



# A Qualitative Study for a Competence Development Plan

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## **BACHELOR'S THESIS**

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### **Summary**

The main purpose of this bachelor's thesis is to create a competence development plan for Technical Information at a company. The plan is based on qualitative research data from employees, team leaders and line managers within Technical Information Finland as well as internal stakeholders within the company's Finnish branch. The secondary purpose is to map out the current competencies within Technical Information Finland. The results of the qualitative research can be used as a base during the budget reviews and when planning the training needs.

The qualitative research, carried out through interviews, provided a lot of input and a wide range of result. The conclusions of the results are that the department should put more effort on e.g. customer focus, documentation skills, quality awareness and communication. The purpose of the thesis was reached and many proposals for further research emerged during the process.

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## EXAMENSARBETE

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### Abstrakt

Huvudsyftet med detta examensarbete är att skapa en plan för kompetensutveckling för avdelningen Technical Information vid ett företag. Planen är baserad på kvalitativt undersökningsmaterial, erhållet genom intervjuer med anställda, team ansvariga och avdelningschefer inom Technical Information Finland samt även genom intervjuer med interna samarbetspartners inom företaget. Det sekundära syftet är att redogöra för de nuvarande kompetenserna inom Technical Information Finland. Resultatet av den kvalitativa undersökningen kan användas som ett underlag vid planering av avdelningens skolningsbudget och vid kartläggning av skolningsbehov.

Den kvalitativa undersökningen, genomförd genom intervjuer och diskussioner, resulterade i ett omfattande material och ett brett resultat. Slutsatsen av resultatet är att avdelningen borde lägga mer resurser och mer fokus på skolningar berör t.ex. dokumentation, fokus på kunder, kvalitetstänkande och kommunikation. Syftet med examensarbetet uppnåddes och många idéer och förslag till fortsatt undersökning framkom under arbetets gång.

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Språk: Engelska

Nyckelord: kompetens, kompetensutveckling

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Appendix 1: Interview questions, employees

Appendix 2: Interview questions for line managers and team leaders

Appendix 3: Interview questions for internal stakeholders

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Appendix 6: Identified competence development areas – employees

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# **1 INTRODUCTION**

This thesis is about competence development among employees and line managers in a specific department in a large global company. The idea for this topic was based on results from the company's regularly performed employee survey published in the beginning of 2014.

In this first chapter the purposes, delimitation and background of the thesis is accounted for. To make the text more fluent there is also mentioned a few abbreviations and for an overview, a disposition of the thesis.

## **1.1 Background**

Every year after receiving the results from the company survey it is up to the line managers of each department to make sure an effort is made to solve the shortcomings within the organization. In this case my team's line manager was assigned a task called competence development. After several discussions the task to create a competence development plan for the employees and line managers of Technical Information Finland was delegated to me. The plan had a deadline for September 2014, before next year's budget review.

## **1.2 Purpose**

The main purpose with this thesis is to create a competence development plan for Technical Information Finland, which can be used as a base when creating the budget. The plan should stretch 3-5 years into the future. The progress of the competence development can be followed through annual development discussions and regular company surveys.

The secondary purpose for this thesis is to map out the existing competencies within the organisation. This will be done with the help of global competencies listed in the company's competence assessment tool.



### 1.3 Delimitation

Technical Information is a department stretching all over the world, however my study is limited to Technical Information in Finland only. TI-FI has approximately 60 employees within different work areas, situated in Vaasa and Turku. A few employees from every work area were selected for the analysis, as well as all the line managers and team leaders.

In the beginning of the project an idea emerged to ask the company's internal stakeholders, i.e. internal customers, for their opinions on the competencies of TI-FI. The decision was made to limit the amount of interviewed internal stakeholders to a few departments closest connected to TI-FI through different activities. It was also, at this point, decided not to interview managers too high up in the organisation. This way the interviews would only be performed with employees impacted by the work at TI-FI.

### 1.4 Definitions and abbreviations

CD	Content Distribution
CM	Content Management
Company survey	Global employee satisfaction survey within the company
DMTI	Delivery Management Technical Information
FI	Finland
HR	Human resources
HRM	Human resource management
L&D	Learning and Development
Line manager	Includes all the line managers and the department manager of TI-FI
PDLM	Parts Data Lifecycle Management
SB	Service Bulletin
TI-FI	Delivery Management Technical Information Finland
TI	Technical information
WFI	Wärtsilä Finland
WFI-S	Wärtsilä Finland, Services

## **1.5 Disposition**

In chapter 2 there is a short text about the company to create a picture of the scope of the company such as its mission and vision. Services and Technical Information in Finland, for which the thesis is made, are also mentioned. Chapter 3 concludes the theory on competence development generally and how this works within the company. Further in chapter 4 the method is accounted for and the company survey results are gone through further. The method chapter, together with the theory chapter, forms the basis of the interviews, which are accounted for in chapter 5. In chapter 6 the results are analysed and discussed and in chapter 7, reflections are made on how well the purpose of thesis was reached, the contribution to the company and thoughts about how the research on the topic could be continued.

## 2 THE COMPANY

In this chapter a brief description of Wärtsilä is given, the organisational setup and activities, turnover and about Services and Technical Information globally and in Finland.

### 2.1 Wärtsilä in brief

Wärtsilä Corporation Oyj, founded in the small village of Wärtsilä in Karelia 180 years ago, is a global company providing lifecycle power solutions for the marine and energy markets. Wärtsilä employs around 18 700 people in 200 locations worldwide and has a turnover of 4.7 billion euro (2013). The company is listed on the NASDAQ OMX Helsinki, Finland. (Wärtsilä 2014)

Wärtsiläs mission is: *”to provide lifecycle power solutions to enhance our customers’ business, whilst creating better technologies that benefit both the customer and the environment”*. The vision is to: *“be each of our customers’ most valued business partner”*. Wärtsiläs values are Energy, Excellence and Excitement. (Wärtsilä 2014)



Figure 1. Mission, vision and values. (Wärtsilä 2014)

The company consist of three different business segments: Ship Power, Power Plants and Services. Wärtsilä Ship Power is in charge of the marine market and offers ship machinery, propulsion and manoeuvring solutions for all types of vessels and offshore applications. Wärtsilä Power Plants is a global supplier of power plants, operating on various gaseous and liquid fuels, for the decentralised power generation market. Wärtsilä Services is the biggest

segment and offers support to customers during the lifecycle of their installations. (Wärtsilä 2014)

## **2.2 Wärtsilä Services**

Wärtsilä Services organisation, a big part of Wärtsiläs complete lifecycle power solutions, has approximately 11 000 employees around the world and the net sales for 2013 was 1,842 billion euros. WFI-S supports its customers throughout the lifecycle of their installation and also provides reconditioning solutions for both the marine and power industry. (Wärtsilä 2014)

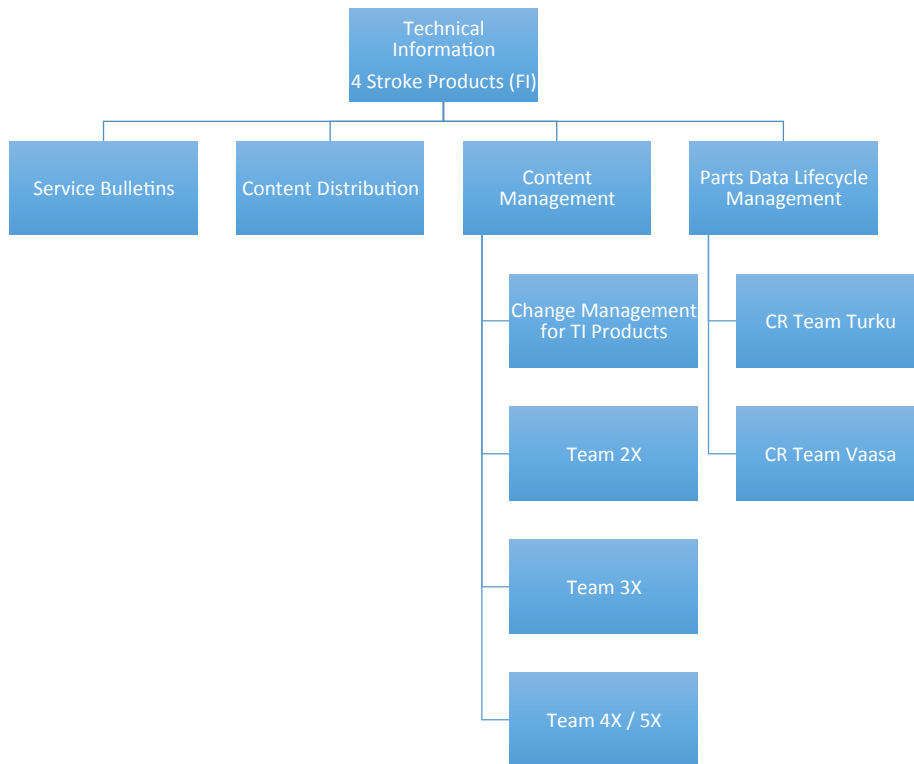
Services strategy is to focus on customer needs through constant development, to support the customers locally, to grow by providing service agreements and to support its customers in minimising their environmental footprint. Emphasis is also put on fostering a customer-focused quality attitude and a safe way of working. (Wärtsilä 2014)

## **2.3 Technical Information**

Technical Information serves as a part of Delivery Management in Wärtsilä Services and has around 120 employees located in Finland, Italy, Norway, the Netherlands, Switzerland and France. TI is in charge of providing technical information for the customers using different online and offline applications. The mission of Technical Information is to *”secure the availability of accurate and complete information for operation, maintenance, repair and overhaul of the installed Wärtsilä solutions and its equipment to our customers and to Wärtsilä employees”*. The target of Technical Information is to *”be a market shaper by constantly seeking and applying new, innovative and competitive delivery solutions”*. The targets are customer satisfaction, employee satisfaction, cost to server, time to serve and quality of services. The vision is *”a flexible, effective and mission driven organisation and a great place to work in”*. The roadmap for 2017 includes going more global and *“ensure that we act and work according to global processes and function within TI”*. (Wärtsilä 2014)

TI Finland employs around 60 employees located in Vaasa and Turku. The department consist of four teams: Service Bulletin, Content Distribution, Parts Data Lifecycle Management and

Content Management. PDLM is further divided into two sections and CM into four sections according to Figure 2 below.



**Figure 2. TI-FI organisational chart**

### 2.3.1 Service Bulletin

The Service Bulletin team creates Service Bulletins for FI products in cooperation with e.g. the responsible product teams in Technical Service and the Product Management. The main activities for the SB-team are to create and maintain bulletin specific product information, to plan and create bulletin illustrations and to publish and distribute bulletins for internal and external customers with the help of different online applications. (Wärtsilä 2014)

### 2.3.2 Content Distribution

The Content Distribution team is in charge of making accurate technical information available to the stakeholders. The main tasks are management, publishing and coordinating translations. The main deliverables from the CD team are i.e. engine spare part catalogues, engine operation and maintenance manuals and record books. (Wärtsilä 2014)

### 2.3.3 Parts Data Lifecycle Management

The Parts Data Lifecycle Management team consists of two sub-teams (Figure 2), one in Vaasa and one in Turku. The PDLM main activities consist of creating, providing and maintaining master data for the use of stakeholders in Services. The team maintains the code resolution database for FI products and supports different departments within the Services organisation through various processes. (Wärtsilä 2014)

### 2.3.4 Content Management

Content Management team consist of several sub-teams (see Figure 2). Their main assignment is to produce spare part lists and related spare part data for production modules. Content Management works closely with all teams within TI-FI. There is also a sub-team called Change Management within CM. Their responsibility is the content of the operational and maintenance manuals and to receive, monitor and analyse all change requests that are linked to the manuals. (Wärtsilä 2014)

### 3 THEORY

The purpose of this chapter is to create a picture of what competence is and how it is evaluated and developed. The chapter starts by explaining the concept of human resources management generally and within Wärtsilä, since human resources is the department constantly dealing with competence and its development to ensure that the company stays competitive and their workforce stays motivated.

