



Developing safety orientation video for case organisation

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The development objective of this thesis was to create a safety orientation video for case organisations specific departments, following the principle of occupational safety. The safety video would include the case organisation's safe work practices, safety rules, and principles. Knowledge was based on risk management, risk assessment, and hazard identification.

By creating a safety orientation video, the case organisation can improve new employee's knowledge of the safety rules and principles. The objective of the training is to ensure the safety of all employees and continuity of the production by creating a safety orientation video. The theoretical background supports comprehension of the employer's responsibilities according to the Finnish Occupational Safety and Health Act. Then it reviews what the objective safety orientation should have and how risks and hazards are defined and identified. Additionally, it reviews the ISO 31000, Risk management - Guidelines, which provides principles, a framework, and a process for managing risk.

This study used qualitative research methods, such as secondary data and unstructured interviews. The secondary data used in this development project was obtained from the case organisation's internal database. The purpose of secondary data was to gain a better understanding of the safety culture, rules, regulations and to review past incident reports. Interviews were conducted in an unstructured way. Therefore, the interviews did not have a clear structure and new questions were generated depending on the interviewee's answers, but they followed the main subject of occupational safety. Interviews were conducted with five different specialists and they were chosen because they work closely with occupational safety in the case organisation.

Based on the data collected some safety principles were still unclear for employees such as how to act in first aid situations or during a fire alarm. Other concerns such as employees' turnover rate, due to seasonal work means that there are new employees each year. Therefore, the safety orientation video for this department was needed.

The new orientation video included information that is relevant in improving everyone's safety in that department. It gave guidelines on safe work practices and principles as planned. The video has not been yet shown to new employees, but it can assume that it will help to elevate occupational safety and health in the case organisation.

Keywords: Keywords: Occupational Safety and Health, hazard, risk, risk management, ISO 31000 risk management framework

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Turvallisuusperehdytyksen kehittäminen case-yritykselle

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Tämän opinnäytetyön kehittämistavoitteena oli luoda turvallisuusperehdytys video case-yritykselle. Turvallisuusperehdytys videolla olisi tietoa yrityksen turvallisen työn käytännöistä, turvallisuussäännöistä ja periaatteista. Tieto perustui riskien hallintaan, riskien arviointiin ja vaarojen tunnistamiseen.

Luomalla turvallisuusperehdytys videon yritys voi parantaa uuden työntekijän tietämystä turvallisuussäännöistä ja -periaatteista. Koulutuksen tavoitteena on varmistaa kaikkien työntekijöiden turvallisuus ja tuotannon jatkuvuus luomalla turvallisuus perehdytysvideo. Teoreettinen tausta tukee työnantajan vastuun ymmärtämistä Suomen työturvallisuuslain mukaisesti. Sitten se tarkastelee mikä on turvallisuusperehdytyksessä tavoite ja kuinka riskit ja vaarat määritellään ja miten ne tunnistetaan. Lisäksi tarkastellaan ISO 31000 -standardia - riskienhallintakehystä, joka tarjoaa selkeän kehyksen ja prosessin riskein hallitsemiseksi.

Tässä tutkimuksessa käytettiin kvalitatiivisia tutkimusmenetelmiä, kuten toissijaista tietoa ja haastattelua. Toissijainen tieto saatiin case-yrityksen sisäisestä tietokannasta. Toissijaisten tietojen tarkoituksena oli saada parempi käsitys yrityksen turvallisuuskulttuurista, -säännöistä ja aikaisemmista tapaturmaraporteista. Haastattelu tehtiin ilman selkeää haastattelustruktuuria. Siksi haastatteluilla ei ollut selkeää rakennetta ja haastateltavien vastausten mukaan syntyi uusia kysymyksiä, mutta pääaiheena oli case-yrityksen työturvallisuus. Haastattelut tehtiin viidelle eri asiantuntijalle ja heidät valittiin, koska he työskentelevät tiiviisti työturvallisuuden kanssa case-yrityksessä.

Kerättyjen tietojen perusteella osa turvallisuus säännöksistä olivat edelleen epäselviä työntekijöille, kuten miten toimia ensiaputilanteessa tai palohälytyksen aikana. Muut huolenaiheet, kuten kausityön aiheuttama työntekijöiden vaihtuvuus merkitsevät sitä, että uusia työntekijöitä on vuosittain. Siksi turvallisuusperehdytys videolle oli tarvetta.

Uusi perehdytysvideo sisälsi tietoa, joka parantaa osaston työntekijöiden turvallisen työn osaamista. Videota ei ole vielä näytetty uusille työntekijöille mutta oletuksena on, että se auttaa parantamaan työturvallisuutta ja työterveyttä tapausorganisaatiossa.

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1 Introduction

This thesis is a development project that aims to create safety orientation video for the case organisation-specific department. The safety orientation video would have knowledge of the case organisation's safe work practices, safety rules, and principles. It would be shown in the orientation of the new production employees when they enter the workforce. Currently, the safety orientation video focuses on the whole organisation and often includes information that is not relevant to all departments.

The objective of the training is to ensure the safety of all employees and continuity of the production by creating safety orientation video. The video would include case organisations safe work practices, safety rules, and principles that are in use. The video will be directed, edited, and filmed by me.

Development task:

- Developing safety orientation video for case organisation

1.1 Scope and exclusions

The scope of this thesis is to improve the case organisation's orientation of new production employees by creating a safety orientation video for a specific department. By creating orientation that only focused on the specific department we can ensure that the new employee's in that department understand necessary safe work practices and rules that apply that specific department. The theoretical background supports comprehension of the employer's responsibilities according to the Finnish Occupational Safety and Health Act. Then it reviews what the objective safety orientation should have and how risks and hazards are defined and identified. Additionally, it reviews the ISO 31000, Risk management - Guidelines, which provides principles, a framework, and a process for managing risk.

The exclusions in this thesis are the case organisation's risk management, hazard identification, and risk assessment plans as these are defined by the case organisation. Thus information from these sources is used in the development of the safety orientation video as it provides good base knowledge of the existing risks and hazards. Furthermore, actual feedback from the new safety orientation video cannot be collected from the new employees within the timeframe of this study.

1.2 Case organisation

The case organisation is an industrial operator, that focuses on fast-moving consumer goods. They operate in eight countries and export goods to around 40 countries. In 2019 net sales were worth 1.1. billion euros and employed almost 9000 employees (Anon. case organisation).

