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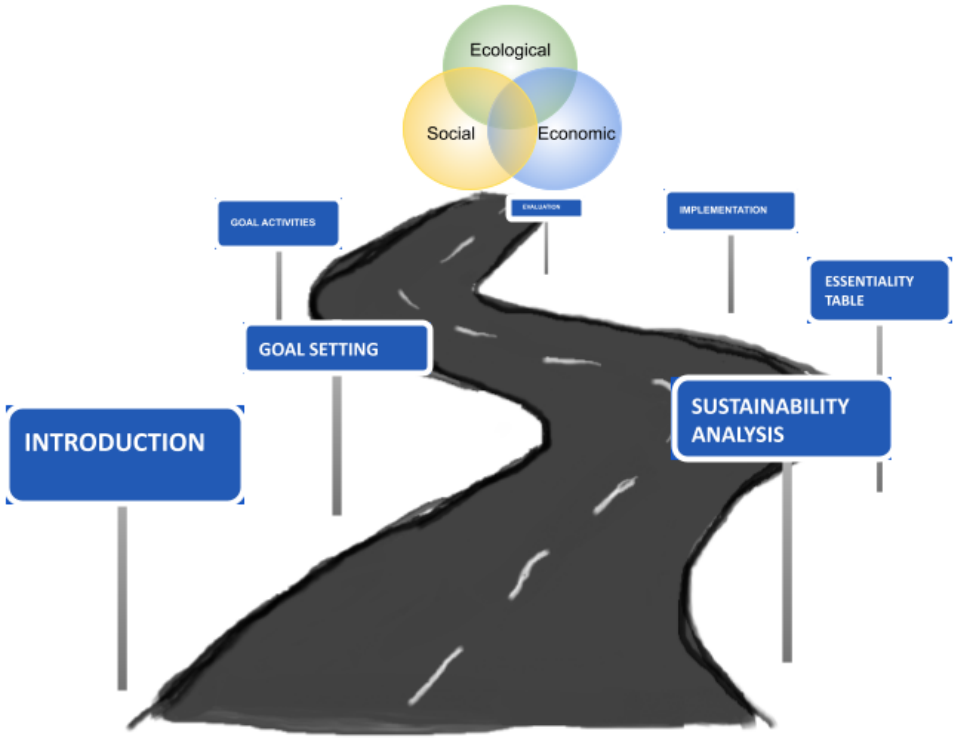

Roadmap for Sustainable Development

A Guide for Small and Medium-sized Enterprises in the Gothenburg Region

Master's thesis in Learning and Leadership

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Abstract

In order for companies to keep their customers and stay in business they need to start working towards sustainable development. This project aims to find out what companies are doing today and where they need help. Thereafter, the goal is to create a roadmap that is flexible enough so that it can be applied to all manufacturing SME - small and medium-sized enterprises in the Gothenburg region.

After interviewing 15 manufacturing SME in Gothenburg the first issue was answered. There is a need and an interest for a sustainability roadmap. The interviewed SME are at different stages and need to develop their own goals that are suitable for their operation. In order for the goals to be reached employees need to be involved in setting the goals. Apart from setting 3-5 sustainability goals at a time a suggestion board is recommended where employees can make sustainability suggestions that are not necessarily connected to the current goals.

A roadmap consisting of seven steps was developed. The steps are: Introduction, sustainability analysis, essentiality table, goal setting, implementation, goal activities and evaluation. All employees are actively involved in three of the steps and their input is taken into consideration in the remaining steps. A sustainability group or the management team carry out the other four steps, these steps involve answering yes or no questions, specifying goals and presenting them to the employees.

Keywords: Sustainability, Roadmap, Ecological, Economic, Social, Circular Production.

Acknowledgements

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Last but not least, we would like to thank our examiner Philip Gerle, our classmates and all the companies involved. Especially Lejonet och Björnen who let us implement the Roadmap at their company and CM Hammar AB who inspired us with their own Roadmap.

Matilda Hurtig and Taghi Moradi, Gothenburg, May 2022

List of Acronyms

Below is a list of acronyms that have been in the project, they are listed in alphabetical order:

ADKAR	Awareness, Desire, Knowledge, Ability, Reinforcement
EPA	Listen, Think, Share (Ensam, Par, Alla)
GTC	Göteborgs Tekniska College
SAM	Systematic Environmental Work
SMART	Specific, Measurable, Attainable, Relevant, Timebound goals
SME	Small and Medium sized Enterprises

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1
Introduction

In 2015, the 193 countries in the UN gathered to discuss sustainable development, from these meetings and discussions, 17 global goals were agreed upon. The aim of the goals is to eradicate poverty by 2030, reduce inequalities, promote peace and justice, stop global warming and resolve the climate crisis (Svenska FN-förbundet, 2021). To achieve these goals, everyone needs to work actively with sustainable development, both individuals and organisations. For companies, sustainability is not only important for their contribution for a better world, but also a competitive issue. Those who choose not to work with sustainable development risk losing their customers and eventually going bankrupt. Another consequence could be that their activities do not meet legal requirements that are implemented as a result of the UN's global goals.

99.9% of all Swedish companies are SME, small or medium-sized enterprises (Dalqvist, 2019), only 46% of all Swedish SMEs work actively with sustainable development (Nyström, 2018). Therefore, there is a great opportunity to improve social, economic and ecological work within SMEs and contribute to a more sustainable world. That is why, this report aims to map the needs within SMEs and develop a roadmap for them to make sustainable development easier.

In the following section the background is presented, why it was chosen and what effects the results will hopefully contribute to. An introduction to the concept and an explanation of its meaning is also included in the background. The delimitations are also presented, followed lastly by the two research questions.

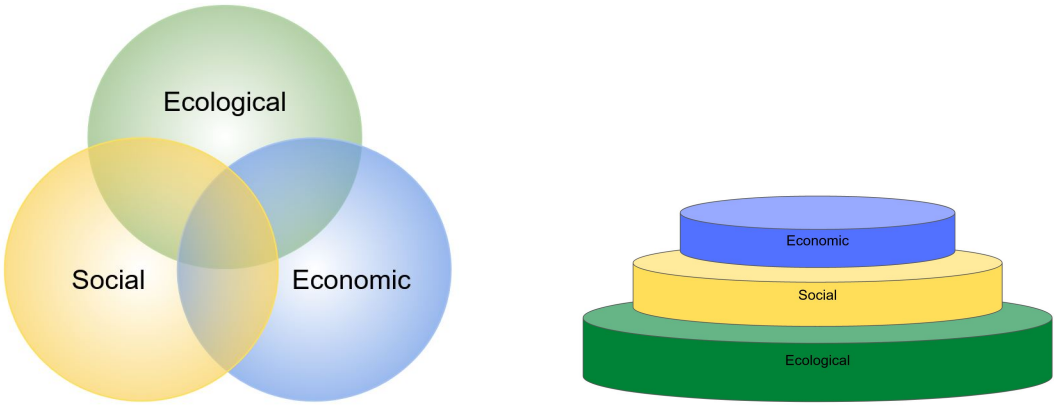
1.1 Background

Sustainable development was first introduced by the American environmental scientist and author Lester R. Brown in 1981 (UNDP, 2017). It took a few years before the word spread properly, under the UN World Commission on Environment and Development the term was used in the report "Our common future" (Brundtland Commission, 1987). The concept of sustainable development has been defined in the report as follows:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The UN countries developed 17 sustainability goals and agreed that sustainability goals should be the overarching goals for societal development at both local and global levels (United Nations, 1992). Agenda 21 is an action program that has been developed with the aim of setting goals and guidelines for how to reach the 17 goals for sustainable development. The action program points out that sustainability goals should also focus on the social and economic perspective and not just the ecological environment and resource issues (United Nation, 1992). It is also important that everyone in all groups of society is involved in the work towards sustainable development.

Sustainable development is based on three dimensions: the social, ecological, and economic (UNDP, 2017). The dimensions are connected, and their connection can be represented in two different ways. Figure 1(a) shows a Venn diagram where all dimensions are equally important. For some sustainability issues, the dimensions overlap and are covered by all dimensions; these end up in the middle of the vendiagram. Other issues are common to two dimensions, for example living wages are common to both the social and economic dimension, while it does not affect the environment. Finally, there are sustainability issues that only belong to one dimension. Figure 1(b), on the other hand, shows sustainable development as a hierarchy where the ecological part has a fundamental weight and is the basis for the social and economic dimension to function (United Nation, 1992).



(a) Venn diagram. **(b)** Hierarchy.

Figure 1: Two ways to represent the three sustainability dimensions.

The ecological aspect sets the framework for the other two dimensions of sustainable development. It covers everything that has to do with the earth's ecosystem. It includes land use, air, land and water quality, carbon dioxide emissions and the use of the earth's resources. The goal is to maintain the earth's ecosystem and its functions, such as the production of energy, food and clean water. For companies, this means that their production or services shall contribute to as little environmental impact as possible (Ekologisk Hållbar Utveckling, 2017). The social dimension, or the human perspective is about ensuring that all people's needs are met. For example, it can be to ensure that all staff at workplaces are well or that all the

world's people may share the earth's resources in a just and equal way. The social dimension is also about all people being included in a welfare society and that they are respected regardless of gender, level of education and income, social status, sexual orientation, religion and ethnicity (Public Health Agency, 2018).

The economic dimension means that economy and growth should not be an obstacle to the ecological and social part of sustainable development. The development of the economic part must not take place at the expense of the ecological or social dimension. It also means finding new and resource-efficient business models where the business community aims for a circular resource use, for example that manufactured products can be recycled and converted into new products (Ekologisk Hållbar Utveckling, 2017).

It is important for companies to find a balance between the three dimensions and that they do not put all the focus on one dimension. Only focusing on the ecological dimension and using raw materials, which is usually a lot more expensive could for example lead to a lack of profit and eventually bankruptcy. Another consequence of this could be that employees do not receive fair wages, thus affecting both the economic and social dimensions.

In concrete terms for companies, sustainable development is about awareness and reducing the use of limited natural resources. There is only one earth, but with a growing population, innovative solutions are required to meet everyone's needs and ensure sustainable economic growth. Production needs to continue but in new ways where the environment is not affected to the same extent. Companies need to become more energy efficient, ensure that all resources are used minimally, and that all waste is sorted and reused. It is important that employees in all positions feel safe, are respected and treated fairly, no discrimination must take place. This also applies to suppliers around the world. Companies need to use sustainable transport of products but also their employees to and from the workplace.

GTC - Gothenburg Technical College has a broad network for small and medium-sized enterprises (SME) in the Gothenburg region. The network means that the partner companies can meet and exchange thoughts and ideas. In addition, GTC supports companies through consulting and development projects (Göteborgs Tekniska College, 2022). One of the partner companies has asked for help in developing a sustainability strategy to facilitate and achieve the sustainability goals that the company sets. As sustainable development is very relevant today, we together with GTC want to produce a roadmap that can be adjusted to suit several companies. The work will also be part of Production for future, a project that GTC runs to increase knowledge about sustainability, diversity and technology.

1.2 Aim and Goal

The aim is for small and medium-sized enterprises to become more sustainable and increase the possibility of achieving the UN's 17 global goals. The global goals are interconnected and are based on the three dimensions of sustainable development: economic, social and ecological (Svenska FN-förbundet, 2021).

The goal of this project is primarily to find out how SMEs work with sustainable development today, this part of the project is named mapping. Based on the companies' needs, the plan is to produce an educational roadmap with concrete activities and tasks to enable and facilitate their goals for a more sustainable production.

1.3 Boundaries and Restrictions

The work has been limited to SME companies in the Gothenburg region as that is where the project work is performed, this will make it easier to get in contact and meet up with companies. Another limitation is the focus on producing companies, the goal is to create a roadmap for sustainability that can be applied to production companies. The reason for this restriction is the limited time frame. There are approximately 116 000 SME in the Gothenburg region, 767 of these have some form of production (SCB, 2022).

The goal for the roadmap is to be flexible and applicable at all production companies, therefore interviews and production observations will be done at several different companies. Implementation and testing of the roadmap will only be carried out at one company, Lejonet och Björnen. This company was chosen because they were the inspiration for the project and have shown great interest in a potential roadmap. Steps one and two will be tested during the project, the rest of the test will be done after the project is handed in.

1.4 Research Issues

Two project issues have been decided upon and they are as followed:

1. Do manufacturing SME work with sustainability today? If so, how?

2. Development of a roadmap with distinct steps that help SME work towards sustainable developmen. Including all three sustainability dimensions, social, ecological and economic).

2
Methods

The project was divided into two parts, one for each research issue, the question was answered through a needs analysis and mapping of the current state of SME regarding sustainability. The second issue was adressed by creating a roadmap. This chapter presents the methods used to achieve results for each issues.

2.1 Needs Analysis and Mapping

The needs analysis consists of two parts which in turn contain a number of activities. The previously presented restrictions could have an effect on the result. To counteract sources of error, a number of validation measures are therefore presented that were used to achieve a credible result.

2.1.1 Data Collection and Interviews

The needs analysis was inductive, meaning a survey was conducted to obtain a result in the form of knowledge about how SME in the Gothenburg region work with sustainable development. In cases like this, it is common to use a qualitative data collection method (Bryman, 2011).

Semi-structured interviews were chosen as the qualitative method. Semi-structured means that themes and supporting questions have been produced prior to the interviews but there is flexibility during the interviews. The questions may be asked in different orders and depending on what the respondents answer there is a greater opportunity to ask follow-up questions (Bryman, 2011). This makes it possible to get a better understanding of the respondent and answer questions such as why and how.

For the study ten production SME in the Gothenburg region were contacted for interviews. Some were unavailable thus additional companies were contacted until at least 10 were available for interviews. This is because the goal was to create a roadmap that is applicable at production SMEs in general. Therefore it is also important to have a representative distribution of respondents. To validate the representation, data from all registered manufacturing SME in Gothenburg was collected from SCB, Statistikmyndigheten (2022) the data that was compared was the number of employees and the industry category. As the 10 chosen companies were representative of the manufacturing companies an additional five companies were contacted for interviews.

Due to Covid-19 restrictions at the beginning of the year some of the interviews were held online. Although Shapka et al. (2016) found in their study that there is no quality difference between in person and online interviews, face to face interviews are preferred during this study as it will allow an observation of the production. Shapka et al. (2016) also found that during online interviews respondents answered with fewer words and took longer time to answer; this won't be a problem as the interviews are semi-structured and allow for the interviewers to ask the respondents to elaborate.

During the interviews some of the respondents expressed that they would like to remain anonymous. If only one or two companies wanted to be anonymous a list of the companies could have been included. As many wanted anonymity it was decided to exclude all company names apart from Lejonet och Björnen where the testing was completed and Ernströmsgruppen/ CM- Hammar who inspired the first step of our Roadmap greatlty. The exclusion of company names was to create consistency in the report.

2.1.2 Data Analysis

After the interviews were held, they were analysed according to the inductive analysis method. All interviews were recorded, partly to have a transcript to look back at if the notes are unclear but also for the opportunity to go back and listen and get a better understanding. During the interview study a thematic analysis was carried out. This means that answers from the interview were categorised and compared with each other. The division can be based on individual questions or themes that are discussed in one or more questions. Conclusions like 'x amount of companies talk about the sustainability goals at their company' were then drawn. The themes and their respective answers were made into a table to get a clear overview of the questions, for more complex answers and themes with a lot of input from the respondents notes were taken in a text document instead. The advantage of a table is that it is easier to see the answers and see a connection (Backman, 2016).

2.2 Creating Roadmap

When the needs analysis was completed, the production of a roadmap began. It was created based on the needs from the interviewed SME companies and strategies that they use as well as information from the literature study. This section presents the methods used for producing and testing the roadmap. The development and testing of the roadmap took place at the same time.

