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Introducing new software tool

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Guidelines for introducing new software tool to a team. Case study

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**ABSTRACT**

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<p>Aim of the study:</p> <p>The objective of this thesis is to investigate what are the main obstacles in introducing a new software tool to an organisation and how to overcome those obstacles. If there are any definite set practices that could be used by leaders and managers, to minimise the resistance towards the change and the effects of such practices– both upon employees and the businesses or organisations. In addition, the research study aims to validate pre-existing literature and relevance of certain traits and submit its own findings through primary data collected</p> <p>This thesis approaches the problem from change management point of view. The proposal for guideline is built based on best practices found in change management literature. The status of the current practices is analysed by using qualitative methods. Then again the qualitative method is applied to gather opinions on the subject matter. The findings were reflected against the best practices. The new guideline is developed and reviewed and tested.</p> <p>The outcome of this thesis is the guideline for introducing a new software tool to a team. The proposed guideline provides a comprehensive list of task which needs to be done in during roll-out phase. The successful test run of the proposed guideline provides a confidence in its steadfastness.</p>	
Keywords	Change Management, Project Management, Change Project, Change guideline

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**Abbreviation**

AR	Action research
CSA	Current State Analyses
DE	Delivery executive
ISG	Internal Steering Group
KPI	Key Performance Indicator
PM	Project Management or Project Manager
PRM	Project resource management
PRMT	Tieto PRM tool
SG	Steering Group
TERP	Tieto ERP tool
TPM	Tieto Project Management
W2E	Work to Excellence (Tieto template repository)
WBS	Work breakdown structure
XL	Microsoft office – Excel

## 1 Introduction

I work in IT solutions and service provider company, Tieto Oy, as a project manager where the business model needs to adjust according to the rapidly changing market and overall business environment. That is the key to thrive and take the position as the largest Nordic IT services company providing full life-cycle services for both private and public sectors.

However bringing change is not an easy task for a company. It requires detail planning and continuous focused monitoring until the desired change is accomplished. In this thesis I have attempt to find the common causes which become obstacles in bringing a change, and to introduce a new project management software tool to project managers. The scope of this thesis will be limited to only one team within Tieto.

### 1.1 Case company in 2013

The company started its business operations in Espoo, Finland in 1968 under the name Tietotehdas Oy. During the first years, Tietotehdas operated mainly in its owners' computer centre. IT systems were developed and maintained mainly for the Union Bank of Finland and its customers, and for a few forest industry companies. During the 1990s, the company experienced rapid growth through a number of acquisitions, mergers and strategic alliances. In 1999, Tieto and Enator merged, and TietoEnator was born. During the 2000s, the IT industry has become global and Tieto has increased its efforts to internationalize. Offshore production was started in 2004. At the same time, Indian players started to enter the Nordic market and competition became fiercer. In 2007, the company took a new course, back to Northern Europe. Global scope, however, remained in selected sectors, such as telecom. The importance of horizontal operations and adequate offshore resources has grown and the company has replaced the industry-based structure by a matrix comprising country organizations, industries and global service lines in 2009. Offshore production was increased substantially towards the end of the decade.

As of 2013 Tieto is the leading IT service company in Northern Europe providing IT and product engineering services. Tieto's specialized IT solutions and services

complemented by a strong technology platform provide both local and global customers with tangible business benefits. With about 18 000 experts, Tieto is aiming to become a leading service integrator IT business. Its shares are listed on NASDAQ OMX in Helsinki and Stockholm. Its main markets are the Nordic countries, Russia and Poland. In addition, it also provides industry-specific activities in selected countries. Tieto's deep understanding of customers' businesses and needs lays the foundation for long-term relationships with large and medium-sized organizations in various sectors like:

- Financial Services
- Public, Healthcare and Welfare
- Manufacturing, Retail and Logistics
- Telecom, Media, Energy and Utilities

Tieto's way of working is described in its W2E (Way to Excellence) business system. It is a repository of experiences and best practices gained during over forty years, and continuously benchmarked and certified against international frameworks like ISO 9001, ISO 27001, and ISO14001, ITIL and CMMI (and many other industry-specific frameworks). Tieto provides service in a unique mix of industry specific onshore, near shore and offshore delivery centres, tailor-made into a package as per customer need. Dedicated teams in multiple locations work, utilize unified processes and tools in Tieto. In addition Tieto also provides quality standard, mature processes (CMMI and Lean) and excellent inbuilt tools that have proofed to be a robust framework for thousands of successful deliveries.

Tieto has been updating its strategy and organization to better cope with the ever-changing market. At present Tieto is mainly focusing on the markets where it can be amongst top 3 suppliers and Nordics being the core market. Tieto's organisation is a project based matrix organization.

Tieto's operating model as of 2013(Figure 1. Tieto's operating model 2013) is a matrix dividing four vertical industry groups ( Financial Services, Public healthcare and welfare, Manufacturing retail and logistics, Telecom and media and energy and utilities) and three horizontal Service Lines(consulting and system integration, Managed

services, Industry products). The product development business is less dependent from IT services business and operates globally.

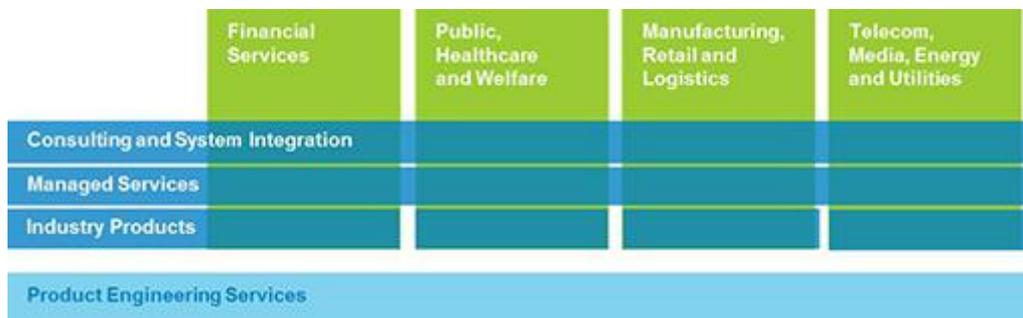


Figure 1. Tieto's operating model 2013.

Consulting and system integration: Provides business and technology consulting to the customers. Tieto also provide full program and project management services which include:

- **Advisory & Governance services (enable business)**  
Advisory and governance services build upon the know-how of thousands of delivered IT projects and change programs. Tieto evaluates customers' projects and support them to run effectively and help their organization to manage change.
- **Consulting services (deliver value)**  
Consulting services empower customers IT related programs and projects to be led with passion and the right attitude towards the project directives and objectives.
- **Methodology and training services**  
These provides the project methodology Practical Project Steering® (PPS) packaged as an on-line service (PPS Online). Training services help customers to manage and lead programs, portfolios, PMOs and projects with exceptional accuracy and value for money and ensure that Tieto and its customer's organization has a common way of working.
- **Tools and structured efficiency**  
Tieto offers the best tools on the market to support portfolio management, program and project steering for effective performance, by partnering with leading IT vendors, Tieto ensures accurate project management information, well-informed decision-making and effective change management.

Managed services: MS focus on enabling customers to get most out of their IT transformation with good quality Tieto services and other leading technology partners.

Industry Products: To provide industry specific solutions to different customers.

Product engineering services continue as a separate unit comprising design, development and maintenance of software for customers' products. Tieto's strong R&D offering covers telecom networks, mobile devices as well as automotive and industrial R&D areas.

## 1.2 Project Management

Project Management is one of the key competences in a projectized organization such as Tieto. Tieto offers both projects and continuous services, which requires similar skill sets and competences to provide quality service and create value for the customers and for the company's self.

Project management is about taking ideas and converting them into a planned, resourced and funded project while continuous service is about providing continual quality support afterwards as per the customer's requirements. The project management process can be broken down in to five stages: project initiation, project planning, project execution, project monitoring and control and project closure (PMBOK).

During the project initiation and planning stage it is necessary to clearly and explicitly define what the project is intended to achieve and its scope. By defining this first, you set a benchmark for the quality of what is actually produced at the end of the project. You also determine what resources and time will be allotted to complete the project (PMBOK).

The project execution and control stage is about monitoring and controlling the progress of the project. It's also about controlling the quality of the product by tracking progress through regular checkpoints and resolving issues that arise during the course of the project. The majority of the work and time spent on a project is during this stage (PMBOK).

The purpose of the project closure stage consists of two parts: formally closing the project and passing on any lessons that can be applied to other projects. There may be some outstanding work that needs to be done and a plan for these things should be done in this stage. There is no need to reinvent the wheel every time you do a project but you do want to become more efficient (PMBOK).

The project manager (PM) plays a significant role in the project, being responsible for delivering specific project objectives within the constraints of the project. PM is also responsible for managing scope, schedule, cost and quality of the end product and also PM plays a key role between project team and the stakeholders (PMBOK). This work requires a significant amount of calculations, estimations and reporting work.

### 1.3 Business problem and Research questions

Tieto as a company wants to make life easier for project managers, the conductors of project teams while keeping – focus on customer, quality and innovation. This can be improved by better coordination and co-operation of supporting units and people as well as with developing PM capabilities (competences, processes & tools).

In the past, Tieto's different units worked as individual legal entities and they were driven by customers' requirements. A lot of different requirements from the customers thus resulted in different ways of doing things in various parts of the organization and countries. Now with the new projectized way of working introduced in Tieto requires unified way of working which is must in order to create harmony and improve overall quality.

Tieto has streamlined its processes and templates to be used in its offices located worldwide and operated independently. These templates and processes are described and continuously improved in Tieto Way to Excellence (W2E). As a part of continuous improvement for Tieto's own benefit and its customer's benefit, several new tools have been introduced. Some tools and processes are quite easy to adapt since they do not require major change in day-to-day business handling, however some new tools and processes requires more effort to be taken in use, since they affect project manager's day-to-day business. Therefore, a challenge is faced when the change is not accepted by employees as gracefully as the management had hoped for.

Among such an effort of unifying Tieto tools and processes, Tieto introduced a new tool to handle day-to day tasks of project management. This tool is based on Planview. Planview is among the market leaders for portfolio management and enables decision-makers software which can be customized the as per customer requirements. Tieto process experts along with Planview experts customized software to create PMView for Tieto project managers. This covers all aspect of project and portfolio management from initiation to closing of the project in accordance to PMI standards.

PMView is a necessary tool to unify all the reports and project data collection. In the past we have faced several problems if a new project manager replaces the current project manager in the middle of the project and who is using his or her own tools and methods to control and monitor the project. Each project manager is using his or her tools and processes to create reports, which makes it rather difficult to understand or interpret the end reports.

In this thesis, my focus is limited on how to introduce the new tool (PMView) to the Tieto project managers; a tool designed to improve project managers' day-to-day work. However, this change requires a total shift of the way project managers have been working so far, and it created much of resistance. The thesis will focus on following questions:

- ➔ What are the main factors which are causing this resistance?
- ➔ What can be done to ease this resistance and bring the change as desired?
- ➔ What are the lessons learned in this process which can be beneficial in future?

All data for this thesis is collected during the actual project's roll-out phase.

### 1.3.1 Research outcome

The end result of this research should cover two basic requirements:

- ✓ A list of best practices, defining how a tool can be introduced with minimum resistance. It should also have a collection of lessons learned during this process for future reference.
- ✓ Lessons learned from PMView project.

### 1.3.2 Delimiters

The scope of this thesis is limited to the XYZ unit with the total strength of over 200 people globally among which 20 are project managers working in the different industry group. These project managers are located in multiple locations in Finland, India, and Latvia. The result of this study is a set of best practices/guidelines, will be created for the XYZ unit project managers; nevertheless, these guidelines can be used by any other unit or other project managers also.

## 2 Research process

To get deeper understanding of the research issue, it is relevant to have a look at the present knowledge of change management. The study will form basis for both justification and evaluation of the research. Theories presented in this chapter are later reflected against the contents and the structures of the designed construct. The study also aims to corroborate views and hypothesis based on the literature reviews that perhaps commonly agreed general good traits of human behaviour are of importance in change management.

### 2.1 Research method

In this thesis I have adopted Contextual action research as a research method. Primary focus of action research method is to help people involve in the process, learn best, and more willingly apply what they have learned, when they do it themselves. Secondary, it also has a social dimension aspect as the research takes place in real-world situations, and aims to solve real problems. Finally, the researcher makes no attempt to remain objective, but openly acknowledges their bias to the other participants. In its simplest form it is a cycle of following actions: Planning-> Action according to plan-> Monitoring the actions & outcomes-> Reflection & required re-planning (Stephen Kemmis, 1988, 22-25).

Figure 2 describes a 4 phases to be conducted within each research cycle. Initially, a problem is identified and data is collected for a more detailed diagnosis. This is followed by a single plan of action. Result data are collected and analysed, and the findings are reflected in light of how successful the action has been. At this point, the

problem is re-assessed and re-planned and the process begins another cycle. This process continues until the problem is resolved.

