

After the external audit for ISO 9001:2008 performed in 2011, the auditors gave the recommendation that we deleted this exclusion because the grounds on which we excluded the demand / requirement did not hold in their view. Next to this, they examined whether or not Collis was operationally compliant to this demand / requirement. Their conclusion was that in practice, the processes were compliant with the norm, and therefore, no further action had to be taken except for the inclusion of the removal of the exclusion from the official ISO 9001:2008 norm in Collis Documented working procedures.

7.3 Step 3 – Comparison of actual way of working versus processes ‘on paper’

The third step in the internal audit was to evaluate to what extent the ‘actual’ way of working in Collis reflected the ‘paper’ way of working, as described in the Collis Documented Working Procedures. The starting point of this was to define the ‘paper’ way of working by examining the list of official Collis processes, consisting of the ‘generic’ and ‘corporate’ processes. For each of these processes (31 in total) I have performed checks to make an assessment about whether or not the actual way of working reflected the ‘paper’ way of working. The following checks were performed for each individual process:

- Interviews with employees; consisting of an assessment of whether or not they were able to give me information and explanations on processes that they are supposed to have knowledge of.
- Administrative samples; for some processes information has to be stored and kept available. Is this information available, complete and correct?
- Checking procedures with employees, asking employees how they perform their work, and comparing this with the documented procedures.

For each process, I have conducted one check per process (each process consists of multiple steps) to assess the compliance to the prescribed way of working. This was done for practical reasons. Each process can have up to 25 steps, making it impractical to check if all these steps are performed correctly due to time and capacity constraints. The challenge was to think each process through, and determine which process-step could best be evaluated to get the most accurate and complete picture of whether or not the paper process was being followed in the organization during the actual day-to-day activities.

For the processes described in the Documented Working Procedures, these are the checks performed during the internal audit;

1. Corporate processes

<i>Activity: What?</i>	<i>Owner</i>	<i>Activity</i>	<i>Control:</i>	<i>Name?</i>
1.1 Year Plan	CEO	1.1.9	Ask three employees what the biggest change was in the previous year plan compared to previous years	Random
1.2 Delivery Mangement Information	CFO	1.2.8	Check for BU-reports of the PCC and ID Management of the last two years. How many should there be? Are they all there?	BRAM
1.4 Evaluate / Edit Mangement Information	CFO	1.3.4	Check the KPI-lists in the archive over the last 5 years	BRAM
1.4 Purchase and Payment	CFO	1.4.6	Interview responsible employee who imports the signed invoices (1.4.7) how he/she checks whether or not approved by the board. Also, physical evidence check (if for instance board has to put a stamp on approved invoice)	BRAM
1.5 Invoicing	CFO	1.5.3 / 1.5.4	Check whether or not the hours on the send invoices (via 1.5.9) correspond to the hours stated in PSO of past projects (5x)	BU-Manager for 2X Project and Barbara for PSO
1.6 Salary Processing	CFO	1.6.11	Pick 5 employees (different departments) and check whether or not their salary slips (1.6.7) of the past 3 years are present in the archive	BARBARA

1.7	Debtors Management	CFO	1.7.8	Check for any debtor that has not paid and is beyond the payment date, and look at the actions undertaken by Collis to correct this. Interview to procedures first, check if procedures are followed correctly.	BRAM
1.8	System Administration	CFO	1.8.5	Check with system administrator the reported incidents file (1.8.2) and compare with 1.8.5. Are reported incidents being handled correctly and timely?	DENNIS
1.9	Evaluate System Administration	CFO	1.9.3	Check with CFO about the performance evaluation of the System Administrator of 2011. What were the results, what areas needed to be improved, and how was this done (if necessary)?	DENNIS
1.10	Time Registration	CFO	1.10.8	Ask employee to produce the time registration for all employees who worked on two (yet to be chosen) projects and check if it is present. Ask BU-manager for two recently closed projects first.	BARBARA
1.11	Quality System - Compliance	QM	1.11.5	Check whether or not the Internal and External Audit reports are present over the last 5 years	MARK
1.12	Quality System - Maintainance	QM	1.12.8	Are all the modification from step 1.12.8 and found in 1.12.9 also present in 1.12.5? Also, check the ratio between 1.12.2 and 1.12.5. If too low, more effort has to be made.	MARK

2. Corporate Processes

<i>Activity:</i>	<i>What?</i>	<i>Owner:</i>	<i>Activity:</i>	<i>Control:</i>	<i>Name?</i>
2.1	Marketing (PR)	CEO	2.1.3	Is the marketing strategy as described in the Year Plan of 2011 fully executed? Interview employee responsible for executing strategy and ask for	JENNY HOEKSTRA

				evidence that the strategy has been implemented	
2.2	Quotation / Contract	CEO	2.2.20	Look in 2.2.21 if all contract from PCC and MCC from the closed projects in 2011 are present	PCC = NICOLE MCC = TOJA
2.3	Delivery Standard Products	CFO	2.3.8	Ask relevant employee to show all letters and packing list that accompanied the last 10 deliveries, check packing list correspondence to quotation	WILCO V ROOIJEN
2.4	Delivery Customized Products	Man. D&D	2.4.7	Check for 5 relevant projects of different departments whether the PID can be found in archives	WILCO / JEROEN
2.5	Delivery Service	D&S coord.	2.5.3	Get list from relevant employee, and ask two BU-managers whether they have any projects/customers that are not on that list that should be on that list	WILCO
2.6	Delivery Consultancy	BU-Manager	2.6.6	Ask BU-Manager of MCC what projects they are currently working on, and if the Time registration is up-to-date.	AMOS / BARBARA
2.7	Delivery FAS-TC Services	Manager FAS-TC	2.7.5	Ask FAS-TC manager which projects they are currently working on, and check this with PSO	GERT DE MOOI / BARBARA
2.8	Delivery Training	Training Coord.	2.8.2	Check with all BU-managers if they have a clear overview of all internal trainings in the coming three months	IDM = ROGER E-TICKET = CHISTIA
2.9	Delivery releases	CFO	2.9.2	Check whether in the service contracts is mentioned which client gets a release of the updated product, check via BU-manager if this has happened	WILCO
2.10	Resource Allocation	CFO	2.10.8	Is registration currently up-to-date? Check for all consultants that are currently available according to system, and ask BU-Managers if they truly are so	ROSALIEN

2.11	Securing Delivery	CFO	2.11.6	Is the project archive up-to-date? Check archive and look at BU-managers to tell if they have completed any projects that are not in this archive	WILCO
2.12	Closure	MND	2.12.5	Assess evaluation decisions - 1) on what grounds is this decision taken and 2) use this grounds several finished projects that have not been evaluated	CAROLA
2.13	Innovation Products and Services	CEO	2.13	Innovation is often not a top-down process, what I propose is to talk to R&D personnel and let them give their view of how innovations come about in this company, from there, we can start looking at a different process or processes to be described in the manual	MAARTEN BRON
2.14	Contracts Employee	CFO	2.14.19	Is the employee file up-to-date with the latest of their contracts?	BARBARA
2.15	Employee Development	CFO	2.15.6	Check whether or not BU-manager IDM performs for each of his employees two performance reviews per year via 2.15.11	BARBARA
2.16	Employee Leaving Company	CFO	2.16.4	Ask office management if they can give a list of the last ten people that have left the company, and check if the report of their exit interview can be found	BARBARA
2.17	Handling of Complaints	CEO	2.17.4	Ask office management assistant for three recent complains, and (2.18) look at how these are addressed (if at all) in the registration sheet (2.18.9)	TOJA
2.19	Preventive measures	CEO	2.19.1	BU-Manager of PCC and MCC must give me an up-to-date overview of important processes of which the results might be threatened	IDM / ROGIER

These checks have all been performed during the internal audit. To illustrate this, I will give an example of one of the actual processes at Collis, the time registration, process 1.10. This is a corporate process, and is used to make sure the organizational input for invoicing is correct.