Occupational safety plays a central role in the case organisation operations. It is stated that the principle is “safety first”. Risk and hazards are being constantly monitored to ensure safe work conditions. Therefore, the employees receive training and guidance for working safely. Additionally, supervisors are advised to talk about safety with their peers, that way safety can be an integrated part of the daily work. It is stated in the case organisation's website that the development of safety culture can be presented as phases (figure1) (Anon. case organisation).

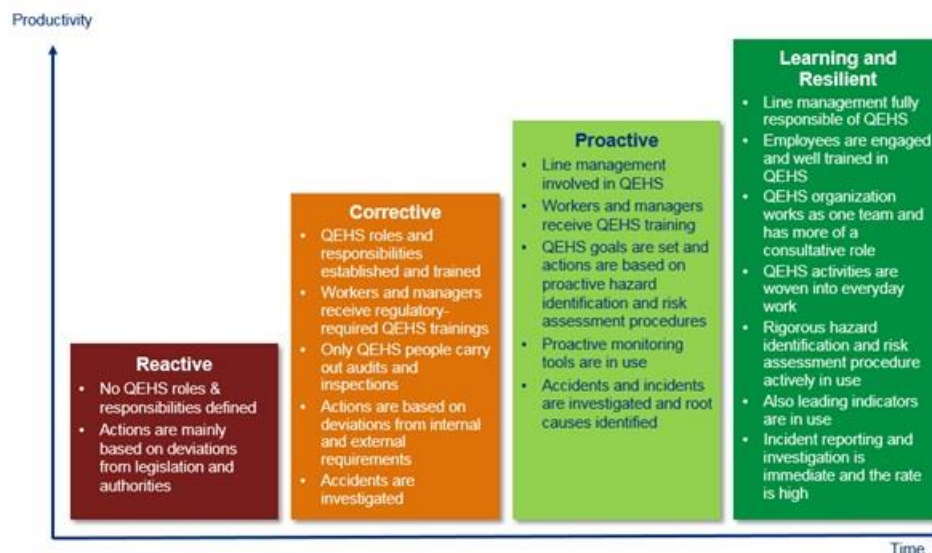


Figure 1 Development of safety culture (Anon. case organisation).

2 Theoretical background

For this development task, this and the next chapters address the theoretical background and Finnish Occupational Safety and Health Act, the objective of safety orientation, the definition of risks and hazards and how to identify risks. Additionally, it reviews the ISO 31000, Risk management - Guidelines, which provides principles, a framework, and a process for managing risk. It is necessary to take into consideration what requirements laws and regulations set for orientation of new employees and what should be the objective of safety orientation. Understanding what the definition of risk and hazards is and how to identify them is necessary as the safety orientation video should have latest information of the risks that

are present in the case organisation. Furthermore, understanding the ISO 31000, Risk management - is crucial as it provides guidelines for internal or external audit programmes and it can be used to compare existing risk management practices.

2.1 The Finnish Occupational Safety and Health Act

In this chapter, we discuss the responsibilities of employers and employees according to the Finnish Occupational Safety and Health Act. It is relevant to this development project as the development of the safety orientation video can be justified by the law and it is necessary to understand the requirements that the laws and regulations set for orientation of new employees.

The Finnish Occupational Safety and Health Act is based on protecting employee's work conditions in such a way that any work-related health harms are prevented (Occupational Safety and Health Act 738/2002, 1 §). Obviously, an employer has more responsibilities regarding the act, but the employee's responsibilities are equally important, which I shall explain below.

The employer has the responsibility of identify risks and hazards in the workplace in such a manner that the safety and health of the employees is regarded. Necessary precautions must be taken considering the nature of the work and the environment where the work is conducted. Though if the work is conducted in such an environment where unusual events might occur even when precautions have been taken, it can limit employer's duty of care. Nonetheless, the employer must design a work environment to ensure safety and continuously improve it (Occupational Safety and Health Act 738/2002, 8 §).

In case where risks or hazards are identified the employer must try to remove them. Sometimes risks cannot be removed, and in that case, the employer might replace them with lesser bad. For example, if a wooden walking path in the winter gets frozen and it is slippery, it might be replaced with a concrete path. It is less slippery, but it does not remove the slipperiness entirely. Although the employer must take into consideration developing technology and techniques, so if someone develops a surface that does not get slippery at all he might need to replace it in the future. (Occupational Safety and Health Act 738/2002, 8 §.) Additionally, risks and hazards that cannot be removed or replaced, the employer shall estimate the level of danger to the employee's safety and health. This estimate needs to be conducted as a report. If the employer does not have the necessary expertise of the subject, outside resourcing is to be used. Even at this point employer must be sure that the external help has the necessary expertise to conduct in the matter. (Occupational safety and health act 738/2002, 10 §.)

When orientation is given to employees, it should include information about the safety rules and principles in the organisation. This information can vary, but it should give the employee base knowledge on how to work safely and what kind of tools or equipment are in use. Additionally, the employee should know of the risks and hazards that are present in the workplace in such a manner that they understand how to prevent such risks or hazards from occurring. (Occupational Safety and Health Act 738/2002, 14 §.) After the employee starts working, if the work is conducted in environment where risks are present e.g. loud noise or dust, the employer shall provide necessary safety gear to conduct the work safely (Occupational Safety and Health Act 738/2002, 15 §).

As mentioned, the employee's responsibilities are equally important with the object of having a safe work environment for everyone. The responsibilities of employees are to follow given safety rules and principles e.g. safety gear is used according to instructions and that work is conducted in a way that the health of all employees is secured. Keep in mind that the duty of care applies to employees as-well and any carelessness can be interpreted as a violation of the Occupational Safety and Health Act. (Occupational Safety and Health Act 738/2002, 18 §.) Therefore, if the employee becomes aware of any risks in the work environment, machinery, safety gear, or anything that can cause harm to others he or she must try to remove the risks. Even if the risk is removed it is necessary to report it to the employer who then takes necessary actions to remove or mitigate the change of the risk from occurring again. (Occupational safety and health act 738/2002, 19 §.)

2.2 Safety orientation

Using a video for safety orientation is nothing new, but it has some great benefits when training or teaching people. Especially in an industrial environment where moving around the premises requires knowing of the safety rules. Some people learn better when they can see how something looks like e.g. dangerous situation rather than reading about in text-form. Nowadays many companies have invested to different kinds of e-learning platforms, which are used to train employees using computers software's that have videos, online forms, quizzes or even 360 view of the work environment.