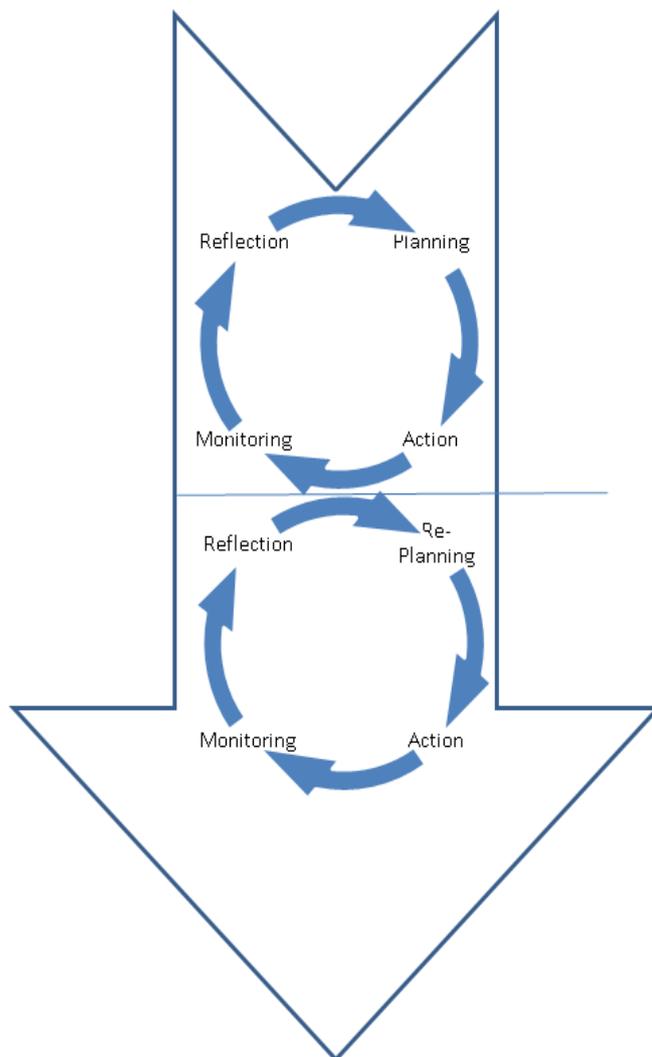


Figure 2. Contextual action research process

According to Kemmis and McTaggart (1988, 5 ) Action research is a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out.

However, there are many concerns' also there for action research, such as:

- Action research lacks rigour and validity
- Action research findings are not generalizable
- Action research is a deficit model
- Action research and mainstream research

(Adapted from Koshy, Koshy & Waterman, 2011)

During my thesis action research will be best suited approach, since input from the subjects will be gathered and analysed to form a common understanding of practices and then given to the same subjects to use. The feedback will be taken and that will be used for re-planning in the second stage of the cycle.

#### The phases in my research

I have personalized the cycle (Figure 3) to achieve the goals of this thesis.

Basic research question can be found from the existing problem; however, to know how deeper the issue is a current state analysis was necessary, to offer basis for defining and refining relevant research questions. A conceptual framework is needed to summarise the existing theories on the research issue for later evaluation of the research outcome and for designing the contents and the structure. Based on the conceptual framework and open-end questionnaire will be created and face-to face interviews will be conducted. The summarized results of the interviews will help draft the guidelines and then put it to test with one project. Results of test prototype will help determine if all research questions are answered. This process can be repeated till we have achieved satisfactory answers to all research questions.

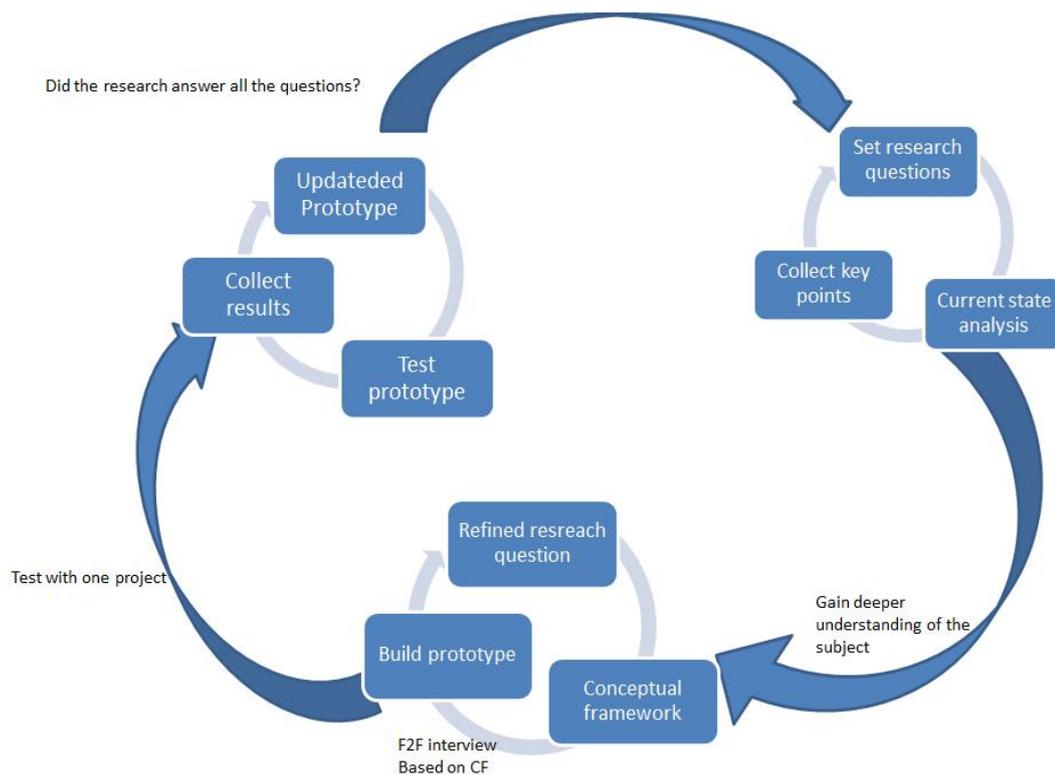


Figure 3. Research process

## 2.2 Data collection & data analysis methods

For ages the quantitative analyses provide us information about the measurable amount. However it has been found difficult quite to measure human behaviour in the unpretentious quantitative methods. Therefore qualitative research methods were developed which facilitated researchers to look beyond how, how often and how many. Qualitative method looks at 'why' and challenges the researchers to further and deepen their understanding of the social world around them.

Qualitative research methods describe situation without manipulation. The idea is to just understand and describe the situation as it is by opinions, feelings and experiences. Overall data is sought by taking a holistic approach, than looking at a set of variables. Qualitative research data has been used to develop concepts and theories to understand the social world around us. Qualitative data is collected through

individual or group interviews, self-observations/ self-study and/or ethnography, which often is time consuming. (Keegan, 2009)

Since this research topic focuses on human behaviours that are considered essential for bringing in an effective change in an organization. The primary focus is on the project managers of the organization.

The data analysis method used in this research is qualitative. The method used to obtain primary data to support this study and to research how to effectively bring change is by face-to-face interviews and questionnaires. The conclusion will be derived from the key points collected during the interview discussions for further analysis.

The aim to collect the primary data is to identify the gaps in the techniques of introducing a new tool and the hidden issues surrounding that. In addition to above, the same data will identify the technical or emotional problems project managers are facing in using this new tool. Furthermore, I would like to find out what the management can do to ease the process of introducing PMView, what project managers would like to see more or less done towards introducing this new tool, what kind of support project managers require now and in the future to continue using this tool. This data can also be used for future reference.

### **3 Current state analysis**

#### **3.1.1 Tool analysis**

New or even experienced project managers often take an informal and, in some cases, haphazard approach to managing projects and their goal is usually just to get the project or product done as quickly as possible. The success of a project – at work or at home – is linked to the ability to analyse problems and to use the right project management tool at the right time. What comes as a surprise for some people is that we use many of these tools in everyday life without being aware of it. To keep

customers the central focus for the company, project management software tools bring together managers and teams to work on and meet common goals more efficiently.

With project management software tool, organizations are able to accomplish their goals while also making the most of the people and resources available. There are many readymade tools available in the market, which can be used as it is or then customized to the business need.

However when it's a team of a few people a formal process can slow down the overall output. But as the business grows, there are multiple projects happening on different timelines. In that situation usage of a formal tool can be quite efficient, creating structure to the management and flow of projects.

Tieto is a listed company and we need to forecast costs, revenues, profits and schedules and we need to monitor performance in the form of KPI's. Even for agile projects KPIs needs to be tailored according to agile processes. We required a tool which can:

- Improve Efficiency
- Keep it Simple
- Minimise manual and double work
- The aim is to make life easier for project managers by providing a single integrated environment that:
  - Supports Project Planning, Forecasting/Budgeting and Staffing (Project resource planning)
  - Is integrated with Tieto ERP systems
  - Supports the whole lifecycle (from Pre-Sales thru to Maintenance)
  - Supports all types of project (Large/Small, Agile, Waterfall, etc)
  - Supports efficient scope, change and risk management
  - Provides you with precise reporting and follow up
  - Drives a high-performance culture and support Tieto W2E Processes.

In spring 2010 PM tools improvement was indicated by a user survey. At the same time, project status reporting requirements by the management were increasing. After serious consideration, a professional commercial tool was prioritized over a self-developed. The costs of such a tool were high and on the limit of being acceptable. All

means were used to reduce the cost (e.g. TERP-Planview interfaces developed by Tieto as offshore work)

PMView is the central piece of Tieto's project manager's tool-set puzzle. It connects Tieto's tools and processes providing the framework for better project management. The solution allows project and program managers to concentrate on project delivery by using a tool that efficiently supports the entire project life cycle.



Figure 4. Snapshot of PMView processes, integrating with other Tieto processes.

### 3.1.2 Key problem areas

To establish the key problem areas what project managers are facing in project management area and why they have not used the PMView tool following questions were prepared and asked from the targeted group of project managers.

#### **Interview question**

1. How do you work with project schedule?
2. Are you aware of W2E Project management processes?
3. How do you compare budgets (cost vs. actual vs. forecast)?
4. Are you aware of KPIs related to Tieto project management?
5. How do you Reserve people for your project?
6. Are you able to navigate in Tieto ERP easily?
7. How do you prepare reports for (internal) steering group?
8. How do you prepare report to Delivery executive (DE)?
9. How do you create forecast?
10. Have you received PMView training (Basic & financial)?

11. Reason (if so far you have not used),, why you have not been able to use PMView so far?

### **Results**

These questions were asked from twenty-two project managers. Sixteen project managers were quite open to answer most of the question. Three project managers were unaware of PMView or any other tool as their project assistants were handling the tools for them. Remaining three project managers were not willing to answer any questions.

- Fourteen out of twenty-two project managers have heard of PMView and some had attended the basic training also.

-Eleven out of sixteen were using other pm tools instead of PMView tool.

The detailed answers can be found in list in appendix 2.

### **Conclusion**

This ended in a conclusion that the problem assumed in the beginning does exist. Most project managers are unaware or unwilling to use new tool PMView.

Ramp-down of this change project at this stage is not a feasible option; since, Tieto has already spent quite much amount of money and effort on this. This money cannot be recovered unless this tool is been fully adapted. Another problem is un-uniformed reporting; which causes much of overhead work. Thus, it will directly effect to Tieto's cost-reduction plans. Thus, situation needs to be assessed and problem areas needs to be addressed to find the key factors.

#### 4 Conceptual framework

For deeper understanding of the research problem, it is relevant to look at the existing expertise knowledge of change in an organization. Latter this framework will help form basis for both justification and evaluation of the research. Theories presented in this chapter will reflect in building prototype of guidelines.

##### 4.1 What does change means?

“It is not the strongest of the species that survive nor the most intelligent, but the ones who are most adaptive to change” (Charles Darwin, ‘Origin of species’)

Change implies the difference between the old state of things and new state of things (French and Bell 1999, 2) Thus in an organisation change means the new state of things or thinking which are different from the old state of things or thinking. According to French and Bell (1999, 2; see also Goodstein and Burke 1997, 159; Kanter et al. 1992, 24) the need for change may originate from several different sources, within the organization or from an external influence. External influences could be for example: regulators, competitors, customers, and technology whereas internal pressure could be from: obsolete services or products, new market opportunities, new strategic directions, and/or global multicultural workforce. Also, Lippitt et al. (1958) described that an organization may itself decide to bring change, after considering current pain points or recognizing the opportunity for a better future, or an organization is influenced by an outside change agent which also takes the initiative towards the change effort.

According to Goodstein and Burke (1997, 159) an organisation consider change primarily because of external pressure rather than self-desire to change. Kleiner and Corrigan (1989, 25, see also Lanning et al. 1999, 32; Miles et al. 1995, 142; Scherr 1989, 407) also agree that all organisational changes are triggered due to the experience of environmental threat, loss or opportunity.

To summarise, change is needed when current way of working no longer reflects the requirements of an organization internally or with the external environment. Organizations will benefit from change that results in new ways of looking at customer needs, new ways of delivering customer service, new ways of strengthening customer interactions and new products that might attract new markets and new processes which attract employees. Change is needed look for new ways to get work done faster, better and with higher levels of quality and service.