See the process below:

7.4 Time registration (05-07-2011)

Goal:

Organizing a closing time registration, which forms the basis for invoicing.

Process Owner:

CFO

Type process:

Corporate, Generic

(see following page)

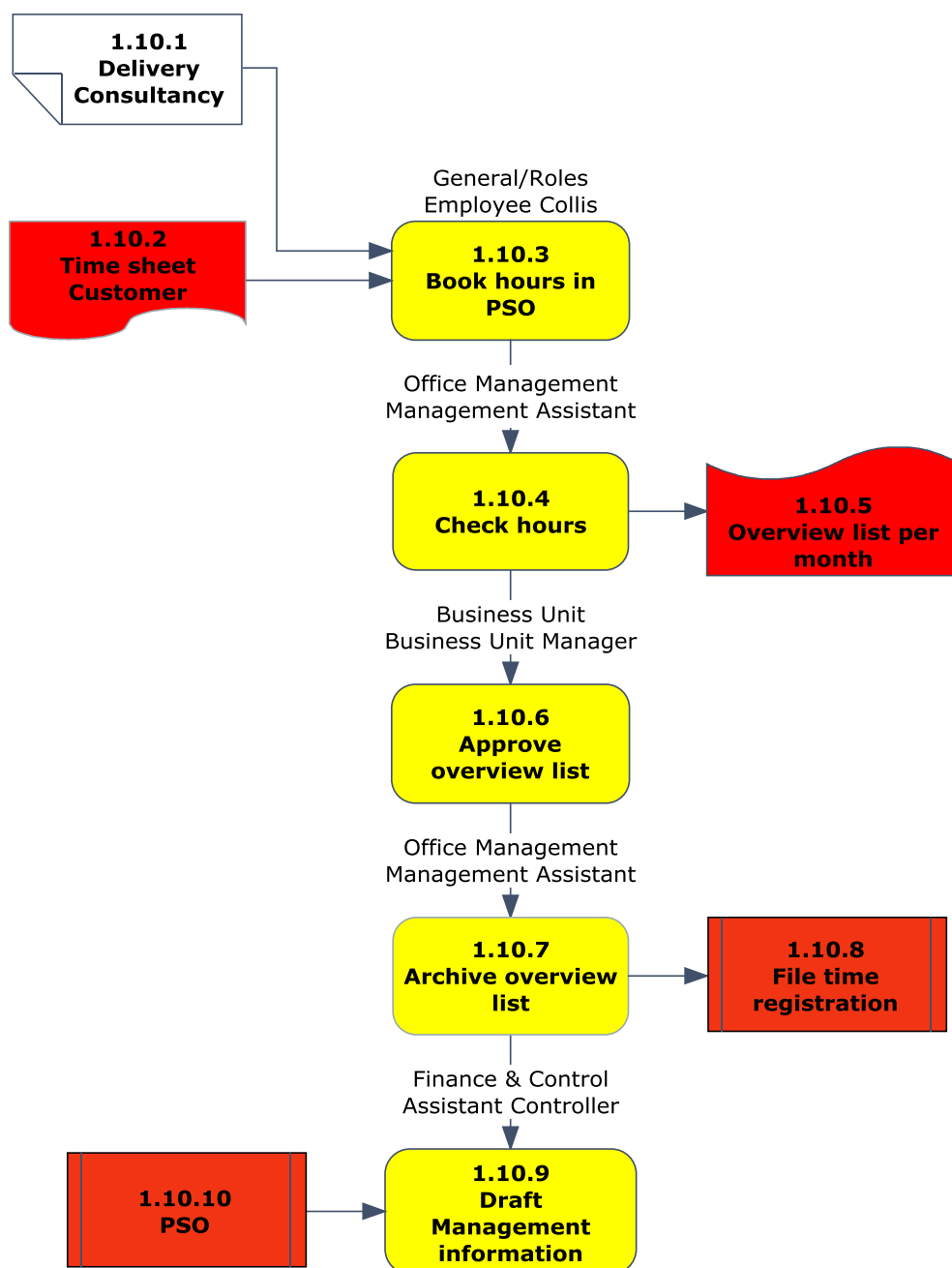


Figure 5: Time registration

The goal is to create a 'check' that gives the best possible insight into whether or not this process is working correctly in real life. We try to do this with only one check, due to time restraints. The starting point for this is the goal of the activity. In this case, the goal is: '*Organizing a closing time registration, which forms the basis for invoicing*'. With this in mind, we see that the output of the process is an overview list per month of the hours booked in PSO, which is filed in the *File time registration*. Common logic states that the output must be in line with the input, which is activity 1.10.2, *time sheet customer*. The output document also must be stored and kept available.

To check this process, I have asked three different BU-managers (Erwin Jansen from PCC, Amos Kater from MCC, and Rogier van Ratingen from IDM CC) to each identify three closed projects performed in the last year (one approximately 10 months ago, one approximately 6 months ago and the last approximately 2 months ago), and present these in a list to me with the name of the client, and the name of the project. For the nine mentioned projects, performed within different departments and over a period of time, I have checked if the hours booked in PSO (process 1.10.3, which uses input from process step 1.10.2) for these projects match with the overview list per month archive. Next to this, I have requested to see the invoices send to the customers concerning these projects, to see if the hours stated on the invoice match the hours in the *overview list per month (1.10.5)*.

For these nine projects, the hours in PSO corresponded to the overview list per month in the archive. Also, the invoices send to the customers concerning these projects gave the correct number of booked hours. For the other 30 described processes, similar checks have been performed to assess whether they reflect the actual processes within Collis. Further, for every finding (a non-conformity) I have suggested a follow-up action for Collis to become compliant to the norm. The non-compliant processes and their suggested actions are described below:

Findings in corporate processes:

ID	Process	Description	Pr.	Suggested Action
2012-C01	1.8	(System Administration) Incidents are not being filed properly.	x	New process that describes a weekly back-up of list of mailbox Dennis, and store back-up in Leiden (not Dennis' home).
2012-C02	1.8	The list of lend hardware to employees is not up-do-date / existing. This when the total value of these items equals 175.000,- euro's.	x	Make list / make list up-to-date of hardware being lend to employees. Only laptops are now being monitored, but list is not at all up-to date. Also for keyboards & mouse, flatscreens, laptop-bags and usb-hubs a list should be made.
2012-C03	1.9	Mostware has no deadlines for their work on the system administration	x	QM and MT need to decide whether or not this is a threat for the quality of the Collis system administration

Table1: Findings corporate processes

Findings in generic processes:

ID	Process	Description	Pr.	Suggestion
2012-G01	2.4	No one knows what a PID is, it is not being used anymore but is replaced by a proposal document	x	Find out what a PID is, and whether or not the process is now actually being followed or not.
2012-G02	2.9	There is no overview of the projects that require releases or when they require releases, no control on whether releases are being executed according to contract with clients	x	Create a new file and process that ensures all releases for clients projects are being planned, executed and monitored, and communicated.
2012-G03	2.12	No client evaluations performed in 2012 have been found	x	Find out if any evaluations have been performed, if not why? And if evaluations are performed where are they stored?
2012-G04	2.13	The actual innovation process does not match the process on paper	x	Remodel the process on paper to match the actual process taking place
2012-G05	2.16	An exit interview is not always being performed when employee leaves company	x	Adjust written-down procedure

2012-G06	2.19	Preventive measures process is not working to specification.	x	Find out how process is being performed now, evaluate effectiveness of current process and make (if necessary) adjustments. Document new working procedure
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Table 2: Findings Generic processes

7.5 Step 4 – Checking findings from previous years

The fourth step in the internal audit was to thoroughly (re-)examine those areas of quality in processes that have been indicated to be in need of improvement by the external audits of the last three years and the internal audit performed last year. Over the last three years, roughly a dozen processes that needed improvement have been identified, and for some of these processes, follow-up actions have been performed (or at least should have been performed). Those processes that have been identified during the external audit of 2011 as being below the quality standards of ISO9001:2008, will be discussed here:

Audit Start Datum	Audit Type	Nr.	Status	
23.08.2011	PA2	1	processed	Opstellen van facturen. Organisatie is hierin afhankelijk van 1 persoon, hetgeen risico's met zich meebrengt. Specifiek voor testcentre.
23.08.2011	PA2	2	processed	Kritische leveranciers beoordeling ontbreekt. Deze dient opgesteld te worden.
23.08.2011	PA2	3	processed	Specificatiestandaarden (wetgeving) kan niet met zekerheid vastgesteld worden of de actuele versie gehanteerd wordt.

