Case study summary report

New ways of working

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Abstract

The Introduction chapter of the Case Study Summary report presents shortly the history of the Alternative work development also called New Ways of Working a.k.a NewWoW. The effect of enablers usually classified as Technological, Physical and Social are in the main focus.

Objectives are 1) perform three complementary approaches of enablers, concept and future of the organization using the same consultative process to engage work practices 2) find quantitative information of the aspects (what?) of the work environment affecting to personal life using a survey 3) find out qualitative information of "*How aspects of the social environment enhance or disrupt Knowledge Work – on individual, team, organizational, societal levels. Why*?" using focus group discussions in the same three organizations.

The first part of the report is describing the companies (VTT, Granlund and ISS) change plans and the target setting. The Optimaze engagement methodology and the results are described for the three organizations cases. The key work practices in three organizations have remarkable similarities: the need for communication, coordination, sharing, being with customers/partners/colleagues etc.

The second part describes a survey of totally 255 persons in three organizations addressing question *"What factors of the social environment enhance or disrupt Knowledge Work?"*. The SPSS™ statistical program was used to analyse the survey data. The differences between the Granlund, ISS and VTT in survey response patterns reflected mainly the fact that they are different type of organizations.

The third part describes the preparation, execution and the data analysis of the Focus group interviews. The transcripts were content coded both manually and by Atlas.ti, a software package for qualitative data analysis. The overall impression from the group discussion is that that most of the participants cared deeply about are issues that personally affect them or their close colleagues. The drivers for Job Crafting arise from three personal needs. Firstly to exert some control over the job to avoid alienation, secondly to build a positive self-image, and thirdly to connect with others. The three aforementioned needs echo the basic psychological needs of Self-Determination Theory: namely Autonomy, Competence and Relatedness.

Keywords   new ways of working, knowledge work, case study, engagement, downshifting

Preface

This report is a part of NewWoW project (2011–2014) as a work package in the Pre Engineering Research Program funded by RYM SHOK. Research program creates the means how the Real Estate and Construction cluster can serve as a new enabler of other industries' growth and development by bringing solutions to manage, support and speed up the change all industries are facing.

The goal of NewWoW research is the creation of concepts, implementation management models, and key metrics for high-performance and sustainable new ways of working.

Industry partners of the NewWoW project are Rapal Oy (project leader), Granlund Oy, ISS Palvelut Oy and Senate Properties.

The research partners are VTT Technical Research Centre of Finland and Tampere University of Technology (TUT).

The Case studies of this report was done in three organizations: VTT, ISS and Granlund. In this report the work as subcontractor and writing to Chapter 2 and mainly Chapter 3 was done by Co3 at the time of the work. The current name, Optimaze Inc., is used in this report. The word "Optimaze" in this report always refers to Optimaze Inc.

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1. Introduction

During the past 10 years Alternative Work programs also known as "New Ways of Working" a.k.a. NewWoW programs have been introduced in several Finnish knowledge work organizations. Partly as a follow-up to the global trend (or more precisely North American and British implementations of NewWoW) and partly as a reaction to mandates from funding agencies (especially in public organizations), large knowledge firms in Finland have to some extent implemented or are planning to introduce some form of alternative work programs. Although the health and wellbeing of employees have been partly hailed as motivations to update HR, CRE, and IT policy, it is widely acknowledged that NewWoW programs are expected to deliver results that are reflected in an organization's bottom line, namely lower costs and increased productivity.

In a recent benchmarking survey (NewWOW 2013), CRE cost was downgraded to 5th amongst the corporate motivations for adopting NewWoW programs. The current leading drivers in order of perceived importance, among the majority of participating US firms, are claimed to be 1) employee attraction and retention, 2) employee work-life balance, 3) employee satisfaction and 4) employee productivity. Nevertheless despite the shifting trends and irrespective of the motivations for adoption, an emphasis on measurement still pervades such programs. Calculations of profits and costs is aimed to be applied already in trial phases in order to provide management with data to confidently decide whether and which part to scale and diffuse across the organization. Yet not all aspects of knowledge work can be measured and this fact along with other aspects of organizational and social life such as trust, motivation, fulfilment, may contribute to a dissatisfaction with NewWoW programs and their failure to fulfill promises both to the organization and to employees and by extension to Society at large.

It is perhaps for the reason that social and psychological matters may be quantifiable only to a certain extent, that research on the effects of social enablers for NewWoW has been limited. Enablers are ways, methods, tools or practices through which the objectives of a NewWoW program can be reached. Enablers are typically classified as Technological (e.g. internet-enabled laptops or tablets for remote or even mobile work), Physical (e.g. open offices encourage interaction) and Social (e.g. coffee breaks contribute to a sense of community). Another less published aspect of NewWoW implementation is related to hindrances or disablers which can be grouped under the same categories, i.e. Technological,

Physical and Social. Nevertheless on both counts of Enablers and Disablers, often Technological and Physical categories receive the most attention both in academic literature and in practitioner discussions. The Social kind remain a "black Pandora's box", an obscure and complex system which processes inputs and outputs that dynamically morph as a response to the peculiarities of human behaviour and contextual factors.

The NewWoW project's first task was a state-of-the-art report (Aaltonen et al., 2012) including a section about knowledge work environment (distributed work, contextual workspace design, benchmarking) and a section about developing new ways of working (management, impacts, productivity).

In our (Aaltonen et al., 2012) literature review of NewWoW in Knowledge Work for the Tekes-funded program for Built Environment Innovations RYM, we located very few peer-reviewed empirical investigations or theoretical attempts at demystifying Social Enabler or Disablers of NewWoW. Harrison et al. (2004) emphasise the growing importance of the social aspect of the workplace whereby the office becomes a means to express culture and reinforce organizational values. Vartiainen (2009) includes not only the social context but also the social network in his definition of "social space". Furthermore Vartiainen et al. (2007) add a fourth dimension to the workplace besides the physical, social, and virtual (technological), namely a mental space which includes feelings and thoughts making up each individual's personal space through which others' spaces are perceived and interpreted. At this point it is worth noting the influence of others on one's space. Scholars within the Social Network Analysis tradition address communication and influence patterns (Christakis & Fowler, 2011) which can be applied in workplaces in order to predict or even attempt to social engineer behaviour, e.g. swarming for innovations (Gloor, 2006, 2011).

2. Objectives

The three pilots research consists of three complementary parts. The first part is based on the results of the application of the Optimaze's methodology. The objectives for the three pilots differed in terms of extent of full implementation according to Optimaze methodology. In this way, VTT provided the fullest implementation (actual **enablers** implementation), followed by the ISS (pilot **concept** development to a schematic level), and Olof Granlund (**future** pilot schematic at high level). Optimaze Methodology and Process consist of mechanisms to engage the organization in a process to co-develop a future work environment (social, technological and physical enablers that work systemically) to support work practices.

The second part of the study is a social enablers -questionnaire distributed to the three organizations. The objective was to find out quantitative information of what aspects of the work environment affecting to personal life and aspects or practices of team work or company policy or national policy to enhance or disrupt own work.

The third part consists of focus group interviews the aim of which was to answer why- and how-questions.

The aim was to answer to the following questions of the NewWoW project plan:

Q1. What are the work requirements that are based on business success factors and key performance indicators?

Engagement methodology deploys data collection and workshops to solicit work practices as the fundamental activities that need to be supported by the new work environment.

Q2. How do the ways of working and workplace arrangements affect productivity positively/negatively?

Q3. How can work requirements be turned into strategic guidelines?

The key work practices are the foundation for developing the guidelines for designing an organization's overall work environment comprised of an integrated set of social, technological, and physical enablers. Thus, "strategic guidelines" first apply to the work practices that a workforce needs to adopt to successfully achieve the organization's desired outcomes. The first and

perhaps most important outcome are guidelines that describe the key work practices that managers, teams and individuals need to adopt.

"Strategic guidelines" apply also to the design of the environment that will support the key work practices

Q4. How can the required change be managed and maintained?

Q8: What factors of social environment enhance or disrupt knowledge work?

- on individual level
- on team level
- on organizational level.

The Social enablers study is guiding research questions behind the survey. As the survey was planned, also generated some specific guiding questions addressing each level:

- *Are there aspects of your work environment which affect your personal life?*
- *What aspects of team work enhance or disrupt your own work?*
- *What company policies or practices enhance or disrupt your own work?*
- *What national policies or practices enhance or disrupt your own work?*

The guiding Research Question (RQ) behind the focus group interviews was adapted from that of the survey. While in the survey we were interested to know "What?", in the focus groups we sought for the "How?" and the "Why?".

The aim was also to accomplish the following goals:

Goal S1. To develop methods for the definition of work requirements and work profiles.

Optimaze methodology involves employee workshops to identify work practices that ideally accomplish business goals. Data collection of various kinds, including surveys, allow for identification of various patterns of work (patterns of collaboration, ways in which individual work is accomplished, and patterns of mobility and work locations), which serve as "profiles" that guide the provisioning of work places and technologies to support the various patterns of work.

Goal S2. To develop methods for the management of change processes from the viewpoint of space management, taking into account the end user perspective.

Since the end user perspective forms the basis of the final work environment design, change management is embedded in the overall design, and space management becomes less individually oriented and more "group" focused, as individuals and teams make choices about work practices, technologies and places that can best support their work. Places to work include home, outside office, and new, group environments for groups to come together physically. The "use" of the individual office shifts toward a more team orientation. As workers can work from more than one place, the office can be managed on a "capacity" basis, as opposed to traditional one person per seat management.

Goal S3. To develop the reliability of methods that assess the productivity of knowledge work.

Optimaze's *metrics architecture is based on work practices as the proxy for productivity. Business outcomes are used as the ultimate objective of each entity. Work practices are those behaviours that best allow accomplishment of these outcomes (productivity). A Pre survey asks questions on ability to perform the identified work practices. A Post survey (after introduction of new enablers) asks the same questions, looking for improvement in ability to accomplish work practices, thus indirectly measuring whether productivity has improved.*

2.1 Enablers – pilot (VTT)

Become a more internationally recognized, synergistic and flexible partner for its customers, assure that VTT is the best investment option in the innovation environment, and be the preferred employer for experts who want to develop their knowledge and succeed. This vision will require VTT employees and managers to become more adept at working over distance and multiple time zones, and more flexible in times and locations of work, all aimed at developing innovative technologies with and for customers and partners regardless of global location.

2.2 Concept – pilot case (ISS)

Assure that employees are highly customer oriented, with a deep understanding of customer needs. Offer integrated bundles of services to its customers and new services to existing customers. Assure that ISS's distributed employees feel a strong sense of identity with and belonging to their company, work groups and cross- functional project teams. This vision will require ISS employees and managers to engage frequently with customers across Finland, communicate effectively between operations and sales staff (regardless of location), and work fluently and flexibly across the various ISS lines of businesses to create bundled service offerings. These modes of working will have major implications for ISS's own real estate strategy in the Helsinki Capitol area. Successful prototypes will provide a strong guide for real estate portfolio decisions that will need to be made in the next year.

2.3 Future – pilot case (Granlund)

Grow international presence in the areas of Mechanical and Electrical Engineering services, and related software development and consulting services. Accomplish this through building an international network of partners and customers. Enhance offerings by creating strong links between sustainable buildings, the design of leading edge HVAC systems, and new ways of working. This vision will require Granlund employees and managers to embrace distributed work and appropriate flexible work times and locations, and demonstrate in the design of their own work

environment the sustainability benefits of new ways of working. Doing this will also enable greater sharing of skills and knowledge between Granlund's various locations in Finland and other countries.

2.4 Methods

The NewWoW champions behind the three organizational cases mentioned above agreed on the following proposition: "Productivity and Well-Being is higher in those work environments which are civilized, tolerant, heterogeneous and allow choice."

Research team took to compare the theories behind that starting assumption against the actual practice in the selected organizations. Our research strategy has been to approach the manifested implementation of NewWoW principles as intra-organizational comparative case studies. Our case studies' data was collected from 3 sources: 1) archival material of various types e.g. outputs of the consultative process in the form of reports from the Optimaze-led internal workshops with employees, interviews with management and other documentation 2) the social enablers survey and 3) the 4 focus groups. Social enablers can be thought of as benefits mostly emanating from HR policy such as remote work agreements, flexible hours and subsidies. The need for focus groups arose out of the unexpected Social Enablers Results.

Among the several relevant theoretical frameworks against which to interpret the data collected, the research team agreed to apply: Social Constructivism, Self-Efficiency, Work Engagement and Self-Determination Theory, with the aim to facilitate the emphasis of the Social realm.

2.5 Theories

2.5.1 Social constructivism

Social constructionism (SC) is based on the idea that we shape the world we live in through communication and in social relationships we participate. According to Gergen (2009), SC can be characterized by the following assumptions:

1) If we think about a particular state of affairs, according to SC it can be explained and described in an unlimited number of ways.

2) All explanations and descriptions of the proposed state of affairs are based on social relationships.

3) We construct the world and its characteristics in a way that is socially useful.

4) Our explanations and descriptions shape our future.

5) We have to critically reflect on our obvious beliefs and self-evident truths.

Historically, SC is originated from three kinds of dialogues and views. First, there is the opinion that there is no value neutrality or objectivity but all values are implicit. Secondly, there is the postmodernist view according to which there is no place for rational arguments because all terms that are used in an argument are ambiguous. Thirdly, it has been thought that scientific knowledge has some practical value but it is in no way absolutely true.

According to SC, workplaces as social worlds can be considered as systems that exist only in an intersubjective domain among people. They are meaningful to people who have made them and lived in them. A workplace is a social world constructed of physical entities, but it is the ideas and beliefs of these entities that matter, that is, the only thing that is important is what they signify in the minds of people.

2.5.2 Self-efficiency

Theories of human agency (e.g., Bandura's social cognitive theory) propose that people have the ability and power to elicit changes by their actions, and by this way become the agent of their life. Intentionality, forethought, self-reactiveness and self-reflectiveness have been addressed as the main features of human agency. Intentional way of acting is based on representations of a future course of acting to be performed that may be shared by other people. Anticipated future events are motivators and regulators of behaviour that can motivate the execution of actions. The metacognitive ability characterized by the ability to reflect upon one's thoughts and actions is a key feature of human agency. Bandura (2002) has proposed that this kind of self-efficiency plays a key role in occupational self-regulation in modern worklife characterized by continuous change and increased competition. Self-efficiency refers to workers' beliefs of their ability to control their work-related behaviour and environmental and organizational events.

2.5.3 Self-determination theory

One of identified theoretical frameworks to analyse the data is Self-Determination Theory SDT (Deci & Ryan, 1985, 2000, 2008 as reviewed in Vansteenkiste et al., 2010). SDT has been developed during the past 40 years based on cumulative empirical research. SDT nowadays represents an umbrella-term in that it encompasses 5 mini-theories that have evolved in sequence during the past 4 decades. One of the mini theories is the Basic Needs Theory. Its main tenets are that irrespective of age, gender, culture and other categorizing attributes, humans have in common 3 basic psychological needs of Autonomy, Competence and Relatedness. It is worth noticing that field studies on SDT have been rare and long-term research designs even rarer. The theory has been mostly applied in medical and educational settings. To date, scholars and practioners alike have recognized the need to apply it in knowledge-work settings.

Applying SDT to work environments implies that promoting the satisfaction of the 3 basic and universal psychological needs of Autonomy, Competence and Relatedness would enhance employees' intrinsic motivation (the task becomes interesting and so inherently satisfying) and consequently promote the internalization of extrinsic motivation (the task is aligned to one's values thereby becoming personally relevant for one's goals). Need-satisfaction is helped via certain contextual factors. In the case of a new work environment, for instance, an open or shared office may support the need for Relatedness, flexible work arrangements both in time and place may satisfy the need for Autonomy and virtual collaboration or mentoring programs may lead to feelings of Competence. Such changes may lead to positive individual, team, organizational or societal outcomes such as: 1) persistent and maintained new ways of working or sanctioned behaviours, 2) better performance in different types of tasks even in simple routine ones, 3) job satisfaction, 4) positive work-related attitudes and overall well-being and 5) organizational citizenship behaviours.

3. Piloting companies in change

3.1 Companies change plans

3.1.1 VTT

The main target of VTT's New Ways of Working project (a.k.a. WorkWays), was to align the needs of the core business with the work environment, work habits and tools. It was agreed that a tailored change management approach would be applied for tackling this challenge. The key objective was to transform VTT's work environment to meet the current needs of knowledge workers. For VTT, the workplace transformation approach involved research and prototyping on workplace enablers for effective and productive work. Enablers that would improve Collaboration, Connectivity, Internationalization, and Leadership were prioritized.

Knowledge work is growing increasingly collaborative. The last bottlenecks for distributed and asynchronous work are breaking down, thereby making more flexible working orientations desirable from an individual's perspective and feasible from an organizational viewpoint. For VTT the challenge in enabling flexible work laid in differences inherent in the organization. VTT Group comprises various organizations with different job groups within knowledge work (from technical staff bound to the laboratory infrastructure to technology commercialization staff who can be versatile and mobile in their work), career alternatives, work roles, and positions. The workplace transformation challenge clearly demanded a range of infrastructure and management policies, ICT tools and facilities solutions.

Moreover due to a high average age among VTT employees which would be leading to bulk retirements, another challenge related to the need for employee retention as well as attraction of younger generations of employees. An internal HR investigation revealed that VTT's younger generations favoured a more tailored infrastructure and on the whole expected more flexible working conditions. As a consequence enablers which would improve Mobility and Flexibility were emphasized along with the others mentioned earlier: VTT would support mobility practices while providing better physical work environments for all especially for the non-mobile employees.