#### 3.1 Human Resource management

Boxall & Purcell (2011, p. 1-4) defines HRM as all the activities associated with managing work and people within an organisation and by stating that any company with at least one employee has engaged in HRM. A few essential aspects associated with this term are motivating, training and developing individual employees within the company. These aspects are further developed in subchapters below.

HRM can also be defined as a set of activities with the main purpose of achieving performance, both within the whole organisation and individually. In order to improve the individual performance, effort should be put on individual ability, motivation and opportunity to perform and the correlation between these three (AMO model in Figure 3). (Boxall & Purcell, 2011, p. 5)

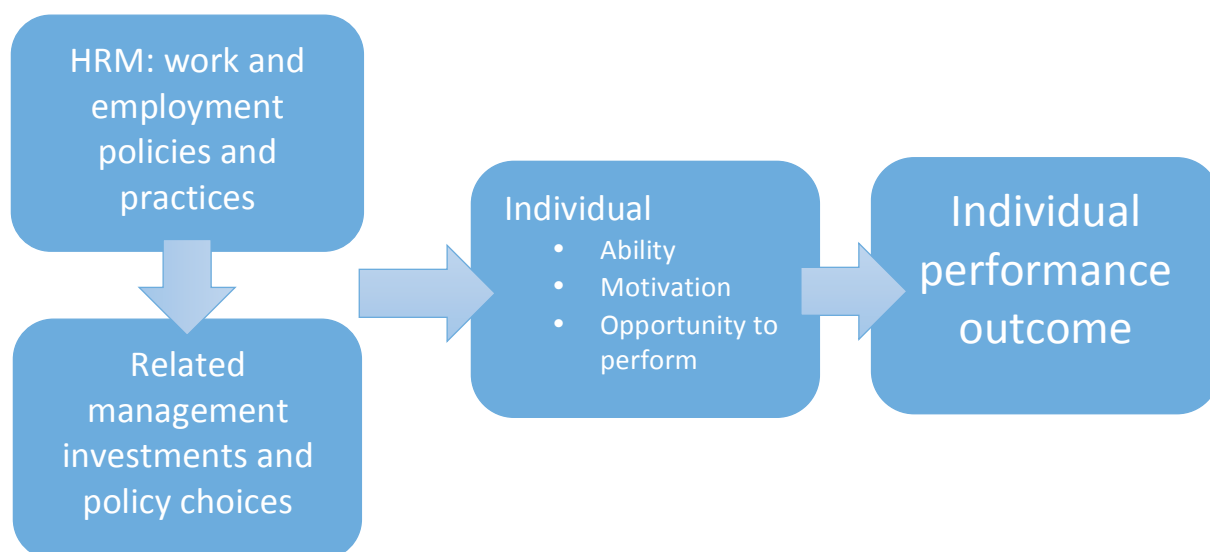


Figure 3. The AMO model of individual performance. (Boxall & Purcell 2005, p. 5)

Companies and their management have since the beginning of time got used to concentrating on following the flow of money and customer reports. Times are changing and nowadays human resources are also a part of the management group and are thus participating in developing and fulfilling the company's strategy. According to Ojala (2008) the three major changes in working life contributing to the increasing importance of developing competence are that the operations and activities are proceeding to be more service and knowledge based, the experts are considered as the key resource and information and competence is important when creating value for the company. In order for a company with a strong service organisation to be competitive it needs high competence in addition to high quality products. (Ojala 2008, p. 15-18)

### 3.1.1 HR in Wärtsilä

Human Resources are involved with all the activity concerning the employees at Wärtsilä. The goal of Wärtsilä's HR organisation is *"to have energetic, competent and motivated personnel with exciting work assignments and career opportunities led by excellent leaders"*. In Figure 4 below there is an illustration of the employee lifecycle management provided by HR in Wärtsilä. In the beginning is the strategy, which decides what kinds of resources are needed within the company. The phases of employments are induction, L&D, competence development, resourcing and recruitment, performance management, rewarding and organisational development and design. (Wärtsilä 2014)

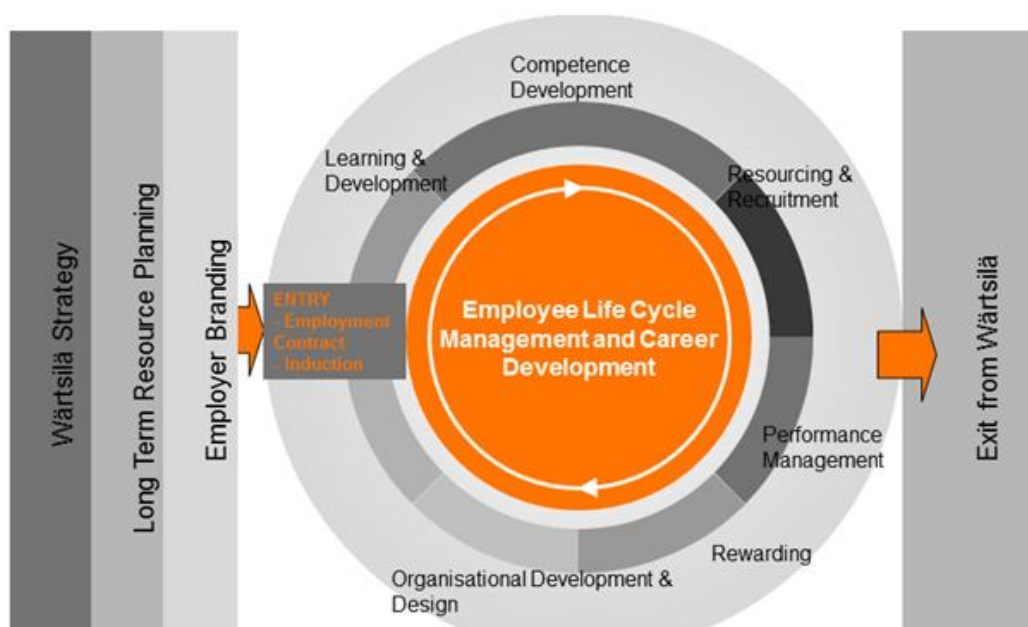


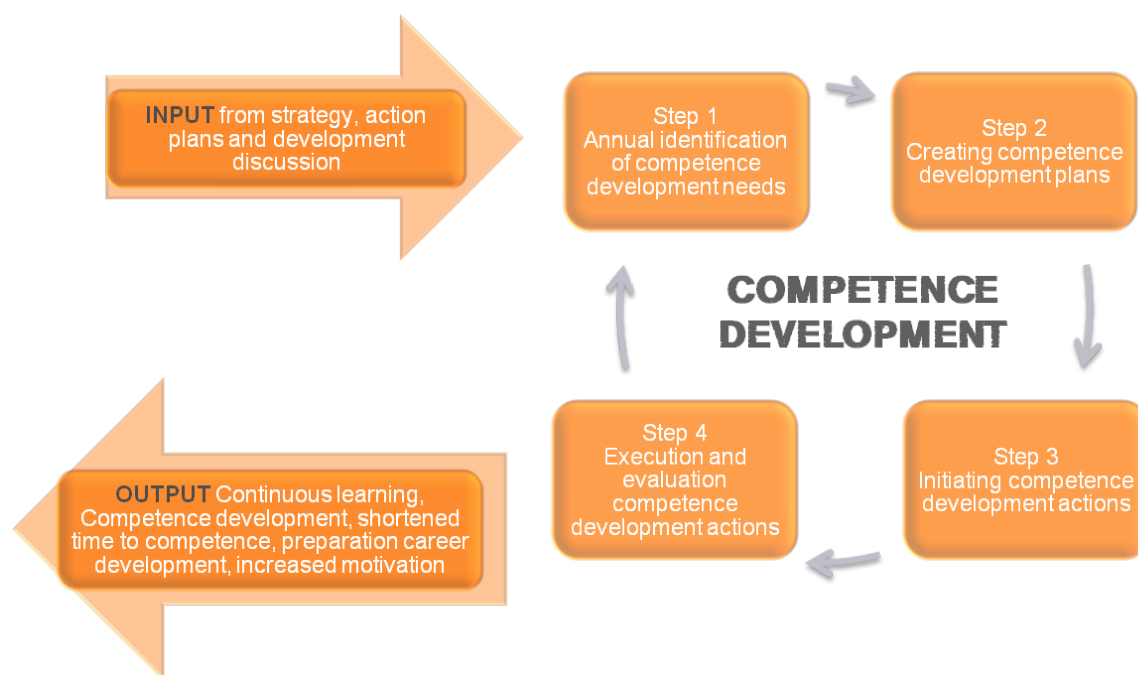
Figure 4. Employee Lifecycle Management (Wärtsilä 2014)



### 3.1.2 Learning & Development in the company

In Wärtsilä there is a department within HR called Learning & Development, which is in charge of all the learning activities globally. Within Wärtsilä Finland there are three people working full time with developing competence and organising trainings to meet the development demands of the workforce. (Lämsä & Storvist 2014)

L&D work closely together with the department line managers and team leaders. One purpose with the annual development discussions is to distinguish the learning and development needs of each co-worker. With the help of this and through the competence assessment tool the managers are able to locate the development needs of their employees and together with L&D the necessary training is provided. In Figure 5 below is an overview process for competence development in Wärtsilä. (Lämsä & Storvist 2014)



**Figure 5. Competence development process. (Wärtsilä 2014)**

In recent years L&D has presented different learning portfolios for different target groups. Presently there are four portfolios available within Wärtsilä. These are leadership, project management, sales and technology. There are learning paths developed within certain knowledge areas for specific target groups. (Lämsä & Storvist 2014)

It is very important to remember that competence development is not to be seen as a career development plan. Competence development is brought to the employees to make them feel more motivated and get better at their job. It is not meant to be a tool for them to advance in their career. (Lämsä & Storvist 2014)

### 3.1.3 Current competence development tools within the organisation

An important part of the development of employees is the performance management. By performing development discussions it is possible to measure competence and therefore develop it. The goal is continuous improvement throughout the organisation in connection to the development discussions. During the performance review a competence assessment is also conducted. This is used to evaluate ones own competencies according to the questions and statements given in the person's own competence profile. These questions and statements vary on the profile. (Wärtsilä 2014)

Another tool is the company survey, which is a global employee satisfaction survey within Wärtsilä. This survey is conducted every 18th months and the purpose is to collect employee feedback on issues related to wellbeing at work, the work environment as well as management and strategy. Another purpose is also to initiate development actions for improvement of operations. With the results the managers are able to compare to previous company survey results, but also compare their team to the whole department and to the entire organisation. For TI-FI the comparisons were made to DMTI globally and Services globally. At the department meetings it is then decided which areas are in need of improvement. (Wärtsilä 2014)

Wärtsilä has its own learning system, called SABA. With this tool each employee can find courses available globally within Wärtsilä. Some courses are held at the premises, some as webinars or e-learning courses, and some, especially product related hands-on courses, are held in the Wärtsilä Land & Sea Academy, which is a global training centre located e.g. in Turku, Finland.