#### 4.2 Organizational change

Now when we have established what change is and what benefits it could bring, we study further what exactly change means in an IT organization. For developing IT organisations, two different types of concepts are usually distinguished, namely organisational change and operational change. However, in practice they are closely interwoven and difficult to segregate its activities from each other since; changes done in one part will always have implications to the other parts of the organization. Salminen (2000, 11,) and Sharrat and McMurdo (1991, 43) explain that every change effort incorporates both organizational change and operational change characteristics and elements.

The change in an organization can occur in three different levels according to Goodstein and Burke (1997) first, at individual level, which includes personnel's skills, values and behaviour. Second, at the organization's structure and process level, which includes employee hierarchy within the organization or in small units, works culture and reward systems etc. Third level includes input from climate and social culture. According to Turner (1999, 53), changes can be either in technical environment, for example, introducing new technology or in physical environment, for example introducing global team, new organizations structure, new processes to follow. Turner also explains that majority of changes introduced are a mixture of above and named this endeavours PSO-projects (People, Systems and Organisation).

Salminen (2000, 49) goes further defining different kinds of changes from academic or research point of view. According to him change can be studied in two different disciplines, first as "industrial engineering or operation research" when studying operational changes in an organization and secondly, to stream study the changes in human organization which is more drawn towards people perspective. However, it has been acknowledged that there is a need for enhanced collaboration between these two disciplines (Järvenpää and Eloranta 2000; Kast and Rosenzweig 1985, 102).

In my further study, I discover that change can be intrusive or non-intrusive, which can be considered as threatening or non-threatening. Change can be fast or slow, change may affect many elements of an organization or only handful. (French and Bell 1999, 2; Cummings and Worley 1993, 52). Change event can also vary in predictability and controllability, for example a group of individuals may choose the time for a change, when the change is both predictable and controllable. Advantage of this kind of change is that the change is done when the group is ready and has time. Changes which are

unpredictable or uncontrollable may possess potentially bigger challenges and difficulties for the organization. (Poole & Van de Ven, 2004). The theories of Huber (1991), Katz and Kahn (1987) and Poole and Van de Ven (2004) seem to point that most likely organizational changes can occur due to planned as well as unplanned events.

#### Planned vs. Unplanned Change

Implementations of planned changes are preceded with complete knowledge and complete layout planning of the specific change. Planned change is in accordance to organization's overall strategy and goals. Its advantages are described before the actual change is implemented. On the contrary, unplanned changes may not always be driven willingly and it may or may not move the organization in a desirable direction. The implications of this distinction are conveyed by Poole and Van de Ven (2004) as follows: 'The contrast between planned and unplanned change focuses our attention on the degree to which change and innovation can be choreographed, scripted, or controlled. Theories of planned change specify ways to manage and control change processes. Theories of unplanned change, on the other hand, imply that change is to some degree a force in its own right, susceptible to channelling, but not necessarily to control or management.' While for this thesis in the end work I want to create guidelines for future changes, and Tieto is only interested in changes that can be controlled, which means planned changes. Thus, in my further literature study I will concentrate in regard with planned changes.

#### Episodic vs. Continuous Change

Changes can be categorized according to which tempo they have, episodic or continuous change. Planned changes can be episodic, a change which is infrequent or discontinuous however intentional, or it can be continuous, a change which is on-going or evolving. Episodic changes are preferred when the organization is moving from its equilibrium condition. It requires the target change to be completed in a defined period of time, for example: organization's technology shift or change in key personnel. Episodic changes are often implemented in a defined short period of time and they are often planned from beginning to end in detail with predefined roles and responsibility to drive and create the actual change. On the other hand continuous change are like fine-tuning, fixing problems, making adjustments and modifying processes; these are kind of changes which improve an organization's or personnel's performance but not

fundamentally change the organization. Continuous changes often are included in daily activities since they are only smaller adjustments and improvements which can emerge quickly. Responsible change agents need to possess and create an understanding for ongoing changes. The idea of continuous change is that small continuous adjustments, which are implemented simultaneously across departments, can cumulate and create substantial change. (Weick & Quinn, 1999)

However, all these different descriptions and classifications of 'change' tend to be type-cast generalizations. The reality is not so forthright (Mintzberg and Westley 1992, 57). In reality, there are immeasurable range of change efforts, each distinctive both in purpose and contents. Katzenbach (1995, 7) puts it unmistakably clear that "real change leaders do not care if the change effort is fast or slow, empowered or controlled, one-time or recurring, cultural or engineered – or all of the above. They only care that it is people intensive, and performance oriented."

As we have established what change means to an organization and the kind of change we need at Tieto, now it is necessary to also understand how change is managed in an organization, which will help choosing the right model for our need.

#### 4.2.1 Change Response

The response to a change can be seen both before and after the actual change event. Adaptation of a change can be either directed, planned accompanied with lots of prior information and choices or undirected, which can take the cycle of variations before settling down. Study shows that, there is no comparable proportionality between the extent of change and subsequent response and these responses may have unexpected consequences, both desirable and undesirable. (McGrath & Tschan, 2004)

An organization comprises of a group of people. Argyris and Schön's (1974) argue that from an early age people develop mental maps with regard to how to act in situations. This involves the way they plan, implement and review their actions. Furthermore, they assert that it is these maps that guide people's actions rather than the theories they explicitly espouse. The words we use to convey what we, do or what we would like others to think we do, can then be called *espoused theory*. The second theory of action is described as *theories-in-use*. They govern actual behaviour and tend to be tacit structures. Their relation to action 'is like the relation of grammar-in-use to speech; they contain assumptions about self, others and environment – these assumptions

constitute a microcosm of science in everyday life' (Argyris & Schön 1974: 30) "When someone is asked how he would behave under certain circumstances, the answer he usually gives is his espoused theory of action for that situation. This is the theory of action to which he gives allegiance, and which, upon request, he communicates to others. However, the theory that actually governs his actions is this theory-in-use. "(Argyris and Schön 1974: 6-7)

Further Argyris and Schön suggest two responses, and these can be seen in the notion of single and double-loop learning. When the error detected and corrected permits the organization to carry on its present policies or achieve its present objectives, then that error-and-correction process is single-loop learning. Double-loop learning occurs when error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies and objectives. Most people, irrespective of age, gender or education level use the same theories-in-use, called Model I.

Model I theory-in-use motivates people to be in unilateral control of the environment and task, and the unilateral protection of self and others, to win and not to upset people. In simpler words it justifies the actions and strategies which help save their own and others faces. Model I leads to often deeply ingrained defensive routines, leads to misunderstanding and self-protection (Argyris 1990; 1993) – and it can be found at individual, group and organizational levels. Exposing actions, thoughts and feelings can make people vulnerable to the reaction of others.

Whereas, Model II has significant feature: the ability to call upon good quality data and to make inferences. It looks to include the views and experiences of participants rather than seeking to impose a view upon the situation. It looks to: emphasize common goals and mutual influence, encourage open communication and to publicly test assumptions and beliefs, and combine advocacy with inquiry. (Argyris and Schön 1996)

This can be concluded: if individuals in an organization use Model I type learning the organization will proceed in ways that act against its long-term interests.

While there has been a growing research base concerning the models, it is still limited. It is assumed that 'good' learning and responses 'takes place in a climate of openness where political behaviour is minimized' however, since most organizations are inherently political this assumption is been questioned. However, Argyris's models gives insight into human behaviour in different circumstance. Among the biggest

challenges that must be overcome in any organization is to recognize and analyse the ways people reason defensively. Until then, change can never be anything but a passing phase (Argyris 1991, 106). Everyone must learn that the steps they use to define and solve problems can be a source of additional problems for the organization (Argyris 1991, 100).

#### 4.2.2 Change response in an Organization

'An organizational change can be both disruptive and adaptive, and organizational inertia can actually increase the likelihood of organizational change.' (Amburgey, Kelly & Barnett, 1993) Amburgey, Kelly and Barnett (1993) research study is based on a model that was presented by Hannan and Freeman in 1984, which describes both internal and external restraints on organizational change.

Organizations progress as long as they are perceived reliable and act rational. When strategies and goals of an organization are clear and technical & institutional structures are established, the steadfastness and accountability are high within the organization. However, institutional and technical structures also cause strong resistance against organizational change. In simpler words, the very physiognomies of organizations steadiness also produce resistance to changes. Most changes bring certain degree of disturbance in internal routines which may as well affect connections with external stakeholders, while both internal and external stakeholders prefer consistent and predictable performances. Organizational change increases the failure rate of organizations, independent of the effects of the changed characteristics. (Amburgey, Kelly & Barnett, 1993)

The second statement is that the disruptive effect of organizational change increases with the age of the organization. The large/older organizations which last longer is able to rebuild itself after the disruption of change as oppose to the similar changes done in newer organization, which is most likely set to fail. (Amburgey, Kelly & Barnett, 1993)

The third statement is that the disruptive effect decreases with elapsed time since the occurrence of the change. After the change event, the organization starts to build up new routines and over the period of time the negative effect from the change starts to fade out. However, if the changes occur too frequent then organization may not be able to recover itself. . Frequent operational changes in an organization may lead to more changes of similar kind to adjust the routines (Amburgey, Kelly & Barnett, 1993).

The fourth statement is that the probability of an organizational change increases with the number of former changes of the same type. Studies have shown that each occurrence of a change increases the likelihood of success of other changes of similar kind, in simpler words it means that the fact that the organization has earlier implemented changes and survived increases the openness to new changes. (Amburgey, Kelly & Barnett, 1993)

The fifth statement is that the longer the time that has elapsed since a change of a special type occurred, the less probability it is for this given type of organizational change to occur again. When searching for a solution, it is likely to start with the most recently used routines. The more time that has passed since the last implementation of a certain type of a change, the less likely it is that this type of change will be used again. (Amburgey, Kelly & Barnett, 1993) An early occurrence of a certain type of change increases the probability that the following changes will be of the same type. (Amburgey, Kelly & Barnett, 1993)

The last statement is that the older organizations not only are more disrupted by a change, they are also less likely to change at all, that the probability of organizational change decreases with the age of the organization (Amburgey, Kelly & Barnett, 1993).

The research results showed that the resistance due to a change in organization is intensely age-dependent and age acts as a strong factor between organizational change's success and failure. Even though a change can lead to a big leap for a long-standing organization, the risk of failure is much higher in a young organization as the older organization is more robust prior to the change. This ended in a conclusion that old organizations are more likely to survive fundamental changes compared with young organizations. (Amburgey, Kelly & Barnett, 1993)

As we have established what change means to an organization, what to expect as change response and the kind of change we need at Tieto, now we need to get deeper understanding on different methods available to implement the actual change and which can be customized for our needs.

### 4.3 Change process – Models

The complexity and unpredictability of human behaviour ensures that many more change management models frameworks will be created to study and adopt. Thus, when implementing a change in an organisation, single model may or may not fulfil the real conditions. While there are broad selections of change management models available, I study two popular models for my thesis, Lewin's three steps change model and Kotter's eight steps change model. In my theoretical study, I will study briefly these two models and make hypothesis based on Tieto's environment.

#### 4.3.1 Lewin's Change Management Model

Among the first ones published and also the most popular and discussed change model was created in the 1950s by Kurt Lewin. Lewin illustrated that the majority of people prefer and operate within safety zones. He suggested three-stage change process: (1) unfreezing the old, (2) moving to new, and (3) refreezing the new behaviour or situation (in Schein 1987, 93). He also discussed how certain forces can affect change, which he called force-field analysis.

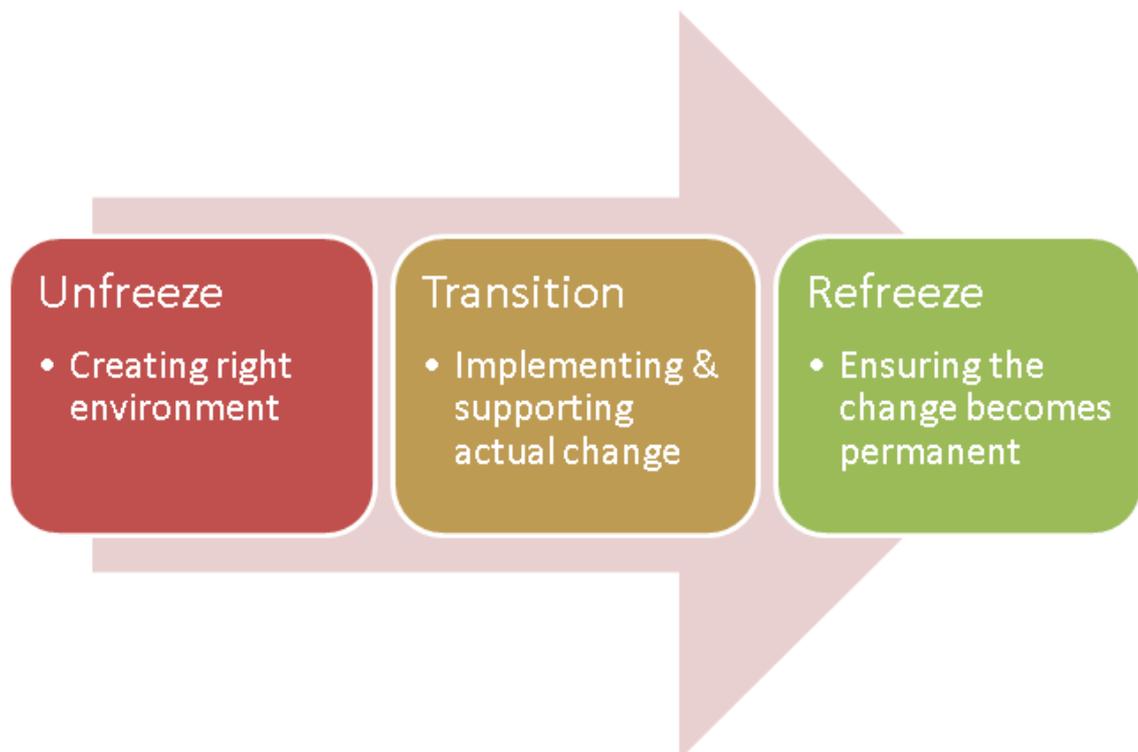


Figure 5. Adaptation of Lewin's three stage change management model

Schein (1987, 93) proposed an improved version of Lewin's model by adding and describing the psychological characteristics for each phase of the model. Goodstein and Burke (1997) favoured Lewin's three-phase:

Stage 1: Unfreeze – Since majority of people make a deliberate effort to resist change, thus a period of thawing or unfreezing is suggested to be initiated through motivation and some factors such as top management change, reduction of the levels of hierarchy or redefinition of the business, top management's full commitment and involvement may assist to carry this process smoothly.