2.2.1 Literature Study

The theoretical content of the roadmap was generated through a literature study. Since the purpose of the project was to increase the sustainability of SME companies, a literature search on sustainable development and its meaning was done first. After

that a study about roadmaps and other change work was conducted. For the design of the roadmap, didactic and pedagogical literature was used. This was done to find the best activities and most effective ways to work when implementing sustainability at companies. The literature study was done through the five steps presented in Figure 2. The Figure was created with inspiration from Bryman (2011). In step one, familiar literature used in previous courses and contexts was re read, literature recommended for the research question was also used. Based on this literature, notes and keywords were written down, the sources' own references were recorded, concluding step two. Step three involves the formulation of keywords based on those developed in step two, the goal was to find keywords that were relevant to the project issues. During step four, new searches were carried out on the internet, in databases and in libraries that contain the keywords that were developed in step three. To check the relevance of articles and texts, titles and summaries were read. The literature with a relevant summary was saved and carefully examined (Bryman, 2011).

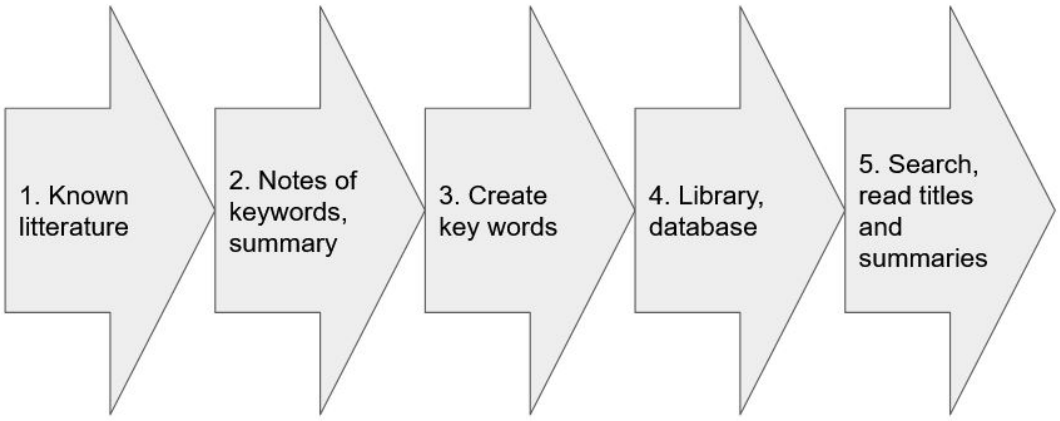


Figure 2: Five steps of literature study.

2.2.2 Testing of Roadmap

Parts of the roadmap were implemented as new theories were generated, they were tested continuously. Deductive research was used to test a theories. This is usually done through quantifiable analysis methods, such as questionnaires, short, structured interviews or observations (Bryman, 2011). As the roadmap evolved it was also implemented and tested at Lejonet och Björnen. This was done through a short qualitative analysis where employees were observed and interviewed.

3
Literature Study

A literature study has been conducted to further understand how companies work with sustainability today, what tools are available and how they can measure their sustainability. In this chapter findings from the literature will be presented, the first part includes an in-depth study of the three dimensions within sustainability, environmental, social and economic. The second part include sustainability certifications, diplomas and the resources that companies can apply.

3.1 Sustainability

In order for a company to be sustainable it needs to work with all three dimensions. In this chapter the dimensions will be explored on a deeper level. How they can be applied to businesses will be presented later in the report. The three dimensions are usually called environmental, social and economic but are also referred to as people, planet, profit (Slaper & Hall, 2013). There is no certain date from when the three dimensions originate, instead it is thought that they have been created over time (Purvis et al., 2019).

3.1.1 Environmental Dimension

The environmental dimension or ecological sustainability is about taking care of earth's resources, using what is needed today but making sure that future generations also have resources and the ability to meet their needs. This dimension includes the use of land and water, air quality as well as biodiversity among other things. Production should not impact the environment negatively. Therefore, it is important to make sure not to use too many resources at the same time so the earth has time to recreate them. Some resources cannot be recreated so it is important not to be wasteful (United Nations Conference on Environment & Development, 1992). This in turn means that social and economic development must not take place at the expense of ecological sustainability. To achieve this, companies need to review their core business and adapt to the global sustainability goals set by the UN in 2015.

Ecological sustainability can be measured among other things, through conducting a life cycle analysis of products that are being created. Companies need to take responsibility for their product at every stage, including after it has been sold. It is possible to continue to have control over the product by selling it as a service that includes maintenance. This means that the product is returned if it is not functioning

properly and will be switched. An example of a company that is working like this is SKF with their bearings (Hållbart Företagande I Besöksnäringen - Verksamt.se, 2022).

When it comes to product development and design, companies can take material selection into consideration. That decision will in turn impact the environment either in a negative or a positive way. Companies can exclude hazardous chemicals, plastics or other materials that are harmful to the environment. In order to have an overview of what chemicals are used in production, it is an advantage to introduce a chemical handling system and an employee who is responsible for handling the system. This will help the company understand what chemicals are used and how much of each chemical is used. Once all the chemicals are reported the employee can start looking for replacements for the worst chemicals. He or she should also be involved in new potential chemicals that may be implemented at the company. In the future, toxic chemicals can be avoided or replaced with better alternatives. In addition, a chemical management system enables chemical goals to be measured. A safe work environment and chemical handling is based on knowing what chemicals are used and produces, how they are used, the potential risks and the amount (Kemikaliehantering: Allt Du Behöver Veta, 2021).

Choosing electricity that is marked as green is a good environmental choice. Green energy places strict demands on how electricity is produced and at the same time works to reduce the environmental impact of electricity production. Many companies mix green electricity with eco-labelled electricity. There is a big difference between green electricity and eco-labelled electricity. Green electricity only guarantees the energy source, but no environmental requirements are set, which can have a negative effect on the environment despite the fact that it is green electricity, eco-labelled electricity also has environmental requirements (Elenergi - Bra Miljöval, 2021). When it comes to energy, SME companies that have a higher energy use than 300 MWh per year can apply for financial support from the energy authority. The support will be used for energy mapping at the company in order to be more energy efficient. The result must show consumption in MWh and kronor. In addition, there must be suggestions on how energy use can be reduced or made more efficient. The support from the energy authority covers 50% of the cost of the energy survey, but a maximum of SEK 50,000 (Energikartläggningsstöd Till Små Och Medelstora Företag, 2020).

3.1.2 Social Dimension

The social dimension is about everything that has to do with people, well-being, social justice, gender equality and the needs of the individual. Some aspects of the dimension can be calculated or quantified while others can not. Several attempts have been made to measure social sustainability and one of these measurement systems is called the Human Development Index (HDI). HDI includes three dimensions for measuring social sustainability: life expectancy and welfare in terms of purchasing power and gross national income (Human Development Index (HDI), 2020).

According to Swedish law, everyone must be treated equally regardless of the seven grounds of discrimination, gender, age, religion or other belief, sexual orientation, function variation, ethnicity and transgender identity or expression (Vad Är Diskriminering?, 2021). It is therefore of great importance that companies in Sweden involve this in their sustainability work as this is fundamental and most of the UN's global goals contain this.

The UN's definition of human rights also falls under the social dimension. It is an agreement between all UN member states that consists of 30 articles. It is a protection for all individuals and should give everyone the right to their own life. Slavery is not allowed, everyone is equal before the law and should thus be given the same protection and punishment (UN, 2008).

In addition to equality and gender equality, social sustainability includes ergonomics and safety protection in the workplace. It is about the employer ensuring that the employees have a safe workplace where they do not get injured.

3.1.3 Economic Dimension

There are different definitions of economic sustainability and in this section they will be presented. One of the definitions is that economic development must not take place at the expense of the social or ecological dimension (Hedenus et al., 2014). Economic growth should therefore not adversely affect the other two dimensions. It is not always possible for SMEs to make the most sustainable choice as the economy is extremely important in order not to go bankrupt. Despite the desire to do the best for the environment, the economy often has the last say.

There are several important areas in economic sustainability that are described in the UN's global goals. One of these areas is bribery and corruption, which damage society enormously in that it causes higher costs, undemocratic societies and the balance of power in the world becomes skewed, which in turn leads to distorted competition. Therefore, companies need to make sure it does not occur at any stage (Ledarna, 2020).

Another area that is also of great importance is ethical investments, also called SRI (sustainable responsible investment), which companies can make to contribute to financial sustainability and indirectly affect the other dimensions in a positive way. These investments work actively with, among other things, improving the environment or social sustainability. It is important that companies are aware of their own investments so they do not accidentally invest in companies that contribute to child labor, weapons manufacturing or deforestation (Ledarna, 2020).

In recent times, the concept of a circular economy has become increasingly common among companies and society. Simply put, circular economy is the opposite of linear economy, which is what has characterised society since industrialization.

Linear economy, or the linear value chain, see Figure, 3 involves extracting natural resources, producing, consuming and then becoming a waste of the product in the end (Circularity Gap, 2021). According to a previous study, it appears that a circular value chain is extremely important for sustainability and is necessary to achieve global goals.

Nature's resources are limited and this way of conducting production and consumption does not last long. Therefore, companies need to work with a circular economy and make use of nature's resources so that it does not endanger the next generation. In a circular economy, you use the manufactured product as far as possible before recycling as much as possible. To achieve this, the products can primarily be designed so that it will be possible to repair or replace parts when the product has broken down (Circularity Gap, 2021).

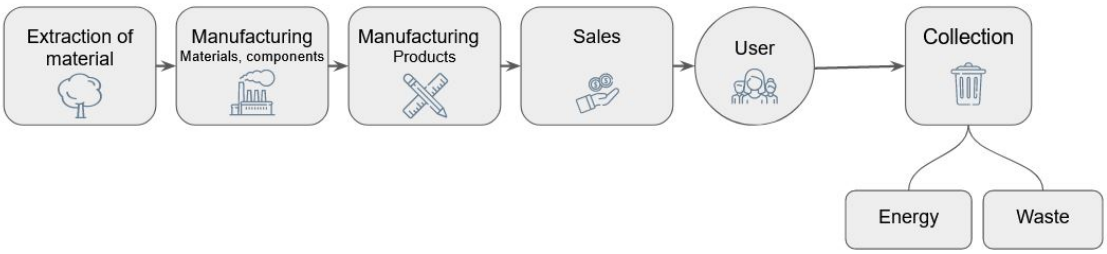


Figure 3: Linear Value Chain.

A product's value chain is often presented linearly, as in Figure 3. This means that materials are extracted, manufactured and sold to one user and eventually the user throws it in the trash or recycles it where it will hopefully become energy. In the worst case it ends up in a landfill.

Hopefully this will change making the value chain circular, see Figure 4. The Figure shows that there are many steps in which the chain can be circular, the user can fix his or her product and re-use it. If he or she has no need for it anymore it can be sold to another person or company, if they don't want it, it can be renovated or upgraded otherwise it can be recycled or made into something completely different, this means that the need for extraction of material will be lower thus impacting the earth less.

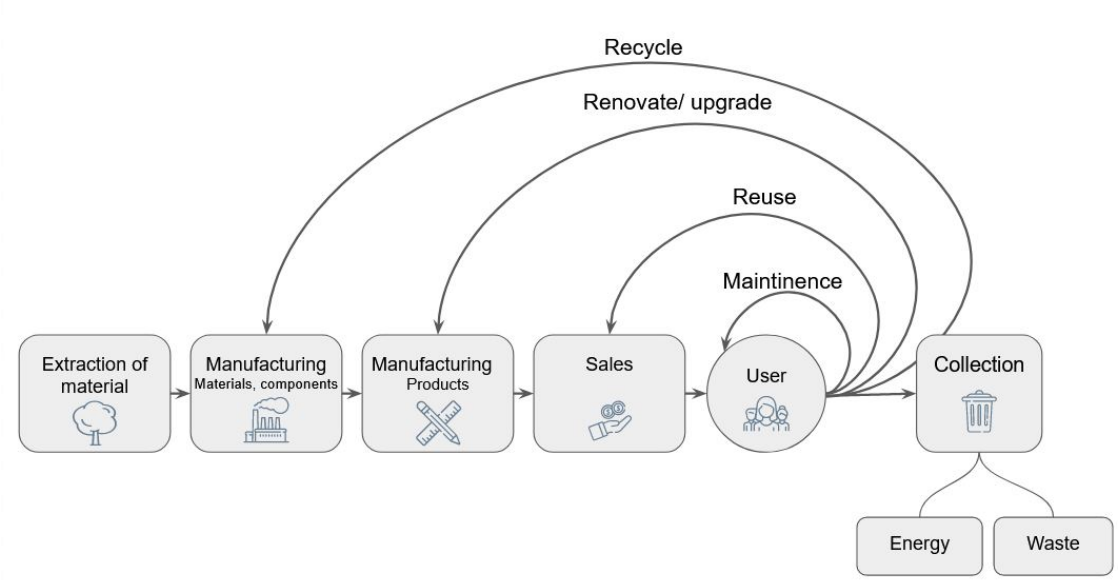


Figure 4: Circular Value Chain.

3.2 Sustainability Certifications and Diplomas

In order for a company to stay in business it needs customers. As mentioned earlier in this report more and more customers are becoming aware of sustainability and want to buy sustainable products. Between 2015 and 2021 consumers sustainability demands grew by 8%. In 2015, 66% of swedish consumers considered environmental or ethical labels as important and in 2021 the percentage was 74% (Svensk Handels Hållbarhetsundersökning, 2021).

There are different ways for companies to show their sustainability, they can for example get a certificate or diploma or include social and ecological aspects in their annual report. Although there are many good ways companies can show what they are doing, the demand for sustainability has also led to greenwashing. Greenwashing is when companies use false advertising that make consumers believe that the products they are buying are sustainable in a way in which they are not. This part of the report includes an explanation and examples of certifications, ways to present sustainability and examples of greenwashing.

3.2.1 Certifications

ISO - International Organisation for Standardisation is an independent organisation that aims to create global standards. By the end of 2021 there were approximately 22 000 ISO standards which are applied globally. As of 2021 they are active in 265 countries where Sweden is one. There are different categories for the standards, they are named after the group they are in. All ISO certifications are called ISO followed by a number. Certifications related to sustainability are called ISO 140XX, where XX are replaced by numbers. The most common sustainability standard is

ISO 14001, companies can pay a fee and apply to get a certification but to do this they need a sustainability strategy and they need to meet certain requirements including a plan for continued sustainability work. ISO then contacts a third party to assess and control the sustainability and make sure it meets ISO's standard. This third party is not allowed to have a connection to the company that is applying for the certification. An example of an assessment company is Swedac. Controls are performed annually or semiannually for as long as the company has the ISO certification, a safety measure for the consumers. There is a standard for this control, ISO 17065. The standard ensures that the review is transparent and that it is done by a third party. (ISO, 2022).

There are also standards for how sustainability is allowed to be presented. There are three types aimed at consumers: ISO 14021, ISO 14024 and ISO 14025. ISO 14021 is a standard for statement or advertisement. Everything that is said about the product must be true.

ISO 14024 is the usage of symbols for example the Fair trade logo. Logos and symbols are usually found on consumer goods. This standard is for creating labels, what they mean and how they are assessed. Just like ISO certificates need to be assessed, certificates like Fair trade and Rainforest Alliance also need to be assessed on a regular basis. ISO 14025, type III environmental declaration says that how sustainable a product is should be declared not that it is good.