Well organised safety orientation reduces the risk of accidents and teaches the employees about the organisation's safety culture and work practices (Website of the Occupational Safety and Health Administration in Finland n.d.). It should raise awareness of hazards and explains if there are any specific risks involved in the employee's role (Elliswhittam n.d.). Also, there should be information about how to react in a first aid situation and how to respond in the event of fire (Elliswhittam n.d.). This includes showing the locations of the emergency exits and meeting points (Elliswhittam n.d.). In the end the content of the safety orientation depends mostly on the nature of work, the organisation, and the experience of

the employee. Lastly the safety orientation should advise the employee to follow the organisation safety rules, eliminate or report any shortcomings or failures, use protective equipment and only use tool and machinery only if he or she has received training for it (Website of the Occupational Safety and Health Administration in Finland n.d.).

2.3 What is risk and hazard

Generally, a hazard is defined as a situation that has the potential to cause harm to a person, e.g. exposure to toxic chemicals or exposure to loud noise. Risk and hazard go hand in hand. If there is a risk, it means there is a possibility of hazard. Hazard and risk can be interpreted with words, numbers, or any other way as long as the information is understandable. It is important to know what type of harm may occur from the hazard because each hazard causes a range of harms from minor injury to death. The latter of consequences can vary from simple irritation to risk of causing cancer and that is why the harm must be specified. When assessing risks, the focus should not only be on a routine check of the conditions, but also on the possibility of accidental hazards e.g. exposures to hazardous substances. (Cherrie, Howie and Semple 2011.) When hazards are identified, and corrected incidents of injuries decrease. This means there will be fewer lost workdays, absenteeism, compensation costs, and even an increased in productivity. That is one of the reasons why hazard identification is paramount. (Reese 2003, 73-74.)

The probability of risks can increase over time, therefore it is important to have regular inspections to identify any shortcomings before the incident occurs. Documentation and checklists help to maintain efficient inspections routines. Additionally, using statistics from past incidents from public authorities, consultants or insurance companies can serve as a valuable resource. In the end, identifying risks effectively requires teamwork from the whole organisation. (Suomen Riskienhallintayhdistys n.d.)

All employees should be trained and advised to identify and assess risks. Because often management cannot identify the same hazards as the workers who are performing the work. As a result, workers' information is valuable when removing or reducing workplace hazards. Thus it should be made easy to report any hazard and one way to do it is using a simple hazard identification form (figure 2). The benefits of this approach are that it is easy and does not require any special training to conduct, (Reese 2003, 76-77.)

Hazard Identification Form		
Worker's Name (Optional) _____	Date _____	
Jobsite _____	Job Titles _____	
1. Describe the hazard that exists.		
2. What are your recommendations for reducing or removing the hazard?		
3. What suggestions do you have for management for handling the hazard?		
4. Manager's or supervisor's response to hazard concern identified.		
Supervisor: _____	Date: _____	Time: _____
NOTE: Use a Separate Form for Each Hazard Identified.		

Figure 2 Hazard identification form (Reese 2003)

There are other risk identification techniques such as internal and external research or models like SWOT analysis, risk mapping or even scenario role-playing. With internal research existing data is examined to find root causes of the incidents. Often reports of near-misses or abnormally high costs in the department may suggest that there could be unmitigated risk. Sometimes simple observation in the area can highlight some risks in the operation. (Webb 2021.) Keep in mind that any risks that are not identified cannot be controlled. Therefore, it is necessary to understand what could happen in the organisation in the worst possible situation and plan what actions to take to stop any additional damage (Suomen Riskienhallintayhdistys n.d.).

2.4 ISO 31000, Risk management - Guidelines

This chapter and the subchapters focus on understanding what is the ISO 31000 risk management - guidelines that provides principles, a framework and a process for managing risk. As mentioned, the case organisation is an industrial operator, therefore many rules and principles that are in use are based on risk management. Everything from raw-materials, refinement, packaging, and inventory is guided by safety rules and regulations. Typically risk management is actions that organisation takes to avoid or reduce any risks or hazards that

could occur in their operations. It seeks to ensure the continuity of the organisation's operations, the wellbeing of employees and the sustainable use of the environment. Good risk management is a conscious, planned, and systematic activity. (Malmén & Wessberg n.d.) This said it is crucial to understand the ISO 31000, Risk management - guidelines as it provides guidelines for internal or external audit programmes and it can be used to compare existing risk management practices. Furthermore, establishing the ISO 31000 is well worthwhile while as many laws, contracts and insurance agreements require solid risk management practice and understanding the whole process is valuable while creating safety orientation video (ISO 31000 2018a).

Risk management can be interpreted differently depending on the field to where the risk management is applied to. Generally, risk management is applied for several important reason such as business continuity, protecting reputation, improving quality and efficiency, or legal compliance as mentioned in the Finnish Occupational Safety and Health Act (Bourdache 2017). Overall risk management can bring value by setting clear strategy, objectives, and informed decisions (ISO 31000 2018b).

Risk definition according to ISO 31000 risk management - guidelines differences from the general way of describing a risk. The guidelines states that risk is the “effect of uncertainty on objectives”. Meaning that every step has a chance of risk, which needs to be managed, and that every outcome is uncertain. The outcome can also be positive or negative and it can result or create new opportunities. (Praxiom n.d.)

2.4.1 Principles

In this and the following chapters the ISO 31000 risk management - guideline is referred as ISO 31000. The ISO 31000 framework is built with three different components which are principles, framework, and process. The ISO 31000 empathizes that principles are the base for efficient risk management and that principles help to manage any uncertain effects that might come on the objectives. Therefore, in the planning phase of risk management, there

should be a clear understanding of the principles (figure 3) (ISO 31000 2018b).

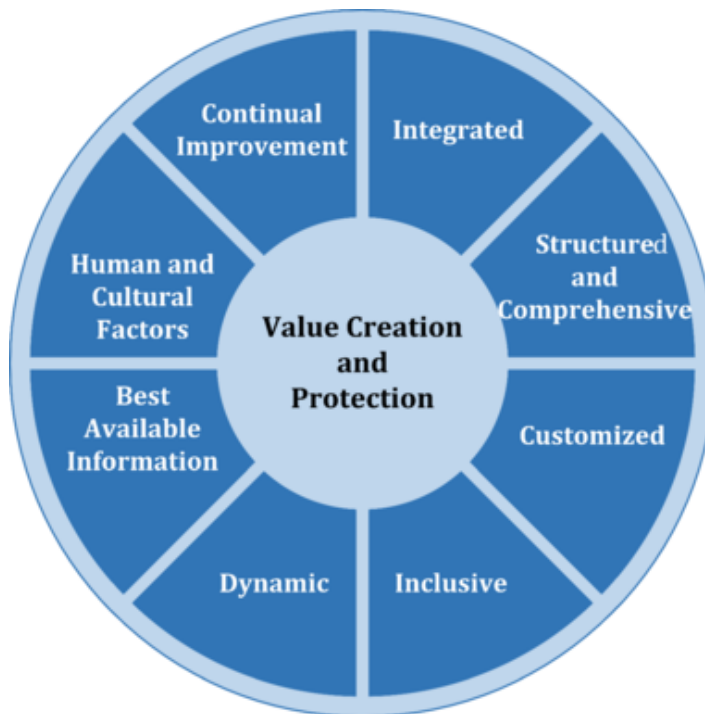


Figure 3 Principles (ISO 2018b)

