

# **Motivating employees in times of closure**

A study of the decommissioning process of nuclear powerplants

Johan Steimer

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Author:	Johan Steimer
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Supervisor (Arcada):	Carl-Johan Rosenbröijer
Commissioned by:	
<p><b>Abstract:</b></p> <p>The purpose of this study is to investigate the issues of maintaining a motivated workforce during the process of dismantling of a power plant and the existence of the organization. The business for this case study is nuclear power plants in Sweden. The main focus of the study are the questions, what motivates the employees in the latter part of the dismantling and what aspects play a key role in ensuring key employees not leaving on beforehand? The research is composed as a case study with a theory part to form an idea and in-depth interviews to get insight in one of the companies. Findings in this research are that basic needs as salary and job security plays a large role to keep employees. To further strengthen the company, to maintain motivated employees, another insight is creating meaning in and at work. To create a meaning for the individuals' tasks as well as creating a higher purpose for the company, and corporate social responsibilities are key factors.</p>	
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# 1 INTRODUCTION TO THE TOPIC OF THE STUDY

## 1.1 Introduction

As the world faces changes in the environmental conditions, governments are facing the issue on how to handle energy production in a more carbon neutral perspective. Germany was one of the first industrialized countries to approve what they called Erneuerbare Energien Gesetz, Renewable Energy Sources Act in the year 2000 (World Nuclear Association, 2018). This was supplemented with Energiekonzept, Energy Concept, in 2010 and together this is called Energiewende, Energy transition. In context the transition's aim is by 2025 to have an electricity production by renewables by 40-45% and in 2035 by 55-60%. Nuclear power is to be phased out completely in 2022. This adds a complexity for energy producing companies, especially those with large scale nuclear and thermal powerplants, and large issues in short- to midterm business planning (World Nuclear Association, 2018).

The closing and transition of energy production is not a new phenome and has historically been faced with large empty buildings and environmental issues. One of the worlds bigger coal production, and iconic, power stations, Battersea Power Station in London, closed down in 1975 and 1983. After that the building was abandoned and fell to near ruin (Battersea Power Station, 2020). In 2017 in USA over 200 of the 523 coal-powered plants that where in operation is closed or slated for closure. Most of those 200 is not being reused, and many requires decontamination, and several is in dispute on which party is to pay for what aspect of the decommissioning (McGraw, 2017).

In Sweden a non-binding referendum was held in March 1980 on the subject of decommissioning nuclear power (Regeringskansliet, 2015). The three alternatives where 1. Decommissioning in a pace that was possible with aspect of future renewable production. 2. The same as number 1, with the addendum of that all significant production sites should be state owned. 3. Decommissioning with in 10 years. Alternative number 1 and to combined won the referendum and was interpreted as slow decommissioning.

There is four nuclear power plants in Sweden, with a total of eleven nuclear reactors (Uniper SE, 2019). Of those five were started after 1980, but construction had begun earlier. The Swedish parliament decided in 1997 that the two reactors in Barsebäck should be closed for energy production in 1998 and 2001 due to the location of the plant was unsuited for nuclear production (Regeringskansliet, 1998). The two reactors were permanently closed in 1999 and 2005 by final decision of the government (Uniper SE, 2019).

In 2015 Vattenfall AB took the decision to close down two out of four reactors in Ringhals before the planned technical end-of-life. Reactor 1 closed the 31<sup>st</sup> of December 2019 and the second reactor will close at the end of 2020 (Vattenfall AB, 2018). Uniper SE took the same year the decision to close two out of three reactors in Oskarshamn. Reactor 1 closed in 2017 and the second reactor was since 2013 closed for major upgrades. These upgrades were never finished, despite over one billion Swedish krona invested (Uniper SE, 2019).

The decommissioning of nuclear power is more complex than just abandoning the coal plants, and much more regulated. IAEA defines decommissioning as the process of administrative and technical actions to remove all or some of the regulatory controls from an authorized facility so the facility and its site can be reused (International Atomic Energy Agency, n.d.). It is a normal part of the plants lifecycle and is a complex project to plan and execute. The aspects are both technical and non-technical such as management and safety of the workers.

In 2007 the Swedish government commissioned a report on the financing system for decommissioning and dismantling of nuclear facilities. The report had its base on the fact that it was thirty years since the first reactor in Sweden was closed down, and that the two reactors in Barsebäck had recently ceased production (Statens offentliga utredningar, 2007). The report states that complete decommissioning can't start before summer 2015 and probably not before 2020. The report also highlights the unique Swedish financing model via Swedish Nuclear Fuel and Waste Management Company (SKB), where the utility companies pay a waste fee to handle nuclear waste and to seek financing for decommissioning. A system also implemented in other European countries, for example Spain (Statens offentliga utredningar, 2007). The Swedish law on running nuclear power plants states in 10 § section 4 that a nuclear power plant that has ceased production and



operation shall institute the necessary actions to ensure a safe way to dismantle and demolish the facility (Riksdagen, 1984).

In 2016 a Norwegian case study of the decommissioning of Barsebäcks nuclear facility was published. The study is mainly focused on the economic estimations, but clearly states that the complexity of the situation and the issue of very few experiences in aspect of decommissioning a nuclear facility (Torp and Klakegg, 2016).

The lack of experience in dismantling nuclear facilities has led to over-estimation of cost and technical difficulties, and a delay or failure to start the decommissioning (International Atomic Energy Agency, 2013). Since the 1990s there has been an increase in information and studies from decommissioning projects, including lessons learned from the projects themselves. There still is, however, a big gap in studies on the non-technological aspects such as organizational issues, management needs (International Atomic Energy Agency, 2013). The required study for decommissioning of a nuclear facility for Oskarshamn is a comprehensive 116 page study (Larsson et al., 2013). It tackles issues such as Waste management, inventory, dismantling and cost. The organizational and worker aspects are covered in two paragraphs alone.

## **1.2 Statement of the problem**

When the dismantling is done, the owning company no longer has a purpose, and the employees will unfortunately be redundant. This raises of course quite a few areas of questions and fields to study, as how to govern the organization, recruitment, business purpose in the long run, other business areas the company can diverge into.

The process of decommissioning requires skills that is not necessarily the same set as the current employees. It requires a changing mindset and a ways to secure the correct skills for the process (Thomas, 2016). Uniper has planned to secure most of its resources via contractors, but main site manager and project managers and operational personnel should be employed (Larsson et al., 2013).

Of the articles, reports and studies the need for organizational studies are apparent, but scares. It can raise questions as in handling culture, change in business purpose, leadership, and as Thomas (2016), stated the changing of the mindset of staff. One of the

utility companies owning nuclear facilities has expressed an interest in this field with aspects on retaining employees during the whole process.

The areas of study will be learnings of decommissioning of plants and large industrial closures in terms of maintaining a workforce, organizations in process of transformation and personal motivation.

### **1.3 Purpose of the study and research questions**

The purpose of this study is to investigate the issues of maintaining a motivated workforce during the process of dismantling the physical plant and the existence of the organization. The aim is to answer the research questions below, and to look into the possibility of using the conclusions to give recommendations for future research.

1. What motivates the employees in the latter part of the dismantling?
2. What aspects play a key role in ensuring key employees not leaving on beforehand?

### **1.4 Limitations**

In line with the purpose of the study and the research questions the study covers decommissioning of large energy production facilities in Sweden, with the aspect of nuclear production. This is a complex process and regulated by law in Sweden, “Lag om kärnteknisk verksamhet “ (Riksdagen, 1984) that specifies to a much larger extent the decommissioning process, and therefore a defined area of study. The study has the possibility to widen the research to other countries as Germany, which are in similar situation as Sweden, but countries within the EU has significant differences in labor law and regulations of nuclear power, and therefore will not be covered. The study will not cover labor law and their national differences, as well as different national regulations.

### **1.5 Ethical Considerations**

The theoretical part of the study is done by literature review and official studies and are not sensitive in any part. The interviews are done in workplace environment and focus on the respondents view on work and workplace and done voluntary. Confidential or

personal information can be shared in the environment of the interview and edited out in transcription. Transcription will be shared with the respondents for feedback. The presentation of the respondents will be somewhat generalized to protect their anonymity within the organization. Complete transcripts will not be shared with the case company.

## **2 STRUCTURE OF THE THESIS**

The thesis has five major sections:

1. Introduction to the area of the study
2. Literature review where research, and concepts within the topic will be analyzed
3. Methods where the research structure will be addressed
4. Results where the interviews will be presented
5. Discussion where the literature study and result will be discussed.

The structure is based on the concept by Bui (2014)

### **3 LITERATURE REVIEW**

The literature review will address the three areas as described in section 1.2. The first section will address previous studies and on decommissioning of nuclear power plants and studies of closures of other large industrial production businesses. The focus will be on maintaining and motivating the workforce. The second section addresses aspects of organizations in transformation, and in particular the individual's motivation in the change and managerial aspects of change and motivation. The final section concludes the review with studies and research done on practical handling of personal motivation, and organizational culture, in aspect of ensuring a working environment were individuals strive and stay.

#### **3.1 Studies of decommissioning of plants**

##### **3.1.1 Organization and management of nuclear decommissioning**

It requires sensitive planning and management to handle the complex process of decommissioning a nuclear facility. Studies have been made, to a lesser or greater extent on decommissioning process, with focus on technological aspects. Reports or studies on organizational issues are more scarce.

The purpose of the study is to provide information and guidance of organization and management aspects for the decommissioning process (International Atomic Energy Agency, 2000).

The report is based upon studies done of decommissioning projects from IAEA's member states. In total has fourteen studies been used as background material, from Belgium, Canada, Estonia, Germany, Italy, Japan, Netherlands, Slovakia, Spain, United Kingdom and United States. For UK, Germany, Canada and Belgium, two cases were used. The decommissioning projects started from 1984 and the latest in 1997/98 (International Atomic Energy Agency, 2000).

The report is an extensive case study with focus on delivering organizational aspects of decommissioning, with focus on best practice from the cases and a literature review.