Stage 2: Transition – This is the second stage, where an organization moves into the transition period or the actual change implementation. This stage may last longer than the first stage. However, with adequate leadership and much reassurance does help in completing out this stage successfully. Many factors such as empowering and participation of employees, supporting the change by support groups, new incentives and bonuses, intensive training according to the business strategy and values and management tools to support the change can make a large impact on the success of this stage.

Stage 3: Refreeze – This is the third stage after the desired change has been widely accepted and has been implemented successfully, and the organization becomes stable again. Then the organization begins to operate under the new guidelines (Re-freeze stage). This stage requires continuous monitoring and feedback collection, constant promoting of the new values, new performance appraisal system and use of task forces.

While this change management model remains widely used today, it takes time to implement. Of course, since it is easy to use, most companies tend to prefer this model to enact major changes.

#### Force-field analysis

This is a framework for problem solving and planned change, developed by Lewin (1951). It illustrates that restraining forces cannot be removed and they can be countered only by increasing driving forces. Figure 6 provides an example of a force-field analysis. When the force-field analysis is completed, change agents must develop strategies to reduce the restraining forces. First step is to identify all the drivers and inhibitors and second step is to decide which ones have the greatest impact.

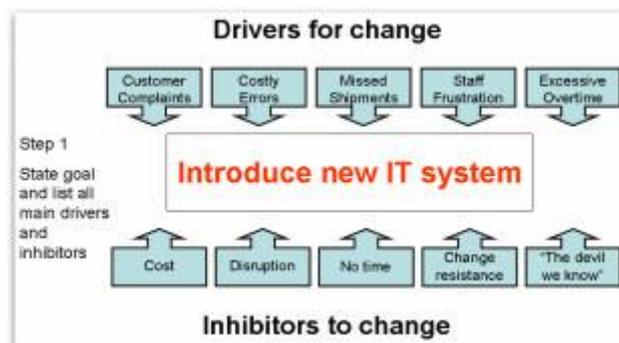


Figure 6. An example of Force-field analysis [www.practical-management-skills.com]

There are many successful implementation of this model working with strategic and incremental or reactive or anticipatory change. However, Lewin's model has been criticised for being too simplistic and thus, not offering practical enough information for carrying out change in practice (e.g., Kanter et al. 1992, 372). In the 1980s and 1990s, emerged more practical approach for implementing change, which brings me to my next model. One of the most popular Kotter's phase models originally introduced in Harvard Business Review and then later published as books (Kotter 1995 and 1996).

#### 4.3.2 Kotter's Model

Jhon P. Kotter (1996) describes in his book a change model comprises eight overlapping steps. The first three are all about creating a climate for change, the next three steps on engaging and enabling the organisation and the last two steps on implementing and sustaining change. Kotter has received widespread acknowledgement for this model by numerous business leaders for its simplicity and practical approach. Kotter (1996), wrote that, even if it can be easy to identify a problem, it is not always easy to correct and implement needed change without a well-considered method.



Figure 7. Kotter's eight stage change management model (courtesy: <http://semuwemba.com>)

Above figure shows the eight steps in Kotter's model (Kotter, 1996) are:

- Establishing a sense of urgency
- Creating the guiding coalition
- Developing a vision and strategy
- Communicating the change vision
- Empowering broad-based action
- Generating short term wins
- Consolidating gains and producing more change
- Anchoring new approaches in the culture

The first three steps will disintegrate the existing state of affairs in an organization; steps four to six will introduce new practices and last two step will establish the desired changes in the organization and will make those changes stick .(Kotter,1996). According to Kotter (1996), it is extremely important to go through all steps, and not skip any of the steps. Skipping any step, no matter how irrelevant it seems at the time of its implementation, will result in the failed change efforts. Kotter (1996) describes each of these eight steps in great detail:

Step 1- Establishing a sense of urgency: According to Kotter (1996) the worst thing for an organization is to step into complacency and in current fast changing world complacency can create disaster. In most old established organizations complacency is more likely the norm and even if they are experiencing serious problems they are capable of doing business-as-usual, thus making it quite hard to implement the desired change. To resolve this problem sense of urgency for the change needs to be established in the organization. Dictionary definition of urgency is “of pressing importance.” When people experience a true sense of urgency, then they think that action on questioned issues are needed now, and not when it fits easily into a schedule. Kotter (1996) defines "Now" means making real progress every single day.

Therefore, the leaders and the change managers need to identify potential crises and/or opportunities in order to bring about the desired change as their first step. In any organization that is desiring change must have at least twenty five percent of its workforce putting full efforts in change process, and with low urgency, it is difficult to get good cooperation or even gather a group of like-minded people together to carry out the change. Strong leadership skill are required to create a true sense of urgency, which focuses on critical issues at hand and driven by the deep determination to win rather than having anxiety about losing. A visible crisis catches people’s attention regardless of organization’s hierarchy. Kotter(1996), suggested taking a step further and keep talking about potential issues even with good reports, it prevents complacency to built-up within the organization. Key personnel are such as middle or lower-level managers who are in charge of the different units can help reduce complacency and increase urgency by creating change coalitions and /or developing a guiding vision and selling the vision to the employees on regular intervals.

Step 2 – Creating the guiding coalition. Kotter (1996) explained, that no matter how great leader or competent a person is, no single person is capable of developing the right vision and communicating it effectively to vast number of people in a way that it brings the sense of urgency or desire to bring change in the whole organization, recognizing and eliminating key obstacles, defining short term milestones and its success, leading dozens of change projects and lastly anchoring the new approaches deep in to the organization’s culture.

However, this can be done by fashioning together the coalition of like-minded people to lead the desired change initiatives. The most important factors of right coalition must be the ample level of trust, and common objective. Trust factor is more important now when we work in global teams, it is important to take time to connect heart and mind with the off-site members of the team. Success of the coalition team and eventually the actual change, for which the team is put together, rests on these factors. Kotter (1996) describes four essential qualities, which must reflect, of the coalition team as a whole and without these qualities coalition team may not see much success in bringing change. The guiding coalition teams must have:

- ✓ Position Power: Enough key players should be on board so that those left out cannot block progress.
- ✓ Expertise: All relevant points of view should be represented so that informed intelligent decisions can be made.
- ✓ Credibility: The group should be seen and respected by those in the firm so that the group's pronouncements will be taken seriously by other employees.
- ✓ Leadership: The group should have enough proven leaders to be able to drive the change process.

Keeping in mind those that persons, who are highly qualified and motivated for the purpose, but with personalities such as disparagements or back-biting must be avoided to be the part of guiding coalition teams. When creating the change coalition team, it is important to keep in mind that this group must be able to do the hard work in creating the necessary vision, communicating the vision widely, empowering a broad base of people to take action, managing dozens of different change projects etc. (Kotter, 1996)

Step 3- Develop a change vision. Kotter (1996) explains vision as a statement which clearly defines how future will be different from the past and motivates every employee to take action in their own environment and hierarchy in a way that each one reflects the same goal. An effective vision has the following characteristics:

- Imaginable: Conveys a picture of what the future will look like, something which can be translated for each employee in their day-to day work meeting the higher goal of an organization.

- Desirable: Should be appealing to the organization overall, its employees, its customers and stakeholders.
- Feasible: Very much within your capabilities thus, contains realistic, reachable goals
- Focused: Shall be clear enough to provide guidance while making decision
- Flexible: Must allow individual initiative in changing conditions to achieve the goals and avoid complacency state of mind
- Communicable: Must be easy to communicate and understand, If it cannot be explained quickly in a way that makes intuitive sense, it becomes useless.

Vision and organization's overall strategy must emulate each other. A clear and powerful vision will do far more than an authoritarian decree or micromanagement can ever hope to accomplish.

Step 4 – Communicating the vision for buy-in. A good vision will be useless or even die if it cannot be communicated effectively to its audiences. It must be communicated in a way that it translates to day-to-day activities. It should be communicated more in form of examples or lay-man vocabulary than in technical gibberish. Sometimes fewer words are better than formal speeches, containing complicated or technical words, which tend to create more confusion. It is more strategic to use various methods such as forums, news magazines, memos, posters etc. and repeat the vision several times. Repetitive talking, effective communication is not enough, as the saying goes "Action speaks louder than the words." Employees look up to the leaders to walk the talk i.e. leaders must lead by their own example at every level. (Kotter, 1996)

Step 5 – Empowering broad-based actions. This is about removing as many obstacles as possible to ensure everyone is able to do their best work. By serving its employee's organization can itself become more influential especially during the change phase. Often realigning incentives and performance appraisals to reflect the change vision can have a profound effect on the ability to accomplish the change vision.

Management information systems can also have a big impact on the successful implementation of a change vision. Up-to-date competitive information and market analysis, and the ability to communicate powerfully and effectively throughout the company in a cost effective way can speed up feedback loops and provide information necessary for people to do their jobs more efficiently. (Kotter, 1996)

Step 6 – Generating short term wins. Research shows that companies that experience significant short-term wins by fourteen and twenty-six months after the change initiative begins are much more likely to complete the transformation. Even though identifying the small improvement can be a challenge, nevertheless the results can bring long term success. Short term wins gives credit to people's effort so far in change transformation and motivates them to keep on working hard towards that change, which can also be used as an example for the rest of the organization. Short term wins also increases the sense of urgency and the optimism in organization's environment. On the contrary the lack of short-term wins during the change efforts can be translated to the lack of commitment and insufficient management.

(Kotter, 1996)

Step 7 – Don't let up. This step is about keeping transformation spirits up and on-going. This stage requires efficient leadership skill to drive the success of change deeper in to the organization to make sure that the change now become part of organization's culture to ensure the long-term success of the change. This does not suggest celebrating the success of the transformation but to consolidate gains and produce more change. At this stage leadership and the guiding coalition must keep their focus on the vision and the end goal of the desired transformation. Leadership must invest time in completing dozens if change projects. In big organizations this step can be up to decade-long process. (Kotter, 1996)

Step 8 – Make it stick. Tradition or practices is a powerful force. These traditions tend to shape group behaviour, often remain the same over the period of time even if group membership changes. Common values & practices are passed on to the new members from older members. Often these are difficult to change since they are nearly invisible and hard to address directly. Thus it is rather important to create a new, supportive and sufficiently strong organizational culture. A Guiding Coalition or few groups of people alone cannot root the change in place no matter how strong they are. It takes the majority of the organization truly embracing the new culture for there to be any chance of success in the long term finishes the process with anchoring the new approach in the culture. The more the new approach differs from the core of the culture, the harder it is to anchor. It is also important to change the culture in the end rather than in the

beginning, so leadership has time to prove why new way is better than the old way and its success is been communicated well, and new reward and incentives are put in place.. (Kotter, 1996)

Kotter (1996) explains 70% of the change projects fail because organizations often do not take the holistic approach required to see the change through till its in-grain in organization's culture. He explains that although different phases are rather straightforward and simple, however, they often overlap. Thus the entire change effort ever more bears a similitude to an evolving progression than phased progression. In most organization change efforts, following 'Kotter's eight step process', may not have distinct ending separating end of one phase to beginning next step. Although Kotter stresses upon initiating process in the suggested order as described in his eight-stage model, many phases can be rolling in parallel. However, both skipping even a single step and failing to build a solid base, before moving further in the process, will most likely will produces difficulties.

#### 4.4 Synthesis of theory

Kotter has not mentioned Lewin in his book; however Kotter's eight stages can be group in to three groups defined according to Lewin, which can be speculated that Kotter's model has some degree of influence from the Lewin model.

Table 1 summarized the Lewin and Kotter's theories into simpler and practical step.