As mentioned, effective risk management requires the principles of figure 3. The principles are explained in the following way in the ISO 31000. Integration means that risk management should be integrated into all organisational activities e.g. sales and accounting. A structured and comprehensive approach to risk management furthers consistent and comparable results. Customising means that the risk management framework should be designed to meet the organisation's external and internal objectives. Internal objective could be environmental goals or increase of production levels. Inclusive emphasis on the cooperation between stakeholders as they can bring valuable knowledge and views, that can benefit the organisation. Dynamic means that organisations should be preparing to face new risks and understand that some risks might disappear. Additionally, risk management should be capable of responding to changes quickly by anticipating and detecting context changes. The best available information emphasises on how information is critical for functional risk management. In an effective risk management framework, current information and future expectations should be followed closely to understand any limitations or uncertainties that might come. Also, there should be clear and available information for relevant stakeholders, so they can bring valuable knowledge and views for the organisation. Human and cultural factors point out that humans and culture have a significant influence on all aspects of risk management. Lastly is continual improvement, which means that the risk management process is always developing and should be improved by learning and experiences. (ISO 31000 2018b.)

2.4.2 Framework

The second component is a framework. In this component governance and leadership plays a key role and it emphasises that the organisation should be managed at all levels. Hence cooperation between stakeholders and top management is a must because the effectiveness of the risk management will depend on integration into the governance of the organisation. The framework is built with integration, design, implementation, evaluation, and improvement (figure 4). Importantly, the framework should be implemented across the whole organisation and used in a way that suits the organisation's needs. (ISO 31000 2018b.)



Figure 4 Framework (ISO 2018b)

In the framework, the leadership and commitment are centralized as it is up to the top management to implement necessary customisations, policies, resources, responsibilities, and accountabilities. After that, it is easier to introduce risk management and promote it to the whole organisation and in some cases to the stakeholders. In the end, it is the top management who are responsible for managing the risks while supervising authority is responsible for overseeing the risk management. (ISO 31000 2018b.)

The integration of risk management requires understanding the organisation's structure and context. The structure is always different depending on the purpose, goals, and complexity of the organisation. (ISO 31000 2018b.) Organisational structure outlines how certain activities such as rules, roles, and responsibilities are conducted to achieve the goals of an organisation (Kenton 2020).

In design, it is obligatory to understand the organisation's external and internal contexts. The external context may include the social, cultural, political aspects, or key drivers and trends affecting the objective of the organisation. On the other hand, the internal context may include vision, mission, values, strategy, or objectives. (ISO 31000 2018b.)

In a successful implementation of risk management, cooperation between stakeholders is crucial. Also, it is necessary to allocate time, resources, responsibilities and ensure that managing risks is clearly understood. When designing and implementing a risk management framework successfully it will ensure that risk management is part of all activities throughout the organisation. This includes decision-making and that any changes externally or internally will be noted and considered. (ISO 31000 2018b.)

The last component of this framework is improvement. As mentioned before risk management process is an on-going process, which means that it should be continually improved. Monitoring changes internally and externally is important as it can bring more value to the organisation. (ISO 31000 2018b.)

2.4.3 Risk management process

The final component of the ISO 31000 is the risk management process. The process involves several steps that can be visualised in figure 5 and explained further below. The process starts with communication and consultations, where relevant stakeholders understand which decisions are made and why certain actions are necessary. Communication brings awareness and understanding of the possible risks. Consultation brings feedback and information to support the decision-making process. The main goal of this step is to bring all available expertise together, by considering different views and decision making. (ISO 31000 2018b.)

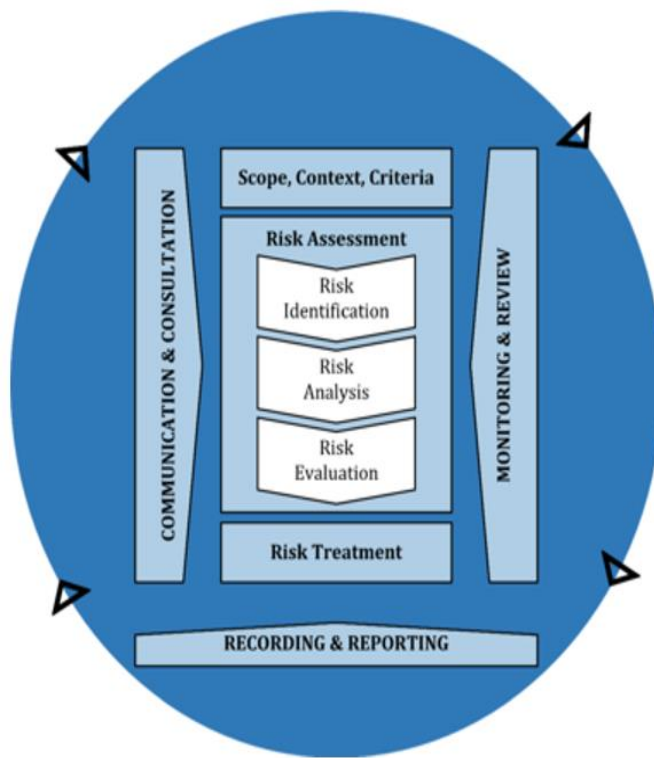


Figure 5 Risk management process (ISO 2018b)

Subsequently, the scope of risk management activities should be underlined. Meaning that if there are several levels where the risk management process may be applied to e.g. strategic or project, there should be clear objectives for each. Nonetheless, when planning the approach, it should include things like expected outcomes, tools, techniques in use, and responsibilities. In context, it is necessary again to understand the external and internal environment. Where the organisation operates and how the environment might affect it. Risk criteria should state what risks the organisation takes and cannot take. Also, it should state how consequences and likelihood are defined and how risks of levels are determined. (ISO 31000 2018b.)