### 3.1.1.1 Result

The purpose of decommissioning is the reduction of risk, leading to unrestricted release of the site in a safe and cost-effective manner. To achieve this, a collection of considerations should be factored into the decommissioning project, including a dedicated management organization. Focus of the project organizations is of course the safety of the workforce and the public. Often in the closing phase existing staff is used, to a certain degree. One large issue is that experienced employees may leaving on beforehand when new career prospects are available. Around midway into the projects the staff number will peak, both in contractors and skilled employees in need for supervising the project activates (International Atomic Energy Agency, 2000).

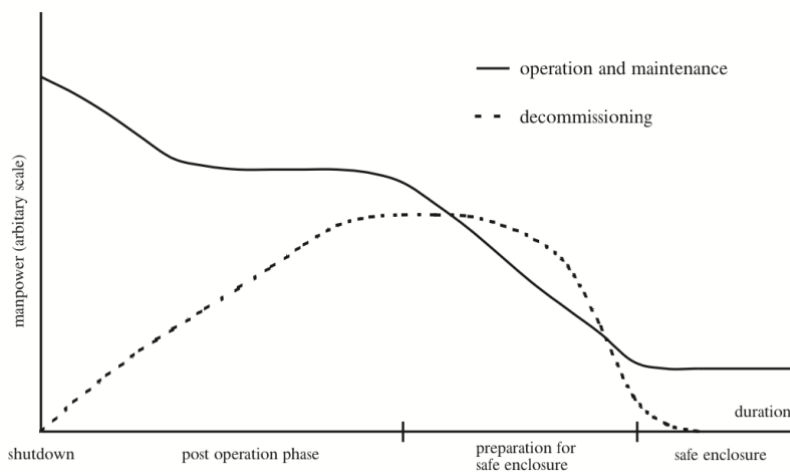


Figure 1 Staff reduction profile (IAEA Technical series report 399, 2000, p. 6)

The process of transforming from operations mode to project decommissioning mode requires training in new skills and organizational setting. In order to achieve incentives to keep the staff on for the duration of the project is to ensure future relocation to other plants, or similar project organizations. It could also be forming new teams of experienced employees to provide expertise in these projects, as contractors.

Importance of providing incentives to staff is highlighted to ensure effective delivery, as well as safe and within time/budget. These incentives may differ from situation to situation (International Atomic Energy Agency, 2000).

The report recommends when setting the organization not only to select individuals based on technical, and professional qualifications, as well as administrative aspects and individual management requirements. In an industry where security of employment often is more or less taken for granted, the adaption to dismantle your workplace can be

unsettling for the staff. This can threaten morale, increase uncertainty and express psychological distress. These are significant challenges that needs to be addressed by plant management (International Atomic Energy Agency, 2000).

Several recommendations are highlighted in the report. The tools, processes and techniques as well as planning and funding. The structure of the organization and stable management is further key components. The use of key resources from the operations team is seen as a success factor due to their familiarity with the plant. As the whole project is seen as a continuous change project, procedures for “management of change” is needed, and how to deal with the social impact of the plants closure and demolition (International Atomic Energy Agency, 2000).

The report provides a clear outline for an organization in both the closure phase of a nuclear powerplant, and the transition to the decommissioning phase. The highlights of the social impact and processes for continuous change is convincing. It provides a clear setting of the challenges for these types of projects. However, the focus tends to fall back on technical issues, as waste management and safety issues related to radiation. The major limitation of the report is the lack of empirical data. The spread of the background studies projects from member states provides an extensive material, but the conclusions formed from these reports and other literature is not empirically verified in any form. The conclusion also lacks a bit on suggestions for more studies or in-depth references.

### **3.1.2 Planning a decommissioning**

In a workshop organized by “Nuclear Energy Agency Radioactive Waste Management Committee” in the group “Working Party on Decommissioning and Dismantling” Safe and cost efficiency were discussed, but also papers on these topics where discussed. One such was “Early planning and transition management form operation into decommissioning” by Almeida et.al. (2005). In this paper the authors conclude that organizations must provide support for management of change, and the uncertainty of personnel is kept at a minimum and staff morale is maintained. Furthermore, groundwork in organizational process and work planning and management is needed to ensure key resources, skills and corporate knowledge is maintained, as well as retaining staff competence during the whole decommissioning process (Almedia et al., 2005)

### **3.1.3 A large decommissioning of two industrial production sites**

In many cases, despite large companies' long-term planning, closure of large production facilities is often made in haste and leaves a large number of employees and contractors redundant at one time. Strategic restructure or closures is more done in a long-term perspective and often most of the redundant staff have found new employments once the closure is finalized. These strategic closures have been done in with a great deal of Corporate Social Responsibility, CSR (Wigblad and Östberg, 2009).

The purpose of the study is to give insight in Scania's strategic closure of their production facilities in Falun and Sibbhult, Sweden, in 2005-2008 from three perspectives: Management, Employees and Community (Wigblad and Östberg, 2009). Another study made specifically of Scania's closure in Sibbhult with the perspective of a learning perspective for the county council (Region Skåne) (Jonsson, 2009). In total 1250 employees were effected by the closure of the plants.

The broader research have done interview with representatives from Scania Group management in Södertälje, and local management and union representatives in Falun and Sibbhult as well as representatives from the city council of Falun and county council of Skåne (Wigblad and Östberg, 2009). The Sibbhult study has interviewed local management of Scania, union representatives, business owners and city council representatives of Östra Göinge, and representative of county council of Skåne (Jonsson, 2009). Since the researches are specific to one company's closure of production plants most of the interviewees are the same, apart from Wigblad (2009) focused on the town of Falun and Jonsson (2009) on the city of Östra Göinge when it came to the local/regional focus.

#### **3.1.3.1 Result**

When restructuring or phasing out large companies or production facilities there will be a gap in the employment rate. Large layoffs and a small community will create a large gap in the employment rate, as small layoffs in a large community will be a lot less severe. The balance for the community is a slow closure process, and possibility for the employees in an orderly fashion seek new employments (Wigblad and Östberg, 2009). For the case's long strategic closure it has been a key component to uphold a "Good Citizen Corporation" and act in a way to help the community to minimize the cap in the employment rate (Jonsson, 2009).

During the first phase of a phase out process, when the workers are given notice of layoffs performance often drop and there will be a bit of commotion. Once the dismantle organizations is set and the process and support mechanisms are in in place the effect is often the opposite, performance will increase. In order to prepare the community for activates to minimize the employment rate gap, communication and a plan often needs to be prior to the notice. By implementing bridging activates has shown that the employment rate is substantially higher than if no activates where in place (Wigblad and Östberg, 2009).

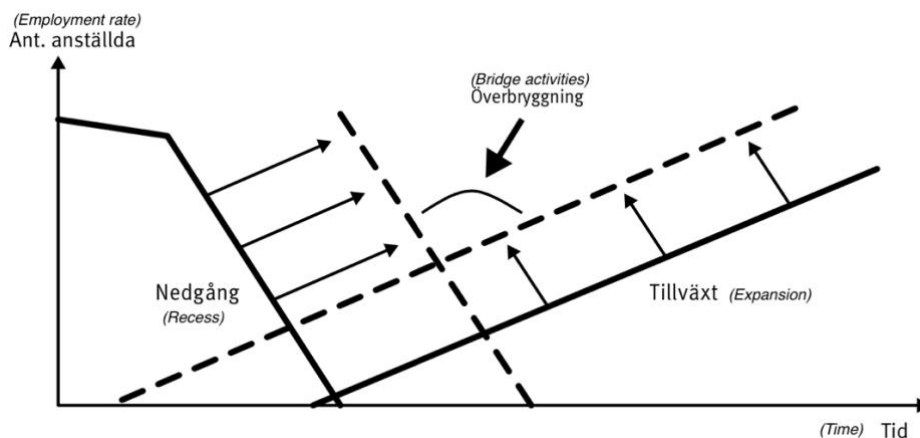


Figure 2 The restructure model that bridge the local employment rate gap (Wigblad and Östberg, 2009, p. 12)

Scania took early on a decision not to do a fast dismantle process but rather to create an offensive closure process. This due to prior experiences with fast closure projects that created a lot of conflicts and bad-will. The dismantle project team took contact with local city and county officials, plant managers and unions roughly five months prior to the closure notice, to initiate the bridge model/processes. This included investigating possibilities for different use of the facilities, complete dismantling to brown field etc. (Wigblad and Östberg, 2009).

The different bridge activities for the employees where done in collaboration with the unions, who backed the company to assert its social responsibility and create new employment opportunities. The activities where:

- An agreement for Scania to use short time employment for replacement of permanent staff during the time for their activities and is they left for other employment
- Time for further education and retraining



- Leave of absent to try other employment
- Mapping of persons with difficulties to find other employment

The activities were done in collaboration with local unemployment agencies and TRR<sup>1</sup>. Especially the mapping process was important and rendered in individual plans for these persons (Wigblad and Östberg, 2009). An internal job-center was created to support the personnel and also, if applicable, seek new employment within Scania. One common opportunity was not chosen by Scania, “golden handshake”. Instead doubled time of notice combined with the activities were chosen (Jonsson, 2009).

In both local community’s collaboration teams were formed with representatives from town and county government, unions, TRR, local educational providers and Scania. The purpose of these teams was to explore business development opportunities, support any of these ideas as well as help the transition from Scania to new business (Jonsson, 2009).

As far as the result of the bridge activities, when the plants were finally closed, out of 570 employees in Sibbhult 17% were actually given notice, and of the 680 employees in Falun the number was 16% (Wigblad and Östberg, 2009). In Sibbhult 39% got employment in new business in Scania’s former location, 15% moved to other Scania plants, 23% found other employment and 6% received early retirement (Jonsson, 2009).

Both reports conclude that a longer, well thought through dismantle process of a business with bridge activities has many benefits for the community, the closing company’s image, and the employee’s motivation. A strong Corporate Social Responsibility enhances the company’s culture and improves loyalty between workers and management (Jonsson, 2009). By maintaining a strong CSR in the dismantling process and bridge activities key resources in the company are often loyal and ready to do extra efforts and less likely to quit on beforehand (Wigblad and Östberg, 2009).