Table: The Lewin and Kotter's theories into simpler and practical step

<b>Action Category</b>	<b>Action</b>
Unfreeze	<ul style="list-style-type: none"> <li>• Increase urgency</li> <li>• Examine competition and internal environment</li> <li>• Identify and discuss crisis and potential crisis, as well major opportunities</li> <li>• Build the Guiding Team</li> </ul>

	<ul style="list-style-type: none"> <li>• Assemble a group of influential people to lead the change effort</li> <li>• Influence the key leaders by showing enthusiasm and commitment</li> <li>• Get the Vision Right</li> <li>• Align or create the company vision that directs the change effort</li> <li>• Align strategies to achieving that vision</li> <li>• Communicate for Buy-in</li> <li>• Use every channel to communicate the new vision and strategies</li> <li>• Keep communication simple</li> <li>• Let the guiding coalition be the example</li> </ul>
Change	<ul style="list-style-type: none"> <li>• Empowering Action</li> <li>•</li> <li>• Identify and remove hindrances in bringing change</li> <li>• Change environment(systems, structures) that work against the vision</li> <li>• Plan visible performance improvements</li> <li>• Create short term wins</li> <li>• Reward personnel involved in the improvements for their achievements</li> <li>• Do Not Let Up</li> <li>• Reinforce the behaviours shown that led to the improvements</li> </ul>
Refreeze	<ul style="list-style-type: none"> <li>• Make Change Stick</li> <li>• Articulate the how change has brought corporate success</li> </ul>

Table 1. Combining two change models

While these two different change theories described above have same goal of 'implementing change successfully', they are also slightly different. Lewin's three-tiered approach has attracted major criticisms. It is argued, for example, that it is only suitable

for small change projects, that it ignores organizational powers and politics, that it is top down and management driven, and that it assumes that organizations operate in stable states. Kotter's model also have few weaknesses, for example, it can be applied for all top-down change processes which means it gives no room for co-creation or other forms of true participation and , its linearity of the model can lead to wrong assumptions and once the process starts, it is difficult to change the direction, it can lead to deep frustrations among employees if the stages of grief and individual needs are not taken into consideration.

On the other hand Lewin's three stage model is a simple and easily understood model for change and all steps are done in sequential manner, while Kotter's eight stage model focus on buy-in of employees as the focus for success, clearly defines the steps which can give a guidance for the process and are easy to understand and fits well into the culture of classical hierarchies.

It is rather challenging or perhaps even futile to differentiate between phase models and critical success factors. Many times, on one hand, phase models are based on some kind of critical success factors and, on the other hand, models of critical success factors are portrayed in a way that they resemble phase models (e.g., Kotter 1996, 21).

I also recognized one more important aspect of change management after the literature study: leadership has an very important role because that can greatly impact on the outcome of the change project. As the business environment is constantly changing and evolving, managing that change is essential part of the leadership. The leader and its leadership team needs to ensure that the whole organization is flexible to adapt new behaviours and skills to fit in the changing environment. The leader must encourage and put emphasis on continuous education and learning. Leaders, by clear communication, their positive behaviour and true commitment towards change project can influence most team members. Effective communication and team working are among the most significant elements for any change project. .

#### 4.5 Summary & conclusion

Organisational and operational change projects require the knowledge, skills and experience derived from both project management and change management. Thus each change projects, whether small or big, should be managed as projects. Since

each change project requires thorough planning, team co-ordination, and people management. The organizational changes always require people to change their existing practices and one common way to achieve this is open & clear communication.

In Tieto, there seems to be plenty of frameworks based on different models for managing change. However, most people are unaware of these frameworks and they do not offer necessary practical instructions on carrying out desired change. Thus a simple and practical guideline for managing and leading changes is needed. For big and episodic changes a checklist will be an advantage. However checklist may not be very useful for continuous changes.

The guidelines created in this thesis must have at least the following characteristics:

- \_ Very practical
- \_ Simple language and not too long
- \_ Generic yet comprehensive

To conclude Chapter 4, I first review the main findings regarding the first two research question, i.e., the main factors which are causing this resistance and what can be done to ease this resistance and bring the change as desired?

I gathered after reviewing the literature that there 'fear of unknown' is the major factor which causes people to resist against any suggested change project. Most people are comfortable in the current state because they can predict the outcome; however change in the environment takes the predictability factor away. To resolve this issue, detailed planning and repetitive communication is extremely necessary. An open dialog will help, where questions can be asked to settle down this fear. Change leadership must need to ensure that each member understands why suggested change is necessary, what is the timeframe the change will be implemented and how this change is going to affect day to day working.

Another factor is 'lack of knowledge', in the context of my thesis; it is the lack of knowledge of the PMView tool. To resolve this issue, detail planning of trainings, coaching and post-support must be done. These plans for trainings and coaching must be communicated to ease the anxiety of team members. This plan and trainings must be reviewed periodically even after the change is been implemented, that will ensure

up to date information. Success stories must be communicated to encourage people. It will be a good idea to take team member's feedback.

Carnall (1990, 121) summarizes the management of change by stressing that continuous learning about the business or organisation is an essential part of implementing change.

Change effort that does not instigate learning, possibly will lead to frustration and adverse outlooks towards change efforts which will eventually result in organization's descent. Thus, continuous learning is the only way to achieve and sustain.

## **5 Building prototype guidelines**

The aim of this chapter is to gather the practices which are currently been used to implement the change effort and find the gaps and finally create a guidelines on how to introduce a new tool to a team. This guideline will be in-line with the literature I have reviewed in previous chapter. This guideline will be generic and will be usable in similar change efforts.

### **5.1 Interviews with PMs**

To gather the current practices and current mode of communication and PM's own viewpoints on change management, I propose following open ended questions to initiate the discussion. These questions will be asked from different project managers. The interview discussion addressed strategic change, step change and continuous improvement approaches, identifying the barriers to change and how to overcome them.

Interview outlines:

1. How did you first hear about the PMView tool?
2. Were you aware of 'why' this new tool was needed?

3. Has your manager or team members discussed about new tool for project management? If not, why not?
4. What role management should have played?
5. Did you receive sufficient information regarding new tool?
6. Was it clear 'What was expected of you'?
7. Were you aware of the trainings and coaching PMView offered?
8. Do you know where to find more information on PMView tool?
9. What kind of support you expect from tool team?
10. What could have been done better in introducing this tool?
11. In your opinion does this tool bring any value to you or your team?
12. Did you receive any survey from PMView team? Did you provide feedback?
  - a. Was your participation in PMView training voluntary or forced?
13. Were you satisfied with the training and coaching?
14. Are you now able and willing to utilise the new tool?

## 5.2 Consolidated table

The main purpose of table 2 is to represent the key points that were collected during interview of project managers, as being critical to managing change successfully within Tieto. These key points will lead to the development of guidelines for successful change.

These key points help me to find the gaps between current practices and the literature review. Detailed interview replies are documented in appendix 3.

Ten project managers were interviewed, including one senior tools manager who has been involved in many change projects. The interview concerned the key problem points in the current practice (in introduction of PMView tool).

Table 2 below summarizes the main key points of the interview results

Date	Name	Key points – Negative	Key points -Ideas
20.11.2013	PM1	Team leader was against this tool thus information was not spread, benefits of new tool were missing	Change must be made mandatory. Benefits must be told. Repeated communication is the key
21.11.2013	PM2	Lack of commitment & missing information on the alignment of company's vision and change implementation	100% commitment! Managers are the guys who sell the change in the organization. Be prepared to answer all kind of questions connected to this change. No matter what communication channel is used, the challenge is to make sure that message is understood (in the right way). Define all stakeholders. Do not introduce new tools/practices before asking what the stakeholders need. Feedback from end-users can provide the real view.
20.11.2013	PM3	Plan was good, implementation lacked consistency	Consistent use of new terminology. Support for training and learning the new tools. Some test environments, if it is related to tool.

21.11.2013	PM4	Lack of management support, too long training- lack of time	Effort & cost must be defined for the learning.
22.11.2013	PM5	Lack of management support, setting bad examples by not using the tool themselves	Management should find out the benefits of new way of working so they also know and what they can get out/require from it. Along with end-users tool's coaches and trainers also need full management support. Users have training/information and support in native language.
22.11.2013	PM6		Instructions should be simple. Interactive help like 'coaching' is good to have. Training & usage must be inline, too much gap does not produce good results.
22.11.2013	PM7	It's quite difficult to know which tool to use and when.	Clear definition of usage of different tools is must – 'when to use what' Benefits must be defined clearly for each tool. Management must support in learning.
25.11.2013	PM8	Realization was poor, benefits were missing, lack of management support	Clear process on how to proceed is must. Test environment is quite necessary. Management must provide the time & cost for learning.
26.11.2013	PM9	Benefits were missing, No	Communication is most

		guidelines was defined to what project new tool needs to be used.	important. 'Why change is needed' must be answered.
26.11.2013	PM10	Lots of things are not as they are supposed to be.	Management should read Kotter before making any change.

Table 2. Key points from the interview discussions

### 5.3 Summary

After the interviews, it was quite clear that most persons are not resisting the change itself but how it is done. One major factor which came up during the interview with almost each participant was the lack of support from the management. And the other factor was missing list of benefits in bringing this change. In any organization both topics are quite important issues which needs to be addressed earnestly in order to bring the change successfully (Kotter, 1996).

Through combining the key points, collected from the interviews and knowledge gathered from the literature, I have a concrete base to draft the guidelines. Guidelines which may help in future change project, of similar nature.

### 5.4 Prototype guidelines

The guidelines I proposed are divided into five sections:

Planning: offers the list to be considered during roll-out planning phase

Communication: offers the list which could be considered in planning and during the course of execution, with regards communication.

Launch & trainings: offers the list which could be considered during the tool launch and provides ideas on trainings.

Coaching & support: offers a list providing ideas on coaching and support system for the tool.

Follow-up: offers a list providing ideas on feedbacks and follow-up.

Based on my study I propose the following roll-out activities which are given in table 3.

Table 3. The proposed roll-out activities

Planning	Define all stakeholders.
	Do comprehensive survey in organization to collect the current pain points and development areas.
	Prepare a list of benefits of the new tool.
	Communicate “Why we need the new tool”, use collected pain point in current practice vs. benefits of the new tool.
	Justify the change in-line with company strategy and long term goals.
	If there are many similar tools, then define and describe the usage of each tool clearly.
	Estimate & allocate time & cost of learning the new tool.
	Plan piloting before actual launch.
	Plan trainings and training data in detail including different training methods e.g. F2F, on-line, e-learning, etc.
	Plan coaching & support system in detail.
	Reserve competent and eager resources to run the change.
	Plan to incorporate usage of new tool as one of the KPI for end-user.
	Define the mandatory scope of the tool.
	Prepare tool derivative and minimum requirement expected from the end-users.
	Define milestones to measure success of this change project.
	Prepare and store quick guides’ in common reachable placeholder.
Use common terminology and templates.	
Set-up the maintenance and development team to for supporting technical issues.	
Communication	Use previous experience in communication.
	Use all possible means of communication.
	Indicate clearly, what are you going to do, what will change, why we are doing this.
	Communicate throughout the change project.
	Keep it simple and short.

	<p>"Trade mark" the change project. The information receiver must see at the first glance that the message is about "The Change".</p> <p>Communicate the effort and allocated cost for learning.</p> <p>Communicate trainings, coaching, and support system.</p> <p>Communicate where to access the additional information and contacts.</p> <p>Be ready to answer all kind of questions connected to this change.</p> <p>Make sure all middle-managers have understood the message.</p> <p>Communicate the mandatory scope of the tool.</p> <p>Communicate the new KPI.</p> <p>Communicate pilot success stories.</p>
Launch & trainings	<p>Gather committed professionals for piloting.</p> <p>Define detailed test criteria's during piloting phase.</p> <p>Highlight success stories.</p> <p>Prepare test environment (sandbox environment) to practice and test.</p> <p>Trainings must be planned closed to the tool launch.</p> <p>Test environment should be provided to end-user after training to practice.</p> <p>Clear steps on 'How to proceed' should be provided to end-user.</p> <p>Management must prioritize and agree on time &amp; cost used for training and practicing the new tool.</p> <p>Managers must adapt to new tool to set an example. E.g. managers require information/reports generated from new tool.</p>
Coaching & support	<p>Team of coaches must support and understand the decision of this change and have positive attitude towards it.</p> <p>Coaches must be trained to provide answers/solutions to the end-user questions.</p> <p>Coaching and other support could be provided in local language, if applicable.</p> <p>Encourage local team members to be coaches/representative in their own team locally, if possible.</p>
Follow-up	<p>Regular pilot feedback collection, keep it in short intervals.</p> <p>Be ready for immediate adjustments based on pilot feedback and deploy immediate adjustments based on pilot feedback.</p> <p>Collecting feedback survey after each milestone.</p> <p>Compare the survey results after each milestone with previous ones.</p>

	Communicate the findings to encourage end-users.
	Collect regular feedback for coaching and support network.

## 6 Testing prototype

To fully test this guideline with new change project (such as: Introduction of certain new software tool), will require many months of planning and execution. In the current timeline it was not possible to find such a new change project. Thus to test the guideline, I proposed retrospective work using PMView tool roll-out. Two personnel were involved, a project manager and a senior manager, who were also involved in some other change projects. We together checked each step of the proposed guideline and evaluated if the step was performed or not. If the step was performed then what was the outcome and did it bring any value, positive or negative, to the change project.

### 6.1.1 Observations

The results were quite motivating. Questions raised with each step assisted us in finding the gaps in current practices. And also helped us recognize our achievements in smaller ways. Having a generic nonetheless comprehensive list made it much easier to define milestones of achievements and decisive points e.g. time for feedback.