There are many different methods of risk assessment. The reason is that there are wide range of problems and study objects. To select the best method, it is necessary to understand what is going to be analysed. Like mentioned the process of risk assessment starts with planning. It is important to understand the objective and goal of the risk assessment as it is the most critical part of the process. If the objective is not clear the assessment might not support the actual decision making. (Rausand, Haugen 2020, 61-62.)

Generally, the idea of risk assessment is to anticipate events that could result from hazards or operations. The events are estimated by consequences and probability. Consequences are the potential outcomes of an undesirable event, which is measured by severity. (Popov, Lyon

and Hollcroft 2016, 23-25.) Probability is simply how likely something is to happen, and it can be used when the outcome of an event is unsure (Khan Academy n.d.).

The first component of ISO 31000 risk management process is risk identification, which is used to find, recognise, and record hazards. The second component is risk analysis, which is used to understand consequences, probabilities, and existing controls. The last component is risk evaluation, which is used to compare the level of risk and considering additional controls (Popov et al. 2016, 23-25). These components are explained in ISO 31000 more deeply but can be summarised as previously mentioned.

Finally, it is time to conduct a risk treatment plan that should include risk treatment options. These options may differ depending on the organisation but may involve options like; avoiding the risk, removing the risk source, or sharing the risk. After the risk treatment options are clear, it is time to implement them in the organisation. Importantly the risk treatment plan should be easily interpreted in a way that it is clear what risk treatment options are for each risk. Furthermore, the whole process is inspected and reviewed in a manner where information is collected for future improvement or feedbacks. Lastly, the process is observed to ensure improvement and recorded for information that can be used later. (ISO 31000 2018b.)

3 Methodology

This chapter explains the difference between quantitative and qualitative research methods. Along with how these research methods collect data and what features they have. As well, the chosen research method is stated and how data was acquired for this development project.

The quantitative and qualitative research methods differ primarily on their analytical objectives, data collecting instruments, and the way the data is produced. Though the key difference between these two methods is flexibility. Most quantitative methods are not flexible e.g. surveys or questionnaires, because they use identical questions and give the participant fixed answers. There are benefits of having inflexible research when comparing responses, but it means that you must find the right questions to ask. Because the qualitative researcher method offers more flexibility it allows open-ended questions, where participants can respond more complexly. Therefore, the connection between the researcher and the participants can be more spontaneous. (Qualitative research methods n.d.)

Qualitative research has multiple different approaches, but there are common features that can be identified. These features come from the way the information is analysed and obtained. A few of these common features are how experiences, interactions, communications, and documents are examined. They all seek to understand how people construct the world around them. (Graham 2007.)

As mentioned, there are several different approaches for qualitative research, but what they have in common is that they are generally based on textual analysis, which means that the research is conducted as text. This means that qualitative data does not include counts or measures. What can be counted as qualitative data are interviews, web pages, film, documents, photos, observation, emails, anything to do with any form of human communication. (Graham 2007.)

For this study, I chose qualitative research because the data was acquired from secondary data and unstructured interviews. The secondary data used in this thesis was case organisation records and data that was collected earlier such as safety rules, principles, and previous accidents. The second method interview was conducted in the form of an unstructured interview, therefore, there were only couple of main questions and then the conversation was underlying the main subject of occupational safety in the case organisation. The interviews were conducted remotely due to Covid-19 and the participants were Technical operator, EHS manager, and specialist (environment, health, and safety), HRM specialist (human resources management), and rescue manager. These participants were chosen because they work closely with occupational safety and health in the case organisation along with knowledge of the orientation of new employees. Eventually, a script was formed from

the results of secondary data and unstructured interviews and was used in the filming of the safety orientation video.

3.1 Secondary data

There are differences between primary and secondary data. Primary data is information that the researcher collects himself. Secondary data on the other hand is information that someone else has already gathered and it has been handled through a statistical process. A common way to collect primary data happens through observations or surveys. (Kothari 2004, 95-96.)

There are different types of secondary data and often it is easier and cheaper to obtain as it is readily processed. Secondary data can be information that government, organisation, agency, or institution has collected as part of their day-to-day operations e.g. records of accidents or administrative data. As this information is collected over a long period it means that researchers have the benefit of detecting changes over time. Thus some researchers use primary and secondary data together to find better solutions. In the end, it is up to the researcher to choose what kind of data he uses. (Institute for work & health 2015.)

3.2 Interview

Interviews are generally used in qualitative research as it is seen as a technique that uses open-ended questions to collect data from the participants. Usually, the goal is to understand respondents' opinions on well-planned series of questions and answers. Interviews can be conducted via email, web, telephone, or in person. There are similarities with other data collecting methods such as surveys and focus groups because they collect information with the same principle. Though focus groups are usually conducted to small groups and surveys are quantitative in nature. (QuestionPro n.d.)

Interviews can be conducted in different styles such as structured, semi-structured, and unstructured. Structured interviews follow a more traditional quantitative approach, which is often used in surveys. They leave little no space for flexibility as questions are asked in the same order from all the participants of the research. The objective of structured interviews is to gain comparable information from a larger number of participants. Semi- and unstructured interviews on the other hand give researchers more flexibility because they lack a clear structure. Therefore, these styles have large variations and are used commonly in qualitative approaches. However certain core features can be identified in all interview styles such as the interactional exchange of dialogue with the participants or thematic, topic-centred approach. (Edwards & Holland 2013 1-9.)

As mentioned, semi- and unstructured interview gives interviewer more flexibility. Therefore, interviewers often come without a predefined theoretical framework and generate questions depending on the interviewee's responses. As result, unstructured interviews might generate data with different builds and patterns. Keep in mind that even without predefined questions, the interview is never random and non-directive and it cannot be conducted successfully without clear preparation and detailed knowledge of the topic. (Zhang & Wildemuth n.d.)

Even unstructured interviews offer several advantages, there are three main challenges that it has when using it as a data collecting method. The first challenge is time. Since interviews might be completely different from each other and lack a clear structure, the sessions might belong. Also, reaching the person that needs to be interviewed can be difficult and if the interviewer is new to the field or topic it can be difficult to generate questions. The second challenge is how the interviewer can control the discussion. If the discussion drifts in a direction that is not useful, the interviewer needs to direct it back without interrupting the conversation. If a new topic emerges during the interview, the interviewer must know if it is useful. The third challenge is analysing the gathered data, because as mentioned each interview can be structured differently and therefore generate different responses. The interviewer must analyse data carefully and systematically to find possible patterns in it. (Zhang & Wildemuth n.d.)