One major limitation of the reports is that it’s done on one company’s closure of production plants. But it’s apparent that from all participants, employees, community and the company, that a bridge model for minimizing the employment rate gap and improving the local community’s business opportunities is a great success. The other limitation is that Scania’s plants employed mostly blue-collar staff.

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<sup>1</sup> TRR, is a Swedish non-profit foundation that offers expert assistance to redundant white-collar staff to get new employment

### **3.1.4 Summary**

The various studies from International Atomic Energy Agency on how to transform from operations to decommissioning focus on that transformation, and largely not on the latter part of the dismantling. The ideas and research on organization, transformation and downsizing are well described. They highlight the large issue of experienced employees leaving on beforehand when new career prospects are available, and the threat to morale and increased uncertainty and psychological distress.

Almeida et.al. (2005) highlights the work planning and management processes to ensure key resources, skills and corporate knowledge and well retaining staff competence during the whole process.

Jonsson (2009), Wigbland and Östberg (2009) highlights bridging activates as part of reducing uncertainty, both for the community and individual. These activates largely reduced the risk of key resources leaving and creating security for those leaving with support for new employment, personal education and psychological support.

### 3.2 Aspects of organizations in transformation

The framework is derived from publications based upon case studies, in different settings. Angelöw (1991) focuses on learning aspects from closures and organizational changes made in Sweden. Nilsson (ed) (1999) is a compilation of nine researchers work in Continuous improvement. Bolman and Deal (2017) has in the 6<sup>th</sup> edition of their work used up-to-date cases to illustrate their theories, as well as Yukl (2006).

Change management, at large, is a practice with the foundation of participation, security, mutual reliance and a rich and direct information flow. A collaboration between management and staff to set the pace is a success factor, too high or too long change process leads to change-fatigue (Angelöw, 1991). Often management create barriers for staff participation of creating value and in the change processes. These barriers need to be overcome in order to have a successful change (Hart, 1999). Change can also create a loss of meaning for those affected. It also creates conflict between participants, that need to be addressed (Bolman and Deal, 2017).

Change itself has no appraisal, it's neither good nor bad. The circumstances of the change can have different levels of appraisal. Irrelevant changes are seen to have no consequences on an individual. Positive changes are subject to what an individual see as beneficiary, and strenuous changes includes elements of threat, loss or challenge. If an individual perceives a coming change as a threat, regardless of being objective or not, a lot of energy will go to defend oneself. If management can turn the change into be perceived as positive the individual's energy can be used to something creative and meaningful (Angelöw, 1991).

Resistance to change is a fairly common phenomenon, both for individuals and organizations at large. The reasons for why people resist change can be a number of different reasons, or a combination thereof (Yukl, 2006). They can be:

- *Lack of trust.* Suspicion of hidden agendas, or purpose. Mutual mistrust between staff and management.
- *Economic threats.* Loss of income, benefits or job security.
- *Fear of personal failure.* Expertise can become obsolete.
- *Loss of status and power.* Relative power and status can shift in the change and by that being resisted.

Angelöw (1991) adds to the list:

- *Social contacts*. As groups and social relations on the workplace is important for well-being, a large change as moving to a new location can be much resisted.
- *Management*. A new manager can create anxiety, and hostility which affect trust.
- *Participation*. If the employee is directly implicated by the change and has no participation in the shape or execution of the change it usually led to resistance.
- *Self-esteem*. If the employee has low faith in its ability to influence the change it also can lead to resistance.
- *Information*. Rich and direct information can empower success of the change. Its opposite can lead to resistance and conflicts.

The resistance to change is fundamental and it is more than the individual's reasons, even though the protection of self-interest is high. It's also affected deep on a group and organizational level (Yukl, 2006).

Both actual as well as the potential of change is challenging for both the organization itself and as the individuals in it. The challenges are a lot more difficult and complex when the change is surrounded by high levels of uncertainty and the fate of the organization itself (Durbin et al., 2001).

From an individual's perspective and the uncertainty that affect people's decisions can be divided into three areas. First, the uncertainty in regards of the surrounding environment. Will there be a change? Second, the effect of change on the organization and the uncertainty in those times. What will it mean for me as an individual? Third, the uncertainty of how to respond to the change, and the individual's decision on how to react. In a major change, as a decommissioning of a nuclear power plant, all of these three types of uncertainty will occur (Durbin et al., 2001).

Uncertainty can be a stress factor for individuals. It can lead to feelings of helplessness, lack of control, mental and physical health problems. There could also be a greater level of cynicism, which in its way can lead to lower commitment to the organization, less job satisfaction, motivation and lower respect for managers. Table 1 shows the individuals uncertainties.

- Whether there will still be an organization
- Whether he or she still have a job
- What their job will be
- How they will do their job
- Whether there will be changes regarding rewards and remuneration—e.g., will there be changes in the contract between the organization and the employee?
- What resources will be available to do the work (including co-workers)

*Table 1 The individual's uncertainties (Durbin et al., 2001 p. 9)*

Changes that affect the basic survival of an organization, create uncertainties of the vision and goals of the organization. The organization, just as with individuals, faces uncertainties on what the change will be in the long run. Table 2 describes these uncertainties.

- Whether the organization will continue to exist
- Whether the organization will continue to pursue the same goal (e.g., production of electricity) or a new goal (e.g., decommissioning)
- How the organization will achieve new goals, or achieve old goals under new circumstances
- Whether the organization will be able to maintain its resources — including staff
- How the organization can and should respond

*Table 2 The organization's uncertainties (Durbin et al., 2001 p. 10)*

Personal crisis is a condition where previous experiences and art of reaction is not enough to handle the situation. The triggering factor can be external hardships such as sudden loss of your job, threat to social identity and basic security and lead to traumatic crisis. It can also be more of a life crisis as changes at your workplace, retirement and relocation. The second factor is individual's history and previous development, and third where the life cycles the individual is. The fourth important factor is the social preconditions, as the persons family life and work situation (Cullberg and Lundin, 2006).

A large change, that can also lead to a crisis, is the closing of your company. The wellbeing and efficiency of employees and be much affected by the notice of closing (Angelöw, 1991). From the research some conclusion can be made:

- The personnel group being given notice show higher stress levels than their colleagues, as well as those being relocated.
- Persons with a more difficult starting position for new employment as older persons, or persons with very special commences, of low educational level. Age seems to be the decisive factor for the ability to get new employment.
- Stress seems to be highest when the notice is given and then reduce.
- Different reactions can be observed with the employee's, all from depression, indifference, to chock.
- Persons who found new employment during the period of notice where much happier than their colleges.
- There seemed to be a greater indifference for following safety procedures at the workplace.

In some, or perhaps many, change management projects start with an inquiry to map out the key explanations to a problem. It follows with a review of possible arrangements, and the estimated efficiency and earned value. All of this is compiled into a roadmap and project plan. It's at this stage the employees implicated in the change are involved. This will have the effect of low involvement and a passive action to implement the change (Hart, 1999).

To overcome this effect of dogmatic strategy one can, choose the representative change strategy or the collaborative strategy. In the first union representatives, management and a few employees do the idea, and planning phases of the change project, with constant information to the whole organization. In the collaborative strategy the concept is that everyone effected by the change is involved in the idea, planning and execution phases. This means quite a few people involved, but insures a very high degree of involvement (Angelöw, 1991).

The most usual response to uncertainty, from both the individual and organization, is to try to decrease it. This type of reaction is a logical from a human perspective as the negative aspects of uncertainty. Normally individuals and organizations try to reduce uncertainty in two different ways, either by increasing information and/or by increasing control over the outcome of events (Durbin et al., 2001).

To perform an effective increase of information, is has to be done with some direction and by not waiting for all information to be gathered, but rather cyclic collection. The

information should be used for providing insight in different outcomes, their probability and effect. The need for information can have a negative effect on an individual level as it could be a distraction or time-consuming from doing their job. Increasing control over the current situation or possible future situations can be achieved through legal, economic or political means. Other means can be emergency planning and emergency response training.

If uncertainties are not handled, both on an organizational level and individual level, or mitigated in a dysfunctional direction, the employees might lose trust in the organization, or even feel that it violates their physical contact with the organization. When this occurs employees might hand in their resignations. This can occurrence can escalate rapidly and lead to loss of key resources, senior experience and corporate knowledge (Durbin et al., 2001).

The organization itself is also a factor in change projects. To cope with the change its sometimes needed to change the culture of the organization. If an organization have a centralized structure it often reflects that only the manager has the knowledge, or mandate, to know what is best. A decentralized structure reflects on individual initiative and shared responsibility (Yukl, 2006). If an inclusive manager supplants an authoritarian manager and the organization is still a centralized one the change process will be hindered (Angelöw, 1991). The change projects structure needs to in line with a current strong organizational culture.

Another approach to deal with uncertainties, on a long term and strategic level is to analyze and plan for alternative outcomes, scenario assessments. This doesn't reduce the immediate uncertainty, but it will increase control for the future. This can include policies for maintaining key resources in the latter part of the decommissioning, programs for training and transfer of knowledge. This can reduce the uncertainty in the long run and therefore reduce the level of stress and individual uncertainty for the employees. To add to the reduction of uncertainty the organization can concentrate its powers to the different departments and fields of expertise and divide the areas of uncertainty to the different managers and departments. This may help the organization to deal with the uncertainties more efficiently and let c-level managers deal with the overall uncertainties (Durbin et al., 2001)

### **3.2.1 Summary**

Changes will add stress to the organization and the employees. Closure of a company is a major change and creates a large resistance (Yukl, 2006). The change process can also exclude the employees when management set up barriers for participation (Hart, 1999). Layoffs can also lead to personal crisis, the base of that foundation is family and work situation (Cullberg and Lundin, 2006). Persons that find new employment during the notice period is still more efficient and happy than other collages. During the notice period increased indifference for safety procedures as well as greatly increased stress occur (Angelöw, 1991). Uncertainties can create stress, lack of motivation and psychological problem with individuals. By reducing uncertainties for job security, organizational goal and strategies, individuals will perform better and have a reduces risk of leaving the company. The organization itself will be mor functional with reduced uncertainty (Durbin et al., 2001).



