BEHAVIORS IN HIGHLY EFFECTIVE CONTINUOUS IMPROVEMENT TEAMS:

TWO TYPES OF VIDEO-ANALYSES OF THREE PROTOTYPICAL WORK SITUATIONS

Laura A. M. Weenink

University of Twente, The Netherlands

Master of Science Thesis

Business Administration

Supervisors University of Twente

Prof. Dr. C.P.M. Wilderom

Dr. M. van Vuuren

Supervisor House of Performance

D. H. van Dun, MSc.

Abstract:

In order to adapt to today's highly uncertain and customer-focused environment, many organizations implement continuous improvement (CI) at the shop floor team-level. However, many teams fail to successfully implement CI, while the behavioral dynamics of CI teams are hardly understood. To explore their daily behaviors, five highly effective CI teams were minutely analyzed by means of a survey and video-analysis of three prototypical situations: a start-up meeting; a weekly team meeting; and everyday work of team members and leaders. It appeared that all five teams have different behavioral dynamic patterns, although some similarities were found. For instance, team leaders barely showed any 'self-defending' type of behaviors during all three prototypical situations. Furthermore, during their everyday work, team members showed extensive 'individualized consideration', far more than in the meetings. In addition, two teams with similar types of work environments, showed correspondence in their team dynamics. For instance, these team leaders had the same level of 'informing' during the start-up meeting. This suggests that CI team dynamics are subject to contextual enablers. Finally, 'Team learning', measured by the survey, was negatively related to negative types of observed behavior (e.g. defending one's own position) and positively related to the observed behavior 'intellectual stimulation'. Our findings open up new paths for future video-research on behavioral dynamics in CI teams.

1. Introduction

The application of Lean in organizations has made a great impact both in academia and in practice (Hines, Holweg, & Rich, 2004). To build a Lean organization, the Lean philosophy needs to be applied. This includes adding the value that customers request from their goods and services, in the most efficient and least painful manner, for both the customer and the provider (Womack & Jones, 2005). Moreover, Lean involves five guiding principles: (1) identification of value creation from the customer's perspective, (2) identification of all necessary steps in the value stream, to highlight non-value-adding waste, (3) development of the capability to flow production, (4) a pull mechanism in order to produce that what is pulled by the customer, and (5) a set goal of perfection by reducing all forms of waste at work to zero (Hines, et al., 2004). Albeit the first four of these principles can be accomplished through analytical methods, the final principle requires all organizational members to continuously improve their practices and minimize waste (Van Dun & Wilderom, Expected 2012). This fifth principle, which can be identified as Continuous Improvement (CI), has become an important topic of interest. Nowadays, it is essential for firms to adapt to the turbulent and uncertain environment. Therefore, firms need to increase their innovative capacity, which can be achieved through the powerful mechanism of increasing the number of participants in this process, thus making it an organization-wide process (Bessant & Caffyn, 1997). Moreover, Bessant and Caffyn (1997, p. 10) defined CI as '*an organization-wide process of focused and sustained incremental innovation*'. Later on, de Lange-Ros and Boer (2001, p. 345) defined it as '*the planned, organized and systematic process of on-going, incremental and company-wide change of existing practices aimed at enhancing customer value*'. This will be the leading definition of CI in this paper. Several studies have reported that CI improves the organizational performance in terms of productivity, quality and costs (Caffyn, 1999; Magnusson & Vinciguerra, 2008).

In this study, we investigate, in an exploratory manner, CI in shop floor teams. A team can be defined as '*collectives who exist to perform their organizationally relevant tasks, share one or more common goals, interact socially, exhibit task interdependencies, maintain and manage boundaries, and are embedded in an organizational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity*' Kozlowski and Bell (2003, p. 334). More specifically, we focus on shop floor teams, which are responsible for producing goods and providing services (Cohen & Bailey, 1997). Teams have great potential: they may increase adaptability, productivity and creativity. Furthermore, teams foster problem identification and problem solving with more complex, advanced and extensive solutions. Therefore, the growing complexity of both the environment and tasks makes more and more organizations turn to team-based structures (Salas, Cooke, & Rosen, 2008; Salas, Sims, & Burke, 2005). Moreover, several authors suggest that, especially in Lean, team members are self-managing (Shah & Ward, 2007; Womack & Jones, 2003), since Lean requires employees to take responsibility for their own tasks and improvements (Van Dun & Wilderom, Expected 2012). Self-managing work teams constitute *'interdependent individuals that are able to self-regulate their behavior concerning relatively complete tasks'* (Kuipers & Stoker, 2009, p. 399; Spreitzer, Cohen, & Ledford, 1999). As self-managing refers to the minimized need for control and hierarchical command: these teams need to decide themselves how to attain the goals set by management (Kauffeld, 2006; Kuipers & Stoker, 2009). This implies that team members are held responsible for monitoring and managing their own performance processes, in addition to executing the task (Hackman, 1987). As these responsibilities overlap to a large extent to those of (team) leaders, we will also review the literature associated to leadership behavior.

Both focal concepts, CI and teams, seem to be crucial for meeting the challenge of today's complex environment (Bessant & Caffyn, 1997; Salas, et al., 2005). However, many organizations fail to implement both CI and teams successfully, which can have far reaching effects on the total organization, e.g. lost revenue and spilled resources (Baer & Frese, 2003; Salas, et al., 2005). Bessant and Caffyn (1997) argue that barriers to implementing CI arise from different angles, such as a lack of understanding of the concept by organizational members, a lack of organizational skills to implement CI, and a lack of organizational will to move down this road. Moreover, Bessant, Caffyn and Gallagher (2001) state that the high failure rate of CI implementation to a large extent derives from the fact that there is a lack of understanding of the behavioral dimension of CI.

Some literature on CI and CI teams discuss behavioral dynamics, however, these behaviors are not mutually exclusive and very generic (Beale, 2007; Bessant & Caffyn, 1997; Bessant, et al., 2001; Caffyn, 1999; Emiliani, 1998), while human behavior enables CI teams to be a success (Van Dun & Wilderom, Expected 2012). On the other hand, the team effectiveness literature is much more extensive and distinguishes several specific behaviors that are related to team effectiveness. The team effectiveness literature provides a solid base to describe team behavior, nevertheless, this is not specifically aimed at CI teams. We explicitly aim to investigate the behavior of highly performing CI teams. Therefore, aside from our literature study on team dynamics, we video-observed five highly performing CI teams, to analyze their behavior in three prototypical situations. Unobtrusive video-observation of CI teams allows for repetitive analyses that enables more detailed results (Kozinets & Belk, 2006; Van Der Weide & Wilderom, 2006; Van Vuuren, Brummans, & Westerhof, 2011). Besides, the video-observation, the focal CI team members also completed a survey in which they reported on their perceived behavior. Thus, an additional value of this study is that it reports

on the congruence between team members' own, self-reported view on their behavior and their actual, video-observed behavior.

In sum, the aim of our explorative video-observation study is to improve the understanding of CI team dynamics. Therefore, our study purports to answer the following three research questions:

1) *What behaviors do team members show when working in effective CI shop floor teams?*
2) In what ways do the CI team leaders and CI team members differ in their behaviors in everyday work practice?
3) To what extent does congruence exists between the self-reported and the observed behaviors?

In the following sections, literature about behavior in (CI) teams and leadership will be reviewed. Second, we will report the methods used to investigate CI team behavior, followed by the results and discussion of the results. Subsequently, we determine the practical implications of this study, by providing advice for Lean coaches, team leaders and managers of CI teams. Finally, an overall conclusion, including future research paths, is provided.

2. Extant literature on behavior in CI teams

In this section, we review the literature on effective team behavior that is shown to be associated with CI.

2.1 CI related behavior

Although studies of concrete CI-related behavior is rare, some scholars discuss CI behavior (e.g. Bessant et al. (2001), Bessant and Caffyn (1997), Caffyn (1999), Emiliani (1998), Beale (2007)). In the 90s the CIRCA (Continuous Improvement Research for Competitive Advantage) study investigated implementation issues in CI (Bessant, et al., 2001). Therewith a CI maturity model was established in which a set of behaviors were linked to the maturity stages of CI (Bessant & Caffyn, 1997; Bessant, et al., 2001). According to Bessant and Caffyn (1997), CI development starts with no formal CI structure and problem solving at a low level. The final stage is the learning organization, in which CI and learning behavior continuously occurs through the entire organization. Behaviors in the final maturity stage (the learning organization) are for instance: 1) '*people learn from their experiences, both positive and negative*' and, 2) '*individuals seek opportunities for learning/personal development*' (Bessant, et al., 2001, p. 73). Based on this CI maturity model, the CI capability model has been developed. This model describes ten key behaviors or behavioral routines that are found to be essential for long-term CI success. Among others, the following two key behaviors are included: 1) *'Employees demonstrate awareness and understanding of the organization's aims and objectives'* and, 2) *'Individuals and groups use the organization's strategic goals and objectives to focus and prioritize their improvement activities'* (Caffyn, 1999, p. 1143). Although these studies opened up a more behavioral line of study, these behaviors are not very specific and difficult to observe in practice. For instance, 'demonstrating awareness and understanding of the organization's aims and objectives' can be illustrated by several separate behaviors such as, 'visioning', 'informing' and 'intellectual stimulation'. Consequently, the behaviors are not mutually exclusive.

Second, Emiliani (1998) reports on Lean behavior. As Lean involves CI, we consider Lean behavior to be relevant for this study. Emiliani (1998) describes Lean behavior as value-adding or value-creating behavior and he distinguishes this behavior from 'fat' behavior that adds no value and that can therefore be eliminated. The reported Lean behavior constitute twenty-six behaviors, such as, *'self-awareness', 'humility', 'compassion' and 'suspension'* (Emiliani, 1998, p. 623). In our view, these behaviors are very generic and overlap to a great extent with, personal characteristics such as work values. Moreover, they cannot be observed in a CI team's daily work practice.

Finally, Beale (2007) reports on the factors underlying employee willingness to adopt Lean behavior. Therewith the following behaviors are considered as important in Lean principles: 1) '*To get engaged in CI activities'* 2) '*To get involved in the proactive aspects of productions (problem-solving, target setting, decision-making)'* 3) '*Multi-skilling'* 4) '*Job rotation'* 5) '*Cross-functional team working'* (Beale, 2007, par. 1.2). These behaviors are again very generic and do not represent behaviors that are mutually exclusive. In contrary, they describe activities to be performed in a Lean organization, as they involve more than one specific behavior.

Clearly, the CI literature to date does not provide mutually exclusive behavioral constructs that can be observed in practice on CI shop floors. However, CI teams are continually trying to improve their team performance (De Lange-Ros & Boer, 2001), and therewith their team effectiveness, as team effectiveness involves the appraisal of the outcomes of team performance (Hackman, 1987; Salas, et al., 2008). Therefore, in order to demystify Lean team behavior we may also study team effectiveness. Thus, in the following section we review the main behavioral team dynamics found in extant team effectiveness research.

2.2 Behavioral dynamics in effective teams

The Input-Mediator-Output-Input (IMOI) model, is a key model within team effectiveness literature that depicts teams as complex, adaptive and dynamic systems (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). It illustrates how mediators (M), that are based on Input variables (I), influence team performance (O) (Ilgen, et al., 2005). Thereby M is defined as *'variables that are important mediational influences with explanatory power for explaining variability in team performance and viability'* (Ilgen, et al., 2005, p. 520).

The IMOI is a revised version of the Input-Process-Output model of McGrath (in Hackman, 1987). The IMOI model better captures teams as complex, adaptive systems with multiple types of processes and outcomes. Furthermore, it incorporates the many interactions between and within input, output and the process (DeChurch & Mesmer-Magnus, 2010; Ilgen, et al., 2005; Mathieu, Maynard, Rapp, & Gilson, 2008). The I has been included to address the cyclical aspect of team performance (Ilgen, et al., 2005). Furthermore, the M includes a broader range of variables mediating team performance; specified in three different types of mediators: (1) cognitive states, (2) motivational-affective states and (3) behavioral factors (DeChurch & Mesmer-Magnus, 2010; Ilgen, et al., 2005), of which behavioral factors are of specific interest in this study.

As a starting point for our study we distilled the observable human behavioral mediators that account for high team performance, as mentioned in three high-end team effectiveness literature reviews: Kozlowski and Ilgen (2006); Marks, Mathieu and Zaccaro (2001); and Salas, Sims and Burke

(2005). Table 1 shows the five team behavioral mediators, that are central to our study reported below.

Table 1 – Behavioral Mediators Typically Found in Highly Effective Teams (Van Dun, Van Eck, Van Vuuren, & Wilderom, 2011, p. 3)

Behavioral mediator	Conceptual definition	Based on the following constructs:
Adaptability	Team members' ability to adjust their behavior based on information gathered from the environment through back-up behavior, reallocation of intrateam resources and altering a course of action or team repertoire, in response to changing team conditions. (Salas, et al., 2005, p. 560)	-'Team regulation, performance dynamics and adaptation' (Kozlowski & Ilgen, 2006) -'Adaptability (Salas, et al., 2005)
Back-up behavior	Actively keeping an eye on each other's performance, and assisting when necessary through providing feedback, helping or completely taking over a colleague's task. (Marks, et al., 2001, p. 363)	-'Team monitoring and back-up behavior' (Marks, et al., 2001) -'Back-up behavior' (Salas, et al., 2005)
Conflict management	Team members' ability to build trust and minimize and manage task as well as interpersonal conflicts when they arise. (Kozlowski & Ilgen, 2006, p. 95)	-'Team conflict' (Kozlowski & Ilgen, 2006) -'Conflict management' (Marks, et al., 2001)
Information sharing	The process where team members mutually exchange their (tacit and explicit) information in the support of their coordinating behaviors. (based on De Vries, Van den Hooff, & De Ridder, 2006, p. 116; Kozlowski & Ilgen, 2006, p. 95)	-'Team coordination, cooperation, and communication' (Kozlowski & Ilgen, 2006) -'Coordination' (Marks, et al., 2001) -'Closed-loop communication' (Salas, et al., 2005)
Team learning	Activities carried out by team members through which a team obtains and processes data that allows the team to adapt and improve. (Edmondson, 1999, p. 351)	-'Team learning' (Kozlowski & Ilgen, 2006)

In the following sections, we elaborate on each of the five behavioral mediators. By discussing each behavioral dynamic we set propositions of how we expect these behaviors to reveal within CI teams.

Team learning Several scholars state that team learning is positively related to team effectiveness (Edmondson, 1999; Edmondson, Dillon, & Roloff, 2007; Kozlowski & Ilgen, 2006; Van Den Bossche, Gijselaers, Segers, & Kirschner, 2006). Moreover, Bunderson and Sutcliffe (2003) describe that teams with a stronger learning orientation aim for experimental learning, innovation and competence development (in Bunderson & Boumgarden, 2010). Team learning is therefore considered as an important construct within team effectiveness literature.

The importance of team learning is also emphasized in the CI literature: to achieve CI, a learning organization needs to be build (Bessant & Caffyn, 1997; Bessant, Caffyn, Gilbert, Harding, & Webb, 1994; Bicheno & Holweg, 2009; Kaye & Anderson, 1999). Furthermore, it is stated that organizational learning involves improving processes and actions through better knowledge and understanding of work routines (Anand, Ward, Tatikonda, & Schilling, 2009).

To describe team learning the following definition, provided in the team effectiveness literature, is used: *'The acquisition of knowledge, skills, and performance capabilities of an interdependent set of*

individuals through interaction and experience' (Kozlowski & Ilgen, 2006, p. 86). Thus, team learning is an interactive process, in which team members carry out activities in which data is obtained and processed. This results in ways to improve the team's work processes (Drach-Zahavy & Somech, 2001; Edmondson, 1999; Van Den Bossche, et al., 2006). Team learning can be specified through behaviors such as 'asking for help', 'seeking feedback' and 'discussing errors' (Edmondson, 1999). Therewith, **feedback** is an important component of team learning. Feedback is essential to monitor the difference between current performance levels and the desired performance levels and to initiate improvement (Kozlowski & Ilgen, 2006).

To enable team learning, team members must feel safe, and not feel threatened or embarrassed, to openly debate differences in opinion in the team (Edmondson, 1999). The team must be psychologically safe for interpersonal risk taking. Psychological safety influences the interactive behavior of team learning, such as 'discussing errors' (Edmondson, 1999; Kozlowski & Ilgen, 2006). Other important enablers of team learning are shared team mental models[1], and transactive-memory[2] structures: effective knowledge sharing needs coordinated ways of storing knowledge. (Kozlowski & Ilgen, 2006).

Bunderson and Boumgarden (2010) argue that highly structured teams, which includes specialization, formalization, and hierarchy (e.g. well defined team leader), are better learners. They suggest that more structure will increase the learning effect in self-managing teams. Thereby, they state that the following constructs mediate, either negatively or positively, the positive relation between structure and learning: information sharing (positive), psychological safety (positive) and conflict (negative)(Bunderson & Boumgarden, 2010).

Hence, we propose the following:

1) Highly structured CI teams achieve higher levels of team learning.
2) Team learning leads to CI.
3) Higher levels of team learning lead to higher CI team performance.
4) High CI team performance is a function of team members feeling psychologically safe to discuss errors or ideas for improvement.
5) The more CI team members give and get constructive feedback, the higher their team's performance.

Conflict management According to Jehn (1995) and Tekleab et al. (2009) effective conflict management includes openly discussing and actively trying to solve dissimilarities. Therefore, the team dynamic **feedback** is also very important within conflict management. In addition, Edmondson (1999) discussed that team learning includes 'discussing errors' and '**seeking feedback**', which are as well conflict managing behaviors. So if conflict happens, learning could take place by applying effective conflict management. In the CI maturity model, conflict management is distinguished as a behavior which is ingrained in more mature CI teams. Team members in mature CI teams recognize and solve problems systematically (Bessant, et al., 2001). Therefore, conflict management is expected to be an unsophisticated behavior in mature CI teams.

[1] This concept refers to knowledge structures or information commonly held in the organization (Kozlowski & Ilgen, 2006)
[2] This concept refers to knowledge of the information distribution within a team (Kozlowski & Ilgen, 2006)

Team conflict is a broadly discussed subject in scientific literature. Initially, scholars asserted a negative correlation between conflict and team performance. It has been argued that when a conflict magnifies, the cognitive systems deter and the information processing stops (De Dreu & Weingart, 2003). Carnevale and Probst (1998) showed that only low conflict (cooperative negotiation) can be beneficial, but high conflict (hostile negotiation) will be harmful to the team. There has been a growing tendency in literature to believe that *task* and a small amount of *process* conflict may be beneficial for team performance.

Conflict consists of three constructs, *relationship* conflict, *task* conflict and *process* conflict (De Dreu & Weingart, 2003; Ilgen, et al., 2005; Tekleab, et al., 2009). *Relationship* conflicts are '*conflicts about personal taste, political preferences and interpersonal style*' (De Dreu & Weingart, 2003, p. 741). *Task* conflicts are *'conflicts about the distribution of resources, procedures and policies, and judgments and interpretation of facts'* (De Dreu & Weingart, 2003, p.741), whereas *process* conflicts are conflicts about '*how task accomplishment should proceed in the work unit, who is responsible for what, and how things should be delegated'* (Jehn, 1997, p. 540). Some scholars (Jehn, 1995, 1997; Simons & Peterson, 2000) argue that *task* conflict and a low amount of *process* conflict, but not relationship conflict, could have a positive correlation with team performance (in Cohen & Bailey, 1997; De Dreu & Weingart, 2003; Kozlowski & Ilgen, 2006). They argue that teams that undergo a *task* conflict make better decisions since cognitive understanding of the concerning issue is stimulated. In addition, a low amount of *process* conflict stimulates production, as changes in the process (e.g. different responsibilities) may positively affect the team. On the other hand, relationship conflict does not stimulate the cognitive understanding, as team members are more focused on each other than on team's *task*-related problems. In addition, high levels of *process* conflict are indeed harmful for the work processes: the team intensively discusses the process, which causes a lower production and uncertainty within the team.

Tekleab et al. (2009) proved that conflict *management*, through which disagreement is openly discussed and solved, is positively related to team cohesion. Thereby, cohesion is positively related to team performance (Cohen & Bailey, 1997; Tekleab, et al., 2009). Cohesion is defined as the bundle of forces that keep a team together (Tekleab, et al., 2009). According to Chin et al. (1999) cohesion instills a sense of belonging, and feelings of morale associated with the membership. Effective conflict management enables the development of an open, healthy and learning environment in which face to face feedback is a very important mean to reduce conflict. Moreover, Bunderson and Boumgarden (2010) argue that high team structure in self-managed teams reduces the frequency of relational and process conflicts in teams. They also state that through less of these conflicts the learning capability will be enhanced in these self-managed teams.

Overall, *task* and *process* conflict may increase performance, whereas scholars agree on the negative influence of relational conflict on team performance. If *task* conflicts and *process* conflicts are openly discussed, through effective conflict management and in an environment where mutual trust exists, *task* conflict and a low level of *process* conflict are expected to be functional and stimulating. Moreover, relational conflict is always harmful, but it is expected that effective conflict management reduces the negative consequences of *relational* conflict on team performance.

Hence, the following propositions:

6) Task conflict and a low amount of process conflict lead to higher CI team performance, through effective conflict management in an open environment that includes mutual trust.
7) Relational conflict dampens CI team performance, but is moderated by conflict management.

Information sharing The process of information sharing entails collective utilization of available information sources, which is positively related to team performance (Mesmer-Magnus & DeChurch, 2009; Salas, et al., 2005). This is confirmed by Johnson, Hollenbeck, Humprey, Ilgen, Jundt and Meyer (2006) who state that errors could be avoided by sharing information: team members can help other team members by sharing lessons they have learned. Further, Kozlowski and Ilgen (2006) suggest that by mutually exchanging these task-related information sources and by developing team solutions to problems, task work and teamwork is supported. In addition, information sharing is discussed by De Vries et al. (2006) by use of the term knowledge sharing. They split up knowledge sharing in *donating* and *collecting* knowledge. These two behaviors can be defined as follows, (1) '*donating knowledge is communicating one's personal intellectual capital to others*' (De Vries, et al., 2006,p. 116) and (2) '*collecting knowledge is consulting others to get them to share their intellectual capital*' (De Vries, et al., 2006, p. 116). De Vries et al. (2006) argue that knowledge and information sharing is essential to enhance the number of innovations, and reduces redundant learning efforts: individuals mutually exchange their knowledge and create new knowledge together. Knowledge sharing consists of communicating to other team members, in which relevant information, skills and knowledge is shared to help them get something done better, more quickly, or more efficiently (Lin, 2007). Indeed, Lin (2007) states that knowledge sharing enhances the firm's innovation capability. Furthermore, as discussed in the previous section, Bunderson and Boumgarden (2010) state that information sharing mediates between team structure and a team's learning orientation, where highly structured teams are likely to share more information and consequently are better learners.

As information sharing is positioned to be an important antecedent of solution generation, creation of new knowledge and making improvements we expect this behavior to be of value in CI teams. Therefore, the following proposition is made:

8) When CI team members regularly share various types of information, it will lead to higher CI team performance.

Nevertheless, Johnson et al. (2006) also underline the negative side effects of information sharing. Team members sometimes have to stop production to be able to share their information. This is time-consuming and thus may decrease production speed. The following proposition considers this final remark:

9) Information sharing should be accomplished as much as possible during pre-scheduled meetings, to minimize temporary production stops.

Back-up behavior Back-up behavior is appointed by Salas et al. (2005) as a core component of teamwork. They propose that back-up behavior has a positive influence on performance by having insured that all the team's task are completed (Salas, et al., 2005). Marks et al. (2001, p. 363) define back-up behavior as *'actively keeping an eye on each other's performance, and assisting when necessary through providing feedback, helping or completely taking over a colleague's task'*. Thus,

back-up behavior implies that team members assist each other to complete their tasks (Seers, 1989) and if a team member's workload is too high, team members or leaders shift tasks to underutilized team members. Salas et al. (2005) argue that if this were not to happen within a team, performance would diminish drastically. Marks et al. (2001, p. 367) confirm this by stating that *'if teammates are not looking out for, or willing to help out, each other, the team will fail when any one member fails'*. Furthermore, Salas et al. (2005) consider the ability of a team to reduce work overload as an important predictor of team performance. To achieve back-up behavior, the exchange quality of the relationships between team members is very important, team members need to be willing to help each other out. In addition, they need to be briefed about other team members' work tasks and roles to know how they need to assist each other (Marks, et al., 2001). Therefore, Salas et al. (2005) argue that both shared mental models and mutual performance monitoring are important, as they provide the information necessary to initiate back-up behavior. Furthermore, mutual trust is needed in teams in which team members are interdependent. Team members need to rely on each other and therewith need to accept a certain amount of risk (Salas, et al., 2005).