VTT's work premises, labs and offices are somewhat characterised by long corridors, individual enclosed offices, and solid brick walls. Therefore the physical environment transformation goal was to reconceptualise the workplace as a more functioning and interconnected one. The plan was to set, develop and prototype social, technological and physical enablers existing in the workplace. A diverse portfolio of renewed spaces and places, tools and software to facilitate, management and human capital practices was set to be established. One driver and an intermediate goal for this was the relocation of 300 researchers into already existing buildings after the end of lease agreement in one VTT-building.

The project started by going through a definition process led by Optimaze consultants. At the same time work for recognising the boundaries (e.g. legal) for the development started. The definition process consisted of three workshops each of them having a different theme. The first workshop addressed management and defined the suitable business outcomes for VTT. The second workshop concentrated on defining the key work practises and ways of working for VTT. Participants were mostly researchers and support staff. The third workshop aimed to close the gap between the desired and actual work practices. Boundaries for the implementation were also set e.g. in terms of finance, leasing agreements, legislation. Besides the workshop, Optimaze instructed representatives of VTT's Operative Functions about a set of generic recommendations for workplace development in the form of a Handbook, the "Pattern Book". After the definition process, a call for prototyping was launched throughout the organization. This bottom-up volunteer-led approach aimed to complement the top-down management-prescribed prototypes. Each prototype was meant to concentrate on certain aspects of workplace. After the prototyping period, lessons learned would be gathered and the solution adjusted and scaled (within limits) to the whole organisation.

One of the prototypes chosen for the RYM NewWoW program involved VTT's Business Development (BD) Team. Optimaze facilitated this Enabler prototype by conducting three workshops with the BD team during the spring of 2012. These workshops defined the main objectives for the team based on VTT's desired business outcomes. Moreover a team agreement and a choice policy defining the key work practises and ways of working for the team were co-developed with the team members. As a consequence of this prototype, VTT's HR adopted a more flexible time tracking and remote work agreements for the members. IT further supported with needed ICT enterprise tools and by tailoring the BD team's Sharepoint site for effective sharing and enhance team communication. VTT WorkWays project team also relied on the cooperation from the Real Estates and Facility Management unit in order to co-locate the BD team "under one roof", or to offer the option for BD members located in another city to have a "touch-down" point within the same floor when visiting the main BD unit in the Capital area. VTT WorkWays project team followed through the prototype period, established pre- and post-surveys and communicated the results. Prototype was ended in the end of 2012.

3.1.2   ISS company targets and results

The decision to initiate into research was done in a situation where preliminary planning of HQ relocation had already started and first ideas of business opportunities related to the subject were spoken out loud.

The primary need was obviously the actual case of relocation as itself but there was also a strong strive to handle company's own situation and needs as like any corporate user facing the fundamental questions at that point.

ISS hit the road with the concrete target to manage the entire question as a service based solution provided to a customer. Own situation was considered as a safe environment to test different methods and ways of approaching without a significant risk of failure, yet to act like with a real client.

The "life span" of the pilot begins early 2011 when a test area for different furnishing and work station solutions was established.

Main phases of the pilot are described chronologically in the chart below.
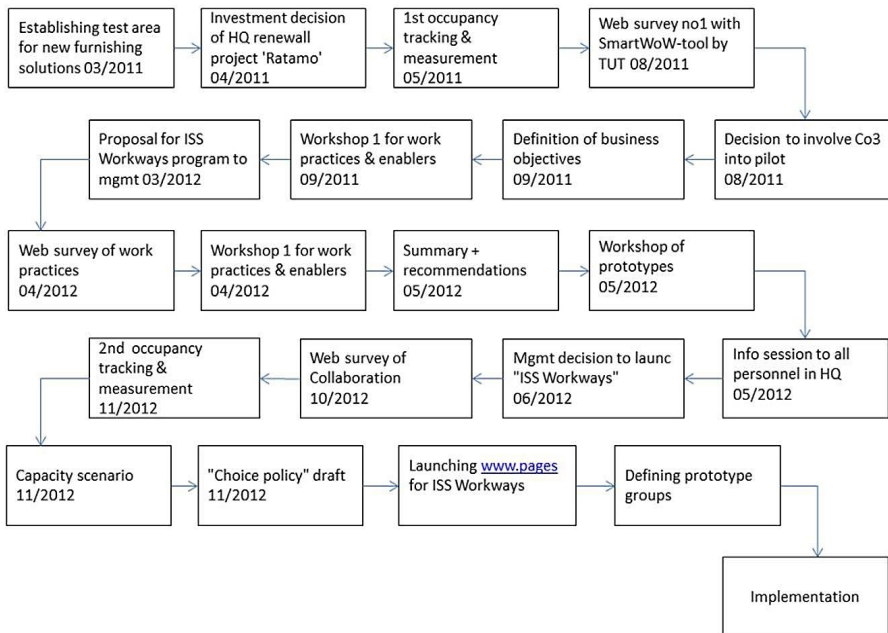
Results

A Choice Policy was drafted in November 2012 by Optimaze to guide the development of the range of location and times of work choices available to individual employees, and to guide the articulation of eligibility to exercise the available choices. For groups, the Choice Policy suggests the areas in which groups should be responsible for choosing how members will work together. The intent of this policy was to support the principles of Norms of Choice.

The prototype groups were nominated as follows;

- Oulu–Kainuu regional business unit in Oulu
- Security business unit in Vantaa
- Proko business unit in Helsinki.

The Choice Policy was processed further by the Program Office during the 1st quarter of 2013 and the main principles were introduced to the prototype groups. HR confirmed an official policy for Remote working including a contract.

ISS Workways intranet pages were opened for internal communication purposes and Team-rooms were established for different projects and prototypes.

The most concrete outcome of ISS Workways renewall program was the relocation project of Oulu–Kainuu regional office in Oulu. The rental agreement for new location in Yrttipellontie was confirmed at the end of January 2013.

3.1.3 Granlund targets and results

One of Granlund's main objectives in the research project is the sustainability issues. Granlund would like to create a state-of-the-art management system, where space management would be combined with owner and end-user decision management by using BIM-models.

One of the main success factors of the project was the level of participation and commitment on staff's side. There were two main design problems: the one concerning the overall plan of Granlund Helsinki work environment and the other concerning work environment created in the pilot project. Both were dealt with at the same time.

Before the actual project work started, the overall goals and objectives were defined. After the definitions were made, it was to possible arrange a kick-off meeting and announce the project to be started. Next step was the collection of the data including the surveys.

The work began with a goal seminar for all employees of the three departments. In this seminar the profile groups were formed based on survey information. The organization for participation was created and three design alternatives were defined. The alternatives were coordinated with the three alternatives of the overall design work.

After the goal was set, the designers and consultants were be able to start their work. When three alternatives were ready, a decision was made on the final solution in a seminar open for all the staff involved. After the steering group and company board had accepted the solution, the construction work started.

3.2 Optimaze process

Optimaze's methodology is based on over 12 years of applied research in the field of new ways of working. It consists of a design logic and process to engage each entity in a co-development, rapid prototyping effort to conceptualize and build

small scale work environment "prototypes", which test new work environment enablers in situ.

In addition, Optimaze has developed a "Pattern Book"™, which describes observed and tested patterns of enablers, which repeat across industries, geographies and company cultures. These patterns are primary social, technological and physical combinations of enablers that support emergent work practices that are evident in global, knowledge work. The Pattern Book uses these patterns as templates with which to evolve an existing work environment to one that supports contemporary work.

The Pattern Book is comprised of seven universal patterns that provide the 80% solution and guides the 20% localization to unique culture or work circumstances within each client entity. It simplifies and expedites the design, implementation, adoption and measurement of new work environments. The patterns include three social patterns (norms of choice, formal team agreements, and shared work management), technological patterns (ubiquitous network connectivity, broad technology adoption and compatibility, and anywhere availability of tools and materials) and one physical pattern with many sub-patterns (network of places). These patterns of enablers must be systemically assembled to provide the total solution aimed at supporting new ways of working (work practices).

Co-development, rapid prototyping (design thinking) and the testing and measuring of the prototypes are represented in the overall engagement methodology as depicted below. The same methodology was applied to all three RYM-SHOK entities, however, not to the same extent. In the case of VTT, all three steps were fleshed out with a business group within VTT, BD1 (Business Development group with the charter to drive international VTT business). For ISS, the first two steps were accomplished with a recommendation for prototypes and a schematic design to draw from. And similarly for Granlund, the first two steps have resulted in a higher level schematic design for prototyping in the future.

Engagement methodology:

1. Collect the data (Survey, Interviews, Workshops).

2. Develop a solution (Pattern Book and Localization).

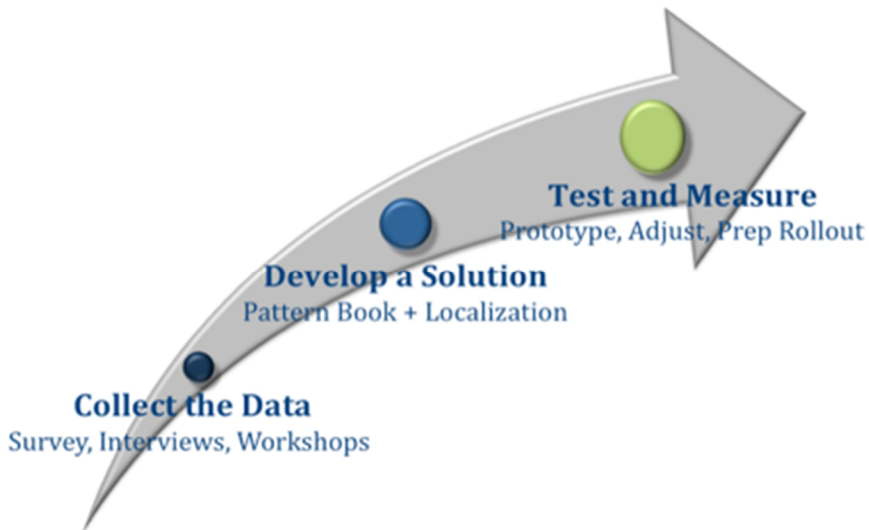3. Test and measure (Prototype, Adjust, Prepare for Rollout).

Figure 1. Engagement methodology.

All three entities not only followed the methodology of co-development, they all completed stage 1, which consists of data collection of several kinds. Survey data on collaboration practices, mobility patterns, and space usage were provided by VTT and ISS. Interviews were conducted with Executive Management of all three to determine the Business Objectives of the entities, which ultimately drive the reasons behind new ways of working, or the new work practices desired to achieve those business objectives.

Workshops were conducted at all three to identify the key work practices that are most likely to accomplish the business objectives or outcomes articulated by Executive Management. Additionally, workshops at both VTT and ISS were conducted to apply Pattern Book principles to the work practices identified, allowing a conceptual design for prototype work environments. In the case of Granlund, Optimaze recommended a schematic set of enablers based on the work practices identified.

The metrics framework for all prototyping follows the logic of the client engagement steps. Once the initial data is collected, the interviews and workshops follow. The work environment is co-developed with the client (using the Pattern Book), based on the articulation of desired business outcomes and the commensurate key work practices identified to support them. The metrics framework is embedded in the process logic below (see Figure 2).
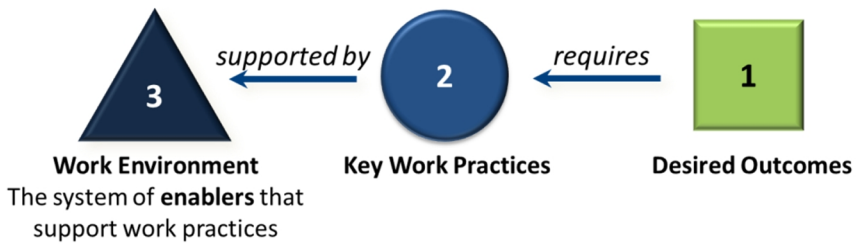
Figure 2. The Optimaze metrics architecture.

Every organization has a set of **Desired Outcomes** that are archived through the work done by the people of the organization: the **Key Work Practices**. Key Work Practices are enabled and supported by the **Work Environment**: the social, technological, and physical enablers that comprise the environment. (See Figure 3.)
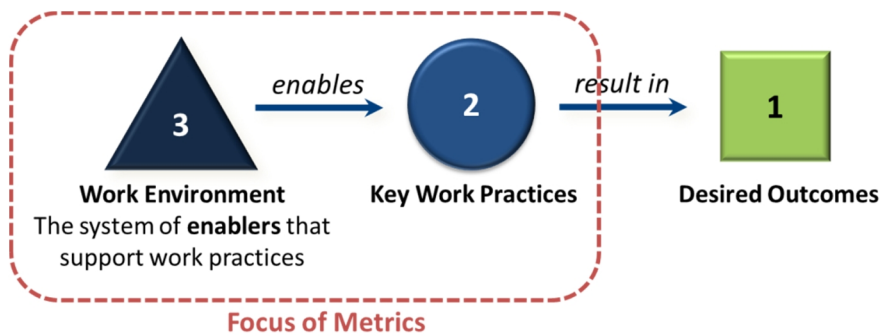
Figure 3. Focus of metrics.

Many variables affect Desired Outcomes beyond the presence of key work practices (such as the competitive environment and the effectiveness of the strategies that dictate the desired outcomes). Therefore, we focus on what is most in the organization's control: the work environment and the work practices.

Optimaze's contribution to the work practice metrics are pre- and post-survey questions examining employees' perceptions of key work practices (Figure 4).
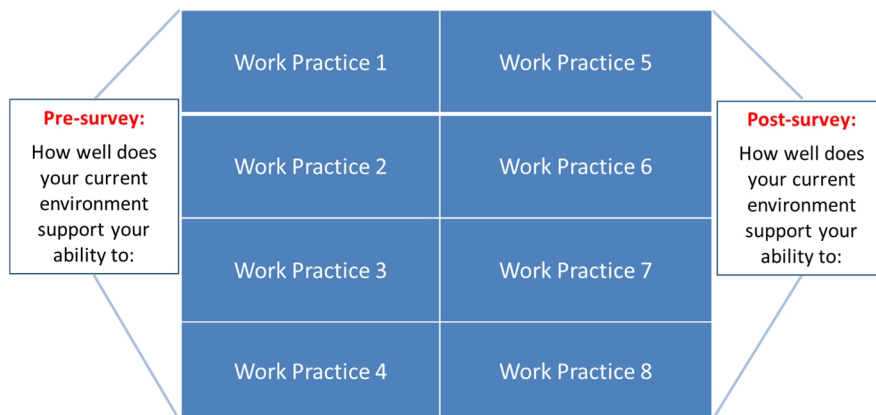
Figure 4. Pre- and post-surveys.

3.3   Results

As noted earlier, the three phases of the Optimaze process were implemented to different degrees within each of the three companies piloted. VTT was able to implement a small prototype (phase 3), but has not gotten far enough along to draw conclusions with pre and post surveys. ISS went through phases 1 and 2, in which a solution has been conceptualized. ISS is still choosing pilot groups. Granlund went through a very rapid version of phases 1 and 2, and is considering a pilot that Optimaze recommended. The results for each are detailed in Figure 5, organized in accordance with the logic previously described and repeated here in diagram form:

Figure 5. The logic of the process for finding key work practices and enablers.

3.3.1 Enablers – pilot case (VTT)

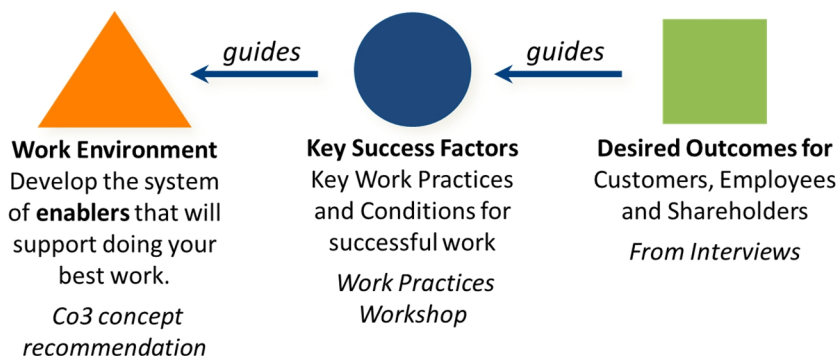VTT went through phase 1 in some detail. Much data were collected and several workshops including participation from various work groups resulted in the articulation of both VTT desired business outcomes and work practices. The desired outcomes were collected from interviews with senior executives and review of VTT annual report and strategic documents. Once BD1 was selected as a prototype group, they summarized their desired outcomes as follows:

- Increased international revenue
- Expanded international alliances, partnerships and networks
- Visibility within VTT
- Teams are competitive, agile and flexible.

These desired outcomes became the primary input into workshops aimed at soliciting the key work practices necessary to achieve them. BD1 identified the following practices:

- Working flexibly is the norm
- Understand how our/my works fits into VTT overall
- Communicate frequently, quickly and informally
- Be disciplined in project management.

Then, Optimaze partnered with the members of BD1 and functional representation from IT, RE and HR to co-develop selected enablers to be introduced into the prototype. The basic enablers are found in the Pattern Book, organized within the 7 universal patterns described earlier. The co-development process involves adapting the patterns to unique needs to support the work practices identified as important to BD. Thus, the primary enablers selected to enable BD work practices are as follows:

- Choice Policy that enables flexibility in locations and times of work
- Ability to log time from any location at anytime
- Formal team agreement
- Baseline technologies available to and used by all
- Network of Places that includes hub, home and in-hub drop-in seats.

Optimaze worked with the BD1 members to localize these patterns, and actually create a team on-line work site for identity and availability to use by all. A choice policy was written, as was a formal team agreement.