Livsmedels-märkningar												
Uppdaterad 2021	ASC/MSC	Demeter	EU-ekologiskt	Fairtrade	Garant	KRAV	Naturbetes-kött	Rainforest Alliance	Svenskt Sigill	Ä-märket	Änglamark	UTZ
Allmänt												
Ekologisk odling		●	●		●	●				●	●	
Förbud mot kemiska bekämpningsmedel		●		Reglerad använ. tillåten	●	●	●	Reglerad använ. tillåten	Vissa förbjudna	●	●	Vissa förbjudna
Förbud mot konstgödsel		●	●	Reglerad använ. tillåten	●	●	●	Reglerad använ. tillåten	Tillåtet. Krav på skyddszoner	●	●	Reglerad använ. tillåten
Regler för vattenanvändning	●	●	●	●	●	●	●	●	●		●	●
Förbud mot GMO-grödor		●	●		●	●	●	●	●	●	●	
Krav på förpackningsmaterial		●			●	●						
Djuromsorg												
Tillgång till utevistelse (utöver svensk lag)		●	●		●	●	●		●		●	
Liggplats heltäckta ytor inomhus		●	●		●	●	●				●	
Förbud mot GMO i foder		●	●		●	●			●		●	
Förbud mot animaliska produkter i foder (ej mjölk)			Fisk, ägg tillåtet			KRAV-märkt grisar & fjäderfä			Fisk, ägg tillåtet		Fisk, ägg tillåtet	
Begränsad användning av kraftfoder		●	●		●	●	●		●		●	
Begränsad läkemedelsanvändning	●	●	●		●	●		●	●		●	
Begränsad antibiotikaanvändning	●	●	●		●	●		●	●		●	
Hälsa												
Förbud mot joniserande strålning		●	●		●	●			●		●	
Förbud mot livsmedelstillsatser		●	Tillåtna om godkända för eko		Tillåtna om godkända för eko	Tillåtna om godkända för eko			Tillåtna om godkända i EU	●	Tillåtna om godkända för eko	●
Arbetsvillkor												
Följer ILO:s kärnkonventioner om arbetsrätt	●	●	●	●	●	●		●	●		●	●
Regler för säker arbetsmiljö	●	●	●	●	●	●		●	●		●	●
Garanterar minimilön	●	●		●	●	●		●				●

● Pricken innebär att märkningen uppfyller kriteriet. Om rutan är tom innebär det att märkningen inte innefattar kriteriet. En kommentar innebär att märkningen uppfyller kriteriet till viss del. Med reservation för eventuella fel.

Figure 5: Most commonly used labels and symbols in Sweden.

Figure 5 shows some of the most commonly used labels and symbols in Sweden, it is taken from Medveten Konsumtion with their permission. Medveten Konsumtion is run by an independent organisation whose vision is to increase circular economy and contribute to sustainable consumption. These symbols are used on food and drinks (Föreningen Medveten Konsumtion, 2021).

There are certifications for timber; two examples used in Sweden are PEFC (Programme for the Endorsement of Forest Certification schemes™) and FSC (Forest Stewardship Council®). Wood can either be certified as one of them, both or neither. Being FSC certified means that the timber is up to the highest standard when it comes to environmental and social standards. The label also includes the origin of the materials used to get the finished product. FSC labels can be found on timber, paper, packaging and other products that come from forests and the goal is to lead to a sustainable use of forests. FSC environmental and social standards are based on 10 principles: compliance with law, workers' rights and employment conditions, Indigenous peoples' rights, Community relations, Benefits from the forest, Environmental values and impact, Management planning, Monitoring and assessment, High conservation values and Implementation of management activities.

There are three types of FSC labels. FSC 100% - this certificate means that 100% of the materials used come from forests that are up to FSC social and environmental standards. FSC recycled - products with this certificate are guaranteed to come 100% from recycled products, this certificate can hopefully lead to less people only wanting products made from new raw material. FSC mix - the third FSC label indicates that the material used in the product either comes from FSC 100%, recycled or controlled wood. Controlled wood is not the same as FSC 100% but it makes sure the material does not come from unacceptable sources. FSC has decided to stop imports from Russia and Belarus as the invasion of Ukraine progresses, a stand for social sustainability (FSC, 2019).

PEFC have also decided to take a stand against timber from Russia and Belarus and have named it 'conflict timber'. PEFC was founded in 1999 as a way for forest owners to come together and demonstrate their sustainability work. Today it is the largest forest certification in the world. They too use a third party to certify that the forest is sustainable and control the work. They have eight conventions no Forced Labour, Freedom of Associations and Protection of the Right to Organise, Right to Organise and Collective Bargaining, Equal Remuneration, Abolition of Forced Labour, Discrimination (Employment and Occupation), Minimum Age for Admission to Employment and Worst Forms of Child Labour. All these are part of the social dimension of sustainability (PEFC International, 2022).

Certifications for forests are similar to those on foods and other goods in the sense that some cover all three dimensions whereas others only cover some. PEFC and FSC are global standards and so is ISO, some of the food certificates are only known in Sweden or Nordic countries like KRAV and Svenskt Sigill. FSC can be found on packaging for eatables as well.

Certificates are proof that the company is working with one or more dimensions within sustainability. The dots in the table indicate what the certificate guarantees, some for example Demeter, Garant and KRAV are broad and cover all three sustainability dimensions whereas others like Fair trade focus on one, in this case the social dimension. Certificates are often a good investment for businesses as it shows their customers that they fulfil certain requirements. The downside of certificates is that they are usually very expensive and require yearly reviews and continuous work in order to keep the certificate. For a company with approximately 100-200 employees ISO 14000 costs between 12,000 - 15,000 USD which is a big expense for a company that works hard to stay in business.

3.2.2 Diploma

A cheaper alternative to certifications is sustainability diplomas. SUSA - Sustainable Standards is a Swedish non-profit organisation which works for increased environmental work at companies in Sweden. They have a starting fee of 1000kr for every organisation who wants to take part. Afterwards an additional cost is added, how expensive it is depends on the size of the organisation. SUSA also has a diploma to ensure quality. Just like the certification having a diploma means that the organisation needs to have a sustainability plan, meet certain requirements (what these are decided annually by the member organisations) and are examined annually. Each organisation needs to educate their employees in sustainability (SUSA, 2022).

3.2.3 Greenwashing

Greenwashing is when a company makes a statement or advertises a product or service in a way that can trick the customer into thinking that it is more sustainable than it is. It is usually in the ecological dimension. Greenwashing has become more common as the demand for sustainability has increased. There are different ways in which companies and organisations use greenwashing (Delmas Cuerel Burbano, 2011). They can for example use false certifications which is the usage of words that are normally associated with sustainability for example green or eco. These words may not have a meaning for the organisation but makes the customers believe that the product is good for the environment. Another example is climate compensation. Compensating emission from production by planting trees or doing something good for the environment to reach net zero emission has become popular. Although it leads to the question whether compensations can undo damage. This form of greenwashing makes consumers focus on the good that the company is doing rather than the negative impact it has on earth. Stating irrelevant facts is also something companies can do. For example, stating that the product is vegan although there would be no reason for it to include meat (Laufer, 2003). There are seven known ways companies can use greenwashing and they are presented in the list below (Richard Dahl, 2010).

Hidden trade-off is when companies describe that the product is green but it is

based on insufficient information. An example of this is when a company advertises that the product is environmentally friendly, but in reality it is only the packaging that is.

No proof this means that the company can not prove its claims. The information or claim that the company has on its packaging, for example, cannot be substantiated by a third party that is independent. A common example of this is when a company claims that a certain percentage of the packaging is made of recycled material without having any proof of it.

Vagueness is when companies are very vague with their claims that the real meaning will be misinterpreted by customers. Examples of this are "we must reduce fossil fuels" or "completely natural".

Irrelevance means when a company's assertion about sustainability is probably true but in reality it does not matter to consumers' choices. An example of this is when companies describe their products as "CFC-free" this will not affect customers anyway as CFC has been banned since 1970. Customers who do not know these laws will think that the company cares about the environment but in fact they must follow those laws anyway.

Lesser of two evils when companies' statements are true but risk distracting customers from the real health and environmental effects. A very good example of this is "organic cigarettes" or companies that plant a tree for every purchase to cover up for their pollution.

Fibbing means that claims about environmental friendliness are completely false. An example of this is when products are eco-labeled even though they do not meet the requirements for being eco-labeled.

False labels is when there is a false label due to customer requirements. This can be done by the company trying to imagine that a product is environmentally friendly by changing the colour of the packaging or having pictures of trees and green environments. This is also done by companies coming up with their own eco-labels that have very low requirements in relation to the real eco-labels that take sustainable development into account on a larger scale.

3.3 Sustainability In Businesses

How organisations can work for and disclose their sustainability is presented in this chapter. Triple bottom line is a way to annually present social and ecological dimensions along with the annual economic report. This chapter also contains information about resources that can be used by companies along with the roadmap. It also includes literature and learning models that were used during the creation of the roadmap.

3.3.1 Triple Bottom Line

All registered companies and organisations in Sweden must write an annual report where they include their economic spendings and balance sheet (Bolagsverket, 2022). Organisations have expanded their annual report and decided to include social and ecological footprint as well. A company that makes a lot of money at the expense of people is not considered a good company so including all aspects shows more transparency to the customers. When companies do not present information about all three dimensions it is hard to tell whether a company is sustainable or not (Slaper, 2013). When talking about the triple bottom line the three dimensions are usually referred to as people, planet and profit.

It can be hard to measure the people and planet aspects as it cannot always be compared to the economic cost or monetary gains of a company. There is no standard to how they are presented, Timothy Slaper and Tanya Hall (2013) describe three different ways that companies can use to compare the three Ps. Companies can translate all variables to monetary values in order to easily compare the different aspects although it might be tricky to set a price to a person's worth (2013).

Another way is to create a common index, this prevents the problem with setting a price on people or the earth's resources. As long as companies can agree on a common index this is a good solution. An index could compare an organisation's achievements to the country's achievements when it comes to the 17 sustainable goals. In this alternative each index would be worth the same. The third way to measure people, planet and profit is by presenting all three individually without comparing them to one another.

What variables are included in the triple bottom line is up to each organisation to decide. The economic variable is the easiest as it includes all income and expenditure. The other two on the other hand are more difficult. As presented in 3.1 there is a lot to weigh in. A common way to measure the planetary impact is through a carbon footprint (IBM TRIRIGA, 2021).

An advantage of measuring all three aspects is that by reducing the negative social and ecological impact the economic aspect usually decreases as well. An example of this is by reducing the material used in packaging less plastic is used which is good for the environment and it costs less for the company (Savitz, 2013).

3.3.2 SAM - Systematic Environmental Work

SAM was introduced in Sweden in 1993 to help companies systematically work with environmental issues. It was implemented to make sure that it was done correctly and is a requirement for all Swedish companies (Arbetsmiljöverket, 2022). SAM is done through four steps:

Investigation - This step involves gathering information and finding any potential risks.

Risk Assessment - The risks from step one are assessed based on their severity and potential consequences.

Action - During this step activities are proposed. An action plan is made and evaluated.

Control - The last step includes making sure the activities are completed. If so, what was the effect?

Because of limited resources and reluctance to change, a lot of smaller companies have a hard time working systematically through SAM. L. Birgersdotter et al. wrote an essay about 45 SME with working SAM in order to pinpoint what the success factors are when it comes to working with sustainability. 45 companies were interviewed and the result showed that SAM worked best when it was adapted to fit each individual company (2002). SAM is usually built the same way the rest of the company is built. If there is a hierarchy at the company SAM is implemented in the same way. It is clear who has what responsibility. In a flatter organisation it is done differently.

The areas with the most problems usually have the biggest focus. When SAM works well the employees are more interested and their knowledge about their work environment increases. The study showed that another success factor was whether or not the management team was interested or not, if they were SAM worked better. A lot of the companies with successful SAM already had a way to address the work environment. The study also showed that SAM was more successful if the employees were involved. The implementation is a learning environment where no one has all the answers from the beginning, instead people learn from each other (Birgersdotter et al., 2002). By involving everyone at all levels in the organisation (including the employees), the organisation will perform better (Spreitzer, 1999).

3.3.3 Resources

Lack of financial resources is a common reason why SME do not work with and prioritise sustainability (Agan et al. 2013). Instead SME focus on staying in business. Other reasons why SME don't work with sustainability are lack of time and that no one is responsible for it. Due to this, financial resources have been found. SME companies in the Västra Götaland region can apply to these resources as of now (May 2022), this may change in the future. Below are some of these resources and how companies can apply respectively. Companies can apply for financial support for organic investments, an example of this is Klimatklivet.

Klimatklivet Climate change is a resource that SME companies can seek. It is a national investment support from the Swedish Environmental Protection Agency and the support is applied for via the County Administrative Board. Klimatklivet is an investment support for local and regional measures that contribute to reduced

climate impact or greenhouse gas emissions. This is to be achieved through smart and innovative solutions. The support can be applied for by county councils, municipalities, limited companies, universities, non-profit organisations and foundations (Klimatklivet – Stöd Till Klimatinvesteringar - Bidrag, 2022).

Energimyndigheten The Swedish Energy Agency is a Swedish government agency whose task is to evaluate and answer questions and energy use. By starting with energy mapping, companies can see how energy use can be made more efficient and thereby reduce electricity costs, which in turn benefits sustainability and increases competitiveness (Energy-efficient Small and Medium-sized Companies, 2016). Swedish SME companies with an energy use higher than 300 MWh have the opportunity to apply for financial support from the Swedish Energy Agency to carry out energy mapping. The support covers 50% of the cost of the energy survey with a maximum amount of SEK 50,000.

Hållbarhetscheck Västra Götaland Regionen (VGR) offers financial support in the form of a sustainability check where the support will be used to promote and help companies' transition to achieve Agenda 2030 and the 17 global goals. The support will promote a sustainable business community in the Västra Götaland region (Sustainability Check, 2022).

The purpose of the sustainability check is to provide support to be able to meet society's adjustment and the new conditions. It is a grant that can be applied for at VGR to bring in an external consultant to develop new products or services that are part of circular business models, electrification or sustainable food systems and bio-based materials (Sustainability Check, 2022).

3.3.4 Learning Models

Due to the lack of resources that many SMEs often have, learning before and during sustainability work needs to take place internally. Employees need to learn from each other and together come up with the best solutions for each company. In order to create effective learning opportunities that engage employees, the literature below has been studied.

3.3.4.1 Feedback Model

Hattie and Timperley (2007) have come up with a feedback model to increase learning and help the learner move forward. Giving feedback the right way will help the receiver perform better.

According to Sadler (1989) feedback needs to provide information that are specifically relating to the task or process of learning. In this way the gap between what is understood and what is aimed to be understood will be filled. Instruction is the opposite of feedback. Instructions in this term means that the student or participant only hears what he or she needs to do. But instruction and feedback are often given at the same time. For example, the teacher gives feedback to a student after a test

about what she or he has done well and wrong and after that gives instruction on how to perform better next time.

This type of giving feedback and instruction is not the best way according to Hattie and Timperley. Instead, feedback should be given during a learning context, so the feedback can fill the gap between what the participant understands and what she/he aims to understand (Hattie and Timperley, 2007). The first step to learning is to try and solve a problem, during the next step the learner needs feedback. Feedback is a tool that reduces the gap between where someone is today and where they want to be. If feedback is given incorrectly there is a risk that ambitions and goals are lowered so that they are met (Hattie and Timperley, 2007). The model that Hattie and Timperley created is based on asking three questions:

Where am I going? (what are the goals?) During this step the learner reflects on where they want to be, what is the goal?

How am I going? (what progress should be made toward that goal)? The next question is about how far they have come, what is left to do?

Where to next? (what activities should be made to make better progress)? The final step is about figuring out the next activity. Maybe they need help from someone else or maybe they should start with a sub-goal.

3.3.4.2 EPA

EPA is a structured model used for discussions in a classroom climate. The goal is to involve everyone. It is most commonly used in schools but can be applied elsewhere as well. To begin with the lecturer or teacher asks a question and applies EPA. Each letter stands for a step (Andréasson Sandell Ring, 2017). A big advantage of this model is that more people become involved in the conversations as it gives space to both think and talk. The model also helps to get shy people to participate in the conversations because they end up in couples and groups. It is easier for a shy person to be involved if he or she is in a couple or group than to be alone.