There is also a mentoring program within Wärtsilä. *“Mentoring supports the individual development of both mentor and mentee in a confidential setting.”* The meaning of this program is thus to increase knowledge sharing and develop skills. (Wärtsilä 2014)

## 3.2 Competence

There are many definitions on what competence is and just as many ideas on how to develop the knowledge among the employees and within the organisation. In this chapter there is mentioned a few definitions, different types of competencies as well as how to assess individual and organisational competence.

According to Dalin (1997) competence generally means documented knowledge and skills attained by performing tests and exams. This is also called formal competence. Competence can also be explained by the way an individual operate in their work based on experience and the individual's background. This is called virtual or silent competence. Ojala (2008) also defines competence as a resource provided by individuals, teams, groups and organisations. (Dalin 1997, p. 16; Ojala 2008, p. 50)

In an article quoting Levin (2013) it is stated that it does not matter if you are newly employed or almost retired, since competence development is, regardless of age, a way to stay up-to-date whilst creating new possibilities for the company and the workforce. Even though time is mostly at short and employees think they know their job, competence development is important: *“Knowledge is perishable and needs to be fuelled and updated frequently in our working life to make us feel good at work and in order for us to contribute to growth and the development of the industry.”* (Levin 2013)

Nilsson et al (2011, p. 76) is in agreement with the above. They also enhance the fact that even though a person has the competence to perform a certain work the opportunity is not always given to make full use of it.

### 3.2.1 Different levels of knowledge

According to Ojala (2008, p. 48-49) knowledge can be displayed according to Figure 6 as a pyramid, where the value of the knowledge increases from data towards wisdom. Data is information without being linked to any specific context, but when the data is linked to a specific context it is called information. Further on knowledge is created when the information is applied to activities.

Competence is analysed and comprehended data. The competence includes the entity of available and approved information. The company competencies transforms into organisational competence when the competence is managed and taken advantage of in different processes. (Ojala 2008, p. 48-49)

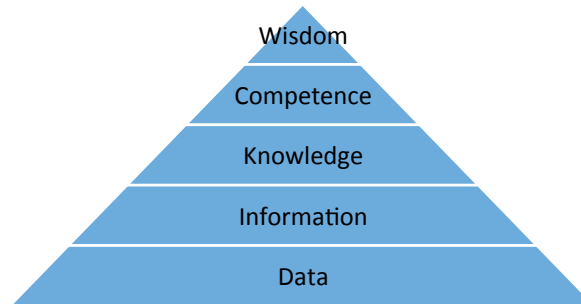


Figure 6. Knowledge pyramid. (Ojala 2008, p. 49)

Wisdom signifies a comprehensive and balanced worldview concept. Having wisdom includes e.g. having the ability to see things in a larger context and seeing the relevance. Wisdom includes a lot of silent knowledge, i.e. experience, and is therefore usually related to elderly people. (Ojala 2008, p. 49)

### 3.2.2 Individual competence

Both Dalin (1997) and Ojala (2008) connect the virtual or silent competence to the personality of an individual. This can be visualised with a hand (Figure 7), where the fingers correspond to attitude, knowledge, skills, experience and network, which means that we should use our contacts and their competence to complement our own. In order for these five fingers to work properly we need physical and psychological energy, leadership and motivation. (Dalin 1997, p. 16-17, Ojala 2008, p. 50-51)



Figure 7. Competence hand (Dalin 1997, p. 17)

Knowledge is a part of the human nature and possessing it gives value and confidence to the employee. In the past people could trust on their competence and the security of their performance, but nowadays even the most experienced workers are facing situations where the probability of errors are common. That is why you constantly have to learn new things alongside your work, not only to prevent errors from happening, but because knowledge is an important factor for success and also important for satisfaction at the workplace. (Viitala 2007, p. 180-182)

Nowadays the individual competence is not as important as before. Information is of course still important, but since there is too much information available nowadays it is no longer possible for one person to have all the knowledge. That is why teamwork and networking has become so important. (Ojala 2008, p. 51)



**Figure 8. Competence in business strategy framework. (Viitala, Theme week in Leadership at Wärtsilä 19.5.2014)**

### 3.2.3 Competence within the organisation

The key word today is cooperation. When people start working together and start sharing, combining and developing their competence together with others a common approach and way of working is created. This is defined as competence within an organisation. According to Ojala (2008) this is something that every company need to nurture by instructing and developing their workforce. (Ojala 2008, p. 53)

### 3.2.4 Strategic competence

Every company should have a clear view of what kind of competence and knowledge is needed in the present and the future. Strategic competence means that the company has the strategy and the goals in mind when determining which knowledge is the most important. Strategic competence can also be defined as core competence. (Ojala 2008, s. 53-54)

Generic competence is the kind of competence that supports the strategic competence within a company, e.g. cleaning services and facility maintenance. These activities are usually outsourced to another company with the generic competence as their core competence. (Ojala 2008, s. 54)

### 3.2.5 Managing competence

When managing competence you build a bridge between the company strategy and the competence among the workforce. From an individual's point of view the competence is measured on how well you perform at work. Through knowledge and competence the human being receives appreciation from others and his/her place in the social network. (Viitala 2007, p. 180)

Managing competence is related to managing motivation. A motivated employee chooses a place to work where the benefits outweigh the costs. These benefits are usually connected to the salary, satisfaction and the social standing of the job while costs are the mental, physical and emotional effort put into the job. It is thus important as a manager to think about what employees find attractive at work. Attention should also be put on enabling personal growth among the employees, since this is valued among the workforce. According to Boxall & Purcell (2011) companies that do not offer personal growth risk to lose many of their talented employees. To summarize it is important for managers to not only think about the HR processes but also to think about the underlying processes. An organisation, in which management is seen to treat employees well and deliver on their promises, enjoys greater employee loyalty and satisfaction. (Boxall & Purcell 2011, p. 203, 226-227)

### 3.3 Competence development

The core of all companies is the employee. Their actions decide on how well a company performs compared to their competitors. In order to ensure that the company is competitive when it comes to quality and reliability, effort should be put on training and motivating the employees. Achieving this leads to faithful members of the workforce, that will remain in the company. This way it is also made sure that the knowledge stays within the company. (Viitala, 2007, p. 10)

With competence development a company aims to improve the knowledge among the workforce and simply help them get even better at what they do (Nilson et al. 2011, p. 79). As mentioned in section 3.1 about human resource management, people perform when they have the ability, motivation and opportunity (AMO) to perform. Ability in this context means that the employee can do his/her job because he/she has the necessary knowledge, skills and intellect. To have the necessary motivation to perform means that the employees will do their job because they have enough interest for the subject and is stimulated by their work. Opportunity is all about the work structure and whether its environment provides the necessary support and possibility for the employees to express themselves. The correct mix of these three is involved in creating employee performance. (Boxall & Purcell 2011, p. 5)

According to Viitala (2007) attitude and motivation plays a huge part in the competence. Attitude is hard to change while motivation often occurs short-term and is sensitive to context. Attitude reflects people's values and motivation provides measures with aim and force. Hence both aspects are important when it comes to using the competence in different situations and tasks. Viitala (2007) further states that competence is shown in best light within an organisation with positive attitude and motivation. Insufficient knowledge wears on the motivation at work. Positive feedback and a sense of content from succeeding in work-related tasks empower the emotion of being competent and strengthen the motivation. (Viitala 2007, p. 182)

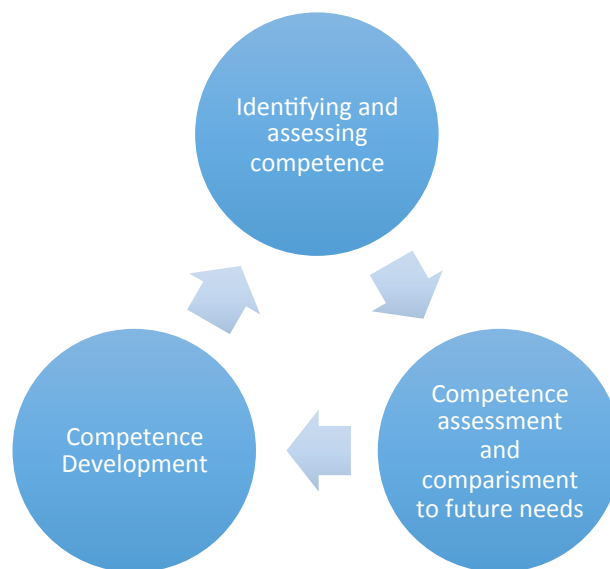
Boxall & Purcell (2011) states that learning is important when you want to enhance the individual employee's knowledge on theory relevant to the job and their ability to address issues concerning problem solving. It could also be an advantage to mix abstract, theory-based

learning with more challenging assignments. Doing this could result in extended abilities and more satisfying work. (Boxall & Purcell 2011, p. 199)

### 3.3.1 Competence assessment

According to Levin (2013) a manager should frequently ask their employees what they would like to learn and encourage them to develop their competence and get better at what they do.

As previously stated everyone needs to brush up his or her competence every now and then during his or her career to ensure success and satisfaction. In order for the employee and the manager to know how the development should be accomplished it is important to evaluate and name the competencies. With the competence assessment as a foundation a development plan can be made (see Figure 9). When a person is aware of their own competence and its strengths and weaknesses, he/she can make use of it successfully. (Viitala 2007, p. 182-183)



**Figure 9. Competence development (Viitala 2007, p. 183)**



### 3.3.2 Learning models

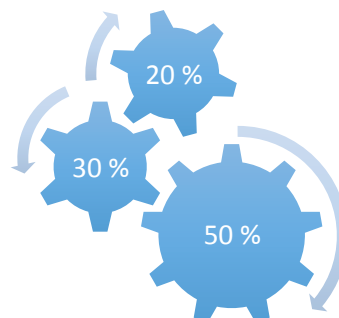
The 70-20-10 learning concept (Figure 10) is a model developed by the Centre for Creative Leadership and is a result of research done during a scope of 30 years. This model provides support on how to setup and improve the performance on the workplace and also supports the continuous learning process. (Rodgers 2014)



**Figure 10. 70-20-10 Learning model (Rodgers 2014)**

As illustrated in Figure 10, 70 % of all the learning activities originate from learning by doing and especially from overcoming challenges. According to the model the additional 20 % originates from feedback, mainly from managers and work environment, and 10 % from classroom training. This model is according to Rodgers (2014) a relevant model when striving to improve the competitiveness of a company.

Otala (2008, p. 69) also presents a similar model (Figure 11) developed by Dodge (1993). In this model the distribution of ways to learn is somewhat different than the one in Figure 10; 50 % is learning by doing, 30 % consist of social interactions and 20 % corresponds to classroom training.