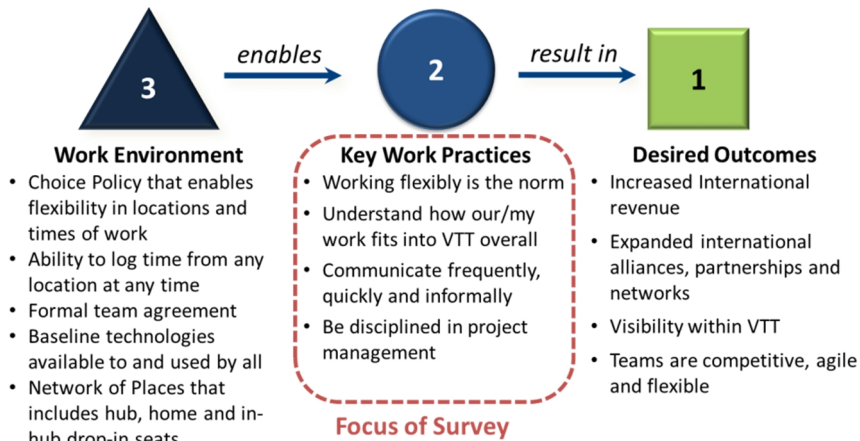For BD1, then, the full design logic is as presented in Figure 6.

Figure 6. Survey design logic for BD1.

Though outside the scope of Optimaze's work with BD1, Optimaze recommended that, prior to the completion of the enablers, a pre-survey should be launched (Optimaze provided the survey questions associated with the key work practices), which would test the baseline conditions against the key work practices. Once the enablers are in place and in use, after about 6 months of experience, a post-survey should test the success of the enablers on the enhancement of key work practices (and thus, also on the desired outcomes indirectly), measuring productivity. To date, the enablers have not been fully implemented.

3.3.2   Concept – pilot case (ISS)

ISS pursued an intensive effort to accomplish both phase 1 and 2, in a reasonable, timeframe. Data existed on demographics and office utilization. A collaboration survey was launched, which helped determine primary modes of collaboration and also usage of types of technology in the "today" state. Desired business outcomes were garnered from Executive Interviews and written collateral as follows:

- Deep understanding of customer needs and business issues
- Bundled services for customers
- Strong growth through new sales to existing customers
- Employees feel strong identity with their company
- Attract motivated, diverse employees
- Demonstrates broad expertise.

A series of workshops involving combinations of managers and individual contributors from both Functional jobs and Line jobs (sales, marketing, product & solution development) to determine which work practices were most likely to result in the business outcomes:

- Share and utilize information and expertise
- Use time efficiently
- Learn and develop integrated solutions
- Feel rewarded and valued
- Test, develop and understand innovations
- Work wherever, whenever needed to be effective
- Spend time with customers
- Managers lead.

Lastly, an intensive session with Functional reps from IT, HR, RE and line representatives from ISS Security Business, Sales, and Product Development determined which Pattern Book enablers were most needed to support the key work practices identified.

- Physical, Social and Technology Enablers from the Optimaze Pattern Book and customized by ISS (see Figure 7)

The entire list of enablers is summarized in detail in the following graphic. ISS also asked Optimaze to develop a concept for the Helsinki Area Real Estate portfolio, in essence, a roadmap from which to make location and sizing decisions over the next three years. Based on the collaboration survey and other data from workshops, we were able to determine a workforce segmentation of collaboration and mobility patterns that allowed for three main categories of workforce: external, flexible and internal. These categories can be "planned" for by using different headcount/seat ratios. Capacity planning could become a very important enabler going forward, as ISS believes it can best work with sharing group environments, using drop-ins, and taking advantage of group collaboration technologies already in place.

ISS PROTOTYPE ENABLERS

Social Enablers
- Time of Work: Core hours of work plus flexibility beyond core hours.
- Location of Work: Home during business hours to up to 3 days per week as well as after business hours.
- Enable work from any ISS location.
- Group Work: Enable non-Face to Face work as a norm.
- Adoption of shared work management and team agreement protocols.

Work Environment

Technology Enablers
- A baseline toolkit of communications and collaboration tools for all employees
- The baseline toolkit automatically provided to most employees
- Program to encourage wide adoption of tech tools, including training.

Physical Enablers
- Network of Places: Central ISS Hubs, Customer locations and Homes.
- Add drop-in locations at ISS Hubs.
- Within Hubs: Shift emphasis to group work spaces, expand scope of shared seating, 1:1.5 to 1:1.75 HC/Seat ratio for individual work spaces.
- Adopt Capacity Planning.

Figure 7. Physical, Social and Technology Enablers from the Optimaze Pattern Book and customized by ISS.

3.3.3 Future – pilot case (Granlund)

Granlund's engagement with Optimaze involved a truncated version of the three phases, and in fact allowed for final recommendations for immediate piloting (prototyping) of enablers that will be useful to Granlund's three to five year vision for its business. Granlund's articulated outcomes:

- Competes first and foremost on the quality of our design capabilities, not on cost nor economies of scale.

- Has grown "organically" rather than through M&A.

- Is recognized as the industry leader in energy management and efficiency.

- Is recognized as an industry leader in BIM centered design, project delivery and building management.

- Has attracted and retained top tier talent.

- Employees have developed and maintained strong working relationships with partners and customers.

And, key work practices, as identified by workshop participants from all lines of business at Granlund:

- Employees actively share info & knowledge early and throughout a project.

- Managers communicate big picture to engineers and actively seek to provide "stretch" opportunities and feedback.

- Teams proactively manage work quality.

- Leadership takes innovation risks and encourages the same for engineers, especially internationally.

- Every "Granislainen" engages in "real engineering".

- Actively develop relations with each other, customers and partners.

- Proactively develop and renew business and professional skills, including English and ability to manage the business and monetary aspects.

Allowed Optimaze to make recommendations for a prototype concept that could be implemented today to begin the process of getting ready for the future.
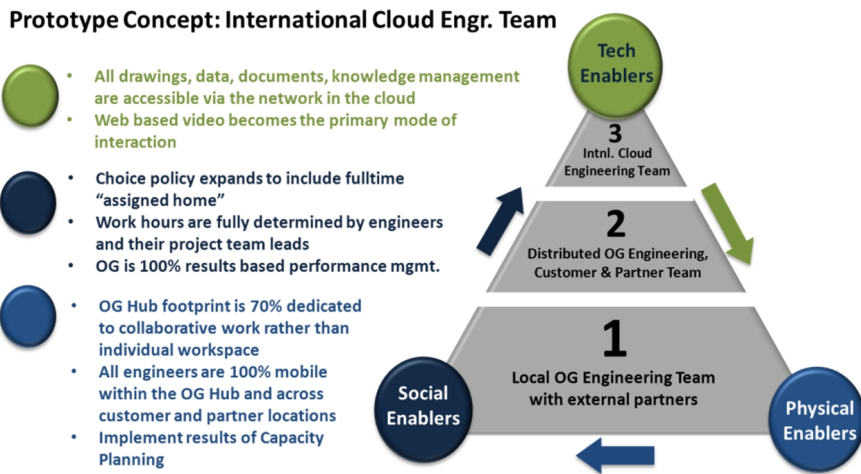
Figure 8. Granlund prototype concept.

3.4 Discussion

Optimaze entered this effort with the following hypotheses:

1. "Contemporary work" has characteristics that cross industries, disciplines and cultures. Primary among these characteristics are use of knowledge and information to accomplish work, and the importance of collaboration among people with diverse sets of knowledge.

2. Often, collaborations need to occur across distance, because of a wide variety of circumstances. These circumstances often grow out of what a business or enterprise is trying to accomplish with its business intents. They also often grow out of individuals' personal circumstances (such as where they live) and their diverse work styles.

3. The key work practices that organizations identify as necessary to achieve their business goals will have a high level of commonality: the need to communicate, share information, coordinate efforts, engage in both formal and informal ways, work on focused tasks as individuals, etc.

4. Because of these commonalities, the sets of enablers that define work environments will also have similarities across industries, disciplines and cultures.

5. Differences can be understood through a thoughtful process of data collection and engagement with employees at every level of the organization.

6. This process of engagement provides the core of what is often referred to as "change management." The employees themselves define what changes are needed, and then test their conclusions on themselves.

7. The process of testing can occur via "rapid prototyping" that further engages employees, and gives them a voice and sense of control over the design of their work environment.

The Optimaze Pattern Book and engagement process tested these hypotheses with three diverse organizations. The engagement process used interviews, surveys, and interactive workshops to elicit participants' knowledge and best thinking about what they need to accomplish, and the work activities need to achieve desired business outcomes.

As would be expected, the desired outcomes of the organizations have variation (because they are very different organizations). However, the key work practices that the three organizations identified have significant similarities: the need for communication, coordination, sharing, being with customers/partners/colleagues wherever they may be, building relationships, and feeling valued, challenged and responsible for the work that needs to be done.

From the strong commonality in key work practices comes strong commonality in the functionality of the enablers that comprise the work environments. Key among these are the social enablers that allow choice in when, where and how work is done; that foster shared engagement in the management of work and provide the necessary structure in which people can exercise choices; that provide the spatial and technology resources to connect people and information; and that promote wide adoption to assure compatibility of both tools that support and expectations for interactions.

These enablers provide perceived productivity benefits because they enable effective work as defined by the employees themselves. Additionally, adoption of the enablers can lead directly to efficient use of work resources, in particular, use of an organization's portfolio of space and real estate.

Optimaze believes their hypotheses continue to have merit, but until full prototypes are in place and in use over at least several months time, we cannot be certain that the perceived productivity benefits will be realized, or that real estate efficiencies can be achieved. We look forward to the next steps that lead to full prototypes.

One concern is that enablers that allow choice in when (and in some cases where) work is done may be in conflict with certain Finnish laws. As experienced with similar laws in other European countries, laws intended to protect employees' well-being may not be keeping up with employees' own needs, desires and abilities for flexibility and control in accomplishing their work. We believe that having this flexibility and control are likely strong contributors to well-being, and should perhaps be accommodated in the appropriate labor laws.

4.   Social Enablers survey

4.1   Process

To compensate for the lack of investigations in the social and mental realm of NewWoW, a subset of the NewWoW workpackage researchers proposed to conduct a survey to address an additional research question based on the findings from the literature review and experiences of participating organizations introducing NewWoW programs.

The guiding research question behind the survey was: "What factors of the social environment enhance or disrupt Knowledge Work? – on individual, team, organizational, and societal levels". As we planned the survey, we further generated specific guiding questions addressing each level:

- Are there aspects of your work environment which affect your personal life?
- What aspects of team work enhance or disrupt your own work?
- What company policies or practices enhance or disrupt your own work?
- What national policies or practices enhance or disrupt your own work?

The survey design process started with a brainstorming session where attributes of Social and Work Environments were listed. Both researchers and practitioners involved in New Ways of Working programs participated in this session. They voiced both their own insights and experience gained from lessons learnt during NewWoW prototyping. They also expressed common opinions, wishes or complaints directed to them from the employee front-lines, at NewWoW workshops or in private consultations. The list included more than the Enablers and Disablers. It encompassed characteristics of such environments and related connotations, ranging from concrete artifacts such as "coffee machines" to abstract concepts such as "Lifestage". The list did not differentiate those social enablers, disablers or characteristics that were mandated by law, worker union or local agreements from those enablers, disablers or characteristics that were solely based on individual's wishes. Essentially a general list was created to represent typical social enablers, disablers and characteristics that are present in work life today.

The next action after the free association stage was to mark each list item against one or more levels, starting with Individual, continuing to Team, Organization and Society, as was delineated by our guiding Research Question. When

attributing items to the Individual level, we recognized the need to separate between the Physical and the Psychological aspects. As a result we refined the sub-research questions by adding:

- What aspects of yourself enhance or disrupt the work environment?

Similarly when we discussed items that related to the level of Society, we realized that there was a further distinction to be made between Society and State. Certain attributes clearly represented benefits which were peculiar to the form of national government and its laws, such as "subsidies" or "tax refunds". Consequently the attribute list was mapped across 5 levels. In this case the original sub-question pertaining to national policies and practices was deemed suitable therefore we did not edit it. At the end of this stage, each item on the attributes list was mapped to a minimum of 1 level.

We next proceeded with classifying the attributes by finding a common denominator for grouping attribute subsets. For instance terms such as "Engagement", "Motivation", "Power", "Trust" and "Commitment" were collected under the Category of "Personal Characteristics" whereas terms such as "Training", "Relocation Services", "Remote Work" were grouped under the heading of "Policies". Although the research question directed us to focus exclusively on the Social Aspect of the Work Environment, already at the Brainstorming stage we realized the difficulty in separating Social Enablers from the Physical and Technological ones. Consequently the classification stage was needed in order to give us an overview of the social and work environment attribute mapping. Upon examination, we observed that the groupings could fit along analytical dimensions such as "Changeable (from organizational viewpoint)" to "Influenceable (from person viewpoint)". This mapping stage was deemed useful in order to balance the eventual survey items so that our respondents would be required to express their interest in both currently available resources as well as hypothesised desired ones.

The next stage consisted of drafting the survey questions. Some parts of the survey included standardised questions. For instance in the section "Personal Factors" we applied the Ten Item Personality Inventory (Gosling et al., 2003). Other published surveys, for instance the "Better Work-Life Balance Survey" by The State of Queensland, Australia (Department of Industrial Relations, 2005) and theoretical frameworks, for instance Preference Theory (Hakim, 2000) were drawn upon due to their affinity with our research question, in order to formulate the rest of the survey. Common questions that are prevalent in employee satisfaction annual surveys such as "Would you recommend your place of work to a friend?" were also included. Essentially most of the survey items required participants to rate their level of agreement with statements concerning their work environment and to indicate their level of interest in and usage of real or potential resources.

4.2   Survey demographics

Once drafted, the survey questions were transferred to an online survey system called Digium (www.questback.fi). This first version was piloted during August 2012 with the research group and with the NewWoW representatives of the part-ner organisations who were involved in this research exercise. The survey ques-tions were reformulated according to the feedback received from the pilot users. The survey was finalized and replicated into three identical copies according to three organisation involved. The only variation was in the introduction text which was tailored to each organization.[1]

The survey participants were selected by organisations' NewWoW representa-tives from a pool of employees that had been introduced to New Ways of Working, in some way. For instance lists of attendees of internal information sessions on the subject were provided. The research team also expressed the preference for par-ticipants who were not in a managerial role, because it was generally agreed that the Optimaze -consultative process covered those groups extensively. We aimed for the "frontline employee". This preference was not entirely satisfied.

The surveys were sent in the middle of September 2012 with an allocated re-sponse time of two weeks. Overall the survey was sent to 255 people, out of which 100 were from Granlund, 62 from ISS and 93 from VTT. Out of the 255, the replies amounted to 106: 49 from Granlund, 23 from ISS and 34 from VTT – the overall response rate being 42% (Granlund 49%, ISS 37%, VTT 37%).

82% of survey respondents had been involved somehow with New Ways of Working (Question "Have you been participating in New Ways of Working happen-ings, prototypes, seminars or for example workshops in your organisation?"), while 18% announced that they had not been participating.

The age of the respondents varied from 22 to over 60 years of old (Figure 9). VTT and ISS respondents had quite similar age profiles, while Granlund on the other hand had significantly younger respondents.

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[1] Although generations Y, X and Z or baby boomers may be mentioned in the text, it is worthwhile to recognise that these generational definitions originate most likely from United States and Great Britain. These differences may not fit entirely well to the northern Euro-peans, Scandinavians or Finns due to historical and political developments. For example Scandinavia has not been involved in international conflicts since the Second World War. Furthermore the development of the welfare state from 1970's onwards has played a key role in Scandinavian societies especially in downsizing the gap between the young and the elderly.
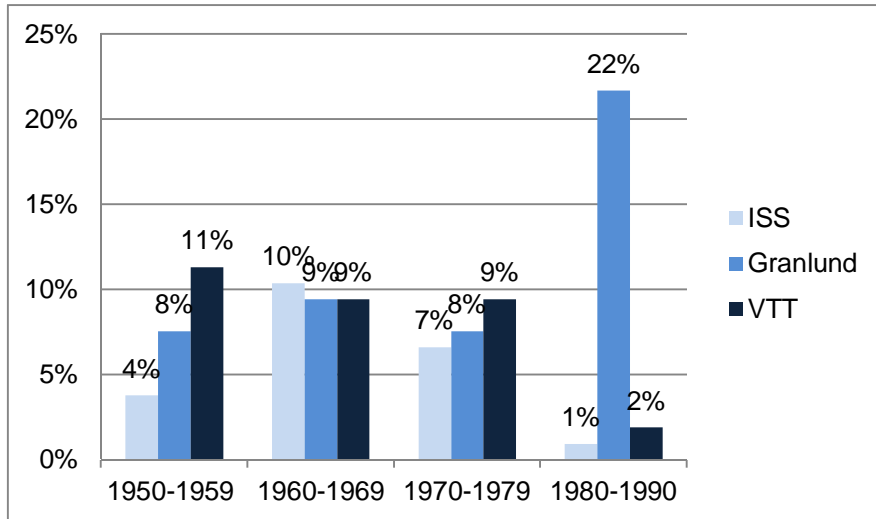
Figure 9. Age structure of the respondents (percentage of the amount of responses per organisation compared to amount of total responses).

62% of overall respondents were male and 38% were female. VTT had even numbers between male and female respondents (50%) as well ISS had quite similar profile with 52% of the ISS respondents being female. Granlund was an exception with 76% of the respondents being males.