### 3.3 Personal motivation and organizational culture – practical aspect

In order to understand how culture works there is two perspectives to be taken into account. Content is the values of the culture, behavior and what is important. Structure is the context and sets the framework on which the values exist in (Schein, 2017).

1. Artifacts
  - a. Visible structures and processes – incl. charters, description on how the organization works
  - b. Climate of the group
2. Espoused beliefs and values
  - a. Ideals, goals, values, aspirations
  - b. Rationalizations – incl. the individual's assumption on what will work or not
3. Basic underlying assumptions
  - a. Unconscious, taken-for-granted beliefs and values

*Figure 3 Three levels of Culture, adopted from Schein (2017 p. 18)*

A culture of an organization can be seen as a social unit and the shared history and learning process has developed its culture.

To understand number three the basic underlying assumptions the understanding of motivation, why people do one thing rather than another. The research is extensive over decades and include many theories of what motivates people, and that its requires understanding of their underlying needs they carry with them (Bolman and Deal, 2017).

One of the most used, and oldest models for human need, and the baseline for motivation is the existential psychologist A. Maslow's theory of Hierarchy of Needs from 1954. The theory has been subject for many developments by other scientists, as well as validation attempts. But at large it's still the most spread and acknowledged theory (Bolman and Deal, 2017).

The baseline is that the bottom lying category of needs has or should be fulfilled before the next category can be satisfied.



*Figure 4 Hierarchy of Need. (Conley, 2017 p.8)*

At the base of the pyramid there is the physiological needs as sleep, food, water. The next category includes living arrangement, safety of yourself and family as well as employment (Conley, 2017). At social and belonging comes friendship, sense of connection and intimacy. Moving up comes your ego needs as self-esteem, status, recognition. On the top of the pyramid is Self-actualization – developing to your fullest potential (Bolman and Deal, 2017).

McLeod highlights a few different models of the hierarchy. For the deficiency needs (the bottom four) the motivation declines as the needs are met, i.e. if you have house, food in the fridge, family/friends and employment they become salient needs. At the top is the Being Needs, where motivation increases as the needs are met. This is not something that lacks, it's the desire to grow as a person (McLeod, 2020).

In time of change and reduction or closure one of the key security aspects is job security. The concept was probably established in Scotland at a cotton mill in 1806. Cotton wool suddenly became scares and a most mills closed down and all personnel was laid off. At Robert Owens mill the production halted, but the works was still paid, and tasked to do maintenance. Observations made of workers motivation was that they were open to changes in organization, management and technology. Innovation that had the workers support led to more lasting and greater profitability than the competitors (Angelöw, 1991).

Maslow went further in motivational studies and expanded to how basic theories of human motivation could be applied in workplace situations (Conley, 2017). McLeod investigates Maslow's scientific methods and concludes that the sample is biased and

lacks female subjects and other subjects than educated white males. This greatly reduces validity as well as the extreme difficult to empirically test the concept of self-actualization. One very large attempt to validate the concept was made between 2005-2010 and the large sample of 61.000 persons from 123 countries more or less validate the concept of deficiency needs, but necessary in the order in Maslow's strict hierarchy. On level doesn't need to be fulfilled before one can embrace the next one. Its rather a combination of the levels that set the individuals wellbeing (McLeod, 2020).

Motivation is a driving force for an individual's actions. It could be both conscious and unconscious needs, and expectations that sets the path and target. These targets can be on different levels, internal/external, individual/organizational and short/long. Motivation and target is intertwined. To have a motivational environment with a base for development there need to be: a will and insight, participation and power to influence, faith in others, faith in yourself, information and knowledge and a strong sense of security and belonging (Angelöw, 1991).

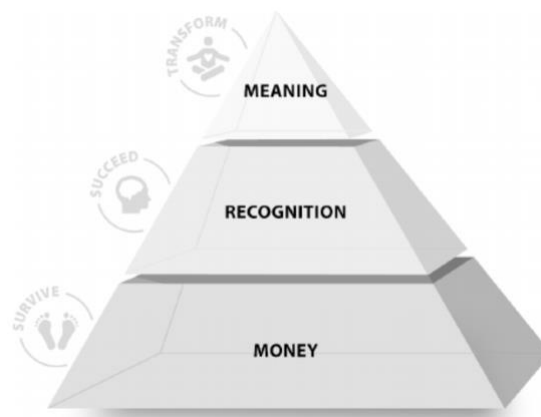


Figure 5 The Employee Pyramid (Conley, 2017 p. 43)

An evolved model for creating motivation, based on Maslow's underlying concept, is the Employee Pyramid by Conley (2017).

At the base for motivation is not only salary but the company's whole compensation package. A good strategy is customized packages for each employee with not only monetary incentives but other perks as time for exercise, time for self-education or a week at the company's ski cabin.

The second level creates loyalty, and this comes from building a strong culture of recognition. To achieve this the company, need both strong formal and informal

mechanisms. Often companies have strong formal but weak informal mechanisms. This creates a paternalistic and distanced culture. The recognition comes by processes. The weak formal, but strong informal, as found in companies with very collegial environment. The downside is a risk of disconnection between the company goals and the employee's actions. Formal recognition processes include employee yearly reviews, formal bonuses and development programs, and celebrations activates as Christmas dinner. And the tools and templates for manages to perform these activities, and company targets. Informal recognition is feedback, and more personal appraisal. It can be flowers to someone on sick leave, or a special gift for someone doing the extra mile for a project. Informal recognition needs to be (1) sincere and deserved, (2) specific and individualized, and (3) offered with timing. The company need to av a strong process in place form the formal recognition and build a culture for informal. It could be training for managers, formal recognition of managers being good at informal, and affinity programs to create a sense of belonging (Conley, 2017).

The highest level in this concept creates Inspiration and is necessary for keeping motivated employees at the company. It's not just motivated employees needed for success, it's motivated and engaged employees. There can be three levels of the employees view of the workplace: A means to earn money to fulfill at pastime – at the base of the pyramid, those on a career path being recognized at work – the middle, and for those who the work is a calling – at the top. The concept is to evolve to a company where the grade of meaning at and in the work is high.

Meaning *at* work takes in aspects of how the employee feels about the company, their working situation as work environment, and the company's mission. Meaning *in* work takes in aspects as how the employee feels about their specific job task. Conley (2017) states that the meaning *at* work is more important than *in* work. When employees believe in the work of the company the whole Hierarchy is met. Employees with their base needs met has a confidence in the company in a secure job. Believing in the company's mission often deepen the relations between employees as they are part of something bigger and take pride in their work. The fulfilment of the self-actualization is met by an intangible feeling that they are part of something that makes a difference.

C. William Pollard (1996) expresses the phenome as a powerful force of creativity, service, quality, growth profit and value if the following conditions are met. The person

understands the reason for the task, that its personally satisfying and rewarding. The person believes and trusts that the mission/target of the company is in line with the persons own target for personal development and growth.

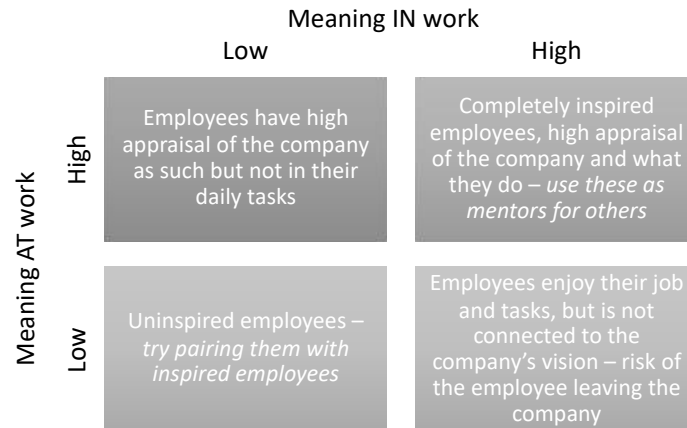


Figure 6 Meaning IN vs At Work adapted from (Conley, 2017 p. 85)

The above concept illustrates the high and lows of AT and IN work concept. If an employee finds a meaning *in* their daily work without the meaning *at* work, i.e. they are not informed or have understood or believes in the company's vision, they are likely to leave the company. The bigger the gap between *in* positive in work and negative *at* work the risk of the employee leaving increases (Conley, 2017).

If employees believe in the company's mission it usually creates a deeper alliance between coworkers and a sense of being part of something that sails above the water. The sense enhances pride, success and in part our social and recognition need. The self-actualization need have higher possibility to be met by the feeling of meaningfulness at work, the employees tasks in the organization and the organization itself makes a difference (Conley, 2017).

There can be different ways to achieve meaning *in* work, but in concept it's above business plans, engaged leadership and strategy. The concept of meaning *at* work is the higher purpose of the company's vision (Conley, 2017).

A vision for the organization brings the employees and potential employees together around a dream, helps everyone make decisions and builds a foundation for business planning (Scott et al., 1993).

Many company's vision or mission are often a longer sentence, or a short paragraph the aim to define the company. The more successful companies create a slogan are even a mantra, some are even public as Nike's "Just do it", Apple's "Think different" or old Nokia's "Connecting people"<sup>2</sup>. The aspect of a short two-word motto or mantra is to be easier for the employees to connect to. To define the mantra, it should be something that can be used in a question when engaging the employees. Other aspects of meaning *at work* is visualizing the philanthropy part of the company's work. What kind of donations is the company involved in, community work, etc. The best way to utilize this is to have a strategic approach with a statement, plan and communication. And connection to the mantra (Conley, 2017).

The Swedish gaming company, Massive Entertainment, choose their office locations for the different countries in multicultural parts of the cities. They want not only to employ a multicultural staff, but also to connect with the communities their employees live in. It's not only vision and strategy of the company, it's within the their values (Hedberg and Brundin, 2020).