23.08.2011	PA2	4	processed	Eis: Monitoring en meting van processen (8.2.3.)
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Tekortkoming: Management Review: Onderscheid bestaande en nieuwe klanten voor Sales wordt niet gemonitored. Voor targets Customers / markets wordt expliciet percentage nieuwe klanten benoemd. Aan het eind van het jaar wordt dit wel weergegeven. Tussentijdse monitoring vindt niet plaats.

Bewijs:tijdens interview benoemd door Sales.

After having identified all the proposed alterations, I have checked whether the proposed alterations were implemented. I did this by comparing the proposed modification with the currently documented process. If the current process accommodated the proposed modification, the process had likely been adjusted. If the current process did not accommodate the proposed modification, further investigation needed to be done to check if the follow-up had been correct. In one instance, this was the case. This is point PA2 (see table above), a process for the evaluation of critical suppliers. After checking this with the Quality Manager, it turned out that this point for improvement had not been given follow-up. This process alteration would receive priority in the improvement process. The other identified improvements over the last three years had received proper follow-up.

The findings of the external audit performed in 2011 have also been discussed with the BoD, and the following has been decided by them:

7.5.1 Invoicing

Finding

Making invoices; Organization is dependent upon 1 person, which brings risk. This finding has been done in the invoicing process for Collis Test Centers.

Analysis/ Follow Up Collis

QM has found that the making of invoices is now being done by multiple persons. Also, new personnel will be hired in the short future for this task to reduce risk of dependency even further.

7.5.2 Assessment Critical Suppliers

Finding

It is unclear to what extent all critical suppliers are being assessed.

Analysis/ Follow Up Collis

Because this finding is not closed yet, Collis QM keeps this finding open. Collis QM will support this. The follow-up (from 2012) is described below.

- 2012-E01** QM has found that the suppliers are not formally checked by Collis. QM proposes the following:
- Make a list of all business critical suppliers
 - Define requirements to validate these suppliers
 - Perform a supplier evaluation once a year or when choosing/ adding new suppliers.

Advice BoD: This does happen, but in real life this practice does not work in our market because there are no real alternatives, next to this, the BoD considers the current processes as sufficient. However, for compliance reasons we can institute this process.

7.5.3 Test Specification applicability

Finding

When using test specifications in the Testing Services Department, it is not always clear whether testing is done with the latest of test specifications.

Analysis/ Follow Up Collis

QM has found that it is clear now how the process works; in the files of Collis there is being worked with a system that every new version gets a higher number, and you should always pick the highest number. Basic rule is always use latest version, unless otherwise agreed.

7.5.4 Measurements of KPI

Finding

Management review: Difference between existing and new customers is not being monitored for Sales. For the targets of Customers and Markets an explicit percentage of new customers are being mentioned. At the end of the year, this is not reviewed. Also there is no mean time monitoring for this.

Analysis/ Follow Up Collis

The KPI described above is no longer a KPI in the year plan of 2012, and therefore this observation is closed.

7.6 Step 5 – List of preliminary findings and advice Collis BoD

After all the three angles above described for the internal audit had been prepared and the audit had been executed, a list of preliminary findings has been constructed. This list contains all of the processes that are examined, a description of the way they are examined and also the outcome of the check. As described earlier, I have presented this list to the Quality Manager at Collis, and point per point we have had a discussion about my advice concerning the quality of processes at Collis. The result of this discussion was a final list of findings (processes where some elements of the process were not up to quality standards or ISO9001:2008 standards), these are the findings that I have presented above. I have presented this list of findings to the BoD, with my advice on the follow-up of the findings. The ultimate responsibility concerning what risks (that are quality related) Collis finds acceptable and what threats to quality of processes have to be countered lies with the BoD. The BoD and QM have made decisions concerning which of my findings require follow-up in their view and which do not. For all advices that the Collis BoD and QM did not follow, an explanation and rationale

will be given later in this paragraph. First I will present the identified threats for the quality of processes that the BoD indicated to be in need of improvement.

The BoD has decided the following actions are justified to counter the threats indicated by QM:

Process 1.8 – System Administration

QM has found that the reporting of incidents can only be found in the mailbox of the system administrator. Registered incidents are reported by an e-mail to the System Administrator, this makes the mailbox of the SA 'business critical'. A back-up of this mailbox is being made by the SA every three months, and stored on a personal drive. QM advises to critically assess this procedure.

Note: during the discussion with the Quality Manager and System Administrator concerning this, we came to the conclusion that this lack of regular back-up for critical mailboxes is not only a threat for the quality of process 1.8. All employees who have a mailbox that can be labeled as being 'business critical' should be regularly stored via a back-up. A mailbox has been deemed business critical if it contains emails with client contact, planning of projects, or internal planning.

From the above, action points 2012-C01 and 2012-C02 have been named.

Action 2012-C01 Adjust process to ensure that information in System admin mailbox is secured better by a weekly back up of all emails. BoD has to answer if e-mail archives of other Collis employees are business critical.

Also, QM has evaluated how the hardware being lend to employees is registered and monitored. QM has found that:

- Only laptops are being registered, but the list of these laptops is incomplete and information uncertain.
 - For other hardware (keyboard, mouse, screen, laptop-bag, USB-hub) no file is kept.
- The total value of these assets exceeds 175.000,- euro.

QM suggests that the list for laptops is updated and completed to get a complete and matching overview of which employees has what laptop (also for performing updates).

Advice BoD: After further investigation by QM, the back-up made by the System Administrator is also being stored on the file server, so no actions are needed according to the BoD. Further, the BoD has indicated that a new process needs to be put in place that ensures that the mail archives of Collis employees that are deemed business critical are stored on the server, and regular backups are made.

Action 2012-C02 Update file of hardware lend to employees, and discuss if this is also necessary for other hardware lend to employees.

Advice BoD: The Board has decided that Dennis needs to fully update the list of outstanding hardware.

Process 1.9 – Evaluate System Administration

Action 2012-C03 Mostware has no deadlines for their work on the system administration. BoD and MT need to decide whether this is desired. This issue is also mentioned during the ISO 27001 audit. If BoD and MT decide this is a threat to quality, appropriate actions need to be taken (by introducing clear SLA requirements and managing deadlines). Also, formal consequences for not reaching the level of service (e.g. 4 hours response time) should be introduced.

Advice BoD: The Board has decided that the current process is insufficient. A new and more elaborate SLA must be made with Mostware.

Process 2.4 – Delivery customized projects

Quality Management has diagnosed that the PID (as described in steps 2.4.6 / 2.4.7 / 2.4.4 / 2.4.5) is no longer being used in the organization. It has been replaced by a 'proposal document', which is broken down into a Work Break Down. This WBD is being used in progress reports of the Collis employee responsible for the project.

Action 2012-G01 QM proposes to change the process, by replacing a PID by the proposal document as leading for Collis projects. For bigger projects, project plans are still in place.

Advice BoD: The BoD supports the proposal from QM to create a new documented working procedure.

Process 2.12 – Closure

QM has found that no client evaluations have been performed (yet) in 2012.

Action 2012-G03 Verify with MT why no performance evaluations have been performed yet, and take appropriate actions.

Advice of BoD: The BoD and QM have decided that effort will be made by QM to introduce effective triggers for the BU-managers to perform client evaluations on a regular basis.

Process 2.13 – Innovation for products and services

Quality Management has discovered that the innovation at Collis does not necessarily follow the described path in the Collis Documented Working Procedures, where innovation is described as a top-down process.