Civil status showed that 62% of total respondents were married, 19% cohabiting, 10% single and 8% divorced (Figure 10). Granlund's figures were slightly different from VTT and ISS which may due to the younger age profile of the respondents.
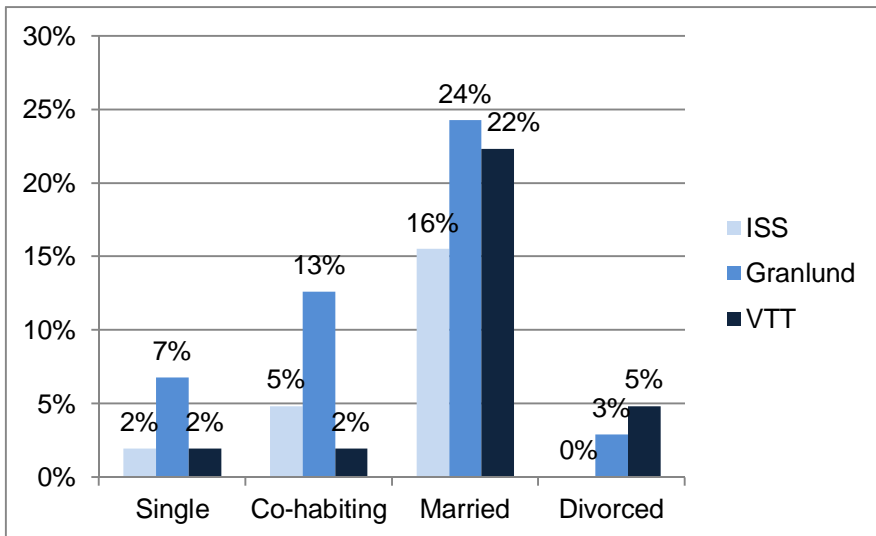
Figure 10. Civil status (percentage of the amount of responses per organisation compared to amount of total responses).

Almost half of the respondents had a University (48%) and almost one-third had a polytechnic degree (Figure 11 and 12). Again Granlund's respondents were an exception to this trend having more polytechnic than university degrees. VTT respondents on the other hand had mainly only university degrees.
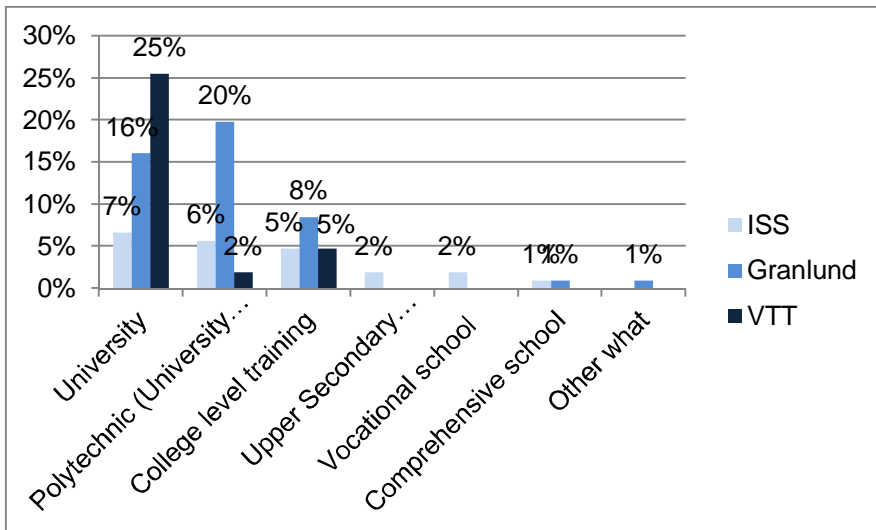
Figure 11. Education level (percentage of the amount of responses per organisation compared to amount of total responses).
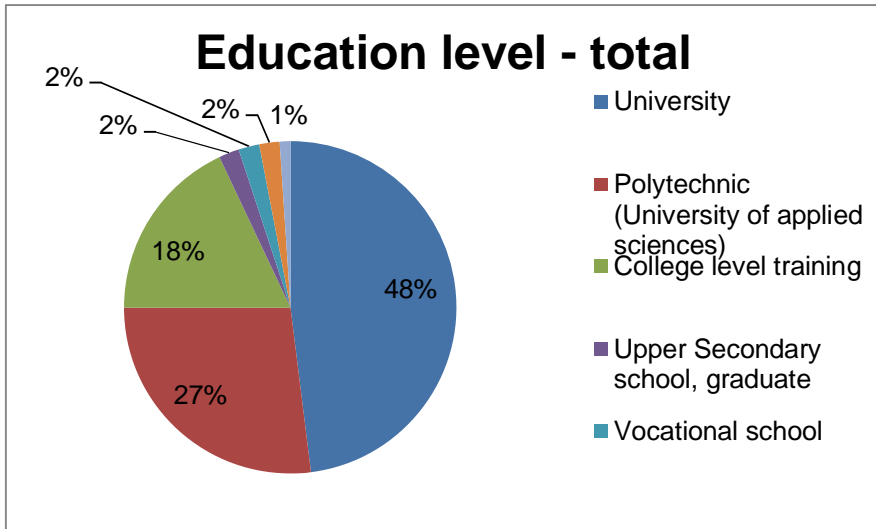
Figure 12. Education level (the amount of responses per level compared to total amount of responses).

Most of respondents (43%) had been working for their company less than five years. 18% of the respondents had been working for six to ten years and quite surprisingly 15% of respondents had been working for more than 26 years for their company. (Figures 13 and 14.)

Figure 13. How many years have you been working in your current organisation? (The amount of responses per organisation compared to amount of total responses.)

Current organisation - Total

Legend:
- 0-5
- [6-10]
- [11-15]
- 16-20
- 20-25
- 26+

Figure 14. How many years have you been working in your current organisation? (The amount of responses per organisation compared to amount of responses per organisation.)

From the total respondents 70% had been working in their current role for less than five years. 17% had been working in the same role for six to ten years and 10% eleven to fifteen years (Figure 15).
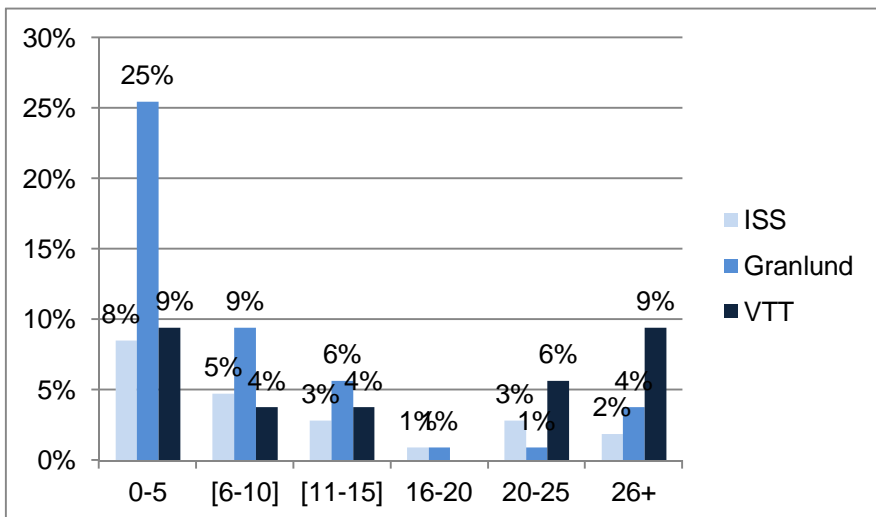
Role total

Legend:
- 0-5
- (6-10)
- (11-15)
- 16-20
- 20-25
- 26+

Figure 15. How many years have you been in your present role? (The amount of responses per period compared to amount of total responses.)

4.3   Results

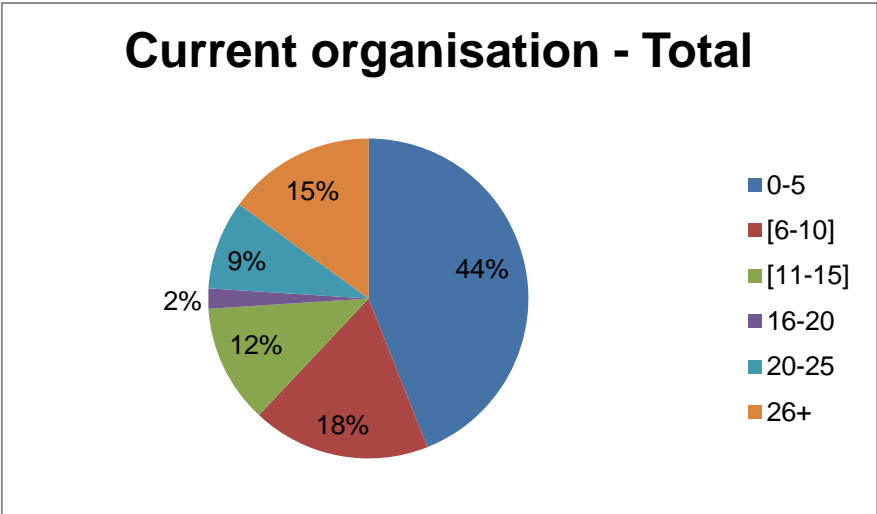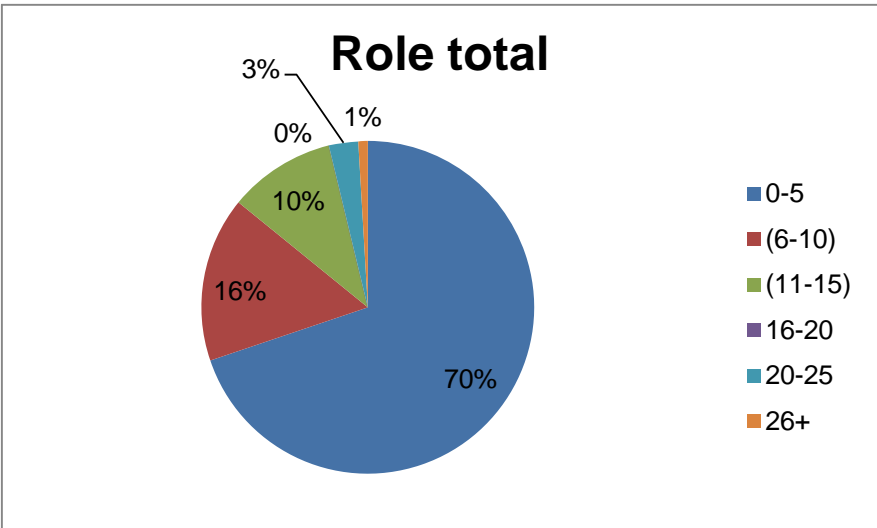The SPSS™ statistical program was used to analyse the survey data. Nonparametric statistical tests were used in the statistical analysis of the results, since they do not make restrictive assumptions regarding the underlying mathematical distribution. Since the sample size was quite small, the population structure is not exactly known, and therefore, nonparametric tests are a proper and safer alternative than parametric tests.

In the following only the statistically significant findings are listed.

4.3.1   Demographic-based comparisons

4.3.1.1   Comparing the organizations

We compared the three organizations in terms of Team Characteristics, Company Policies, Company Benefits, Recommendations, and Job Satisfaction. The following differences between the three organizations reflect mainly the fact that they are of a different type: VTT can be conceived as a kind of research organization; Granlund can be characterized as a consultant company, and ISS as an estate maintenance service company.

It was assessed the prediction of membership in one of the Organizations on the basis of different Team Characteristics. Significant differences were observed in 1) Co-Location (Figure 16) and 2) Common Agreed Goal (see Figure 17). Granlund respondents considered Co-location as more important than the respondents of the other two companies; ISS people, in turn, considered Common Agreed Goal as more important.
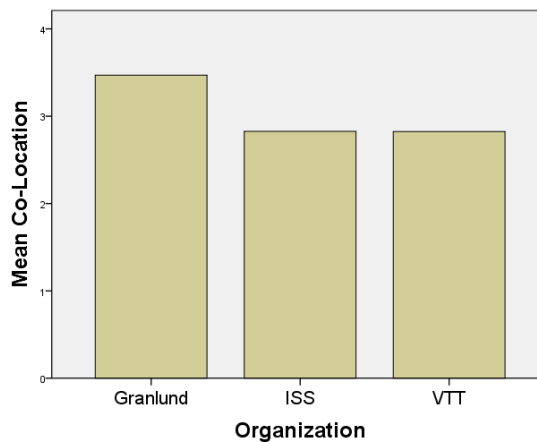
Figure 16. Co-location as a function of Organization.
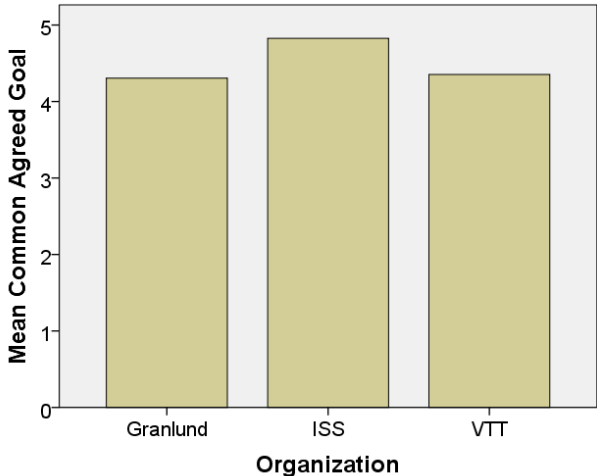
Figure 17. Common agreed goal as a function of Organization.

The following Company Policies have a unique contribution in predicting differ-ences between Organisations: 1) My organisation treats part-time and full-time employees similarly; 2) My organisation often expects employees to take work to home outside agreed office hours; 3) My organisation expects employees to help each other without additional compensation; and 4) My organisation has a good reputation in society. I am proud to work as part of it (see Figure 18).

VTT respondents agreed with the first three statements more strongly than the respondents of the other two companies. ISS respondents disagreed with the fourth statement more strongly than Granlund and VTT respondents.

Figure 18. Factors of Organizational Policy that are associated with Organization.

The following Company Benefits have a unique contribution in predicting differences between Organisations: 1) Free coffee and tea at work, 2) Sporttipassi, Kulttuuripassi, Liikuntaseteli, Kulttuuriseteli, 3) Company car (for travels in work-hours), 4) Opportunity to work abroad, 5) Company credit card (for work related expenses), 6) Company subsidised mobile phone (limited personal calls, taxable benefit), 7) State sponsored daily commute from home to office and back (annual calculation) State sponsored daily commute from home to office and back (annual calculation), and 8) International relocation services (company paid) (see Figure 19).

   Granlund respondents appreciated Free coffee/tea at work, Sporttipassi etc. and State sponsored daily commute more than the respondents of the other two companies; ISS respondents considered Company car and Company subsidised mobile phone as more important than Granlund and VTT people; and the VTT respondents appreciated Opportunity to work abroad, Company credit card and International relocation services more than the Granlund and ISS respondents. As stated above, these differences can be understood to reflect the differences in purposes and roles of the three companies.
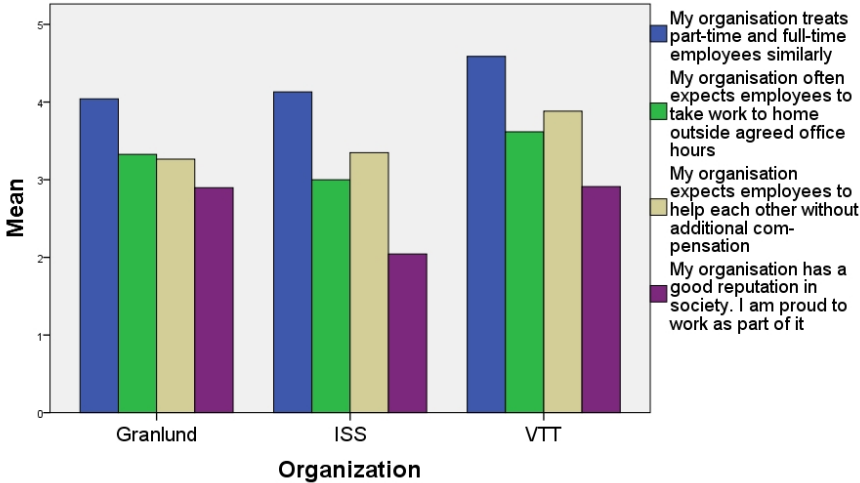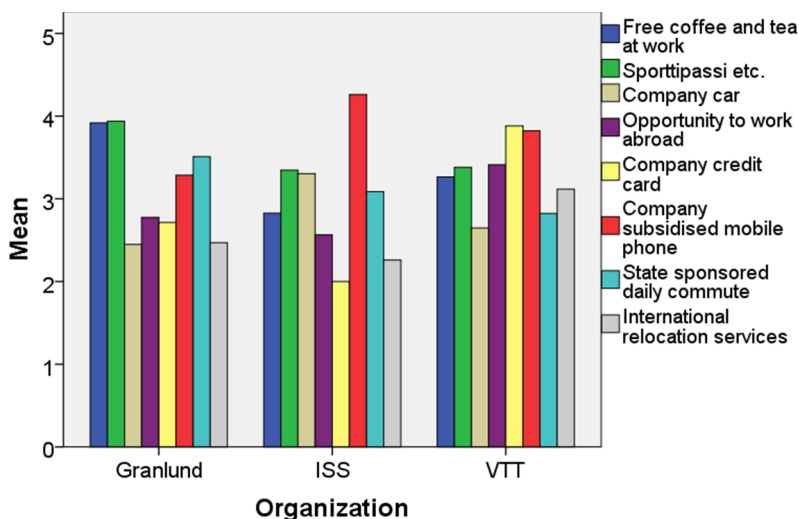

Figure 19. Organizational Benefits that are associated with Organization.