To achieve high CI performance, we expect back-up behavior to be essential. When back-up behavior is ingrained in the team, team performance cannot be pulled down by any one failing team member. However, Barnes, Hollenbeck, Wagner, DeRue, Nahrgang and Schwind (2008) state that back-up behavior also includes certain costs. If a team member provides another team member with back-up behavior, it leaves the provider with fewer resources to work on their own tasks. Therefore, back-up behavior can result in neglected task work on the side of the back-up provider. Furthermore, a lot of back-up behavior within a CI team may suggest that the underlying problems are not solved, but it only the symptoms are fixed. Thereby, Barnes et al. (2008) found a high amount of back-up behavior to be negatively related to team performance, and therefore the amount of back-up behavior versus team performance is considered to be curvilinear.

Considering both the benefits and the costs of back-up behavior, we propose the following:

10) In highly-performing CI teams back-up behavior occurs, but only in unforeseeable or incidental circumstances.
11) A high level of back-up behavior within CI teams is associated with a lowering of team performance.

Team Adaptability Adaptability is defined by Salas et al. (2005, p. 560) as *'the team members' ability to adjust their behavior based on information gathered from the environment through back-up behavior, reallocation of intra team resources and altering a course of action or team repertoire, in response to changing team condition*'. This behavior is highlighted by Salas et al. (2005) and Kozlowski and Ilgen (2006) as a core element of team effectiveness, as it helps the team to react to unforeseen events and changes. A team needs to be able to identify the changed conditions (in environment or team task) and their implications, to develop and execute an adapted plan. This may imply team members need to adapt their work standards. Therewith the complexity of the operational environment determines the level of need for adaptability. We expect adaptability to be a requisite in CI teams: in order to improve, a team needs to be able to learn from their mistakes, identify changes and subsequently adapt their work routine to it.

As indicated in the definition, team adaptability is closely related to back-up behavior. Team members must be aware of other team members' work tasks and roles to detect errors, to

determine if assistance is needed and, finally, to be able to decide whether and how the team should deviate from their planned actions. Therefore, for the same reasons as with back-up behavior, shared mental models, mutual performance monitoring and mutual trust are important antecedents of adaptability (Salas, et al., 2005).

Overall, we propose the following:

12) CI teams that effectively adapt to change, enhance their level of CI team performance.

2.3 Leadership behavior in CI teams

As responsibilities of team members in self-managing work teams to a large extent overlap those of (team) leaders, we will now review literature associated with leadership behavior. Team leadership is appointed by Salas et al. (2005) as one of the core elements of effective teamwork. To explain the effect of team leadership, we would like to address the previously discussed IMOI model.

Team leadership influences team mediators (that include team dynamics), therefore, team leadership can be depicted input (I) as follows: a team leader's resources and actions moderate the input of team members' resources (e.g. knowledge and skills), which are important predictors of teamwork (M). Subsequently, the mediators (M) contribute to team leader capacity (e.g. motivation and connectivity of team members), which is considered an outcome (O) of team leadership, and can be seen as the social capital of the team. This team leader capacity acts again as input of team processes and influences the team member resources. This addresses the cyclical aspect of team performance (Day, Gronn, & Salas, 2004). In sum, team leadership can be considered as an important determinant of team effectiveness and thereby strongly influences the dynamics within a team.

To illustrate the main tasks that constitute team leadership we adopt Zaccaro et al. (2001), who clarifies the main tasks of a leader. These tasks are coordinative, cognitive, motivational, and affective of nature, of which the last three correspond to the different types of mediators of the IMOI model.

First of all, a team leader's main task is provide the team with regulated coordination patterns, that include awareness of resources available in the team, and the provision of training and instruction (coordinative). Second a team leader should create and maintain a teams' shared mental model: a shared understanding of the operation environment need to be established (cognitive). Third, a team leader should facilitate information processing activities when teams confront task and problem situations (cognitive). This includes a reflection on problem identification and on the generation and implementation of solutions. Fourth, a team leader should initiate team motivation by motivational strategies and indirectly through behaviors such as providing a planning and feedback (motivational). Last, a team leader should moderate the emotional level in the team (affective). This, can be achieved by creating an environment in which disagreements about team strategies are openly discussed.

In addition to Zaccaro's functional leadership approach (Zaccaro, et al., 2001), the main responsibility of leaders is to check on what is missing or is not accomplished in an appropriate way within the team (Day, et al., 2004). A team leader's support towards team members is perceived by team members as organizational support: increased team leader support increases the perceived organizational support. Organizational support is found to enhance a team member's commitment to

the organization, which increases performance (Rhoades & Eisenberger, 2002). Therefore team leader's support is considered important. Furthermore, a team leader should diagnose problems, generate possible solutions and, finally, implement the most appropriate one (Salas, et al., 2005): leadership is about satisfying the needs of the team (Morgeson, DeRue, & Karam, 2010). Considering the previous discussed tasks of the team leader, it can be concluded that they are a regulating and supporting actor in teams.

On the contrary, in self-managing teams, team members are able self-regulate their team: Morgenson, DeReu and Karam (2010) state that if leaders encourage self-management in teams, team members are encouraged to solve work related problems themselves, this leads to more adaptable and flexible teams. This involves proactive team behavior in which team members continuously look for improvements, introduce new work methods and try to prevent problems. This fits with the transformational leadership style, in which leaders intellectually stimulate their team members. Moreover, the transformational leadership style is positively related to proactive team behavior, and encourages self-managing teams (Williams, Parker, & Turner, 2010).

Therefore we propose the following:

13) The explicit monitoring of team performance by CI team leaders leads to high CI team performance only if such team leaders have empowered their team members to express their improvement ideas, and if they show a transformational leadership style.
14) CI teams are self-managing.
15) CI team members show leaders-specific behavior.

To measure team leadership two influential lines of research can be distilled: the theory of Leader Member Exchange, and the theory of transformational and transactional leadership styles. Both lines of research are included in the empirical part of our study. Our video coding scheme is largely based on the transformational and transactional leadership styles. Whereas, in the survey of this study we applied the Leader Member Exchange scale (LMX). LMX involves the relationship between team leader and team member. Overall an effective team leader needs to create an environment which entails psychological safety and mutual trust, and supports mutual performance monitoring (Day, et al., 2004). As a consequence team leaders and team members (followers) are able to build mature leadership relationships of high-quality, that enable effective execution of leadership functions. (Graen & Uhl-Bien, 1995). Thus, the LMX focuses on dyadic relationships between a leader and its followers, within an organization. According to Graen and Uhl-Bien (1995) it appeared that when leaders develop high-quality relationships with all their followers, performance increased. A relationship between a leader and its followers develops over time: a mature relationship of high quality, entails reciprocity and a mutual reliance on each other for loyalty and support. Therewith, mutual trust, respect and accountability evolves during the process (Graen & Uhl-Bien, 1995).

But what about transformational and transactional leadership styles? Transformational leaders inspire and energize their followers, and create collective confidence by intellectually stimulating them. Transactional leaders are literally focused on transactions: leaders praise and reward their followers for successfully executing their tasks and assignments (Bass, 1990; Bass, Avolio, Jung, & Berson, 2003). In the Multifactor Leadership Questionnaire (MLQ), Bass and Avolio describe the components of both leadership styles. The transformational leadership style includes the following: 'idealized influence', 'inspirational motivation', 'intellectual stimulation', and 'individualized

consideration' (Bass, 1990). Leaders that apply 'idealized influence' gain trust, respect and are admired by their followers. 'Inspirational motivation' includes motivational leaders who stimulate their followers by setting challenging goals and expectations; enthusiasm and optimism are key characteristics'. When leaders apply 'Intellectual stimulation', they challenge their followers to critically think about solutions and to be creative and innovative. The final component of transformational leadership is 'Individualized consideration' which includes personal interest: the personal development of the follower is of interest. On the other hand, the transactional leadership style includes the components: 'contingent reward', 'management by exception (both active and passive) and 'laissez-faire'. 'Contingent reward' entails rewarding related to performance. 'Active management by exception' mainly involves the control of the task execution of followers, in which the focus is on deviations from normal procedures. If a leader applies 'passive management by exception' a team leader intervenes only when norms are not met. The 'laissez faire' component speaks for itself, the leader is very passive and avoids decision making (Avolio, Bass, & Jung, 1999; Bass, 1990; Bass, et al., 2003). In research, support is found for a positive relationship between transformational leadership and team effectiveness: transformational leadership creates enhanced willingness to attain the organization's goals and difficult challenges (Bass, 1990; Bass, et al., 2003). Considering this we propose the following:

16) CI team leaders that expose transformational leadership behavior achieve higher team performance.

The behavioral components of both the transformational and transactional leadership style are core elements in the behavioral video-coding scheme developed by Van Der Weide en Wilderom (2007) that will be used in the empirical part of our study.

In these sections sixteen propositions are set. However due to the explorative scope of the study, not all propositions are reported in the results section of this thesis.

3. Methodology

In this study, team members and team leaders of five highly performing CI teams were video-taped, to minutely analyze their behavior, by means of two types of video-analyses. Moreover, they were video-taped during three prototypical situations: start-up meeting, weekly monitoring meeting and everyday work. The study is based on an earlier validated video-observation and analysis method developed by Van Der Weide (2007). Moreover, all team members and leaders completed a survey, to be able to analyze if there is any congruence between the observed and the self-reported behavior. In this section we elaborate on the sample, the survey, the procedures of data collection, the behavioral coding scheme, the video analysis method and the data analysis.

3.1 Sampling

Our sample consists of five highly performing shop floor teams that, as shown in table 1, operate in either a manufacturing or a service providing firm. The teams operating in manufacturing firms consist of two production teams and one logistics team. The teams operating in service firms consist of a health insurance company team and a team of a public tax administration office. These teams

are selected based on interviews and a document study of each team's key performance indicators, and meet the following criteria:

- The teams implemented a CI strategy more than one year prior to data collection;
- The teams continuously enhance their own work habits;
- The teams established stable growth in terms of the following quantitative performance measures: employee satisfaction; customer satisfaction; and financial results.

An extensive description of the selection procedure of the teams is reported in Van Dun and Wilderom (2010), who collected the data used in this study. The sample characteristics are described in Table 2. To highlight some of the main characteristics, we add that all team leaders, except for one, completed a higher education program. And, apart from a few exceptions, all team members completed vocational education and training. Furthermore, the Mail distributor team mainly consists of female team members and the Truck and Retail manufacturing teams mainly consist of male team members.

Table 2 – Descriptions of the Five Selected High-Performing CI Teams (Van Dun, et al., 2011, p. 3)

		Months working	Team size (incl. team	Mean years working in the	Gender		Employment	
Type of organization	Main team task	with CI	leader)	team (SD)	male	female	full-time	part-time
Truck manufacturing	Assembling Trucks	147	11	3.4 (2.35)	89%	11%	67%	33%
Retail manufacturing	Assembling small consumer products	87	6	1.4 (0.49)[a]	100%	0%	100%	0%
Mail distributor	Sorting irregular Mail by hand	26	13	5.8 (4.48)	11%	89%	10%	90%
Health Insurance	Handling claims of private persons	19	36	4.3 (4.14)	36%	64%	68%	32%
Tax administration	Monitoring Taxes	12	10	4.6 (4.79)	56%	44%	44%	56%

Note. [a] This team was formed after a reorganization 13 months before the study was performed.

Throughout the text we will refer to these teams with the following abbreviations: Truck (Truck manufacturing), Retail (Retail manufacturing), Mail (Mail distributor), Insur (Health Insurance) and Tax (Tax administration).

3.2 Survey

The team members and team leaders observed were also surveyed about their behavior. All constructs were measured by a 7-point Likert scale, ranging from 'strongly disagree' (1) to 'strongly agree' (7). The survey is included in appendix D.

Team leadership The leadership behaviors of the behavioral observation scheme, were captured in 18 leader specific behavior Likert scales. These 5-point Likert scales, ranging from 'disagreeing' to 'agreeing' were developed by Wilderom, Wouters and Van den Berg (Under review). A sample item is: *'gives negative feedback'*. *Team leadership* was measured by the Leader-Member Exchange scale (LMX). This measure exists of seven items report on the expected agreement between leader and member. One sample item is: *'How well does your leader understand your job problems and needs'* (Graen & Uhl-Bien, 1995, p. 237).

Team dynamics *Perceived team cohesion* was measured by five items of the Perceived Cohesion Scale (PCS) developed by Bollen and Hoyle (1990) and adopted by Chin et al. (1999). The following

example item is included in the survey: 'I see myself as part of this group' (Chin, et al., 1999, p. 757). *Feedback* was measured by five items from Morgan, Glickman, Woodard, Blaiwes and Salas (1986). The following sample item is included: *'called attention to a mistake made by another member without being negative'* (Morgan, et al., 1986, p. 72). *Back-up behavior* was measured by three items of Seers (1989) that illustrates the willingness of team members to switch jobs, to finish jobs of others and the willingness of others to finish your work. The following item is used in the measure: '*I am willing to finish work assigned to others*' (Seers, 1989, p. 125). *Team learning* was measured by using the measure 'team learning behavior' of Edmondson (1999). This measure involves six items, including the following: '*we regularly take time to figure out ways to improve our team's work processes'* (Edmondson, 1999, p. 383). *Information sharing* consisted of eight items, of which four items measure 'knowledge donating' and four items 'knowledge collecting', and are adopted from De Vries et al. (2006). The following example is included in the 'knowledge donating' items: *'I share information I have with my colleagues'* (De Vries, et al., 2006, p. 131). In addition, the following example is included in the set of 'knowledge collecting' items: '*When I need knowledge I ask my colleagues about it'* (De Vries, et al., 2006, p. 131). *Conflict management* was measured by four items of Tekleab et al. (2009) of which two items were adapted from Cosier and Dalton (1990) A sample item for this construct is *'conflict is dealt with openly in this team'* (Tekleab, et al., 2009, p. 198). *Team adaptability* was measured with four items from Angle and Perry (1981). These item were adapted from survey items of Mott (1972). An example item is: '*people in this organization do a good job anticipating problems'* (Angle & Perry, 1981, p. 14).

Team performance measures Finally, to measure team performance we used three different constructs. *General satisfaction* was measured by use of three items from Wageman, Hackman et Lehman (2005). They assess satisfaction with team relationships, and include the following item: *'I enjoy the kind of work we do in this team'* (Wageman, et al., 2005, p. 388). *Satisfaction with growth opportunities* was also measured by two items of Wageman et al. (2005), and includes: '*I learn a great deal from my work on this team*' (Wageman, et al., 2005, p. 388). *General performance* was measured by four items, defined by Hackman (1989). These items measure team performance, team viability and team learning. We provide the following example item to illustrate the measure: '*We have completed the task in a way we all agree upon*' (Van Den Bossche, et al., 2006, p. 507).

3.3 Procedures of data collection

Our data collection procedure consisted of two phases; a pilot video study and five in depth video-studies. The pilot video study enabled us to test our data collection tools and optimize the data collection procedure. This resulted in the following method to video-tape the five high performing CI teams during their daily work activities: The teams were each studied closely for one week by two researchers. The first day was meant to familiarize with and to participate in the team; to get to know the team members and team leaders, their task and to 'break the ice'. This 'observant participation' is a technique to enhance invisibility during the video-taping later on (Czarniawska, 1998). The second day, all team members and their leaders were surveyed (N=60) on team effectiveness and performance factors. At the third day the videotaping was introduced and tested. The fourth and fifth days were used to video-tape the three prototypical situations by use of the two types of video analyses; filming meetings and video shadowing. Filming meetings and video shadowing is considered non-participant observation as the observers did not participate in the everyday work and it does not require simultaneous action and observation (Czarniawska, 2007).

When meetings (short and long) were filmed the observers used two cameras. One camera aimed at the team leader and one to capture the team as a whole. Video shadowing comprises following a team member or team leader with a camera: researchers video-tape activities as they naturally occur (LeBaron, 2008). The observers only used one camera and tried to film the team members and leaders as unobtrusively as possible. However, video shadowing may cause discomfort for the subject of observation. To prevent uncomfortable situations, the researchers sometimes had a little conversation with the concerning team members or leaders, because discomfort may cause that team members and leaders behave differently. However, these conversations are not coded as such. Video shadowing adapts to the difficulty of observing objects that move around quickly and a lot, and allows you to move with them (Czarniawska, 1998). Furthermore it boosted the morale of the person being observed: it enlarges the status of the shadowed team member in the eyes of its co-team members (Bunderson & Boumgarden, 2010).

In total 1,795 minutes, which is about 30 hours, of video tapes were collected from the five highly performing teams. The total set of footage can be categorized into four types of data: 1) Meetings: a. start-up meetings (< 10 minutes) b. weekly monitoring meetings (> 15 minutes) 2) daily work practices: a. daily work practices of a team leader b. Daily work practices of a team member. The total data set was minutely analyzed to unravel the actual behavior of team members and team leaders in a natural day-to-day setting.

Start-up meeting The start-up meeting is a short meeting of about five minutes to discuss what needs to be done that day. It takes place on the shop floor, and during this meeting some team members sit and others are standing, however this ratio differs per team. It is not a highly formal meeting. Information is mainly sent by the team leader and team members are able to ask questions and to communicate their points of view. Any problems and points of improvement that relate to their daily tasks, tend to be shortly discussed. Four of the five teams used the start-up meeting as a Lean practice, which we all filmed. However, in one of these four Lean teams, only one daily start up meeting was taped. However this was not a representative one, compared to a usual start-up meeting, as the total meeting was dedicated to honoring one of the team members. Ceremonies and rituals like these give expression to an organizational culture's values and beliefs (Islam & Zyphur, 2009), and do not represent the usual day to day practices. Therefore including this ceremony would have influenced the validity of the results. Hence, we decided to omit this daily meeting which resulted in an analysis of three teams with start-up meetings: the Tax, Truck and Mail team. The total amount of footage for the start-up meetings involves 38 minutes of tape resulting from seven start-up meetings in three teams. In one team three start-up meetings were video-taped as there had been more shifts on one day, and therefore more start-up meetings.

Weekly monitoring meeting The weekly monitoring meetings take much more time than the start-up meetings (about half an hour to an hour). It is a more structured meeting in which the points of discussion are determined beforehand, and led mostly by the team leader. It includes a longer time frame to be discussed, in which, among others, figures, points of improvements and current projects are discussed. It still involves a lot of information sent by the team leader; however, there is more room for interaction. Team members are stimulated to share their point of view and their ideas of improvement, and inform their team leader about the state of affairs of issues discussed. Three teams applied weekly monitoring meetings as a Lean practice which resulted in an analysis of the observed behaviors in weekly monitoring meeting of three teams: the Tax, Insur and Retail team. In

all the five teams a team leader and two team members were video-shadowed, which resulted in the analyses of daily work practices of five teams. This total footage of the weekly meeting involves 190 minutes of tape resulting from four weekly monitoring meetings in three teams. In one team they have two meetings, as this was a very large team. One meeting was with the total team and the other meeting with only a few team members.

Video shadowing work behavior By means of video shadowing team leaders and team members are video-taped during their daily work tasks on the shop floor, outside meetings. The video tapes do not include all their work tasks, but are randomly taken video recordings of their daily work tasks. This may, for instance, comprise conversations with team members, net task behavior and assisting or being assisted by other team members. For each team, the team leader and two team members were video shadowed during their everyday work. These team members were selected through a nomination item in the survey; the two team members of each team who were rated most effective by their peer team members were filmed. However, these team members were unaware that they were rated 'most effective' by their peers. The team leader and two team members were video-taped during two consecutive days. They were each filmed for at least half an hour to an hour. The total video shadowing footage includes 911 minutes tape of video shadowed team members, and 656 minutes tape of video shadowed team leaders.

Directly after the video-taping team members and leaders were asked by the researcher if the meetings and daily work practices were representative or not. They all answered that they did not act differently in front of the camera. This is confirmed by the researchers, as they worked with the team before the introduction of the camera and they did not notice the behavior changed due to the camera. This corresponds with the findings of Kent and Foster (1977) who state that using video cameras to tape behavior seems to be largely unobtrusive and does not affect unduly the behavior of those being filmed. Not to forget that cameras in these times were even much bigger and much more obvious. Furthermore Van Vuuren, Brummans and Westerhof (2011) who video-shadowed nurses and residents concluded in their study that the subjects of observation got used to the presence of the camera fairly quickly, and that *'it seems that they went on with their everyday activities 'as usual' and behaved more or less 'naturally' without displaying clear signs of self-consciousness, insecurity, shyness, embarrassment, or uneasiness/discomfort'* (Van Vuuren, et al., 2011, p. 19).

Videotaping allows for repetitive analysis of subtle behaviors and emotions by multiple researchers in a reliable, precise and neutral manner (Van Der Weide & Wilderom, 2006). Moreover, Van Vuuren, et al. (2011) state that video analysis permits researchers to view the recorded data multiple times which enables a fuller, more detailed analysis. For this reason Kozinets and Belk (2006) state that filming represents the most reliable form of data collection, especially if interactional details of organizational processes are important to study (Kozinets & Belk, 2006). For instance, when taking field notes, certain details may be overlooked. Yet, if once missed, it is not possible to review the interaction.

3.4 Behavioral coding scheme

In order to objectively analyze the video-observed behavior of the five highly performing teams, we applied the behavioral coding scheme used in the video-study of Hoogeboom et al. (2011). This coding scheme exists of twelve mutually exclusive behaviors that are found to be relevant for coding the behavioral pattern of leaders. The coding scheme is based on Van Der Weide's video coding

scheme (Van Der Weide, 2007) which has been validated in many video-observation studies (Gupta, Wilderom, & Van Hillegersberg, 2009; Nijhuis, 2007; Nijhuis & Wilderom, 2009; Van Der Weide & Wilderom, 2004, 2006; Van Dun, Hicks, Wilderom, & Van Lieshout, 2010). These behaviors originate from transformational and transactional behaviors and from extant behavioral observation schemes (Bales, 1950; Borgotta, 1964). The coding scheme exists of specific leader behavior in the following three categories: 1) 'steering' 2) 'supporting' and 3) 'self-defending' type of behaviors, whereas the 'supporting' type of behaviors mainly derived from the transformational leadership style. As this coding scheme was developed to observe leaders, we also applied it to observe team members. This is because members of CI teams also may exhibit leader behavior, since they may be self-managing.
In our study, both team members and leaders are observed during regular meetings as well as daily work practices outside of these meetings. Thus, compared to previous video-observation studies that used the coding scheme originated from Van Der Weide (2007), our subject of analysis consists of teams, instead of only leaders; moreover, we filmed behavior on the shop floor instead of just meetings. However, a pilot test showed that the coding scheme almost covers the full range of team members' and leaders' behavioral repertoire on the shop floor. We added one additional mutually exclusive behavior in order to code the full range of behaviors, named 'net task behavior'. This type of behavior can be described as: working on assigned work tasks without any verbal communication between team members, team leaders or other colleagues from other teams or departments. If a team member or leader needs to communicate during their work task, this communication is overruling the 'net task behavior' and needs to be coded with the concerning behaviors of the coding scheme. Furthermore, we separated the behaviors 'agreeing' and 'disagreeing', as we view them as stand-alone behaviors. They were included in, respectively, the behavioral items 'individualized consideration' and 'directing' in the coding scheme of Hoogeboom (2011).

In sum, the adapted coding scheme we used in this study consists of fifteen mutually exclusive behaviors. With this coding scheme we analyzed the behaviors of team members and leaders during their daily work practices. The elaborated coding scheme instructed those who rated the tapes. Appendix A lists the fifteen behaviors with accompanying examples.