### 6.1.2 Questionnaire

Following questions were asked from the participants, a project manager and the senior manager, who were directly involve in testing these prototype guidelines.

#### Discussion questions

1. Could these guidelines be used for communicating change?
2. If not, why not; explain the reasons and tell how to improve the guidelines, etc.
3. What is the best way to make people aware of the guidelines?

Both agreed that this guideline provides a good baseline when introducing a new tool. This can be used as it is or with few adjustments depending upon the nature of the tool and its usage. Participants also suggested few improvements to the proposed guideline. Thus the guideline is adjusted and final version is table 4:

Table 4. Guidelines for Roll-out activities.

Planning	Define all stakeholders.
	Do comprehensive survey in organization to collect the current pain points and development areas.
	Prepare a list of benefits of the new tool.
	Communicate "Why we need the new tool", use collected pain point in current practice Vs benefits of the new tool.
	Justify the change in-line with company strategy and long term goals.
	If there many similar tools, than define and describe the usage of each tool clearly.
	Estimate & allocate time & cost of learning the new tool.
	Plan piloting before actual launch.
	Plan trainings and training data in detail including different training methods e.g. F2F, on-line, e-learning, etc.
	Plan coaching & support system in detail.
	Reserve competent and eager resources to run the change.
	Plan to incorporate usage of new tool as one of the KPI for end-user.
	Define the mandatory scope of the tool.
	Prepare tool derivative and minimum requirement expected from the end-users.
	Define milestones to measure success of this change project.
	Prepare and store quick guides' in common reachable placeholder.
	Common terminology and templates must be used.
Set-up the maintenance and development team to for supporting technical issues.	
Communication	Use previous experience in communication.
	Use all possible means of communication.
	What are you going to do, what will change, why we are doing this?
	Communicate throughout the change project.
	Keep it simple and short.
	"Trade mark" the change project. The information receiver must see at the first glance that the message is about "The Change".
	Communicate the effort and allocated cost for learning.
	Communicate trainings, coaching, and support system.

	Communicate where to access the additional information and contacts.
	Be ready to answer all kind of questions connected to this change.
	Make sure all middle-managers have understood the message.
	Communicate the mandatory scope of the tool.
	Communicate the new KPI.
	Communicate pilot success stories.
	Communicate end-user certification.
Launch & trainings	Gather committed professionals for piloting.
	Define detailed test criteria's during piloting phase.
	Highlight success stories.
	Prepare test environment (sandbox environment) to practice and test.
	Trainings must be planned closed to the tool launch.
	Test environment should be provided to end-user after training to practice.
	Clear steps on 'How to proceed' should be provided to end-user.
	Management must prioritize and agree on time & cost used for training and practicing the new tool.
	Managers must adapt to new tool to set an example. E.g Require information/reports generated from new tool.
Certifying end-user.	
Coaching & support	Team of coaches must support and understand the decision of this change and have positive attitude towards it.
	Coaches must be trained to provide answers/solutions to the end-user questions.
	Coaching and other support could be provided in local language, if applicable.
	Encourage local team members to be coaches/representative in their own team locally, if possible.
Follow-up	Regular pilot feedback collection, keep it in short intervals.
	Be ready for immediate adjustments based on pilot feedback and deploy immediate adjustments based on pilot feedback.
	Collecting feedback survey after each milestone.
	Compare the survey results after each milestone with previous ones.
	Communicate the findings to encourage end-users.

	Collect regular feedback for coaching and support network.
	Collect penetration statistics and "feed" the facts back to the organisation.
	Acknowledge/award the successive units/users/trainers/coaches.

At this moment, we have comprehensive guidelines in place for 'introducing a new tool'; it was proposed that we store it in common teamer. Teamer is accessible by all employees of Tieto. This thesis has a limited scope of one unit, thus this guideline cannot be advertised Tieto-wide. However, individuals are free to use this data.

### 6.1.3 Conclusions

To conclude this chapter, I used the quote from Khalil Gibran

"No man can reveal to you nothing but that which already lies half-asleep in the dawning of your knowledge."

Khalil Gibran

As the above quote says no man can reveal anything new, I observed the same. During this testing, I realize that most individuals have quite good idea of how a change should be implemented. They have used several of those ideas during the implementations also; however a list of the combination of all those ideas is missing. Thus the guidelines provided by this thesis are filling that gap.

## 7 Conclusion of research

This chapter sums up the findings of the research and answers the research questions. It summarises the business problem and the current status. The research methodologies used in research are summarized in this chapter. The results of the research are discussed and how the proposed guidelines could be Implemented .This chapter also includes the validity and reliability section, which reflects on defined research standards vs. quality of this research.

## 7.1 Summary

The objective of my research is to provide guidelines which could be used in future when introducing the tools, and also to find the main cause of resistance to adapt the change. First, the findings of the initial interviews to access the current situation were discussed in chapter 3. Then a prototype guideline to avoid the resistance is proposed in chapter 5. That is followed by the testing of the guidelines and reaching to a conclusion if it can be used in future in chapter 6. Finally, in chapter 7 research questions are answered that were initially stated in Chapter 1.3. For this research qualitative method is used to collect all the data. The action research methodology used in this thesis.

### 7.1.1 Problem

In Tieto, a new tool PMView for project management was introduced to all project managers. However adaptation of this tool was not as promising as it was initially hoped. There was quite much resistance from project managers. Despite of loads of roll-out activities results were not good. Thus through this research I have tried to find answers to my questions. In the beginning three questions were defined:

- ➔ What are the main factors which are causing this resistance?
- ➔ What can be done to ease this resistance and bring the change as desired?
- ➔ What are the lessons learned in this process which can be beneficial in future?

### 7.1.2 Main findings

To approach this research I choose Contextual action research method. The simple cyclic approach of this method of plan->action->reflect->re-plan, was the best choice for this research. Another reason was that this research was done for real problem in real environment. I amended this cyclic approach for my thesis defining following steps (refer to figure 2):

First cycle:

Settings up research questions -> current statue analysis -> refine research questions.

Second cycle:

Refined research questions -> conceptual framework -> building prototype.

Third cycle:

Prototype -> testing prototype -> did it answer all research questions, if not -> re-setting the research question.

For this research qualitative data analysis method is used. Qualitative research helps find answers to the questions like 'what?', 'why?' and 'how?' During this research, data is collected by individual interviews and self-observations. Interviews were conducted in semi-structured way, series of open ended questions were asked to encourage interviewees to provide their own insight of the topic.

During my research I studied the much available literature on change management and tried to understand why individuals resist adapting. Also I tried to find a better way of managing change since current practices are not producing desirable results. During this research, I discovered several change models and chosen two of them to do deeper studies. I followed Lewin's Model and Kotter's Model. Both models provided much understanding of human behaviour towards change and how it can be done better.

The key point I learnt is how to "Make the change stick" (Kotter, 1996). Often change project start-up good with all right ingredient, however along the way the commitment drops down or shifted to someone else's shoulder. After the literature study, I discuss my findings with selected project managers and asked their opinions. I was amazed that most interviewees had quite much knowledge on the subject; although not very structured knowledge. Some individuals were able to discuss the topics at length, however quite resistant to adapt the new tool. Based on the above discussion and literature I proposed a set of guidelines. These guidelines could be used as a checklist when preparing for roll-out of new tool.

Another key point I learned is that "Why behind what" is very important for people to be willing to adapt a change. Often in communication, the emphasis is on 'what is going to be changed' than 'why we are doing the change or what benefits the change will bring over the current practices'. People need to have full management support to adapt any change. I also learnt during this research that even with all the right factors and right steps some individuals will resist till they are constrained in to adapting the change.

### 7.1.3 Results

The objective of the research was to identify factors which are causing resistance in using new tool and to provide a guideline for the future, which could be used when introducing new tool. The research process went as planned, the collection of data and existing theory research were combined to develop a guideline. The results of this research are successfully fulfilled. The key factors causing resistance were identified through the collected data during various interviews and discussions. After testing the guidelines prototype we produced the final version of guideline. In this process we were also able to gather the mismanaged issues from launching of PMView as lessons learned.

Following were the research question:

- ➔ What are the main factors which are causing this resistance?
  - Poor or missing information: 'Why do we need new tool'.
  - Lack of support from management.
- ➔ What can be done to ease this resistance and bring the change as desired?
  - By providing all needed information on 'Why', 'What', 'How' and repeated communication as long as it takes.
  - Management need to allocate cost and effort for learning.
  - Management must lead by example. Managers must adapt change and then require teams to adapt it too.
- ➔ What are the lessons learned in this process which can be beneficial in future?
  - Communicate the benefits of the change over current practices.
  - 100% commitment from the change team is required.
  - Middle managers must be convinced to make the change stick.
  - Regular surveys/feedbacks are needed.
  - Plan on how to provide time and cost for learning curve.
  - It is important to have successful roll out in the first time it is started. If failed the first time then repeated roll out/s would take much more extra effort.

## 7.2 Practical implications

The proposed guideline as a result of this research is proposed to be uploaded to the common Tieto share point. Share point is accessible by all employees of

Tieto. However, management has not approved this request yet. The scope of this research was limited to one unit, thus this guideline cannot be advertised Tieto-wide. However, if the guideline is uploaded to share point then individuals are free to use this data.

### 7.3 Evaluation

Validity and reliability must be addressed for action research. The accuracy, dependability, and credibility of the information depend on it. In quantitative research, reliability refers to the ability to replicate the results of a study. In qualitative research, there's no expectation of replication since research is focus on solving one specific issue and the results are not empirical and repeatable (Simon, 2011).

Egon Guba and Yvonna S.Lincoln (1994) explained the concept of reliability as a standard by which qualitative research can be categorized to the positivist or post-positivist paradigm. They mention that those working from a constructivist paradigm would prefer the concept "dependability." In a qualitative research reliability does not hold the same importance; for example it is possible that the respondents may provide different answers to the same question if they are interviewed more than once. Whereas, validity of the qualitative research implies that the study investigates what was intended to be investigated.

Triangulation of information among different sources of data, receiving feedback from participants (member checking) and expert review is most popular way to address validity and reliability, in qualitative studies. Member checking is the process of verifying information with the targeted group. Whereas, expert review is one of the primary evaluation strategies used in both formative and summative (Simon, 2011). Thus interviews transcripts are saved the same day as the interview took place describing date and interviewee's details.

Action research is about continuous process. Each cycle consist of four basic phases planning and executing, and evaluating the results. The results of one research cycle becomes the input for the next cycle and thus with each cycle researcher is one step

closer to the solution of the research problem. This research utilizes the cyclic model approach to achieve end results.

At the first phase, current status analysis was done by using qualitative method to collect the data for gaining the understanding for reasoning of the current state and to verify if the research questions were set correctly. The outcome of current state analysis was used in the next cycle as foundation to study relevant text from expert knowledge. And detailed literature study was done to address the issues to be solved. After the literature study relevant stakeholders were interviewed about the current practices used and their opinions about improvements. Finally, research was focused on developing a prototype guideline for future use. Next cycle of the research focused on testing the guidelines with one project. Relevant persons were asked how this prototype could be improved and if it could be used in future. The outcome of this cycle was a final version of guideline.

The interview discussions of all the interviewees were made by using the open method. To be able to gather similar data and to keep the conversation in perspective, the interview discussions followed similar structure and same open ended questions. The reliability of the interviews discussions was enhanced by having each session one-to-one to be able to record each interviewee's opinions without being biased. To ensure overall validity each interviewee was given equal amount of time to ponder and express his or her opinion on the subject. The researcher has several years' of experience in project management and people management. This competence was used to address the issues in this research. The literature part of the research focused on the change management. The data gathered and utilized was focused to research issue however industry independent.

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Planview

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PMBOK

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## Appendices

### Appendix 1: Interview transcripts for CSA

Data collected for current state analysis. Interviews conducted during the beginning of this thesis. Actual names have not been used due to privacy policies.

PM1            Title: Project manager

1. How do you work with project schedule?

- Excel is my main working tool

2. Are you aware of W2E Project management processes?

-Somewhat, but most of the time I copy from old project.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel, or most of the time I leave it to my assistant or project controller.

4. Are you aware of KPIs related to TPM?

-No, last I heard they were under discussion.

5. How do you Reserve people for your project?

-Assistant does it. I think it's done via TERP system.

6. Are you able to navigate in TERP easily?

-Hardly. We need to get rid of old TERP.

7. How do you prepare reports for (I) SG?

- Excel mostly or sometimes power point slides.

8. How do you prepare report to DE?

-Same as above.

9. How do you create forecast?

-Excel

10. Have you received PMView training (Basic & financial)?

- No

11. If not used then reason why you have not been able to use PMView so far?

- I do not have any project which could move to PMView and I heard that it may be replaced by an easier version. So I do not want to use.

PM2 Title: Project manager

1. How do you work with project schedule?

-Excel, is there anything better ☺

2. Are you aware of W2E Project management processes?

-Yes. But I do not use it actively.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel

4. Are you aware of KPIs related to TPM?

-Yes, somewhat.

5. How do you Reserve people for your project?

-TERP is the only way.

6. Are you able to navigate in TERP easily?

-No, it is quite complex tool.