Action 2012-G04 QM suggests that effort is made to establish how innovation takes place within Collis, and model this process accordingly.

Advice of BoD: The BoD supports the suggestion made by QM to remodel this process

Process 2.16 – Employee leaving company

QM has found that the described procedure does not completely reflect practice. The exit interview is not mandatory, and is therefore not always performed.

Action 2012- G05 Add to process that exit interview does not take place if the employee does not want it.

Advice of BoD: The BoD follows the proposal from QM.

Findings that did not receive follow-up

The above described seven findings were recognized as being ‘substantial’ threats to the quality of the Collis processes and management system, and have received follow-up, as is described above. For the first of the earlier described three lenses, the comparison between the official norm of ISO 9001:2008 and the documented Collis Working Procedures, all of my findings were decided not to receive follow-up by the BoD. We will describe them one by one, and give the rationale of the BoD / QM for their decisions.

Findings from comparing Collis Procedures with the ISO9001:2008-standard:

#	ISO-Norm	Finding	Who?	How to find out current procedures
4.2.2 A	--> de organisatie moet een kwaliteitshandboek opzetten en bijhouden, waarin het onderwerp en toepassingbeid van het kwaliteitsmanagementsysteem met inbegrip van de bijzonderheden van en rechtvaardiging voor eventuele uitsluitingen.	Er zijn geen vermeldingen naar de genoemde bijzonderheden en rechtvaardigingen voor uitsluitingen.	Everyone	To be found out by interviewing different managers

Rationale for denial of follow-up by BoD: The BoD has indicated that during the external audit of 2011, the auditors from DNV have removed the exclusions from the norm written down by Collis (norm 7.1 and 7.5.4). Therefore, the finding was correct but not relevant.

4.2.4 D, E, F en G --> Er moet een gedocumenteerde procedure worden vastgesteld om te definiëren welke beheersmaatregelen nodig zijn om:

te bewerkstelligen dat voor van toepassing zijnde documenten relevante versies beschikbaar zijn op werkplekken;	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteitsverantwoordelijke
te bewerkstelligen dat documenten leesbaar en gemakkelijk herkenbaar blijven;	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteitsverantwoordelijke
te bewerkstelligen dat documenten van externe oorsprong waarvan de organisatie heeft bepaald dat ze nodig zijn voor de planning en uitvoering van het kwaliteitsmanagementsysteem, worden geïdentificeerd en de distributie ervan wordt beheerst	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteitsverantwoordelijke
onbedoeld gebruik van vervallen documenten te voorkomen, en geschikte identificatie toe te passen als ze om welke reden dan ook worden bewaard.	Geen gedocumenteerde werkwijze	ERWIN	Interview kwaliteitsverantwoordelijke

Rationale for denial of follow-up by BoD: This is considered a procedure that is evidently carried out by the Quality Manager. The process is being carried out in reality, but considered to be a part of the process of quality compliance (process 1.11).

5.5.2 --> De directie moet een lid van het management van de organisatie benoemen dat, ongeacht overige verantwoordelijkheden, de verantwoordelijkheid en bevoegdheid moet hebben om:

Te bewerkstelligen dat processen die nodig zijn voor het kwaliteitsmanagementsysteem zijn vastgesteld, ingevoerd en worden onderhouden;	In de beschreven processen van Collis is dit niet terug te vinden	CEO	Ask CEO
Te rapporteren aan de directie over de prestaties van het kwaliteitsmanagementsysteem en eventuele noodzaak voor verbetering	In de beschreven processen van Collis is dit niet terug te vinden	CEO	Ask CEO

Rationale for denial of follow-up by BoD: The BoD is of the opinion that although it is not documented as explicitly as above, the appointment of Erwin Jansen as Quality Manager makes Collis compliant with the official norm.

6.2.1 --> *Personeel dat werkzaamheden uitvoert die van invloed kunnen zijn op het voldoen aan producteisen, moet bekwaam zijn, gebaseerd op passende opleiding, training, vaardigheden en ervaring.*

Niet direct een proces kunnen vinden, tenzij dit proces 2,14,3 is.

MELISSA Ask HRM how this is done

Rationale for denial of follow-up by BoD: It is the BoD's view that although this is not explicitly stated in any process description, the Collis HR-department and BU-managers have detailed knowledge of the skills required to function at Collis.

7.4.2 --> *Inkoopgegevens moeten het in te kopen product beschrijven. En De organisatie moet de geschiktheid van gespecificeerde inkoop-eisen bewerkstelligen alvorens deze kenbaar te maken aan de leverancier.*

Eisen voor goedkeuring van het product, procedures, processen en uitrusting

Processen zijn niet beschreven

ROY Ask BU-Managers

Eisen voor kwalificatie van personeel;

Processen zijn niet beschreven

ROY Ask BU-Managers

Eisen vanuit het kwaliteitsmanagementsysteem.

Processen zijn niet beschreven

ROY Ask BU-Managers

Rationale for denial of follow-up by BoD: The Collis personnel responsible for procurement within Collis are in the view of the Collis BoD skilled and knowledgeable and have a clear view of the product to be bought and the minimum requirements.

Findings in the corporate processes:

The Collis BoD has followed my advice concerning improvement for all findings in the corporate processes of Collis

Findings in the generic processes:

2012-G02	2.9	There is no overview of the projects that require releases or when they require releases, no control on whether releases are being executed according to contract with clients	x	Create a new file and process that ensures all releases for clients projects are being planned, executed and monitored, and communicated.
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Rationale for denial of follow-up by BoD: The Collis BoD has indicated that this responsibility is spread over the different actors in the process of project releases, and acknowledges that this is not explicitly mentioned in the Collis Documented Working Procedures. The BoD indicates that they see this as an acceptable procedure and do not wish to alter the current way of working or documentation of the current way of working.

7.7 Step 6 – Constructing the internal audit report

The end deliverable of the internal audit for ISO9001:2008 has been the internal audit report. This report describes the scope of internal audit, the manner of auditing, what has been audited and what potential threats to the quality of the Collis management processes have been identified (these are called ‘findings’). This report is the basis for follow-up measures to improve the quality of the Collis Management processes. The internal audit report is also a necessary input document for the external audit, to show to the auditors that Collis itself is working on the continuous improvement of their management processes. The internal audit report can be found in appendix X.

7.8 Step 7 – Follow-up on Internal audit

The last element of the internal audit performed is the follow-up of the findings that have been indicated by the BoD to require follow-up. The follow-up will exist of 1) process alterations, 2) extension of other processes, and 3) extra attention for organizational compliance to processes. Also, for some processes there is a need to be followed better, this will mean a closer check on the following of the process in the future by the process owner. This follow-up process will be described in another part (chapter 8) of this Master thesis.

8 FOLLOW-UP ON INTERNAL AUDIT

8.1 Processes followed up after Internal Audit

As described in chapter 7.6, the Board of Directors determines what areas of the business or what processes require improvement from a quality perspective. In this section, I describe the actual follow-up of the identified soft spots during the internal audit.

8.1.1 2012-C01 and 2012-C02

Process 1.8 – System Administration

QM has found that the reporting of incidents can only be found in the mailbox of the system administrator. Registered incidents are reported by an e-mail to the SA, this makes the mailbox of the SA ‘business critical’. A back-up of this mailbox is being made by the SA every three months, and stored on a personal drive. QM advises to critically assess this procedure.

Note: during the discussion with the Quality Manager and System Administrator concerning this, we came to the conclusion that this lack of regular back-up for critical mailboxes is not only a threat for the quality of process 1.8. All employees who have a mailbox that can be labeled as being ‘business critical’ should be regularly stored via a back-up. A mailbox has been deemed business critical if it contains emails with client contact, planning of projects, or internal planning.

From the above, action points 2012-C01 and 2012-C02 have been named.

Action 2012-C01 Adjust process to ensure that information in System admin mailbox is secured better by a weekly back up of all emails. BoD has to answer if e-mail archives of other Collis employees are business critical.