Other engaging strategies can include off-site retreats with presentation not only of the company's success but also the success of strategic initiative as the philanthropy work, and how including all employees in the strategy development. Most major cooperation's has internal training programs. It's necessary to include cross training, and development programs not only for top management but for the major part of the employees and to include programs for tangible knowledge as language, competence that might be needed in the longer perspective (Conley, 2017).

Creating meaning *in* day-today work is about aligning the job to create a deeper connection to the organizational vision. A way to create this connection is with one-to-one conversations and team workshops where discussions on the topic is made. The major part is allocate time to handle the hard questions as: "What's your best experience in the last month, and why", "Why is what our company do important?", "If you did your job poorly, what is the effect on your coworkers and product/customers?", and "What are you becoming as a result of your work?". From a managerial point of view get managers to create top experiences with their employees to create a sense of community with each other. Create a top-ten list of why people should join the organization, without mentioning

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<sup>2</sup> Authors note

compensation package. The main focus for disengaged employees is to have them write down what they have done good, in organization targets, and what they feel grateful about on a regular basis. Have the conversation of meaning *in/at* work (Conley, 2017)

Meaning *in* work is further developed, together with one's work identity as how the employee defines themselves at work as well as the employees understanding of the purpose of their work, and what they believe it archive in their job. What individuals do in their job and whom they interact with defines their work identity and how that can change (Wrzesniewski and Dutton, 2001).

To actively adapt and take charge of the work, the individual can actively reshape, and redefine their job. This is called job crafting.” Job crafters are individuals who actively compose both what their job is physically, by changing a job's task boundaries, what their job is cognitively, by changing the way they think about the relationships among job tasks, and what their job is rationally, by changing interactions and relationships they have with others at work” (Wrzesniewski and Dutton, 2001 p. 180). The job crafting activates can be specified in three dimensions: The employee's motivations that initiate this activity, the freedom or opportunity to engage in the craft activity and the work orientations to determine the direction, and the probable effects on the employee and the organization.

Employees motivation for engaging in job crafting have a ground in three different individual needs. First the employee wants to be in control of their work to not alienate it from them self. The need for personal control is considered a basic human need, and by taking control or reframing the job the employee makes the job their own. Second is the need to create a positive self-image of one's work. It's not a way to assert oneself, but to sustain a positive sense self-awareness for themselves and for others as a social identity. If your work hinders your self-image one might go to length to correct this image in the eyes of coworkers. Third is to fulfill human connections to others. Building relationships form a connection and work identity (Wrzesniewski and Dutton, 2001).

The motivation within to engage in job crafting comes with the drive to fulfill need for control, positive image and connections. If an opportunity to craft a job arise is a degree of freedom and a sense of discretion in their job and how they do it. Not all employees feel these needs. Either the job is already crafted, or the fulfill their needs in their spare

time (often in monotone work) or they feel hindered to craft their job and evolve. The latter put pressure on management (Wrzesniewski and Dutton, 2001).

Individual employees orientation for their work has a correlation to their motivation for crafting the job and crafting behaviors (Wrzesniewski and Dutton, 2001). Typically, one can see one’s work as one of three orientations, as a job, a career or a calling. That can mean that people work for different reasons, but primary it’s within one of these three directions. The orientation as a job means that given a steady salary and other benefits, as stability is more important than the work itself. If another job opportunity that offers better compensation arises, they will take that offer, no loyalty lost. With a career approach it’s the success of the individual, the greater self-worth, and “climbing the ladder” that’s most important. Success artifacts as cars, clothes, accessories are important for the self-image. With a calling orientation the work is a way not only to fulfill your self-image but to somehow make a difference in society. The person is linked to the larger community and sees one’s role in a larger perspective (Dik and Duffy, 2013).

Work approach will interact with the motivations for job crafting, either in an encouraging way or discouraging way. Employees are likely to approach their tasks and relationships at work in different ways dependent on their approach. An employee with a career approach will craft their job to interact with persons more powerful, and to create as much visibility in the organization on their one worth. With an approach of the work as a calling one might focus on cognitive tasks to create relationships and competence needed to help as many people as possible, or in a better manner (Wrzesniewski and Dutton, 2001).

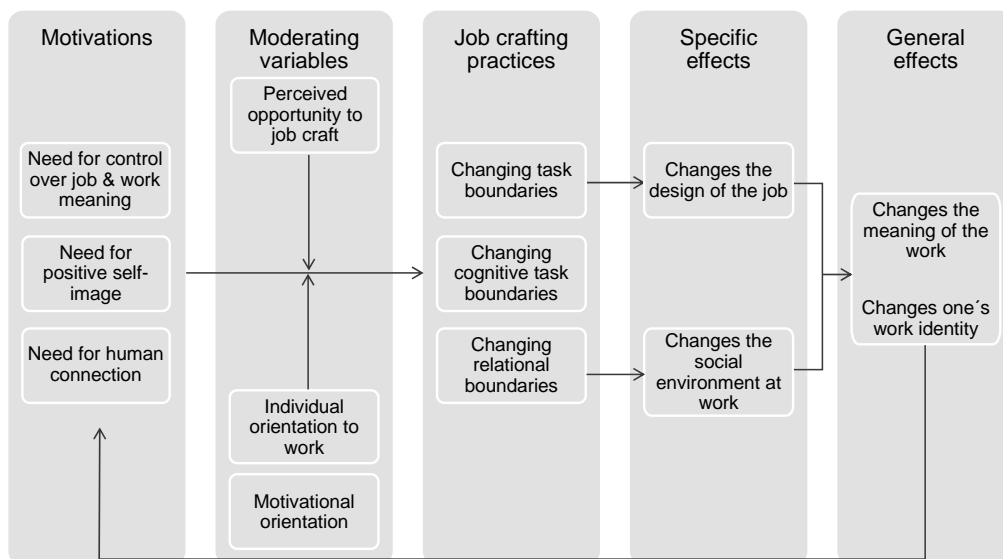


Figure 7 A Model of Job Crafting, adapted from (Wrzesniewski and Dutton, 2001 p. 182)



In figure 7 the process model for job crafting, by Wrzesniewski (2001), gives an overview of the different activities involved, and what sets the boundaries. The first aspect is why an employee has a drive for job crafting, their motivations. The second stage illustrates the boundaries of external effects on the crafting activities. This includes the degrees of freedom and organizational structure set by the organization. The crafting can be addressed in three forms: Task, cognitive task and relational boundaries change. The effects on the crafting activities can be both specific, on one's own perspective and on a more general perspective: the meaning of (or at) work.

The form of changing task boundaries involves the number of tasks, scope and type of job. By changing the tasks, the job can differ from what is described in the formal job description. For example, it could be engineers in a project that defines different tasks, change or exclude them in order to move the project to completion. The effect is a project completed in time but could also include a change in meaning of the engineer's job to include guardian, or promotion of the project result. By changing the cognitive task boundaries, the employee is altering the interpretation of the job, that the tasks include more components as discrete tasks, information flow that helps them deliver on target. This can have a major effect on how the employee approaches one's job, as taking a holistic approach rather than a specific technical approach. The last form is changing the amount and/or quality of interactions with others in the employee's specific work. By choosing more, or fewer interactions with more quality the employee can alter the meaning of their work. Maintenance personnel might start interacting with the process engineers in order to improve their daily work. This will have the effect of not only improving the employees' daily work, but the meaning of it: it's an integrated vital task to help process development, and creates larger social connection at work (Wrzesniewski and Dutton, 2001).

By experiencing a more positive sense of meaning, higher self-image, feeling needed and respected, being made of creates a higher purpose. It's a part of our life's purpose. By altering the meaning of the job, it might fulfill that higher purpose (Dik and Duffy, 2013).

Employees that themselves take initiative to evolve their job, as in job crafting, and goes beyond the formal job description have a higher personal engagement. These engagements enforce behaviors that, 1) aligned with the organization's mission, 2) have a long-term focus, 3) are action and target oriented, 4) are persistent in facing barriers, and

5) are proactive and formed by the individual. Job crafters with high personal initiative often redefine their jobs to include more than formally described. The downside is that unsupervised this can create friction on how work is executed in an organization (Wrzesniewski and Dutton, 2001).

The crafting model prerequisites employees to have the ability, both from external and internal factors, to be proactive and creative in building their work identity, and to take opportunity to evolve their work setting, meaning and social relations. There are important implications on management by the process of job crafting. Management can both encourage, and discourage job crafting, as well as taking a step back and let the process be uncontrolled. The management should be seen as architects of the process, support and encourage employees as well as have direct control of incentives and reward associated with the outcome. A crucial element is to include employees in strategic discussions on various levels and its development (Wrzesniewski and Dutton, 2001).

### **3.3.1 Summary**

The major issue with basing a theory on Maslow's hierarchy of need, is the difficulties with empirically testing of the theory and Maslow's small and convenient sample (McLeod, 2020). The more recent attempts, with a large and culturally diverse sample human needs to be fairly consistent between cultures and follow Maslow's theory. Except on the strict hierarchy. Needs do not need to be filled in order or to complete extent.

With baseline in Conley (2017) the motivational factors in staying in a job can be summarized to:

Money – Compensation package and incentives and job security. Angelöw (1991) adds individual motivation for the job, and organizational motivation.

Recognition – Conley (2017), Angelöw, (1991) and Wrzesniewski and Dutton (2001) all, in variation, highlights the importance of recognition: Feedback culture, sense of belonging, the little encouraging bits, degrees of freedom, power to influence and faith in yourself and co-workers. In creating a stable and encouraging working environment where people stay and develop this seems to be a crucial part.

Meaning – To strive even further to keeping employees motivated, and create meaning *in* and *at* work requires a higher purpose for the company, it's to create an environment that

strives for this (Conley, 2017). The meaning *at* work is to enable the employees to create a feeling of a part of something that makes a difference. Employees inspired, high appraisal of the company and what they do. Wrzesniewski and Dutton (2001) further develops the meaning *in* work with the concept of job crafting – degrees of freedom and inspiration and environment to, within boundaries, to from one’s job.