**Figure 11. Learning sources (own design)**

### 3.4 Creating a competence development plan

During the making of a competence development plan several aspects should be taken into account. Except for the competence assessment you also have to remember e.g. the objectives and of course the strategy of the company and the department included in the competence development. The plan should only be made a few years ahead, since the working environment and the strategies change over time. The competence development plan should also, if possible, be kept simple and tangible in order to make it easier to implement. (Viitala 2007, p. 187)

Viitala (2007) gives a few examples of what the plan could include. One of these is reflection on what competencies the workforce would like to develop: What are the competence goals? What can be done to reach the goals? Who are included in the development? Effort should also be put on reflecting on a timeframe, follow up on results as well as who will train and what resources, in terms of time and money, can be spent on the competence development? (Viitala 2007, p. 187)

#### 3.4.1 Benefits for the company

When a company invest in competence development they are likely to spend a lot of resources and money during the process. In return impact is seen in productivity and actual results. Therefore it is recommended that the company put as much effort in the competence development as they put on their other investment projects. (Viitala 2007, p. 187)

Through the competence assessment, the development discussions and appraisals the employee can, along with the manager, follow their own path and development. With these tools the plan can also be renewed regularly to adapt to the constant changes within an organisation. The development discussions can also result in the planning of a career path. (Viitala 2007, p. 188)

### **3.5 Conclusions**

In chapter 3 a definition of competence and aspects that affect the competence level has been given. Motivation, attitude and opportunity are important key words when talking about developing competence. The managers have to work together with the workforce to find areas in need of development and in turn the managers have to work together with human resources to provide the necessary training. With the right amount of resources and effort put into creating a competence development plan and following it, the company could enjoy far better results compared to the investment made. In the end and in the best-case scenario, everyone benefits from developing the competence. The employees enjoy improved motivation and in return the company experience better results.

## **4 METHOD**

In this chapter the research method is explained. The chapter includes the approach for retrieving the primary data and explains in what ways the data will be collected. Last in this chapter the analysing method is accounted for.

### **4.1 Secondary research data**

Secondary research data is such data that the researcher herself has not collected. It can be company surveys, statistics, basically any kind of data. Here secondary material, the results of the company survey, is used as a basis for the interviews. The latest company survey was conducted in September and October 2013. The results were presented in the beginning of 2014. Each team having more than six responses got a team level result. Each team in TI-FI got results and they are presented in chapter 6.

### **4.2 Qualitative approach – primary data**

The background for this study is data gathered with a quantitative method with a company survey. In order to get a more nuanced understanding of the matter, the qualitative method is used. Except for the qualitative method with interviews the strategy within Wärsilä Services and TI-FI was also studied, in accordance with the theory. With the help of this approach an attempt was made to create a credible competence development plan for TI-FI.

#### **4.2.1 Interviews**

When choosing the employees to interview the so-called snowball sampling method was used. This method involves identifying an initial interview subject who can provide the names of other actors (Atkinson & Flint). This means that the sampling works like a chain referral. Each interview subject will nominate another person with the same interest to participate in the survey. The research will continue in the same way until a sufficient number of subjects have been reached and no new information is provided through the interviews. (Explorable.com)

Before the interviews with the employees, team leaders and the line managers started, the manager of TI-FI distributed an internal e-mail to all TI-FI employees encouraging them to participate in the interviews if invited.

The internal stakeholders were chosen through the line managers. Each line manager was asked to list his or her most important internal customers and co-workers. After the input of all line managers, a few people within other departments, which cooperate the most with TI-FI and hence has the most to contribute to my research, was handpicked. When the list was done it was given to the manager of TI-FI. He distributed the information to the people concerned and informed them about the thesis and asked them to participate. Further contact was initiated closer to the interviews.

#### 4.2.2 List of competencies

When mapping the current competence within the TI-FI organisation a list of skills specified in so-called “global job families” within Wärtsilä was used. Similar competencies are used when rating the competence in the competence assessment tool. The line managers modified the complete list of skills and the result was an MS Excel document containing only the skills and competences seen as relevant for TI-FI.

Before distributing the list to the interview subjects it was modified to contain two extra columns: current competencies and future competencies. For each competence a dropdown list was added, creating the possibility to rate the competence as basic, good or expert. The list was sent together with the interview invitation to each interview subject within TI-FI.

The reason why it is not possible to copy these competencies directly from the competence assessment tool is that the competencies listed there, and specified in the department job family, does not correspond to the existing skills in Technical Information, i.e. there is no global job family developed purely for TI activities.

### 4.3 Analysing the data

The interviews were performed individually and the sessions were recorded in order for all information to be retrieved. The core content of the recordings was later documented in MS

Excel to simplify the analysing process. For confidentiality reasons the interview recordings were then deleted.

The results from the competence list were put together in MS Excel and compiled in MS Access to create a team-based list. However, the material was very comprehensive, making it hard to draw conclusions. To make the list more comprehensible the ratings basic, good and expert was modified into ratings 1-3, making it easier to draw conclusions.

## **5 EMPIRICAL PART**

In this chapter the target group and the criteria's for choosing the interview subjects will be further described. Presented in this chapter is also the time frame for conducting the research and when it is planned to deliver the complete competence development plan to the company. Last in the chapter the questions in the interviews are accounted for and their validity analysed.

### **5.1 Target group**

When performing the interviews a lot of thought was put into selecting the interview subjects and how to make the selection to attain a credible result. During springtime 2014 and through many discussions with the supervisors the following plan was made.

#### 5.1.1 Criteria

The purpose for this thesis is to map out and analyse the present competence and future need for TI-FI and with the information at hand create a competence development plan. For this to succeed several employees and line managers within the organisation would have the chance to state their opinions. In order to get another point of view of TI-FI it was decided to also include some of the most important internal stakeholders.

#### 5.1.2 Time frame

When planning the project the conclusion was made that it would be best to perform the interviews before the summer vacation period in July. However, in case there would be lack of time some interviews could be performed also later in the summer and even in the beginning of August.

After each recorded interview the answers were analysed and documented. When all interviews were done the concluding analysis could be made. The plan was to analyse the results in July and August and provide the supervisors at the company with a complete competence development plan at the end of August.

## 5.2 Questions in the interview

Since there were three different target groups the questions asked varied. In order to create a discussion the questions were sometimes slightly modified during the interviews.

### 5.2.1 Interview questions for employees

The questions are presented in Appendix 1. Some of the questions are based on the questions in the company survey, e.g. *“Do you participate in trainings arranged by Wärtsilä?”*, *“Do you feel that it is hard to find courses that suits you and your work?”* and *“Do you feel that your competence meet the requirements of your job?”* The core questions were spot on asking what competencies they would like to develop for themselves and what kind competencies they feel they need to get better at what they do and stay motivated. At the end of the interview each interview subject was given the chance to comment if they had anything further to add.

### 5.2.2 Interview questions for line managers

The questions are presented in Appendix 2. The team leaders and line managers were asked about their competencies and whether or not they feel they are supported to manage their work. The team leaders and line managers were also asked to comment on the competencies of their employees and whether or not they feel there is something that should be developed further. At the end of the interview each team leader and line manager was given the chance to comment if they had anything further to add.

### 5.2.3 Interview questions for internal stakeholders

The questions are presented in Appendix 3. In these interviews the focus was on the cooperation with TI-FI and more of a customer satisfaction survey asking about expectations and challenges. I also asked the interview subjects in this category to explain their competence development and how trainings work in their department.



#### 5.2.4 Validity

The questions used in the interviews are a result of the theory presented in chapter 3, the company survey questions and own thoughts.

Prior to making the interviews the questions were reviewed together with the supervisor at Novia UAS. When questions were considered ready the first interview was conducted. After the first interview was completed, some time was taken to reflect on the results given and whether or not modifications should be made to the questions. Slight modifications were made before continuing with the rest of the interviews. The competence list was at this stage also further developed so that the interview subject could rate his or her competencies according to options basic, good or expert.

## 6 RESULTS

In this chapter the results of the research is presented as well as the result of the secondary research data. Section 6.1 covers the secondary research data gained from the company survey. Section 6.2 narrates the current competencies, which are a result of the distributed competence list, filled in by each interview subject. Further on the competence development plan is presented and justified in section 6.3.

### 6.1 Secondary research data

The secondary material was, as previously explained, provided through the company survey, conducted in the autumn of 2013 and presented in the beginning of 2014.

#### 6.1.1 Current situation – secondary research, company survey results

The radar chart shown in Figure 12 shows the development within TI-FI since 2010. From the chart it can be seen that the competence and development is still below reference value, however it has improved since 2010.

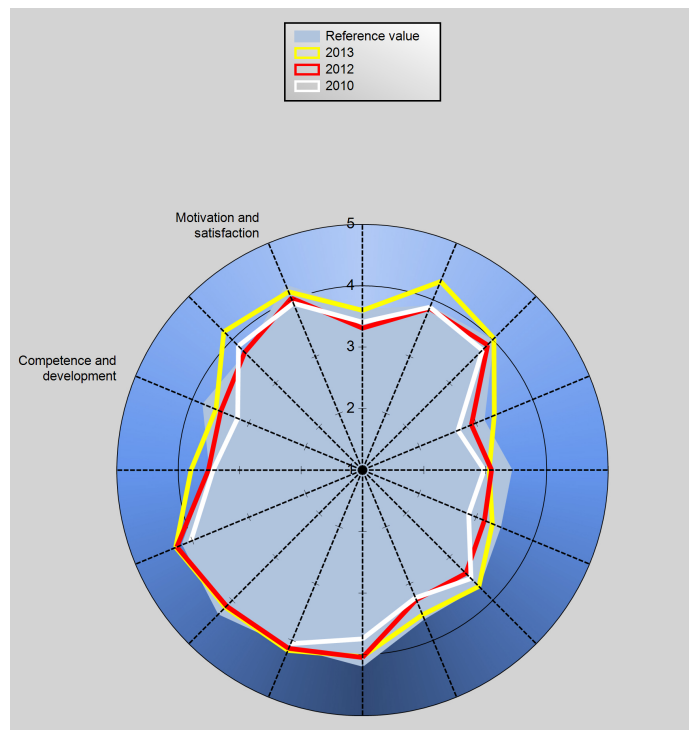
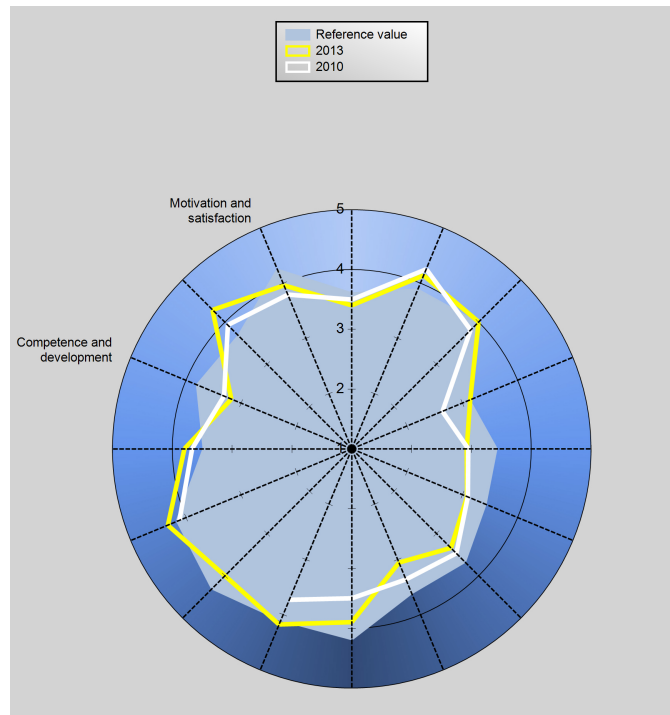
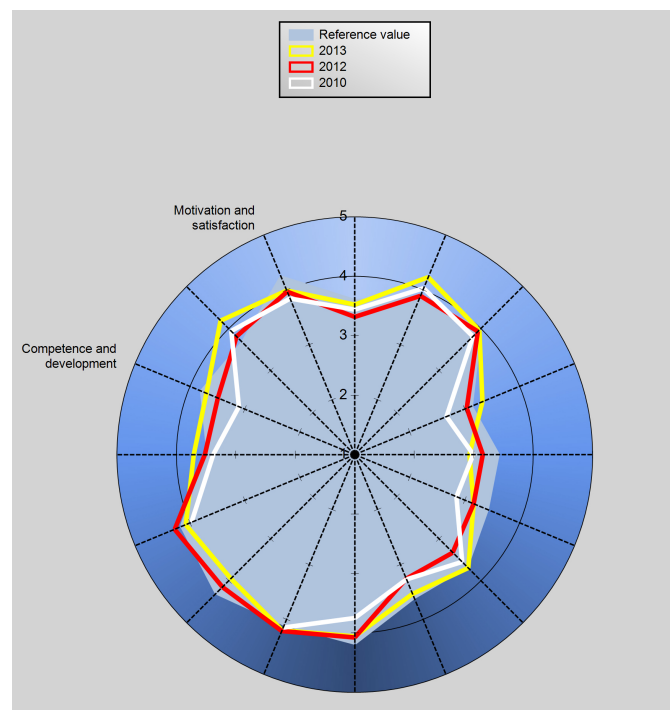


Figure 12. TI-FI progress

In the CD team (Figure 13) the progress within competence and development has been negative. Comparing with 2010 (white line) the results are slightly lower.