3.5 Video observation method

All tapes were also coded with the behavioral transcription software 'The Observer' (Noldus, Trienes, Hendriksen, Jansen, & Jansen, 2000). This software allows users to assign codes very precisely to every individual behavior that occurs. Each video tape was separately coded by two observers to increase objectivity. The total set of footage was coded by seven raters, who all either were in the final phase of a Master's degree in Business Administration or finished this study. They all voluntarily participated in the study as they were interested in working with the software and this type of research. One of the authors of this paper coded every videotape, whilst the second rater was performed by the remaining six raters. In accordance with the coding procedure in the study of Hoogeboom et al. (2011), prior to the actual coding procedure the raters were trained to use the software and interpret the coding scheme correctly. This training increased the accuracy and reliability of the coding. In this training each behavioral item was thoroughly explained, and questions of the raters were intensively discussed. In addition, before the coding started each day, the raters had to read the coding scheme to prevent own interpretations of the behavioral items. Moreover, during the coding procedure the coding scheme was at hand to check.

The tapes were analyzed in terms of frequency (how often a behavior occurs) and the duration of certain behavior. The unit of analysis for coding was either (a) one sentence, (b) several sentences, (c) specific words, or (d) a certain moment, that illustrates the same behavioral item. Nonverbal behavior, e.g. listening, was also taken into account. We coded 15 mutually exclusive behaviors as listed in Appendix A. The raters compared their assigned codes, after coding each tape separately. If these codes deviated from each other (they did not agree on a behavioral item), they viewed the concerning video fragment again and discussed the assigned codes, mostly resulting in recoding by one of the raters. A disagreement existed when the two raters did not agree on the type of behavior and the time of occurrence, which is allowed to deviate two seconds. After reconsidering and recoding the disagreements the inter-rater reliability was calculated, by means of computing the percentage of agreements within the entire coded footage. In this study the average inter-rater reliability of all coded tapes was 97.9%.

3.6 Data analysis

A total set of frequencies and duration of behavioral items per category resulted from the video analyses. The results of the two team members that were video-shadowed in one team were merged into one behavioral profile of a team member per team. In the results section, the durations of the behavioral items are not explicitly discussed, to prevent an overload of information; however, remarkable differences between frequencies and duration are discussed. The frequencies are displayed in column tables and a descriptive analysis provides an extensive overview of the results. For the daily meetings and the weekly meetings, concerning the team members, one extra note has to be made: during these meetings the team members largely 'listen' to their team leader, however the 'active listening' behavior is not included in the percentages, since listening was not coded for every team member (not every team member could be filmed). Only the verbal communication has been considered in these sections.

Furthermore, we compared our results of the team leader behaviors during the weekly monitoring meeting to the studies of Hoogeboom et al. (2011) and Van Dun et al. (2010), in which respectively, effective middle managers and effective Lean middle managers are studied. To measure deviations between the studies, we compared the means of these studies, per behavioral item, by conducting a t-test.

The survey that was completed by the team members and leaders provided information about the perceived behavior of team members and leaders. We conducted a Spearman's Rho test, in which the correlations are computed between the observed and self-reported behaviors. We selected this test because we related an ordinal measurement level to a ratio measurement level. After elimination of 2 items, the alpha's of the constructs were ranging from α=0.666 to α=0.876 (see Table 7-12 in the appendices).

Finally, we will examine the set of propositions through linking the results of the observed behaviors to them (Table 3). In the table below we explain what behavior can be related to which propositions.

Table 3 – propositions linked to behaviors of coding scheme

	Propositions	**Behaviors to be related to proposition**
1	Highly structured CI teams achieve higher levels of team learning	No behavior can be related to this proposition
2	Team learning leads to CI	No behavior can be related to this proposition
3	Higher levels of team learning lead to higher CI team performance	No behavior can be related to this proposition
4	High CI team performance is a function of team members feeling psychologically safe to discuss errors or ideas for improvement	This proposition is related to 'visioning' and 'intellectual stimulation'. Through these behaviors team members are able to give their opinion, ask for ideas and propose new ideas
5	The more CI team members give and get constructive feedback, the higher their team's performance	This proposition is related to 'providing negative feedback'
6	Task conflict and a low amount of process conflict lead to higher CI team performance, through effective conflict management in an open environment that includes mutual trust	'Self-defending' type of behavior and 'disagreeing' are related to task and process conflict. Conflict management is related to 'steering' and 'supporting' type of behaviors
7	Relational conflict dampens CI team performance, but is moderated by conflict management	'Self-defending' type of behavior and 'disagreeing' is related to relational conflict. Conflict management is related to 'steering' and 'supporting' type of behaviors
8	When CI team members regularly share various types of information it will lead to higher CI team performance	This proposition is related to 'informing'.
9	Information sharing should be accomplished as much as possible during pre-scheduled meetings, to minimize temporary production stops	The rate of 'informing' can be related to the two types of meetings explains this proposition
10	In highly-performing CI teams back-up behavior occurs, but only in unforeseeable or incidental circumstances	No behavior can be related to this proposition
11	A high level of back-up behavior within CI teams is associated with a lowering of team performance	No behavior can be related to this proposition
12	CI teams that effectively adapt to change, enhance their level of CI team performance	Differences in behavior over the three prototypical situations can be related to this proposition, as this explains how team members adapt their behavior to the three prototypical situations
13	The explicit monitoring of team performance by CI team leaders leads to high CI team performance only if such team leaders have empowered their team members to express their improvement ideas, and if they show a transformational leadership style	This proposition can be related to the rate of 'intellectual stimulation' of the team leaders: through 'intellectual stimulation' team leaders empower their team members to express their improvement ideas. 'Intellectual stimulation' is a transformational leadership style behavior
14	CI teams are self-managing	This proposition can be related to behaviors such as 'intellectual stimulation' and 'visioning', as through these behaviors, team member express their opinion, ideas for improvement and long-term visions
15	CI team members show leader-specific behavior	Typical leader behaviors are 'informing', 'visioning', 'intellectual stimulation', 'structuring the conversation' and 'individualized consideration'
16	CI team leaders that expose transformational leadership behaviors achiever higher team performance	Transformational leadership style behaviors are 'supportive' type of behaviors

4. Results

The results are divided into three sections. First, the descriptive results, which describe the observed behaviors and, second, a section that discusses the observed versus the self-reported behaviors, both ending with a summary. Third, we examine the propositions that are set in the previous sections. In the descriptive results, the frequencies of each video-taped prototypical situation are discussed for both the team members and team leaders. To avoid an overload of information, the duration of the observed behaviors will not be explicitly discussed. However we did notice some remarkable differences between the frequencies and the duration and will report them where they seem most appropriate.

4.1 Descriptive results

4.1.1 Start-up meetings Table 1 of the appendices describes the frequency of the observed behavior in start-up meetings per team. In the following two sections the results are described per team leader and team member and two column tables provide (Table 4 and 5) a graphical view of the results.

Team leaders' behaviors in start-up meetings**:** The most frequently occurring behaviors for the team leaders are 'verifying' (ranging from 8,8% to 12,9%) , 'structuring the conversation' (ranging from 11,0% to 15,2%), ' informing' (ranging from 18,3% to 24,3%), 'visioning' (ranging from 3,7% to 18,6%), 'individualized consideration' (ranging from 5,8% to 12,7%) and 'active listening' (ranging from 16,9% to 37,1%). These are 'steering' type and 'supportive' type of behaviors, whereas the 'steering' type of behaviors prevail. Noteworthy is that enormous differences exist between the different teams per behavior. On the other hand, to a very low to zero level they show 'self-defending' type of behaviors. Moreover, the teams correspond with each other on the behaviors 'showing disinterest' and 'defending one's own position': they all did not adopt these behaviors.

Two of the team leaders (Truck and Mail) seem to follow the same pattern of behaviors during daily meetings. They equal on the 'self-defending' type of behaviors like 'showing disinterest', 'defending one's own position' and 'providing negative feedback': all 0,0%. Further, they narrow each other on following the 'steering' type and 'supportive' type of behaviors: 'verifying' (resp. 8,8% and 10,1%), 'structuring the conversation' (resp. 15,2% and 13,6%), 'informing' (resp. 22,9% and 24,3%), 'individualized consideration' (resp. 6,5% and 5,8%) and 'active listening' (resp. 20,5% and 16,9%). However, they fairly differ in 'intellectual stimulation' (resp. 0,8% and 2,8%), which is a 'supportive-type' of behavior, and 'visioning' (resp. 18,6% and 12,0%) a 'steering' type of behavior. Interestingly, in the Tax team the team leader exposed almost double the amount of listening behavior (37,1%) compared to the other two teams (resp. 20,5% and 16,9%). Moreover, the team leader of the Tax team did not expose any 'providing negative feedback' (0,0%) behavior and 'directing/correcting' (0,0%) and 'disagreeing' (0,0%) behavior, whereas the other two teams do to a low extent. Furthermore, 'visioning' (3,7%) behavior is coded to a very low extent in this team. The Truck team leader exposed a very low rate of 'intellectual stimulation´ behavior (0,8%) compared to the other teams.

Noteworthy about the *durations* of these behaviors, is that the *duration* percentages of 'informing' in the Truck and Mail team, are double the amount of the frequency percentages. On the other hand, the *duration* percentage of 'listening' is half the amount of the frequency percentage.

Furthermore, for all teams the *duration* percentage of 'verifying' was half the amount of the frequency percentage. This implies that 'listening' and 'verifying' are behaviors of short duration, contrary to 'informing'.

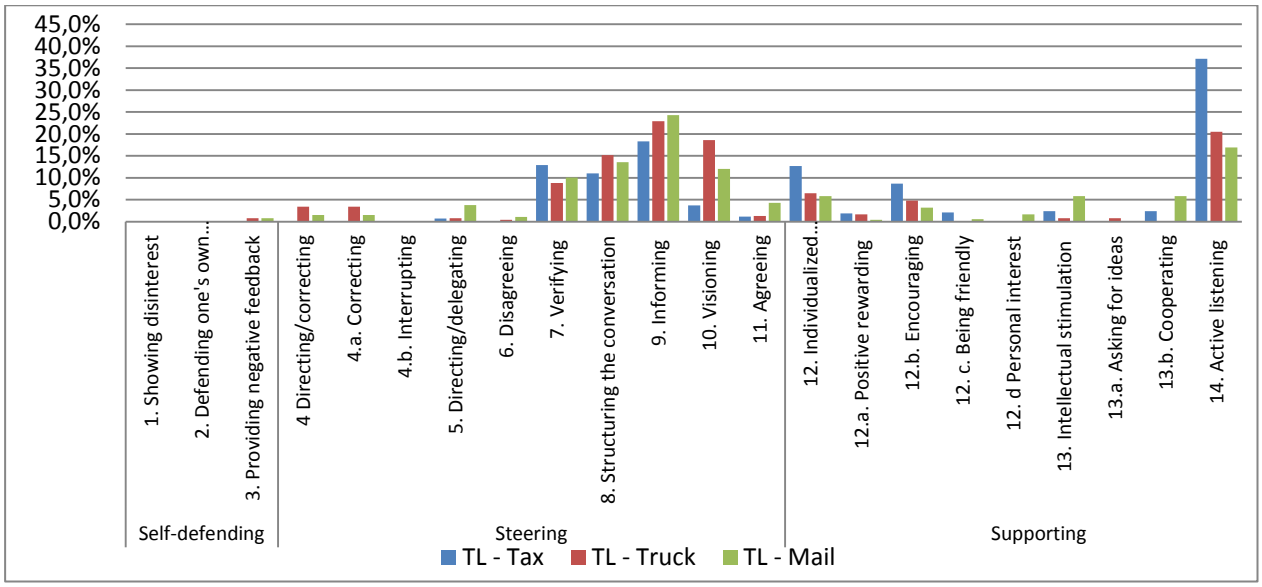

Table 4: Column table of the frequential behaviors of the team leaders in start-up meetings (n=3)

Team members' behaviors in start-up meeting: The most prevailing behaviors for the team members are 'showing disinterest' (ranging from 3,2% to 29,6%) , 'verifying' (ranging from 6,8% to 14,1%), 'informing' (ranging from 19,3% to 27,3%), 'visioning'[3] (ranging from 5,4% to 17,1%) and 'individualized consideration – (mainly) encouraging' (ranging from 16,3 to 35,1%). These behaviors stem from all the three types of behaviors; 'steering', 'supporting', and 'self-defending' type of behaviors. As with the team leaders, enormous differences exist between the different teams per behavior. The behavior 'structuring the conversation' (ranging from 0,0% to 2,5%) has hardly shown amongst team members, but only by the team leaders (ranging from 11,0% to 15,2%). This however is a leader-specific behavior. Moreover, compared to the team leaders the high rate of 'individualized consideration' is remarkable. However, this may be due to the fact that this behavior includes ´encouraging´ which comprises laughs and jokes. This involves mostly more than one team member per joke or laugh. Furthermore, whilst team leaders do not, or to a very low extend, show 'self-defending' type of behaviors, the team members show a little amount of 'providing negative feedback' (resp. 0,3%, 0,0% and 5,8%) or 'defending one´s own position' (resp. 0,0%, 2,9% and 0,0%).

Two teams (Truck and Mail) have high rates on 'showing disinterest' (resp. 26,4% and 29,6%), therefore, they have higher scores on showing 'self-defending' type of behaviors. These are the teams where the team leaders seemed to follow the same patterns of behavior for the team leader. These team members also follow to a certain extent the same pattern: they agree on the amount of 'directing/correcting' (2,2% and 3,7%), 'verifying' (resp. 14,1% and 12,7%), 'informing'(resp. 24,4% and 19,3%), and 'visioning' (0,7% and 5,4%). On the other hand, the team members of the Tax team are 'visioning' a lot more than the other two teams. The members of Truck team do not show any 'intellectual stimulation' (0%) behaviors, which is corresponding with the figures of the team leader (0,8%) and low compared to the other team members (resp. 2,5% and 2,8%).

[3] Note: this is not a prevailing behavior for the Truck team (0,7%).

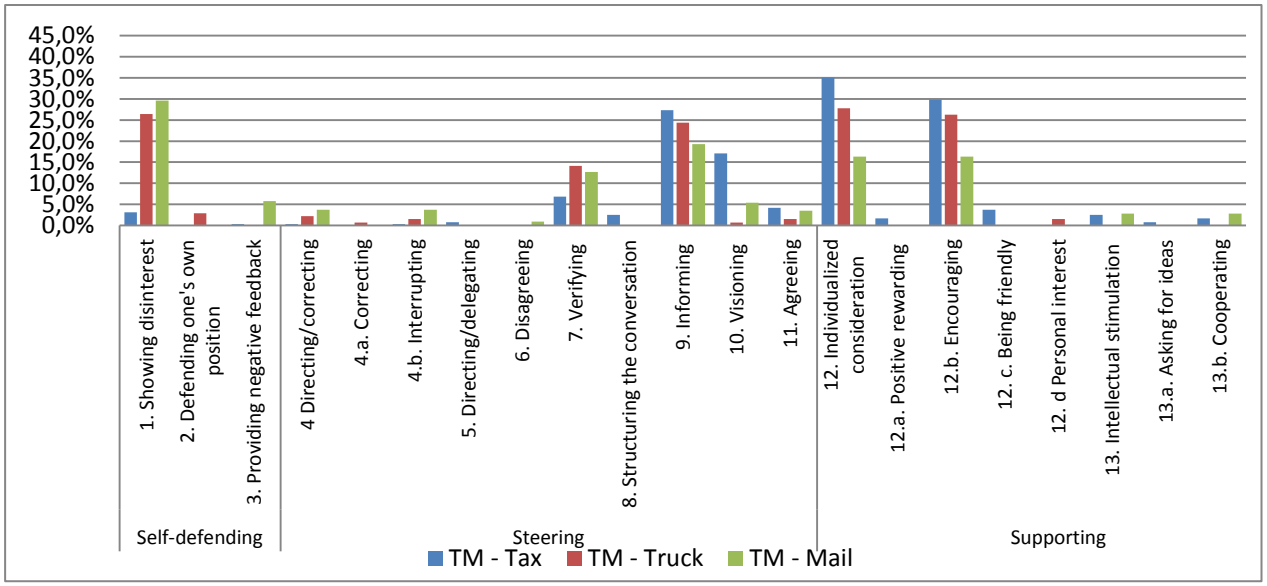

Table 5: Column table of the frequential observed behaviors of team members in start-up meetings. Note that active listening is not considered in these figures (n=3)

Comparing team leaders' and team members' behaviors during start-up meetings: Compared to the team leaders, the team members expose a high rate of 'individualized consideration'. Second, the team members expose 'self-defending' type of behaviors whereas the team leaders do not. The team members show a little amount of 'defending one's own position' and 'providing negative feedback' and a large amount of 'showing disinterest'. Furthermore, the team members do barely expose the behavior 'structuring the conversation', since this is a role-specific behavior. Finally, we were struck by a pattern that uncovered with regard to 'visioning': if a team leader exposed less of this behavior team members exposed more of this behavior et vice versa.

4.1.2 Weekly monitoring meetings Table 2 of the appendices describes the frequencies of the observed behaviors in weekly monitoring meetings per team. Similar to the previous paragraphs, the results of the process monitoring meetings are described per team leader and team member and two column tables (Table 6 and 8) provide a graphical view of the results.

Team leaders' behaviors during weekly meetings: Characteristic for the team leaders is that during the weekly monitoring meetings listening is by far the most frequently occurring behavior (resp. 40,9%, 34,1% and 41,9%). Further, the following behaviors are principal ones in the weekly monitoring meetings: 'verifying' (ranging from 5,9% to 18,7%), 'structuring the conversation' (ranging from 5,2% to 6,8%), 'informing' (ranging from 10,5% to 23,6%), 'individualized consideration – (mainly) encouraging ' (ranging from 5,1% to 9,4%) and 'intellectual stimulation' (ranging from 5,2% to 6,6%). These are 'steering' type and 'supporting' type of behaviors. Again, large differences exist between the frequencies per behavior. All teams have very low rates (up to 1,7%) or a zero rate on the three 'self-defending' type of behaviors and 'directing/correcting', 'disagreeing' and 'agreeing' behavior. Only minor differences per team exist between these behavioral items.

The Tax and the Retail team leaders follow about the same pattern of behaviors. They agree on the following behaviors: the 'self-defending' type of behaviors, 'directing/correcting', 'verifying', 'structuring the conversation', 'informing', 'visioning', 'agreeing', 'individualized consideration', 'intellectual stimulation' and 'listening'. The Tax and Retail team leaders showed double the amount

of ‘informing’ behavior compared to the Insur team leader, whereas the Insur team leader had double the amount of ‘visioning’ behavior. Compared to the start-up meetings the team leaders showed more ‘intellectual stimulation’ behavior, although the Retail team showed this to a lower extent (3,5%) than the other two teams (resp. 5,2% and 6,6%).

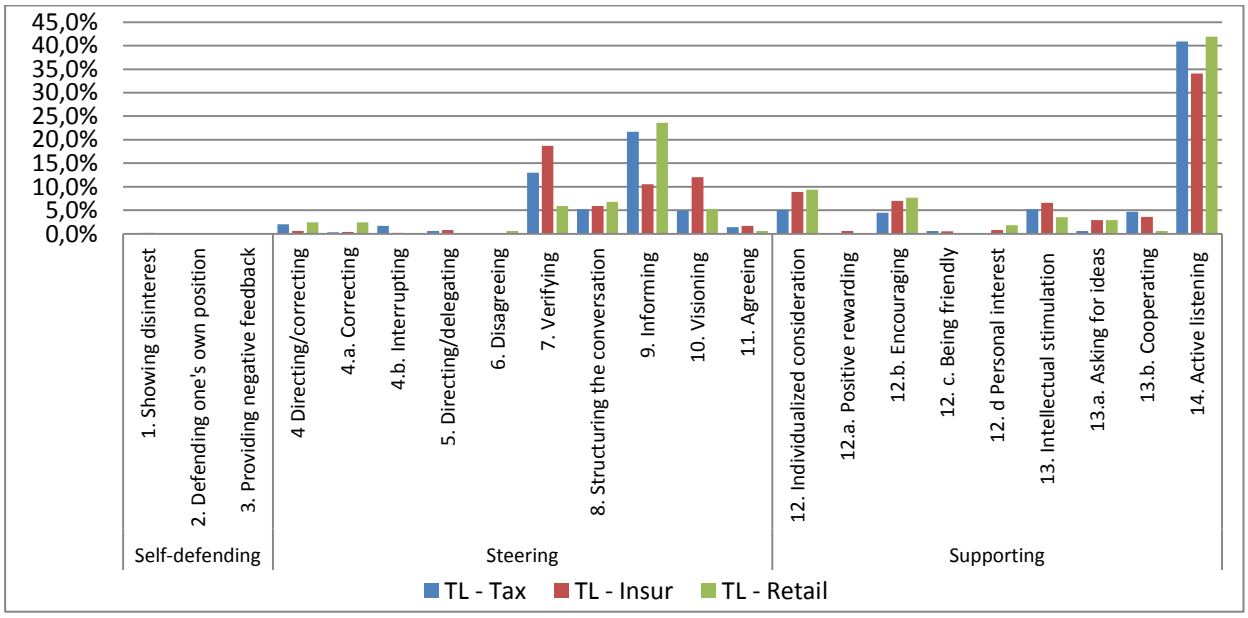

Table 6: Column table of the frequential observed behaviors of team leaders in weekly monitoring meetings (n=3)

The leader behaviors during these weekly meetings can be compared to the outcomes of the leadership studies of Hoogeboom et al. (2011) and Van Dun et al. (2010). Table 7 displays the exposed leader behaviors per study. The behavioral frequencies displayed of our study are the means of the three team leaders per behavioral item.

Compared to the other two studies, it appeared that the team leaders in our study exposed a very low rate of ‘self-defending’ type of behaviors, since they have hardly exposed any ‘self-defending’ type of behaviors: ‘showing disinterest’ (0,1%), ‘defending one’s own position’ (0,0%) and ‘providing negative feedback’ (0,0%). The other two studies scored higher on these behaviors: ‘showing disinterest’ (resp. 0,6% and 2,6%), ‘defending one’s own position’ (resp. 0,4% and 0,2%) and ‘providing negative feedback’ (resp. 0,7% and 0,4%) . Furthermore in our study the mean of ‘verifying’ (12,5%) is twice as much as the means of the other studies (resp. 6,3% and 4,8%).

To statistically test these percentages of the three different studies with each other, we computed the t-value for each behavioral item. It showed a significant difference between the mean of ‘showing disinterest’ of our study and the means of both other studies on this behavioral item: compared to Hoogeboom et al. (2011) (t = -8.000, p = 0.015 (2-tailed)), and compared to Van Dun et al. (2010) (t = -38.000, p = 0,001 (2-tailed)). Additionally, we found a significant difference between the means of our study and the study of Van Dun et al. (2010) on the behavioral item ‘structuring the conversation’ (t = -12,124, p = 0,007 (2-tailed)). However, in the study of Van Dun et al. (2010) ‘directing/correcting – interrupting’ was additionally included in the behavioral item, which was not the case in our study and the study of Hoogeboom et al. (2010).