The model is most often used in the EPA order, but it can also be performed in any other order or remove any phase. The usual order is E, P, A which means that each participant (E) thinks and formulates his or her thoughts alone. Thereafter the participants sit in pairs (P) and exchanges their thoughts. In the last phase, discussions take place in large groups (A) to analyse the issue. In each phase, participants' thinking and understanding expands. In the first phase, the participant is given time to think for themselves without being influenced by anyone else, and in the second phase, space is given to be able to put into words what they have thought in the first phase. Here, the participant also exercises his self-confidence before the discussion in the last phase (Andréasson Sandell Ring, 2017)

E - Individual: Everybody gets 1-2 minutes to think for themselves. This is a way to include people who don't usually enjoy the spotlight and give everyone time to

form their own opinion without input from others

P - Pair: When everyone has gotten a few minutes to think for themselves they get to discuss with the person next to them.

A - Everyone: The final step is to discuss in bigger groups or with everyone.

The model can be used in different ways, they can be combined differently and steps can be removed. Apart from including more students it also leads to an awareness where each individual learns what they know (Wilson, 2016). This model is commonly known as Think, Pair, Share in English and is often used in classroom situations (Kooperativ lärande, 2016).

3.3.4.3 5E

Another model that is commonly used in classroom situations is the 5E-model. It is used during lectures to keep the learners involved and interested.

The 5E model is good for active learning. Active learning is the opposite of the traditional learning model where the teacher or educator stands in front of a blackboard and students take notes. The disadvantage of the traditional learning model is that students are not actively involved but only a few ask questions and discuss with the teacher while the majority of the class does not really keep up and record what they see on the board. However, the 5E model enables students to become active participants through discussions and questions. The unique thing about this model is that Bybee and his colleagues have summarised decades of research in five words where the educator or teacher can remembers it and therefore use it more often (Trowbridge and Bybee, 1996; Bybee et al., 2006). The difference between the 5E model and other models is that 5E can be used as an applicable and simple tool where it is possible to work with it and use all or parts of the tool. Furthermore, the model enables the instructor to design a learning environment that suits participants with different learning styles and preferences, this is thanks to the model proposing that an instruction should have more parts.

Although the 5E model was developed to help teachers with more effective teaching, the 5E model is suitable for how people learn in general (Tanner K.D, 2010). Therefore, 5E can be used in other contexts such as seminars, conferences and meetings. Each E has a meaning and the steps are:

Engage: activity that arouses curiosity and engages the participant where the teacher or educator identifies the participant's perception or level of knowledge. The activity can be reading an article, watching a movie or finding information online.

Explore: this phase is a good opportunity for the participant meta-cognition, i.e. an opportunity where he can realise what he can or can not do about the current topic and also identify the gap in her understanding. During this phase, the partici-

pant's interest will increase even more and create new questions and aha-experience.

Explain: in all phases, the participants are expected to be active and this also applies in this phase. Both active participants and active instructors are expected here. Participants and teachers explain the phenomenon. Teachers introduce new concepts and ideas.

Elaborate: during the next phase of the model, the instructor must explicitly guide the participant in how to do it and also create an opportunity for the participant to absorb the new knowledge. This is an excellent opportunity for activities that consolidate and expand understanding and skills. During the third phase, the student was confused and overwhelmed by the new knowledge, but now he can exercise that knowledge.

Evaluate: participants and teachers reflect on and evaluate the knowledge they have acquired. Here, the instructor can evaluate the participants' progress towards the set goals (Bybee et al., 2006).

3.3.5 Achieving Change in Business

The following literature did not fit under resources or learning models. The first topic, ADKAR, is about implementing change work at a company. SMART is used to create specific and attainable goals.

3.3.5.1 ADKAR

Adkar is a model that is used to better understand and drive organisational changes through an individual perspective. Each letter stands for an element and needs to be fulfilled in order to make successful changes in an organisation. The elements are presented in the natural order of which employees go through the change (Hiatt, 2006).

A - Awareness: Employees need to be aware that a change needs to be made. They need to understand the risks they are faced with if they do not change and how it affects them personally.

D - Desire: Employees have to want the change and to be a part of the change. Everyone has different driving forces so identifying employees' driving forces and focusing on them will help implement the change.

K - Knowledge: Everyone needs to understand how to make the change. This element also includes the processes, job roles and models that are used to create the change.

A - Ability: Employees need the right skills and resources in order to make the needed changes. This is about what is needed to execute the change, create the

change.

R - Reinforcement: There needs to be some sort of reinforcement to keep the change in place. This step is about implementing systems, rewards or punishments to drive people towards change.

Change leaders can ease the change work by making employees aware of the need for change beforehand. Thinking about potential problems or risks the employees may see and beforehand in order to be able to answer questions from the employees. It is important to listen to employees and try to understand their driving forces as it will make it easier to help them reach the Desire phase. Before the change can be implemented individuals need to understand the changes, what potential new job roles mean or if there are new routines. In order for the implementation to work everyone needs the right skills or help to achieve new skills that they may lack. This could be in the form of a course, handover or training or as simple as showing someone how something is done. To keep the change in place there needs to be some sort of reinforcement otherwise it is easy to fall back on old ways (Hiatt, 2006).

Figuring out potential risks beforehand can be done through a risk analysis. It is done by systematically using available information to assess how likely it is that the risk will occur, and also the severity of a potential consequences of the risks. In addition to the risks and the probability that the risks will occur, measures to prevent the risks can also be described. A table is often used where the first column is the risk, the second is the likelihood on a scale of 1-10 where 10 is very probable. The third column is how bad the consequence is also on a scale of 1-10 where 10 is very severe. The next column is the mitigation (likelihood*severity of consequence). It is a good idea to make an action plan to prevent the highest mitigations (Tonnquist, 2020).

3.3.5.2 SMART

Working towards a more sustainable future is a form of change work and whenever a change needs to be made it is important to set goals. Setting goals is a crucial part of change work and how they are phrased can determine whether they are achieved or not. SMART is a model commonly used for goal setting that ensures that the goals are specific (Conzemius O'Neill, 2009). Field studies have been carried out indicating that people who were given clear and challenging goals did better than people who were presented with easier but more vague goals. When talking about the SMART model Les MacLeod prefers calling the goals objectives as objectives are more specific (MacLeod, 2012). SMART is an acronym, the meaning of each letter is presented below:

S - Specific: Specify what the goal is, what needs to be done? Who needs to be involved? When will it be done and why is it a goal?

M - Measurable: Is the goal measurable, how is it measured? Will it be compared to data that needs to be attained beforehand? If so, make sure that it is obtained

beforehand.

A - Achievable: Is it possible to reach the goal? If not, what needs to be done beforehand?

R - Relevant: Is it logical to set this goal now? Why are we setting it now?

T - Timebound: Is the set time enough for the goal to be obtained?

MacLeod suggests expanding the goals with two additional letters:

E - Engaging: Involving and engaging the employees are success factors, without engaging them it will be hard to make any changes.

R - Rewarding: To engage and involve employees in reaching goals it is crucial to reward employees. This will hopefully lead to more employees working towards the goal.

Apart from following the objectives MacLeod argues that there needs to be an "owner" of the project, without an owner the goal won't be reached. Employees' time is valuable therefore it is important to make sure they do not feel that they are wasting their time. Setting the SMART or SMARTER goals should be done by the owner who then follows up on the goal and makes sure things are going accordingly (MacLeod, 2012).

3.3.5.3 KANBAN

Kanban system is a Japanese method that aims to visualize workflow at the individual, group or even organizational level. The word "kanban" means "visual signal" or short in Japanese (Tonnquist, 2020). The concept is related to lean production and just in time production. Lean production is a way of working and is originally from Toyota's development strategy Toyota production system. The purpose of lean is to maximize customer value and reduce waste through streamlining of production. Waste in this case involves activities that do not add any benefit from the customer's perspective (Tonnquist, 2020).

A kanban board can visualise the work by dividing it into three fields: ongoing, not started and completed. Each task is written on a piece of paper, such as a post-it note, and then the task is placed in the correct column on the board. The notes are moved between the different parts of the board depending on the status, ie if it has not been started, started or completed. The kanban system is based on three principles and these are the following.

Visualize the workflow
To visualize the work, a board is used where the tasks are placed in the different columns (ongoing, one started and completed). Visualizing the work is one of the great advantages of the kan-ban system as everyone gets an overview of the work

process and sees how the work develops. In addition to visualization, the painting can be used as proof that the work has really been done.

Work in progress
By limiting ongoing work that can increase the efficiency of the work team / company as staff do not do much information exchange but focus only on the few tasks that exist instead of constantly re-prioritizing tasks. Another advantage of fewer tasks is that the stress level in the workplace decreases, which contributes to the quality increasing.

Lead time
Lead time is the average time to complete a task. For example, it is possible to measure how long it takes to develop a new product, assemble a product or manufacture a product. By measuring lead times, bottlenecks can be reduced and thus increase the efficiency of the company. Furthermore, the lead time can be used to tentatively see when the task will be completed or if it is a product, the customer can be notified when he receives it.

4
Results

The result is presented in three parts, one to address each thesis issue and a third part that concludes the testing of the roadmap thus far. The interviews answer the question *What does sustainability work look like for small and medium-sized production companies today?* The second issue, *Development of a roadmap with concrete proposals for working with the three perspectives in sustainable development (social, ecological, economic)* is written about in the second part.

4.1 Interviews

Företagsregistret has divided production companies in Sweden into 23 sections. The six most common SME sections in Gothenburg are: groceries (99 SME), graphics and reproduction for example Printing shop (42), metalwork without machines (116), machine industry (53), other - engines or similar (72) and repair work (101) (CSB, 2022). The goal was to interview a representation of the production SMEs in Gothenburg. The ten primary companies did not cover the most common sections so an additional five companies were added. Unfortunately no graphics and reproduction for example printing shop companies were available for an interview. Apart from that the six most common sections are represented in the interview study. Companies from steel and metal manufacturing were also interviewed. The size of the companies ranged between 3- 140 employees.

The interviews took approximately 45 minutes and some took up to an hour. In order to remember what was said, notes were taken. Because of Covid- 19 a majority of the interviews took place in a video chat platform. During the three that were done in person a tour of the production was given as well. Interviews in person were preferred partially because of the factory tours but also because both respondents and interviewers were more relaxed. The interviews on Teams were typically shorter than the ones in person.

Seven of the 15 companies had sustainability goals; one out of the seven claimed that their goals were strained and that they only came up with new goals in order to be able to keep their certifications. A majority of the companies explained that their sustainability work mainly consisted of turning lights off and using less paper but that they wanted to do more. Basic actions like this and sorting trash was not considered sustainability work in this report. The driving forces pushing towards sustainability are mainly the customers but also employees. Reasons to

work towards sustainability include being competitive in the market, doing good for the environment and society and being ready when new laws are implemented. When asked whether a roadmap would be helpful the response was yes. Even if the roadmap is not followed step by step all companies said they could learn something from this report.

During the interviews it was found that three companies, 5, 8 and 10 had come the furthest with their sustainability work. They had a structure for setting sustainability goals and made sure to follow up and evaluate the goals on a regular basis, either quarterly or once every two months. These three companies had a sustainability plan and an involved management team. When they decide on new sustainability goals they make sure to involve employees as they have noticed that the employees are more interested in working towards goals when they have been involved in developing the goals. Company 5, 8 and 10 could give an exact timeframe for their sustainability work, the time ranged between one and three years, when the remaining companies were asked the same question they either responded that they don't work much with sustainability or that they always have by for example sorting trash or turning off the lights.

Company 5 is owned by a mother company that owns 22 companies. The mother organisation had developed their own roadmap that is beginning to be implemented within the subsidiaries. The first step of the roadmap is to send three employees on a course about sustainability where they learn about the global goals. The chosen three become the environmental group together with the manager. When they come back, they teach the rest of the organisation about sustainability. Afterwards they use an eco-screening tool to check how they are doing environmentally. The screening tool can be found on their website (Ernströmgruppen, 2021). After using the screening tool, the company gets a grade for each category and a graph showing where they are doing well and where they need to put in more effort. From these they decide on a couple of global goals to focus on.

As equality is part of the social dimension within sustainability, hitta.se was used to find out what the gender distribution looks like in the board. Four out of the 15 companies have a 50%/ 50% division, five have 75% up to 89% males in their board and five only have males in their board, the last company had hidden statistics (Hitta.se, 2022). Another factor that was investigated was change in the number of employees as that could indicate worse social sustainability. The biggest change was in company 3 with a loss of 17 employees but when asked about it they explained that it was due to Covid- 19. Company 3 was one of the companies that had come the furthest in their sustainability work but it was mostly within the environmental dimension.

A pattern that was found during the interviews was involvement from employees and the ability to come with suggestions. Eight companies used or had used suggestion boxes or similar to get input from employees, three of the companies that had clear systems for the suggestions explained that their organisations were flat enough that

employees could come and talk to the board whenever they felt like it and that they often had employees come with suggestions.

Companies with successful suggestion systems had a couple of things in common, first of the suggestions were visible to all employees, either on a board in the cafeteria or online on their intranet. As suggestions were chosen they were moved to another section of the whiteboard like a to-do list or kanban where they were eventually moved to a section for completed suggestions. If a suggestion was not chosen, the employees got an explanation from the board or sustainability group. If it was chosen, the person that came up with the suggestion was allowed to be a part of the process and involved in making a change. Lastly it was suggested by the interviewed companies to implement suggestions even if they were not great or would lead to a big change. This is because many employees like being involved and making a change, these changes will make they feel seen and heard. In turn it is likely that the implementation of suggestions will motivate employees to come up with new suggestions and work towards them.

Another success factor found during the interviews was education, a lot of the companies were trying to work more sustainably but they didn't know how. They were unsure what the global goals were and did not discuss sustainability with their employees, instead they focused on simple tasks like the ones named earlier: sorting trash, turning off lights and using less paper.

4.2 Roadmap

The second research issue was solved by the development of a roadmap consisting of seven individual steps. Each step is presented and explained further down in this chapter. In order to use the roadmap the organisation needs to have one or more sustainability managers that lead the process. This is necessary as the interviews showed that if something is everybody's responsibility there is a greater chance that it will be forgotten. Another key factor is involving the employees both in the roadmap itself and also in the sustainability movement. A suggestion for this is to implement a suggestion board inspired by the interviewed companies. The suggestion board is not part of the roadmap in itself but should be used in parallel with the roadmap.

The suggestion board is inspired by kanban with one added column for suggestions. It is presented on a whiteboard divided into four parts: Suggestions, Chosen (not started), Started and completed. Employees write suggestions on a sticky note and stick them under the heading suggestion. Once a month the sustainability managers go over the suggestions and choose a couple that are then moved to the chosen section, they also explain why the other suggestions were not chosen. When they are chosen a plan is created to complete the suggestion. As the suggestions can be both big and small, how the plan looks is different for each suggestion. The most important steps are deciding on someone to follow through and setting a time frame, during this step it is moved under started and once it is complete it will

be presented under complete. Seeing completed suggestions is a good reward for the employees and will hopefully motivate more employees to get engaged in the sustainability work.

Before the company starts using the roadmap they have given a simple answer to Hattie and Timperleys question: *Where are we going?* - The company wants to become better at sustainability work. During step 2, Sustainability analysis, the next question, *How are we going?* is answered. The company will get a score and grade for their sustainability work. The last question *Where to next?* is answered in step three and four where the company's sustainability goals are set and a plan on how to reach them is implemented. These are the steps where Hattie and Timpeleys questions are answered.

The Roadmap was created in excel with tabs for the different steps. The first tab is an instruction to the roadmap with a short summary and aim of each step. The second tab contains tips to use before and during the roadmap. It includes links to videos and websites that further explain sustainability as well as funds companies can apply for if they need to invest in new machines that are more sustainable for example. This is also where the suggestion board is explained further. How much time the roadmap takes to complete depends on how extensive the goals are, an approximation of the time it takes to complete each step is presented below along with an explanation of the steps.