7. How do you prepare reports for (I) SG?

-All reports are created in Excel

8. How do you prepare report to DE?

-N/A

9. How do you create forecast?

-Manually in Excel. It is a real pain-point, since I have number of small projects.

10. Have you received PMView training (Basic & financial)?

-Yes, I think it was basic.

11. If not used then reason why you have not been able to use PMView so far?

-I am not sure if my project qualifies for PMView.

PM3 Title: Project manager

1. How do you work with project schedule?

-Flipchart, Notebook, Excel, Pivotal tracker.

2. Are you aware of W2E Project management processes?

-Yes, I have used some templates.

3. How do you compare budgets (cost vs. actual vs. forecast)?

4. Are you aware of KPIs related to TPM?

-Yes.

5. How do you Reserve people for your project?

-Via TERP

6. Are you able to navigate in TERP easily?

-Absolute pain. Staffing working brings the worst in me.

7. How do you prepare reports for (I) SG?

-Word, Excel, Power point, Sometimes customers want to see their own template.

8. How do you prepare report to DE?

-Depending on Audience

9. How do you create forecast?

-Excel mostly

10. Have you received PMView training (Basic & financial)?

-My manager asked me to. So yes I've attended both trainings.

11. If not used then reason why you have not been able to use PMView so far?

-No comments.

PM4 Title: Project manager

1. How do you work with project schedule?

-MS Project and Excel

2. Are you aware of W2E Project management processes?

-Yes. Often, I've used it.

3. How do you compare budgets (cost vs. actual vs. forecast)?

- MS Project is quite good

4. Are you aware of KPIs related to TPM?

-Yes

5. How do you Reserve people for your project?

-I have used TERP, recently tried PMView also. Although, finding right people is a pain-point.

6. Are you able to navigate in TERP easily?

-I've worked quite long in Tieto; I am quite familiar with common path.

7. How do you prepare reports for (I) SG?

-Power point

8. How do you prepare report to DE?

-Power point

9. How do you create forecast?

-MS Project

10. Have you received PMView training (Basic & financial)?

-Yes, very recently.

11. If not used then reason why you have not been able to use PMView so far?

-We have two projects inside one code. Perhaps, in my next project.

PM5 Title: Project manager

1. How do you work with project schedule?

-More excel. And MS Word, PowerPoint

2. Are you aware of W2E Project management processes?

-Yes.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel

4. Are you aware of KPIs related to TPM?

-Yes

5. How do you Reserve people for your project?

-TERP PRM

6. Are you able to navigate in TERP easily?

-Yes. I have used TERP several years.

7. How do you prepare reports for (I) SG?

-Via Tieto facts

8. How do you prepare report to DE?

-Same as above

9. How do you create forecast?

-Excel

10. Have you received PMView training (Basic & financial)?

-Yes.

11. If not used then reason why you have not been able to use PMView so far?

-I am using PMView from one of my project already.

PM6 Title: Senior Project manager

1. How do you work with project schedule?

-MS Project and Excel, however work estimation is a pain-point.

2. Are you aware of W2E Project management processes?

-I hope I am

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel

4. Are you aware of KPIs related to TPM?

-Yes

5. How do you Reserve people for your project?

-Via TERP

6. Are you able to navigate in TERP easily?

-No

7. How do you prepare reports for (I) SG?

-TERP, Excel, Tieto facts and customer has their own templates

8. How do you prepare report to DE?

- Same as above

9. How do you create forecast?

-Excel

10. Have you received PMView training (Basic & financial)?

-Only basic

11. If not used then reason why you have not been able to use PMView so far?

-Mainly lack of time, but also I have not been sure if it can be used in a project which was created using TERP PM. It has been decided to create a new project for the next phases of the project.

PM7 Title: Project manager

1. How do you work with project schedule?

-MS Project Server 2010 and other detailed plans made by excel. An official one is on server

2. Are you aware of W2E Project management processes?

-yes

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Same tool which is used from beginning.

4. Are you aware of KPIs related to TPM?

-Yes. But couldn't be part of Tieto Project management as much as would have been necessary. So, the utilization of KPIs must & could be better.

5. How do you Reserve people for your project?

-TERP

6. Are you able to navigate in TERP easily?

-Just ok.

7. How do you prepare reports for (I) SG?

-MS Project Server, Excel and Power point.

8. How do you prepare report to DE?

-MS Project Server, Excel and Power point.

9. How do you create forecast?

-In the same tool which is used from beginning.

10. Have you received PMView training (Basic & financial)?

-One two days training. Everything was combined to that training. More needed, with time and full concentration (not project work at the same time.) Is there more trainings where to participate?

11. If not used then reason why you have not been able to use PMView so far?

This is such a big project that we didn't start to use PMView for this during the last phase. The project is ending – it's not meaningful to start with PMView. And we are use MS Project Server for the project; it is fully overlapping system – duplicate usage by two project management tool not meaningful.

PM8 Title: Project manager

1. How do you work with project schedule?

-MS project, excel, TERP

2. Are you aware of W2E Project management processes?

-Yes

3. How do you compare budgets (cost vs. actual vs. forecast)?

- MS project, excel

4. Are you aware of KPIs related to TPM?

-Yes, mostly.

5. How do you Reserve people for your project?

-TERP

6. Are you able to navigate in TERP easily?

-No, not so far.

7. How do you prepare reports for (I) SG?

-Power point. We don't have unified templates but I assume that they are in process.

8. How do you prepare report to DE?

9. How do you create forecast?

10. Have you received PMView training (Basic & financial)?

-No

11. If not used then reason why you have not been able to use PMView so far?

-No time.

PM9 Title: Project manager

1. How do you work with project schedule?

-Excel

2. Are you aware of W2E Project management processes?

-Yes. We are using it.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel.

4. Are you aware of KPIs related to TPM?

-

5. How do you Reserve people for your project?

-I have used TERP PRM couple of times.

6. Are you able to navigate in TERP easily?

- Not easily, but with the help of colleagues.

7. How do you prepare reports for (I) SG?

- Project reporting in in ppt.

8. How do you prepare report to DE?

- Project reporting in in ppt.

9. How do you create forecast?

-Excel

10. Have you received PMView training (Basic & financial)?

-Yes.

11. If not used then reason why you have not been able to use PMView so far?

-I have used pm view to create tasks, report hours, input estimates. My current project is ending soon and we decided not to use actively PMView in my project. In new projects I have no reason not to use PMView. The changes keep coming from inside Tieto. We got our definitions from TIPS team and the definitions keep on changing.

PM10 Title: Senior Project manager

1. How do you work with project schedule?

-MS Project and MS Excel.

2. Are you aware of W2E Project management processes?

-Yes, I have used some templates also.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Mostly Excel, it is not very fancy way. I am waiting to see if PMView could help in that area.

4. Are you aware of KPIs related to TPM?

-At least some of them.

5. How do you Reserve people for your project?

- TERP, that is the only way.

6. Are you able to navigate in TERP easily?

-Yes, I have used it for over 14 years.

7. How do you prepare reports for (I) SG?

-Tieto facts and Excel or the customer templates. There is no common format.

8. How do you prepare report to DE?

-Same

9. How do you create forecast?

-MS Project or Excel

10. Have you received PMView training (Basic & financial)?

-Yes

11. If not used then reason why you have not been able to use PMView so far?

-Yes, I am using it actively. Finally we have a good PM tool.

PM11 Title: Project manager

1. How do you work with project schedule?

- I don't need to plan much. We use excel to follow development cases and customer's development issue tool.

2. Are you aware of W2E Project management processes?

-Some-what, we don't use it much in our projects.

3. How do you compare budgets (cost vs. actual vs. forecast)?

- I'm more technical PM and I leave financial issue to Delivery manager.

4. Are you aware of KPIs related to TPM?

-

5. How do you Reserve people for your project?

-I have not done much, but mainly TERP. Still this remains a pain-point.

6. Are you able to navigate in TERP easily?

-No, it is a mess.

7. How do you prepare reports for (I) SG?

- We don't create reports. Only detail level time entries per month to customer use (done by Excel)

8. How do you prepare report to DE?

-N/A

9. How do you create forecast?

- I'm more technical PM and I leave financial issue to Delivery manager.

10. Have you received PMView training (Basic & financial)?

-Yes, basic.

11. If not used then reason why you have not been able to use PMView so far?

-I have experimented with PMView with one of my projects. Many open bugs.

PM12 Title: Senior Project manager

1. How do you work with project schedule?

- At sale phase, excel

2. Are you aware of W2E Project management processes?

-Yes

3. How do you compare budgets (cost vs. actual vs. forecast)?

-

4. Are you aware of KPIs related to TPM?

-Yes, almost.

5. How do you Reserve people for your project?

- Project assistant does it for me.

6. Are you able to navigate in TERP easily?

-Nope.

7. How do you prepare reports for (I) SG?

-N/A

8. How do you prepare report to DE?

-N/A

9. How do you create forecast?

-Excel mostly.

10. Have you received PMView training (Basic & financial)?

-Yes

11. If not used then reason why you have not been able to use PMView so far?

-No, I have just tried to use with my colleague for his project.

PM13 Title: Project manager

1. How do you work with project schedule?

- TERP, Excel, Word

2. Are you aware of W2E Project management processes?

-Yes, but never used it.

3. How do you compare budgets (cost vs. actual vs. forecast)?

- In previous department there was a special application for making forecasts & comparing.

4. Are you aware of KPIs related to TPM?

-Barely

5. How do you Reserve people for your project?

-Rarely

6. Are you able to navigate in TERP easily?

-Not comfortable.

7. How do you prepare reports for (I) SG?

-TERP, Excel, Word, MyInvoices.

8. How do you prepare report to DE?

-TERP, Excel, Word, MyInvoices.

9. How do you create forecast?

- In previous department there was a special application for making forecasts & comparing.

10. Have you received PMView training (Basic & financial)?

-Yes

11. If not used then reason why you have not been able to use PMView so far?

-Still there are too many tools that have to be used. (MyInvoices, MyProjects, TERP, PMView...) The realized project figures have to be found from MyInvoices and in some cases in TERP. It is hard to know which one.

PM14 Title: Project manager

1. How do you work with project schedule?

- MS Project and Excel

2. Are you aware of W2E Project management processes?

-Yes, I have received trainings. I have never done any project which is done with W2E processes or with Tieto processes.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel

4. Are you aware of KPIs related to TPM?

-No

5. How do you Reserve people for your project?

-Using only customer project management tools

6. Are you able to navigate in TERP easily?

-Well, I have seen more user friendly tools than TERP

7. How do you prepare reports for (I) SG?

-Mostly customer template.

8. How do you prepare report to DE?

-N/A

9. How do you create forecast?

- MS Project Excel

10. Have you received PMView training (Basic & financial)?

-Yes.

11. If not used then reason why you have not been able to use PMView so far?

-Customer processes are much easier to work with.

PM15 Title: Project manager

1. How do you work with project schedule?

-I use MS Project for WBS.

2. Are you aware of W2E Project management processes?

-Yes.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-I have different kinds of excels for following up on budgets and realisation figures.

4. Are you aware of KPIs related to TPM?

-Yes. NMD, CSS results and offshore rate comes to mind first.

5. How do you Reserve people for your project?

- TERP PRM UI is difficult and at times annoying to use. I've tried out PMView's resource allocation and I'm eager to use it more and get a good routine on it.

6. Are you able to navigate in TERP easily?

- There are certain things that I have used often and those I find without problems. For some rarely used parts I have a personal step-by-step notes that I refer to when needed. So in short, the answer is no, navigating is not easy.

7. How do you prepare reports for (I) SG?

-MyProjects and Excel

8. How do you prepare report to DE?

-Same as above

9. How do you create forecast?

-I have my own Excels.

10. Have you received PMView training (Basic & financial)?

- Yes.

11. If not used then reason why you have not been able to use PMView so far?

- Full blown daily use has been limited because I'm in a transition phase where older projects are being closed.

PM16 Title: Project manager

1. How do you work with project schedule?

-Excel

2. Are you aware of W2E Project management processes?

Yes, I have used many templates.

3. How do you compare budgets (cost vs. actual vs. forecast)?

-Excel

4. Are you aware of KPIs related to TPM?

-Not really.

5. How do you Reserve people for your project?

-

6. Are you able to navigate in TERP easily?

- Very confusing.

7. How do you prepare reports for (I) SG?

- Power point or customer template.

8. How do you prepare report to DE?

- Power point or customer template.

9. How do you create forecast?

-

10. Have you received PMView training (Basic & financial)?

-No

11. If not used then reason why you have not been able to use PMView so far?

-I have not gone for training due to the lack of time.

## Appendix 2: Interview transcripts

Interviews transcripts collected before preparing guideline prototype.

10 project managers were interviewed during this process. Actual names have not been used due to privacy policies. For many interviewees the questions were combined to get their view point.

Date: 20.11.2013

PM1

Title: Senior Project manager

1. How did you first hear about the PMView tool?

-From Tieto Intranet, I regularly follow-up the internal news.

2. Has your manager or team members discussed about new tool for project management?

-No, my team leader was against this tool thus no information was given or discussed rather discouraged. We were asked to use other tools; since PMView is just a temporary tool.

3. Was it clear 'What was expected of you'?

-It was somewhat clear what was expected, however trainings were not so clear. No information was given who to contact and how to proceed. Response rate was too slow and error rumours were too many.