**Figure 13. Content Distribution progress**



**Figure 14. Parts Data Lifecycle Management progress**

On the other hand in the PDLM team (Figure 14) the progress has been positive and is almost at the reference value. In the other teams, SB team and CM team there was no previous results

to compare to, however when looking at the reference values the CM team is slightly below the reference value, while SB team is exactly at the reference value.

When it comes to motivation and satisfaction, which according to the theory in chapter 3 is an important part of the competence development, the results are at the reference value for the whole TI-FI. The results are however negative for two of the teams, PDLM and CD. For CM and SB the results are at the reference value and above.

Already at this stage some conclusions can be made that there seems to be a correlation between motivation, competence and development. Lower results in motivation shows lower results in competence and development.

When comparing to Wäertsilä Services as a whole and DMTI globally the results can be viewed in Figure 15 below. The chart shows that Services as a whole has better results than DMTI globally and TI-FI concerning competence and development as well as motivation and satisfaction. DMTI globally and TI-FI has approximately the same results.

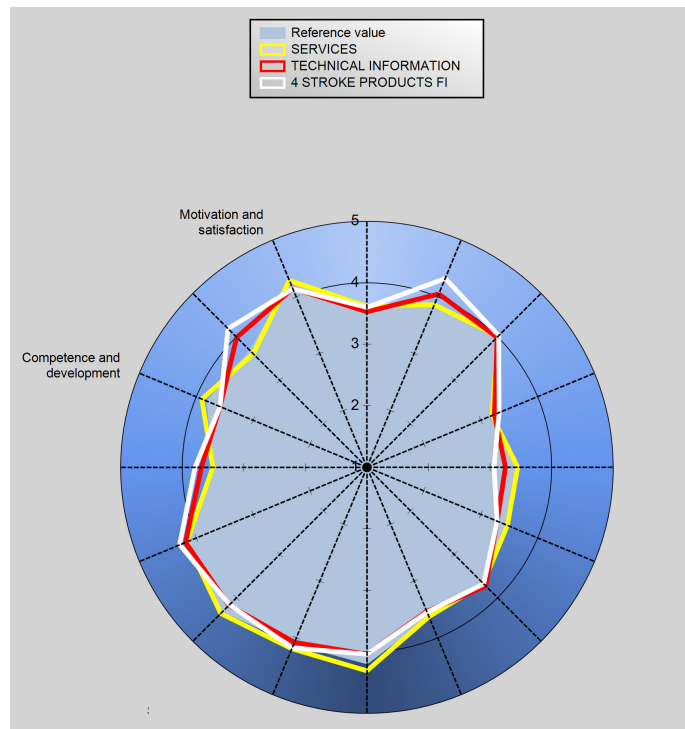


Figure 15. Services vs. DMTI globally and TI-FI

When looking at the actual question concerning the competence and development in the company survey the results were as shown in Figure 16 below.

Competence and development			
	2013	2012	2010
Q66:I can use my knowledge and skills at my work	3.86	3.93	3.63
Q67:My competence meets the requirements of my job	3.73	3.89	3.78
Q68:My work offers me possibilities for personal growth and development	3.65	3.18	2.74
Q69:I am encouraged to develop my professional skills	3.76	3.50	2.81
Q70:I have participated in trainings organized by Wärtsilä	3.00	3.00	2.78
Q71:The training organized by Wärtsilä has met my development needs	3.65	3.54	3.22
Q72:It is easy to find courses that suit my development needs from the trainings organized by Wärtsilä	3.14	3.18	2.81
Q73:I develop my professional skills and competences on my own initiative	3.86	3.79	3.85

Figure 16. Competence and development questions; TI-FI

There is one question that is particularly interesting, Q70. This is one of the questions with the lowest results and the least development. This raises the question why? Q72 also has a low result and indicates that it is not so easy to find courses that suit the development need from the trainings organized by Wärtsilä, hence the reason for this thesis.

In Figure 17 below are the same questions but the results are from comparing Services as a whole (results in column A) and DMTI globally (results in column B) to TI-FI (results in column C). From this it can be seen that the results e.g. in questions Q66 and Q67 are a bit lower for TI-FI than for Services.

Competence and development			
	A	B	C
Q66:I can use my knowledge and skills at my work	4.40	4.01	3.86
Q67:My competence meets the requirements of my job	4.40	4.07	3.73
Q68:My work offers me possibilities for personal growth and development	4.01	3.46	3.65
Q69:I am encouraged to develop my professional skills	3.90	3.62	3.76
Q70:I have participated in trainings organized by Wärtsilä	3.14	2.97	3.00
Q71:The training organized by Wärtsilä has met my development needs	3.67	3.56	3.65
Q72:It is easy to find courses that suit my development needs from the trainings organized by Wärtsilä	3.50	3.03	3.14
Q73:I develop my professional skills and competences on my own initiative	4.15	3.94	3.86

Figure 17. Competence and development results; TI-FI vs. DMTI and Services

On the basis of these results, effort should be made to investigate more or less all of the questions concerning competence and development. It could also be investigated somewhat about the motivation and if the work would feel more meaningful with more effort put on training and relevant such. As previously stated in section 5.2, some of the questions in the company survey were included in the interview questions.

### 6.1.2 Results for questions based on the company survey

One of the questions asked, Q70 in Figure 16, was *“Do you participate in trainings arranged by Wärtsilä?”* The answer to this question was yes in most cases. According to the interview subjects and mainly the employees they have always been encouraged by the line managers and the team leaders to participate in trainings, however the main issue is that there is not enough resources to participate in some courses. All line managers and team leaders also responded positively, but mention that in most cases the lack of time is the biggest obstacle for enrolling to a course.

Another question linked to the company survey was, Q72 in Figure 16, *“Do you feel that it is hard to find courses that suits you and your work?”* This question also gave a lot of yes-answers, since there is not many courses linked to e.g. documentation management and documentation in general. This topic is further evaluated below in section 6.3, Competence development needs.

In the Company survey there was two questions that were quite similar, Q66 and Q67 in Figure 17, and both had lower results for TI-FI compared to DMTI globally and Services globally. Q67 was used in the interviews: *“Do you feel that your competence meet the requirements of your job?”* The answer here varied. Some feel that they have the necessary requirements and feel that they experience balance in their daily work, which means that even though some tasks are easy, there are still challenges and always something new to learn. However, some of the interview subjects feel that their daily work-tasks are easy, and that there is not that much left to learn. Some of the interviewed employees also mention that their area of education is different compared to their daily work.

## 6.2 Current competencies within the organisation

As previously mentioned the competencies will be divided into five groups, one for each team as well as one for the line managers. For each team the team leaders are also included, since they are a big part of the day-to-day operative activities. The competence list used as a base for this chapter is quite long and therefore the current competencies will be presented in short as a summary. The complete list is presented in Appendix 4.

### 6.2.1 Content Distribution team

Within the Content distribution team there is basic or in some cases good product knowledge, e.g. about product portfolios, engine automation, design and equipment, engine auxiliary equipment, engine development, operation and maintenance. There is also basic or good knowledge within technical problem solving, maritime rules and regulation and engineering tools.

Concerning documentation there is good knowledge in area of technical documentation, documentation management and identification. Within the area of data handling there is basic knowledge in the code resolution principal, master data maintenance and data analysis.

Customer related skills are basic or good concerning customer focus, customer value understanding, customer feedback management and customer understanding.

Within the area of quality and business related skills there are basic or in some cases good knowledge within understanding the business environment, company knowledge and core processes, lean philosophy, quality awareness and health safety and environmental systems. Concerning management skills there is basic or good knowledge within problem solving and decision-making.

Other skills are basic or good knowledge within the areas of technical communication, cultural knowledge, negotiation, presentation, process development, reporting and analysing, teamwork, sales processes and tools, as well as good or expert knowledge in communication skills and English language.

### 6.2.2 Content Management team

Within the Content Management team there is basic or good product knowledge, same as for content distribution team above but within a broader scope including basic knowledge in e.g. assembly methods and 3D modelling tools.

Documentation skills vary between basic, good and expert skills within documentation management, document identification and technical documentation. Within the area of data handling there is all three levels of skills concerning the code resolution principle, master data maintenance and data analysis. Of these three the code resolution principle is the strongest.

Concerning customer related skills there are good or in some cases basic knowledge in customer value understanding, customer service orientation, customer focus, customer feedback management and understanding the customer and its business.

Quality related skills can be found e.g. in the areas of continuous improvement methods, health, safety and environment systems, project quality planning and quality awareness. Business related skills are basic or good within e.g. Wärtsilä knowledge and business understanding and understanding the business environment.

Within the content management team there is also basic skills within project management, e.g. risk management, time management and quality management. General skills are basic or good concerning e.g. networking, communication, time management, cultural knowledge, cost awareness and effectiveness, negotiation, presentation, teamwork, problem solving and training and development skills. There is good or expert knowledge in the English language.

### 6.2.3 Parts Data Lifecycle Management team

Within the Parts Data Lifecycle Management team there is generally good product and technical knowledge, e.g. within product specification, product life cycle approach, engine equipment and auxiliaries as well as engine systems and automation. In some areas the team has expert knowledge, e.g. in product specification, technical drawings and technical problem solving skills.

Concerning documentation the skills vary from basic to expert in documentation management, document identification and technical documentation. The best skills in the team, and the whole department, are within master data, where there is good or expert knowledge in the areas of code resolution principle and master data maintenance as well as basic or good knowledge in data analysis.



Customer related skills in the PDLM-team are basic or good in customer service orientation, customer understanding and customer feedback management. There is also basic, good or even expert knowledge in customer value understanding and customer focus and orientation.

Quality and business related skills are basic or good within lean philosophy, understanding the business environment as well as health, safety and environment systems. All three levels of competencies are found in the area of quality awareness.

Other skills within the PDLM-team are basic or good knowledge within e.g. technical communication, sales process and tools, English language, presentations, training and development and company knowledge and business standards. Basic, good or even expert knowledge is found in areas of team working and communication.

#### 6.2.4 Service Bulletin team

In the Service bulletin team there is good knowledge about e.g. Wärtsilä product portfolio, drawings and technical communication. There is basic knowledge about e.g. engine systems and auxiliaries, product lifecycle approach, automation and measurements. Expert knowledge can be found about Wärtsilä engineering tools used in the SB-team.

The documentation skills in SB-team are good concerning document management, document identification and technical documentation. Within the master data area there are good skills in the code resolution principle and finding master data inconsistencies. There is good or expert knowledge in data analysis.