3.3 Analysing the data

After data has been collected from secondary data and interviews it must be analysed. Generally, qualitative researchers yield text-based data that could be from interviews, transcripts, or records. Wong (2008) states that analysing text-based data is not a technical process, because it exercises a dynamic, intuitive, and creative process of inductive reasoning, thinking, and theorising. Data analysis in qualitative research can begin with arranging acquired data systematically and creating coding or categorising it. This stage is critical in the qualitative data analysis process. The coding process divides the raw materials into categories and reduces the amount of raw material and helps to identify patterns. After that, it is possible to build a logical chain of evidence to support your findings. A traditional form of coding was using coloured pens to categorise data, nowadays using software technology is more common. Important to note is that the software does not do the analysis for the researcher and the researcher still must create the categories and codes. (Wong 2008.)

3.4 Secondary data used

This chapter and the following subchapters will explain more on how the secondary data was obtained and how the interviews were conducted. The secondary data used in this development project was obtained from the case organisation's internal data base. Because case organisation operates on consumer goods several safety rules and regulations are defined to protect the quality and safety of the products. Everything from raw-materials, refinement, packaging, and inventory is guided by safety rules and regulations. Safety plays a key role in the case organisations operations. Therefore, it was necessary to study secondary data carefully to fully understand the safety culture, principles, and rules that are in place. After that it was easier to perceive possible development objects and have productive unstructured interviews with the safety experts within the case organisation.

Case organisation has several e-learning tasks that are interactive, and which are used to train employee's knowledge on a variety of things. Often newly hired production employees must watch and complete a series of videos of occupational health and food safety. To understand what was needed in the new orientation video, it was necessary to review these videos that employees in this department must review upon starting to work. Only this way it was possible to plan the content of the safety orientation video in a way that it does not include information that has been already stated in other videos.

Reviewing past incident reports gave insight on what kind of accidents has happened in the department and what events lead to the incidents. It also brought up what possible risks and hazards there are. Then it was possible to analyse the data and plan behaviour guides for the safety orientation video. Most accidents in the case organisation department were minor physical injuries and observations. In the appendix 1 you can review accident reports.

3.5 Interview preparation and phases of creating the video

Before the case organisation agreed on the development of the safety orientation, I discussed with the technical operator about the development task and from that, I created a PowerPoint presentation that was shown during the interviews. The presentation included objectives of the orientation, arriving to work safely, changing production clothing, hygiene regulations, rightful moving in the factory, working safely, fire alarms, evacuation practice, and first aid situations.

As mentioned, the interviews were conducted in an unstructured way. Therefore, the interviews didn't have a clear structure and new questions were generated depending on the interviewee's answers, but they followed the main subject of occupational safety in the case organisation. The interviews were conducted remotely due to Covid-19. The participants of the interviews were five different specialists: Technical Operator, EHS-Manager and Specialist

(Environment, Health, and Safety), HRM-Specialist (Human Resources Management), and Rescue Manager. These participants were chosen, because they work closely with occupational safety in the case organisation, along with knowledge of the orientation of new employees. In the end interview results played a vital role in developing the video, because each person had their views and expertise on the matter.

The main questions that were premeditated at first are shown in appendix 2. Important to note is that the same questions were not asked from all the participants and that questions changed after each interview. The reason is that participants work in different fields in the case organisation and thus they might not know anything about a certain subject. Also, if I was able to receive a clear answer for one of my questions there was no need to ask it again.

Because the interviews were conducted with five participants the data could be collected by writing notes. The themes that emerged from the interviews were that some of the safety principles were still unclear for employees such as how to act in first aid situations or during a fire alarm. After the interviews, the notes were written in a form of a transcript. The transcript included the development plan for the current orientation, reasoning why it would be needed, and when the actual recording of the video would take place. Then the transcript was sent to the factory director who accepted the development plan.

After the development plan was accepted, a recording plan for the safety orientation video was created. In appendix 3 you can view the raw recording plan. The recording plan was very important as it needed to include everything that has been talked about over in few months. Before the recording day, the recording plan was sent to interview participants for any additional ideas.

At this point, there was constant cooperation with the department where the orientation video recording would take place. In the case organisation, anyone that would be recorded in the video had to write a written agreement that allows the organisation to use the video. Also, because the safety orientation video included examples and incidents there was a need for actors. With the cooperation of the supervisors that worked in that department, I was able to get few actors for the orientation video. Eventually, safety orientation video was recorded, edited, and created.

4 Results

This chapter and the following subchapters will explain the results of the secondary data and the interviews. As the case organisation is a large industrial operator secondary data plays a key role in understanding the safety culture and principles in use. The same applies to the interviews. Each person that was interviewed gave more perspective of the important aspects that should be included in the new safety orientation video. Hence the larger the organisation is the more cooperation is needed with different units to create valuable and effective results. Based on the data collected some safety principles were still unclear for employees such as how to act in first aid situations or during a fire alarm. This information was not stated clearly in the orientation of the employees, because the information is different depending on where your workstation is. Other concerns such as employee turnover rate, due to seasonal work and forklift safety were highlighted in the collected data.

4.1 Secondary data results

Past incident reports contained incidents that have occurred in the department. It also contains possible hazard identifications or occupational safety risks. As stated in the literary review in chapter 2.2 by Reese. (2003), there are benefits of having workers trained and advised to identify and assess risks. The report is from November 2018 until November 2020 and can be interpreted with four different main incident categories see (table 2). Pallets related incidents were 16,67%, forklift-related were 22,22%, physical injuries 27,78% and observations 33,33% (Turvallisuuustapahtumat 2020). Each category is explained more in the next chapters.