Also, QM has evaluated how the hardware being lend to employees is registered and monitored. QM has found that:

- Only laptops are being registered, but the list of outstanding laptops is incomplete and information (which employee has the laptop, what is the update history) uncertain.
- For other hardware (keyboard, mouse, screen, laptop-bag, USB-hub) no file is kept. The total value of these assets exceeds 175.000,- euro.

QM suggests that the list for laptops is updated and completed to get a complete and matching overview of which employees has what laptop (also for performing updates).

Advice BoD: After further investigation by QM, the back-up made by Dennis is also being stored on the file server, so no actions are needed according to the BoD. Further, the BoD has indicated that a new process needs to be put in place that ensures that the mail archives of Collis employees that are deemed business critical are stored on the server, and regular backups are made.

Description of follow-up:

The first step in this process was to make a grounded assessment of which employees have a critical mailbox, and which do not. To do this, I have asked all the unit managers in Collis via e-mail or in person to make a judgment about this. All received an excel file with names of the people in their department, and instructions on what constituted for a 'business critical mailbox'. Employees who had a business critical mailbox received a 'y' next to their name.

After this inventarisation of which employees have business critical mailboxes, a final list has been prepared with every Collis employee who has a business critical mailbox

The second step was the construction of a process that describes what actions are being undertaken and by who, to ensure that the identified mailboxes are regularly stored by performing a monthly back-up. This process will be as follows: an email will be sent by Office Management at the end of every month to all employees on the above described list, in which

they are asked to make a backup of their mailbox, and store this back-up on the Collis Fileserver.

The third step is the maintenance of the process; this will be the responsibility of the Quality Manager at Collis. The list of employees must also stay up-to-date. To ensure this, every new employee will be asked by OM to check with their unit manager if their mailbox should be labeled business critical, and if so to report this to OM. Their names will be added to the list of employees with a critical mailbox. A mailbox is deemed business critical if:

- It contains e-mail(s) between (potential) Collis customers and Collis
- Planning of Projects
- Deviation or altering of planning

During the internal audit of next year, extra attention will be given to this process.

Action 2012-C02 Update file of hardware lend to employees, and discuss if this is also necessary for other hardware lend to employees.

Advice BoD: The Board has decided that Dennis needs to fully update the list of outstanding hardware.

Description of follow-up:

I have agreed upon a deadline for the system administrator to fully update the list of hardware lend to employees. The system administrator has met this deadline, the list is up-to-date.

8.1.2 2012-C03

Process 1.9 – Evaluate System Administration

Action 2012-C03 Mostware has no deadlines for their work on the system administration. BoD and MT need to decide whether this is desired.

This issue is also mentioned during the ISO 27001 audit. If BoD and MT decide this is a threat to quality, appropriate actions need to be taken (by introducing clear SLA requirements and managing deadlines). Also, formal consequences for not reaching the level of service (e.g. 4 hours response time) should be introduced.

Advice BoD: The Board has decided that the current process is insufficient. A new and more elaborate SLA must be made with Mostware.

Description of follow-up:

The system administrator is composing a new SLA with Mostware, and this is being done in cooperation with the Quality Manager of Collis. The deadline for this has not yet expired, but will be controlled for.

8.1.3 2012-G01

Process 2.4 – Delivery customized projects

Quality Management has diagnosed that the PID (as described in steps 2.4.6 / 2.4.7 / 2.4.4 / 2.4.5) is no longer being used in the organization. It has been replaced by a 'proposal document', which is broken down into a Work Break Down. This WBD is being used in progress reports of the Collis employee responsible for the project.

Action 2012-G01 QM proposes to change the process, by replacing a PID by the proposal document as being leading for Collis projects. For bigger projects, project plans are still in place.

Advice BoD: The BoD supports the proposal from QM to create a new documented working procedure.

Description of follow-up:

I have altered the paper way of working to the current way of working, below the old activities of process 2.4 and the new activities of process 2.4 are shown (activities 2.4.4 to 2.4.7).

Here we see the old process steps or activities:

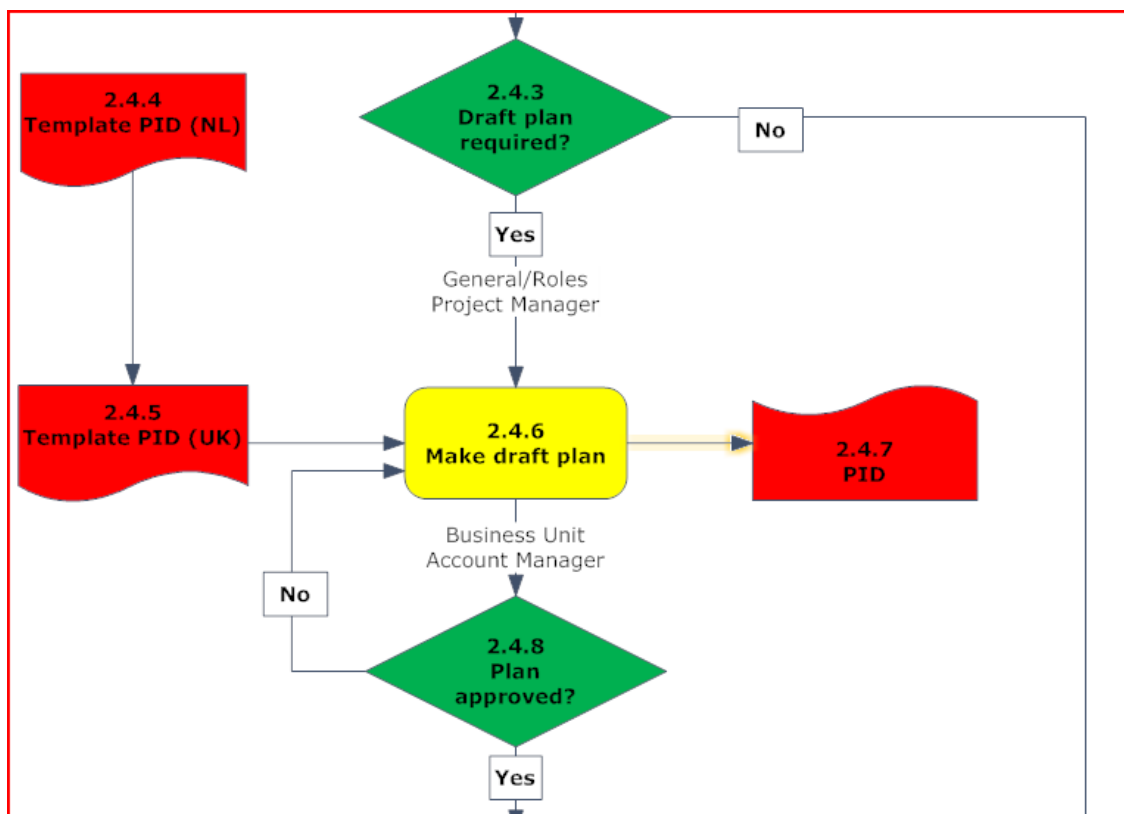


Figure 6: Old process flow of Delivery customized projects

This has been changed to the following process steps or activities:

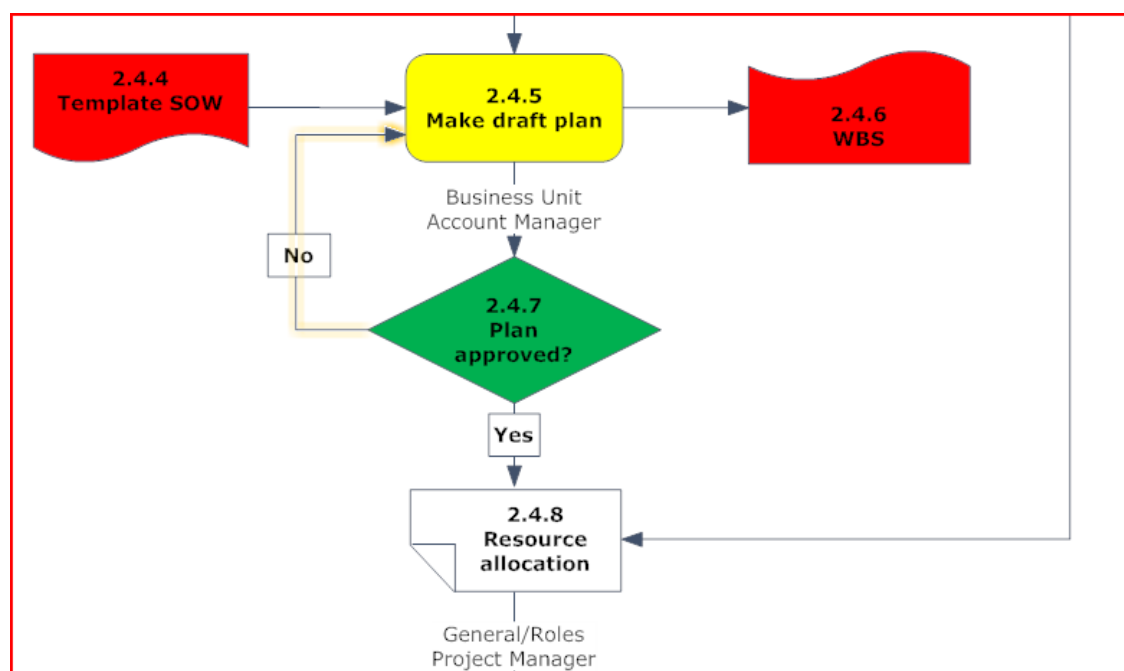


Figure 7: New process flow of Delivery customized projects

8.1.4 2012-G03

Process 2.12 – Closure

QM has found that no client evaluations have been performed (yet) in 2012.

Action 2012-G03 Verify with MT why no performance evaluations have been performed yet, and take appropriate actions.

Advice of BoD: The BoD and QM have decided that effort will be made by QM to introduce effective triggers for the BU-managers to perform client evaluations on a regular basis.

Description of follow-up:

The BoD has decided that it will check during MT-meetings every month how much performance evaluations have been performed. The BoD itself will perform this monthly check.

8.1.5 2012-C04

Process 2.13 – Innovation for products and services

Quality Management has discovered that the innovation at Collis does not necessarily follow the described path in the Collis Documented Working Procedures, where innovation is described as a top-down process.

Action 2012-G04 QM suggests that effort is made to establish how innovation takes place within Collis, and model this process accordingly.

Advice of BoD: The BoD supports the suggestion made by QM to remodel this process

Description of follow-up:

A new process has been described in the Collis Documented Working Procedures, both the old and the new process are shown below:

The old process:

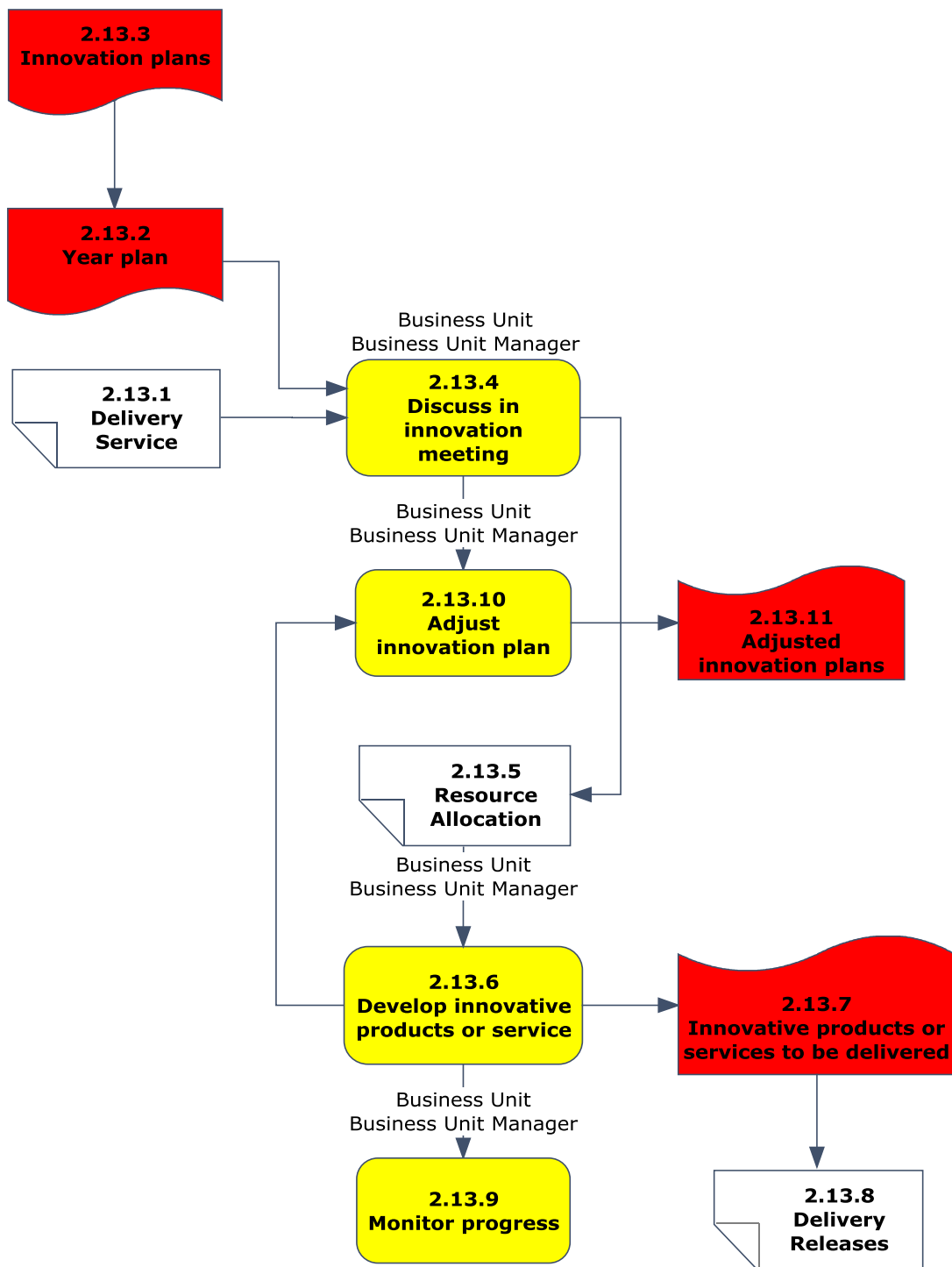


Figure 8: Old process flow of Innovation for products and services

The new process:

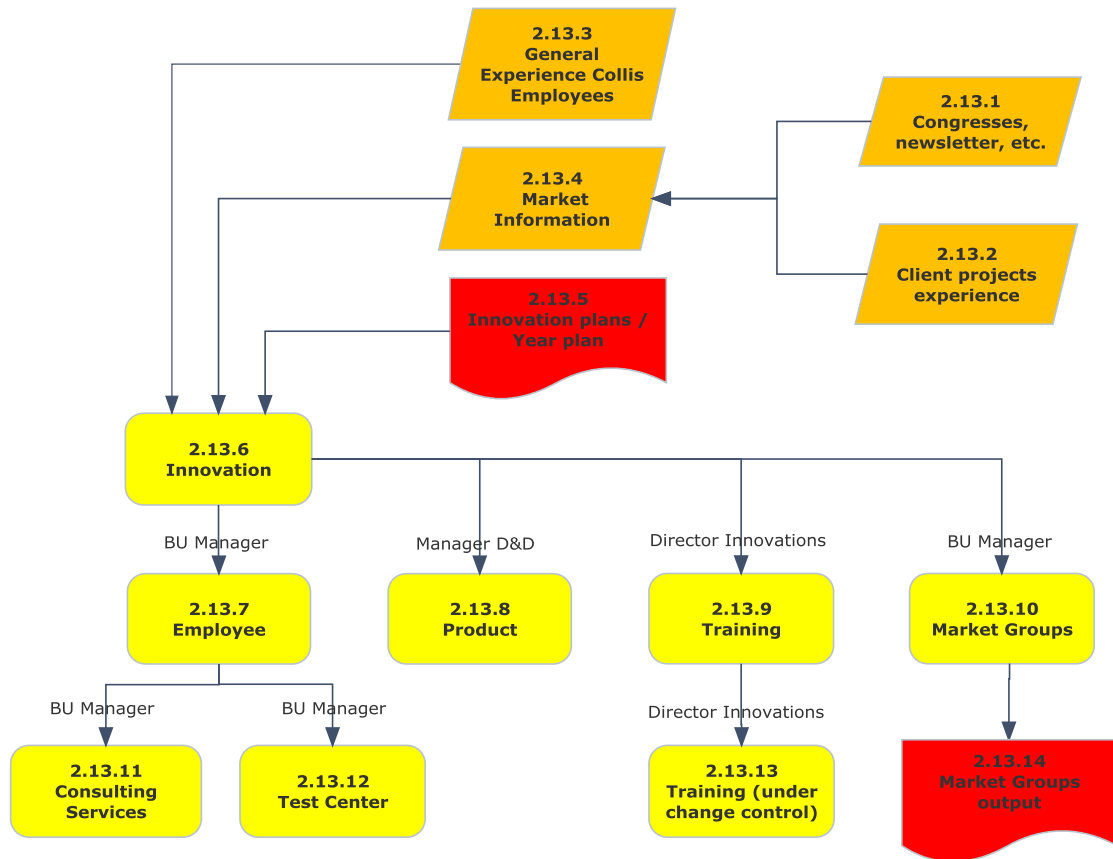


Figure 9: New process flow of Innovation for products and services

8.1.6 2012-G05

Process 2.16 – Employee leaving company

QM has found that the described procedure does not completely reflect practice. The exit interview is not mandatory, and is therefore not always performed.

Action 2012- G05 Add to process that exit interview does not take place if the employee does not want it.

Advice of BoD: The BoD follows the proposal from QM.

Description of follow-up:

The process on paper has been adjusted, the old and new versions are shown below:

The old version of process 2.16

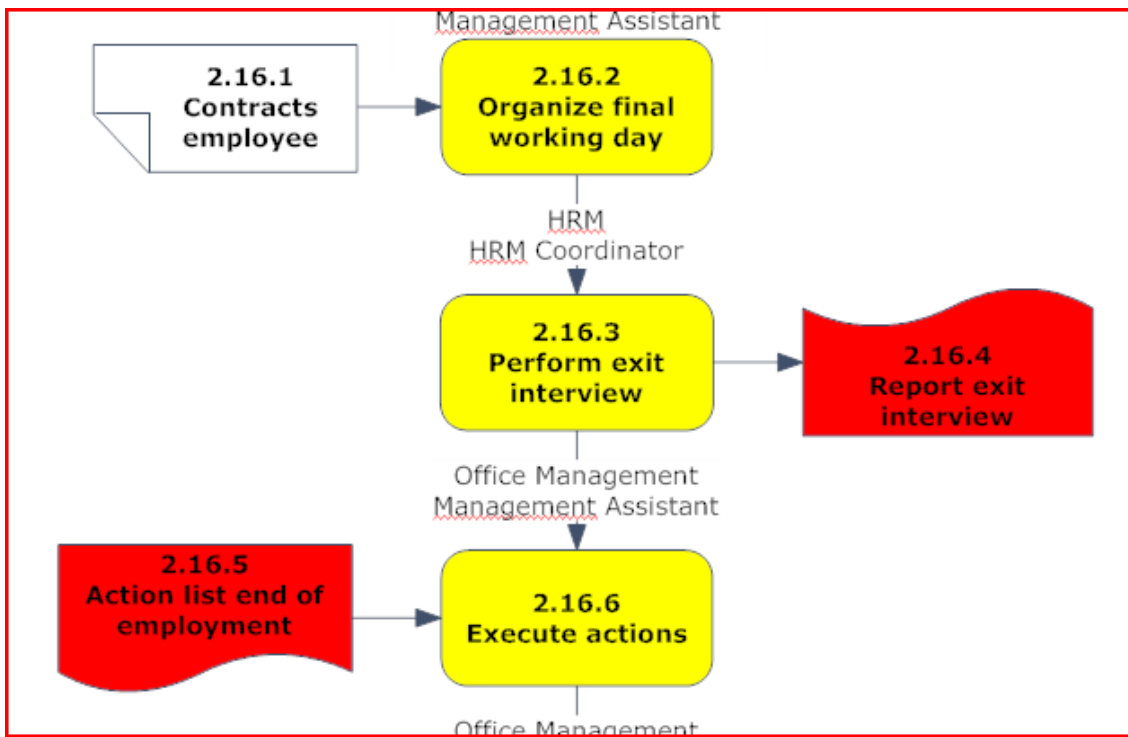


Figure 10: Old process flow of employee leaving company

The new version of process 2.16

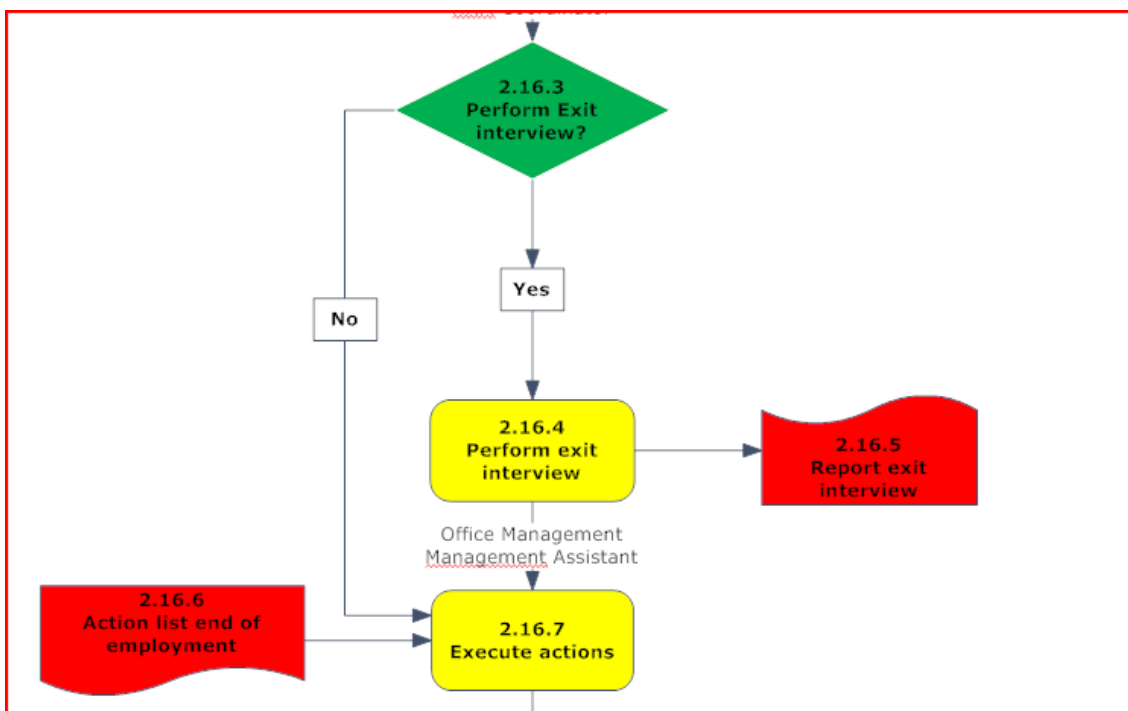


Figure 8: New process flow of employee leaving company

8.1.7 2011-PA02

Finding

It is unclear to what extent all critical suppliers are being assessed.

Analysis/ Follow Up Collis

Because this finding is not closed yet, Collis QM keeps this finding open. Collis QM will support this.