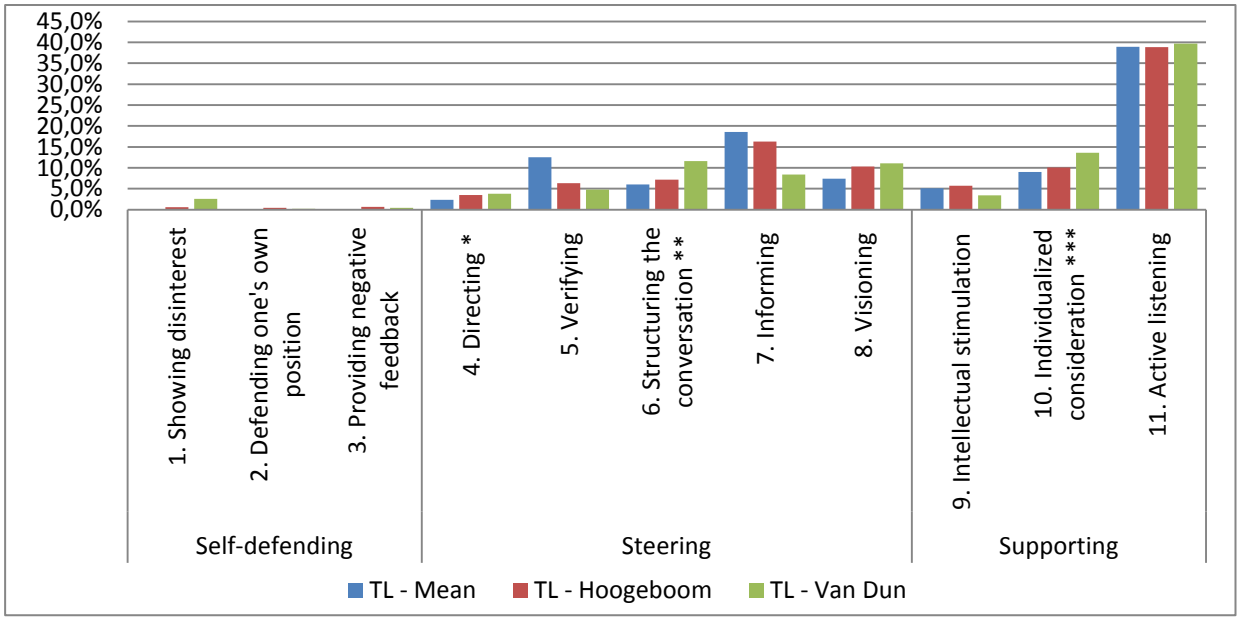

Table 7: Column table of the frequential observed behaviors of team leaders of three different studies
* Includes 'directing/correcting', 'directing/delegating' and 'disagreeing'
**includes also 'directing/correcting – interrupting' in the study of Van Dun et al. (2010)
*** Includes Agreeing

Team members' behavior during weekly meetings: The most occurring behaviors during the weekly monitoring meetings for the team members are 'verifying' (ranging from 7,7% to 23,4%), 'informing' (ranging from 31,9% to 37,2%), 'visioning' (ranging from 11,5% to 26,3), 'agreeing' (ranging from 5,0% to 6,7%) and 'individualized consideration – (mainly) encouraging' (ranging from 9,5% to 12,4%). These are mainly 'steering' type and a smaller part of 'supporting' type of behavior. Large differences per behavior between the teams exist. Nevertheless, the team members narrow each other on 'informing', 'agreeing' and 'individualized consideration'. In all teams the team members score close to zero or zero on 'directing/delegating'. Corresponding to the team leaders, the team members also display some 'intellectual stimulation' (ranging from 2,6% to 6,2%) behavior.

Team members do not show behavior to 'structure the conversation' except for the Insur team members. This is due to the fact that one of the team members instead of the team leader chaired the meeting. Furthermore, the Insur and Retail team members seem to follow the same pattern of behavior. In addition to the behaviors already discussed in the previous paragraph, the Insur and Retail teams resemble each other on 'verifying' (resp. 7,7% - 10,8%) and 'visioning' (resp. 25,9% - 26,3%). Moreover, they exposed 'self-defending' type of behaviors only to a low extent: (1) 'showing disinterest' (0,0% - 0,4%), (2) 'defending one's own position' (0,0% - 0,6%) (3) 'providing negative feedback' (0,4% - 1,2%). On the other hand, the Tax team members showed a larger amount of these behaviors: (1) 'showing disinterest' (1,1%), (2) 'defending one's own position' (3,2%) (3) 'providing negative feedback' (1,2%). The team members of the Tax team also 'disagree' to a certain extent (3,5%). The Retail team members even pass this percentage (5,0%), but the Insur team members do not show any 'disagreeing' behavior at all. These proportions per team also count for the behavioral item 'directing/correcting' (resp. 3,5%, 1,4% and 5,0%).

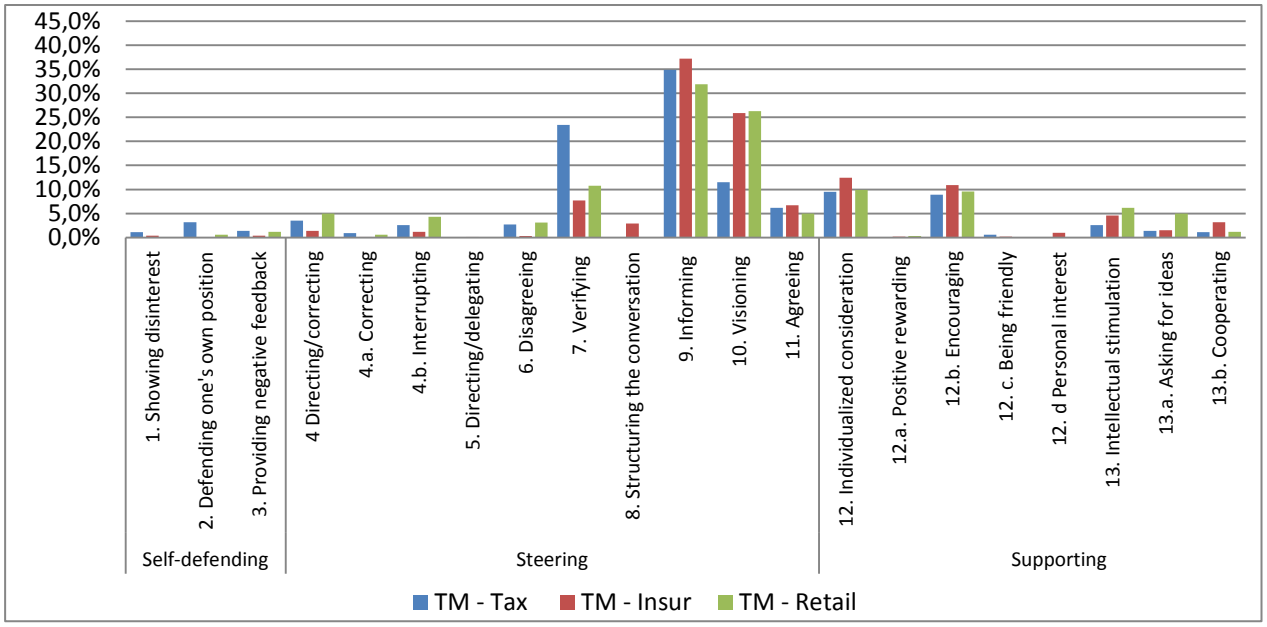

Table 8: Column table of the frequential observed behaviors of team members in weekly monitoring meetings. Note that 'active listening' is not considered in these figures (n=3)

Comparing team leaders' and team members' behaviors during weekly meetings: As with the start-up meeting the team members did not show any 'structuring the conversation' behavior, except for the Tax team, where one of the team member chaired the meeting. Also in the Tax team, the team members exposed a certain amount of 'self-defending' type of behaviors, whereas their team leader did not.

4.1.3. Work behavior team leaders Principal behaviors for the team members during their daily work processes are 'verifying' (ranging from 9,7% to 12,9%), 'informing' (ranging from 10,5% to 22,4%), 'visioning' (ranging from 5,7% to 9,5%), 'individualized consideration' (ranging from 4,8% to 14,0%), 'listening' (ranging from 33,6% to 39,7%) and 'net task behavior' (ranging from 3,8% to 16,2%). They mainly expose 'steering' type and 'supporting' type of behavior plus a considerable amount of the 'independent-type' of 'net task behavior'. However, at some behavioral items the dispersal of the frequencies is high. To a very low to zero extent (ranging from 0,0% to 0,7%) they expose 'self-defending type' of behavior and 'disagreeing' and 'directing/correcting'. The team leaders have a similar amount of frequencies on the behaviors 'verifying', 'visioning', 'listening', plus the five behaviors that have low frequencies, as previously listed (Table 9).

Overall, the team leaders seem to have about the same distribution of frequency of behavior. However, there are some outliers. To start with the Insur team leader, the percentage of 'informing' is lower (10,5%) than the percentages of the other team leaders (resp. 22,4%, 16,2%, 19,0% and 19,6%). Second, the Insur team leader has a high rate on 'individualized consideration' (14,0%), in which they have high scores on 'encouraging' (7,2%) and 'personal interest' (5,3%). Finally, the Insur team leader applied 'structuring the conversation' (3,1%) behavior during the daily work practices. Other team leaders did not expose this behavior, or less than 1%. The Tax team leader had a very low frequency percentage of 'net task behavior' (3,8%), while the other team leaders all had a percentage ranging from 10,7% to 16,2%. Further, the Tax team leader has an above average score on 'individualized consideration' in which the team leader has a high rate on 'being friendly' (4,4%) and an above moderate rate on 'personal interest' (3,4%).

The team leaders also differ on the 'directing/delegating' behavior: The Tax, Insur and Truck team leader exposed a very low rate of this behavior, but the Retail and Mail team leaders expose somewhat more of this behavior (resp. 2,2% and 3,0%). The opposite applies for the 'intellectual stimulation' behavior: the Retail and Mail team leaders showed this behavior only marginally (resp. 0,3% and 0,8%), and the Tax, Insur and Truck team leaders exposed this behavior more often (resp. 2,4%, 3,4% and 1,9%).

As expected, the frequency percentages of 'net task behavior' are much lower than the *duration* percentages. The frequency percentages of this behavioral item vary from 4% to 16%, and the duration percentages vary from 36% to 69%.

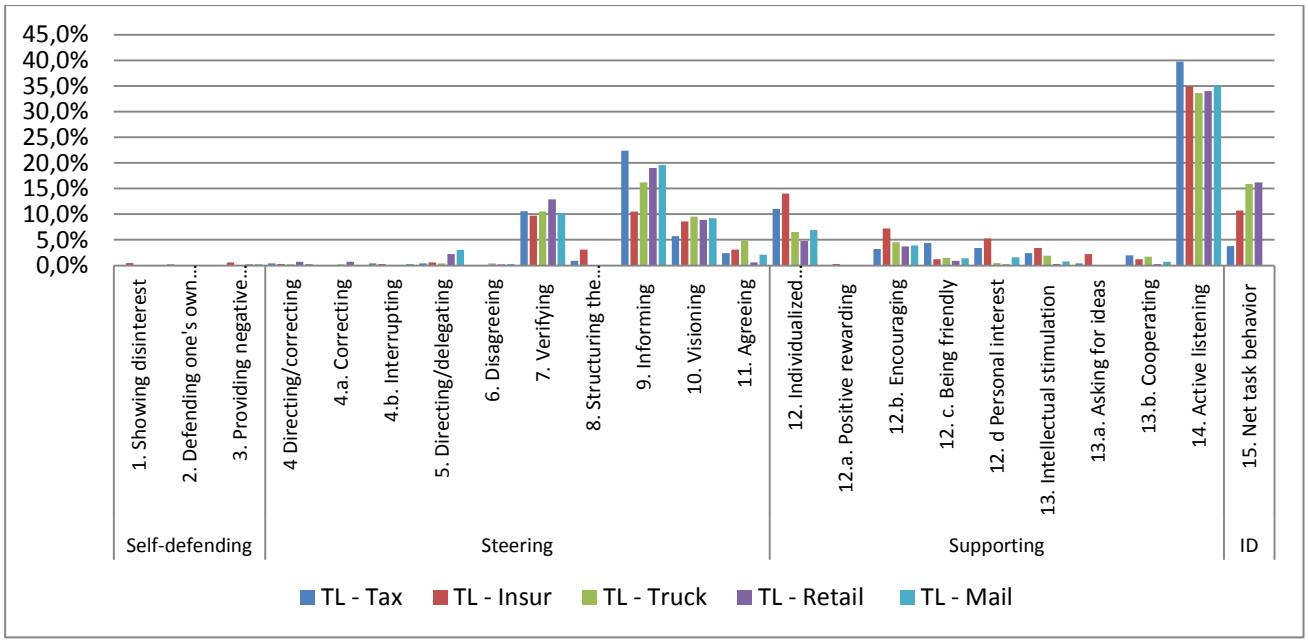

Table 9: Column table of the frequential observed behaviors of team leaders during their daily work practices (n=5)

4.1.4. Work behavior team members The most common behaviors for the team members are 'steering' and 'supporting' type of behaviors, plus the independent type of behavior: 'listening' (ranging from 12,7% to 37,7%), 'net task behavior' (ranging from 14,7% to 37,8%), 'informing' (ranging from 10,6% to 12,5%), 'individualized consideration' (ranging from 10,8% to 27,3%) and 'verifying' (ranging from 3% to 12,9%), whereas, they have corresponding percentages on 'informing'. Again, differences between frequencies within one behavioral item are large in some cases. Overall team members expose a smaller pattern of behavioral items: behaviors such as 'showing disinterest', 'defending one's own position', 'providing negative feedback', 'directing/correcting', 'directing/delegating', 'disagreeing', 'structuring the conversation', and 'agreeing' do barely occur (Table 10).

Nevertheless, there are some outliers. The Insur team members exposed 'verifying' (3%) to a low extent, compared to the 'verifying' percentages other team members (ranging from 8,0 to 12,9%), whereas the 'verifying' rate of the Retail team members (12,9%) is quite high. Furthermore, the teams differ a lot on 'visioning'. The Insur team members 'vision' (11,1%) a lot, but the Truck and Retail team members did not expose 'visioning' behavior (resp. 0,8% and 0,0%). Additionally, the Tax and Mail team 'vision' on a average rate (resp. 5,6% and 3,9%) compared to these figures. The Truck team has a high rate of 'individualized consideration' (27,3%) which is caused by a high rate on

'encouraging' (23,3%). The Mail team also has a considerably high rate on 'individualized consideration' (21,6%), which is caused by a high amount of personal interest (13,2%).

Again, the frequency percentages of 'net task behavior' are much lower than the *duration* percentages. The frequency percentages of this behavioral item vary from 14,7% to 37,8%, and the duration percentages vary from 76,86% to 98,12%.

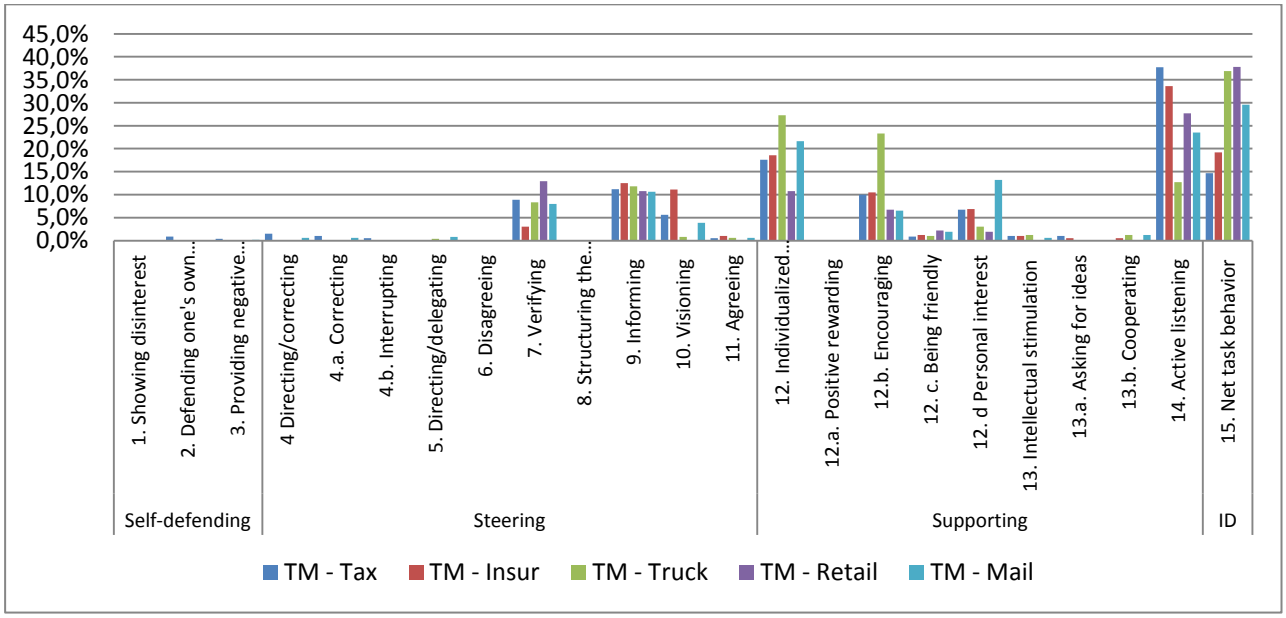

Table 10: Column table of the frequential observed behaviors of team members during their daily work practices (n=5)

Comparing team leaders' and team members' behaviors during video shadowing: In total, the team leaders showed more different behaviors than the team members. The team members had higher rates on net task behavior and especially their duration of net task behavior is much longer than that of the team leaders. Team members also had higher rates on individualized consideration, and the Truck, Retail and Mail hardly displayed any visioning behavior compared to the team leaders. These last three teams mentioned are all manufacturing teams.

4.1.5 In summary First of all, the results are different for each team, which can be explained by the fact that the five teams are different types of organizations. However, some conclusions can be made that concern all prototypical situations. First, all team leaders expose a very low to zero rate of 'self-defending' type of behavior. This is confirmed by comparing the frequency percentages with the percentages of studies of Van Dun et al. (2010) and Hoogeboom et al. (2011), in which the 'self-defending' types of behavior are higher. Moreover, there is a significant difference between the rate of 'showing disinterest' of our study and the other two studies. The team members in general expose a bit more of the 'self-defending' type of behavior. Overall 'steering' and 'supporting' type of behaviors prevail.

Furthermore, it can be concluded that 'disagreeing' had been hardly coded. The behaviors 'directing/correcting' and 'directing/delegating' had been coded just a little bit more, but only to a low extent. Frequently coded behaviors are 'verifying', 'informing', 'visioning', 'individualized consideration', 'listening' and 'net task behavior'. The percentages of 'individualized consideration' mainly consisted out of 'encouraging' behavior and for a little part of 'being friendly' and 'personal interest'. Yet, 'positive rewarding' had barely been coded.

Of interest is the behavior 'individualized consideration', especially its amount of occurrence over the three prototypical situations. This behavior was, above all, prevailing during the everyday work practices of the team members. Yet, we highlight this behavior for both team leaders and member. The percentages, per prototypical situation, for each team, split into team leader and member are displayed in Table 11. From all prototypical situations, team leaders show this behavior the most during their everyday work. They show this the least during the weekly meeting, however, their mean percentages do not differ to a large extent between the two meetings: from 7,8 percent during the weekly meeting to 8,33 percent during the start-up meeting. The percentage of the weekly meeting significantly differs from the everyday work situation (t = -6,216, p = 0,025 (2-tailed)). The sequence of the percentages of the team members, are similar to those of the team leaders: team members show the most 'individualized consideration' during their everyday work and the least during the weekly meetings. The percentage of the weekly meeting significantly differs from the start-up meeting (t = -17,413, p = 0,03 (2-tailed)) and the everyday work situation (t = -34,208, p = 0,001 (2-tailed)). The similarity in sequence is interesting: the amount of 'individualized consideration' seems to be situational dependent.

3 prototypical situations	**Team leader**							**Team members (excluding listening)**					
	Mean	*Tax*	*Insur*	*Truck*	*Retail*	*Mail*		*Mean*	*Tax*	*Insur*	*Truck*	*Retail*	*Mail*
Start-up meeting	8,33%	12,7%	n.a.	6,5%	n.a.	5,8%		26,4%	35,1%	n.a.	27,8%	n.a.	16,3%
Weekly meeting	7,8%	5,1%	8,9%	n.a.	9,4%	n.a.		10,6%	9,5%	12,4%	n.a.	9,9%	n.a.
Everyday work	16,24%	19,6%	25,8%	12,8%	9,8%	13,2%		41,64%	37%	39,4%	54,4%	31,2%	46,2%

Table 11: 'Individualized consideration' during the three prototypical work situations (n.a. = not applicable)
Note: To be able to compare the percentages, listening is excluded in all three situations in case of the team members. Net task behavior is excluded in the everyday work situation for both team leader and team members to be able to compare it with the meetings in which net task behavior is not applicable.

The Truck and Mail team follow the same pattern of behaviors during the start-up meetings and the team members of those teams follow the same pattern of behavior during their daily work practices. Nevertheless, these teams do have an opposing team composition: the Truck team mainly consists of men and the Mail team mainly consists of women. Furthermore, the Tax team and the Retail team have a comparable pattern of behavior during the weekly monitoring meetings.

Noteworthy is that during the weekly monitoring meeting, the team leader of the Insur team showed double the amount of 'visioning' behavior and half the amount of 'informing' behavior. This could be caused by the fact that one of the taped meetings of the Insur team was not chaired by the team leader, but by a team member: a lot of the information transmission is done by the leading team member. This is also visible in the fact that the team members of the Insur team show a certain amount of behavior to 'structure the conversation'. However the Insur team leader also has a lower rate of 'informing' during the daily work practices when compared to the other team leaders.

Interesting about the Tax team is the amount of visioning during the start-up meetings: the Tax team leader has a low amount of visioning, whereas the team members show a high amount of visioning. During the weekly meeting the team leader shows a little higher amount of visioning, whereas the team members show a lower amount of visioning. In this case it was not due to a meeting that was chaired by one of the team members, as with the health team.

Finally, compared to the start-up meetings and the video shadowing the teams adopted more 'intellectual stimulation' behavior during the weekly monitoring meetings. It appeared that in this

type of meeting, to a larger extent than in the other prototypical situations, improvement ideas were discussed. Both the team members and leaders were involved in this behavior.

4.2 Observed versus self-reported behaviors across the three prototypical situations

To measure congruence between the self-reported surveyed behaviors and the observed video-coded behaviors, correlations between those two kinds of behaviors are calculated by means of the Spearman's Rho test. The results of these tests are included in the appendices and show a certain amount of significant correlations. Since we have a very small sample size (n=3 for the meetings, and n=5 for the video shadowing), the correlations that are indicated significant cannot be considered significant in such a way that we are 95% confident that these figures will have the same range of values concerning the next measurement (with an alpha of 0.05). Therefore, we consider the significant correlations as an indication of a possible relation between video-coded behavior and surveyed behavior. In this section, we only discuss the remarkable significant correlations. Significant correlations that were not considered remarkable either had (1) very small differences between the frequencies (then there is a considerable chance of a coincidental significant correlation), or (2) the related video coded behavior and surveyed behavior did not make sense being related to each other. For example, ''showing disinterest' in meetings is positively related to back-up behavior' would not be considered remarkable, as this relation does not seem to be realistic.

In the following sections, first the surveyed leadership behaviors were related to the observed behaviors. Second, the surveyed construct 'team leadership' was related to the observed behaviors. Finally, the surveyed 'team dynamics' and 'team performance' constructs were related to the observed behaviors. The value, per survey construct, of the teams is the mean of the ratings of all team members (including team leader) per team. To the surveyed leadership behaviors, both the observed durations and the observed frequencies were related. This to further investigate the relations between surveyed leader behaviors and the observed behaviors, since these leadership behavioral survey items were each directly derived from the behavioral coding scheme.

<u>Leadership behavior</u> At first, survey items about leadership behaviors were related to the frequencies and durations of each behavioral item of the leader.

Table 5 in the appendices shows the numerical results of the start-up meeting. A significant correlation exists between the frequency of informing and the survey item about informing. This suggests that teams with a higher rate on the survey item of informing in fact inform less in practice. However, the duration of informing is not significant correlated to the self-reported 'informing' behavior (see Table 8). Furthermore, no significant correlations exist between the observed and self-reported team leader behaviors.

Table 6 in the appendices provides a numerical overview of the results of the weekly monitoring meeting. Noteworthy is the significant correlation of the frequency of informing and the survey item of informing. The team leader exposed quite some different amounts of 'informing' behavior (resp. 60.3, 19.5 and 44,4), which is in line with the average scores on the survey item, however the differences between the survey values are low(ranging from 6.04 to 6.2), but correlating (r = 1.000, p < .01). Furthermore, there is a significant positive correlation (r = 1.000, p < .01) between the frequency of 'directing/correcting – interrupting' and the survey item of this behavior. The Tax team leader showed a high frequency (4.7) compared to the others (resp. 0.4 and 0.0), where the Tax team

also has the highest score on this behavioral item. Another significant positive correlation exists between the item and frequency of 'being friendly' (r = 1.000, p < .01). However, the frequency differences are very small. Furthermore, three significant negative correlations exist and the other behavioral frequencies do not significantly correlate to their survey items. In addition to the significant correlations between the frequencies and the survey items, the duration of visioning and the 'visioning' survey item are significantly positively correlated, as reported in Table 9.