Customer related skills are basic or good concerning e.g. customer value understanding, customer focus, customer feedback management and customer understanding.

Quality and business related skills are basic or good e.g. in lean philosophy, understanding the business environment, quality awareness, company knowledge and business understanding.

Other skills in the SB-team are e.g. basic knowledge in networking, time management, training and development skills and culture. Good skills are found in the areas of communication, English language, presentation and team working.

#### 6.2.5 Line managers in TI-FI

In the competence list there were some skills that were mostly aimed at managers, such as management skills, strategic planning and target setting, team building and delegation and supervision. The results however also include current knowledge about products, customer service, quality and business related issues, documentation, master data and general skills.

Concerning competencies related to management and leadership the group of line managers have good or expert knowledge related to e.g. cost awareness and effectiveness, communication, management skills, delegation and supervision, problem solving and decision making. Basic or good knowledge can be found e.g. in the areas of financial knowledge, local legislation and labour laws, negotiation, process development, strategic planning and target setting as well as budgeting and forecasting.

Product related competencies are basic or good in the same areas mentioned for each team above. Expert knowledge can be found within product specification and product life cycle approach. Competencies concerning master data are mostly at good or expert level for code resolution principle, master data maintenance as well as good concerning data analysis. There is good or expert knowledge e.g. in documentation management and technical documentation. Competencies related to customer perspective are basic or good concerning customer focus and orientation, customer feedback management and customer understanding.

For general skills the results are expert or good concerning communication, English language, presentation skills and teamwork skills. Other skills with either basic or good knowledge are training and development skills and self-management.

## 6.3 Competence development needs

Input for the competence development needs originates from the interviews with employees, line managers and internal stakeholders as well as most of the future competencies from the competence lists.

When creating the plan all competencies mentioned were listed and compiled into a visual result illustrated in Appendix 6 for each team and in Appendix 7 for team leaders and line managers. In Appendix 5 there is a list of competence development needs relevant for all TI-FI activities. This list is also taken into account in Appendix 6 and 7. The documentation of the competencies to be developed are hence divided into seven sections:

- All TI-FI activities
- Content Distribution
- Content Management
- Parts Data Lifecycle Management
- Service Bulletin
- Team Leaders
- Line managers

There are a number of competencies that according to the interviews need to be developed at some level. Documented below are the most relevant competence topics.

### 6.3.1 Documentation and communication

First of all comes the English language. Even though the company's official language is English there are only a few with English as mother tongue or English degree students and this has according to one interviewee developed into a form of "*Wärtsilä English*". There is a need to continuously brush up the English language knowledge and almost every interview subject has mentioned this as a development topic. One of the interview subjects stressed the importance of having the correct language in documentation for customers and gave the suggestion to hire a consultant for language review. Another interview subject noted that it might be necessary to focus even more on the actual writing than previously, e.g. grammar and the ability to express oneself.

Related to the language are also all kinds of documentation skills. According to most of the interview subjects at TI-FI there is a major need for documentation trainings, since there are no existing job families for this area of work. Quoting one interview subject: *“Trainings for documentation engineers are non-existing”*. The documentation skills package could include documentation in general, technical documentation, documentation management, content creation, technical writing as well as illustrations and legal issues such as copyright. In the content distribution team there could also be more focus on the documentation logistics, however since this research started a new tool for document handling and distribution has been developed and the need of competence development in the area might not be relevant anymore.

Communication and documentation skills could also include negotiation and presentation skills, which was a common topic during the interviews. Another common topic was cultural knowledge and the need of better cross-cultural communication to create a common understanding. To quote one of the employees: *“When you don’t have the same culture the choice of words can cause issues with understanding each other”*.

### 6.3.2 Quality awareness

Widely connected to communication and documentation is also the presence of quality awareness in all processes. One interview subject explains this as: *“Quality – first time right”*. Another one states the following: *“In the future I think TI is getting more and more important. We need to maintain quality and carefully define what we do, how we do it and who will do it”*. Another interview subject ponders about introducing a quality review section to supervise all deliverables. It could also be mentioned that quality of service is a target in the global TI strategy.

### 6.3.3 Illustrations

The illustrations are paramount for the Content Management team when creating the spare part catalogues and for Service Bulletin team when creating the bulletins. The current tool is Adobe Illustrator and according to the interviews there is a need for a tailor made course in Illustrator, explaining what processes and tools can be used in the program to efficiently create

the illustrations needed. In the spare part pages creation team there is also a need for skills concerning visual planning. One interview subject explains this as follows: *“The layout is made somewhat haphazardly and we can’t really sell what we are creating. The layout should be more visually planned according to how and in what order the human eye register things.”* The interview subject further continues by saying: *“The most relevant information should be where the spectators look first. That is missing in our team, we just produce without thinking.”*

Another thing relevant to illustrations in spare part pages is a 3D-modelling tool. For the time being there is only one person in the whole department who has knowledge about 3D-modelling tools. The problem here is when that person is on vacation or otherwise not present at work, the know-how is lost, and hence it is of importance to develop skills in the 3D-tool available.

#### 6.3.4 Customer focus

Customer focus, both internal and external, was a very common topic in the interviews. Some of the interview subjects’ states that we do not listen enough to what the customer wants and that more focus should be on the customer feedback. Quoting one of the interview subjects: *“There is a need for end-customer understanding, their thoughts and on the basis of that create the deliverables.”*

#### 6.3.5 Core product related skills

The day-to-day work tasks in TI-FI differs depending on the team, but in all of the interviews with the employees, team leaders and line managers in TI-FI there is a need to constantly keep up to date with the product portfolio. In some cases the team needs advanced knowledge, while in some teams’ intermediate or basic knowledge is adequate. Besides engine specific courses there would be a need to develop skills concerning engine internal and external auxiliary systems and components, both Wärtsilä designed and other. The trainings that the employees feel are missing at the moment are courses about differences in engine types, engine design, engine assembly methods, engine systems, intermediate engine specific courses, courses informing about new products and courses about auxiliary systems in general. Some interview subjects also express the possible need to get some sort of field experience: *“It would not hurt to go out on the field and see how things work in reality”*.

In a few of the interviews the course *“Technical fundamentals for non-technical personnel”* was mentioned as a very good course to start with. One of the interview subjects states: *“The course was very good and had a great instructor! The course is valid for 5 years and then you should get an update. I strongly recommend it.”*

#### 6.3.6 Traceability

The term traceability includes knowing where and to whom the deliverables have been distributed. During the discussions with the internal stakeholders the topic was brought up enhancing the fact that there should be correct traceability, mainly concerning the manuals. One interview subject said: *“When meeting with the end-customer one of their concerns are getting updates of the instruction manual. According to the customer this is deficient”*. The interview subject further states: *“This is not 100 % even though it should be without failure”*. As previously stated in chapter 2 the mission of Technical Information is to *“secure the availability of accurate and complete information for operation, maintenance, repair and overhaul of the installed Wärtsilä solutions and its equipment to our customers and to Wärtsilä employees”*. When comparing this mission to the reality presented by the interview subject above, the traceability could be improved.

#### 6.3.7 Proactive approach

According to some of the interviews there are a lot of “fire fighting” going on and not enough proactive approach. Quoting one interview subject: *“We should work so that we solve the problems before they emerge instead of fighting fires.”* The interview subject further illustrates: *“The scenario should not be that everything looks good from the outside, while everyone is in panic behind the curtains.”*

#### 6.3.8 Processes

One interview subject in particular mentioned the need to get a view of the “bigger picture”, i.e. how the work they do affects others. This was then elaborated in another interview: *“Departments could have info sessions for each other and inform about each other’s work. Then you would get a clearer picture of the process and feel that you are a part*

*of a bigger process instead of not knowing how your work affects others and the end-customer. That would be interesting”.*

#### 6.3.9 Going global

It is clearly stated in the roadmap for Technical Information that the target is to *”act and work according to global processes and functions”*. This message has also reached the employees at TI-FI and many of the interview subjects talk about the fact that Technical Information should become more global and maintain a global thinking in most of the processes.

#### 6.3.10 Other competence need

For the Change Management team there is need for some leadership skills, as one interview subject put it: *“Change management would need more leadership training, since their job is very people related. They are an important link between two departments and are often in the position that they need to lead people”*. In addition to this some project management skills are also required.

Concerning the tools used in the different teams many interview subjects felt that there could be more training for each tool, e.g. MS Office and SAP training. One employee expressed this: *“There could be more information about additions and updates in tools so that you would be aware of the possibilities”*.

A few interview subjects mentioned the importance of finding the information needed. Some expressed the phenomenon as a *”jungle of information”*. There has, however, been another company survey development project within the department concerning communication quantity and through that project tips and tricks on how to subscribe to relevant information were presented.

Many of the interview subjects also mentioned the importance of feedback: giving and receiving. As previously mentioned in the theory in chapter 3, the feedback is very important in order to develop the competencies and is, according to the two learning models presented in the theory, 20-30 % of all learning activities. Since the project started a team page has been

opened, as a result of a company survey development project, for giving and sharing feedback to make feedback management easier.

Some people also mentioned networking skills as an important competence and that the work is easier with a large network. Another thing that came up when talking to internal stakeholders was that TI-FI could handle translations also of other manuals, such as auxiliary equipment manuals.

#### 6.3.11 Team leader and management skills

Based on the interviews the conclusion can be made that there is a wide range of trainings and courses for managers. Most line managers and team leaders also feel that they get what they need. For new managers there is mandatory management focus training giving information essential to new leaders. Some feel that this should be re-taken frequently to stay updated.

For team leaders the need of competence development is much the same as the topics for employees, since the day-to-day work consist of many operative tasks. The main challenge for the team leaders is to find the HR information when needed because of the jungle of information. This because the HR activities are not a part of the daily work tasks. There is a need to create easier ways of finding the information, e.g. a list of relevant links.

For all line managers and team leaders the leadership competence is important. As mentioned above there are a lot of trainings already, but that does not necessarily mean that all competencies are up to date. Throughout the interviews the need of more customer focus related courses are needed, as well as communication and ways for a more proactive approach. A big topic for the line managers and team leaders is time management and related to this, delegation skills. Quoting an interview subject: *“when a manager has a lot of employees you cannot hold everyone’s hand, you must be able to delegate and dispose of your time”*.

Another topic was the ability to motivate the workforce: *“somehow it is challenging to motivate people nowadays. The trend is that nothing is enough for our stakeholders”*. Related to this topic is also team building that is essential when acting as a team.



### 6.3.12 Other competence related topics

A topic strongly presented in the interviews with the internal stakeholders was the internal marketing and communication: *“we could receive more information about how we could cooperate with TI”*. “Info sessions” is a very common term: *“More regular information sessions. If you make a 30 minute info session, we’ll definitely find the people to participate”*.

Several of the people interviewed mentioned the problem with the lack of a training schedule for expensive courses: *“It is somewhat of a competition. There is a common training budget and the ones who ask first gets to participate.”* In other words, there should be some kind of schedule determining which employee is the next in line to participate in a more costly course.

### 6.3.13 Future skills

In all of the interviews there was a question asking what they think TI-FI will look like in 5 years’ time. The answers varied but in many cases the impression was that the development had been stagnant the last few years and hence, among some people, there was not so much belief that this would change in the future. However, many expressed the opinion that they hope the department will go more global and put more effort on job rotations, quality, communication and cooperation with other departments. In one interview in particular the amount of tools was questioned: *“We use 5-6 different tools in our process and this creates many time-demanding steps in the process”*.