2012-E01 QM has found that the suppliers are not formally checked by Collis. QM proposes the following:

- Make a list of all business critical suppliers
- Define requirements to validated these suppliers
- Perform a supplier evaluation once a year or when choosing/ adding new suppliers.

Advice BoD: This does happen, but in real life this practice does not work in our market and BoD consider the current processes as sufficient.
However, for compliance reasons we can institute this process.

Description of follow-up:

A new activity has been designed that will evaluate all critical suppliers bi-annually. Three suppliers have been deemed critical by the BoD and the Quality Manager. These are:

#	Name	Supplier of:	Responsibilities	Accountmanager
<u>1</u>	Mostware	Mostware is the supplier of our System Administration services	Mostware is responsible for the performance of our System Administration	Dennis
<u>2</u>	Liad	Liad assembles the smartwaveboxes Collis uses	Liad is responsible for the timely production and delivery of the smartwaveboxes and alike products	Roy

<u>3</u>	Micropross	Micropross delivers hardware for Collis	Micropross is responsible for the timely production and delivery of the mobile hardware components for Collis	Dirk Jan
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For each of these three suppliers, an 'account manager' has been appointed to perform the checks. The suppliers will be checked on the following points:

Accountmanager:

-
- 1 Is the SLA in place still relevant and up-to-date?
 - 2 Is a good cooperation possible within the boundaries of the SLA?
 - 3 What is the (qualitative) judgment from the account manager regarding the cooperation with this supplier?
 - 4 Identify three alternatives in the market for this supplier (if possible):
 - 5 Is the incident file up-to-date and complete?
 - 6 Have the quarterly appraisal sessions been performed and filed?
 - 7 Has the supplier exerted pressure on Collis to pay their invoices early?
 - 8 Is the suppliers' financial statement from last year available for Collis?

The entries will be sent to the Quality Manager, who will assess the need for any actions and then store the documents on the AD.

9 THE SCOPE OF ISO IN THE NEAR FUTURE WITHIN COLLIS

9.1 Are there any other ISO standards useful for Collis in the near future?

Collis has been ISO 9001 certified since 2003. As explained in this thesis, ISO 9001 describes a best practice for quality in management systems. Are there any other ISO's that Collis can 1) successfully incorporate and 2) have a significant added value for the company?

Collis management believes that any ISO to be implemented within Collis, must have a clear and real added value. This added value must be measured in profit. In other words, no ISO will be implemented if this does not improve the business. An important factor in this is however that the management of Collis takes a long-term view in this, that is for the coming 10 years.

9.1.1 How can an ISO-norm improve organizational results (profit)?

ISO standards are mostly related to the internal organization of a company. They prescribe best practices of various organizational fields and subjects. This implies that they do not directly contribute to the revenue of a company. Furthermore, implementing an ISO-norm is costly because it generally requires the internal organization to change to become compliant to a standard, and also the costs of an external audit (performed to receive the official certification) are very expensive. To give an insight to the costs of this, the bare minimum for an ISO 9001 certification of a company the size of Collis (very small, between 150 – 200 employees) is in the area of 5.000,- euro's. The cost for an ISO 27001 certification is a minimum of 15.000,- euro's. These are only the cost for the official certification, not including organizational change, advice from experts, internal work, etc. So how can an ISO-norm improve organizational financial performance? This can be done in two ways, 1) use the acquired ISO certification as a marketing instrument, and 2) the improved internal operations of the company prevents organizational mistakes

9.1.2 Use ISO certification as a marketing instrument

Having an ISO-certification ensures (or at least should ensure) that certain functional aspects of the organization are successfully handled, according to international best practices. Different ISO's have different scopes, so a company if the company wishes to become ISO certified it can choose those ISO's that will likely appeal to their (future) customers. If we apply this to Collis, we must first look at what kind of business they are in, and who their customers are. If we see the Collis slogan, 'Ensuring trust in Technology', and the customers they have (banks, credit card vendors, governments) this implies that security of information might be a useful area for Collis to improve their organization for compliance to an ISO-norm that covers this area. If we look at the business they are in, a field where another best practice can likely be applied is the testing and validation services that Collis offers.

9.1.3 Use ISO certification to improve operations and reduce organizational mistakes

Improving the reliability and quality of your internal organization can also have a preventative goal. Mistakes are less likely to be made if the organization of certain business functions is in line with international best practices. If we apply this for Collis, we see that a loss of data from banks or credit card vendors would likely have a dramatic effect on the reputation of the company; we can name Diginotar as an example of this. Security of information is a field that is likely to be of importance for Collis, and therefore an ISO prescribing a standard for this can be a useful for Collis.

9.2 Search for other ISO's useful for Collis

The Collis management has identified two other ISO's that are applicable and useful for Collis to incorporate, and be officially certified against in 2013, these are;

- ISO 27001:2005; This ISO prescribes a best practice for Information Security.

This ISO provides added value for Collis because it can be used as a marketing instrument for Collis and are likely to reduce organizational mistakes in those areas in the Collis business where any mistakes will be harshly punished by the markets. No other ISO's were identified that directly deliver this added value on both sides.

9.3 Introduction to ISO 27001:2005

ISO 27001:2005 is an international norm describing best practices concerning the security of information in organizations. Its main purpose is to ensure that that information is available, has a high integrity and is confidential to the extent that the company sees this as critical.

9.3.1 Information asset approach

ISO 27001:2005 sees all information that is available at Collis as different Information Assets. These information assets need to be protected to ensure for information security. When is an information asset secure according to ISO 27001:2005? The norm distinguishes between three aspects of security, these are:

- Confidentiality (of information)
- Integrity (of information)
- Availability (of information)

This is also known as the CIA principle of information security.

9.3.2 Information Security Management System (ISMS)

ISO 27001:2005 is more than a summary of technical controls that can be used to improve information security. Rather, the goal when implementing ISO 27001 is implementing a management system that ensures continuous improvement of the state of information security at an organization.

The main vehicle chosen for this is the ISMS that is described in the norm. ISMS stands for Information Security Management System. It is a PDCA-based cycle of processes that need to be incorporated into the organization that will ensure that the status of information security is constantly assessed, tested, and improved.

9.3.3 New Organizational Roles

Working with and improving an ISMS that ensures information security within Collis is estimated to have a substantial impact on the organization in terms of investments in money and time. The money needed will be allocated directly by the CFO of Collis, and permission of both the CFO and the CEO is needed. It is estimated that the execution and maintenance of the Collis ISMS will require on average (a year) two working days per week, with a peak when the internal and external audits take place. For this, the role of Information Security Officer has been created. The IS Officer reports directly to the CFO, and is end responsible for the implementation and execution of the Collis ISMS.

9.4 Internal audit in the future within Collis

The internal audit performed this year was able to highlight various points in the Collis Quality System that needed improvement. We cannot be sure however that all areas where improvement is needed have been discovered. This is because of the method of conducting the internal audit for ISO 9001:2008 within Collis. In short, the current method is that of a 'shallow' audit of all the Collis processes. In other words, check all processes but not in-depth. This approach has an advantage that all non-conformities that have a significant impact on the processes of Collis will be 1) detected and 2) improved.

A downside to this approach is that no single process can be examined in detail, and total quality assured. A different approach that assured a more thorough assessment of the quality of the Collis processes is that during the internal audit not all systems will be checked, but one or two parts of the organization are thoroughly and fully audited, ensuring that the detail is checked in detail, and everything that needs improvement is indeed improved.

The main difference between the two systems can be described as the current system being a system where 'everything is checked a little bit', and the other system as 'a little bit is checked completely.

Collis has decided to use this new approach in the internal audit for the coming years. An advantage of this is that in the long term, everything is checked in detail and this should assure more quality. A disadvantage of this is that in the short term some aspects of the Collis quality system are not examined to ensure for quality.

The choice of what aspects of the Quality System / processes to check will have an effect on the quality of the processes of Collis. That what is selected for an internal audit will (likely) be improved and that what is not selected will not be improved. Collis will select those aspects of the quality system to audit that have the highest apparent need. The BoD and Management team will be involved in selected those areas that will be assessed each year.