The following recommendations have a unique contribution in predicting differences between organisations: 1) Cafeteria serving outside lunch hours and 2) Laundry service and delivery. These recommendations were appreciated significantly more by the ISS respondents than people from the other two organizations.

   It was assessed the prediction of membership in one of the three organizations (Granlund, ISS and VTT) on the basis of different aspects of Job Satisfaction. The effect of the following predictors was significant: 1) Vacation/Leave Policy, 2) Benefit Package, 3) Opportunity to Professional Growth, 4) Rewarding Practices, 5) Sense of Value for What You Do, 6) Challenge in Work, 7) Opportunity to Develop

and Implement Ideas, and 8) Flexibility in the Practice of Organizational Processes (see Figure 20 below).

VTT respondents were the most satisfied with Vacation/Leave Policy, Benefit Package, Sense of Value for What You Do, Challenge in Work and Opportunity to Develop/Implement Ideas; Granlund people were the most satisfied with Rewarding Practices and Flexibility in the Practice of Organisational Processes. ISS respondents were the least satisfied with Benefit Package, Rewarding Practices and Sense of Value for What You Do.
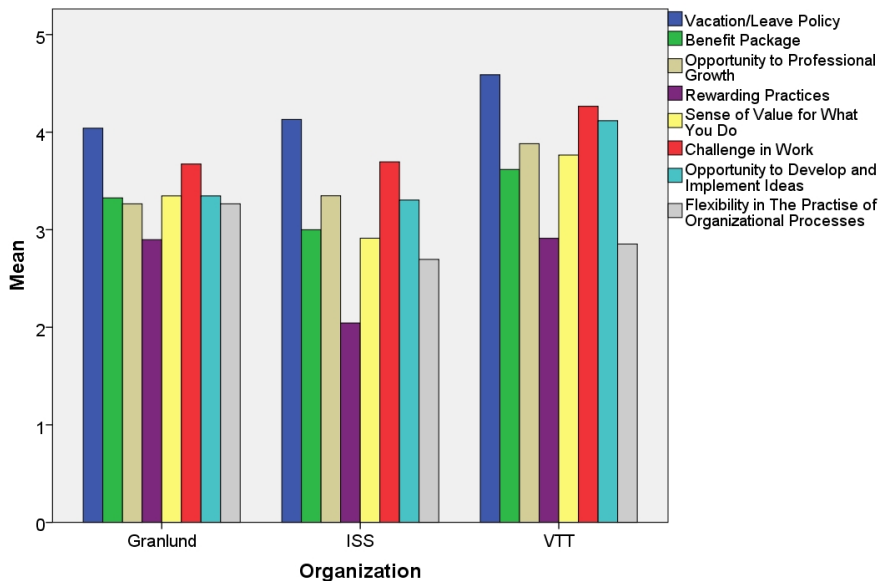
Figure 20. Factors of Job Satisfaction that are associated with Organization.

4.3.1.2 Comparing men and women

Men and women were compared in terms of Team Characteristics, Company Policies, Company Benefits, Recommendations, and Job Satisfaction.

Regarding the different Company Benefits, Utilities (e.g. gym, lockers, showers, massage chairs) and Ergonomic furniture had a significant contribution in predicting differences between men and women: The male participants preferred more Utilities than the female participants, but for Ergonomic furniture the preference was reversed.

Female participants also recommend Cafeteria serving outside lunch hours more than men.

Flexibility in the practise of organisational processes was the only aspect of Job Satisfaction that has a contribution in predicting differences between men and women: Male were significantly more satisfied to the flexibility in the practice of organizational processes.

4.3.1.3 Comparing respondents from different age groups

The respondents that belong to different age groups were compared in terms of Team Characteristics, Company Policies, Company Benefits, Recommendations, and Job Satisfaction. The way job provides for steady employment was the only aspect of Job Satisfaction that has a significant contribution in predicting differences between participants of different ages. State sponsored daily commute from home to office and back was the only Company Benefit that has a significant contribution in predicting differences between participants of different ages. It seems to be that younger respondents considered this benefit somewhat less important than the older ones.

4.3.1.4 Comparing respondents from different educational levels

The respondents that have different educational levels were compared in terms of Team Characteristics, Company Policies, Company Benefits, Recommendations, and Job Satisfaction. The way company keeps employees informed about any changes that will affect them was the only Company Policy that has a significant contribution in predicting differences between participants of different educational level (Figure 21). Excluding the Else group, it seems to be that respondents who have a lower level of educational attainment considered that their organization does not keep them well informed about changes.
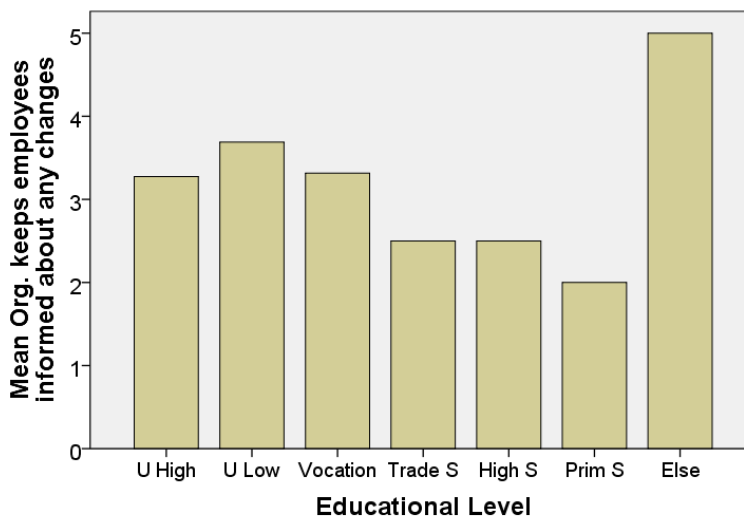

Figure 21. Organization keeps employee**s informed about any changes as a function of Educational level. U High = University** High; U Low = University Low, Vocation = Vocational school, Trade S = Trade school, High S = High school, Prim S = Primary school.

The following Company Benefits have a unique contribution in predicting differences between participants of different educational level: 1) Free parking for employees, 2) Car leasing (taxable benefit), 3) Opportunity within your company to work abroad, 4) Company credit card (for work related expenses), 5) Company subsidised mobile phone (limited personal calls, taxable benefit), 6) State sponsored daily commute from home to office and back (annual calculation), 7) Organisation encouraged practise of car pooling, and 8) International relocation services (company paid) (see Figure 22 below).

Car Leasing was appreciated more by respondents who have a lower level of educational attainment (high/primary school), whereas Company Credit Card was somewhat less appreciated by them. International Relocation Services were considered as somewhat more important by respondents who have a higher level of education.
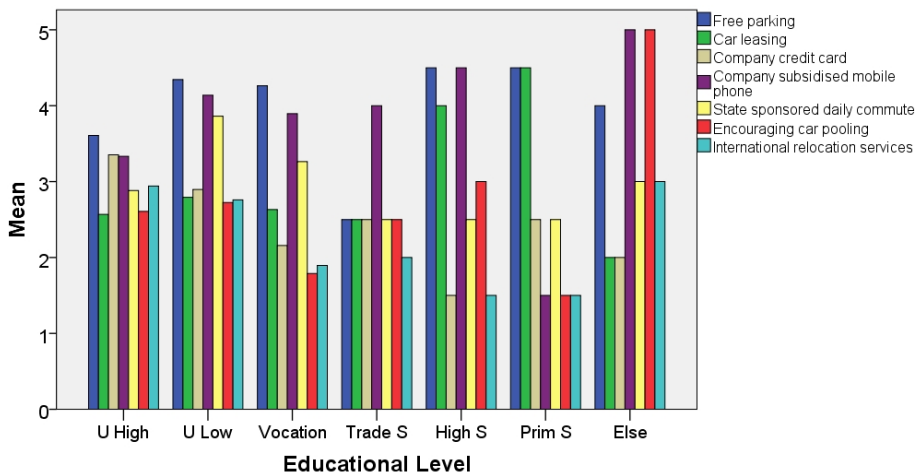
Figure 22. Organizational Benefits that are associated with Educational level. U High = University High; U Low = University Low, Vocation = Vocational school, Trade S = Trade school, High S = High school, Prim S = Primary school.

4.3.1.5 Comparing respondents from different employment durations

The respondents that have different educational levels were compared in terms of Team Characteristics, Company Policies, Company Benefits, Recommendations, and Job Satisfaction. The only Company Policy that had a significant contribution in predicting differences between participants of different employment time was My organization treats part-time and full-time employees similarly: the longer a respondent has been working in the organization the more satisfied he/she is with this policy.

The following Company Benefits had a significant contribution in predicting differences between participants of different employment time: 1) Utilities (e.g. gym,

lockers, showers, massage chairs), 2) Company subsidised mobile phone (limited personal calls, taxable benefit), 3) State sponsored daily commute from home to office and back (annual calculation), and 4) Organisational allowance for transportation on work related trips (see Figure 23). Utilities, such as utilities gym, lockers, showers, and massage chairs, were somewhat more important to those respondents whose employment time has is less than five years. Those respondents who have been working longer in the organization considered Company subsidised mobile phone as more important than those who have been working a shorter period in the organization. On the other hand, State sponsored daily commute from home to office and back was less important to those respondents who have been working over 20 years in the organization. Apparently, this finding reflects the fact that those respondents who have been working longer used their own car in travelling to and from work. Organisational allowance for transportation on work related trips was somewhat more important to those who have been working shorter in the organization that for the other cohorts.
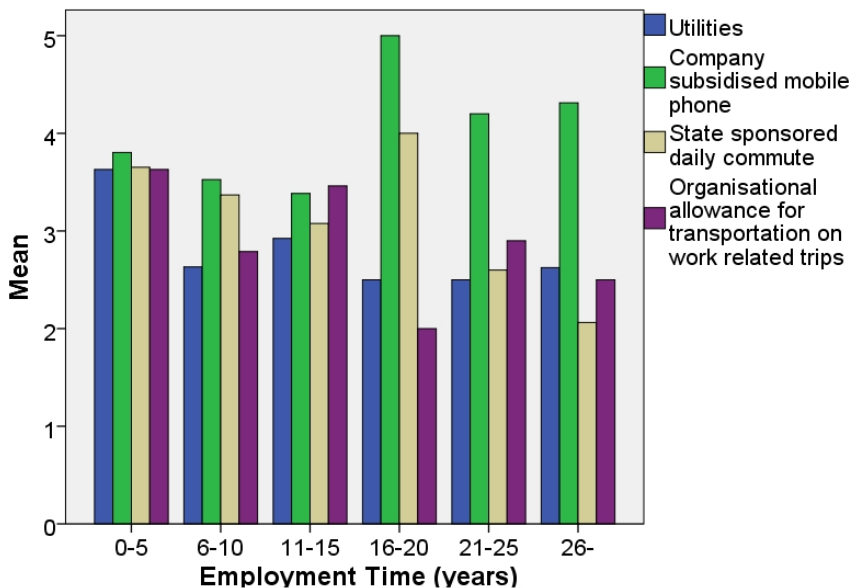
Figure 23. Organizational benefits that are associated with Employment time.

The following Recommendations had a significant contribution in predicting differences between participants of different employment time: 1) Kindergarten (day care centers, baby sitters), and 2) Saunakamari for employee's to use outside office hours. Interestingly, those who have been working 16–20 years in the organization would recommend to their organisation these benefits/facilities more strongly than the other cohorts (Figure 24).

Figure 24. Recommendations that are associated with Employment time.

The following aspects of Job Satisfaction had a significant contribution in predicting differences between participants of different employment time: 1) Professional interaction with other departments, 2) Freedom to question decisions and practices, and 3) The chance to influence the decision makers (see Figure 25). Respondents who have been longer in the organization were more satisfied with professional interaction with other departments and the chance to influence the decision makers than those respondents who have been working a shorter period of time in the organization. Those respondents who have been worked in the organization for 10–20 years were somewhat less satisfied with their opportunity to question decisions and practices.
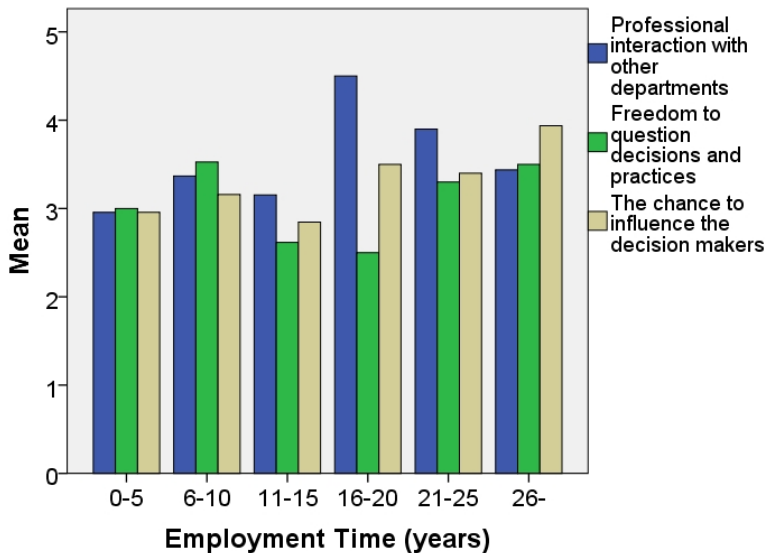
Figure 25. Factors of Job Satisfaction that are associated with Employment time.

4.3.2 Recommending your company to friends

It was asked how strongly you would recommend your company to your friends. The following aspects of Company Policy had a significant contribution in predicting differences between participants differing in their recommendations: My organization 1) allows employees to be in charge of their work-life balance, 2) resents employees who take time off for family/personal reasons, 3) often expects employees to take work to home outside agreed office hours, 4) prefers employees to find solutions among themselves when balancing work and personal responsibilities rather than involving management, 5) listens to ideas of employee's and acts on these ideas, 6) considers the needs of employees (e.g. well-being, autonomy, competence, relationships) as important as organisational needs (e.g., security), and 7) has a good reputation in society, I am proud to work as part of it (Figure 26).

All in all, those respondents who were more willing to recommend their workplace to their friends evaluated their workplace more positively than those were less willing to recommend their workplace.
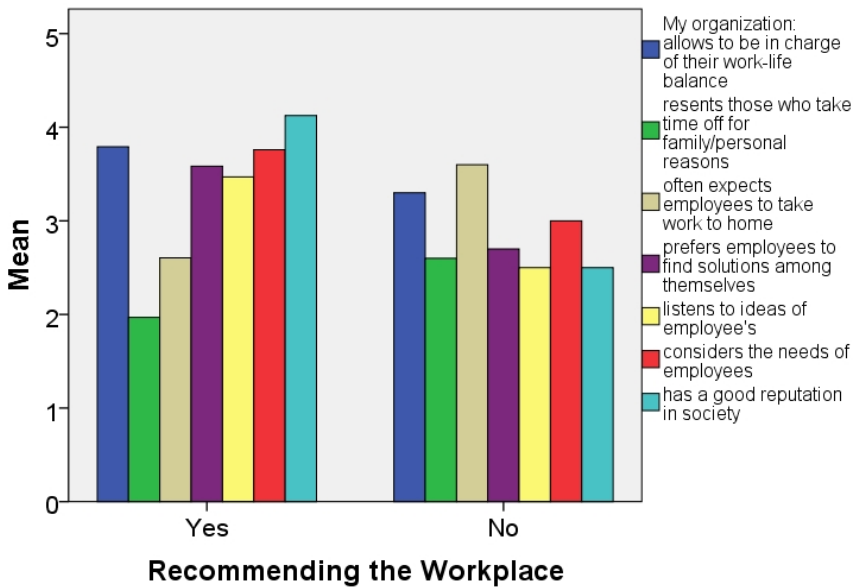
Figure 26. Factors of company policy that are associated with Recommending the workplace.

The following aspects of Company Benefits had a significant contribution in predicting differences between participants differing in their recommendations: 1) Recreational benefits as subsidised hobby clubs at work, and 2) Ergonomic furniture. Those respondents who were more willing to recommend their workplace to their friends considered these benefits as more important than those who were reluctant to recommend their workplace to outsiders.

The following aspects of Job Satisfaction had a significant contribution in predicting differences between participants differing in their recommendations: 1) Amount of administrative support, 2) Sense of accomplishment, 3) Professional interaction with other departments, 4) Availability of experienced mentors, 5) Opportunity for professional growth, 6) Opportunity to expand your skillset, 7) Educational opportunities, 8) Freedom to question decisions and practices, 9) Recognition for your work from supervisors, 10) Recognition of your work from peers, 11) Level of autonomy (freedom to use my own judgement), 12) Evaluation process and policy, 13) Sense of value for what you do, 14) Challenge in work, 15) Opportunity to develop and implement ideas, 16) Sense of how my work fits into the organisational big picture, 17) Self-motivation, 18) Flexibility in the practise of organisational processes, 19) Recognition for services performed outside your normal duties, 20) The chance to influence the decision makers, 21) The way my boss handles his/her workers, 22) The competence of my supervisor in making decisions, 23) The chance to learn from colleagues, 24) Problem solving, and 25) Variety in Work tasks.

For all these factors, those who would strongly recommend the company to their friends received higher scores than those who are reluctant to recommend it to outsiders.

4.3.3 Downshifting

In their report "Downshifting in Australia", Hamilton & Mail (2003) define downshifters as "those people who make a voluntary, long-term, lifestyle change that involves accepting significantly less income and consuming less". The authors compare the Australian context and emerging trends there with the North American situation by comparing the results of their national survey to the one conducted by Schor (1998).