Many of the interview subjects, both within TI-FI and among the internal stakeholders, feel that the manual creation process should be repossessed by DMTI. Some say that change management could develop their scope to include also coordination of all other actions and not just concerning the manual. There is also an expressed opinion about further developing the auxiliary spare part pages.

Throughout the interviews the term *“job rotation”* has been used actively. Many feel that short-term job rotations in other cooperative teams would be a great way to create a better understanding for the processes. Many also mention international job rotations, but unfortunately this has not been possible so far due to lack of financial resources.

## **6.4 Reliability**

The reliability of the research is very good. It is reliable in the sense that various people within the department as well as outside the department have been interviewed. During the interviews different questions and topics have been discussed and some interview subjects have been more active and have had more opinions, relevant and non-relevant to the research, creating a very extensive material. This was however not a surprise, since the interviews knowingly were conducted with people with opinions.

The focus has mainly been to identify areas of competencies that need to be developed further. Some competencies have purposely been left out of the documentation and are only present in the appendices. Concluding the results, one might say that there are a lot of competencies that are in need of development, however it is important to remember that the competencies in need of development are not relevant for every individual employee. Some employees already have expert knowledge within specific areas.

## 7 CONCLUSIONS

In this chapter I will discuss how well the goals of the thesis was reached, my contribution to the department of TI-FI and Wärtsilä as well as proposals for further research on the topic. The problem areas faced with during the project are also accounted for.

### 7.1 How well did I reach my goals?

First of all I would like to clarify that the results of my research is not to be considered as exact. In my opinion it is impossible to get 100 % accuracy when the research is based on people. The goal with a qualitative research as this is merely to gain a better understanding of the topic. There are constant changes in skills and knowledge that he or she possesses. It is also important to remember that within the Finnish culture it is very common to be shy about your competencies and Finnish people don't tend to boast about what they are capable of achieving.

In the beginning of the project it was decided to include the whole department of TI-FI and create an average of competencies existing and needed based on the input from a few employees and the line managers. I have however made a choice to try to include employees who has the most will to participate and have opinions on the topic and in this way I hope that I have come close to the truth.

I feel that I have reached my goals in most of the areas stated in chapter 1. I have listed the current competencies, however the list is very comprehensive. I have identified the competence development areas based on interviews and somewhat on the strategy. I feel that the competencies correspond to the DMTI road map and strategies for Technical Information, Services and Wärtsilä globally. However, a specific competence plan with a time frame was not made. Still, it can be considered that the identified competence development areas is the plan, since the level of competencies listed will, in any case, change over time and will not be valid anymore in 3-5 years. In regard of this I would like to state that the results in this thesis compose a big part of a competence development plan, based on how this subject is explained in the theory chapter. The time frame that is missing is for the line managers to prepare when the budget review has been made.

Concerning the delimitation of the thesis topic I was not in all areas successful. Even though the delimitations presented in chapter 1 correspond to the work I have done, the work unexpectedly turned out to become more comprehensive than I anticipated.

#### 7.1.1 Expectations

During the interviews with the line managers and team leaders they were asked to clarify their expectations on the competence development project. These expectations varied from low to high, but the main point was the need for a competence package for TI-FI activities. This is quite a big task when starting out from basically nothing. I decided quite early to take these expectations seriously but not to get too affected, since it is too big of a project on a bachelor's level in addition to my main purpose. One line manager managed to explain this quite well by saying: *"The results can be whatever, but we need a starting point"*.

#### 7.1.2 Problem areas

The first actual problem that occurred was before the interviews started. I needed a list of competencies in order to map out the present competencies within the organisation. This was hard to get. There were certain skills listed in the competence assessment tool, but these were mainly aimed at people working with engineering. Even though this is a part of the daily work at DMTI, there is also a big part of the work that includes e.g. illustrations, documentation and master data handling. In order for the competence to be mapped out properly the line managers listed the competencies that they thought would fit their departments' actual and future knowledge.

Although the competence list received from the line managers was very good and extensive, the length of the list has caused the usability to suffer. Due to my short experience within the field I did not see it coming and now when looking back it would have been beneficial to delimit the list to 10-15 competencies for each team.

As the interviews proceeded with employees, team leaders and line managers I noticed that it would not be possible to make only one competence plan for the whole department. Even though everyone is working for TI-FI the activities in the four teams somewhat differs.

Halfway through the interviews I decided to make team-specific competence plans to better map the competencies. This did however not affect the interview questions.

When conducting interviews with the internal stakeholders I soon learned that this became a path for them to express their feedback to the TI-FI organisation. Not all feedback was competence related and was not directly relevant to my research. In order for this to reach the line managers I decided to make a separate report for internal use including only the additional feedback relevant to the TI-FI department.

### 7.1.3 Positive attitude to the project

The process of inviting people to the interviews went smoothly since I was currently employed as a trainee and was able to use the scheduling assistant in MS Outlook and a conference room reservation tool. I received a positive response to most invites. In some cases I had to wait for a reply from the interview subjects and in just a few cases the person invited declined or was not able to attend due to work related issues. To summarize I feel that it was very easy to find suitable interview subjects through the snowball method. The initial e-mail from the manager of Technical Information Finland also had a positive effect both on employees as well as internal stakeholders.

## 7.2 My contribution

I feel that through my thesis I have made people aware of the importance of competence development and I have also received comments about high expectations prior to presenting the results. Hopefully this thesis will meet the expectations of TI-FI. As a bonus I feel that I have made other people, not so familiar with all the process in TI-FI, more aware of our work. Hopefully this can lead to improved cooperation and a bigger network.

The competence development plan is as previously stated a result of opinions from employees, team leaders, line managers and internal stakeholders. The plan, even though very challenging to create, contains the most significant competencies that need further development within the different teams. To visualize the competencies I decided to make a competence development chart displaying each competence that is relevant for every team. I have also created a separate

list for team-leaders and line managers. The idea, however, is not to just stare at their own list, but to communicate and see if there is something else on the lists for the other teams that would be suitable.

### **7.3 Proposals for further research**

The area of competence development is very comprehensive and I have just touched the surface in this thesis. My suggestions for further research related to the topic are presented below.

#### 7.3.1 Follow up

If the competence plan were to be used actively during the following 3-5 years it would create the possibility to do a follow-up to see the results of the project. The competence list could then be further developed and competencies could be added or removed to better fit the reality.

#### 7.3.2 Developing competencies according to job title

Within Wärtsilä there are different levels for every job title, e.g. if a person's title when hired is documentation engineer he or she can, according to the level of expertise, continue to be senior documentation engineer etc. Depending on job title a different job description is created. To further develop the competencies there could be a different competence plan depending on the employee's level of employment.

#### 7.3.3 Career paths

One very interesting topic throughout the interviews was the feeling that the career paths are not in line with the reality. Logically there would be two different paths to use: the management path or the expert path. According to the interviews this is not the way things work, since the expert path is not adequately developed. As an example, when getting hired you start out as an engineer, after a few years of experience and good results you get promoted to senior engineer. After that the expert path basically stops and further promotion to reward the employee would be to get designated team leader and then line manager etc. This is in many cases a good path, but the reality is that some people are not cut out to be a manager or

even interested in what it means. The biggest problem here is that in some cases where the person with the most knowledge about the operative work gets assigned manager the expert competencies disappear, due to lack of time and new assignments. The former expert, now a manager, would then need to delegate the work instead of doing it him-/herself. An interview subject expressed this topic quite well by saying *“A leader should be a leader and not an expert”*.

The problem with these two paths is the rewarding system. An expert within a certain field does not make as much money as a manager and therefore the choice is quite natural if you want to make money. An interview subject expressed it like this: *“An expert should have the same salary as a manager so that you don’t feel the need to become a manager to get better pay”*.

To summarize I feel that it would be a good idea to investigate this “problem” further to insure that the right competencies are in the right place. Illustrated below in Figure 18 is an example of career paths for the engineering area.

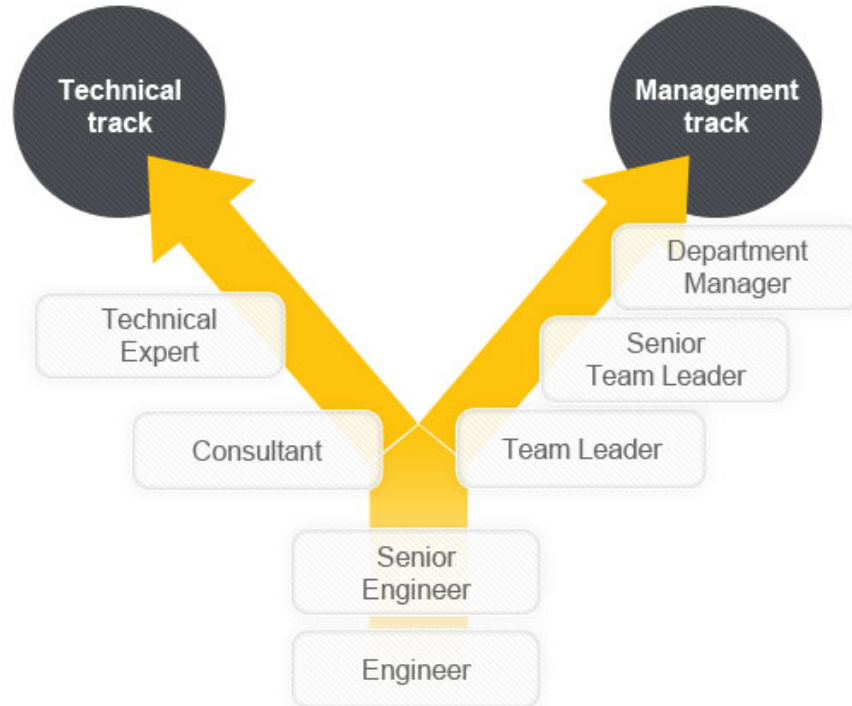


Figure 18. Career path (Source: <http://www.itesoft.com/sites/default/files/ckupload/images/09-JoinUs05EN.jpg>)

#### 7.3.4 Individual competence assessment within specific teams

To create an even more accurate result and a more credible competence development plan, a similar research could be made for each team by making in-depth interviews with everyone in that specific team. This would however require that the teams are not too large. It would be very similar to a development discussion performed by the line managers, but more extensive. This would then help the line managers to create their own list of competencies to assess at every development discussion.

#### 7.3.5 Competence assessment tool

The possibility to create a new job family within Wärtsilä called e.g. documentation could be researched. During the work with the thesis I have come to the conclusion that there are a lot of people within the organisation working with different levels of documentation but without their own job family. In one of the departments there are currently plans to develop a learning portfolio for documentation.

#### 7.3.6 Benchmarking

When making a competence development plan it could be a good idea to compare your own competence development to other departments within the company or even with other companies. This would broaden the view and give more input and ideas. Some benchmarking was performed in the interviews with the internal stakeholders, however a separate thesis could be made comparing the way of working concerning competence development.

#### 7.3.7 Scheduling trainings

If the budget is tight there is a need to schedule the trainings so that everyone willing has the chance to participate equally. Trainings are needed in regular intervals to stay up to date.



## **7.4 Final conclusion**

This thesis has been very rewarding in many ways. I have been given the chance to explore an area previously unknown. When first receiving the project I had no idea what it meant and how it would develop. When looking at where I am now you could call it illuminated. I have not only learned about the topic of competence development but also received a wide view of the company processes and way of working. I have met a lot of people and had many positive experiences. But first and foremost I have learned that a project can quickly escalate and that you need to be strict with your delimitations. In this area I was not 100 % successful, but in the end I have learned so much instead.