1. Introduction - Education and Explanation
The first step in the roadmap is an introduction where all employees participate. The introduction is an interactive presentation where attendees have time to discuss through the EPA method mentioned in the literature study. The order and content of the presentation is based on the 5E model where the first step is to engage the listeners, this is done through a short film. The film is about throwing trash in the sea by putting it in a box with rocks, a recommendation that was shown on national TV in Sweden in 1964. The goal is to make the employees think about what was recommended on tv not too long ago and make them think about what we are doing today that we might question in the future.

The explanation phase is done throughout the introduction or education in, among other things, the presentation of sustainable development and its definition. The three dimensions are then presented and the participants have some time to think about and individually answer what they think each dimension means, this is done in Menti. The previous step is part of the explore phase, shortly thereafter The UN's sustainability goals are presented and they get to explore by reading about the goals on globalamålen.se and thinking about which goal is most important to them and their company. After 15-20 minutes of discussions in smaller groups they present their thoughts to each other.

After this the roadmap and its seven steps are presented to the employees to get them involved in the work. It is explained that the first step is being done and that they will be involved in step three as well. They are also told that there will

be some changes in the future and new goals but that the goals are based on their thoughts and opinions, hopefully this will make them more interested and willing to make changes. Then the suggestion board is presented and they are given 5-10 minutes to brainstorm ideas and suggestions. The last phase of the 5E model is done in connection with a summary of training and an Exit ticket in the form of a competition on Kahoot! This is also to make the employees leave with a positive mindset and interest in the topic.

The aim is to teach the employees about sustainability, what it means, what the three dimensions are and to understand the 17 global goals. Another goal is to get them to use the resources that are available like the website Globala Målen as it will be easier for them to use it again once they have tested it out. Additionally, having the participants reflect on what goals are most important to them will hopefully help them understand that everyone has different opinions and reasons for their opinion and no one is wrong as they are all equally important. This step is planned to take 1.5- 2h. If the company has many employees it is probably a good idea to divide them into groups as having groups that are too large will prevent everyone from being involved in the whole group discussions. A maximum of 30 participants is a recommendation.

2. Sustainability Analysis
There are three tabs for the second step, one for each of the sustainability dimensions. During this step the sustainability managers answer yes/no or give the percentage to questions about the company. This step was inspired by similar calculations used at companies and certifications. In order to get an FCCS certification companies need to live up to a number of different standards.

Frågor	Svar	Kommentarer	Poäng	Viktning	Resultat	Möjliga poäng	Resultat per kategori [%]	Betyg per kategori
Arbetsförhållanden					86	160	54%	E
1. Anställda erbjuds årliga hälsokontroller	partly		5	2	10			
2. Anställda får friskvårdsbidrag	no		2	2	4			
3. Anställda har en bra balans mellan arbete och privatliv	no		2	2	4			
4. Företaget erbjuder kollektivavtal	yes		10	2	20			
5. Anställda har rättvisa arbetstider (normalt 8 timmar, annars erbjuds övertidsersättning)	yes		10	2	20			
6. Anställdas säkerhet är en prioritet (>4 anställda, Skyddsombud)	yes		10	2	20			
7. Nyanställda erbjuds introduktionskurs	no		2	2	4			
8. Anställda har möjlighet till fortbildning	no		2	2	4			
Ledarskap					80	80	100%	A
9. Väljs ledare/chefer på ett rättvisst sätt	yes		10	2	20			

Figure 6: Step 2: Sustainability analysis, Social Dimension.

The first tab, the ecological tab, was inspired by Ernströmsgruppen and used with their permission. A couple of changes have been made in order to make it more suitable for the roadmap, these changes are translation to Swedish as Swedish is the work language for most SME in Gothenburg. The order of the questions have also been changed to better suit the roadmap. It was also decided to un-hide the

column for weighting the point because some of the questions are not applicable at all companies, in which case they can lower the weighting. The tabs for social and economic sustainability were created during this project and the questions are based on the 17 sustainability goals. The questions in each tab are divided into categories. Waste, energy, leadership, equality and circular economy are a couple of categories. Part of the tab for the social dimension can be seen in Figure 6, for the complete file see Appendix A.2. After all the questions are answered the company is given a grade and score for each individual category as well as an overall grade and score for the respective dimensions. The score from each category is then used in step three. This step is done by one or two people, the board or sustainability group. It may take some time to find the answers to some of the questions but it should take less than a day to finish.

3. Essentiality
The next step is the Essentiality table, see Appendix A.3. During this step a table, (see Figure 7) is created for each dimension where the first column is each category from step two. The next column is the score for each category from 0-10 where a higher score means that the company has a lot of work to do and a smaller number means they are doing well in the respective category. This number is taken from the previeous step. The employees take part in filling the third and final column is the interests of the stakeholders. As many companies are just getting started on their sustainability journey it is suggested to start by focusing och the employees interests. Later on when the Roadmap is implemented and the employees are comfortable with the new ways of working other stakeholders can be involved in this step as well. The third column is filled out by discussing how important each category is. The stakeholeds then decide on a number between 1-10 for each category where 10 is the most important and 1 is the least important.

Ekologisk	Hållbarhets påverkan	Intressenter
Miljöarbete	0.00	6
Miljölagar och dylikt	1.88	10
Material och kemikalier	6.50	8
Avfall	7.00	3
Transport	7.10	5
Energi	8.00	8
Leverantörer	6.67	2

Figure 7: Step 3a: Essentiality Table, Ecological Dimension.

A scatter chart is then created from the table, the x- axis is the sustainability impact or score from step two and the y-axis is how important the category is for the company and it's employees. The scatter chart, Figure 8 can then be used to help the company decide what categories to start focusing on. The dots in the top right are more interesting to the company and they also have more work to do in these categories. In this case energy, materials & chemicals and transport are best to focus on. The sustainability manager notes down the categories and opens up

for discussion on goals within each category. The group gets approximately 30-45 minutes to come up with goals, when the time is up the employees pick the top five goals that they would like to start with.

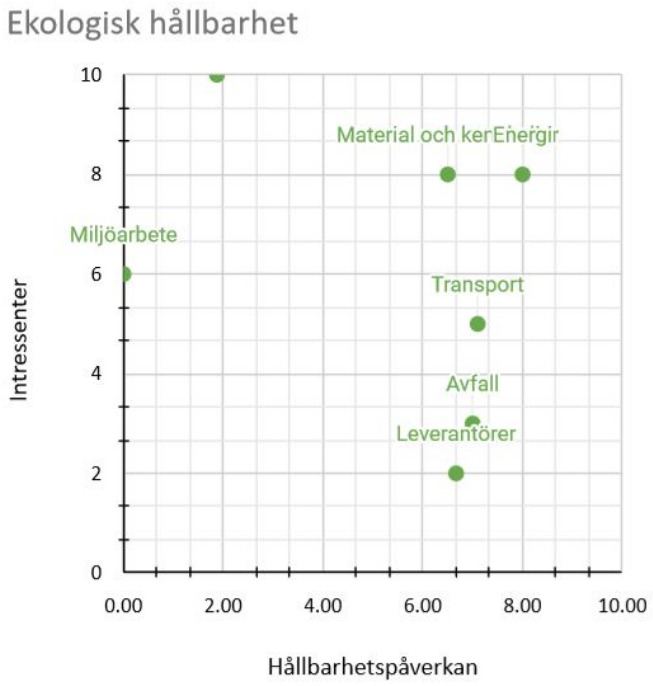


Figure 8: Step 3b: Essentiality Graph, Ecological Dimension.

4. Goal setting

During step four the sustainability managers use the goals from step three to create SMART (specific, measurable, achievable, relevant and time set) goals; these goals are more specific and therefore easier to reach. For a goal to be effective, it must be specific and the following questions must be answered: what needs to be done? Who is responsible for achieving the goals? What steps are needed to achieve the goals? If needed the sustainability managers can discuss it with the management team. A template has been created that the company can fill out while creating their SMART goals, see Figure 9.

S - Specifikt	Vad är det som skall uppnås? Vilka behöver vara involverade? När ska det genomföras? Varför är detta ett mål?	
M - Mätbart	Hur går det att mäta om målet har uppnåtts? Eller hur väl de uppnåtts?	
A - Attainable (Nåbart)	Går målet att nå? Vilka steg tas för att nå målet? Finns tillräcklig kunskap för att uppnå målet? Om inte, hur får man tag på den?	
R - Relevant	Varför sätter vi detta målet nu? Är det logiskt? Stämmer det med vår business plan?	
T - Tidssatt	Räcker den avsatta tiden för att uppnå målet?	

Figure 9: Step 4: SMART way of setting goals.

After the goals are set a risk analysis is done for each of the goals. This will help the implementation in the next step. The risk analysis is performed by writing down the potential risks, multiplying the probability (a number between 1 and 10) by the consequence (a number between 1 and 10). The risk number is a number between 0 and 100. The company should then write measures to prevent the risks from occurring or reduce the consequence if it were to happen. The complete document for SMART goals with a table for the risk analysis can be found in Appendix A.4.

5. Implementation

Step five is about implementing the new goals and introducing them to the employees. The tab for this step includes tips in the ADKAR (awareness, desire, knowledge, ability and reinforcement) model, see Figure 10 to help the change work. Including employees is a crucial step in implementing changes and since they have been part of step one and three they will hopefully be positive to the change. Otherwise it is important that the sustainability manager takes his or her time to listen and answer questions about the changes and why they are being implemented. Showing employees the risk analysis can also help make them feel more at ease.

A - Awareness	Presentera målen. Utgå ifrån matrisen och målen som anställda presenterade. Förklara hur det är gynnsamnt. Ge anställda tid och utrymme att ställa frågor och komma med feedback.
D - Desire	Involvera anställda, förklara fördelarna med förändringarna. Visa att ni tänkt på eventuella risker och vad ni har tagit fram för åtgärder. Involvera och fördela ansvar.
K - Knowledge	Presenterar handlingsplanen och ge anställda verktyg för att arbeta mot målet.
A - Ability	Skapa övningar och gör det lätt för anställda att anpassa sig efter de nya arbetssätten/förändringarna. Justera processen vid behov. Börja smått och utöka efterhand.
R - Reinforcement	Ge positiv feedback, uppmuntra till förändringen.

Figure 10: Step 5: Implementation of goals, ADKAR model.

The change work can be presented to employees through meetings, information is

posted on the intranet, screensavers and information boards or other communication channels.

6. Goal activities
It is important to dare to start sustainability work even if you are not an expert in the field. Sustainability work is a change and learning process. Once the work has started, new questions will be raised. This in turn will provide the conditions for continued change and improvement. Sustainability work must take place everyday, otherwise there is a risk that it will not happen. It should be part of everyday life as well, taking into consideration where things are order from or how all actions affect the environment and sustainability.

It may be hard to see progress in bigger goals and sometimes is can feel like nothing is happening. To change this companies can create list of activities that can help archive their goals. Figure 11 is an easy template that can be used, once an activity is started or completed the coulour of the cell can be changed. If there is a problem with one of the activities the colour can be changed to red to indicate that help is needed in order to complete it. Furthermore, a responsible person must be assigned to the goals and follow-up should take place continuously.

Activities that can be done include measurements on machines to measure energy use, choice of transport, electricity use and choice of supplier when ordering. Keeping the sustainability goals in mind when ordering or purchasing is important as it must be sustainable at all levels. During this step, companies can also use industry-specific indicators and then adapt to their company. In order to succeed with the sustainability goals, it is extremely important that everyone participates and contributes to carrying out the activities and thereby achieving the chosen sustainability goals.

Mål	Aktiviteter		
Mål 1	Aktivitet A	Aktivitet B	Aktivitet C
Mål 2			
Mål 3			
Mål 4			
Mål 5			
	Genomförd		
	Påbörjad		
	Ej påbörjad		

Figure 11: Step 6: Creating Activities for each goal.

7. Evaluation
The last step in the roadmap is evaluation. During this step, results and status are evaluated. The company should continuously check their set goals and update the status of them. They should provide feedback to employees, especially the employs that are responsible for the activities. If feedback is given continuously, those responsible have time to change their behaviour and better their work. Questions that may be relevant to think about and answer include "Examine what went well and why? What can be improved and how?" It is important to stay focused and steer towards the set goals. This is done by filling in the evaluation template, see Appendix A.7, or part of the template in Figure 12. Here are the set goals (Where do we want to go?), schedule, responsible person, status of the sustainability goals (Where are we now?), Action (Where to next?). If the goals have not been achieved an updated time is set to achieve the goals. When the evaluation has been completed and the set goals have been achieved, the companies return to step 2 in the roadmap and develop new goals to work with.

Mål:						
Mål 1 (Vart vill vi?)	Tidsplan	Ansvarig	Status (Vart är vi nu?)	Åtgärd (Hur ska vi nå målet?)	Uppdaterad tidsplan	Anteckningar
Aktivitet A						
Aktivitet B						
Aktivitet C						
Aktivitet D						
Aktivitet E						

Figure 12: Step 7: Evaluation table with Activities.

Just like in other projects or activities, follow-ups and evaluations are extremely important for the success of what has been agreed (Tonnquist, 2020). The business receives collective feedback that can be used in the coming goals and plans. What worked well this time can be used and done again during the next goal. What needs to be improved? How can it be improved? Was the number of goals good? Is there room for more goals at the same time or is it better to have fewer goals? For companies that have seasonal production it could be a good idea to have fewer goals when there is more to do in the factory and more goals when it is a bit calmer. Feedback is a very effective tool for changing and strengthening an existing behaviour or creating a new one (Hattie and Timperley, 2007). Companies that can evaluate their own work and use that as feedback can make great things happen.

As the biggest driving force for working with sustainability is the customers demands it was decided that the main focus of the roadmap would be coming up with and carrying out sustainability goals. The last step includes presenting sustainability to customers. As the sustainability group has implemented and started working towards their goals when they start with step seven there is a smaller risk of greenwashing. Sustainability work can be presented in different ways, two suggestions are using the Triple Bottom Line or presenting goals and goal fulfillment on the company website. The Triple Bottom line means presenting social and ecological impact in the annual report along with the economic dimension.

4.3 Testing of Roadmap

One of the interviewed companies was very interested in moving forward with their sustainability work so it was decided to start implementing the roadmap during the project and test the steps they had time to complete. They decided that the company manager and an employee would become the sustainability group and lead their sustainability work. They agreed on putting up a suggestion board in the hallway into the cafeteria which was done, see Figure 13. The sustainability group will take some time once a month to go through the suggestions and choose a couple to work with. The company had time to complete step one and two. Step one consisting of the introduction was done at their company and a time limit was set to 1.5 hours. The length of the break and discussions were adjusted to fit the time frame. 1.5 hours was a good amount of time, there was time to go through the meaning of sustainability, the global goals and the dimensions. They had time to discuss the importance of each goal at their company, an overview of the roadmap was given and the lesson was ended with a competition that left everyone in a good mood.

Figure 13: Sustainability board at Lejonet och Björnen

All employees apart from the sales group took part in the introduction. The sales group could not attend as they are spread out in the country and the introduction was planned to take place in person as the goal was to engage all participants which is easier to do in person. In the beginning of the presentation a video was shown that made a couple of the participants laugh, using something to engage the listeners set the tone for the rest of it. All participants were involved in the discussions and took part in the exercises, using EPA made it easier for shy participants to take part as they first had time to think for themselves and then talked in pairs before the group discussions. They did well during the exit ticket which indicates that they payed

attention. When it was time for them to come up with suggestions some people really brainstormed and came up with many ideas whereas some couldn't come up with any. Now it's up to the sustainability group to implement some changes and choose some of the suggestions.