4. Were you aware of 'why' this new tool was needed?

- Perhaps, since TERP needed to be replaced (?) anyhow the benefits of this tool were missing.

5. What kind of support you expect from tool team?

-Coaching must continue, online/instant help is better than waiting for an reply from support team.

6. What could have been done better in introducing this tool? Or in future..

- Benefits must be provided for any new tool.

There are still too many official tools to choose, tool must be made mandatory. Also if one does not do practice after training the gained knowledge goes away.

Date: 21.11.2013                      Name: PM2   Title: Senior project manager

1.    PMView in your view.
  - Involvement in PMView project was from the beginning. Tool is very promising and brings much value in project management work. Good committed team was working to customize this tool for Tieto needs. Much effort was put in to bring to a tool which can fulfil the needs of varied projects.
2.    Important aspect of change project such as PMView...
  - Be committed (not surprise - right?). Nothing happens if top-management is not committed to this change. And the change has to be "sold" to all management layers before starting.

Define all stakeholders. Do not introduce new tools/practises before asking what the stakeholders need (for example: we had a pretty comprehensive survey in PM community to collect the current pain points and development areas). There are basically two reasons to do this:

- Survey results are part of the new tool selection criteria,
- As user will complain no matter what you do, you are at least able to re-visit the survey results every now and then to justify the new tool/practice.

Estimate and reserve the needed resources and be prepared that the change has (major) impact the costs and revenue. You have to reserve competent and eager resources to run the change. Do not let this change to be just "another internal project". Estimate and reserve your own workload as well, you are a key resource in this change and part of the change! (This is kind of commitment thing as well)

Define the measures connected to this change, measure the current situation and set targets: let's say "what do we expect these measures to show after a year of the implementation"

### 3. Role of communication...

- Communication... To my mind the communication organisation wide needs to be started as soon as possible: What are you going to do, what will change, why we are doing this, how this change aligns with company strategy...

Find the right channels to reach all stakeholders. No matter what channel you use I think that the challenge is to make sure your message is understood (in the right way). And communication needs to continue throughout the change process

Another challenge is to keep the communication on optimum level (too much is too much in communication as well).

### 4. Other viewpoints in change project...

100% commitment! Managers are the guys who sell the change in the organization. Be prepared to answer all kind of questions connected to this change. One way of supporting could be transparent follow-up on all levels (ref. PMView: follow-up is basically is a constant struggling :-()) I somehow feel that even though the commitment is there in the beginning, the manager tend to lose or even "delegate" it during the change process: "you do it, I am committed". To me commitment is doing and you cannot delegate it. Another gut feeling is that managers buy the complaints too easy- this might be one reason for losing the commitment: you have to stand behind the change. Change must always be justified by a larger frame: we do not do changes just for fun but there is always something bigger behind (company strategy, company targets, cost cutting...etc.)

Date: 20.11.2013

Name: PM3 Title: Project manager

1. How did you first hear about the PMView tool?

-From the Tieto intranet. I read it regularly.

2. Has your manager or team members discussed about new tool for project management?

- Yes. Our group is consists of program and project managers, the tool was often much a part of discussions.

3. Did you receive sufficient information regarding new tool?

- Yes and No. Constant and consistent communication creates a sense of urgency in the organization. People start to discuss about it. They understand that management is helping and following up on the changed practices. They understand the bigger picture. In this case, plan was good, but implementation lacked consistency.

4. Was it clear 'What was expected of you'?

-Yes. It was mostly clear that we need to switch using the new tools. However, now there are quite many ways by which the projects can be handled. PMView is just one of them. When to use what tool is not so strictly enforced.

5. What kind of support you expect from tool team or the management?

- Evaluation – Efforts vs. advantage. E.g. Time for learning curve. Usability of the tool.

Communication – Making sure that people who are affected this tool, understand the limitation of current tool and practices. Without this they cannot appreciate the benefit of the new process/tool.

Support – Ensure that the support network for the new tool/process is in place with sufficient knowledge.

Perhaps management should themselves start to use the tool if applicable, and then enforce the use of the tool within the organization.

6. What could have been done better in introducing this tool?

- Consistent use of new terminology. Support for training and learning the new tools. Some test environments, if it is related to tool. For example for PMView there is no such test environment to play around.

7. Have you participated in the training and coaching PMView offered?

- This year beginning. Earlier I was working for customer project and following their processes, so far I have not use PMView. Perhaps sometime in future.

Date: 21.11.2013

PM4

Title: Project Manager

1. How did you first hear about the PMView tool?

-From the monthly carousel.

2. Has your manager or team members discussed about new tool for project management?

Yes, it was. Since I was then in other Tieto unit and in a project were using in that unit specific tool was integrated to TERP. We were hoping that PMView tool will be for whole company.

3. Was it clear 'What was expected of you'?

-Information was available, however when to use the tool was missing.

4. What could have been done better in introducing this tool? Support from the team or management.

- Permission to attend the needed trainings and info sessions and support from management, else the team will not be willing to adopt the way or tool.

Communication form management is very important. It is important to make clear to all that this is the practice/tool that will be used and that the management is standing behind it. If the communication comes only form the roll-out project level, there is often a feeling that it is not so important to take the practice in use. But when to message comes from "higher" management, it has more power. And all important messages need to be repeated regularly during the roll-out and also after it.

Planning was quite good for PMView for the needed training, overall communication, piloting, but I suppose monitoring was not that strong and have the results from that and the spokesmen found and trained.

5. Have you participated in the training and coaching PMView offered?

- Yes, very recently. Training is too long. Coaching is better. I am using PMView tool for my current project.

Date: 22.11.2013                      PM5                      Title: Project Manager

1. How did you first hear about the PMView tool?
  - My colleague was mentioning some PM tool, so I checked it.
2. Did you receive sufficient information regarding new tool?
3. Was it clear 'What was expected of you'?
4. Were you aware of 'why' this new tool was needed?

(Above 3 questions were combined during discussion)

- No, not everything was so black-n-white. Ideally management should inform new users, not only via email or intra what will happen, when and why and the benefits for the users. Many times today PM's feels that a lot of changes/implementations are made for a very few persons in top management but it requires a lot of effort from each and every PM. They don't see the benefits only more admin work. That management find out the benefits of new way of working so they also know and what they can get out/require from it. Support the decision that has been made of new way of working and have a positive attitude about it. Be active, interested and supportive both to the users but also to those who are in charge for implementation. Sometimes we as coaches and trainers and, I guess PM and others need to defend the new way of working that should already been cleared out before introductions.

Questions like: Why should I use this, Why have they done- we are not the once to answer those questions (even though they will always be raised of course!) must be answered.

5. What could have been done better in introducing this tool? Or what is the better way?
  - Have regular follow-up meetings during the road to collect questions from users so they show they support this new way of working. Also support the decision that has been made of new way of working and have a positive attitude about it. Be active, interested and supportive both to the users but also to those

who are in charge for implementation. Listen to the users what kind of problems they have and try to answer/solve the problem as soon as possible.

Don't know if this can be called support but one thing is that management start to require information/reports that easy can be picked out from the new tool or according to new practice so they also change the way of working. New way of working takes time and management need to let users have that time to learn new tool

6. Have you participated in the training and coaching PMView offered?

-Yes, training given was good. Coaching is also useful. I have used PMView for one of my project; other projects are managed in different tools. It would be nice for users to have training/information and support in native language.

Date: 22.11.2013                      PM6                      Title: Project manager

1.     How did you first hear about the PMView tool?

-From a colleague who was participated in PMView pilot test.

2.     Has your manager or team members discussed about new tool for project management?

-It was discussed many times since unresolved errors made it impossible to adapt this tool.

3.     Did you receive sufficient information regarding new tool?

4.     Was it clear 'What was expected of you'?

5.     Were you aware of 'why' this new tool was needed?

(Above 3 questions were combined)

-Yes and no. Fancy language and dictionary words may look good in a sentence but not for everyone. English is not my mother tongue, sometimes after translation it is hard to understand what is communicated. It would be nice to have simple instructions.

6.     What could have been done better in introducing this tool?

-I do not want to comment on that.

7.     Have you participated in the training and coaching PMView offered?

-I received training many months ago; now I have the opportunity to use PMView, but hardly remember anything. Training & usage must be in-line, too much gap does not produce good results. Coaching should be must with all new tools. No one has time to sit and first find and then read loads of document and still be confused.

Date: 22.11.2013

PM7

Title: Project manager

15. How did you first hear about the PMView tool?

-I heard it in one of the courses I attended. It was 'Estimation technique seminar'.

16. Were you aware of 'why' this new tool was needed?

-No, it was in fact more confusing, since there are many other tools were introduced to handle project management.

17. What role management should have played?

-Management must clearly define 'when to use what' and quit imagining that people will read 100 of mails with different explanations. Benefits of each tool must be clearly defined so user can do their work rather than waste time in re-doing the work because of poor choices.

18. What kind of support you expect from tool team?

-Trainings are good, but learning must be supported. No one can become expert in a day or two.

19. Did you receive any survey from PMView team? Did you provide feedback?

-Yes, I have filled many surveys, however now always you get to know the results. Have they even published the results anywhere? Communication, one way does not bring any results. The companies who realize this are more successful.

Date: 25.11.2013

PM8

Title: Project Manager/Controller

1. How did you first hear about the PMView tool?
  - From my manager, thus we were able to discuss it quite a lot. TERP does not provide enough support for project managers. We did need a complete tool set.
2. Did you receive sufficient information regarding new tool?
  - Not so much, tool is very complicated. There is too much documentation but still information is missing.
3. Were you aware of 'why' this new tool was needed?
  - Very important aspect was missing- the benefits of the tool.
4. What could have been done better in introducing this tool? Or in future..
  - Planning was good, but realization of PMView was poor. There was no pressure from management to use this tool, so everyone was free to use what they wanted.

Benefits should be told to from the beginning to clear up "Why". Thorough testing must be done to before launching, it not good to launch buggy tool. It declines the enthusiasm.

Define the clear process on how to proceed. Provide test environment/sandbox to trainees, it is important to practice the tool to gain some experience.

Date: 26.11.2013

PM9

Title: Project manager

1. How did you first hear about the PMView tool?

- From carousel – making life easier for PM

2. Were you aware of 'why' this new tool was needed?

-Because we have no common tool and TERP needed to be replaced by easier version. No sure if, there any plans to finally get rid of TERP or new tools on top of TERP (?)

3. Has your manager or team members discussed about new tool for project management? If not, why not?

-Yes, it was mentioned in our team meeting in the list of new tools. There was not much information thus it was not very useful/insightful info.

4. What role management should have played?

-Communication is most important; management must be informed in depth to answer the team's questions. My manager was not even sure why we needed this new tool. It should be other way around.

5. Did you receive sufficient information regarding new tool?

-Not quite, there was no benefit list available. It was hard to justify spending time in learning this tool.

6. Was it clear 'What was expected of you'?

-Yes, I took regular help from coaching, so it was easy to start using the tool.

7. Were you aware of the trainings and coaching PMView offered?

-Yes, I have participated in the training and used the coaching facilities quite often.

8. Do you know where to find more information on PMView tool?

-I normally just approach the coach of the day to save my time.

9. What kind of support you expect from tool team?

-Provide benefits of the tool in one page. Also it was mentioned not all project needed to use PMView but I receive two different answers for my project. Different tool teams must discuss with each other and defined clear criteria for project managers.

10. In your opinion does this tool bring any value to you or your team?

-Yes, if it is used properly in all Tieto units including management, then it could bring much value and we would be able to extend it to our customers also.

11. Did you receive any survey from PMView team? Did you provide feedback?

-I have filled 2 surveys so far for tools. I do not remember if I have seen any results. I have given my suggestions to the coaches.

12. Was your participation in PMView training voluntary or forced?

-None, I went to the course because I had some free time.

13. Were you satisfied with the training and coaching?

-Yes, it was quite satisfactory. Some open questions still remained unanswered though.

14. Are you now able and willing to utilise the new tool?

-Yes, I am able to use this tool and promoting it to my colleagues too. This tool has many good points and areas like budgeting, estimation and resource management really makes life easier.

Date: 26.11.2013                      PM10                      Title: Project Manager/Architect

1.     How did you first hear about the PMView tool?

- From Tieto academy I found the course then I checked more details from Intranet pages.

2.     Were you aware of 'why' this new tool was needed?

-Yes, it was quite clear, we had many different PM tools and its about time to have one common.

3.     Has your manager or team members discussed about new tool for project management? If not, why not?

-Not in the beginning. But once projects were found in error log then PMView was the hot topic.

4.     What role management should have played?

-Lots of things are not as they are supposed to be. People eventually adjust or thrown out.

5.     Did you receive sufficient information regarding new tool?

6.     Was it clear 'What was expected of you'?

7.     Were you aware of the trainings and coaching PMView offered?

8.     Do you know where to find more information on PMView tool?

(Above questions were combined)

-Yes, during the training most questions were answered.

9.     What could have been done better in introducing this tool?

- Read the John Kotter's book on bringing change.

10.    Are you now able and willing to utilise the new tool?

-Yes, tool, with all its errors, seems to be quite good. Hope the suggestions given for improvement will be considered to ensure better results.