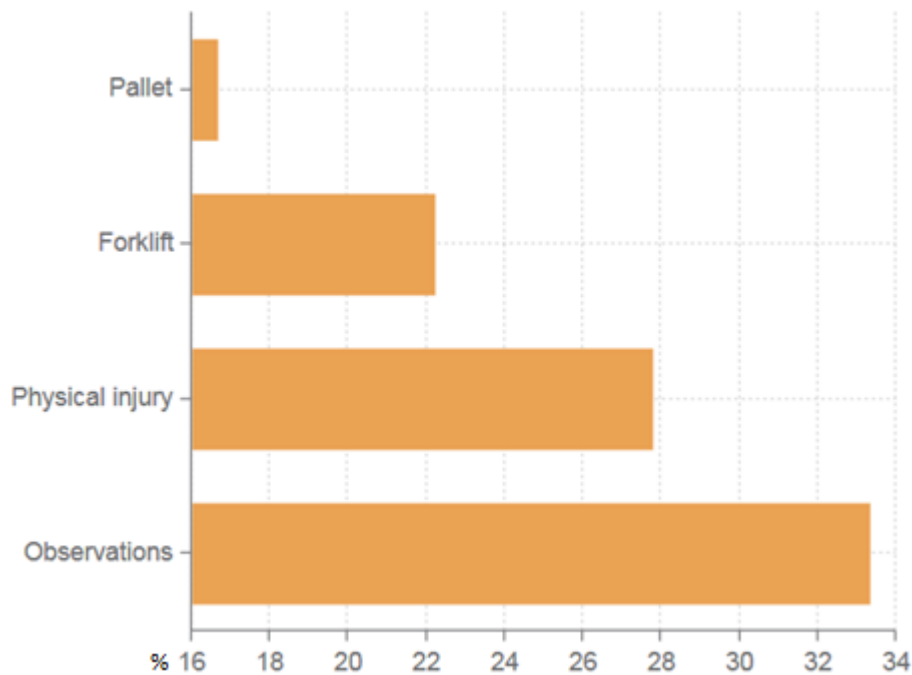


Figure 6 Incident categories

In the case organisations department supply is often transferred with different kind pallets. Pallets are usually heavy and are handled with pump-carts or forklift. Most pallet incidents were accidents where pallet had fallen to the ground while stationary. In these cases, there was no personnel damage. Afterward, pallets were inspected if the falling had happened because the pallets were broken or if it was a humane error.

Forklift related accidents are those where a forklift is operating while the accident occurs. These accidents are always dangerous as it includes moving machinery. Reported accidents did not cause any personnel damage. Most incidents happened when the forklift driver was lifting and moving pallets. Forklift accidents were mostly humane errors.

Physical injuries are incidents where an employee got hurt. Incidents like these are always serious. Reported physical injuries are caused by strains, tripping, or hitting into something. Lastly in the incident report is observations that include close call situations and remarks. All these results are noted in the recording plan, which can be viewed in appendix 3.

4.2 Interview results

As mentioned, the interviews were conducted as unstructured interviews and due to Covid-19 the interviews were done remotely. The preparation for the interviews were done by collecting available data from the case organisations intranet, e-learning platforms, incident reports and from discussion with the technical operator before the agreed thesis development. Predefined questions were created to steer the interview into the right

direction. The participants were technical operator, EHS-manager, and specialist (Environment, Health, and Safety), HRM-specialist (Human Resources Management), and rescue manager. These participants were chosen because they work closely with occupational safety and health in the case organisation along with knowledge of the orientation of new employees. The predefined interview questions can be found in appendix 2. The interviews generated data with different builds and patterns. Therefore, main points from the interviews are visualized in the figure 7.

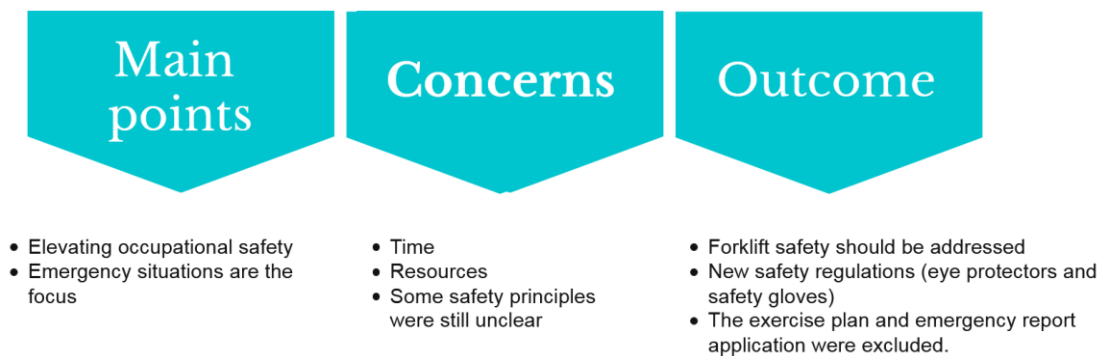


Figure 7 Interview summary

The first interview was conducted with the technical operator. He was the person that suggested the development of the safety orientation. In the first interview, we discussed creating a video that would include safety rules, principles, and emergency situations. It was clear at this point that the focus of the orientation will be on emergency situations. Thus it was agreed that the video should include the whole chain of events. What happens in the emergency, how employees react and how the supervisor reacts? There was also a discussion of an emergency exercise plan, that would have employees practice emergency situations and using the case organisation's internal emergency reporting application.

Important note, at this point the technical operator who suggested the development of the safety orientation left the organisation. This affected the whole development process considerably. In the next interviews, the development plan was introduced to the EHS-manager and the rescue manager. It was agreed that the development of the safety orientation will continue because they also recognised the need for safety orientation video that includes emergency situations. The exercise plan and emergency report application were agreed to exclude from the safety orientation video. In the end, the interviews gave more knowledge on how to act in emergency situations according to the organisation's rules and the sources of important secondary data in the intranet. Along with a list of names that work within the orientation of new employees.

The next interview was with the HRM-specialist who works with the orientation of new employees. In the interview, I asked questions about the orientation, which can be seen in appendix 2. The main safety concerns were that some safety principles were still unclear such as how to act in first aid situations or during a fire alarm. Another highlighted concern was forklift safety. HRM-specialist stated that in the new safety orientations there should not be information that is already available in the other safety sources. Therefore, the focus was shifted totally on the specific department and changing production clothing and arriving to work safely were removed from the plan.

The last interview was with the EHS-specialist. Similar questions from appendix 2 were asked. The main results of this interview were discussion of past incident reports and new regulations that come in effect in the production (eye protectors and safety gloves). It was also agreed that we go to the department together to visualise some of the possible hazards. After the interviews the development plan was sent to the factory director and after it was accepted, a recording plan for the safety orientation video was created.

4.3 The content of the video

The video received positive feedback from the case organisation. It included all important aspects of safe work practices such as using correct protective gear, completing general task in the department following the safety rules, showing possible hazards and risks like forklift traffic, encouraging to take breaks to exercise to reduce strains, information how to react in a first aid situation and how to react during fire alarm. Overall, the development project was successful, and the safety orientation video was created with English and Finnish language commentary.