Schor (1998) remarks at how discussions about downshifting in the early 1990s were entering popular culture via media coverage of selected yuppies' personal accounts of abandoning a fast-track corporate career for the simple life. She is surprised at the lack of "academic research aimed at validating or disproving the existence or importance of downshifting" following the popular press coverage. Schor warns that due to neglect by the academic community, this trend has not been adequately defined. She enlists the "types of downshifts that are possible: 1. Income downshift: a reduction in annual income; 2. Spending downshift: a reduction in annual spending; 3. Hours downshift: a reduction in hours worked; 3. Pace of life downshift: a reduction in daily pace of life and 4. Geographic downshift: a move to a smaller, slower-paced locale." (P. 68.) In addition downshifting can be considered as: voluntary, involuntary, temporary or permanent.

Tan's (2000) investigation reveals 3 broad motives for downshifting: getting balanced, getting free and being authentic. Regarding contributors to the trend, Tan (2000) names technological change, a growing emphasis on work, economical changes and organizational restructuring. In their summary of 6 use cases, Hamilton & Mail (2003) refer to some of the less desirable experiences of downshifting such as a perceived loss in status, isolation, judgement and need for self-redefinition.

Hamilton & Mail (2003), Schor (1998) and Tan (2000) focus on voluntary downshifting and include various motivations for downshifting and triggering events from sudden illness or death of a loved one to a longer process of inner questioning. Voluntary downshifters choose themselves to reduce their income and consumption levels and consequently adapt their lifestyles towards a more balanced and fulfilled life. Involuntary downshifters are those who have no choice but to change their lifestyle as a consequence of, for instance, an organizational restructuring. In her investigation Tan (2000) had included in her sample those who had accepted voluntary redundancy packages, justifying this decision "since they claimed that they would have undertaken a career change of some form in any case, irrespective of a package, although the package did facilitate the form and timing of the downshift". It seems that the distinction between voluntary and involuntary downshifting is not clear cut and relies on the interpretation of events and their consequences.

4.3.3.1 Participants' interest in downshifting

The following aspects of Company Policies had a significant contribution in pre-dicting differences between participants differing in their interest in Downshifting: My organization 1) allows employees to be in charge of their work-life balance, 2) allows employees to talk about personal life at work, 3) resents employees who take time off for family/personal reasons, 4) serves as an example in self-development and training, 5) listens to ideas of employee's and acts on these ideas, 6) expects each employee to do his/her fair share of work, 7) considers the needs of employees (e.g. well-being, autonomy, competence, relationships) as important as organisational needs (e.g. security, profits, reputation), 8) encour-ages employees to respect each other and work as a team, 9) needs to collabo-rate with others in order to provide better service to its customers, 10) keeps em-ployees informed about any changes that will affect them, 11) encourages em-ployees to find new ways to improve their work, 12) keeps employees up-to-date with developments, news, information, etc., and 13) makes decisions without staff input (Figure 27 below).

All in all, those who were less interesting in Downshifting saw their company in a more positive light and were more satisfied for their Company's positively-valenced policies than those who were more interested in Downshifting.

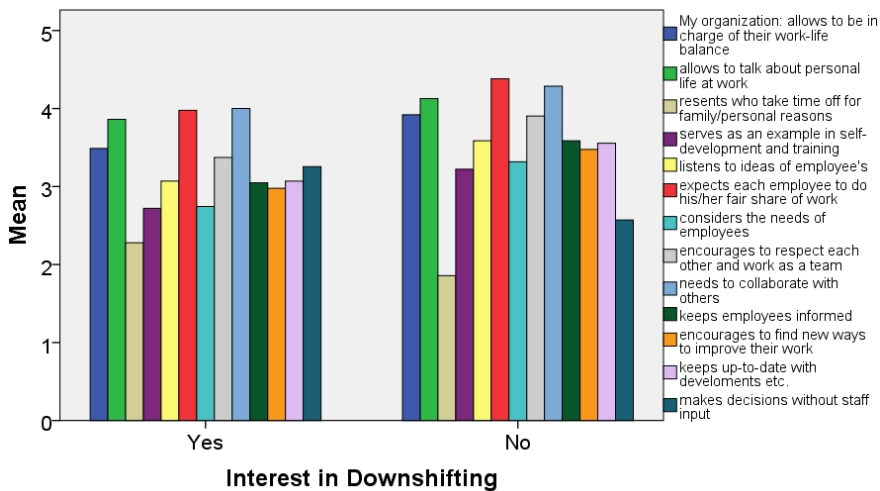**Figure 27.** Factors of company policy that are associated with interest in down-shifting.

The following aspects of Team Characteristics had a significant contribution in pre-dicting differences between participants differing in their interest in Downshifting:

Team Characteristics: 1) Personalities, 2) Leadership, 3) Common agreed goal, and, 4) Sharing of workload. Those were less interested in Downshifting had higher

ratings on the above-mentioned Team Characteristics than those who were more interested in Downshifting.

The following aspects of Big-Five personality domains had a significant contribution in predicting differences between participants differing in their interest in Downshifting: 1) Emotional Stability, and 2) Openness to Experience. Those were more interested in Downshifting received higher rating on Emotional Stability and Openness to Experience than those who were more interested in Downshifting.

The following aspects of Job Satisfaction had a significant contribution in predicting differences between participants differing in their interest in Downshifting: 1) Time allotted for creativity, brainstorming, wild ideas, 2) Time allotted for running personal errands during office hours, 3) Amount of administrative support, 4) Sense of accomplishment, 5) Input into organizational policy, 6) Freedom to question decisions and practices, 7) Recognition for your work from supervisors, and 8) Sense of value for what you do.

Systematically, those who were less interesting in Downshifting were more satisfied with the above-mentioned factors of their work than those who were more interested in it.

4.3.4 Comparing more and less satisfied employees

A summary variable was created by summing up all the survey items that asked respondents to indicate how satisfied they are in their current job with respect to the specified factors. After that, the respondents were categorized into two groups according to the summary scores: those were less satisfied and those were more satisfied with their organization.

The following Company Policies had a significant contribution in predicting differences between participants categorized as Less Satisfied and More Satisfied: My organisation 1) allows employees to be in charge of their work-life balance, 2) resents employees who take time off for family/personal reasons, 3) often expects employees to take work to home outside agreed office hours, 4) considers employees devoted if they put their jobs before their personal life, 5) prefers employees to find solutions among themselves when balancing work and personal responsibilities rather than involving management, 6) cares about employees by providing competitive pay, training and other benefits, 7) cares about employees' education and training, 8) listens to ideas of employee's and acts on these ideas, 9) expects each employee to do his/her fair share of work, 10) considers the needs of employees (e.g. well-being, autonomy, competence, relationships) as important as organisational needs (e.g. security, profits, reputation), 11) encourages employees to respect each other and work as a team, 12) has a good reputation in society, I am proud to work as part of it, 13) needs to collaborate with others in order to provide better service to its customers, 14) keeps employees informed about any changes that will affect them, 15) encourages employees to find new ways to improve their work, 16) keeps employees up-to-date with developments, news, information, etc., and 17)makes decisions without staff input.

As can be seen below (Figure 28), those who were more satisfied with their company also saw their company in a more positive light and gave higher scores to their company's positively-valenced policies than those who were less satisfied. Similarly, those who were less satisfied with their company gave higher scores to their company's negatively-valenced policies than those who were more satisfied.
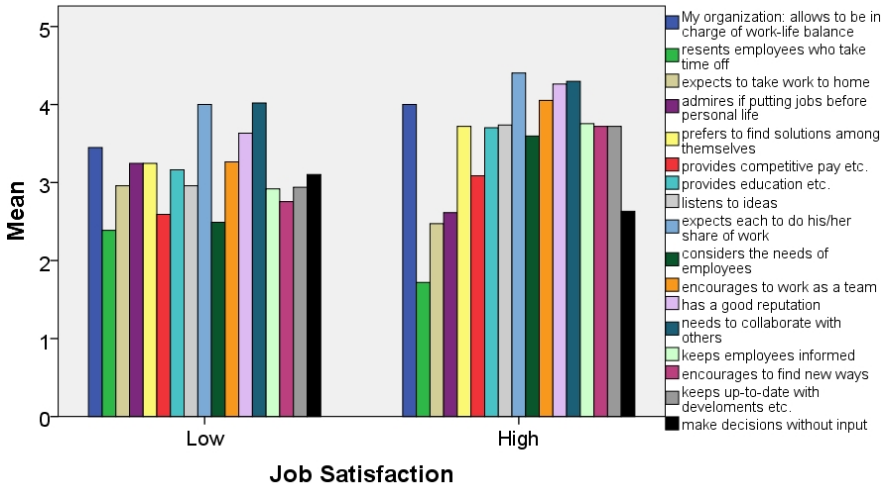
Figure 28. Factors of company policy that are associated with high/low Job Satisfaction.

The only Company Benefit that had a significant contribution in predicting differences between participants categorized as Less Satisfied and More Satisfied is the opportunity to have a Company Credit Card: Those were more satisfied with their company considered the company credit card as more important than those were less satisfied with the company, reflecting possibly their higher commitment to their organization (Figure 29).
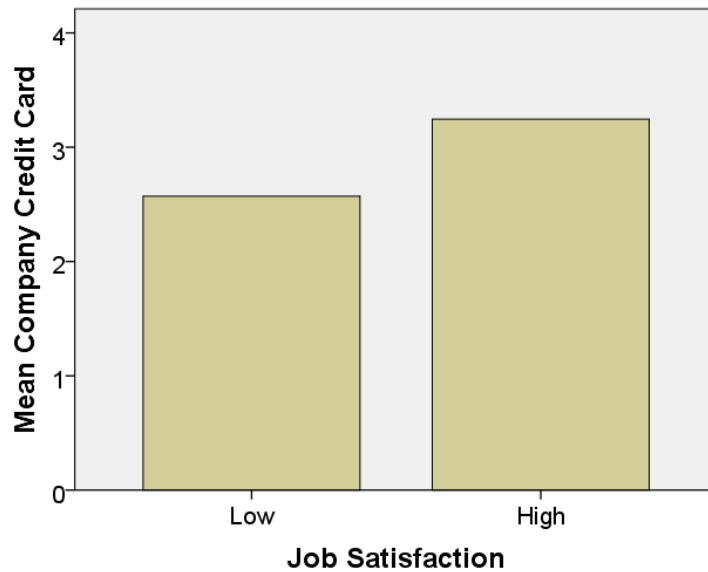
Figure 29. Appreciation of company credit card as a function of high/low Job Satisfaction.

None of the Recommendations or Team Characteristics had a significant contribution in predicting differences between Less/More Satisfied respondents.

The following Big-Five personality domains had a significant contribution in predicting differences between participants categorized as Less Satisfied and More Satisfied: 1) Extroversion, 2) Agreeableness, 3) Emotional Stability, and 4) Openness to Experience (see Figure 30). As can be expected, those participants who were more satisfied with their organization received higher scores on Extroversion, Agreeableness, Emotional Stability and Openness to Experience than those were less satisfied.
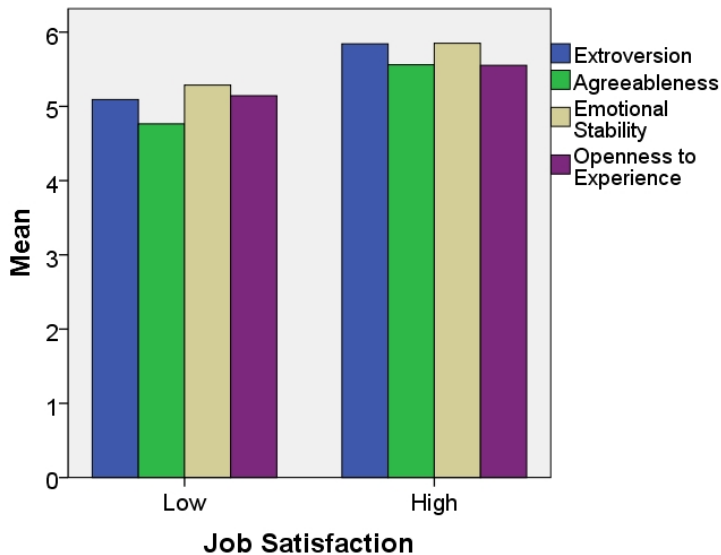
Figure 30. Big Five factors that are associated with high/low Job Satisfaction.

4.4 Discussion

The outcome of the Social Enablers survey was unexpected in that most of the participants did not seem to appreciate the hypothesised or actual social enablers in their working life even if such enablers would cover those aspects of work that take place outside the confines of the office. For instance social enablers of New-WoW in the form of current organizational HR practices and public social services would contribute to making Downshifting in Finland possible. Yet when confronted with real world constraints on individual, organizational and societal levels, individuals might choose to remain "closet downshifters" (Hamilton & Mail, 2003), organizations might choose to postpone large-scale workplace updates until the trend reaches a critical mass for instance through the increase of Gen-Y graduates entries into the workforce and those approaching retirement opting to delay their exit from the workplace, and society including the state might keep the debate on the backburner until Downshifting become reflected in voting and non-conforming behaviours.

Since the survey asked participants both about the expected impact of hypothesised social enablers and also about the importance of actual social enablers in their organization, the research team started to suspect that the under- appreciation might be due to Finnish society: Finnish knowledge workers take social enablers for granted, because the state is expected to provide the most basic forms of benefits. Due to this surprising result, we decided to investigate further by conducting focus group interviews. In order to investigate a potential Finnish bias, we agreed to interview foreign knowledge workers.

As stated above, the differences between the Granlund, ISS and VTT in survey response patterns reflected mainly the fact that they are of a different type: VTT can be conceived as a kind of research organization; Granlund can be characterized as a consultant company, and ISS as an estate maintenance service company. People working in these organizations differ in their commitment to their work, they see their organization in a different light, and their work-related preferences are different.

Overall, only few company policies/benefits, team characteristics, recommendations and aspects of job satisfaction predicted differences between respondents of different gender, age group, educational level and employment duration. This may in part be due to the fact that the sample size was relatively small, and therefore it is also impossible to evaluate the effect of demographic factors that have a low incidence. Therefore, it is also impossible to build up a statistical model of the dependencies between personal, team-level and organizational factors. The results of the above-mentioned statistical analyses can at best be considered as an input to the qualitative interpretation of focus-group discussion data.

5. Focus group discussions

5.1 Preparation and execution of interviews

The guiding research question (RQ) behind the focus group interviews was adapted from that of the survey. While in the survey we were interested to know "What?", in the focus groups we sought for the "How?" and the "Why?". The guiding RQ was transformed into: "*How aspects of the social environment enhance or disrupt Knowledge Work – on individual, team, organizational, societal levels. Why?*". We held 3 Finnish-speaking focus groups, 1 per participating organization and 1 mixed group in English, of foreign knowledge workers from 2 of the 3 participating RYM organizations. Participants were recruited on the basis of their response to the ending survey question, which asked them to mark their interest to participate in an interview. Among those volunteers we selected knowledge workers who were not occupying a management role. The research team agreed that the management point of view had been emphasised in most of the practitioner interventions to date. The international group was recruited via a convenience sample, namely willing foreign knowledge workers known or referred to the research team were invited to join the discussion. Each of the focus groups lasted from 1.5 to 2 hours. The 3 Finnish focus groups were hosted at the respective organizational premises. The international focus group was hosted by the participating research organization. All focus group discussions were recorded with the participants' consent and transcribed by the group facilitator or co-facilitator. The number of participants ranged from 4 to 9. Both genders were represented per group. The international group had a wider age representation.

5.2 Data analysis

The transcripts were content coded both manually and by Atlas.ti, a software package for qualitative data analysis. Content codes were created via both a top-level approach and a bottom-up approach. In the top-down method, some coding labels were initially generated from keywords adopted within the applied theoretical traditions, other labels referred to the impact and implementation levels and still others referred to themes commonly used within NewWoW academic and

practitioner circles. Bottom-up coding refers to assigning labels which are close to the data. As one reads the transcript, the essence expressed in the sentence or paragraph is assigned a label. As the number of bottom-up codes can multiply easily, these are processed at regular intervals. Similar codes are merged and codes pertaining to an identifiable theme are grouped under Coding Categories. Each transcript went through several iterations of coding.

The first round of coding was manual, i.e. it was applied without the assistance of Atlas.ti by the facilitator or co-facilitator of the focus group. As each researcher re-read the transcripts which he or she had generated and started to notice themes, we coded selected quotations and collected the codes. As part of the coding process, we were reflecting on the research question. We realized that there was a nuance to the original guiding research questions both for the survey and focus groups, namely that they can be interpreted in two ways. The level of interest in terms of individual, team, organization and societal level can refer to either the Social Environment or the Knowledge Work. We decided to consider both interpretations to make the most out of the elicited material:

- What/How/Why aspects of social environment enhance or disrupt *knowledge work*? (on individual level ? team level? organizational level? Societal level?)

- What/How/Why aspects (on the individual or team or organizational or societal level) within the *social environment* enhance or disrupt knowledge work?

The second round of coding was software assisted and was conducted by the same researcher for all the four focus group transcripts. The coding strategy here was to be more thorough and to look at the source text with new eyes. Software assisted coding facilitates and assists in the management of codes which are close to the data. The resulting codes and their associations to selected quotations from the second round were reviewed by the other researchers in a third round of coding. The aim of this last round was to verify each other's interpretations, especially for coding of text which was not the native language of the coder. Variations in interpretations and the respective codes were discussed in researcher meetings. All discrepancies were resolved and the relevant codes were updated accordingly. Most discrepancies related to the assignment of codes implying a level of impact or implementation. These were due to the use of the Finnish Passive tense. Segments of text applying this tense were at times misinterpreted and miscoded by the non-native Finnish coder.