Table 7 in the appendices provides an overview of the correlations of the video shadowing of the team leader. No significant or remarkable significant correlations exist. The same counts for the figures in Table 10.

Team leadership In this section the construct 'team leadership' of the survey was related to the frequency of observed behaviors of the team leaders.

Table 11 in the appendices provides the numerical results of the correlations of the start-up meeting. No significant correlations are considered remarkable. Nevertheless, the frequency of informing significantly correlates with team leadership (r = 1.000, p < .01), however if the durations of informing would be used, this correlation would not exist.

Table 12 in the appendices provides a numerical overview of the correlations of the weekly monitoring meeting. In this category some remarkable significant correlations exist. First of all, 'team leadership' is significantly negatively correlated to 'directing/correcting – interrupting' and 'directing/correcting – delegating' (for both r = -1.000, p < .01). Furthermore, 'team leadership' is significantly negatively correlated to 'verifying' (r = -1.000, p < .01). As well as that 'intellectual stimulation' is significantly negatively correlated to team leadership (r = -1.000, p < .01). However, 'team leadership' is positively related to 'individualized consideration' (r = 1.000, p < .01).

No significant correlations were found for the video shadowing of the team leader related to the construct 'team leadership', as displayed in Table 13 in the appendices.

Team dynamics and performance The behavioral frequencies of the team members were related to nine survey item constructs that measured team dynamics and performance.

Table 14 in the appendices represents the numerical results of the correlations between the nine constructs and the observed behaviors of the start-up meetings. The first remarkable significant correlation is a negative relation between the behavioral item 'visioning' and 'team learning' (r = -1.000, p < .01). Second, negative significant correlations exist between the behavior 'individual consideration' and the following constructs: 'conflict management', 'team cohesion', 'general satisfaction' and 'team effectiveness' (in all cases: r = -1.000, p < .01).

Table 15 in the appendices displays the numerical results of the correlations between the nine constructs and the observed behaviors of the weekly monitoring meetings. Remarkable is that the construct 'team learning' correlates significantly negative with the following behaviors: 'defending one's own position', 'providing negative feedback' and 'directing/correcting' (in all cases: r = -1.000, p < .01). Especially, the Tax team members exposed high frequencies on all of these behaviors and have low scores on 'team learning'. Furthermore, 'visioning' correlates significantly positive to 'team learning' (r = 1.000, p < .01). This is in contradiction with the results found in Table 7. Finally,

'intellectual stimulation' is correlated significantly positive to the construct 'team learning' (r = 1.000, $p < .01$).

Table 16 in the appendices provides the numerical results of the correlations of the video shadowing of the team members. Some significant correlations exist, but not remarkable as the differences between the frequencies are all very small.

In summary the comparison between actual, video-coded behaviors and self-reported behaviors resulted in some interesting insights. First of all, the actual video-coded leader behaviors are related to the self-reported leadership behaviors. We found only a few significant positive correlations and even some significant negative correlations. Despite of the four significant positive correlations, we conclude there is low resemblance between the observed and self-reported behaviors, since most behaviors were not significant related to each other and some even negatively.

Similarly, although we expected a 'supporting' type of behavior to positively correlate with team leadership, we found a negative correlation existed between 'intellectual stimulation' and 'team leadership'. Furthermore, 'interrupting', 'delegating' and 'verifying' were negatively related with 'team leadership'. On the other hand, 'individualized consideration' was positively related to team leadership. In sum, several correlations existed for team leadership, related to the weekly meeting.

Taking the two selection criteria of remarkable significant correlations into account, many significant correlations have not been considered as remarkable when relating the behavioral frequencies of the team members to the nine concerning constructs. Although some correlations are of interest such as the significant correlations between the behaviors 'defending one's own position', 'providing negative feedback' and 'directing/correcting' and 'team learning' during the weekly meeting. These behaviors could be seen as negative-type of behaviors. Thereby, a higher frequency of these behaviors causes a lower rate on team learning. Furthermore, 'intellectual stimulation', which is a 'supporting' type of behavior, seems to positively influence team learning during the weekly meeting. However, visioning significantly correlates with team learning in a contradictive way during the start-up meetings and the 'weekly monitoring meeting'. In the 'start-up meeting', it is negatively related and in the 'weekly monitoring meeting' it is positively related. The other eight constructs next to team learning did not show noteworthy significant correlations whereas these constructs might be difficult to relate to individual behaviors.

Overall, there seems to be a large gap between the observed and self-reported behaviors. The leadership behaviors are only to a low extent significantly related positive the observed behaviors of the team leaders. Furthermore the constructs about 'team leadership', 'team dynamics' and 'team performance' hardly relate to separate behaviors.

4.3 Selected propositions examined

In the literature review of this study, sixteen propositions have been set. As previously mentioned, not all propositions are reported on in the results section. In this section we indicate if the proposition is included and we further clarify this proposition in relation to the results in Table 12.

Table 12 – examination of selected propositions

	Propositions	Explained in this study	Results of the five highly performing teams
1	Highly structured CI teams achieve higher levels of team learning	No	
2	Team learning leads to CI	No	
3	Higher levels of team learning lead to higher CI team performance	No	
4	High CI team performance is a function of team members feeling psychologically safe to discuss errors or ideas for improvement	Yes	Team members had relatively high rates of 'intellectual stimulation' and 'visioning' behavior during the weekly meeting
5	The more CI team members give and get constructive feedback, the higher their team's performance	Yes	Team leaders and members showed low rates of the behavior 'providing negative feedback' in all three prototypical situations
6	Task conflict and a low amount of process conflict lead to higher CI team performance, through effective conflict management in an open environment that includes mutual trust	Yes	Team leaders and members showed a low rate of 'self-defending' type of behavior, which implies that disagreements and conflicts are solved by 'steering' and 'supporting' types of behavior
7	Relational conflict dampens CI team performance, but is moderated by conflict management	Yes	Team leaders and members showed a low rate of 'self-defending' type of behaviors, which implies that disagreements and conflicts are solved by 'steering' and 'supporting' types of behavior
8	When CI team members regularly share various types of information it will lead to higher CI team performance	Yes	Team leaders and members both had high rates on the 'informing' behavior
9	Information sharing should be accomplished as much as possible during pre-scheduled meetings, to minimize temporary production stops	Yes	During the meetings most information was shared, by both team members and team leaders
10	In highly-performing CI teams back-up behavior occurs, but only in unforeseeable or incidental circumstances	No	
11	A high level of back-up behavior within CI teams is associated with a lowering of team performance	No	
12	CI teams that effectively adapt to change, enhance their level of CI team performance	Yes	Team members and leaders adapted their behavior to the three different types of situations. During the start-up meeting they mainly show the behaviors 'informing' and 'visioning'. During the weekly meeting they also showed 'intellectual stimulation'. During their everyday work they mainly showed 'net task behavior' and adopted a high rate of 'individualized consideration'
13	The explicit monitoring of team performance by CI team leaders leads to high CI team performance only if such team leaders have empowered their team members to express their improvement ideas, and if they show a transformational leadership style	Yes	Especially during the weekly meeting team leaders adopted a relatively high rate of intellectual stimulation. This is a typical transformational leadership style behavior
14	CI teams are self-managing	Yes	Team members showed more 'visioning' behavior if team leader showed less. Furthermore, team members showed 'visioning' behavior, this to a high level during the weekly meetings. Furthermore team leaders 'intellectually stimulate' their team members
15	CI team members show leader-specific behavior	Yes	Team members showed 'steering' type of behavior such as 'informing' and 'visioning', furthermore, they showed supportive behavior such as 'intellectual stimulation' and 'individualized consideration'
16	CI team leaders that expose transformational leadership behaviors achiever higher team performance	Yes	Team leaders showed a high amount of 'supportive' type of behavior in all three prototypical situations

5. Discussion

In this explorative study we analyzed the behavior of CI team members and leaders with a broad perspective. First, by studying literature on CI and team effectiveness. This resulted in sixteen propositions about dynamics in CI teams. Second, we studied five highly performing CI teams, by means of video-observation. We observed them in three prototypical CI situations that included video-observation in meetings and video shadowing. Third, these teams were also surveyed on team behavior, through which we could relate our observed behaviors to these self-reported behaviors. In this discussion section we reflect on the main findings of our empirical study in light of the propositions we set earlier. Therefore, only the propositions that are related to our empirical findings are discussed in this section.

Through video analyses and a comparison with the self-reported survey findings, we arrived at a variety of results, subdivided per prototypical work situation (daily meeting, weekly meeting and video shadowing team leaders and members during everyday work). Overall, it can be concluded that each of the five teams had its own team dynamics, though similarities among the teams have been found. First of all, two teams (Truck and Mail) did show similar patterns of behavior: both team leaders and team members showed similar behaviors during the start-up meetings and team members showed similar behaviors during their regular work. Those teams have a corresponding work environment. These teams both work in a factory, on the production line, within speaking distance of each other. The other teams did either not work in a factory, or they do not work within speaking distance of each other. This correspondence in both behavior and work environment suggest that team dynamics are subject to contextual enablers: CI teams do apparently not act according a fixed pattern of behaviors, but their behavior is influenced by contextual enablers such as work environment. Noteworthy about the Truck and Mail teams, is that these two teams have an opposing team construction. The Mail team members are mainly women and the Truck team members are mainly men (see Table 1). A remarkable difference in behavior in these teams that could be related to this opposing team composition is how they displayed ‘individualized consideration’. In the ‘male’ Truck team they mainly showed ‘encouraging’ behavior, while in the ‘female’ Mail team they mainly adopted ‘showing personal interest’ behavior. This could be explained by the fact that women typically have a more relational level of communication, which focuses on feelings and the relationship between the communicators (Case, 1994). Showing personal interest includes sharing personal issues and experiences, which mostly did not happen on the team level, but between two team members. ‘Encouraging’ includes making jokes and enthusing remarks not explicitly focused on feelings and building relationships. Furthermore, the team members of Truck and Mail team, showed a high rate of ‘showing disinterest’ during start-up meetings, especially compared to the Tax team that operates in an office environment. As the start-up meetings took place on the shop floor, a logical explanation would be that this high rate of ‘showing disinterest’ was caused by the noisy factory environment. Team members may be more easily distracted by these noises of machines and yelling people of other teams. According to Sundstrom (1986), noise causes a temporary distraction of attention. These findings provide a possible explanation for the high rate of ‘showing disinterest’ of the Truck and Mail team.

Compared to the Tax and Retail team, the team leader of the Insur team showed double the amount of ‘visioning’ behavior and half the amount of ‘informing’ behavior during the weekly meeting. This could be explained by the fact that the Insur team leader was not the chairperson in

one of two taped meetings. According to Jay (1987) one of the objectives of a meeting is being 'informative', to keep the team up to date. Moreover, Prince states that one of the principles of a chairperson is to keep the team informed. Therefore, if the team leader is not leading the meeting, but another team member does, it would be logical that this team member informs more and the team leader less. Nevertheless, 'information sharing' during meetings is clearly not solely a role specific behavior. All team members are involved in this and have relatively high 'informing' rates during meetings. Furthermore, team members and leaders also share information during their everyday work, but to a lesser extent. This corresponds with proposition eight and nine which state that when team members regularly share various types of information, preferably during pre-scheduled meetings, it will lead to higher CI team performance.

It appeared, that if the team leaders during the start-up meeting adopted less 'visioning' behavior, the team members showed more, and also the other way around. Therefore, it seems that if a team leader shows this behavior to a low extent the team members fill in this behavior for their team leader. This would be in agreement with proposition fourteen and fifteen. These propositions state that CI teams are self-managing and that CI team members show leaders-specific behavior. This corresponds, since 'visioning' is a leader-specific behavior, and if a team leader show this leadership behavior to a lesser extent, and the team members to a larger extent, the team members seem adopt self-managing behavior. However, it seems that these team members need to be enabled to do so: if team leaders vision to a higher extent, team members do to a lower extent. Furthermore, team members are enabled to propose ideas for improvement and are intellectually stimulated by their team leaders, which also indicates self-management.

The team leaders barely display any 'self-defending' type of behavior. Even if the team members do this to a certain extent, the team leaders do not. Team leaders mainly show 'steering' and 'supporting' types of behavior. These results draw attention to the theory of appreciative inquiry (AI) in which positivity is leading. With AI the focus is not on the problems to be fixed, but on the strengths and strategic opportunities of the organization. It is called a positive approach to change (Cooperrider & Whitney, 2005). It seems that CI team leaders also adopt positivity to take along their team to a high CI level, since they hardly adopt 'self-defending' type of behavior, and score high on 'supporting' type of behavior. Further research could investigate the relation between CI and AI. Especially, compared to the study of Van Dun and Wilderom (2010) and Hoogeboom (2011), the team leaders of our study display the 'self-defending' type of behavior only to a very low extent, with a significant difference between the levels of 'showing disinterest'. However, the other studies are about middle managers (one study is about Lean middle managers and the other is about otherwise effective middle managers), whereas our study is about shop floor team leaders, which is of a lower hierarchical level. The results on these type of behaviors of Van Dun and Wilderom (2010) and Hoogeboom (2011) are even lower than the results of Van Der Weide (2007), who also studied middle managers. DeChurch, Hiller, Murase, Doty and Salas (2010) state that managers at different hierarchical levels practice the same functions (e.g. direction setting, boundary spanning and operation maintenance). However, they do this in different ways and adopt different behaviors: behavioral needs change at different organizational levels (DeChurch, et al., 2010). Pavett and Lau (1983) concluded that 'self-oriented' behavior particularly occurs at the middle management level, since these managers need to build a power base and establish the right connections. They are between two management levels, which could lead to 'self-oriented' behavior. This could explain the

difference in ‘defending one’s own position’. Thus, there is possibly a difference on the behavior ‘defending one’s own position’, across different management levels. Furthermore, it could be that the differences between the studies on the behaviors ‘showing disinterest’ and ‘negative feedback’ are also due to the different management levels. However, further research on this topic should be done to conclude if showing less ‘self-defending’ type of behaviors is related to a lower management level.

Nevertheless, the low level of ‘self-defending’ type of behavior of the team leaders seems to indicate that team leaders adopt conflict managing behaviors in case of disagreements. When we analyzed the video-tapes we observed task-related disagreements. The team leader discussed and solved these disagreements by showing behaviors such as ‘verifying’ and ‘visioning’, instead of behaviors such as ‘showing disinterest’ or ‘defending one’s own position’. Had ‘self-defending’ type of behaviors been practiced, they could have instigated the conflict. As our observed teams are highly performing, the low rates of ‘self-defending’ type of behavior seems to connect to proposition six, that through conflict management, task conflict and a low amount of process conflict leads to relatively high team performance.

Both team leaders and team members showed a low rate of ‘providing negative feedback’. This does not correspond to proposition five that giving and getting constructive feedback increases team performance. Therefore it should be further investigated to which extent or even, if ‘providing negative feedback’ is necessary to achieve better performance.

During their daily work practices, team members exposed a high rate of ‘individualized consideration’ mostly through ‘encouraging’ and ‘showing personal interest’. As our studied teams are highly performing, this result implies that a team can be successful despite a high level of non-work-related discourse. Alternatively, this ‘individualized consideration’ could even be the success factor of being highly performing. Scholars found that humor, which is a part of our construct ‘encouraging’, contributes to an increased productivity, it stimulates teamwork, boosts morale and assists team members to manage workplace challenges and stress (Holmes, 2007). Thereby, the amount of ‘individualized consideration’ in all the three prototypical situations is interesting. Team members show a high rate of this behavior during their everyday work and a low rate during weekly monitoring meetings (Table 10). The rate of ‘individualized consideration’ seems to be situational dependent: if the work situation is getting more formal (e.g. a longer meeting), the amount of ‘individualized consideration’ decreases, of which a significant difference exist between the everyday work situation and both meetings. For team leaders applies the same: they also show a high rate during their everyday work and the lowest rate during the weekly meetings. Moreover, a significant difference exists between the weekly meeting and the everyday work situation. However, for the team leaders the percentages are lower and the differences between the percentages for the two meetings are only small. Their amount of ‘individualized consideration’ seems to be rather stable during meetings. This is a remarkable difference between team members and team leaders.

It is expected that team members in CI teams also display leadership behavior as they appeared to be self-managing as proposed in proposition fourteen and fifteen. Especially ‘steering’ type of behaviors are considered leadership behaviors: ‘directing/correcting’, ‘directing/delegating’ and ‘verifying’ are transactional leadership behaviors and ‘visioning’ in which team members give their opinion and discuss improvements is of transformational nature. In the start-up meetings team

members to a certain extent show 'steering' type of behaviors, however in the weekly monitoring meeting they do this to a larger extent and during their daily work they exposed 'steering' type of behavior only to a small extent. Thus, as proposed, they seem to expose leadership behaviors, especially during the weekly monitoring meetings: they propose improvements, give their opinion and suggest solutions. Nevertheless during their daily work, they are mainly working, taking responsibility for their tasks to be performed. During the start-up meeting the team leader is mainly 'informing' the team members, and due to time constraints there is less room for steering behavior of team members. Therefore we can state that these team members adapt their behavior to changing work situations. As proposed (proposition twelve), adaptability is important to achieve high team performance.

Differences between the two types of meetings are that team leaders were mostly 'informing' and 'visioning' in their start-up meetings (team members are mainly standing), whereas in weekly monitoring meetings (team members are sitting), team leaders also try to 'intellectually stimulate' their team members. This could have two explanations. First, Bluedorn, Turban and Love (1999) conclude about different types of meetings (sit-down vs. stand-up meetings) that during sit-down meetings, participants use more task information to make their decisions, which involves more discussion. However, there is no difference in decision quality. Stand up meetings are of shorter duration than sit down meetings and less comfortable for team members, though equally effective. To intellectually stimulate team members it may be better to have sit-down meetings, to take time to comfortably discuss problems and solutions with the concerning task information. Bass (1990, p. 22) defines intellectual stimulation as follows: '*promotes intelligence, rationality, and careful problem solving*'. In order to achieve careful problem solving intensive use of task information, and therefore sit-down meetings, may be necessary. The second explanation is time-constraints. The start-up meeting is very short of time and may be too short to intellectually stimulate the team members.

As previously discussed, team leaders try to intellectually stimulate the team members mainly during the weekly meeting, through which team members are encouraged to express their ideas of improvement. Thereby, 'intellectual stimulation' typically is a transformational leadership style behavior. This corresponds to proposition thirteen which states that high CI team performance can be solely achieved if team leaders empower their team members to express their improvement ideas, and if team leaders show a transformational leadership style. Besides the transformational behavior 'intellectual stimulation', team leaders show 'individualized consideration' and a large amount of 'active listening' behavior. These are all transformational leadership behaviors and correspond to proposition sixteen which states if team leaders expose transformational leadership behaviors a higher team performance will be achieved.

By adopting meetings (e.g. a start-up meeting) in a team, team members are able to share information during meetings. This minimizes temporary production stops, as during production time less information still needs to be shared. According to Johnson et al (2006) team members that share information during production may decrease production speed. Therefore daily and weekly meetings seem to be very important in achieving high performance, as proposed in proposition nine.

The high-performing CI teams we observed were highly structured. All team members had specific tasks to perform of repetitive nature. They knew exactly their responsibilities and who their leader was. This can be related to proposition one, which states that highly structured teams are better

learners. Thus the high performance of our studies teams seems to be to a certain extent related to the structure of these teams.

Remarkable about the results of the survey is that the Tax team had the lowest scores on all surveyed constructs. There are two possible explanations for this. First, this could be due to the fact this was the youngest CI team; as discussed in the theoretical section Bessant and Caffyn (1997) distinguish a five-stage process of CI capability development. In addition, Hines, Found, Griffiths and Harrison (2008) also distinguish four types of organizations that develop through maturity. Starting with a knowing organization, followed by an understanding organization, then the thinking organization and concluding with a learning organization. Both studies described this development process as a linear model. Nevertheless, Jorgensen, Boer and Laugen (2003) argue that companies do not implement CI behaviors in a linear sequence, though they develop their CI capability over time. In sum, both capability-maturity models argue that CI capability grows over time, as an organization can achieve higher results through acquiring knowledge during the CI maturity process (Hines, et al., 2008). This could explain the lower scores of the Tax team, since the Tax team was the youngest CI team. The second explanation for the low scores of the Tax team is a team conflict. The researchers that performed the video study felt tensions between team members, identifying a potential relational team conflict. During a team session in which the researchers reported on the initial findings of our study, several team members discussed with the researcher that the team was divided into two groups that did not work well together. This could also explain these low scores. This would be corresponding to proposition seven, which states that relational conflict dampens CI team performance. However, through conflict management, as previously discussed, the effect of the conflict is moderated, which still makes them a high performing CI team.

A final point of discussion is that we used two methods to analyze the behavior of CI teams: a survey and video analysis. We compared the results of both methods to estimate the congruence between the observed behaviors and the self-reported behaviors. As indicated in the results section, it seems that a large gap exists between the observed and the self-reported behaviors. Especially, in the ‘leadership behaviors’ section, self-reported behaviors are only marginally related to the same observed behaviors. One should expect that the self-reported ‘leadership behaviors’ do all positively correlate to a large extent with the observed behaviors of the leaders. However, this is not the case; only a few positive significant correlations existed. Furthermore, the surveyed constructs that include team dynamics and team performance, are minimal related to the observed behaviors. This could be due to the small sample size, but this could also suggest a difference between espoused and enacted behaviors at the team-member level. Nevertheless, the surveyed construct ‘team leadership (LMX)’ is significant related to several behaviors, however, this is only noted during the weekly meeting. Behaviors that are negatively associated with ‘team leadership’ are ‘interrupting’, ‘delegating’, ‘verifying’ and ‘intellectual stimulation’, whereas ‘individualized consideration’ is positively associated with ‘team leadership’. The first four behaviors seem to negatively influence the relationship between a team leader and member. However, ‘intellectual stimulation’ is a supportive-type of behavior, and therefore this outcome is not as you would expect. On the other hand, ‘individualized consideration’ positively stimulates the relationship between the team leader and team members. Therefore ‘individualized consideration’ is important in establishing high quality relationships between team leaders and members. For the constructs that measure team dynamics, only ‘team learning’ displays remarkable significant correlations with the observed behaviors in the weekly meeting. Of interest are the negative type of behaviors (‘negative feedback’, ‘directing –

correcting' and 'defending one's own position') that are negatively related to 'team learning'. Whereas in scientific literature '(negative) feedback' is associated with better learning, it is in our study negatively related to team learning. Moreover, this behavior was marginally shown in all prototypical situations, therefore, the added value of this behavior in CI teams needs to further investigated in future research. Finally, 'intellectual stimulation' is positively related to 'team learning'. This is consistent to proposition four, which states that high CI team performance is a function of team members feeling psychologically safe to discuss errors or ideas for improvement. If team members ask for or propose ideas learning is stimulated.

6. Limitations and suggestions for further research

This study was subject to several limitations. Considering these limitations, we propose suggestions for future research. First of all, this study had a very small sample size. Many hours of footage had been collected of the five teams, and were classified into four categories. Partly due to this fragmentation, each category existed of a small sample size. We had three teams with start-up meetings (n=3) and three teams with weekly monitoring meetings (n=3). For the video shadowing, our sample size was five teams, for both the team members and team leaders (n=5). As a result of the small sample size, we mainly have descriptive results. Nevertheless, we executed Spearman's Rho tests to see if there are any correlations between the self-reported and observed results. A number of significant correlations appeared. The usefulness of these correlations that are based on a small n is underlined by Tsoukas (2009). Tsoukas (2009) states that small-n studies are without a doubt very useful for aiming at imitating the logic of large-n studies. He argues that '*the distinctive theoretical contribution of small-n studies stems from seeing particular cases as opportunities for further refining our hitherto conceptualization of general processes'* (Tsoukas, 2009, p. 298). Therefore, these significant correlations can be considered as a useful indication of an association between two variables. In further research, scholars could enlarge the sample, to obtain statistical valid conclusions. However, considering the time-consuming nature of video-coding, we advise the investigation of only one prototypical situation. Furthermore, it would be interesting to conduct a longitudinal research to study the development of behaviors during CI maturity.