5 Conclusion and recommendations

The objective of this development project was to create safety orientation video for the case organisation. It can be concluded that in order to develop safety orientation video regarding occupational safety it is necessary to understand the Finnish Occupational Safety and Health Act and the process of risk management. The Finnish Occupational Safety and Health Act gives an understanding of the employer's responsibilities. As stated in the literary review in chapter 2.1 in Occupational safety and health act 738/2002, 14 §, the employee should know of the risks and hazards that are present in the workplace in such a manner that they understand how to prevent such risks or hazards from occurring. This was considered in the development of the safety orientation video. Risk and hazards presented in the case organisation department were added to the recording plan (appendix 3) and then later filmed in the video. In addition, the risk management process contributed important data for the safety orientation. As stated in the literature review chapter 2.3.3 by Popov et al. (2016), risk identification is used to find, recognise, and record hazards. This information was available from the case organisation's secondary data in a form of a past incident report (appendix 1).

The methodologies used in this development project were effective in answering my research questions. The secondary data and unstructured interviews generated adequately data of the case organisation's safety culture, principles, and regulations. The limitations of the thesis were that if using video for the orientation of new employees is an effective way to train safety regulations and rules.

Occupational safety is handled in the case organisation on a high level. Risks and hazards are constantly being monitored and new regulations are carefully implemented. Although because case organisation has several different operations and a lot of employees, they should find ways to increase the employee's involvement in the risk identification process. One possible way to do it could be by training employee's knowledge of risk identification. Along with making risk observation effortless by offering computers convenient places or risk identification forms and by giving employees time to do within work time.

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Appendix 1: Past incident report

03/10/2019 Injury / Illness

The finished foiled pallet had remained on the foiling machine as work in progress. The person went to move the pallet to be taken to the warehouse. The pallet had remained in the wrong position in the so-called transversely and partially away from the wrapping area on the strip. Person pushed the forks of the battery-powered pallet truck under the pallet and began to move the pallet to a flat rotating foiling area. Noticed that the platform was in the wrong position. Tried to force the forks of the lift under the pallet and move / straighten the pallet on a flat rotating platform to get the pallet in the correct position and to be moved away. The person used force to get the forks of the lift under the platform (over the transverse trees / platform support frames) so that there was a clicking sound at the right shoulder blade. The upper back ached at the scapula.

04/10/2019 Near Miss

The truck driver was putting the product pallet on top of the second pallet. The platform was pinched by forks that were too wide. The truck began to reverse, and the platform tilted and fell to the floor. The truck driver said he was in a hurry.

16/10/2019 Property Damage or Fire

The temporary truck driver of the wrapping had been driving down the aisle and when he turned to the left, the rear skirt of the truck touched the post's bumper, with the result that the fastening bolts broke. Pure evaluation error was too close to the pole when turned. I am not aware that anything similar has happened to him before.

21/10/2019 QEHS Observation

I almost slip in the heating room because there was grease on the floor. However, I did not slip.

23/10/2019 Near Miss

The person planned to start lowering the cassette during its disassembly at the robot wrapper feed point. The cassette was in Rocla's lift about 50 cm from the floor and the person lifted the emergency stop button and was going to press the lower button when the cassette fell for some unknown reason away from the person on the side of the corridor. The cassette was about 60% full and had been disassembled from the bottom. The cassette was in Rocla's hoist throughout the event, which was in no way moved or lifted / lowered at the time of the event. There was nothing wrong with the cassette.

01/09/2020 Injury / Illness

At the pallet point, the person snaps the PP tape into the knotted loop. The person did not fall, but took a hit with his foot violently on the floor as a result of tripping. There was a strong pain in my leg.

03/09/2020 QEHS Observation

A second pause space for the winding, to which access should be from the adjacent door. However, the people in the wrapper use another door and pass through the storage area. This creates dangerous situations when materials are transported in the area at the same time with a forklift.

02/11/2020 Injury / Illness

The person's upper back was injured in a small rotating motion when pulling the product plate out of the cassette. The person described the situation as a witch's arrow.

Appendix 2: Interview structure

How the orientation of new employees is done?

What does it include?

What are the most important matters in employees orientation?

What do you think is missing from the orientation?

What have been the biggest safety risks with new employees?

What new safety regulations are coming into the production?

Appendix 3: Recording plan for the video

Work safely

Theme. Good team spirit.

Note. The use of Goggles & work gloves is coming to the whole factory, the actors must be photographed with the right equipment.

Workers enter production along the “forklift corridor”. Following the rules of safe movement. (Carrying lunch)

Before going into production, another co-worker reminds the other person to protect their hearing. (Another employee's reaction is positive)

Next, the workers walk into the break room to take their lunch and belongings.

Filming production (There is a general talk about how to behave in production, such as calm movement, because space is limited, possible junctions & crushing hazards are described.)

A few general tasks in the line are described.

- Adding glue (use thermal protection gloves)
- Use of pump carts (mention the safe use of lithium battery pump carts
Tukes regulation)
- Use of compressed air to clean the line. (Remember goggles).
- Workplace cleanliness (staging water on the floor to be cleaned)
- Film pallet packaging
- Chemical use

Describe the discussion situation (reminded that if you notice an occupational safety risk you must notify your supervisor)

Next, warn / show things that should not be done in the production

- Do not run or hurry, the co-worker will stop the person at the STOP signal when the truck arrives. (Talking about forklift safety & forklift drivers must have a separate forklift permit from the employer, possibly describing one sample of the forklift from the forklift driver's point of view, it is also reminded that rush is not suitable for production)
- Describe electrical equipment and remind that you can't touch electrical equipment.

- The person tries to lift the platform alone -> co-worker comes and helps with lifting. (Talking about safe lifting and stacking pallets).
- Do not put your hands on the production line.
- Describe the X-ray machine and talk about radiation safety (Tukes).

Remind in the video that is good to take a break to exercise. Show actors stretching.

Next, let's talk about accidents, describing first aid cabinets. (Find out if the names of first aid people appear on shift lists)

Staged an accident → forklift platforms fallen to his feet. Describe a person who is injured → another person assesses the situation (visits another person) and calls the gate.

Describes the caller's phone that enters the number 098762222 in the phone box. (At this point, the background explains how to make an emergency notification; What has happened, how many patients? Confectionery or Bakery, Door number / corridor 9.)

Next, the accident is immediately reported to the supervisor. (Describing a call to a supervisor)

Described when an emergency caller goes against an ambulance at the door.

Finally, describe the fire alarm situation. Workers drive production down calmly and walk towards the emergency exit to the assembly point. (recalls deliberate and peaceful action)

Describe the employees at the assembly point. (Out may not go expected inside)

The foreman comes and announces that the danger is over and may return to the workstations.

The end