The final Code list is provided as Appendix A.

5.3   Results

All groups were discussing different issues from exactly the same set of guiding questions. Although the focus group facilitators did not use the question probes as a script, nevertheless the discussion guidelines were intended to facilitate the

emergence of a common thread within the discussions since these were facilitated by different researchers. In the Finnish groups the discussion largely emphasised the physical and technological enablers with one exception, where social enablers in the form of HR policy regarding overtime was discussed because there were two workers' union representatives among the participants. This group was also bolder and took the focus group as an opportunity to vent out criticisms towards that organization's management and those responsible for daily operations. The popular themes surrounded "inequality" in some form or another. In these discussions the impact was felt at the individual and team levels whereas the implementation of practices leading to "unfairness" was deemed accountable at the organizational level. In one organization, the discussion focused on practical matters related to an individual's estimated efficiency e.g. disturbances or disruptions both while working from the office or from remote locations (e.g. home). In another organization, the participants were clearly influenced by the champion of the NewWoW program in that organization. Despite of a few disparaging comments related to the general management style, the essence of the discussion involved participants repeating the "NewWoW-speak" they were accustomed to hear and sharing their interpretations of the mantras.

In the international group, the discussion was more varied and a common observation was that compared to other countries the work-life situation is much better in Finland for a number of reasons. Codes such as "flexibility" and "autonomy" were prominent. Besides fitting well into the SDT framework, the general themes of the international focus group seem to confirm the research groups' initial proposition that perhaps Finns expect social enablers or what in other countries are considered to be private services (or organization-provided NewWoW perks to a few) to be provided by the state as part of public services e.g. recreation vouchers, daycare etc. or as a right to be enforced by the collective bargaining power of Workers' Unions. On the downside, foreign Knowledge Workers also expressed feelings of "fragmented-self" & "lack of a genuine collegial work culture" pointing to a low satisfaction for the SDT basic need of "Relatedness". One conclusion is perhaps that the level of satisfaction of such needs remains not only Subjective but also Relative. The consequences may be especially poignant for a globally mobile work force that has to adapt to the host country and host organizational cultures. In these cases, something has got to give. Those who choose to remain in Finland admit that the balance works out in their favour despite the compromises made. As our international participants' compared what they used to enjoy or tolerate in their countries of origin or in other foreign lands wherein they have study or work experience, they expressed appreciation to the better side of what Finnish working life presents to them daily. Nonetheless the expectation for a double standard of treatment was hinted at during the discussion. While reflecting on the opportunity costs that are involved in living and working in Finland, some of the foreign knowledge workers almost expected a Positive Discrimination Policy in their regard. This allusion could also be interpreted as a way to preserve one's distinct cultural identities while at the same time wanting to assimilate within the

local working culture. A superficial example to illustrate this point is the debate about the daily working language in the case organization.

Selected extracts from the combined group discussions are provided as 5 code network views in Appendix B. The visualisations are constructed around themes embedded within the research question and suggested by the chosen theoretical frameworks. They serve to capture the essence of the group discussions while highlighting participants' viewpoints against the backdrop of daily workplace realities. While interpretations may vary, an attempt to describe the essence of each view is made by reflecting upon the actual participants' input.

5.4 Discussion

Despite organizational investments in physical and technological resources as well as organizational efforts towards efficient operative processes to transform the work environment according to NewWoW principles, the overall impression from the group discussion is that what most of the participants cared deeply about are issues that personally affect them or their close colleagues. The need for Flexibility and Trust from both sides was highlighted. This particularly resonates with Organizational Management research, which is gradually building evidence for both the spread and the benefits of Job Crafting, defined as "the physical and cognitive changes individuals make in the task or relational boundaries of their work" (Wrzesniewski & Dutton, 2001). The drivers for Job Crafting arise from three personal needs. Firstly to exert some control over the job to avoid alienation, secondly to build a positive self-image, and thirdly to connect with others. The three aforementioned needs echo the basic psychological needs of Self-Determination Theory: namely Autonomy, Competence and Relatedness. The theory of job crafting is also nicely in agreement with Bandura's social cognitive theory (see 2.5.2), according to which people have the ability and power to elicit changes by their actions.

The above-mentioned observations are also in line with the ideas of social construction, according to which one of the main success factors for work organizations is their ability to promote dialogues and conversations among different employee groups that activate collaborative processes working for the company's good (Gergen, 2009).

The separation of work from a fixed working location and regular office hours means that the concepts of employment relationships and psychological work-contract need to be revisited. From the employee perspective, agile work (knowledge or service work that can be carried out from any place at any time) could signify autonomy, control and a better work-life balance. From the organizational perspective, agile work could translate in bottom-line savings as in the case where long term real-estate leases are traded in for short-term tailored agreements with Facilities and Service providers. In NewWoW best practice benchmarking, successful implementations have been attributed to the collaboration among operative functions: Real Estate, Security, Procurement, IT and HR.

6.   Conclusions

The aspiration for a better work-life balance has been the subject of Finnish discussion groups, both in academic and practitioner circles as well as a subject in social policy debates during the past few years. Professor Juha Siltala's book "Työelämän huonontumisen lyhyt historia" ("A short history of the deterioration of working life"), published in 2004, was one of the starting shots for the discussions on employees' worsening working conditions. The heated debate on the topic has been going on since then in various forums. For example, "The First International Interdisciplinary Conference on Research on Work" (2013) held in August 2013 in Turku, Finland addressed "Continuities and Disruptions in Modern Life" including research topics as "Work and Family"; "Work and Careers"; "Decency at Work, Wellbeing at Work"; "The Place of Theory in Working Life Research"; "Legal Aspects of Work" etc. Moreover one of focus area of Tekes – the Finnish Funding Agency for Innovation is "Vitality of People", which "aims to promote overall wellbeing and develop an efficient, effective and high quality social and health care service system .Work is an important source of learning and well-being".

In social media there has been an intermittent proliferation of blog entries on the subject of "Downshifting" (*downshiftaus* in Finnish) since 2006, presumably as a jerk reaction to media coverage of the trend (or aspirations thereof) locally or abroad but also as running commentaries to local organizational and social policy debates. Social media discussions range from the cynical to the idealized view of Downshifting, from those who not only support downshifting but also claim it a national duty, to those who discredit downshifters' motivations and so are suspicious of practices enabling it. For instance, in 2011, the Finnish National Institute for Health and Welfare (THL) publicly reported on national news that "Downshifting reinforces traditional gender roles".

An incumbent Finnish telecommunications firm has been laying off knowledge workers for a number of years therefore the Downshifting trend (or permutations thereof) might be on the increase. Most of these redundant experts are incentivized to start a company which may mean that the work-life balance becomes worse than when they employees. Some redundant experts who find employment elsewhere might have to settle for a lower wage, although the hours of work would not be less. Therefore without generalizing, it is difficult to qualify a change in lifestyle as a downshift, irrespective of the original motivations as being voluntary

or involuntary. Is the ultimate outcome of downshifting to achieve a well-balanced life? Do the benefits compound at a societal level?

Apart from the current economic downturn there might be other motivations to encourage social policies which would enable the adoption of the Downshifting practise. It is said that Finland has one of the highest suicide rate and 1 of every second marriage ends up in divorce. Nearly 1 in 5 Finns takes drugs for depression and mood disorders. High stress levels are said to contribute to these outcomes. Hakala (2012) describes Finns as "an anxious lot, with a narrow view of life dominated by the expectations of others". Although this statement might reflect a stereotype, one cannot easily dismiss his call for action: "something must be done to change Finnish working life and the way of life in general". For example, according to Pekka Himanen (2013), we need in Finland openness and trust to others and more positive attitude to entrepreneurship and innovativeness.

Although Finnish employment law through the "Working Hours Restriction Act" states that work time has to be tracked, it allows for flexibility in work-time tracking. Organizations are free to define their work-time tracking methods, processes, boundary conditions and staff exceptions within the stated legal limits. Flexibility in terms of choice of work location (for instance remote working from home, third places such as cafeterias, customer premises or on the move e.g. in trains and planes) rests also within the discretion of the organization. Moreover even if organizations might have a democratic formal policy with regards NewWoW practices such as remote work, our discussions with the case organizations' employees revealed that such permission remains at the discretion of one's supervisor. So if working from anywhere at any time is a new practice to be scaled in an organization, it is important to have more equality and trust in place otherwise the implementation of NewWoW practices continues to add to the bureaucracy and consequently creates inefficiency rather than increase productivity and wellbeing.

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Appendix A: Code list

CODESET Code Name *Abbreviations are expanded at the end*	Number of Quotations linked to the Code. Quotations refer to text (minimum length a sentence, maximum length a paragraph representing an individual speaker's turn). Quotations are extracted from transcribed Focus Group Interviews.					
	Case 1: VTT	Case 2: Granlund	Case 3: ISS Palvelut	All Finnish Groups	International Group	TOTALS (FIN + INT)
BASIC PSY NEEDS (SDT)						
Basic Psy Needs_Autonomy	3	0	2	5	20	25
Basic Psy Needs_Competence	2	1	3	6	15	21
Basic Psy Needs_Relatedness	2	0	0	2	20	22
COLOCATION						
CoLocation_Benefits	10	4	2	16	0	16
CoLocation_Disturbances	1	6	0	7	1	8
CONTEXT						
Context_KW_Environment	22	0	1	23	0	23
Context_Overlap	3	1	3	7	2	9
Context_Social	10	0	0	10	30	40
Context_Work	3	0	0	3	18	21
DEF FLEXIBILITY						
DEF Flexibility_Choice&Adapt	3	11	14	28	14	42
DEF Flexibility_Rulebend/Abuse	1	2	2	5	6	11
DEF Flexibility_Tolerance	1	2	6	9	10	19
DEF INFLEXIBILITY						
DEF Inflexibility_Conseq	1	0	2	3	2	5
DEF Inflexibility_Norms	1	0	2	3	12	15
EFFICIENCY						
Efficiency_Org	3	0	0	3	1	4
Efficiency_Org_Joke/Critique	0	0	0	0	7	7
Efficiency_Person	2	2	0	4	4	8

ENABLER TYPE						
Enabler Type_Physical	8	10	7	25	3	28
Enabler Type_Social	1	1	0	2	5	7
Enabler Type_Tech	5	5	10	20	11	31
IMPACT LEVEL						
Impact Level_Org	14	25	53	92	11	103
Impact Level_Per	41	43	106	190	38	228
Impact Level_Soc	4	0	0	4	3	7
Impact Level_Team	24	24	23	71	15	86
IMPLEMENT LEVEL						
Implement Level_Org	37	28	27	92	24	116
Implement Level_Per	15	9	16	40	6	46
Implement Level_Soc	3	0	0	3	14	17
Implement Level_Team	18	13	5	36	8	44
NW IMPLEMENT						
NW Implement_Consultants	3	2	0	5	0	5
NW Implement_Dependency	0	5	12	17	0	17
NW Implement_Expectations	5	12	9	26	0	26
NW Implement_Forced	0	0	1	1	3	4
NW Implement_Foundations	1	5	0	6	3	9
NW Implement_Justify_Emotion	0	0	0	0	4	4
NW Implement_Justify_Legal	0	0	0	0	3	3
NW Implement_Lead by Example	3	10	14	27	0	27
NW Implement_Limit_Org	0	7	8	15	0	15
NW Implement_Must Revise	1	9	6	16	3	19
NW Implement_Policy&Agreemts	1	13	5	19	0	19
NW Implement_Practical Xperience	0	2	7	9	0	9
NW Implement_Process	0	5	5	10	0	10
NW Implement_Profiles	0	2	7	9	0	9
NW Implement_Reason_Org	3	5	13	21	10	31
NW Implement_Reason_Per	2	6	7	15	7	22

NW Implement_ Scope&Context	4	9	2	15	17	32
NW PRACTICES						
NW Practices_Adopt_ EaseofUse	0	4	6	10	3	13
NW Practices_Diffuse_ Networks	1	12	9	22	9	31
NW Practices_Incompatible	0	1	1	2	2	4
NW Practices_Raise Awareness	0	14	14	28	0	28
NW Practices_Union Negotiate	1	0	1	2	1	3
NW Practices_User Particip	0	5	6	11	0	11
NW PROMISES						
NW Promises_Disappoint	4	3	5	12	2	14
NW Promises_Ideal	2	1	9	12	2	14
NW Promises_Paradox	2	1	6	9	6	15
NW TREND DW						
NW Trend DW_Conseq	1	1	0	2	6	8
NW Trend DW_Failure	0	0	0	0	4	4
NW Trend DW_Suitable	1	3	0	4	5	9
ORG PROCESSES						
Org Processes_Benefits	0	0	0	0	7	7
Org Processes_DIY_Informal	3	2	1	6	6	12
Org Processes_Negatives	3	1	0	4	5	9
PERCEIVE OTHERS						
Perceive Others_Cultural	0	3	0	3	33	36
Perceive Others_Stereotype	1	2	4	7	10	17
Perceive Others_ Stereotype_Correct	0	0	0	0	9	9
Perceive Others_Work Demands	5	9	9	23	4	27
PERCEIVE SELF						
Perceive Self_Accountable	3	3	4	10	0	10
Perceive Self_Adaptable	2	1	3	6	10	16
Perceive Self_Fragmented	0	0	0	0	5	5

Perceive Self_Sacrifice	0	0	0	0	4	4
PERSON ASSET INTXP						
Person Asset IntXP_Study	0	0	0	0	6	6
Person Asset IntXP_Work	0	0	0	0	10	10
PP RELATIONS						
PP Relations_Accessibility	3	1	3	7	0	7
PP Relations_Collaboration	2	5	5	12	10	22
PP Relations_Colocation	2	6	4	12	10	22
PP Relations_Connected_ Physical	2	1	2	5	3	8
PP Relations_Connected_ Virtual	1	1	2	4	7	11
PP Relations_Inequality & Unfairness	5	4	4	13	0	13
PP Relations_ Trust&Confidential	1	0	2	3	3	6
TIME TRACKING						
Time Tracking:Contradiction	3	0	0	3	5	8
Time Tracking:Suitability	1	0	0	1	3	4
WORK PRACTICES						
Work Practices Outcome_ Liability	4	3	1	8	3	11
Work Practices Outcome_ Negative	0	1	0	1	12	13
Work Practices Outcome_ Positive	3	0	0	3	1	4
Work Practices_Feedback	0	0	3	3	0	3
Work Practices_For Granted	1	1	0	2	7	9

| Code Abbreviations |
| --- |
| PSY = Psychological |
| SDT = Self-Determination Theory |
| KW = Knowledge Work |
| DEF = Definition |
| Org = Organization |
| Per = Person |
| Soc = Society |
| Implement = Implementation |
| NW = New Ways of Working |
| Particip = Participation |
| DW = Distributed Work |
| Conseq = Consequences |
| DIY = Do-It-Yourself |
| IntXP = International Experience |
| PP = People |