Second, the raters of the video tapes did not collect the data themselves, so they did not know the exact context of the video tapes. Therefore, they could misinterpret some of the filmed situations, since context sensitive remarks could be difficult to interpret. For instance, if a team member makes a joke about another team member, it could be disguised negative feedback to another team member, but positively coded (as individualized consideration), as it pretends to be a joke. On the other hand, using raters that were not involved in data collection enhanced the objectivity of the coding since the behaviors are analyzed by raters without any prejudice about team members and leaders.

The third limitation might be the potential reactivity of the team to the video-filming. If people are video-taped they may react to the camera and behave differently, which could influence the results. Czarniawska (2007) states that one of the difficulties of video shadowing is that it causes discomfort, as it can be awkward for the subject of observation. In our study, the video-observers tried to reduce this as much as possible by starting an informal chat, when the subject of observation seemed to be in discomfort. Furthermore, 'blending in' is very important, which means that the

observer dresses and acts like the other people in the research environment (Czarniawska, 2007). Indeed, the observers in our video-data actively participated in the team during the first two days of natural observation, and, when available, they wore company clothes. However, sometimes other team members made jokes about somebody else being video-taped. In our opinion, this is not necessarily behavior that deviates from their day to day behavior: we noted that in all the teams' cultures it was normal to make jokes in general. If there would be another issue to laugh about (e.g. a team member having a new haircut) the team members would joke about this. Furthermore, most of these teams are used to having external people on the shop floor to observe them, since they are considered 'best practices' by their own companies as well. To illustrate, the Retail team had recently participated in another academic research. The Truck team is used to outsiders as they are regularly having outside guest on the shop floor: the plant facilitates tours and open house events. Furthermore, the Mail team had been filmed a few months before for a promotion company movie, and the Insur team were used to having external Lean coaches on the shop floor, which also observed their daily work practices and meeting effectiveness.

Reactivity is an important issue to consider in further research on video shadowing, but also on video filming in general. As previously mentioned, blending in as a researcher is very import to try to keep reactivity within bounds. Furthermore, as a result of analyzing a great variety of videotapes (stationary camera versus shadowing, factory versus office environment, single versus multiple team members) we provide some recommendations that may be of use for future video observation studies:

1) Always keep the camera focused on the face of the subject of observation. If more team members are involved in the conversation (during the video shadowing), try to catch all their face on tape.
2) Film as close as possible to the subject of observation, without interrupting the subject of observation in performing the task.
3) Keep the camera as stable as possible, so try to move the camera only if the object of observation also moves.
4) Start a small conversation with the subject of observation if he/she clearly feels uncomfortable, but try to keep this as short and limited as possible.
5) During the meetings keep one camera focused on the team leader, use another camera to (unobtrusively) film each team member that is speaking. By doing this, team members can be separately analyzed if needed.

Fourth, the quality of the audio of the tapes was sometimes poor (in case of the Truck and Retail team), as these tapes contained a lot of background (machine) noise. This made it sometimes very difficult to understand the team members. However, as we were able to view the recorded data multiple times, we were to a large extent able to distinguish the verbal behaviors as well. In undecipherable seconds, the code 'null behavior' was assigned, data that was not included in the results. The main cause of the poor audio quality was a large distance between the camera and the subject of observation in relation to the present background noises. However, the camera may not be obtrusive, and therefore not too close to the subject of observation. This is important to minimize reactivity. Thus, in further research where video observation is applied, it is advisable to adapt the microphone of the camera to the film environment. In a noisy film environment one should use a microphone that can distinguish voices from environmental noises.

As discussed in the results section, the following behaviors had hardly been coded or only to a low extent for both leaders and team members: 'disagreeing', 'directing through correcting', 'directing through delegating' and the 'self-defending' type of behaviors. One could argue, on the basis of this near absence of negative behaviors that these findings may not mean much. However, the strength of the impact of these behaviors is yet unknown. It could be that one single noted disagreement of a team leader with a team member has more impact than five shared laughs among them. For instance, a disagreement could have a negative influence on psychological safety. Therefore it could be that the value of some behaviors is underestimated. To investigate the strength of impact of behaviors would be an interesting topic for further research. If the impact of these behaviors is known, one could determine a more specific value of the behaviors by multiplying the percentages of the behaviors with the impact value.

In this study we also set sixteen propositions that derived from our literature study. A number of these propositions have been related to our empirical part of the study, and discussed in our discussion section. However, all of these propositions would be solid starting points for further research. They could be hypothesized to further investigate them and to strengthen the knowledge on team dynamics.

Finally we question the generalization of the findings of the study. The observed teams are solely Dutch teams, while cultural differences are important determinants of behavior (Baum et al., 1993). Hofstede (1983) reports five dimensions (power distance, uncertainty avoidance, masculinity, individualism and long-term orientation) which could each influence work behavior. Thereby, each country scores different on these dimensions. For instance, in the Netherlands we exhibit a small power distance and a weak uncertainty avoidance. We score high on individualism and low on masculinity. Furthermore we have a moderate long-term orientation (Hofstede, 2001). Therefore, our results may not be generalizable to other countries, as the cultural dimension may be related to the patterns of behavior exposed by team members and team leaders. It would be a useful topic for further research, to investigate to what extent CI team behavior is similar across culturally distinct borders.

7. Practical implications

This study provides insight in behavioral dynamics of CI teams. This insight indicates what kind and intensity of behavior constitute a successful CI team. This information is very useful for managers of CI teams, team leaders or advisors of consultancy firms that implement CI or Lean, since this information fosters a successful CI implementation.

First, we advise to implement a high structure in teams, as more highly structured teams are expected to have a greater learning capability which is expected to result in higher team performance. This can be practiced by structuring activities through task specialization, a clear hierarchical structure and formalization of procedures. Every team member needs to know what their exact tasks and responsibilities are, and who is responsible for them. In addition there need to be clear descriptions of coordination procedures and work task specifications. In the teams we studied, team members indeed worked on a specific task of repetitive nature, with specific task descriptions. If they needed help they queried another team member who would be able to help or

their team leader. In addition, it is advisable to apply start-up meetings and weekly-process monitoring meetings in CI teams. It clarifies responsibilities of the team members, as they are monitored in these meetings. Furthermore, daily and weekly meetings stimulate information sharing among team members, and information sharing is an essential behavior in CI. Though, daily and weekly meetings limit information sharing during production time, which minimizes temporary production stops, and therewith waste of resources. Moreover, the weekly meeting enables 'intellectual stimulation' that is related to team learning.

Second, in our results it appeared that the teams that conducted the start-up meetings in a noisy factory environment had high rates of 'showing disinterest' among the team members, as noise causes a temporary distraction of attention. Therefore we advise to keep this meeting preferably on a place where loud and distracting noises are limited. But, the start-up meeting should keep its current format as an informal short meeting.

Third, the observed CI teams showed a high rate of 'individualized consideration', mostly by showing personal interest and encouraging e.g. laughing. These social talks and laughs are important in teams. They contribute to building a good atmosphere and it positively stimulates the relationship between the team leader and its members. Van Dun et al. (2011) who observed the same highly performing teams also indicated the importance of social talks and laughs in their study; it aids in creating and sustaining a safe psychological environment. To achieve this, team members need to respect, and feel respected by other team members (Edmondson, 1999). On the other hand, especially the team leaders barely showed any 'self-defending' type of behaviors. They mainly communicated through 'supportive' and 'steering' type of behaviors, even if team members showed 'self-defending' type of behaviors. Furthermore it appeared that the 'negative feedback' and 'defending one's own position' were negatively related to 'team learning'. Therefore it is important that CI teams are trained to solve any disagreement, or conflict by conflict managing behaviors. They should show 'self-defending' type of behaviors as little as possible.

Fourth, team leaders need to be very supportive to their team members. In case of problems on either personal level or in the production process a team leader needs to be there for support. This is optimizing the production process (productions stops will be faster solved) and to enhance organizational commitment. Illustrating this, the following practical examples can be derived from the team observations: 1) In the Truck and Retail teams, the team leader assisted on the line if team members needed help 2) The Insur and Tax team leader showed interest in personal issues of team members 3) The mail team leader showed empathy when the team members gave their opinion about an organizational issue.

The role of the team leader in the team is very important, as the team leader greatly influences team dynamics. If implementing CI within teams, all team members should adopt CI behavior, but the team leader should stimulate this behavior. This by accurately accomplishing the leader tasks (e.g. initiate team motivation). The team leader needs to be trained what the scope of these tasks is and how to perform these tasks in the right manner. However the team leader should not be the regulating actor within the team. A team leader needs to stimulate its team members to propose ideas of improvement, and to actively generate solutions to problems themselves. In other words, the team leader should stimulate self-management in CI teams and secure this. Therefore, the team leader needs to be trained to lead the team into a CI work routine.

8. Conclusion

This study reports on a minutely analyzed set of observed behaviors of team members and leaders in highly performing continuously improving teams. The results of these observed behaviors were compared to the survey on team behaviors. CI team leaders did barely display 'self-defending' type of behaviors in all three prototypical work situations. During their work all team members, showed a large amount of 'individualized consideration'. Therewith, the Truck team (consisting of mainly men) and the Mail team (consisting of mainly women) were remarkable, as they both show a different type of 'individualized consideration': the Truck team mainly showed 'encouraging' behavior and the Mail team principally showed 'personal interest'. Moreover, the amount of 'individualized consideration' is dependent on the type of prototypical situation. During the weekly meetings they scored lowest on 'individualized consideration' and during their everyday work they scored the highest. Nevertheless, during those weekly meetings team members are intellectually stimulated, more than in start-up meetings. Furthermore the team leaders of the Truck and Mail teams showed a similar pattern of behavior during the start-up meeting, and the team members of those teams showed about the same amount of 'showing disinterest' during these start-up meetings. Of interest is that those two teams have a similar type of work environment, which indicates that team dynamics are subject to contextual enablers. A remarkable result of the survey is that the construct 'team learning' is negatively related to negative-type of observed behaviors, and positively related to 'intellectual stimulation' during the weekly meeting. Furthermore, the observed behavior 'individualized consideration' is positively related to 'team leadership'. These findings contribute to the current knowledge of CI team behaviors. Current CI (team) research hardly discusses the behavioral dynamics of CI. This study provides new insights for further research. Through the method of video shadowing team leaders and members during their daily work, we explored how team members and leaders behave during their work. This provided an exciting new view on team behavior, whereas in previous studies of Hoogeboom (2011) and Van Der Weide (2007) only team meetings were filmed and analyzed on team leader behavior. Furthermore the study contributes to the practical knowledge of implementing CI in teams. In sum, this exploratory video-observation study unraveled new insights on CI team dynamics that contribute to CI implementation in teams, and fosters exiting new future research possibilities.

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Appendices

A. Behavioral coding items illustrated with examples

Self-defending	1	Showing disinterest	Talking to others while someone else is talking Not listening actively, looking bored, looking away
	2	Defending one's own position	"I cannot help it, my boss wants it like that" "I am the operations manager within the organization"
	3	Providing negative feedback	"I am not happy with the way you did this…" "You shouldn't have acted so hastily"
Steering	4	Directing/correcting a. Correcting b. Interrupting	a. "I will decide what happens. I want this candidate to be invited for the job" a. "This decision has been made and there is no turning back" b. Interrupting
	5	Directing/ delegating	"John, I'd like you to take care of that" "Will you take responsibility for that project?"
	6	Verifying	"How far are you with those activities?" "Have you already done this?" "Are we going to meet our deadlines?" "The project isn't progressing smoothly, could you explain this?" "Last week we agreed upon this. How are things now?"
	7	Structuring the conversation	"The next item on the agenda is…" "We will end this meeting at 14.00 hours"
	8	Informing	"The budget for this project is…" "The board will make a decision within the next two weeks"
	9	Visioning	"Given the recent developments, I think we should…" "Let's go through with this reading project"
	10	Disagreeing	"I don't agree with you" "That's not correct"
	11	Agreeing	"That's right" "That sounds perfect to me"
Supporting	12	Intellectual stimulation a. Asking for ideas b. Cooperating	a. "What actions should be taken according to you?" a. "How do you think we can solve this problem?" b. "Don't worry, we will handle this problem together" b. "I am sure you will do a great job"
	13	Individualized consideration a. Positive rewarding b. Encouraging c. Being friendly d. Showing personal interest	a. "Good idea, thanks!" b. Laughing b. "You would be perfectly able to do that!" c. "Would you like something to drink?" c. "Did you have a good journey?" d. "I am sorry to hear that, how are things at home now?" d. What did you do last night?
	14	Active Listening	Nodding, eye contact "ok… yes…" Paraphrasing
	15	Net task behavior	Working on a task without any communication with team members

B. Tables displaying frequencies and durations

Table 1 Displays the frequencies(%) and durations(%) of the observed behaviors during the daily meetings (n=3 teams, consisting of 28 team members and 3 team leaders)

	Daily start-up meetings											
	Tax Administrator				Truck Manufacturer				Mail distributor			
	TL-Freq	TL-Dur	TM-Freq	TM-Dur	TL-Freq	TL-Dur	TM-Freq	TM-Dur	TL-Freq	TL-Dur	TM-Freq	TM-Dur
1. Showing disinterest	0,0%	0,0%	3,1%	3,3%	0,0%	0,0%	26,4%	38,8%	0,0%	0,0%	29,6%	35,0%
2. Defending one's own positio	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	2,9%	2,0%	0,0%	0,0%	0,0%	0,0%
3. Providing negative feedback	0,0%	0,0%	0,3%	0,2%	0,8%	1,1%	0,0%	0,0%	0,8%	0,3%	5,8%	5,5%
4 Directing/correcting	0,0%	0,0%	0,3%	0,4%	3,4%	2,5%	2,2%	1,8%	1,5%	1,5%	3,7%	2,9%
4.a. Correcting	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*3,4%*	*2,5%*	*0,7%*	*0,3%*	*1,5%*	*1,5%*	*0,0%*	*0,0%*
4.b. Interrupting	*0,0%*	*0,0%*	*0,3%*	*0,4%*	*0,0%*	*0,0%*	*1,5%*	*1,5%*	*0,0%*	*0,0%*	*3,7%*	*2,9%*
5. Directing/delegating	0,7%	0,5%	0,8%	2,1%	0,8%	0,6%	0,0%	0,0%	3,8%	3,7%	0,0%	0,0%
6. Disagreeing	0,0%	0,0%	0,0%	0,0%	0,4%	0,1%	0,0%	0,0%	1,1%	0,6%	0,9%	0,4%
7. Verifying	12,9%	5,4%	6,8%	3,3%	8,8%	2,5%	14,1%	10,1%	10,1%	3,1%	12,7%	7,6%
8. Structuring the conversatio	11,0%	7,9%	2,5%	2,0%	15,2%	10,4%	0,0%	0,0%	13,6%	7,0%	0,0%	0,0%
9. Informing	18,3%	27,5%	27,3%	15,8%	22,9%	47,9%	24,4%	13,4%	24,3%	41,7%	19,3%	18,3%
10. Visioning	3,7%	3,1%	17,1%	16,6%	18,6%	20,5%	0,7%	0,5%	12,0%	15,4%	5,4%	4,5%
11. Agreeing	1,2%	0,2%	4,2%	1,4%	1,3%	0,4%	1,5%	0,4%	4,3%	2,4%	3,5%	0,8%
12. Individualized consideratio	12,7%	13,5%	35,1%	52,7%	6,5%	4,1%	27,8%	33,0%	5,8%	3,8%	16,3%	23,9%
12.a. Positive rewarding	*1,9%*	*0,7%*	*1,7%*	*0,5%*	*1,7%*	*0,4%*	*0,0%*	*0,0%*	*0,4%*	*0,2%*	*0,0%*	*0,0%*
12.b. Encouraging	*8,7%*	*11,7%*	*29,8%*	*48,5%*	*4,8%*	*3,7%*	*26,3%*	*31,3%*	*3,2%*	*2,6%*	*16,3%*	*23,9%*
12. c. Being friendly	*2,1%*	*1,1%*	*3,7%*	*3,8%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,6%*	*0,2%*	*0,0%*	*0,0%*
12. d Personal interest	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*1,5%*	*1,6%*	*1,7%*	*0,9%*	*0,0%*	*0,0%*
13. Intellectual stimulation	2,4%	0,7%	2,5%	2,2%	0,8%	0,4%	0,0%	0,0%	5,8%	7,5%	2,8%	1,1%
13.a. Asking for ideas	*0,0%*	*0,0%*	*0,8%*	*1,1%*	*0,8%*	*0,4%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*
13.b. Cooperating	*2,4%*	*0,7%*	*1,7%*	*1,1%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*5,8%*	*7,5%*	*2,8%*	*1,1%*
14. Active listening	37,1%	41,2%	-	-	20,5%	9,5%	-	-	16,9%	13,0%	-	-
15. Nett task behavior	-	-	-	-	-	-	-	-	-	-	-	-
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 2 Displays the frequencies(%) and durations(%) of the observed behaviors during the weekly meetings (n=3 teams, consisting of 24 team members and 3 team leaders)

	Weekly process monitoring meetings											
	Tax Administrator				Health insurance				Retail Manufacturer			
	TL-Freq	TL-Dur	TM-Freq	TM-Dur	TL-Freq	TL-Dur	TM-Freq	TM-Dur	TL-Freq	TL-Dur	TM-Freq	TM-Dur
1. Showing disinterest	0,0%	0,0%	1,1%	4,5%	0,2%	0,1%	0,4%	0,4%	0,0%	0,0%	0,0%	0,0%
2. Defending one's own positio	0,0%	0,0%	3,2%	3,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,6%	0,2%
3. Providing negative feedback	0,0%	0,0%	1,4%	1,6%	0,0%	0,0%	0,4%	0,9%	0,0%	0,0%	1,2%	1,3%
4 Directing/correcting	2,0%	0,8%	3,5%	2,2%	0,6%	0,1%	1,4%	0,3%	2,4%	2,8%	5,0%	2,1%
4.a. Correcting	*0,3%*	*0,4%*	*0,9%*	*1,0%*	*0,4%*	*0,1%*	*0,1%*	*0,0%*	*2,4%*	*2,8%*	*0,6%*	*0,4%*
4.b. Interrupting	*1,7%*	*0,4%*	*2,6%*	*1,2%*	*0,2%*	*0,0%*	*1,2%*	*0,3%*	*0,0%*	*0,0%*	*4,3%*	*1,6%*
5. Directing/delegating	0,6%	0,3%	0,0%	0,0%	0,8%	0,4%	0,1%	0,6%	0,0%	0,0%	0,0%	0,0%
6. Disagreeing	0,0%	0,0%	2,7%	2,0%	0,0%	0,0%	0,3%	0,3%	0,6%	0,1%	3,1%	1,0%
7. Verifying	13,0%	4,8%	23,4%	13,9%	18,7%	8,3%	7,7%	4,4%	5,9%	1,3%	10,8%	7,6%
8. Structuring the conversatio	5,2%	4,0%	0,0%	0,0%	5,9%	3,1%	2,9%	3,2%	6,8%	3,7%	0,0%	0,0%
9. Informing	21,7%	32,8%	34,9%	32,5%	10,5%	10,2%	37,2%	45,1%	23,6%	20,0%	31,9%	34,2%
10. Visioning	4,9%	3,6%	11,5%	14,6%	12,0%	10,6%	25,9%	30,0%	5,3%	4,4%	26,3%	40,9%
11. Agreeing	1,4%	0,5%	6,2%	3,2%	1,7%	0,4%	6,7%	1,6%	0,6%	0,1%	5,0%	1,3%
12. Individualized consideratio	5,1%	2,3%	9,5%	17,2%	8,9%	4,7%	12,4%	9,0%	9,4%	4,2%	9,9%	6,5%
12.a. Positive rewarding	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,6%*	*0,1%*	*0,2%*	*0,1%*	*0,0%*	*0,0%*	*0,3%*	*0,0%*
12.b. Encouraging	*4,5%*	*2,1%*	*8,9%*	*17,1%*	*7,0%*	*4,1%*	*10,9%*	*8,4%*	*7,7%*	*3,7%*	*9,6%*	*6,5%*
12. c. Being friendly	*0,6%*	*0,2%*	*0,6%*	*0,1%*	*0,5%*	*0,1%*	*0,2%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*
12. d Personal interest	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,8%*	*0,3%*	*1,0%*	*0,5%*	*1,8%*	*0,5%*	*0,0%*	*0,0%*
13. Intellectual stimulation	5,2%	3,5%	2,6%	5,3%	6,6%	3,8%	4,6%	4,2%	3,5%	3,2%	6,2%	4,9%
13.a. Asking for ideas	*0,6%*	*0,1%*	*1,4%*	*3,4%*	*2,9%*	*1,4%*	*1,5%*	*1,5%*	*2,9%*	*3,0%*	*5,0%*	*4,5%*
13.b. Cooperating	*4,7%*	*3,4%*	*1,1%*	*1,9%*	*3,6%*	*2,4%*	*3,2%*	*2,7%*	*0,6%*	*0,2%*	*1,2%*	*0,4%*
14. Active listening	40,9%	47,4%	-	-	34,1%	58,3%	-	-	41,9%	60,2%	-	-
15. Nett task behavior	-	-	-	-	-	-	-	-	-	-	-	-
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 3 Displays the frequencies(%) and durations(%) of the observed behaviors during everyday work of the TL (n=5 teams, consisting of 55 team members and 5 team leaders)

	Daily work practices of a team leader									
	Tax Administrator		Health insurance		Truck manufacture		eatail Manufacture		Mail distributor	
	Freq	Dur	Freq	Dur	Freq	Dur	Freq	Dur	Freq	Dur
1. Showing disinterest	0,0%	0,0%	0,5%	0,1%	0,0%	0,0%	0,0%	0,0%	0,1%	0,0%
2. Defending one's own positio	0,2%	0,2%	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,1%	0,1%
3. Providing negative feedback	0,1%	0,0%	0,6%	0,1%	0,0%	0,0%	0,2%	0,0%	0,2%	0,1%
4 Directing/correcting	0,4%	0,0%	0,3%	0,0%	0,2%	0,1%	0,7%	0,2%	0,3%	0,0%
4.a. Correcting	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,2%*	*0,1%*	*0,7%*	*0,2%*	*0,0%*	*0,0%*
4.b. Interrupting	*0,4%*	*0,0%*	*0,3%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,3%*	*0,0%*
5. Directing/delegating	0,4%	0,2%	0,6%	0,2%	0,4%	0,1%	2,2%	0,5%	3,0%	2,1%
6. Disagreeing	0,0%	0,0%	0,0%	0,0%	0,4%	0,1%	0,2%	0,0%	0,3%	0,1%
7. Verifying	10,6%	2,5%	9,7%	1,7%	10,5%	1,7%	12,9%	2,4%	10,2%	3,1%
8. Structuring the conversatio	0,9%	0,4%	3,1%	1,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
9. Informing	22,4%	13,8%	10,5%	4,8%	16,2%	4,9%	19,0%	7,0%	19,6%	11,2%
10. Visioning	5,7%	2,4%	8,6%	3,3%	9,5%	3,9%	8,9%	3,2%	9,2%	6,4%
11. Agreeing	2,4%	0,3%	3,1%	0,5%	4,8%	0,8%	0,6%	0,1%	2,1%	0,5%
12. Individualized consideratio	11,0%	5,2%	14,0%	3,0%	6,5%	1,9%	4,8%	1,5%	6,9%	2,9%
12.a. Positive rewarding	*0,1%*	*0,0%*	*0,3%*	*0,1%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*
12.b. Encouraging	*3,2%*	*1,6%*	*7,2%*	*1,6%*	*4,5%*	*1,3%*	*3,7%*	*1,4%*	*3,9%*	*2,0%*
12. c. Being friendly	*4,4%*	*0,7%*	*1,2%*	*0,1%*	*1,5%*	*0,3%*	*0,9%*	*0,1%*	*1,4%*	*0,3%*
12. d Personal interest	*3,4%*	*2,9%*	*5,3%*	*1,2%*	*0,5%*	*0,3%*	*0,2%*	*0,0%*	*1,6%*	*0,6%*
13. Intellectual stimulation	2,4%	0,9%	3,4%	1,0%	1,9%	0,4%	0,3%	0,2%	0,8%	0,4%
13.a. Asking for ideas	*0,4%*	*0,1%*	*2,2%*	*0,7%*	*0,1%*	*0,0%*	*0,0%*	*0,0%*	*0,1%*	*0,0%*
13.b. Cooperating	*2,0%*	*0,8%*	*1,2%*	*0,4%*	*1,7%*	*0,4%*	*0,3%*	*0,2%*	*0,7%*	*0,4%*
14. Active listening	39,7%	37,8%	34,9%	15,7%	33,6%	22,6%	34,0%	21,0%	35,1%	22,5%
15. Nett task behavior	3,8%	36,3%	10,7%	68,6%	15,9%	63,5%	16,2%	63,9%	12,1%	50,6%
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 4 Displays the frequencies(%) and durations(%) of the observed behaviors during everyday work of the TM (n=5 teams, consisting of 55 team members and 5 team leaders)