## 4 METHOD

The research questions to be investigated in this study are:

1. What motivates the employees in the latter part of the dismantling?
2. What aspects play a key role in ensuring key employees not leaving on beforehand?

The purpose of this study is to investigate the issues of maintaining a motivated workforce during the process of dismantling the physical plant and the existence of the organization. The aim is to answer the research questions and to look into the possibility of using the conclusions to give recommendations for future research.

Bryman and Bell (Bryman and Bell, 2015) describes a qualitative research strategy as one that usually emphasizes on words rather than quantification in the collection analysis of data. The research strategy is inductivist, constructionist and interpretivist, but not necessarily inclusive of all three of these components. The qualitative methods often use inductive reasoning, which is moving from specific to general. The researcher starts with specific situation, finds themes or patterns, create a tentative hypothesis, and then develop conclusions (Bui, 2014).

Grounded theory is described as interpretative, which means the emphasis is on understanding of the social reality of the participants, in a certain context, and interpretation of this reality (Bryman, 2002). The researcher will in this study apply grounded theory in the interpretation of the results and literature review.

From that perspective the researcher has chosen a qualitative research method for this study. The aim is a deeper understanding, and as the research method allows for the theory as and outcome rather than something that precedes it (Bryman and Bell, 2015).

Components of a research can be a study concerned with the nature and complexity of a specific setting, in a single event, location or organization. This will follow with a detailed and intensive analysis, a case study (Bryman and Bell, 2015). The critical case is one where the researcher has a hypothesis and the case is chosen on the grounds that it will allow a better understanding in which the hypothesis will hold or not (Bryman, 2002). In aspects this research will be regarded as a case study, rather than a critical case.

#### **4.1.1 Selection of the sample and setting**

Convenience sample is sampling by the researcher virtue of accessibility (Bryman and Bell, 2015). The drawback can be if the researcher let one or few persons represent the whole organization. Quota sampling is proportions of a categorized population, and not done randomly.

In this study the sample was selected by the contact of the case company, but done at the researchers' categories: Senior manager, personnel within human resources, and persons recently employed.

The case company itself where chosen by the researcher due to convenient access by contacts, and that the company shown interest of the result of the study, and willingness to support with participants, and background material. The study is not commissioned by the case company but endorsed.

#### **4.1.2 Participants**

Respondent 1 is senior within the company, and in the higher span of middle age. Has had several senior management positions and several decades in the organization.

Respondent 2 is senior within HR and is in the span of middle age. Has long background within the HR field but not that many years with the company.

Respondent 3 joined the company within resent years and is in the span of not yet of middle age.

Gender has not been seen as a factor in this study. Multicultural aspects is somewhat limited as nuclear power in under the law of prohibited area of critical businesses, which requires employees to be Swedish citizen or with special permits.

#### **4.1.3 Procedure**

The researcher has used a semi structured interview guide (appendix A) as formal structure for the interviews. The same template was used for all interviews but allowed for elaborations by the respondents. One hour was booked for each interview to not stress

the respondent. Follow-up on company related information has been done by accessing the company webpage.

Questions has been formed by following types of interview questions by Kvale (1997) and interview quality. Kvale also states that the knowledge from the interview and the meaning is dependent on the context. Its sensitive for nuances in the meaning and might not be replicable to another context.

#### **4.1.4 Data analysis**

The interviews were recorded and transcribed as is, without any interpretation or translation from “spoken language”, i.e. Natural language. The transcripts were analyzed and key sentences mark and mapped according to five central themes. The interpretation was done according to principles for hermeneutist interpretation.

Kvale (1997) describe hermeneutist interpretation in six major principles:

1. Constant shift between parts and unity to see the deeper meaning and connection
2. Interpretation of the sentence is finalized when the different sentences form reasonable patterns and is part of a joining unity
3. Testing the sub-interpretation against the unity
4. The text’s autonomic, it should be understood by its own reference frame
5. Knowledge of the texts theme by the researcher
6. Acceptance of the context and bias of the researcher
7. The interpretation enriches the text and enriches the perceived meaning of the interview

#### **4.1.5 Validity and reliability**

The transcription of the interview itself has effect on the reliability. There could be interpretation when writing done the recording. There could also be interpretation done if the interview is translated to another language (Kvale, 1997). Validity can be discussed as how the interview is done, if the person doing the transcription is writing exactly as the person says it or if there is a “cleanup” to more correct language. The transcription is done by translating from spoken language with that persons set of rules to the transcriber’s set of rules for written language.

In this study two out of three interviews were recorded and transcribed with computer aid, that is the use of a speech to text service. The interview is then listening to and corrections done in the text where the automatic transcribe hasn't pick-up the correct words. Very little editing was done by the researcher. One interview was written down by hand during the interview and emailed to the respondent for comments. A previous study of the case company's culture has added a perspective to the results in some areas. By having this approach, the degree of validity and reliability should be relatively high.

## 5 RESULTS

The qualitative interview's aim is to allow the respondent to express what's relevant and important for them, with focus of detailed answers. Therefore, they are not easily coded (Bryman, 2002). To be able to extract information from the interviews to the structure of the topics in the research question the concept of natural unit (the respondents answer) and the derivation of central theme in the answer is used (Kvale, 1997).

The research questions will be the baseline for the themes:

1. What motivates the employees in the latter part of the dismantling?
2. What aspects play a key role in ensuring key employees not leaving on beforehand?

The themes will follow Conley's (2017) steps, with aspect of meaning *in/at* work as the literature review shows the aspect of this being important. Job security will have the added views from section 3.1. In degrees of freedom Wrzesniewski, et.al. (2001) view on job crafting is taken into account. There is also a theme for the respondents' own ideas.

- Money
  - basic motivation, i.e. Money, job security, bridging activates
- Recognition
- Meaning
  - Degrees of freedom in job situation and job satisfaction, job crafting
  - Understanding of company values and overall culture
  - Notes on public profile
- Ideas for keeping key resources

### 5.1.1 Theme one – Money

Respondent 1 notes that the compensation package is good, and the balance between work and spare time is good, and that the severance package when the plant closed for service operation was very good. Will stay as long as possible but is due for retirement within the period.



Respondent 2 notes that the job security is good, since the group company is large, and opportunities will arise. Will most likely stay as long as the job exist, but neither reflect nor worry about the situation.

Respondent 3 is fairly new within the company and reflects that there are some issues with consultants versus employees and that the line is sometimes blurred on how one feels the connection and almost as consultants feel employed. Has a broad role which is somewhat unclear and adds uncertainty? Has not decided if to stay the whole duration of the process of closure.

In a study done on the nuclear powerplant Barsebäck's transition to the dismantling phase, it was concluded that no polarization was seen between employees forced to leave due to down-size and those who were given a new position. The working relationship was on a good level the entire time. The study<sup>3</sup> concluded also that the fact that the compensation package was quite generous might had have a positive impact on the working relationships (Söderberg, 2007).

### **5.1.2 Theme two - Recognition**

Respondent 1 sees the plant as a “small business” where all “doors are open”, one can talk to any superior without hesitation. As part of recognition it's combined with the compensation package and an open culture. Feedback culture is noticed as weak, there is plenty of room for improvement. Quote: “that pat on the shoulder could one do a lot more often”.

Respondent 2 has thought through the notion of recognition in depth and sees the combination of compensation package and recognition of achievement as clear. The informal recognition and feedback culture are neither especially good nor bad. There is an understanding that improvement should be done, and some management training has been done but should be enhanced. The formal recognition, apart from compensation, is done in twice yearly one on one settings where one session is dedicated to individual development and reflection and one session on follow-up. There is also a yearly employee satisfaction survey, done for the whole group. Here often good leadership is noted. As

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<sup>3</sup> Authors note, at the time of that study

more day-to-day activities is more for all employees, as cakes on “fika<sup>4</sup>” sessions to celebrate achievement or just on special days. Highly appreciated. During the Covid-19 pandemic all employees received an Easter candy package to their homes.

Respondent 3 sees the informal recognition culture as open and very good. Appreciation is often showed among colleagues and is sincere. Recognition from superiors is good and frequent. The more informal recognition as social interaction as lunches, tokens or gifts, and informal conversations could be improved. The formal feedback culture is seen more challenging. Constructive and structured feedback is rarely given.

In his master thesis D. Söderberg (2007) has studied the culture at one closing nuclear power plant, and its process of organizational change to handle the decommissioning, and their organizational culture. As for feedback culture Söderberg identified that there is a certain issue with two-way communication not being two-way but rather two one-way communication channels. This had an effect on personnel feeling that their ideas and opinions were not taken into account since they didn't receive any feedback. Söderberg concludes that persons not receiving feedback feels less involved.

### **5.1.3 Theme three- Meaning**

#### *Degrees of freedom in job situation and job satisfaction, job crafting*

Respondent 1 is highly engaged due to the fact of what the company is engaged in hasn't been done in Sweden before. A great opportunity for future knowledge and lessons learned, from success and failure for future projects. Despite a long career there has always been opportunities for new roles and personal development which has contributed to the number of people which stay long with the employer. The importance of receiving new challenges is a key factor in staying on. It's important for personal growth. The feeling is that the degrees of freedom to shape one's own job is large, even within jobs that are highly controlled by processes. Most managers are perceived as being good in delegation of authority and work, with a good ambition of personal growth.

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<sup>4</sup> Authors note: The Swedish notion of “fika”, is a team, group or companywide coffee session and informal chat is a strong part of the Swedish working culture and has become a more recognized activity in the western world business community

Respondent 2 is engaged in the large change the company is undergoing and the support and changes from the group. As for the employee's personal development the company strategy is 70% on-the-job development with exciting job tasks and challenging projects, 20% individual coaching and 10% formal training. The individual development plans could be improved with somewhat more strategic connection on the medium-term targets for the company. As another motivation there is a group wide talent program which the company can send one employee each time the program is run.