The sustainability group was asked to evaluate the introduction, see Appendix B for full answers. They said that the exercise met their expectations and that the group stayed interested from the beginning to the end. Ending with a competition was a good way to motivate the employees to listen. No further suggestions were made for the future. Step two was done by the sustainability group, they answered the questions from all three dimensions resulting in a grade for each category. An easy way to get an overview on where they need to put in more effort.

5
Discussion

Further suggestions and changes are discussed in this chapter. Like the rest of the report this chapter is also divided into one part for each issue as well as a section for further suggestions

5.1 Interviews

Quantitative studies are based on confirming existing theories. If there had already been a theory to test, it would have been more appropriate to use a quantitative method (Bryman, 2011, 39-43). In a qualitative study, fewer respondents are used, but they are given the opportunity to develop their answers. In the end 15 companies were interviewed which gave a good insight to how production companies are working with sustainability today. Visiting three of the companies and seeing their production was rewarding as their recycling and way of saving material was shown. Why some sustainable activities had not been implemented also became more obvious when a tour of the production was given as there was a fast working pace. An example of poor sorting in production was when different waste materials from the machines were mixed together in a bucket. The production manager explained that changing the waste bin took too long and would stop the production. Therefore sorting trash was not prioritised for this machine. When he first explained it it did not seem like a problem, but by seeing it in person it was clear that the production would have to be stopped in order for the trash to be able to be sorted.

The amount of interviews felt appropriate for the time limit and the information it resulted in. A lot of help in finding respondents was given by an employee at GTC, without her help a lot more work would have had to be put into finding companies and people to contact.

From the interviews it became obvious that there is a need for a roadmap, approximately 50% of the interviewed SME didn't have a clear sustainability strategy. The same half didn't have any sustainability goals. Since a lot of the SME don't have a lot of resources it was decided to base the roadmap off of that and make sure everyone could participate in all steps. Instead of sending employees to get educated about sustainability we decided to create an introduction to sustainability and the global goals.

A discussion about certifications arose where some companies explained that their

customers require sustainability certificates whereas other companies claimed that their customers want the cheapest alternative. The companies with certificates said it was a security, something to lean back on and that they will keep getting new certificates as they show up. Others said that some of their products are certified with labels like Rainforest Alliance whereas others are not because they both have customers who value sustainability and others who might not afford it. One of the interviewed Contract manufacturers said that they liked the freedom and ability to find loopholes in their production, something they would not be able to do if they got a certificate. Certifications are costly and one company explained that they would rather buy an energy efficient heating system than get certified as it makes a bigger impact right now.

Because of the cost and the divided opinion about diplomas it was decided to leave diplomas and certificates out of the steps in the roadmap. A certificate doesn't make a company sustainable rather acts as a proof of its sustainability. For companies that want a certificate they can set that as one of their sustainability goals instead. Certificates are a good way for consumers to make sure that what they are buying is sustainable but since greenwashing has become more common it is important to be able to identify real certificates and symbols from labels or words without actual meaning.

5.2 Roadmap

The roadmap was based on literature and information from the interviewed companies. Something that was discussed during the development of the roadmap was the steps and which order they should be presented in. In the beginning it was unsure whether the introduction or training would be a part of the roadmap or a condition in order to be able to complete the roadmap but it was quickly decided that it should be a part of the roadmap as many companies did not have money to pay for an expensive training and it is a crucial step in moving forward. Having it as part of the roadmap means that companies don't have to send employees to expensive sustainability courses. This way all employees were involved from the beginning as well. In the first version of the roadmap the sustainability analysis was step one and the training step two as the board should be able to answer all the questions in the analysis without getting sustainability training. An argument for this order is that they get a grade in the analysis and if they get an A for all parts of it they are already doing a good job. On the other hand the likelihood of that happening is low and even if it were to happen involving and educating employees and getting a repetition of the meaning of sustainability is good. There could also be questions that the sustainability group can answer better after completing the introduction or training.

The introduction is also an opportunity for the employees and board to talk about the changes that are going to be happening at the company so they have time to prepare and ask questions. The second step sustainability analysis was inspired by a similar tool used by Ernströmgruppen; they only had questions regarding the ecological tool. Instead of adding questions to the same tab two additional tabs

were added to the excel sheet, one for each dimension. The reason for this is that adding questions would result in a very long list of questions, it would probably be overwhelming for a company to answer all questions in one go.

Step five, implementation doesn't include an activity or anything for the company to fill out. The reason it was included in the roadmap anyway is that being aware of employees and giving them time to reflect and ask questions is a crucial part of change work. How they are presented with the coming changes could make or break the change. There might be a way to make this step into an activity in the future but as of now it is left as it is.

Step six and seven mostly contain the same information. The reason behind the two steps is that in step six the point is to come up with activities and write down what needs to be done in order to reach the goal. In step seven the company follows up on how they are going. In step seven they can make changes if needed but hopefully they won't need to add or change activities.

An employee from one of the interviewed companies emphasised the importance of allowing anonymous suggestions to the suggestion board as some people may be scared of suggesting things otherwise. Therefore adding a name to the post-it note is optional, leaving it out means that whoever wrote the note might not get an explanation if it is not chosen. To save paper in the future it could be a good idea to have a digital suggestion board, as long as everyone can see it. The roadmap is in Swedish because it was made for SME in the Gothenburg region. All the companies we interviewed had Swedish as their primary work language so it was natural to make the roadmap in Swedish. In the future it could be translated and adapted to work for more companies.

5.3 Testing

The first step of the roadmap was tested on company 9, an ice cream production company. All their employees from the factory and office were invited to participate and everyone except the sales group attended. The response from the employees was very good and everyone was involved in the discussions. Using the EPA model gave everyone time to reflect for themselves and then they had time to discuss in pairs before discussing in the whole group. When they were asked to answer questions individually they all did. An exit ticket was used in the end to summarise and see what they picked up and the response rate was both high and the answers were mostly correct.

The factory workers sat with each other and the office staff sat together. It still led to interesting discussions but it might have been beneficial to divide the groups as homogenous groups usually don't perform as well as mixed groups. The discussions in the different groups would probably have been more interesting and they could have learnt more from each other.

For larger companies the introduction should probably be done a couple of times with about 20 participants to make sure everyone gets to share their thoughts.
A lot of people came forward and thanked us after the presentation and said that it was very interesting. They liked how involved they were in the presentation and that they had time to discuss and also use some of the tools that are available when it comes to sustainability, for example the website globalamålen.se.

Before the exit ticket the employees were introduced to the suggestion board and got five minutes to brainstorm, during the short five minutes that they had they came up with 10 suggestions that were put up on the board. They also said that it was nice to be able to see the suggestions and hopefully see them get chosen and implemented. Seeing the board everyday will hopefully make more people come up with suggestions. It may also create opportunities for discussions.

If there would have been more time it would have been a good idea to test all parts of the roadmap. Involving the Lejonet och Björnen more would probably also lead to more interesting information that could be used further in creating a better roadmap. The introduction took 1.5 hours, it is only an introduction so in order for the company to be more sustainable they need to keep talking about sustainability and the global goals. The introduction won't change everything but we hope that it will be a start and that at least some employees have become more interested in sustainability.

5.4 Future Recommendations

It is recommended that all seven steps of the roadmap are thoroughly tested and evaluated, due to the time limit it was not possible to test all steps at a company. The tests are done to make sure that all steps are easy to follow and applicable at SME. Testing the roadmap may lead to smaller changes in the individual steps for example more or changed instructions.

The roadmap can be evaluated through interviews and feedback from Lejonet och Björnen and other companies who implement the roadmap in the future. This type of evaluation is qualitative. When the companies complete step seven and return to step two their updated answers should give them a better grade in the sustainability analysis. If their grade has increased it is likely that the roadmap made an impact. Seeing a change in the grade is a quantitative way of testing the roadmap. Qualitative testing of the roadmap can lead to changes that and input that could help develop the roadmap and make it as good as possible. The quantitative tests can be used to see whether the companies do better in one of the three dimensions and how big of a change is made on average at SME.

As of now the companies can weigh their answers, a future recommendation is to have standard values instead and allow companies to answer "N/A or does not apply" instead of lowering the weighting. Allowing them to weigh answers may lead to better results than they should have.

Future recommendations for SME that use the roadmap is to eventually create a digital twin of the production including deliveries to and from the factory. The digital twin will contain information about energy, emissions, chemicals and material use. Changing variables in the digital twin will change the sustainability impact so the company knows what variables to change and in which way. The creation of the digital twin ensures that the company knows their values such as emissions and energy usage for each machine. It also creates a digital space where the order of the machines can be changed, other machines can be implemented and different products can be tested without having to test them in real life. This will save money and resources.

6
Conclusion

The aim of this project was first to find out what SME are doing for sustainability, if they have sustainability plans and goals. Depending on their need a roadmap including steps the companies could follow on their own was to be created.

Interviews with 15 small or medium sized production companies in Gothenburg indicated that a roadmap was needed, a majority of the respondents also commented that they would like one. A few of the companies had a sustainability plan and goals they were working towards. 50% had no sustainability strategy at all and 25% were just getting started. When managers explained their sustainability work as turning off lights, an introduction to sustainable development and what companies can do more became a natural first step of the roadmap.

Based on the results from the interviews and from a literature study a roadmap consisting of seven steps was created. The steps are: Introduction, Sustainability Analysis, Essentiality Table, Goal Setting, Implementing, Goal Activities and lastly Evaluation. Because of the need for more knowledge the first step of the roadmap is an introduction to sustainability, the three dimensions, global goals and circular economy. The roadmap in itself is also explained. All employees are invited to attend the first step. The next step is a sustainability analysis. A finding from the interviews was that the companies were at different levels and needed to focus on different things, this step will help specify where more work needs to be put in for each individual company. The score from step two is then used in step three along with the interests of the employees to create a scatter chart. The topics that end up in the top right of the scatter chart are the ones that employees are most passionate about and the ones that need more work. A couple of these topics are picked and goals regarding them are formed. To make sure the goals are reasonable the SMART model is used by the sustainability group to create 3-5 goals for the company. The goals are implemented at the company and activities are made in order to easier reach the goals. Finally the steps are followed up and evaluated. Once the goals are complete steps 2-7 are repeated.

Sources

Arbetsmiljöverket. (2022). Systematiskt arbetsmiljöarbete, SAM. Arbetsmiljöverket. Retrieved 2022, from https://www.av.se/arbetsmiljoarbete-och-inspektioner/arbeta-med-arbetsmiljon/systematiskt-arbetsmiljoarbete-sam/

Backman, J. (2016). Rapporter och uppsatser. Studentlitteratur. 33

Birgersdotter, L., et al. (2002). Fungerande systematiskt arbetsmiljöarbete i små företag -erfarenheter från 45 små arbetsställen. Retrieved 2022, from https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1551299dswid=5276

Bolagsverket. (2022, 04 25). Delar och bilagor i årsredovisningen. Bolagsverket. Retrieved 05 01, 2022, from https:// bolagsverket.se/foretag/aktiebolag/ arsredovisningforaktiebolag/delarochbilagoriarsredovisningen.761.html

Bryman, A. (2011). Samhällsvetenskapliga metoder (B. Nilsson, Trans.; Third ed.). Liber.

Conzemius, A., O'Neill, J. (2009). The Power of SMART Goals: Using Goals to Improve Student Learning. Solution Tree Press.

CSB. (2022). Index - beräkning. SCB:s företagsregister. Retrieved 2022, from https://www.foretagsregistret.scb.se/Rakna?RakneTyp=RAKNA$_{F}ORETAG$

Dalqvist, A. (2019). SME – fakta och definitioner. Svenskt Näringsliv. Retrieved 2022, from https://www.svensktnaringsliv.se/om$_{o}ss/sme-kommitten/sme-fakta-och-definitioner_{1}$171146.*html*

Delmas, M. A., Cuerel Burbano, V. (2011, October). The Drivers of Greenwashing. California Management Review, 54, 64-87. Sage Journals. Retrieved 2022, from https://journals.sagepub.com/doi/abs/10.1525/cmr.2011.54.1.64?casa$_{t}oken$ = $oUWtGLOVe4UAAAAA:XJ-rnvd0ExTX0HapQBVj-utypOFfD_{m}xoSgJTpICU7qmNzv4PrXixDv-k_{M}qrrOdmfHBsvaTLdrNDA$

Ekologisk hållbar utveckling. (2017). Svenska ESF-rådet. Retrieved April 28, 2022, from https://www.esf.se/att-ansoka/horisontella-principer/ekologisk-hallbar-utveckling/

Elenergi - Bra Miljöval. (2021). Naturskyddsföreningen. Retrieved April 28, 2022, from https://www.bramiljoval.se/omraden/elenergi/

Energieffektiva små och medelstora företag. (2016, February 9). Energimyndigheten. Retrieved May 2, 2022, from https://www.energimyndigheten.se/nrp/

Energikartläggningsstöd till små och medelstora företag. (2020, March 2). Energimyndigheten. Retrieved April 28, 2022, from https://www.energimyndigheten.se/utlysningar/energikartlaggningsstod-till-sma-och-medelstora-foretag/

Ernströmgruppen. (2021). Environmental efforts. Ernströmgruppen. Retrieved 2022, from https://ernstromgruppen.com/en/sustainability/environmental-sustainability-work/

Folkhälsomyndigheten. (2018, October 31). Social hållbarhet - Mötesplats social hållbarhet. Folkhälsomyndigheten. Retrieved January 26, 2022, from https:// www. folkhalsomyndigheten.se/motesplats-social-hallbarhet/social-hallbarhet/

Föreningen Medveten Konsumtion. (2021). Märkningsguider. Medveten konsumtion. Retrieved 2022, from https://medvetenkonsumtion.se/rad-fakta/markning sguide/ FSC. (2019). About us. Forest Stewardship Council. Retrieved 2022, from https://fsc.org/en/about-us

Göteborgs Tekniska College. (2022). Partner | GTC. Göteborgs Tekniska College. Retrieved January 26, 2022, from https://www.goteborgstekniskacollege.se /partner

Hållbarhetscheck. (2022, March 16). Västra Götalandsregionen. Retrieved May 2, 2022, from https://www.vgregion.se/regional-utveckling/verksamhetsomraden /naringsliv/foretagsfinansiering/hallbarhetscheck/

Hållbart företagande i besöksnäringen - verksamt.se. (2022, March 14). Verksamt.se. Retrieved April 28, 2022, from https://www.verksamt.se/driva/besoksnaringen /hallbart-foretagande-i-besoksnaringen

Hattie, J., and Timperley, H. (2007). The Power of Feedback. Review of Educational Research.