	Daily work practices of a team member									
	Tax Administrator		Health insurance		Truck manufacture		eatail Manufacture		Mail distributor	
	Freq	Dur	Freq	Dur	Freq	Dur	Freq	Dur	Freq	Dur
1. Showing disinterest	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
2. Defending one's own positio	0,9%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
3. Providing negative feedback	0,4%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,2%	0,1%
4 Directing/correcting	1,5%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,6%	0,1%
4.a. Correcting	*1,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,6%*	*0,0%*
4.b. Interrupting	*0,5%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*
5. Directing/delegating	0,0%	0,0%	0,0%	0,0%	0,4%	0,0%	0,0%	0,0%	0,8%	0,1%
6. Disagreeing	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
7. Verifying	8,9%	0,5%	3,0%	0,2%	8,3%	0,5%	12,9%	0,2%	8,0%	0,5%
8. Structuring the conversatio	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
9. Informing	11,2%	0,7%	12,5%	3,3%	11,8%	1,7%	10,8%	0,3%	10,6%	1,4%
10. Visioning	5,6%	0,3%	11,1%	2,8%	0,8%	0,1%	0,0%	0,0%	3,9%	0,5%
11. Agreeing	0,5%	0,0%	1,0%	0,0%	0,6%	0,1%	0,0%	0,0%	0,6%	0,0%
12. Individualized consideratio	17,6%	2,0%	18,6%	3,7%	27,3%	5,0%	10,8%	0,4%	21,6%	4,5%
12.a. Positive rewarding	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*
12.b. Encouraging	*10,0%*	*1,5%*	*10,5%*	*2,1%*	*23,3%*	*4,6%*	*6,7%*	*0,4%*	*6,5%*	*0,8%*
12. c. Being friendly	*0,9%*	*0,6%*	*1,2%*	*0,1%*	*1,0%*	*0,1%*	*2,2%*	*0,0%*	*1,9%*	*0,1%*
12. d Personal interest	*6,7%*	*0,5%*	*6,9%*	*1,5%*	*3,0%*	*0,3%*	*1,9%*	*0,0%*	*13,2%*	*3,5%*
13. Intellectual stimulation	1,0%	0,3%	1,0%	0,2%	1,2%	0,2%	0,0%	0,0%	0,6%	0,1%
13.a. Asking for ideas	*1,0%*	*0,3%*	*0,5%*	*0,1%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*	*0,0%*
13.b. Cooperating	*0,0%*	*0,0%*	*0,5%*	*0,1%*	*1,2%*	*0,2%*	*0,0%*	*0,0%*	*1,2%*	*0,1%*
14. Active listening	37,7%	6,6%	33,6%	12,9%	12,7%	1,9%	27,7%	1,0%	23,5%	5,1%
15. Nett task behavior	14,7%	89,5%	19,2%	76,9%	36,9%	90,5%	37,8%	98,1%	29,6%	87,6%
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

C. Tables displaying correlations

Table 5 Displays correlations between the frequencies of the observed and self-reported leadership behaviors for start-up meetings (n=3 teams, consisting of 28 team members and 3 team leaders)

Start-up meeting			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS - asking for ideas (freq)	IS - being cooperating (freq)	Active listening (freq)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	M		0,00	0,00	0,30	0,93	0,00	1,10	0,30	7,13	8,53	14,10	6,83	1,43	0,90	3,83	0,67	0,37	0,13	1,83	17,07
	SD		0,00	0,00	0,26	0,90	0,00	0,13	0,36	2,87	0,31	1,54	3,61	1,10	0,60	2,67	0,83	0,64	0,23	1,80	10,77
1 Showing disinterest (value)	2,21	0,54	-																		
2 Defending one's own position (value)	4,95	0,43		-																	
3 Providing negative feedback (value)	2,73	0,7			-.500																
4 Directing/correcting - correcting (value)	5,21	0,51				.500															
5 Directing/correcting - interrupting (value)	2,6	0,87					-														
6 Directing/delegating (value)	5,13	0,33						.500													
7 Disagreeing (value)	3,03	0,35							.500												
8 Verifying (value)	5,55	0,13								-.500											
9 Structuring the conversation (value)	5,57	0,36									-.500										
10 Informing (value)	6,2	0,3										-1.000**									
11 Visioning (value)	5,6	0,41											.500								
12 Agreeing (value)	5,86	0,3												.500							
13 IC - positive rewarding (value)	5,25	0,73													.500						
14 IC - encouraging (value)	5,73	0,16														.500					
15 IC - being friendly (value)	6,21	0,45															.500				
16 IC - personal interest (value)	5,69	0,95																.000			
17 IS - asking for ideas (value)	5,89	0,54																	.000		
18 IS - being cooperating (value)	6,38	0,3																		.866	
19 Active listening (value)	5,86	0,22																			-.500

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Table 6 Displays correlations between the frequencies of the observed and self-reported behaviors for weekly monitoring meetings (n=3 teams, consisting of 24 team members and 3 team leaders)

Weekly monitoring meeting			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS - asking for ideas (freq)	IS - being cooperating (freq)	Active listening (freq)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	M		0,13	0,00	0,00	2,00	1,70	1,03	0,37	27,27	12,80	41,40	15,33	2,70	0,37	13,30	0,87	1,60	4,23	6,93	85,27
	SD		0,23	0,00	0,00	2,08	2,61	0,90	0,64	14,02	1,70	20,56	6,31	1,44	0,64	0,98	0,81	1,65	2,28	5,90	25,72
1 Showing disinterest (value)	1,92	0,54	-.866																		
2 Defending one's own position (value)	5,05	0,47		-																	
3 Providing negative feedback (value)	2,78	0,23			-																
4 Directing/correcting - correcting (value)	4,61	0,4				-.866															
5 Directing/correcting - interrupting (value)	1,95	0,14					1.000**														
6 Directing/delegating (value)	4,94	0,13						.500													
7 Disagreeing (value)	2,87	0,15							.866												
8 Verifying (value)	5,76	0,55								-.500											
9 Structuring the conversation (value)	5,51	0,31									-1.000**										
10 Informing (value)	6,14	0,08										1.000**									
11 Visioning (value)	5,59	0,36											.500								
12 Agreeing (value)	5,53	0,5												.500							
13 IC - positive rewarding (value)	5,73	0,09													-.866						
14 IC - encouraging (value)	5,85	0,33														-.500					
15 IC - being friendly (value)	6,49	0,29															1.000**				
16 IC - personal interest (value)	6,25	0,56																-1.000**			
17 IS - asking for ideas (value)	5,95	0,54																	-1.000**		
18 IS - being cooperating (value)	6,24	0,09																		-.500	
19 Active listening (value)	6,02	0,22																			-.500

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Table 7 Displays correlations between the frequencies of the observed and self-reported leadership behaviors for video shadowing of work behavior (n=5 teams, consisting of 55 team members and 5 team leaders)

Video shadowing			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS - asking for ideas (freq)	IS - being cooperating (freq)	Active listening (freq)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	M		0,34	0,40	0,76	0,58	0,82	6,00	0,70	41,40	2,26	71,78	32,02	9,64	0,20	16,26	7,94	8,08	1,52	4,68	138,72
	SD		0,50	0,49	0,56	1,00	0,86	7,42	0,73	15,51	3,28	40,08	14,27	5,30	0,31	4,79	7,46	6,69	2,06	3,18	59,36
1 Showing disinterest (value)	2,02	0,55	-.894*																		
2 Defending one's own position (value)	5,1	0,37		-.527																	
3 Providing negative feedback (value)	2,75	0,52			-.872																
4 Directing/correcting - correcting (value)	4,95	0,58				-.447															
5 Directing/correcting - interrupting (value)	2,31	0,73					.205														
6 Directing/delegating (value)	5,06	0,26						.100													
7 Disagreeing (value)	3	0,25							.789												
8 Verifying (value)	5,71	0,39								-.400											
9 Structuring the conversation (value)	5,61	0,28									-.112										
10 Informing (value)	6,16	0,22										-.300									
11 Visioning (value)	5,68	0,31											.300								
12 Agreeing (value)	5,72	0,46												.500							
13 IC - positive rewarding (value)	5,44	0,59													.224						
14 IC - encouraging (value)	5,77	0,26														.700					
15 IC - being friendly (value)	6,28	0,37															.051				
16 IC - personal interest (value)	5,85	0,72																.700			
17 IS - asking for ideas (value)	5,84	0,5																	.718		
18 IS - being cooperating (value)	6,33	0,23																		-.154	
19 Active listening (value)	5,93	0,25																			-.100

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Table 8 Displays correlations between the durations of the observed and self-reported leadership behaviors for start-up meeting (n=3 teams, consisting of 28 team members and 3 team leaders)

Start-up meeting			Showing disinterest (dur)	Defending one's own position (dur)	Providing negative feedback (dur)	Directing/correcting - correcting (dur)	Directing/correcting - interrupting (dur)	Directing/delegating (dur)	Disagreeing (dur)	Verifying (dur)	Structuring the conversation (dur)	Informing (dur)	Visioning (dur)	Agreeing (dur)	IC - positive rewarding (dur)	IC - encouraging (dur)	IC - being friendly (dur)	IC - personal interest (dur)	IS - asking for ideas (dur)	IS - being cooperating (dur)	Active listening (dur)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	M		00:00,0	00:00,0	00:01,4	00:03,9	00:00,0	00:04,7	00:00,7	00:11,0	00:25,4	01:57,0	00:39,0	00:03,1	00:01,3	00:17,9	00:01,2	00:00,9	00:00,4	00:08,2	01:03,7
	SD		00:00,0	00:00,0	00:01,7	00:03,7	00:00,0	00:05,4	00:03,7	00:04,6	00:05,3	00:31,3	00:26,8	00:01,0	00:00,7	00:14,9	00:01,7	00:01,5	00:00,7	00:12,4	00:52,0
1 Showing disinterest (value)	2,21	0,54	-																		
2 Defending one's own position (value)	4,95	0,43		-																	
3 Providing negative feedback (value)	2,73	0,7			.500																
4 Directing/correcting - correcting (value)	5,21	0,51				.500															
5 Directing/correcting - interrupting (value)	2,6	0,87					-														
6 Directing/delegating (value)	5,13	0,33						1.000**													
7 Disagreeing (value)	3,03	0,35							.500												
8 Verifying (value)	5,55	0,13								-.500											
9 Structuring the conversation (value)	5,57	0,36									-.500										
10 Informing (value)	6,2	0,3										.500									
11 Visioning (value)	5,6	0,41											.500								
12 Agreeing (value)	5,86	0,3												1.000**							
13 IC - positive rewarding (value)	5,25	0,73													.500						
14 IC - encouraging (value)	5,73	0,16														.500					
15 IC - being friendly (value)	6,21	0,45															1.000				
16 IC - personal interest (value)	5,69	0,95																.000			
17 IS - asking for ideas (value)	5,89	0,54																	.000		
18 IS - being cooperating (value)	6,38	0,3																		.866	
19 Active listening (value)	5,86	0,22																			.500

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Table 9 Displays correlations between the durations of the observed and self-reported leadership behaviors for weekly monitoring meetings (n=3 teams, consisting of 24 team members and 3 team leaders)

Weekly monitoring meeting			Showing disinterest (dur)	Defending one's own position (dur)	Providing negative feedback (dur)	Directing/correcting - correcting (dur)	Directing/correcting - interrupting (dur)	Directing/delegating (dur)	Disagreeing (dur)	Verifying (dur)	Structuring the conversation (dur)	Informing (dur)	Visioning (dur)	Agreeing (dur)	IC - positive rewarding (dur)	IC - encouraging (dur)	IC - being friendly (dur)	IC - personal interest (dur)	IS - asking for ideas (dur)	IS - being cooperating (dur)	Active listening (dur)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	M		00:00,5	00:00,0	00:00,0	00:19,6	00:02,4	00:03,6	00:00,7	01:26,4	01:04,4	06:18,0	01:51,6	00:05,4	00:00,7	00:59,3	0:00:02,(	00:04,6	00:27,1	00:35,9	16:37,7
	SD		00:00,9	00:00,0	00:00,0	00:26,1	00:03,8	00:03,3	00:01,2	01:02,5	00:08,3	03:24,1	01:08,9	00:03,6	00:01,2	00:19,7	00:02,0	00:04,6	00:25,6	00:29,1	02:05,8
1 Showing disinterest (value)	1,92	0,54	-.866																		
2 Defending one's own position (value)	5,05	0,47		-																	
3 Providing negative feedback (value)	2,78	0,23			-																
4 Directing/correcting - correcting (value)	4,61	0,4				-1.000**															
5 Directing/correcting - interrupting (value)	1,95	0,14					1.000**														
6 Directing/delegating (value)	4,94	0,13						1.000**													
7 Disagreeing (value)	2,87	0,15							.866												
8 Verifying (value)	5,76	0,55								.500											
9 Structuring the conversation (value)	5,51	0,31									-1.000**										
10 Informing (value)	6,14	0,08										1.000**									
11 Visioning (value)	5,59	0,36											1.000**								
12 Agreeing (value)	5,53	0,5												.500							
13 IC - positive rewarding (value)	5,73	0,09													-.866						
14 IC - encouraging (value)	5,85	0,33														.500					
15 IC - being friendly (value)	6,49	0,29															1.000**				
16 IC - personal interest (value)	6,25	0,56																-1.000**			
17 IS - asking for ideas (value)	5,95	0,54																	-1.000**		
18 IS - being cooperating (value)	6,24	0,09																		-.500	
19 Active listening (value)	6,02	0,22																			-.500

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 10 Displays correlations between the durations of the observed and self-reported leadership behaviors for video shadowing (n=5 teams, consisting of 55 team members and 5 team leaders)

Video shadowing			Showing disinterest (dur)	Defending one's own position (dur)	Providing negative feedback (dur)	Directing/correcting - correcting (dur)	Directing/correcting - interrupting (dur)	Directing/delegating (dur)	Disagreeing (dur)	Verifying (dur)	Structuring the conversation (dur)	Informing (dur)	Visioning (dur)	Agreeing (dur)	IC - positive rewarding (dur)	IC - encouraging (dur)	IC - being friendly (dur)	IC - personal interest (dur)	IS - asking for ideas (dur)	IS - being cooperating (dur)	Active listening (dur)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	M		00:00,0	00:00,4	00:00,6	00:00,6	00:00,1	00:01,0	00:01,0	00:13,7	00:00,0	00:53,3	00:26,5	00:01,1	00:00,0	01:07,2	00:02,5	00:42,0	00:02,5	00:02,6	03:19,5
	SD		00:00,0	00:00,9	00:00,9	00:00,8	00:00,1	00:01,9	00:01,3	00:05,3	00:00,0	00:40,7	00:41,5	00:00,8	00:00,0	01:00,1	00:01,8	00:51,3	00:04,1	00:03,1	02:50,0
1 Showing disinterest (value)	2,02	0,55	-.894*																		
2 Defending one's own position (value)	5,1	0,37		-.667																	
3 Providing negative feedback (value)	2,75	0,52			-.800																
4 Directing/correcting - correcting (value)	4,95	0,58				-.447															
5 Directing/correcting - interrupting (value)	2,31	0,73					-.205														
6 Directing/delegating (value)	5,06	0,26						.100													
7 Disagreeing (value)	3	0,25							.947*												
8 Verifying (value)	5,71	0,39								-.400											
9 Structuring the conversation (value)	5,61	0,28									-.112										
10 Informing (value)	6,16	0,22										0.000									
11 Visioning (value)	5,68	0,31											.700								
12 Agreeing (value)	5,72	0,46												.600							
13 IC - positive rewarding (value)	5,44	0,59													.224						
14 IC - encouraging (value)	5,77	0,26														.600					
15 IC - being friendly (value)	6,28	0,37															.000				
16 IC - personal interest (value)	5,85	0,72																.700			
17 IS - asking for ideas (value)	5,84	0,5																	.600		
18 IS - being cooperating (value)	6,33	0,23																		-.154	
19 Active listening (value)	5,93	0,25																			-.500

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 11 Displays correlations between the frequencies of the observed behaviors and the self-reported team leadership construct for start-up meetings (n=3 teams, consisting of 28 team members and 3 team leaders)

Start-up meetings			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS	IS - asking for ideas (freq)	IS - being cooperating (freq)	Active listening (freq)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	M		0,00	0,00	0,30	0,93	0,93	0,00	1,10	0,30	7,13	8,53	14,10	6,83	1,43	5,73	0,90	3,83	0,67	0,37	2	0,13	1,83	17,07
	SD		0,00	0,00	0,26	0,90	0,90	0,00	0,13	0,36	2,87	0,31	1,54	3,61	1,10	3,70	0,60	2,67	0,83	0,64	1,60	0,23	1,80	10,77
1 Team leadership (*α=0,753)*	5,96	0,11	-	-	.500	-.500	-.500	-	1.000**	.500	.500	.500	1.000**	-.500	1.000**	.500	-.500	-.500	.500	.866	1.000**	-.866	1.000**	.500

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Table 12 Displays correlations between the frequencies of the observed behaviors and the self-reported team leadership construct for weekly monitoring meetings (n=3 teams, consisting of 24 team members and 3 team leaders)

Weekly monitoring meetings			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS	IS - asking for ideas (freq)	IS - being cooperating (freq)	Active listening (freq)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	M		0,13	0,00	0,00	3,70	2,00	1,70	1,03	0,37	27,27	12,80	41,40	15,33	2,70	16,17	0,37	13,30	0,87	1,60	11,13	4,23	6,93	85,27
	SD		0,23	0,00	0,00	2,23	2,08	2,61	0,90	0,64	14,02	1,70	20,56	6,31	1,44	1,89	0,64	0,98	0,81	1,65	4,01	2,28	5,90	25,72
1 Team leadership (α=0,753)	5,78	0,37	.000	-	-	-.500	.866	-1.000**	-1.000**	.866	-1.000**	-.500	-.500	-.500	-1.000**	1.000**	.000	1.000**	-1.000**	1.000**	-1.000**	1.000**	-1.000**	-.500

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Table 13 Displays correlations between the frequencies of the observed behaviors and the self-reported team leadership construct for video shadowing (n=5 teams, consisting of 55 team members and 5 team leaders)

Video shadowing			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS	IS - asking for ideas (freq)	IS - being cooperating (freq)	Active listening (freq)	Net task behavior
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	M		0,34	0,40	0,76	1,40	0,58	0,82	6,00	0,70	41,40	2,26	71,78	32,02	9,64	32,48	0,20	16,26	7,94	8,08	6,20	1,52	4,68	138,72	43,16
	SD		0,50	0,49	0,56	0,73	1,00	0,86	7,42	0,73	15,51	3,28	40,08	14,27	5,30	15,44	0,31	4,79	7,46	6,69	3,78	2,06	3,18	59,36	22,535
1 Team leadership (α=0,753)	5,86	0,29	.224	-.580	.462	.700	.224	-.103	.800	.54	.300	-.224	.300	.100	-.700	-.300	-.224	.000	-.410	-.400	-.700	-.462	-.800	-.100	.410

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 14 Displays correlations between the frequencies of the observed behaviors and the self-reported constructs for team functioning for start-up meeting (n=3 teams, consisting of 28 team members and 3 team leaders)

Start-up meeting			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS	IS - asking for ideas (freq)	IS - cooperating (freq)	Active listening (freq)
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	M		7,13	0,30	0,80	0,77	0,07	0,70	0,17	0,13	4,50	0,53	10,87	4,47	1,50	12,57	0,37	11,23	0,80	0,17	0,90	0,17	0,74	20,17
	SD		4,72	0,52	1,22	0,60	0,12	0,62	0,29	0,23	0,29	0,92	5,92	5,82	1,11	9,03	0,64	7,14	1,39	0,29	0,82	0,29	0,64	1,90
1 Team learning (*α=0,756)*	4,3	0,37	.500	.866	-.500	.500	.866	.500	-.866	.000	-.500	-.866	-.500	-1.000**	-1.000**	-.500	-.866	-.500	-.866	.866	-1.000**	-.866	-.500	-.500
2 Back-up behavior (α=0,666)	4,94	0,73	1.000**	.000	.500	1.000**	.000	1.000**	-.866	.866	.500	-.866	-1.000**	-.500	-.500	-1.000**	-.866	-1.000**	-.866	.000	-.500	-.866	.500	.500
3 Team adaptability (α=0,770)	4,72	0,81	1.000**	.000	.500	1.000**	.000	1.000**	-.866	.866	.500	-.866	-1.000**	-.500	-.500	-1.000**	-.866	-1.000**	-.866	.000	-.500	-.866	.500	.500
4 Information sharing (α=0,860)	4,84	0,51	-.500	.866	-.500	.500	.866	.500	-.866	.000	-.500	-.866	-.500	-1.000**	-1.000**	-.500	-.866	-.500	-.866	.866	-1.000**	-.866	-.500	-.500
5 Conflict management (α=0,792)	4,14	0,84	1.000**	.000	.500	1.000**	.000	1.000**	-.866	.866	.500	-.866	-1.000**	-.500	-.500	-1.000**	-.866	-1.000**	-.866	.000	-.500	-.866	.500	.500
6 Team cohesion (α=0,876)	4,7	0,9	1.000**	.000	.500	1.000**	.000	1.000**	-.866	.866	.500	-.866	-1.000**	-.500	-.500	-1.000**	-.866	-1.000**	-.866	.000	-.500	-.866	.500	.500
7 Feedback (α=0,719)	4,52	0,36	.500	.866	-.500	.500	.866	.500	-.866	.000	-.500	-.866	-.500	-1.000**	-1.000**	.500	-.866	-.500	-.866	.866	-1.000**	-.866	-.500	-.500
8 Satisfaction with growth (α=0,769)	4,67	0,46	.500	.866	-.500	.500	.866	.500	-.866	.000	-.500	-.866	-.500	-1.000**	-1.000**	.500	-.866	-.500	-.866	.866	-1.000**	-.866	-.500	-.500
9 General satisfaction (α=0,778)	5,11	0,8	1.000**	.000	.500	1.000**	.000	1.000**	-.866	.866	.500	-.866	-1.000**	-.500	-.500	-1.000**	-.866	-1.000**	-.866	.000	-.500	-.866	.500	.500
10 Team effectiveness (α=0,675)	4,98	0,68	1.000**	.000	.500	1.000**	.000	1.000**	-.866	.866	.500	-.866	-1.000**	-.500	-.500	-1.000**	-.866	-1.000**	-.866	.000	-.500	-.866	.500	.500

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 15 Displays correlations between the frequencies of the observed behaviors and the self-reported constructs for team functioning for weekly monitoring meetings (n=3 teams, consisting of 24 team members and 3 team leaders)

Weekly monitoring meeting			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS	IS - asking for ideas (freq)	IS - cooperating (freq)	Active listening (freq)	Net task behavior
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	M		1,43	3,13	2,23	6,47	1,20	5,30	0,13	4,03	32,73	2,60	78,30	44,60	13,70	23,70	0,27	21,87	0,67	0,90	9,07	4,70	4,37	39,00	0,27
	SD		1,56	4,75	1,46	2,85	1,06	1,91	0,23	3,30	27,21	4,50	32,89	21,33	6,44	10,28	0,23	8,81	0,83	1,56	2,82	1,39	3,57	67,55	0,46
1 Team learning (*α=0,756)*	4,54	0,67	-.500	-1.000**	-1.000**	-1.000**	-1.000**	-1.000**	.866	-1.000**	-.500	.866	.500	1.000**	.500	.500	.866	.500	-.500	.866	1.000**	.000	.500	.866	-.866
2 Back-up behavior (α=0,666)	5,35	1,14	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
3 Team adaptability (α=0,770)	4,97	1,09	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
4 Information sharing (α=0,860)	5,03	0,64	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
5 Conflict Management (α=0,792)	4,13	0,95	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
6 Team cohesion (α=0,876)	4,97	1,13	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
7 Feedback (α=0,719)	4,74	0,56	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
8 Satisfaction with growth (α=0,769)	4,85	0,61	-.500	-1.000**	-1.000**	-1.000**	-1.000**	-1.000**	.866	-1.000**	-.500	.866	.500	1.000**	.500	.500	.866	.500	-.500	.866	1.000**	.000	.500	.866	-.866
9 General satisfaction (α=0,778)	5,34	1,04	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866
10 Team effectiveness (α=0,675)	5,29	0,85	-1.000**	-.500	-.500	-.500	-.500	-.500	.000	-.500	-1.000**	.000	-.500	.500	-.500	-.500	.866	-.500	-1.000**	.000	.500	.866	-.500	.000	-.866