Respondent 3 feels that the era the company is in is exciting, new co-workers are employed, new projects and new targets. Times of large changes. The more seasoned colleagues contribute with vast knowledge, and that in a rather small company. There is knowledge in all parts of the processes, including the supporting as human resources and communication. The role for supporting personnel can be a bit vague or unclear though. There is also a challenge when many newly employed enters an old organization with many processes. It requires time and openness to understand them all. The need for new personal challenges is important and the feeling of development. This is combined in the personal development plan, but the connection to company target can be perceived as a bit weak.

As employer branding there is several activities, both in local organization as well as within the Swedish group. One example is including employees on business arenas with universities to help improve the dedication and the pride of the company.

#### *Understanding of company values and overall culture*

Respondent 1 sees the culture as very open and adaptable to changes. It has gone from a fairly low tempo during maintenance operation to a lot more intense during decommissioning operation. The organization has maintained its culture of openness and respectfulness, but the changes are many and become more complex with many new employees. The major change is going from delivering with almost "gold plated engineering" to a project-oriented culture and the change is great. Quote: "either you accept the change or abandoned the ship". One aspect of the company values, as part of an international group, is that the company has always seen itself as the "small powerplant where we define our self". There have been several ownership structures, so the group vision and values hasn't been that important. There is an understanding of somewhat

higher purpose, for showing the public of doing both the former production phase and now the decommissioning phase in a safe and orderly manner.

Respondent 2 refers to the group values “The [company] way” and that these are somewhat adapted in the local meaning for the company’s target. There has been a work done on values concerning how you treat and collaborate with co-workers. The transition to project and delivery-oriented culture is still ongoing and require more work and improvement. The values and culture are somewhat openly discussed in meetings but focus now with many new employees could be improved. Especially among management. The strategy for recruiting is to talk about the group and company values to achieve an understanding for the recruited, and to hire personnel with that understanding.

As for the culture of recognizing overall achievements and company/group progress there is short weekly meetings where the CEO presents feedback on deliveries and group target. Also done in longer meeting combined with discussions on the yearly targets.

The strategic targets are set by the group and derived down to the Swedish companies and the local organization, and further down to each department. It’s fairly done top-to-bottom, but contribution from the employees is done in each department. The group Corporate Social Responsibility policy and work is mostly presented on the intranet and not that locally discussed.

Respondent 3 sees the overall culture as very good but in a very major change. The company has long standing traditions, but as going into a new phase and with many new employees and working methods the change is a driving force. The culture allows for combining new and old in a positive manner and that the CEO is extremely focused in this change and works to include as many as possible. The fact that it involves all personnel can sometimes be challenging. The group values and targets are not so visible in this major change.

It’s also important to have concise plans for introduction of new employees for them not only to understand processes but also to get to know the culture and feel part of the community.

The need for a higher purpose is seen as important, both that the group is dedicated to the transition of green energy and the strive for more female employees in a male dominated

business. There could be a bit more focus on including not just women but also persons with different cultural backgrounds.

Söderberg (2007) came to the conclusion<sup>5</sup> that the new company vision, holding on to that, and the continuous development of it will be the single largest success factor for the dismantling process. The vision is seen as excellent in its simplicity and has been very well received by the employees. The two visions are: “To develop the decommissioning” and “To become the company others benchmark against”

#### *Notes on public profile*

From the company’s official website on the topic of “Working with us” the company start with the statement or overall target with the Swedish business areas. There is no formal statement on what it’s like to work in the different subsidiaries but rather video testimonials form employees.

There is a statement on values that stresses on independence and differences, both as individuals on competences, experiences and views, as well as diversities. The individual contribution will only be good if you are prosperous and flourishing on the workplace.

In a couple of adverts for vacancies the values are not that clearly expressed but rather by implication, it refers to “The [company] way”. The overall targets differ or are vaguer than on the website.

#### **5.1.4 Theme four - Ideas for keeping key resources**

Respondent 1 means that the company should work either more actively with business ideas on what to do with the vast knowledge and experience acquired during the process and market this. Or simply to be clear on the fact that after 2032 there is no company and support personnel to be requited to other similar companies. As this is one of the largest industrial projects in Sweden the demand for experienced personnel is large.

Respondent 2 reasons around the concept of employee turnover might not be a bad situation. By every now and then get new influences in teams might drive for constant improvement and change and therefore improve the culture and work satisfaction.

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<sup>5</sup> Authors note, at the time of that study

Respondent 3 acknowledge that there is work ongoing in new business ideas for when the decommissioning is done, but nothing concrete<sup>6</sup>. Most likely some personnel are due for retirement as the staff need declines as the decommissioning closes to finalization. Previous staff reductions within the group has acquired both knowledge and a smorgasbord<sup>7</sup> of different activities of competence development, severance packages and so forth, but nothing is set for this decommissioning. There is also a clear strategy for recruiting or those positions filled by consultants, so the staff has the right balance.

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<sup>6</sup> Authors note: Or ability to disclose privileged information at this point

<sup>7</sup> Authors note: Smorgasbord, from Swedish smorgasbord, refers to a buffe of delicacies, but in business terms a buffe of choices or options as different severance packages

## **6 DISCUSSION**

### **6.1 Introduction**

The target is to handle this as a qualitative case study. The approach is based on grounded theory. This is an interpretative approach where the specific situation is researched, themes are to be found and conclusions might be drawn (Bryman, 2002).

The aim of the hypothesis is to answer the research questions.

1. What motivates the employees in the latter part of the dismantling?
2. What aspects play a key role in ensuring key employees not leaving on beforehand?

The first section discusses the conclusions in the literature review, the second section the result from the case interviews. The third section handles validity and limitations and ends with conclusion.

### **6.2 Literature study**

One of the few studies done in Sweden on closing industrial production, the Scania case in Falun and Sibbhult by Wigland and Östberg (2009) and Jonsson (2009) conclude a couple of implications:

- Strong CSR and bridging activities strengthen the company, the community where the production is located and employee's loyalty
- Strong bridging activities greatly reduce the number of persons given notice when the closure/dismantling is completed
- Together with the community and supporting organizations as TRR and regional government new business ideas have greater possibilities of actual follow through

For the case at hand with the dismantling of a powerplant there are a couple of major differences to the Scania case:

- The employed personnel have higher academic background and more specialized
- The number of persons employed are by far not as many as 1250 as in the Scania case
- The local future business opportunities may be more limited

Aside the differences there could still be merit to study and adapt the concept of bridging activities to the closure of the plant. Especially the long-term aspect of doing the bridging activities up front and official, and on a long-term base. Use the concept of internal job-seeking market and competence improvement and switching in order to support personnel leaving. At last support and acknowledge new business ideas formed by the closure, well in advance.

Angelöw (1991) supports major parts of this concept in concluding that if the employment security can't be upheld one should take action immediately. Actions can include: Access to support and counselling, competence development, internal job-seeking market and collaboration with TRR, and also follow-up of persons who has been given notice and left. It's the ethically responsibility of the organization.

Changing the culture and organization from maintenance operation to active dismantling is a great task which require dedication. Though as soon as that process is done, and the peak of dismantling activities occur the change process for staff reduction towards the completion needs to start.

Both Yukl (2006) and Angelöw (1991) points on the importance of recognizing the problems that can occur in these situations as well as the well-being of the personnel. An open and inclusive process for these changes is necessary to maintain quality operation, and the content staff.

The first deduction to be made is that even is its quite ways to the final closure of the company it's most likely that involving the personnel right from the start is most likely the way not to disrupt the day-to-day operations.

The organizational culture is often unique to a company, but with a company with the target of close itself down the stress on the culture increases. The basic underlying beliefs are changing (Schein, 2017).



As noted by Conley (2017), Angelöw (1991), Bolman and Deal (2017) the basic need for an income and job security is high. If your job is at stake you work for higher motivation, loyalty to the company and business development activities are inefficient or more or less point-less. The personal stress or even crisis will block everything else (Cullberg and Lundin, 2006).

The second deduction will be that if the long-term target is to close the company in one way or the other the bridging activities need to be in place, otherwise the lack of those will overshadow activities to encourage and motivate the staff.

To achieve for an organization where the personnel has the ability to grow and be both motivated and engaged (the meaning part of the need pyramid), the organization need to strive for both meaning *in* and *at* work. If this is achieved the risk of key resources leaving is greatly reduced (Conley, 2017).

To create the meaning *at* work the company vision and higher purpose is essential and a strong company culture according to Conley (2017). Scott et al. (1993) adds it creates the foundation of the business planning.

The third deduction is that a closing company will still need to have a clear purpose and vision. It might even include how to handle staff at the end closure. The indications are that this will help or be one piece of the puzzle to have motivated personnel and engaged management.

On the more personal level the recognition culture of the company is an important factor, as well as personal development. Creating an informal, but mostly formal feedback culture enforces development and the need to recognition. This a major part of increasing self-esteem and gives a better foundation for more organizational recognition where team/company/group achievements are celebrated (Conley, 2017).

To utilize the feedback and further develop the continuous improvement of one's work is done. The basic motions for this are the individuals need for control over one's job, the need for positive self-image and need for human connection. By looping the job-crafting activities the self-esteem and job satisfaction increases (Wrzesniewski and Dutton, 2001).

The fourth deduction is that the individual needs to have some degrees of freedom to shape one's own job, within the boundaries of the purpose. This increases motivation and

satisfaction. The individual need to be aligned and well involved in the strategic discussions, on respective organizational level. And the individual must be recognized at various levels and way to stay motivated.

### **6.3 Result of the case**

The sense of job security is very high at this level of the dismantling phase, the final closing date is too far in the future to be acknowledged. The engagement in the respective job tasks is high, and the challenge in what executing the purpose of the organization is high. The question of whatever the respondents will stay all the way to the closure is much dependent on the opportunity to still have challenging task that have the components of personal development.

The recognition culture has indications of being under develop. The notion of informal recognition, at least between colleagues, appears to be well developed. The strong sense of belonging is apparent, but it also seems there could be an underlying issue of old versus new culture. This is of course quite logical since the first reactor has been in maintenance operation for 20 year before dismantling begun. The individual plans for development have a little indication of being to formal or at least to infrequent. This could be combined with the formal feed-back culture is suggested to be lacking in frequents or ability. Formal recognition is well established and structured process in place.