I would like to thank my supervisors Roger Nylund at Novia UAS and Stefan Knubb and Timo Saha at Wärtsilä for providing me with insight and being my sounding boards when creating and developing ideas and thoughts concerning the thesis.

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## Appendix 1: Interview questions, employees

1. Have you used the competence assessment tool?  
If yes, has it resulted in competence development? If no, why have you not used it?
2. Do you participate in trainings arranged by Wärtsilä?  
If yes, what trainings? On who's request? If no, why not?
3. Do you feel that it is hard to find courses that suits you and your work?  
If yes, what do you feel is missing? If no, what kind of courses suit you and your work?
4. Do you feel that you have the opportunity to participate in courses/trainings?  
If yes, in what way? If no, why not?
5. Do you feel motivated in your work? If yes, what motivates you?  
If no, why not?

(In what way do the employees feel that the work does not offer them possibilities for personal growth and development?)

6. In your opinion, what courses do you need:  
A: To get better at what you do?  
B: In order for you department to get better at what they do?  
C: To become more motivated in work
7. What competencies would you like to develop for yourself even further? In what way?  
By which means?
8. What are you competence goals? How do you intend to reach them?
9. Do you feel that you can use your existing competencies in your daily worktasks?
10. How did you learn as a new employee?
11. Do you feel that your competence meet the requirements of your job?  
If yes, in what way?  
If no, why not?
12. How do you see the development of TI-Finland? Give an example on what the department looks like in 5 years and what competencies DMTI-FI has.
13. Are you satisfied with the division of work in your team?
14. Do you have anything further to add?

## Appendix 2: Interview questions for line managers and team leaders

1. What are your expectations on the competence development project?
2. Do you feel you have the necessary tools to manage your department/team?  
If no, what are you missing?  
If yes, which are they?
3. What kind of trainings do you wish there would be more of? For you? For your employees?
4. Do you participate in trainings arranged by Wärtsilä?  
If yes, what trainings? On who's request?  
If no, why not?
5. Do you feel that you have the opportunity to participate in courses/trainings?  
If yes, in what way?  
If no, why not?
6. In your opinion, what courses do you need to get better at what you do and stay motivated?
7. What competencies would you like to develop for yourself? In what way? By which means?
8. What are your competence goals? How do you intend to reach them?
9. What do you think about the competence assessment tool?
10. Do you have the necessary info and tools on how to assist in developing the competence among your employees?
11. Are you familiar with Wärtsilä L&D leadership portfolio?
12. When becoming a manager, how was the learning process?
13. How do you see the development of TI-Finland? Give an example on what the department looks like in 5 years and what competencies DMTI-FI has.
14. Do you have anything further to add?

### Appendix 3: Interview questions for internal stakeholders

1. In what way do you work together with DMTI-FI?
2. What are the challenges with the cooperation?
3. What are your expectations on DMTI Finland?
4. In your opinion, what things could DMTI-FI get better at?
5. How do you see the development of TI-Finland? Give an example on what the department looks like in 5 years and what competencies DMTI-FI has.
6. How is the training arranged in your department?
7. Do you have anything further to add?

# Appendix 4: Current competencies

## Competence list - Current competencies

Top 30

General skills	Expert
Management & Leadership competencies	Good
Professional skills	Basic

Competencies						Average					Average									Average	Total sum
	M1	M2	M3	M4	M5		TL1	TL2	TL3	TL4		E1	E2	E3	E4	E5	E6	E7	E8		
1 Code Resolution Principle	3	2	3	3	2	2,60	3	2	2	3	2,50	1	1		2	3	2	3	2	1,75	37
2 Communication skills	3	2	2	3	2	2,40	2	3	2	1	2,00	1	3		2	2	2	2	2	1,75	34
3 Teamwork skills	3	2	2	3	2	2,40	2	2	2	2	2,00	2	2		2	2	2	2	2	1,75	34
4 English language	3	2	3	2	2	2,40	2	2	2	1	1,75	1	3		2	2	2	2	2	1,75	33
5 Problem solving and decision making	2	2	2	3	2	2,20	2	1	3	2	2,00	1	2		2	2	2	2	2	1,63	32
6 Masterdata maintenance	3		1	3	1	1,60	2	2	2	2	2,00	1	1		1	3	3	2	2	1,63	29
7 Wärtsilä knowledge & business understand	2		2	3	2	1,80	2	2	2	1	1,75	1	2		2	2	2	2	2	1,63	29
8 Documentation management	2		3	3	2	2,00	2		2	1	1,25	2	2		1	2	2	2	2	1,63	28
9 Wärtsilä Engineering tools	1		2	1	1	1,00	3	2	1	2	2,00	1	2	1	1	2	2	2	3	1,75	27
10 Customer value understanding	2			2	2	1,20	2	2	3	2	2,25	1	2		1	3	2	1	2	1,50	27
11 Presentation skills	3	2	2	2	2	2,20	1	1	1	1	1,00	1	2		2	2	2	1	2	1,50	27
12 Wärtsilä product knowledge	2	2		2	1	1,40	2		2	2	1,50	1	2	2		3	1	2	2	1,63	26
13 Document Management	2		3	3	1	1,80	2		2	1	1,25	2	2		2	2	1	1	2	1,50	26
14 Technical documentation	2		2	3	2	1,80	2		2	2	1,50	2	1	1		2	1	2	2	1,38	26
15 Customer understanding	2			2	1	1,00	2	1	2	2	1,75	1	2		2	2	2	2	2	1,63	25
16 Technical drawings and flow charts	1		1	2	2	1,20	2		2	2	1,50	2	1	1	1	3	1	2	2	1,63	25
17 Customer focus and orientation	2	2		1	1	1,20	2	1	2	2	1,75	1	1		1	3	2	2	2	1,50	25
18 Technical communication	2		2	2	2	1,60	2		2	2	1,50	1	2	1		2	1	2	2	1,38	25
19 Wärtsilä core processes	2		1	2	1	1,20	2		2	1	1,25	1	2	1	1	3	2	1	1	1,50	23
20 Product specification	1		3	2		1,20	2		2	2	1,50	1	2	1	2	2	1	2		1,38	23
21 Document identification	1		2	3	1	1,40	2		2	2	1,50	1	2			2	1	2	2	1,25	23
22 Quality awareness	2			2	2	1,20	1		2	1	1,00	2	1	2	1	3	1	1	1	1,50	22
23 Training & development skills	2		1	2	1	1,20	2	1	1	1	1,25	1	1		2	2	2	1	2	1,38	22
24 Technical problem solving skill	1		2	2		1,00	2		2	3	1,75	1	1		1	2	1	2	2	1,25	22
25 Data analysis	2			2	2	1,20	2		2	2	1,50	1	1			2	2	1	3	1,25	22
26 Engine auxiliary systems, General	1	1		2	1	1,00	2		1	2	1,25	1	1		2	2	2	2	1	1,38	21
27 Wärtsilä quality,safety&environm. skills	2		1	2	1	1,20	1	1	1	1	1,00	1	2		1	2	1	2	2	1,38	21
28 Technical product & solution knowledge	1		1	2	1	1,00	2		2	2	1,50	1	1	1		2	1	2	2	1,25	21
29 Technical product portfolio knowledge	2			2	1	1,00	2		2	2	1,50	1	1	1		2	1	2	2	1,25	21
30 Product life cycle approach	2			3	1	1,20	1		2	2	1,25	1	2	1		2	2	1	1	1,25	21

# Appendix 5: Competence development needs

## Competence development needs

Top 34

General skills	Graded 1-2:
Management & Leadership competencies	Competence development level 1: basic to good or good to expert
Professional skills	Competence development level 2: basic to expert

Competence list	M1	M2	M3	M4	M5	TL1	TL2	TL3	TL4	E1	E2	E3	E4	E5	E6	E7	E8	Totals	B→E	B→G	G→E
1 Customer feedback management	1	2						2		2	2				1			10	4		2
2 Sales process & tools				1				2	1	2	2				1			9	3		3
3 Presentation skills				1		2		2		2	1				1	1		9	2		5
4 Lean philosophy	1	1		2	1	1				2					1			9	2		5
5 System and solution knowledge		1		1		1			1	2					1	1	1	9	1		7
6 Problem solving and decision making				1	1	1				2	1				1	1	1	9	1		7
7 Understanding business environment		1		2	1	1				2	1							8	2		4
8 Auxiliary system knowledge	1			1					1	2	1					1	1	8	1		6
9 Mechanical skills, practical&theoretical				1		1				2		1	1			1	1	8	1		6
10 Technical communication		1		1	1					2	1					1	1	8	1		6
11 Technical problem solving skill				1	1					2	1		1	1				8	1		6
12 Customer focus and orientation		2		1						2	2							7	3		1
13 Emission reduction systems				2		1			1	2							1	7	2		3
14 Product life cycle approach				2	1	1				2					1			7	2		3
15 English language				1		1				2					1	1	1	7	1		5
16 Charge air system				1		1				2	1					1	1	7	1		5
17 Wärtsilä quality,safety&environm. skills				1		1			1	2	1				1			7	1		5
18 Wärtsilä Engineering tools				1	1				1	2	1				1			7	1		5
19 Maritime rules and regulations		1		1	1	1			1	2								7	1		5
20 Technical documentation		1		1	1					1	1					1	1	7	0		7
21 Training & development skills				1					1	2	2							6	2		2
22 Customer understanding		2		1						2	1							6	2		2
23 Health, Safety and Environment systems				2		1			1	2								6	2		2
24 Customer value understanding		2		1						2	1							6	2		2
25 Compressed air systems				1		1				2	1					1		6	1		4
26 Cooling water systems				1		1				2	1					1		6	1		4
27 Engine autom				1		1			1	2						1		6	1		4
28 Technical Knowledge (SCM)				1	1			1		2	1					1		6	1		4
29 Wärtsilä product knowledge				1					1	2	1					1		6	1		4
30 Design process				1	1			1		2	1							6	1		4
31 Engine auxiliary systems, General	1			1	1				1	2								6	1		4
32 Maintenance management		1		1		1			1	2								6	1		4
33 Technical product & solution knowledge				1	1				1	2	1							6	1		4
34 Wärtsilä power plant solutions				1	1				1	2	1							6	1		4

<h1 style="text-align: center;">Identified Competence Development Areas</h1> <h2 style="text-align: center;">Technical Information Finland</h2>				
Content Distribution	Content Management	Parts Data Lifecycle Management	Service Bulletin	
Internal customer focus Negotiation skills Presentation skills Internal marketing skills Project management Translation management Documentation logistics** Invoicing	<u>SPC team:</u> AMS Presentation skills Networking Confidentiality 3D modelling tools Adobe Illustrator Illustrations and visual planning Cross-cultural communication Engine assembly  <u>Change management team:</u> Leadership skills Project management Coordinating work skills Manual creation process Manual & documentation management Technical writing Traceability management	Presentation skills Teamwork skills Cross-cultural communication Networking Advanced engine specific skills Advanced technical knowledge Propulsion Purchasing process Logistics process Sales process Auxiliary spare parts SAP skills	Technical writing Technical documentation Engine automation systems MS Office skills Adobe Illustrator Finnish language skills English grammar Engine systems and components	Team Specific
All DMTI-FI Activities English language Communication skills Documentation in general Technical Documentation Global thinking Information retrieval* Feedback management*	Customer focus Quality awareness Cultural knowledge Proactive approach Wärtsilä Product Portfolios Wärtsilä Processes – Getting the big picture Engine & technical basics	Intermediate technical knowledge AUX systems & components New product releases New tools TI tools		**New tool already released  *Development project