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 16 Displays correlations between the frequencies of the observed behaviors and the self-reported constructs for team functioning for video shadowing (n=5 teams, consisting of 55 team members and 5 team leaders)

Video shadowing			Showing disinterest (freq)	Defending one's own position (freq)	Providing negative feedback (freq)	Directing/correcting (freq)	Directing/correcting - correcting (freq)	Directing/correcting - interrupting (freq)	Directing/delegating (freq)	Disagreeing (freq)	Verifying (freq)	Structuring the conversation (freq)	Informing (freq)	Visioning (freq)	Agreeing (freq)	IC	IC - positive rewarding (freq)	IC - encouraging (freq)	IC - being friendly (freq)	IC - personal interest (freq)	IS	IS - asking for ideas (freq)	IS - cooperating (freq)	Active listening (freq)	Net task behavior
Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
	M		0,00	0,18	0,16	0,50	0,40	0,10	0,38	0,00	8,82	0,00	14,50	6,70	0,82	26,28	0,00	15,04	1,68	9,60	1,08	0,34	0,74	33,14	33,18
	SD		0,00	0,40	0,22	0,69	0,55	0,22	0,61	0,00	4,45	0,00	7,59	7,89	0,66	15,70	0,00	11,64	1,12	9,20	0,71	0,47	0,71	20,50	20,23
1 Team learning (*α=0,756)*	4,52	0,5	-	-.707	-.866	-.894*	-.783	-.707	-.112	-	-.300	-	.500	.200	.500	.100	-	.600	.200	-.100	.700	-.224	.410	.200	.100
2 Back-up behavior (α=0,666)	5,35	0,81	-	-.707	-.577	-.671	-.447	-.707	-.224	-	-.600	-	.000	-.100	.000	-.300	-	-.300	-.100	-.200	-.100	-.447	-.205	-.100	-.300
3 Team adaptability (α=0,770)	5,06	0,79	-	-.707	-.289	-.447	-.112	-.707	.112	-	-.300	-	-.100	-.200	-.100	-.100	-	-.400	.000	-.100	-.300	-.671	-.103	-.200	-.100
4 Information sharing (α=0,860)	5,06	0,47	-	-.707	-.889*	-.918*	-.783	-.707	-.112	-	-.500	-	-.300	-.600	-.300	-.300	-	.000	-.400	-.700	-.100	-.671	.103	-.600	-.300
5 Conflict Management (α=0,792)	4,33	0,73	-	-.707	-.289	-.447	-.112	-.707	.335	-	-.100	-	-.300	-.500	-.300	.000	-	-.300	-.100	-.300	-.400	-.894*	.103	-.500	.000
6 Team cohesion (α=0,876)	5,06	0,83	-	-.707	-.289	-.447	-.112	-.707	.112	-	-.300	-	-.100	-.200	-.100	-.100	-	-.400	.000	-.100	-.300	-.671	-.103	-.200	-.100
7 Feedback (α=0,719)	4,74	0,4	-	-.707	-.866	-.894*	-.783	-.707	-.335	-	-.700	-	-.100	-.300	-.100	-.400	-	-.100	-.300	-.500	.000	-.447	-.103	-.300	-.400
8 Satisfaction with growth (α=0,769)	4,88	0,43	-	-.707	-.866	-.894*	-.783	-.707	-.335	-	-.600	-	.300	.100	.300	-.200	-	.200	.000	-.200	.400	-.224	.051	.100	-.200
9 General satisfaction (α=0,778)	5,42	0,78	-	-.707	-.289	-.447	-.112	-.707	.112	-	-.300	-	-.100	-.200	-.100	-.100	-	-.400	.000	-.100	-.300	-.671	-.103	-.200	-.100
10 Team effectiveness (α=0,675)	5,3	0,65	-	-.707	-.577	-.671	-.447	-.707	-.224	-	-.600	-	.000	-.100	.000	-.300	-	-.300	-.100	-.200	-.100	-.447	-.205	-.100	-.300

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

D. Survey

Vragenlijst

over de manier van werken

bij [naam organisatie]

UNIVERSITEIT TWENTE.

Toelichting bij de vragenlijst

Doel
Met deze vragenlijst willen we meer te weten komen over het gedrag en de prestaties in uw team. We zijn benieuwd of de bestaande kennis over teams ook bij u van toepassing is, of dat u op bepaalde manieren misschien uniek bent.

We onderzoeken dat niet alleen met deze vragenlijst, maar bekijken ook de dagelijkse praktijk van uw team. Die resultaten vergelijken we met elkaar om een goed beeld te krijgen van uw team. Uiteindelijk kunnen we de kennis over uw team en andere teams beschrijven zodat anderen er van kunnen leren.

Het beantwoorden van de meeste vragen
Vrijwel alle vragen kunnen beantwoord worden door het inkleuren van het hokje die het meeste overeenkomt met uw mening. Er is dan telkens keuze uit zeven antwoorden, waarvan u er één mag kiezen. Stel dat u bijvoorbeeld de volgende stelling krijgt:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. Ik vind werken leuk	☐	☐	☐	☐	☐	☐	☐

Als u werken heel leuk vindt dan bent u het dus volledig eens met de stelling. Dan kruist u het linkerhokje aan, zoals hieronder:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. Ik vind werken leuk	■	☐	☐	☐	☐	☐	☐

Zo gaat het invullen bij de meeste vragen. Bij de rest van de vragen spreekt het invullen voor zichzelf.

Tot slot van belang

- Het invullen van de vragenlijst duurt ongeveer 15 minuten;
- Het kan zijn dat een vraag niet helemaal op u van toepassing is of lastig te beantwoorden in uw situatie. Toch willen we u vragen ook deze vragen zo goed, eerlijk en snel mogelijk te beantwoorden en de vragenlijst zo volledig mogelijk in te vullen;
- De vragenlijst is **anoniem**. Dat betekent dat niemand te weten kan komen wie welke antwoorden gegeven heeft;
- Als iets onduidelijk is, kunt u altijd een vraag stellen aan [naam onderzoeker].

Bij voorbaat hartelijk bedankt voor het invullen!

1. Vragen over uzelf

Als eerste een vraag over waarden. Hieronder vindt u een lijst met dingen die u belangrijk kunt vinden. In welke mate past u de volgende waarden toe als een belangrijke richtinggever in uw werk?

De mate waarin u het eens of oneens bent, kunt u aangeven met een cijfer variërend van -1, 0, 3, 6 of 7. **Omcirkel** dat cijfer.

		Oneens				*Eens*
1.	Ambitie (hoge doelen stellen)	-1	0	3	6	7
2.	Zelfdiscipline (zelfbeheersing)	-1	0	3	6	7
3.	Eerlijkheid (de waarheid spreken)	-1	0	3	6	7
4.	Initiatiefrijk (ondernemend, inventief)	-1	0	3	6	7
5.	Traditioneel (gebruiken in stand houden)	-1	0	3	6	7
6.	Rechtvaardig (anderen eerlijk behandelen)	-1	0	3	6	7
7.	Meegaand (de regels opvolgen, aanpassen)	-1	0	3	6	7
8.	Experimenteel (nieuwe dingen uitproberen)	-1	0	3	6	7
9.	Teamwerk (samenwerken, coöperatief, meedoen)	-1	0	3	6	7
10.	Onbaatzuchtig (zorgzaam, anderen ondersteunen)	-1	0	3	6	7
11.	Nieuwsgierig (interesses navolgen, onderzoekend)	-1	0	3	6	7
12.	Openhartigheid (zonder grenzen over uzelf praten)	-1	0	3	6	7
13.	Zelfreflectie (terugkijken op eigen gedrag en groei)	-1	0	3	6	7
14.	Continu verbeteren (telkens kleine stapjes verbeteren)	-1	0	3	6	7
15.	Succes (resultaatgerichtheid, presteren, hoge kwaliteit)	-1	0	3	6	7
16.	Hulpvaardig (u inzetten voor het welzijn van anderen)	-1	0	3	6	7
17.	Integriteit (integer omgaan met persoonlijke informatie)	-1	0	3	6	7
18.	Creatief (innovatief, het denken buiten bestaande paden)	-1	0	3	6	7
19.	Gehoorzaam (plichtsgetrouw en verplichtingen nakomen)	-1	0	3	6	7
20.	Gelijkheid (zorg dragen voor gelijke kansen voor iedereen)	-1	0	3	6	7
21.	Verantwoordelijkheid (afspraak is afspraak, doen wat je zegt)	-1	0	3	6	7
22.	Durf (moedig, op zoek naar avontuur, risico's durven nemen)	-1	0	3	6	7
23.	Ruimdenkendheid (mogelijkheden zien, buiten de kaders denken)	-1	0	3	6	7
24.	Klantgerichtheid (u bent pas tevreden als uw klanten tevreden zijn)	-1	0	3	6	7
25.	Bescheidenheid (niet opscheppen of teveel op de voorgrond treden)	-1	0	3	6	7
26.	Respectvol (oudere medewerkers het voordeel van de wijsheid geven)	-1	0	3	6	7
27.	Vertrouwen in mensen (mensen vertrouwen vanaf het eerste moment)	-1	0	3	6	7
28.	Informatie delen en analyseren (heldere informatie met elkaar bespreken)	-1	0	3	6	7
29.	Zoeken naar afwisseling (op zoek gaan naar verandering en nieuwigheden)	-1	0	3	6	7
30.	Constructieve feedback (op een opbouwende manier terugkoppeling geven)	-1	0	3	6	7

2. Vragen over uw leidinggevende

Hoe vaak vertoont uw leidinggevende het volgende gedrag?
De mate waarin kunt u aangeven met een cijfer variërend van 1 (nooit) t/m 7 (altijd).

		Cijfer:
1.	Controlerend	
2.	Gereserveerd	
3.	Geeft complimentjes	
4.	Toont zich ongeïnteresseerd	
5.	Spreekt medewerkers tegen	
6.	Valt medewerkers in de rede	
7.	Informeert medewerkers goed	
8.	Luistert goed naar medewerkers	
9.	Houdt vast aan zijn/haar eigen mening	
10.	Is vriendelijk naar medewerkers	
11.	Geeft medewerkers duidelijke doelen	
12.	Werkt goed samen met medewerkers	
13.	Beantwoordt vragen van medewerkers	
14.	Geeft negatieve kritiek op medewerkers	
15.	Komt geïrriteerd en beschuldigend over	
16.	Benadrukt zijn/haar positie als leidinggevende	
17.	Laat waardering blijken voor kleine zaken	
18.	Vraagt door naar bepaalde zaken/situaties	
19.	Toont geen belangstelling voor medewerkers	
20.	Delegeert voldoende taken naar medewerkers	
21.	Roept medewerkers, indien nodig, tot de orde	
22.	Toont zich doorgaans een aandachtige luisteraar	
23.	Geeft overtuigend beargumenteerd zijn/haar mening	
24.	Bepaalt grotendeels het onderwerp van gesprek	
25.	Moedigt medewerkers op een positieve wijze aan	
26.	Toont persoonlijke belangstelling voor medewerkers	
27.	Vraagt naar ideeën en/of meningen van medewerkers	
28.	Vertelt medewerkers waar zij informatie kunnen vinden	
29.	Geeft goed structuur aan gesprekken met medewerkers	
30.	Maakt goed gebruik van wat er tegen hem/haar gezegd wordt	
31.	Laat merken wanneer hij/zij het eens is met medewerkers	
32.	Neemt duidelijk de leiding in gesprekken en vergaderingen	
33.	Bediscussieert de belangrijkste prioriteiten met de medewerkers	
34.	Verifieert goed (= gaat regelmatig na wat de stand van zaken is)	
35.	Verdedigt naar medewerkers toe zijn/haar eigen standpunt of belangen	
36.	Kan een moeilijke boodschap behoedzaam en toch helder brengen	
37.	Beoordeelt en/of beloont medewerkers positief (na een goede prestatie)	
38.	Laat zichtbaar merken dat hij/zij iets begrijpt (b.v. door samen te vatten of instemmend te knikken)	

Nog een vraag over uw leidinggevende. Geef aan in hoeverre u het met de volgende stellingen eens of oneens bent:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. Onze teamleider is blij met de prestaties van de teamleden	☐	☐	☐	☐	☐	☐	☐
2. Onze teamleider begrijpt de problemen en behoeften bij het werk	☐	☐	☐	☐	☐	☐	☐
3. Onze teamleider ziet de potentie/mogelijkheden van teamleden	☐	☐	☐	☐	☐	☐	☐
4. Onze teamleider helpt met problemen bij het werk	☐	☐	☐	☐	☐	☐	☐
5. Onze teamleider redt/verdedigt ons, zelfs ten koste van zichzelf	☐	☐	☐	☐	☐	☐	☐
6. Onze teamleider doet de juiste dingen	☐	☐	☐	☐	☐	☐	☐
7. Onze teamleider heeft een goede werkrelatie met ons	☐	☐	☐	☐	☐	☐	☐

3. Algemene vragen over uw team

Geef aan in hoeverre u het met de volgende stellingen eens of oneens bent:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. Onze teamleden hebben er groot vertrouwen in dat het team effectief kan presteren	☐	☐	☐	☐	☐	☐	☐
2. Teamleden die goed werk leveren worden beloond in de organisatie	☐	☐	☐	☐	☐	☐	☐
3. Ons team is één van de beste teams, van welke organisatie dan ook	☐	☐	☐	☐	☐	☐	☐
4. Ons team krijgt geen nuttige trainingen voor het werk aangeboden	☐	☐	☐	☐	☐	☐	☐
5. Teamleden hebben het gevoel lid te zijn van ons team	☐	☐	☐	☐	☐	☐	☐
6. Ons team heeft veel 'teamgevoel'	☐	☐	☐	☐	☐	☐	☐
7. Ons team ontvangt alle benodigde informatie om het werk te kunnen plannen en uitvoeren	☐	☐	☐	☐	☐	☐	☐
8. Teamleden zien zichzelf als deel van ons team	☐	☐	☐	☐	☐	☐	☐
9. Ons team kan eenvoudig ondersteuning krijgen van een expert als er iets gebeurt waarvan we niet weten hoe we er mee om moeten gaan	☐	☐	☐	☐	☐	☐	☐
10. Teamleden hebben het gevoel dat ze bij ons team horen	☐	☐	☐	☐	☐	☐	☐
11. Ons team kan bijna elke taak oppakken en afmaken	☐	☐	☐	☐	☐	☐	☐
12. Ons team wordt slecht geïnformeerd over de huidige ontwikkelingen en toekomstplannen die ons werk kunnen beïnvloeden	☐	☐	☐	☐	☐	☐	☐
13. Teamleden zijn blij deel uit te maken van ons team	☐	☐	☐	☐	☐	☐	☐

4. Gedrag in uw team

Geef aan in hoeverre u het met de volgende stellingen eens of oneens bent:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. In ons team is er altijd iemand die ervoor zorgt dat we stoppen om te praten over het werkproces van het team	☐	☐	☐	☐	☐	☐	☐
2. Teamleden vragen teamgenoten wat zij kunnen, wanneer zij bepaalde vaardigheden willen leren	☐	☐	☐	☐	☐	☐	☐
3. Als teamleden iets nieuws hebben geleerd, zorgen zij dat andere teamleden dit ook te weten komen	☐	☐	☐	☐	☐	☐	☐
4. Teamleden raden andere teamleden aan om hun eigen werk te controleren op fouten	☐	☐	☐	☐	☐	☐	☐
5. Teamleden wijzen andere teamleden persoonlijk op hun fouten zonder dat de rest van het team dit merkt	☐	☐	☐	☐	☐	☐	☐
6. Wanneer iemand in het team iets goed kan, vragen teamleden of die collega het hen ook wil leren	☐	☐	☐	☐	☐	☐	☐
7. Teamleden brengen fouten onder de aandacht bij andere teamleden, zonder negatief te zijn	☐	☐	☐	☐	☐	☐	☐
8. Teamleden benadrukken expliciet wat er goed gaat in het team	☐	☐	☐	☐	☐	☐	☐
9. Teamleden maken regelmatig complimenten over de resultaten van het team	☐	☐	☐	☐	☐	☐	☐
10. Teamleden zijn bereid te helpen om werk af te maken dat niet aan henzelf toegewezen was	☐	☐	☐	☐	☐	☐	☐
11. Wanneer teamleden bepaalde kennis nodig hebben, vragen zij anderen in het team daarnaar	☐	☐	☐	☐	☐	☐	☐
12. Ons team is flexibel in het veranderen van werktaken, om het voor anderen makkelijker te maken	☐	☐	☐	☐	☐	☐	☐
13. Teamleden vertellen andere teamleden regelmatig waar ze mee bezig zijn	☐	☐	☐	☐	☐	☐	☐
14. Ons team is geneigd om meningsverschillen persoonlijk af te handelen, in plaats van het meteen in de groep aan te pakken	☐	☐	☐	☐	☐	☐	☐
15. Ons team zoekt regelmatig nieuwe informatie waardoor we belangrijke veranderingen maken	☐	☐	☐	☐	☐	☐	☐
16. We nemen regelmatig de tijd om manieren te bedenken die ons werkproces verbeteren	☐	☐	☐	☐	☐	☐	☐
17. Mensen in dit team brengen regelmatig punten in ter discussie	☐	☐	☐	☐	☐	☐	☐
18. Onze teamleden vinden het belangrijk dat hun collega's in het team weten waar zij mee bezig zijn	☐	☐	☐	☐	☐	☐	☐
19. We nodigen mensen van buiten het team uit om informatie te delen of een discussie met ons te voeren	☐	☐	☐	☐	☐	☐	☐
20. Op drukke momenten zijn er vaak teamleden die anderen willen helpen	☐	☐	☐	☐	☐	☐	☐
21. Mensen in dit team worden graag op de hoogte gehouden van wat teamgenoten weten	☐	☐	☐	☐	☐	☐	☐
22. Informatie die teamleden hebben, delen zij met anderen in het team	☐	☐	☐	☐	☐	☐	☐

5. Moeilijke situaties in uw team

Geef aan in hoeverre u het met de volgende stellingen eens of oneens bent:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. Conflicten worden openlijk afgehandeld in ons team	☐	☐	☐	☐	☐	☐	☐
2. Mensen in dit team zijn goed in het voorkomen van problemen	☐	☐	☐	☐	☐	☐	☐
3. Mensen in dit team zijn goed in het aanpassen aan veranderingen van hulpmiddelen en manieren van werken	☐	☐	☐	☐	☐	☐	☐
4. Ons team is in staat om de negatieve gevolgen van conflicten te voorkomen voordat ze plaatsvinden	☐	☐	☐	☐	☐	☐	☐
5. Als een conflict zich voordoet in ons team, dan nemen de betrokkenen in het conflict onmiddellijk stappen om het op te lossen	☐	☐	☐	☐	☐	☐	☐
6. Als er veranderen plaatsvinden in de werkroutines en middelen, passen mensen zich hier snel op aan	☐	☐	☐	☐	☐	☐	☐
7. Mensen in dit team zijn goed in het omgaan met noodsituaties, veroorzaakt door bijvoorbeeld ongelukken, problemen met hulpmiddelen en werk, of andere oorzaken die ervoor zorgen dat er tijdelijk teveel werk is	☐	☐	☐	☐	☐	☐	☐
8. Ons team weet wat het moet doen als zich een conflict voordoet tussen teamleden	☐	☐	☐	☐	☐	☐	☐

6. Prestaties van uw team

Geef aan in hoeverre u het met de volgende stellingen eens of oneens bent:

	Volledig mee eens	*Mee eens*	*Beetje mee eens*	*Niet eens/ niet oneens*	*Beetje mee oneens*	*Mee oneens*	*Volledig mee oneens*
1. Het lijkt alsof ons team de laatste tijd iets achterloopt in prestaties en wat we bereiken	☐	☐	☐	☐	☐	☐	☐
2. De gevoelens van teamleden worden niet op enige manier beïnvloed door hoe goed ons team presteert	☐	☐	☐	☐	☐	☐	☐
3. De kwaliteit van het werk dat ons team levert wordt steeds beter	☐	☐	☐	☐	☐	☐	☐
4. Werken in dit team vergroot de persoonlijke kennis en vaardigheden van teamleden	☐	☐	☐	☐	☐	☐	☐
5. In ons team worden regelmatig kritieke kwaliteitsfouten gemaakt	☐	☐	☐	☐	☐	☐	☐
6. We voeren ons werk uit op een manier waar we het allemaal mee eens zijn	☐	☐	☐	☐	☐	☐	☐
7. Mensen die het werk van ons team ontvangen hebben daar vaak klachten over	☐	☐	☐	☐	☐	☐	☐
8. Teamleden voelen zich slecht en ongelukkig als ons team het slecht heeft gedaan	☐	☐	☐	☐	☐	☐	☐
9. Als team leren we veel	☐	☐	☐	☐	☐	☐	☐
10. Anderen in het bedrijf, die vaak met ons team contact hebben, klagen vaak over hoe we functioneren	☐	☐	☐	☐	☐	☐	☐
11. Teamleden zouden ook in de toekomst met dit team willen werken	☐	☐	☐	☐	☐	☐	☐
12. Teamleden voelen zichzelf tevreden als ons team het goed doet	☐	☐	☐	☐	☐	☐	☐
13. Creativiteit en initiatief van teamleden worden onderdrukt door het team	☐	☐	☐	☐	☐	☐	☐
14. Teamleden beleven plezier aan het werk dat we in dit team doen	☐	☐	☐	☐	☐	☐	☐
15. Mensen in ons team leren veel van het werk dat ze doen in dit team	☐	☐	☐	☐	☐	☐	☐
16. Het werken in dit team brengt veel frustraties met zich mee	☐	☐	☐	☐	☐	☐	☐
17. Over het algemeen zijn onze teamleden erg tevreden met dit team	☐	☐	☐	☐	☐	☐	☐
18. Als ons team het goed heeft gedaan, dan vinden onze teamleden ook dat ze het goed gedaan hebben	☐	☐	☐	☐	☐	☐	☐
19. We zijn tevreden met de prestaties van ons team	☐	☐	☐	☐	☐	☐	☐

Vul een cijfer van 1 (zeer slecht) tot 5 (zeer goed) in voor de volgende vragen:

1. Hoe beoordeelt u het niveau van continu verbeteren op een schaal van 1 tot 5? ……..
2. Hoe beoordeelt u het niveau van klantgerichtheid op een schaal van 1 tot 5? ……..
3. Hoe beoordeelt u het niveau van inspraak van de medewerkers in het proces op een schaal van 1 tot 5? ……..

7. Nominatie

1. Noem de naam van uw **niet-leidinggevende collega** in dit team die het beste het gedrag laat zien dat volgens u bij een effectief team past?

   ……

8. Biografische vragen

1. Wat is uw geslacht?
   - ☐ Man
   - ☐ Vrouw
2. Wat is uw leeftijd? ……..
3. Hoe lang werkt u al in dit team? ……..
4. Hoe lang werkt u al bij [naam organisatie]? ……..
5. Wat is de hoogste opleiding die u heeft afgerond?
   - ☐ LBO
   - ☐ MBO
   - ☐ HBO
   - ☐ Universitair
   - ☐ Anders, namelijk: ……..
6. Wat voor een dienstverband heeft u?
   - ☐ Fulltime
   - ☐ Parttime

Hartelijk bedankt voor het invullen van de vragenlijst!

Hieronder heeft u eventueel de ruimte voor opmerkingen, graag in BLOKLETTERS schrijven.

U kunt de vragenlijst uiterlijk tot en met [datum] inleveren bij [naam onderzoeker]