Hedenus, F., Persson, M., Sprei, F. (2014). Hållbar utveckling. Historia, definition ingenjörens roll. Retrieved May 3, 2022, from http://hagesjo.se/static/books /H%C3%A5llbar$_u$*tveckling.pdf*

Hiatt, J. M. (2006). ADKAR: A Model for Change in Bussiness, Government and our Community. Prosci. https://books.google.se/books?hl=enlr=id=Te$_c$*HbWv*−*ZgCoi* = *fndpg* = *PA*1*dq* = *adkar*+*change*+*managementots* = 1*siJn*1*p*3*DPsig* = *TubPr*8*rf*5*RdXvUk*$_u$*UtevsH*2*XbEredir*$_e$*sc* = *yv* = *onepageq* = *adkar*%20 *change*%20*managementf* = *false*

Hitta.se. (2022). Företagsinformation | hitta.se. Hitta.se. Retrieved 2022, from https://www.hitta.se/info/bolagsinfo

Human Development Index (HDI) | Human Development Reports. (2020). Human Development Reports. Retrieved April 28, 2022, from https://hdr.undp.org /en/content/human-development-index-hdi

IBM TRIRIGA. (2021). Examples for measuring environmental impact. IBM. Retrieved 2022, from https://www.ibm.com/docs/en/tririga/10.7?topic=impact-examples-measuring-environmental

ISO. (2022). ISO - International Organization for Standardization. Retrieved 2022, from https://www.iso.org/home.html

Kemikaliehantering: Allt du behöver veta. (2021). EcoOnline. Retrieved April 28, 2022, from https://www.ecoonline.se/allt-om-kemikaliehanteringkemikal iehantering-och-skyddsutrustning

Klimatklivet – stöd till klimatinvesteringar - Bidrag. (2022). Naturvårdsverket. Retrieved April 28, 2022, from https://www.naturvardsverket.se/bidrag/klimatklivet/

Laufer, W. F. (2003). Social Accountability and Corporate Greenwashing. Journal of Business Ethics, 43. https://link.springer.com/article/10.1023/A:1022962719299

MacLeod, L. (2012). Making SMART Goals Smarter. PEJ, 68-72. https://web.s.ebscoh ost.com/ehost/pdfviewer/pdfviewer?vid=1sid=681e58cb-335b-462e-9249-388af0485 aa1%40redis

Nyström, C. (2018, October 26). Majoriteten av företagen arbetar med hållbarhet. Tillväxtverket. Retrieved January 26, 2022, from https://tillvaxtverket.se/statistik /vara-undersokningar/resultat-fovven-2017/2018-10-26-majoriteten-av-foretagen-arbetar-med-hallbarhet.html

PEFC International. (2022). Standards implementation - PEFC - Programme for the Endorsement of Forest Certification. PEFC International. Retrieved 2022, from https://www.pefc.org/standards-implementation

Savitz, A. W. (2013). The Triple Bottom Line. Jossey-Bass. Retrieved April, 2022, from https://books.google.se/books?hl=enlr=id=qXlBAQAAQBAJoi=fndpg= PA1dq=pros+of+triple+bottom+line+sustainabilityots=x5oiheU$_O hsig = yqCY CZ1glY HiEBCbWJ8QKFDbdtAredir_e sc = yv = onepageq = pros$%20$of$%20$ triple$%20$bottom$%20$line$%20$sustainabilityf = false$

Slaper, T. F. (2013). The Triple Bottom Line: What Is It and How Does It Work? Retrieved May, 2022, from http://web.mit.edu/afs.new/athena/ course/2/2. 813/www/readings/TripleBottomLine.pdf

Spreitzer, M. (1999). Giving Up Control Without Losing Control. Group Organization Management, 24(2). 1059601199242003

SUSA. (2022). Minskad miljöbelastning och bättre interna rutiner. SUSA | Sustainable standards. Retrieved 2022, from https://www.svenskmiljobas.se/index.html

Svenska FN-förbundet. (2021). Globala målen för hållbar utveckling. Svenska FN-förbundet. Retrieved January 26, 2022, from https://fn.se/globala-malen-for-hallbar-utveckling/

Svensk Handels hållbarhetsundersökning. (2021). Svensk Handel. Retrieved 2022, from Svensk Handels hållbarhetsundersökning

Tonnquist, B. (2020). Projektledning (8th ed.). Sanoma Utbildning.

(Kooperativ lärande, 2016). STRUKTUR: EPA – ENSKILT, PAR, ALLA Retrieved 2022, from https://kooperativt.com/2016/04/27/epa-enskilt-par-alla/ UNDP. (2017). Globala målen. Globala målen – För hållbar utveckling. Retrieved January 26, 2022, from https://www.globalamalen.se/

UNDP. (2017, October 4). Vad betyder hållbar utveckling? Globala målen. Retrieved January 26, 2022, from https://www.globalamalen.se/fragor-och-svar/vad-betyder-hallbar-utveckling

UN. (2008). GENERAL ASSEMBLY MARKS 60 YEARS OF UNIVERSAL HUMAN RIGHTS DECLARATION BY ADOPTING ITS OWN, PLEDGING TO ENHANCE DIALOGUE AMONG PEOPLES Retrieved May 5, 2022, from https://www.un.org/press/en/2008/ga10795.doc.htm

United Nation. (1992). United Nations Conference on Environment Development. (1), 351.

United Nations. (1992). Agenda 21 .:. Sustainable Development Knowledge Platform. Sustainable Development Goals. Retrieved May 3, 2022, from https://sustainabledevelopment.un.org/outcomedocuments/agenda21

Vad är diskriminering? (2021). DO.se. Retrieved April 28, 2022, from https://www.do.se/ diskriminering/vad-ar-diskriminering

Wilson, J. (2016). Struktur: EPA - enskilt, par, alla - Kooperativt lärande. Kooperativt lärande -. Retrieved 2022, from https://kooperativt.com/2016/04/27/epa-

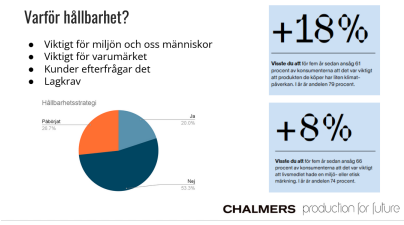
enskilt-par-alla/

A
Complete Steps of Roadmap

A.1 Step 1: Introduction

Presentation av oss- Taghi Moradi och Matilda Hurtig. Under våren 2022 intervjuade vi 15 företag och läset på om hållbar utveckling, förändringsarbete, certifieringar och mycket mer som har med hållbarhetsarbete på företag att göra. Detta gjorde under vårt examensarbete på Chalmers som en del av Production for Future. Våra handledare Johan Bengtsson - GTC och Roland Örtengren - Chalmers har varit overderliga och fantastiska under våren. De har hjälpt till med allt möjligt och alltid kommit med positiva hejarrop och konstruktiv feedback.

TACK för att ni ger oss av er tid! För att vi får vara här och prata om hållbar utveckling o

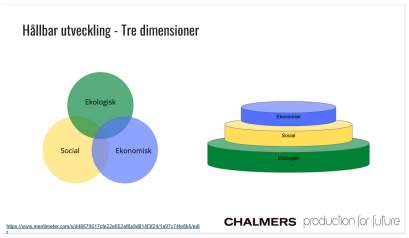


Hållbarhetsarbete är i första hand viktigt för oss människor och planeten, vi måste vara rädda om de resurser som finns. Det är viktigt för företag och deras varumärken, 79% av konsumenter tycker att det är viktigt att produkterna de köver har liten miljöpåverkan. Fler och fler kunder efterfrågar hållbarhet och det tillkommer nya hållbarhetslagar. Exempelvis i år har det kommit lagar om engångsplast. ca 50% av de intervjuade företagen saknar hållbarhetsstrategi. https://www.svenskhandel.se/globalassets/dokument/aktuellt-och-opinion/rapporter-och-foldrar/hallbar-handel/svensk-handels-hallbarhetsundersokning-2020-21.pdf

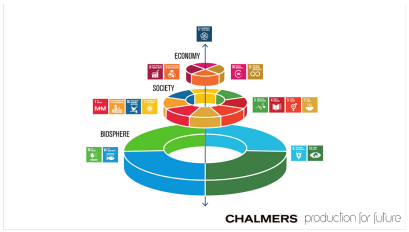
Innan filmen spelar ställs frågan om anställda tänker göra detta i sommar? Avlsuta med handuppräckning, troligtvis räcker ingen upp handen. Hur hade ni känt om denna uppmaning sändes på TV? hade känst konstigt troligtvis. Sändes 1964, inte så längesen.. så vad gör vi idag som vi kommer undra över i framtiden? https://www.youtube.com/watch?v=t03saJVFkv4&ab_channel=H%C3%A5llSverigeRent

Agendan presenteras

Definitionen av hållbar utveckling. Det betyder inte sluta handla, sluta göra allt som är kul utan var medveten om konsekvenserna av dina handlingar och prioritera. Fatta välgrundade beslut

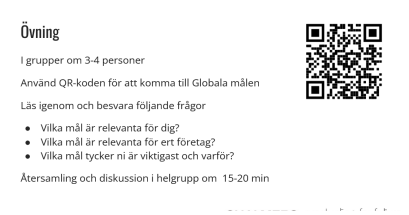


https://www.mentimeter.com/s/d48670617cfe22e052af8a9d814f3f24/1a97c74fe8b5/edit Anställda får själva ange vad de tror att de thre dimensionerna innebär i en menti, deras svar diskuteras och ytterligare delar av dimensionerna läggs till vid behov.



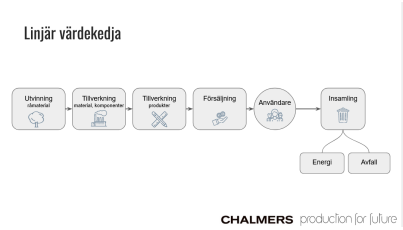
Dimensionerna kopplas ihop med de globala målen och representeras i bilden. Vilka mål som tillhör vilken dimension förklaras korfattat.

Tydligare bild av de globala målen

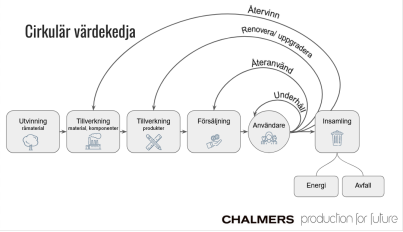


Övning i grupper, om de anställda sitter med de de arbetar med kan det vara en bra ide att mixa grupperna.

Diskussion i helgrupp.

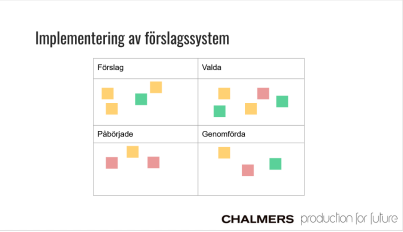


Såhär har värdekedjan sett ut mycket förr, går mer och mer mot en cirkulär värdekedja. Den linjära bidrar till soptippar och utvinning av nytt råmaterial (onödigt).



Såhär vill vi istället att det ska se ut. DÄr vi återanvämder, återvinner, renoverar, underhåller.. Cirkulärt i flera steg.

Prata igenom stegen i Roadmapen. Vi genomför steg 1 just nu, ni kommer vara delaktiga i steg 3 också och sen hjälps alla åt med genomförandet. Visa stegen i excelfilen.



Gå igenom förslagssystem. Eventuella frågor? Ge anställda 5-10 att brainstorma förslag att sätta upp på tavlan.

Presentationen sammanfattas

Avslutar med exit ticket i form av en quiz på Kahoot! exempel på frågor: Hur många globala mål finnsd et? Vilka är de tre dimensionerna? Vad kan du göra för att bidra till hållbar utveckling? Vilket mål är viktigast (kuggfråga, alla är lika viktiga). Såklart avslutas tävlingen med en prisutdelning.

A.2 Step 2: Sustainability Analysis

A.2.1 Environmental Dimension

Datum:

Instruktioner: Besvara frågorna genom att välja ett alternativ i B kolumnen. Kolumn C ger utrymme för kommentarer , tänk på att vara tydlig så det lätt går att förstå när ni tittar tillbaka på dokumentet.

Frågor	Svar	Kommentarer	Poäng	3=Viktigast 2=Viktigt 1=Mindre Viktigt Viktning	Resultat	Möjliga poäng	Resultat per kategori [%]	Betyg per kategori
Hållbarhetsstruktur					130	130	100%	A
1. Har företaget en hållbarhetspolicy eller liknande?	yes		10	2	20			
2. Har företaget årliga utvärderingar av sina hållbarhetsmål?	yes		10	2	20			
3. Har företaget någon hållbarhetscertifiering eller diplomering? (tex. ISO 14001, Svensk miljöbas) Om ja ange vilken som kommentar	yes		10	2	20			
4. Finns hållbarhetsaspekten med i företagets övergripandestrategi eller scorecard?	yes		10	2	20			
5. Utvärderar ledningen företagets hållbarhetspåverkan kontinuerligt och tar fram aktiviteter för att minska negativ påverkan?	yes		10	2	20			
6. Har företaget en metod för att lyfta och arbeta med hållbarhetsideer från de anställda?	yes		10	2	20			
7. I vilken utsträckning marknadsförs era produkter som miljövänliga?	75-100%		10	1	10			
Miljölagar och dylikt					65	80	81%	B
8. Är företaget skyldigt att inneha något miljötillstånd eller har skyldighet att anmäla sin verksamhet till miljömyndigheterna? Om ja, skriv varför i kommentarsrutan.	no		10	2	20			
9. Har det förekommit några brister när det kommer till miljötillstånd eller föreskrifter det senaste året? Om ja, förklara i rutan för kommentarer.	no		10	3	30			
10. Bidrar produktionen till buller, lukt eller annat störmoment (tex. nedskräpning, vatten eller likande utanför byggnaden) i närområdet?	partly		5	2	10			
11. Har företaget fått några klagomål kring ljud, lukt eller andra störmoment under det senaste året?	partly		5	1	5			
Material och kemikalier					35	100	35%	F
12. Har organisationen koll på farliga/giftiga kemikalier eller produkter som används under produktionen?	partly		5	2	10			
13. Finns materialdeklarationen för samtliga produkter?	partly		5	2	10			
14. Hur stor andel av omsättningen [%] omfattar produkter med komponennter som kommer fasas ut inom 5 år på grund av miljölagar eller påtryckningar från kunder eller andra intressenter?	25-50%		2	3	6			
15. Letar företaget efter andra alternativ till de komponenter som nämndes i föregående fråga?	no		2	2	4			
16. Arbetar företaget aktivt för att minska material, kemikalier och energianvändning?	partly		5	1	5			
Avfall					18	60	30%	F
17. Armetar företaget med att minska avfall som genereras under produktionen? Om ja, förklara hur	partly		5	2	10			
18. Används licensierade avfallsentreprenörer?	no		2	3	6			
19. Hur mycket återanvänds eller återvinns av er?	25-50%		2	1	2			
Transporter					29	100	29%	F
20. Har era valda leverantörer, transport och partners ett aktivt miljöarbete?	no		2	3	6			
21. Vilka leveransmetoder använder ni främst?	flight		2	2	4			
22. Vilken leveransmetod används för att få material från leverantörer?	flight		2	2	4			
23. Hur stor andel av era företagsbilar är elektriska	50-75%		5	3	15			

Energi				10	50	20%	F
24. Vilken slags energi används till kontor, produktion, lager? Välj de alternativ som passar bäst.	No environmental aspects considered	2	2	4			
25. Är byggnaderna certifierade eller på annat sätt miljöklassade? tex. BREAM, LEED, Miljöbyggnad. Om ja ange vilken	no	2	1	2			
26. Arbetar nu aktivt för att minska energianvändningen i byggnaderna? Om ja, beskriv hur	no	2	2	4			
Leverantörer				10	30	33%	F
27. När ni väljer en ny leverantör hur mycket väger ni in deras miljöarbet?	50-75%	5	2	10			
28. I vilken utsträckning har er största leverantör milöarbete? (Bortse från transporter)	don't know	0	1	0			
Företagets miljöarbete [%]						**47%**	
					Betyg:	**E**	
						Gradering: A-F, A= Bäst	

Summary			
Miljöarbete	**100%**	0	0.00
Miljölagar och dylikt	**81%**	0.19	1.88
Material och kemikalier	**35%**	0.65	6.50
Avfall	**30%**	0.70	7.00
Transport	**29%**	0.71	7.10
Energi	**20%**	0.80	8.00
Leverantörer	**33%**	0.67	6.67