Appendix B: Groups discussion highlights

While the Code list in Appendix A marks the number of times a code has been used to mark a quotation, Cross-Tabulations of Codes can be generated in Atlas.ti to show pairs of codes which mark the same quotation. As participants actively discuss in Focus Groups, they would be referring to closely associated themes, both as a reaction to others' comments and in expressing their own thoughts. Cross-Tabulations are a useful mechanism to detect instances where multiple codes overlap or match within the same quotation. The qualitative analysis then proceeds with an analysis of the quotations extracted from the code pairs. The outcome of the combination of cross-tabulations with qualitative analysis could be summarized as network views. Although these visualisations can be used to communicate the essence of the discussions, interpretations may vary. Codes in focus are represented as square boxes, while codes most associated with them are depicted as narrow boxes. The strength of associations (links between the shapes) is denoted as follows: a strong link is shown as a solid dark grey arrowed line marked with ==. A weak link is shown as a dashed light grey arrowed line. The link strength is determined according to the amount of matched instances between the codes.
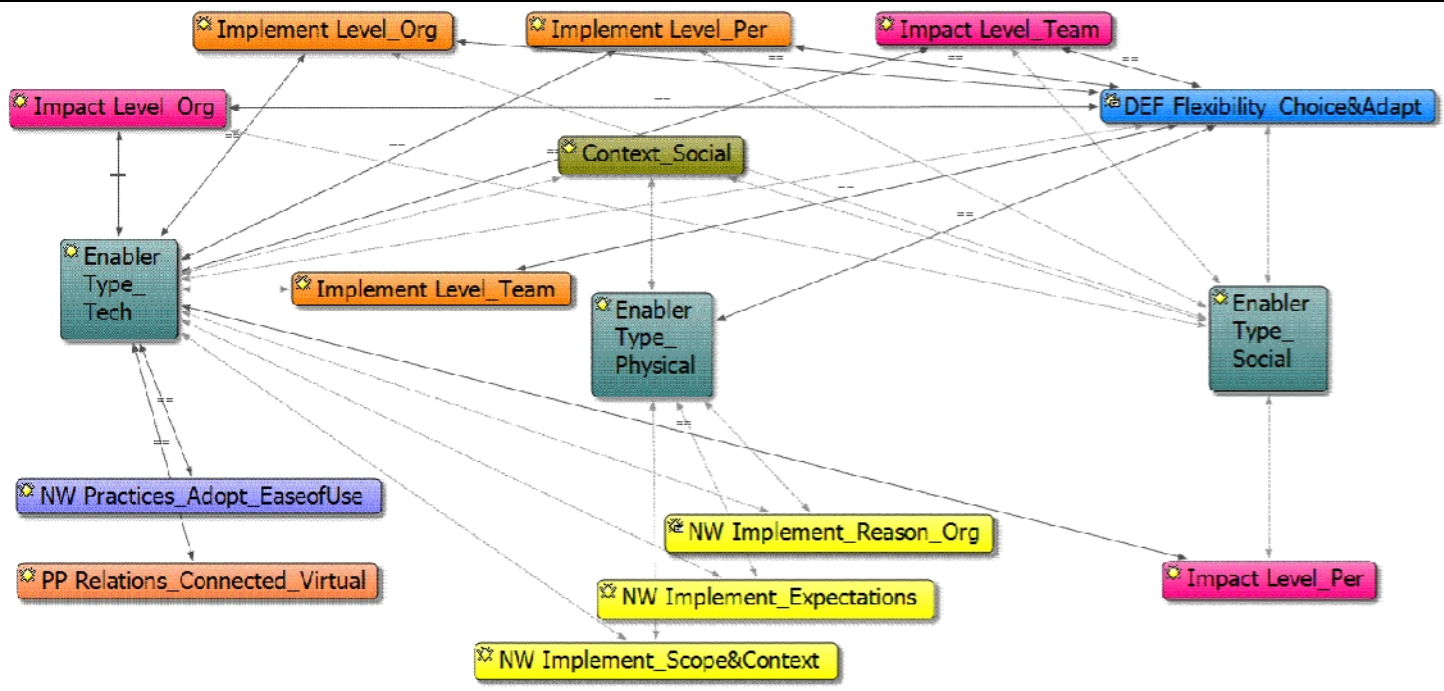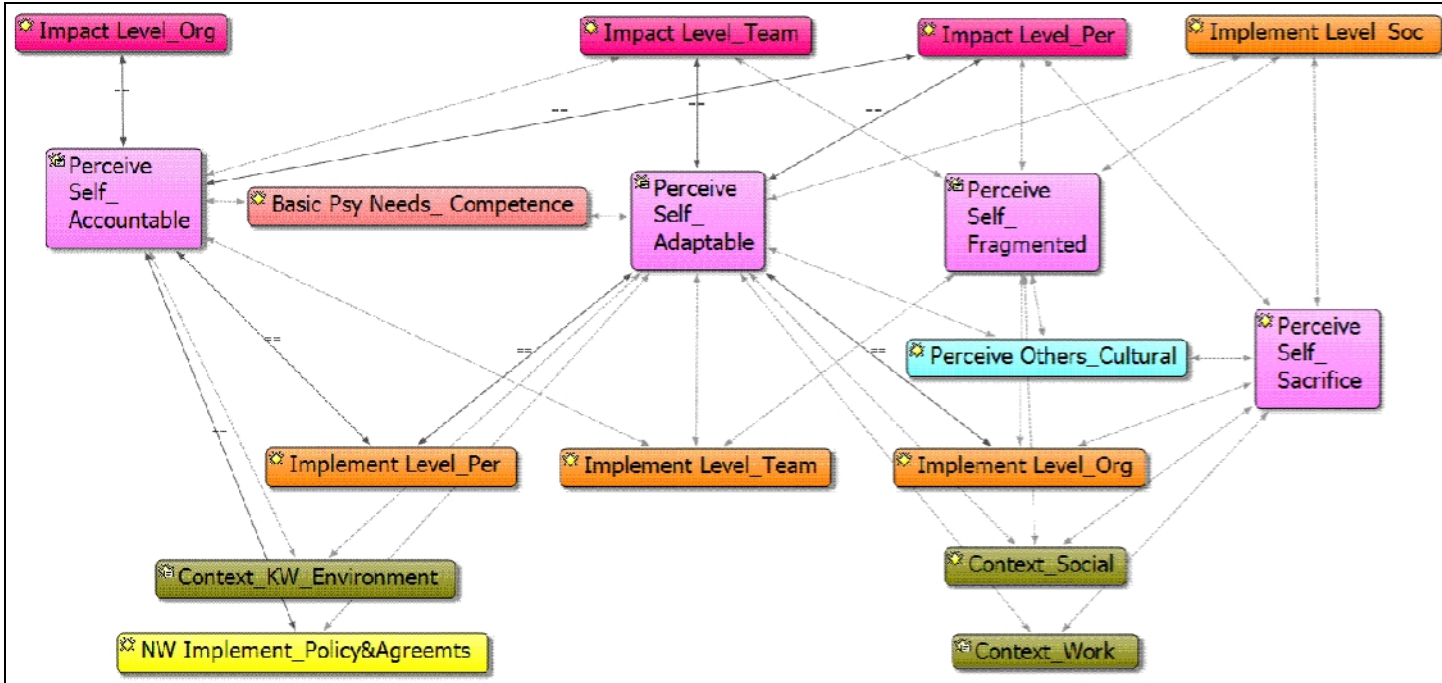
Enabler Codes Network View:

Technical enablers are still a central subject in discussions, affecting the 3 units at both the impact and implementation levels. Their ability of connecting and thereby serving the Social Enablers are highlighted over those provided by Physical Enablers.
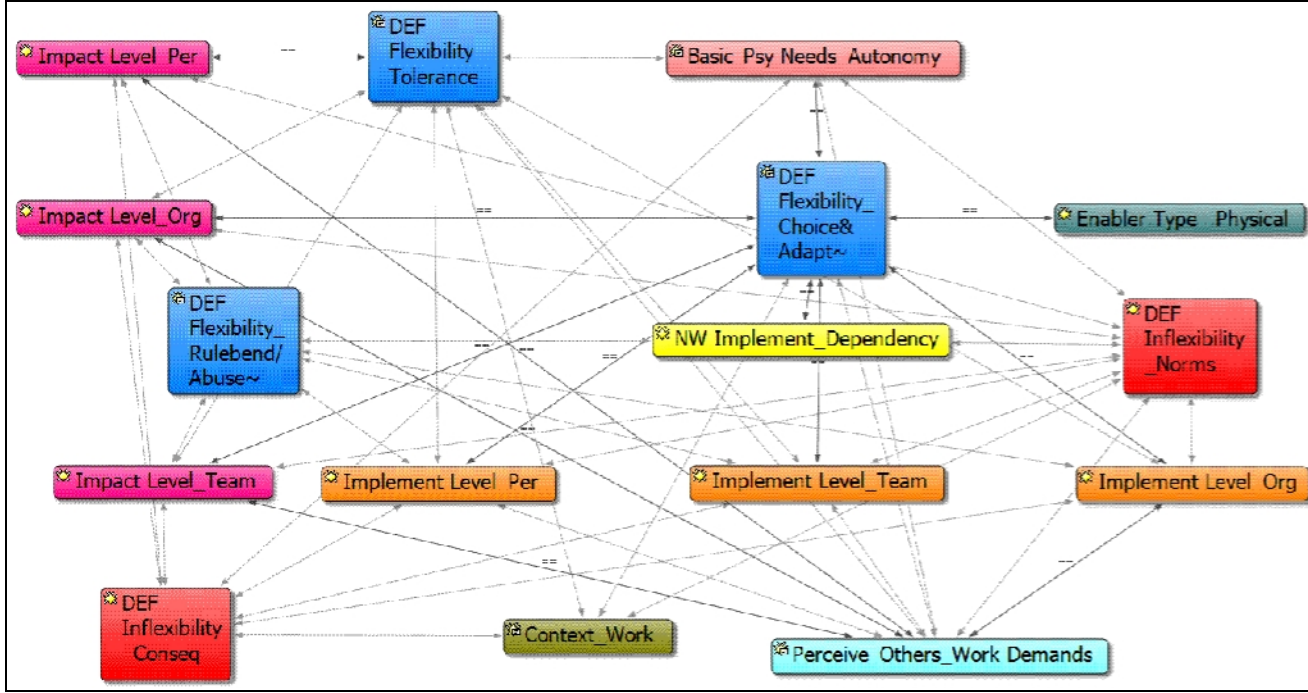
Flexibility and Inflexibility Codes Network View:

A central theme when discussing Flexibility concerned offering choice at all levels but especially allowing Autonomy especially at the personal level. It is interesting to note that the Enabler most referenced here is the Physical type. This is expected since in certain organizations the discussion highlighted time-tracking systems which are bound to physical locations. From the individual and team perspectives, Flexibility is also associated with Tolerance, in the sense that fair team work necessitates that members accept that their ways of working may be different and adapt accordingly. Since references to the role of the organization pointed towards the flipside of flexibility in the sense of imposing policies or having expectations that thwart it, references were also made to how humans can nevertheless adapt even if they "bend the rules"

Perceive Self Codes Network View:

The Societal level is referenced in relation to local employment legislation which is implemented at the organizational level. The outcome of some legal requirements or applications of certain employment policies are associated with limitations which translate as opportunity costs for the Individual. These can be material or psychological. On the upside, gains in terms of competence at the Individual level lead to qualities such as Adaptability and Accountability which benefit the Team and Organizational realms.
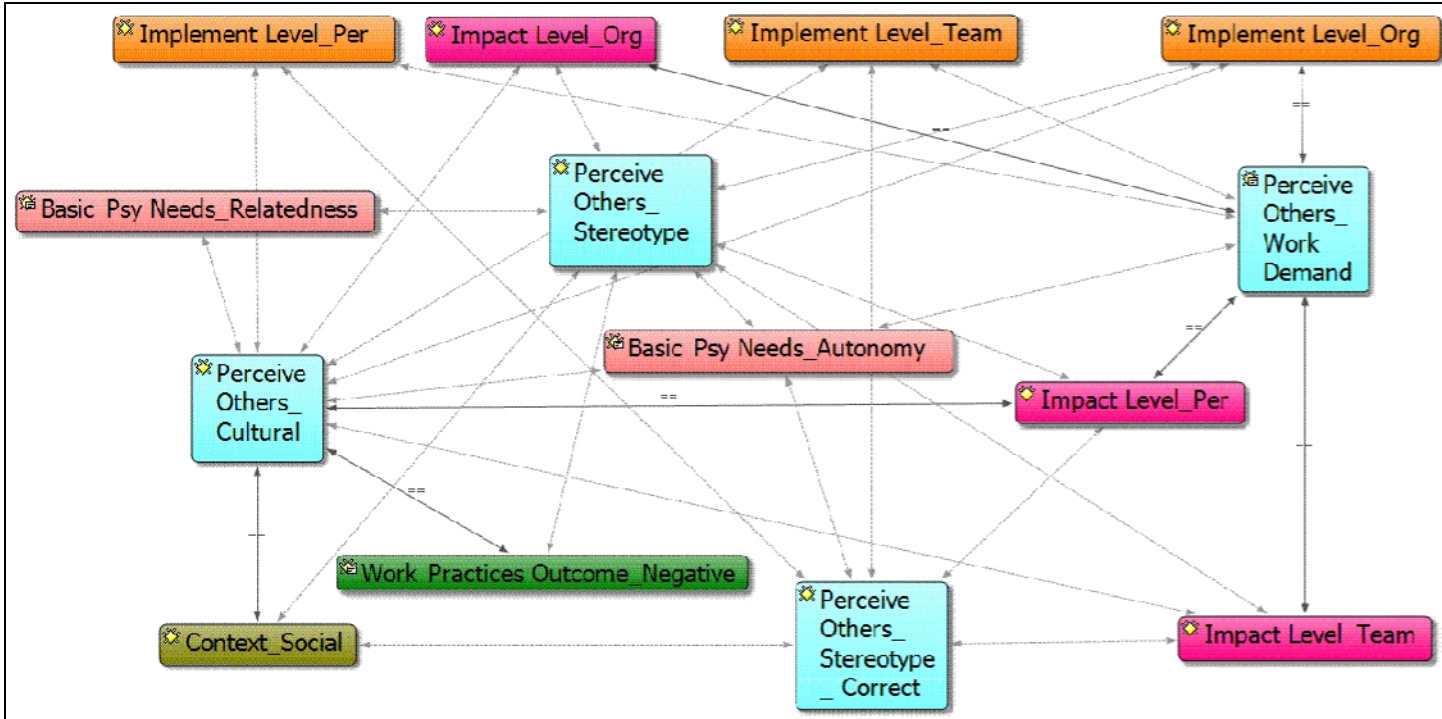
Perceive Others Codes Network View:

A theme that emerged more in the international group is the comparison between the Self and the Others. Comparisons were made both in the negative and positive senses. Participants appreciated the levels of Autonomy that they experience in their Finnish working life while regretting the lack of genuine friendship in the workplace. As expected the felt outcomes resounds at the personal, team and firm levels.
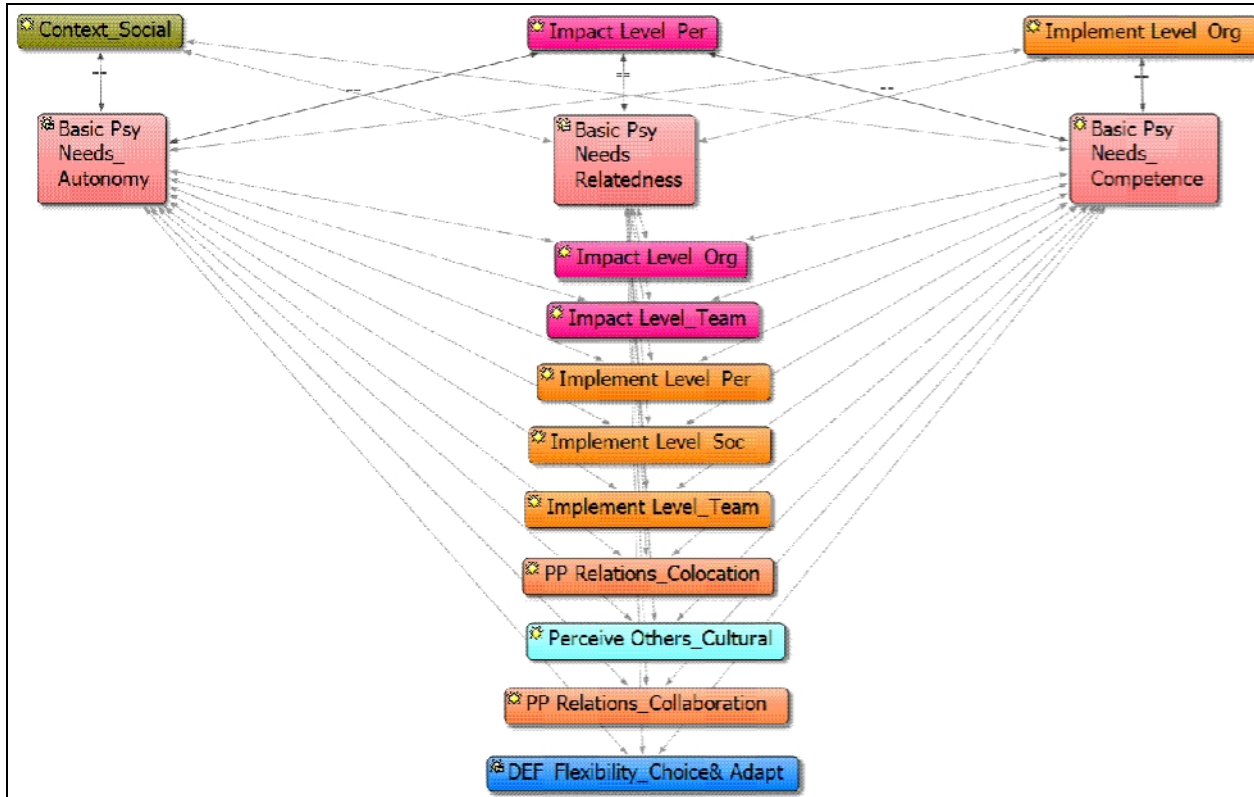
Basic Psychological Needs Codes Network View:

Not surprisingly the 3 basic needs are referenced at all the levels. Although the societal impact is not included in this view, references were made to how eventually even that would be affected eg. Absences from work due to low well-being are compensated by social security contributions which are originating from taxpayer's pockets.

Title	**Case study summary report** **New ways of working**
Author(s)	Jari Laarni, Timo Miiluniemi, Esa Nykänen, Ingrid Schembri & Eric Richert
Abstract	The Introduction chapter of the Case Study Summary report presents shortly the history of the Alternative work development also called New Ways of Working a.k.a NewWoW. The effect of enablers usually classified as Technological, Physical and Social are in the main focus. Objectives are 1) perform three complementary approaches of enablers, concept and future of the organization using the same consultative process to engage work practices 2) find quantitative information of the aspects (what?) of the work environment affecting to personal life using a survey 3) find out qualitative information of "*How aspects of the social environment enhance or disrupt Knowledge Work – on individual, team, organizational, societal levels. Why*?" using focus group discussions in the same three organizations. The first part of the report is describing the companies (VTT, Granlund and ISS) change plans and the target setting. The Optimaze engagement methodology and the results are described for the three organizations cases. The key work practices in three organizations have remarkable similarities: the need for communication, coordination, sharing, being with customers/partners/colleagues etc. The second part describes a survey of totally 255 persons in three organizations addressing question "*What factors of the social environment enhance or disrupt Knowledge Work?*". The SPSS™ statistical program was used to analyse the survey data. The differences between the Granlund, ISS and VTT in survey response patterns reflected mainly the fact that they are different type of organizations. The third part describes the preparation, execution and the data analysis of the Focus group interviews. The transcripts were content coded both manually and by Atlas.ti, a software package for qualitative data analysis. The overall impression from the group discussion is that that most of the participants cared deeply about are issues that personally affect them or their close colleagues. The drivers for Job Crafting arise from three personal needs. Firstly to exert some control over the job to avoid alienation, secondly to build a positive self-image, and thirdly to connect with others. The three aforementioned needs echo the basic psychological needs of Self-Determination Theory: namely Autonomy, Competence and Relatedness.
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Case study summary report
New ways of working

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