The company culture seems to be strong and connected to the strategic purpose of the company and there are quite a few activities in place to handle the present changes.

Depending on experience in the company the views on degrees of freedom and ability to craft one's work defer a bit. The view of importance of new challenges is quite consistent throughout, as the notion of personal development.

The process for individual development plans is established as well as the company strategy for personal development. The connection to daily work is though somewhat unestablished or unclear.

The company has a long history and have had several group owners over its lifetime. This seem to have established a sub-culture that is more or less independent regarding the owner groups culture. The present mission and identity seem though to be quite well

established according to the group. The strategy and mission are implemented according to standard processes involve employees on each level. The extent of this involvement is unclear, and the experienced value of this involvement is also unclear. The extent to having the power to influence seems to differ on the persons own will and interest. The group and company result, and achievements are well communicated.

The company's target and higher purpose and community engagement is important, on a certain level. Mostly on showing the company's responsibilities and contribution to the community and environmental responsibilities, as well as focus on diversity. The personnel and company strategy are rather well shown on the company website but lacks the same clarity in reequipment adverts.

The ideas of how to keep key resources and how to handle final closure is both the suggestion of a clear strategy and the necessity of staff changes and note of a strategy not completely existing at the moment.

### **6.3.1 Limitations and validity**

Three in-depth interviews have given much insight, but in a company with 60-100 employees and 100 more consultants the sample is to be considered as small. The respondents where chosen by the commissioning person, though based on suggestions of age, role and employee time by the researcher, i.e. a convenient sample. To minimize the respondent bias, the topic of the interview where not disclosed in advance. The fact that the researcher has had a brief background with the company as a business consultant might also lead to bias and forming a conclusion ahead of the result. Two actions were made to minimize bias: the chosen respondents had not met the researcher before, and that the researcher's background was disclosed in the beginning of the interview. Research in "successful" closure in recent times in Sweden have been limited to blue collar production lines and the theory of building successful cultures and motivated employees are aimed for companies still in business, not closing. Therefore, can these limitations might have an effect on external validity and make the results difficult to generalize for other similar contexts.

The interviews were re-scheduled due to the Covid-19 pandemic and then due to the same fact done by phone, rather than face-to-face. The pandemic 2020-2021 has also had

impact on the result that that meetings, collaboration and feedback is not given in a normal way, rather by online conferencing. This, combined with the small sample, might have had an effect on internal validity of the study. The addition of an external study to back the result might reduce the effect on internal validity. More and face-to-face interviews may have given boarder result and more accurately displayed the case.

### **6.3.2 Recommendations for future research**

Based on the results of the case study some recommendations can be made for future research. The case has been studied from qualitative perspective to give the researcher in-depth insights in certain aspects of the organization. A quantitative research, both at the case company and the other companies in Sweden with the same preconditions could improve the data and give more insights for further qualitative studies. To test the conclusions and increase external validity group interviews can be done at several sites. There could also be suggestions for studies from an organizational level, on how to further adapt the organization for the last closing phase.

The case study has focused on finding factors to motivate personnel to stay the duration of the lifeline of the company, not on doing the requiting for necessary personnel or replacements. To further increase external validity studies could be made on persons outside of the organization and test the theory.

## **6.4 Conclusions**

Four conclusions can be made from this study (Steimer, 2020). The first conclusion is that to create an inspirational and motivational environment the baseline must first be to in some ways find security around the employment. Secure employment in a business closing down isn't possible, but the study has highlighted some ways: combined bridging activities with finding new businesses, competence improvement for other employments, both within the group and externally, and support in job seeking as well as close collaboration with local government and community. Angelöw (1991) stresses out the importance of being upfront with the fact on how the closure will be done and those actives. This conclusion is supported by Durbin et.al. (2001) that the negative effects as stress, lack of motivation and risk of leaving the company caused by high degrees of uncertainty for the future.

The second conclusion is to have an environment where employees are motivated is to establish a culture of recognition. The formal part of recognition often seems fairly well established, but the informal with the day-to-day feedback and tokens of appreciation is much needed. The external study (Söderberg, 2007), though a few years old, showed issues with the feedback and recognition culture. Combined with the results there is signs that the case company has made an effort to improve the culture. This will still require active and engaged leaders/managers. The recognition should also include the strategic development of the business, or for that matter, coming business and closure.

The third conclusion is that the individual development plans mostly include strict business-oriented targets. To further motivate and hopefully improve the chance of the person staying with the employment, the inclusion of soft targets and even targets that is not directly related to the business could be implemented. A suggestion could be combining this with the ideas in the first conclusion.

The fourth conclusion is the company brand, vision and targets are important to be clear and acknowledge by the employees. The company's CSR work will inflict on the view of the company both internal and public. A strong CSR policy include responsibility to do an organized closure with the wellbeing of the future non-employees. A strong vision strengthens the employees feeling for the company.

The closing reflection of the study is that the conclusion can be theorized but not completely proven until the fact that one of the companies within the industry actually has closed down. The insight in the two dimensions of creating meaning *in/at* work is most likely most valuable and versatile concept that can be adjusted to different cases. And the implement of meaning *at* work in business closing is challenging, but most likely doable.

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## 8 APPENDICES

### 8.1 Interview guide

*Anställd/Chef*

Inledning

1. Bakgrund
  - a. Studiens bakgrund
  - b. Berätta lite om din bakgrund (utbildning, roll, ålder, anställningstid)
2. Hur ser du på din framtid inom företaget?
  - a. Ev. uppföljningsfrågor
    - i. Varför känner du så? (sonderande)
3. Hur är det att arbeta på ett företag som har som mål att avveckla sig själv?
  - a. Ev. uppföljningsfrågor
    - i. Varför känner du så? (sonderande)
4. Tror du att du är kvar hela tiden? (specifik)
  - a. Varför känner du så?

Kultur

5. Vad är företagskultur för dig?
6. Vilken typ av företagskultur upplever du att ni har?
  - a. Varför känner du så?
7. Upplever du att företaget aktivt utvecklar sin företagskultur?
  - a. På vilket sätt?

Empowerment

8. På vilket sett upplever du att du får uppskattning för ditt arbete?
  - a. Uppföljning, det kan vara från din chef, kollegor/medarbetare, företaget, kompensationer
9. Hur upplever du att er återkopplingskultur är (feedbackloopar)
  - a. Varför känner du så?
10. På vilket sätt känner du att du utvecklas i ditt jobb?
  - a. Varför känner du så?
  - b. Hur viktigt är det för dig med utveckling?
    - i. Not kunskap/färdigheter/förhållningssätt

11. Hur stor frihet har du i ditt arbete (ie hur mycket utrymme för att forma din roll har du)?
  - a. Varför?
  - b. Är det något du vill ha mer eller mindre av?
  - c. Hur viktigt är det med frihet inom din roll?
12. Vad är viktigt för dig för att du ska trivas med ditt jobb?
  - a. Varför känner du så?

#### Företagets roll i stort

13. Hur väl känner du till din arbetsgivares devis/motto/mål?
  - i. (not: We are Uniper: Tailoring energy solutions. Managing complexity. I Sverige Vi levereras baskraft.)
14. Är det viktigt för dig att du håller med om din arbetsgivares mål?
15. Hur viktigt är det att din arbetsgivare är engagerad i mer än bara produktion/utförande, i samhället i stort?
  - a. Varför känner du så?
16. Vad tycker du företaget kan göra för att få nödvändig personal att stanna hela tiden?
  - a. Varför känner du så?
  - b. Utveckla ev tankar
17. Är det något du vill tillägga?

#### Avslutning

Tack för din tid och öppenhet. Jag återkommer med transkriberingen för denna intervjun och resultatet kommer delges HR i form av slutrapport. Om det är några följdfrågor, går det bra att jag återkommer med dem i samband med transkriberingen?

#### *Personalchef*

##### Kultur

5. Vad är företagskultur för er?
6. Vilken typ av företagskultur upplever du att ni har?
  - a. Varför känner du så?
7. Upplever ni jobbar aktivt utvecklar er företagskultur?
  - a. På vilket sätt?

## Empowerment

8. På vilket sett ser ni till att medarbetarna får uppskattning för ditt arbete?
  - a. Uppföljning, chefsutbildningar, utbildningar i stort, kompensationer
9. Hur upplever du att er återkopplingskultur är (feedbackloopar)
  - a. Varför känner du så?
  - b. Är det något ni aktivt jobbar med i kontinuerlig chefsutveckling/samtal?
10. På vilket sätt arbetar ni med kompetensutveckling inom företaget?
  - i. Not kunskap/färdigheter/förhållningssätt
  - b. Arbetar ni bra med direkt kopplad kompetensutveckling, eller finns individuella utvecklingsplaner med indirekt kopplade kompetensmål?
11. Vad gör ni för att öka trivsel och engagemang på arbetsplatsen?
  - a. Varför?

## Företagets roll i stort

12. Hur väl känner du till din arbetsgivares devis/motto/mål?
  - i. (not: We are Uniper: Tailoring energy solutions. Managing complexity. I Sverige Vi levereras baskraft.)
13. Är det något ni aktivt arbetar med i ert strategiarbete?
  - a. Och hur mycket inkluderar ni medarbetarna i detta arbete?
14. Hur ser företagets CSR strategi ut?
  - a. Är det något ni aktivt marknadsför internt med resultat?
15. Hur ser er exit-strategi ut? Hur tänker ni er nedläggningen?
  - a. Är ett kompetens/arbetscentrum för att stödja en ny anställning något som ni har funderat på?
16. Är det något du vill tillägga?

## Avslutning

Tack för din tid och öppenhet. Jag återkommer med transkriberingen för denna intervjun och resultatet får vi diskutera hur ni vill ha presenterat. Om det är några följdfrågor, går det bra att jag återkommer med dem i samband med transkriberingen?