A.2.2 Social Dimension

Datum:								
Instruktioner: Besvara frågorna genom att välja ett alternativ i B kolumnen. Kolumn C ger utrymme för kommentarer , tänk på att vara tydlig så det lätt går att förstå när ni tittar tillbaka på dokumentet.								
Frågor	**Svar**	**Kommentarer**	**Poäng**	**3=Viktigast 2=Viktigt 1=Mindre Viktigt Viktning**	**Resultat**	**Möjliga poäng**	**Resultat per kategori [%]**	**Betyg per kategori**
Arbetsförhållanden					86	160	54%	E
1. Anställda erbjuds årliga hälsokontroller	partly		5	2	10			
2. Anställda får friskvårdsbidrag	no		2	2	4			
3. Anställda har en bra balans mellan arbete och privatliv	no		2	2	4			
4. Företaget erbjuder kollektivavtal	yes		10	2	20			
5. Anställda har rättvisa arbetstider (normalt 8 timmar, annars erbjuds övertidsersättning)	yes		10	2	20			
6. Anställdas säkerhet är en prioritet (>4 anställda, Skyddsombud)	yes		10	2	20			
7. Nyanställda erbjuds introduktionskurs	no		2	2	4			
8. Anställda har möjlighet till fortbildning	no		2	2	4			
Ledarskap					80	80	100%	A
9. Väljs ledare/chefer på ett rättvisst sätt	yes		10	2	20			
10. Har anställda möjlighet att anonymt rapportera incidenter?	yes		10	2	20			
11. Har företaget en handlingsplan för incidenter som diskriminering?	yes		10	2	20			
14. Är könsfördelningen jämn i ledningsgruppen? (Beslutsfattare)	yes		10	2	20			
Jämlikhet och jämställdhet					100	100	100%	A
15. Alla på företaget är väl medvetna om de 7 diskrimineringsgrunderna och behandlar alla människor med respekt därefter	yes		10	2	20			
16. Företagets lokaler är handikapanpassad	yes		10	2	20			
17. Blir alla behandlade lika oavsett kön eller könsöverskridande identitet?	yes		10	2	20			
18. Blir all behandlade lika oavsett religion eller trosuppfattning?	yes		10	2	20			
19. Är ditt företag heteronormativt? (Utgår från att alla är hetrosexuella)	no		10	2	20			
Produktion					80	80	100%	A
20. Finns säkerhetsutrustning tillgänglig? (handskar, skyddsglasögon, masker etc.)	yes		10	2	20			
21. Jobbar företaget förebyggande för att förhindra skador på arbetsplatsen	yes		10	2	20			
22. Får nyanställda säkerhetsgenomgång/rundvandring?	yes		10	2	20			
23. Det finns hjälpmedel för att förebygga skador för de som behöver? (Stegar eller pallar att nå till exempel)	yes		10	2	20			
Anställningsvillkor					60	60	100%	A
24. Företaget har tydliga anställningsavtal och god anställningssed	yes		10	2	20			
25. Företaget har ett effektivt skydd av anställdas personuppgifter	yes		10	2	20			
26. Är lönerna i enlighet med lönestatistiken?	yes		10	2	20			

Välbefinnande					59	90	66%	C
27. Finns det rutiner för att avlasta personal som upplever stress?	yes		10	2	12			
28. Lämnar personalen arbetsplatsen med samma eller bättre humör än de anlände?	yes		10	2	12			
29. Har personalen gemensamma raster?	yes		10	1	11			
30. Finns det tydliga rutiner för hantering av psykisk ohälsa på arbetsplatsen? tex. kontakt med psykolog eller vårdcentral	yes		10	2	12			
31. Finns det tydliga rutiner för sjukskrivning på arbetsplatsen?	yes		10	2	12			
Konsumenter					60	60	100%	A
32. Konsumenternas personliga information och integritet skyddas	yes		10	2	20			
33. Konsumenter kan lätt hitta information om produkternas miljöpåverkan	yes		10	2	20			
34. Konsumenter kan lätt hitta information om social påverkan från produktionen	yes		10	2	20			
Företagets sociala arbete [%]							**92%**	
						Betyg:	**A**	
							Gradering: A-F, A= Bäst	

Summary			
Arbetsförhållanden	**54%**	0.46	4.625
Ledarskap	**100%**	0.00	0
Jämlikhet och Jämställdhet	**100%**	0.00	0
Produktion	**100%**	0.00	0
Anställningsvillkor	**100%**	0.00	0
Välbefinnande	**66%**	0.34	3.44
Konsumenter	**100%**	0.00	0

A.2.3 Economic Dimension

Datum:								
Frågor	Svar	Kommentarer	Poäng	3=Viktigast 2=Viktigt 1=Mindre Viktigt	Resultat (poäng)	Max poäng	Resultat per kategori [%]	Betyg
Ekonomi					60	100	60%	D
1. Har företaget rimlig prissättning på sina produkter?	don't know		0	2	0			
2. Har företaget goda betalningsrutiner och betalar leverntörerna i tid?	don't know		0	2	0			
3. Säkerställer företaget att alla anställa (även hos leverantörer) får en minimilön eller mer?	N/A		10	2	20			
4. Har företaget en korrekt hantering av skatter?	N/A		10	2	20			
5. Arbetar företaget förebyggande för att förhindra korruption och mutor?	N/A		10	2	20			
Lokalt					70	70	100%	A
6. Finns det rutiner för att säkerställa att alla investeringar är etiska?	yes		10	2	20			
7. Erbjuder företaget praktik eller lärlingsutbildning?	yes		10	1	10			
8. Skapar företaget välstånd och inkomstmöjligheter för människor i närområdet?	yes		10	2	20			
9. Bidrar företaget till en sund konkurrenssituation?	yes		10	2	20			
Internt					100	100	100%	A
10. Har företaget en tillväxtplan?	yes		10	2	20			
11. Använder företaget Fairtrade?	yes		10	2	20			
12. Förekommer korruption/mutor på företaget? (ex. kontakter kan leda till sommarjobb eller högre lön)	no		10	2	20			
13. Påverkar personliga förutsättningar löner och förmåner inom företaget?	no		10	2	20			
14. Har företaget tydliga och goda förutsättningar för anställda, konsulter och leverantörer?	yes		10	2	20			
Cirkulär ekonomi					120	120	100%	A
15. Kan produkterna återvinnas?	yes		10	2	20			
16. Sker ekonomisk tillväxt på bekostand av social eller ekologisk hållbarhet?	no		10	2	20			
17. Kan produkterna användas i flera led?	yes		10	2	20			
18. Återanväder företaget material?	yes		10	2	20			
19. Kan produkterna repareras/uppgraderas?	yes		10	2	20			
20. Kan det som tillverkas enkelt plockas isär för att återvinnas?	yes		10	2	20			
Företagets ekonomiska arbete [%]							80%	
						Betyg:	B	
							Gradering: A-F, A= Bäst	

Sammanfattning			
Ekonomi	**60%**	0.40	4.00
Företaget	**100%**	0.00	0.00
Internt	**100%**	0.00	0.00
Cirkulär ekonomi	**100%**	0.00	0.00

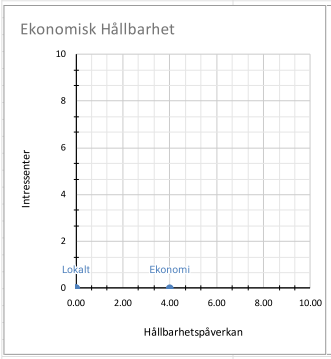
A.3 Step 3: Essentiality Table

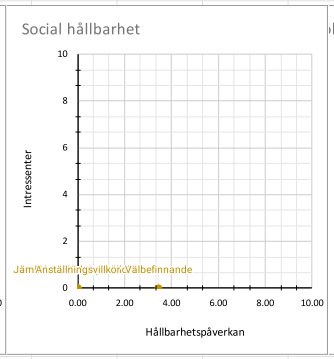
I detta steget vägs intressenternas intressen in för att ta fram de viktigaste målen att börja med. Om data/information finns från intressenter som kunder, närområde etc. väg in deras intressen också. Annars utgå ifrån de anställdas intressen, dela in de anställda i grupper om 3-4 där de får chansen att diskutera och prata med varandra. Avsluta med att alla anställda får göra sin röst hörd. Poängsätt kolumn C utifrån vad intressenterna viktar som högst (från 0-10 där 0 är minst viktigt och 10 viktigast). De områden som hamnar högst upp till höger är de som företaget borde börja arbeta mot. Finns det något som de anställda tycker saknas? Diskutera och lägg eventuellt till en rubrik.

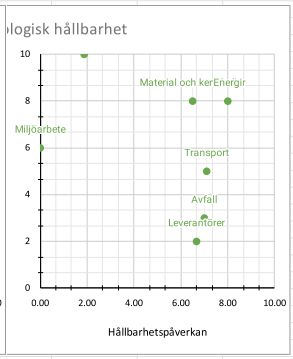
Ekologisk	Hållbarhets påverkan	Intressenter
Miljöarbete	0.00	6
Miljölagar och dylikt	1.88	10
Material och kemikalier	6.50	8
Avfall	7.00	3
Transport	7.10	5
Energi	8.00	8
Leverantörer	6.67	2

Social	Hållbarhets påverkan	Intressenter
Arbetsförhållanden	4.63	0
Ledarskap	0.00	0
Jämlikhet och Jämställdhet	0.00	0
Produktion	0.00	0
Anställningsvillkor	0.00	0
Välbefinnande	3.44	0
Konsumenter	0.00	0

Ekonomisk	Hållbarhets påverkan	Intressenter
Ekonomi	4.00	0
Lokalt	0.00	0
Internt	0.00	0
Cirkulär ekonomi	0.00	0







Vilka områden ska ni utgå ifrån?

Förslag från anställda på mål inom valda områden (hellre för många än för få):

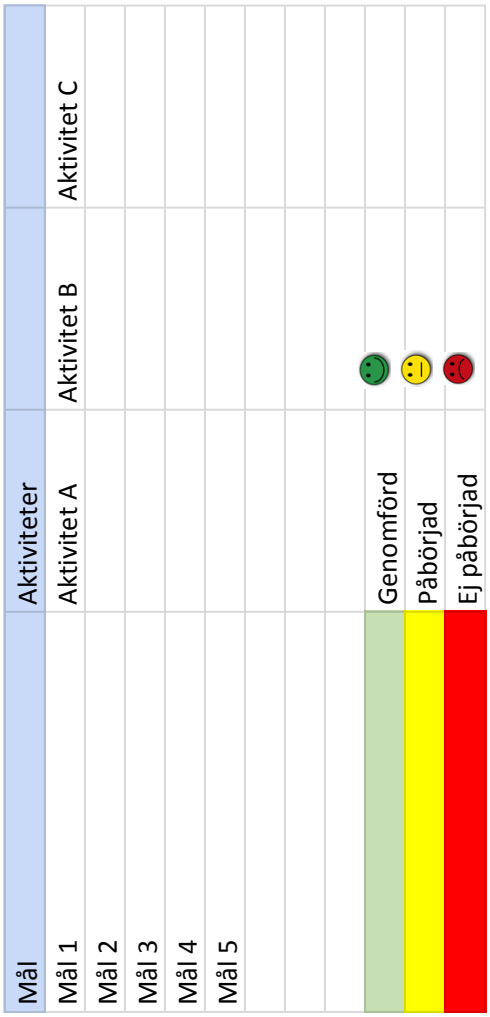
A.4 Step 4: Goal Setting

SMART - Målformulering				
Genom att använda SMART modellen är sannolikheten att uppnå målen större. De blir tydligare och de involverade vet vad de behöver göra. Följ denna mall för att formulera SMARTa mål.				
Börja med att kort formulera målet som det ser ut just nu:				
Fyll i följande tabell:				
S - Specifikt	Vad är det som skall uppnås? Vilka behöver vara involverade? När ska det genomföras? Varför är detta ett mål?			
M - Mätbart	Hur går det att mäta om målet har uppnåtts? Eller hur väl de uppnåtts?			
A - Attainable (Nåbart)	Går målet att nå? Vilka steg tas för att nå målet? Finns tillräcklig kunskap för att uppnå målet? Om inte, hur får man tag på den?			
R - Relevant	Varför sätter vi detta målet nu? Är det logiskt? Stämmer det med vår business plan?			
T - Tidssatt	Räcker den avsatta tiden för att uppnå målet?			
Formulera nu om målet och se till att få med svaren från tabellen ovan, det kan hända att ni behöver dela upp målet i delmål, fyll i ytterligare en mall isåfall.				
Identifiera eventuella risker med implementeringen och hitta åtgärder för dem.				
Risk	Sannolikhet (1-10)	Konsekvens (1-10)	Risktal (Sannolikhet*konsekvens)	Åtgärd

A.5 Step 5: Implementation

I detta steget implementeras arbetet för att genomföra målen. De persenteras för de anställda och läggs upp på ev. intranät, tavlor etc.	
A - Awareness	Presentera målen. Utgå ifrån matrisen och målen som anställda presenterade. Förklara hur det är gynnsamnt. Ge anställda tid och utrymme att ställa frågor och komma med feedback.
D - Desire	Involvera anställda, förklara fördelarna med förändringarna. Visa att ni tänkt på eventuella risker och vad ni har tagit fram för åtgärder. Involvera och fördela ansvar.
K - Knowledge	Presenterar handlingsplanen och ge anställda verktyg för att arbeta mot målet.
A - Ability	Skapa övningar och gör det lätt för anställda att anpassa sig efter de nya arbetssätten/förändringarna. Justera processen vid behov. Börja smått och utöka efterhand.
R - Reinforcement	Ge positiv feedback, uppmuntra till förändringen.

A.6 Step 6: Goal Activities



A.7 Step 7: Evaluation

Instruktion: när ni är klara med målformulering fyller dessa i kolumn A Bestäm intervallen för uppföljning. Återkom till mallen efter den utsatta tiden för att kontrollera om målet är uppnått och göra eventuella justeringar. Är målet uppnått? Om inte vad finns kvar att göra?							
Mål:							
Mål 1 (Var vi vil	Tidsplan	Ansvarig	Status (Var är vi nu)	Åtgärd (hur ska vi göra?)	Uppdaterad tidsplan	Anteckningar	
Aktivitet A							
Aktivitet B							
Aktivitet C							
Aktivitet D							
Aktivitet E							
Mål:							
Mål 2 (Var vi vil	Tidsplan	Ansvarig	Status (Var är vi nu)	Åtgärd (hur ska vi göra?)	Uppdaterad tidsplan	Anteckningar	
Aktivitet A							
Aktivitet B							
Aktivitet C							
Aktivitet D							
Aktivitet E							
Mål:							
Mål 3 (var vi vill	Tidsplan	Ansvarig	Status (Var är vi nu)	Åtgärd (hur ska vi göra?)	Uppdaterad tidsplan	Anteckningar	
Aktivitet A							
Aktivitet B							
Aktivitet C							
Aktivitet D							
Aktivitet E							
Mål:							
Mål 4 (var vi vill	Tidsplan	Ansvarig	Status (Var är vi nu)	Åtgärd (hur ska vi göra?)	Uppdaterad tidsplan	Anteckningar	
Aktivitet A							
Aktivitet B							
Aktivitet C							
Aktivitet D							
Aktivitet E							
Mål:							
Mål 5 (var vi vill	Tidsplan	Ansvarig	Status (Var är vi nu)	Åtgärd (hur ska vi göra?)	Uppdaterad tidsplan	Anteckningar	
Aktivitet A							
Aktivitet B							
Aktivitet C							
Aktivitet D							
Aktivitet E							

B

Feedback from Lejonet och Björnen

Uppfyllde introduktionen era förväntningar?
Ja det gjorde det verkligen, ni fick med er gruppen från första stund och höll deras intresse fram till slutet.

Var det något ni saknade?
Nej det var inget som vi direkt saknade ifrån er.

Vad var positivt?
Ni var naturliga och positiva och det smittade av sig i gruppen, ni hade byggt upp det på ett enkelt och övergripande sätt.
Samt att tävlings momenten alltid är bra för att få med sig personer.

Vad hade kunnat förbättrats?
Jag har ingen förbättrings kommentar till er just nu tyvärr, men kommer jag på något så hör jag av mig.

Övrigt?
Vi vill passa på och tacka och önskar er båda ett stort lycka till med detta arbete och era kommande uppdrag och tjänster i framtiden, vem vet våra vägar kanske korsas igen.

Med vänliga hälsningar
[redacted]
Glassmästare

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