Environmental Management in a Selected Company

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Epstein, Marc J., and Adriana Rejc Buhovac. 2014. *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental, and Economic Impacts*. 2nd ed. Sheffield: Greenleaf.
Modak, Prasad. 2017. *Environmental Management towards Sustainability*. Boca Raton, FL: CRC Press.
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ABSTRAKT

Tato bakalářská práce se zabývá korporátním environmentálním managementem. Cílem práce je zhodnotit environmentální management v dané společnosti a poukázat na to, jak jeho implementace ovlivnila danou organizaci. Teoretická část práce vysvětluje důležitost udržitelného rozvoje a popisuje environmentální manažerské systémy a požadavky ISO 14001. Pozornost je věnována také zelenému marketingu a brandingu. Analytická část popisuje systém environmentálního managementu konkrétního vybraného podniku. Tato část obsahuje popis EMS společnosti na globální úrovni a poskytuje SWOT analýzu jejích operací ve vztahu s EHS oblasti. Následující část obsahuje analýzu nákladů a přínosů zavedených environmentálních programů v pobočce vybrané organizace na Slovensku.

Kľúčové slová: společnost, udržitelnost, environmentální management, environmentální politika, ISO 14001

ABSTRACT

This bachelor's thesis deals with corporate environmental management. The aim of this thesis is to evaluate the environmental management in the selected company and to identify how its implementation affected the given organization. The theoretical part outlines the importance of sustainable development, describes environmental management systems and the requirements of ISO 14001. The thesis pays attention to green marketing and branding as well. The analytical part analyses the environmental management system of a specific selected company. This part contains description of the company's EMS on a global level and provides a SWOT analysis of its operations relating to EHS department. The following part contains analysis of costs and benefits of integrated environmental programs in the selected organization's branch in Slovakia.

Keywords: company, sustainability, environmental management, environmental policy, ISO 14001

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CONTENTS

INTRODUCTION

Reduction of environmental pollution is essential for our global community to sustainably evolve. In the business world, environmental problems are increasingly coming to the fore impacting organizations in terms of competition, innovation, and sustainable development. As a consequence, environmental management has found its way to the spotlight. The primary objective of this thesis is to introduce environmental management system, highlight the benefits of its implementation and analyze its effects on an organization. Firstly, the topic of sustainable development is briefly introduced. This chapter emphasizes the importance of having sustainable strategies in place, and how sustainable practices contribute to the company's overall performance. The next part deals with environmental management system (EMS) in more detail and provides a description of an environmental company policy and its tools, which differentiate in terms of obligation. We also look at two different varieties the environmental management system can be conducted in. These are characterized as EMAS and ISO 14001 standard. The selected company which was chosen as the main subject for this thesis conforms to ISO 14001 standard, therefore the requirements of this standard are described more specifically. The evidence proves that a certified EMS has positively influenced the company in financial, competitive, and organizational areas. The following chapter provides information about green corporate branding of organizations supporting their trustworthiness, credibility, and prosperity on the market. The second part of the thesis begins with a characterization of the selected company and information about its customers, suppliers, and other important stakeholders. Next, we discuss the stronger and weaker areas of the company on a global level in a SWOT analysis, which also addresses its weaknesses and provides suggestions for growth and improvement. Integrated environmental programs in a Slovakia branch of the company are the next part's main focus. This analysis provides an overview of these programs, their description, reasoning, financial and other benefits produced from their implementation. Afterwards, the final part informs the reader about various certifications and awards the organization has acquired, which prove the company's commitment to reducing its carbon footprint. The corporation has been introduced as XY for protective purposes.

I. THEORY

1 SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT

The conflict between our Earth and our economy is visible in our day-to-day life. We can see in daily news reports how much we compromise our Earth's natural ecosystem - rising sea levels, rising carbon dioxide levels, acidic rains, destructive storms, and high temperatures. Over the last 100 years, the economy has prospered, and civilization expanded like never before. Our current market relies upon exploitation of natural resources and burning cheap fossil fuels in order to provide all the resources that we are dependent on. This disrupts climate balance and greatly contributes to melting ice caps, polluting fresh water, causing respiratory illnesses from polluted air. There are believers that this dangerous trajectory of development can be refuted, but this window of opportunity will not be opened forever. (Brady 2005, 26). What the world needs is the fundamental shift in our thinking and a change in the relationship of humans towards our Earth. All the world's problems cannot be solved once, but individually, step by step, the world has enough resources to improve the health and livelihood of low-income people coming from the poorest areas. With the rising population, this journey for reaching sustainability will be ever more difficult and challenging. (Brady 2005, 27)

Our Common Future, commonly known as the Brundtland report, was published in 1987 by the World Commission on Environment and Development (WCED). The report established guiding principles in area of sustainability and defined sustainable development as: "Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (World Commission on Environment and Development, 1987, 41). However, the concept of sustainability is a wide spectrum where many interpretations are possible. The fundamental basis of this notion is in the premise that environmental objectives need to be integrated into everyday operations of businesses, governments and local communities. (Schaltegger 2003, 22) Sustainability has emerged into a proactive strategy for businesses. The agenda of sustainability and corporate responsibility determines which businesses will fail and which will succeed in the following decades. If sustainability is implemented properly, it can create financial value for the company. Costs can be lowered due to product improvement, more efficient utilization of resources and through a decrease in regulatory fines. Revenues can be increased because of the improved corporate reputation. Corporations don't introduce sustainability only because of the governmental obligations, but also because of their social and moral responsibilities. But metrics for goals in social, environmental and innovation performance are uncertain and

difficult to predict, therefore harder to introduce. (Epstein and Buhovac 2014, 4-6) Admittedly, many companies still undertake sustainability actions only to cope with the regulations, but there is a strong link between sustainability and corporate value. Epstein and Buhovac (2014) list these multiple payoffs stemming from introducing sustainability:

- Bottom-line economic savings
- Employee satisfaction
- Waste minimization
- Increased market share

Implementation of sustainability processes is no easy task, but our technology progression has never been more evolved than now. Corporations worldwide are committed to protect the environment, drive efficiency throughout their operations to reduce green-house emissions and are carrying out responsible remediation projects to create more sustainable products.

1.1 Striving for a sustainable approach

Sustainable development is an integration of three important areas – economic, social, and environmental groups. These disciplines can help us achieve our sustainable goals efficiently (Schaltegger 2003, 20). The process of sustainability starts with developing a suitable strategy. According to Schaltegger (2003), we distinguish these three main strategies.

- Strategy of efficiency
- Strategy of sufficiency
- Strategy of consistency

Through these three strategies, the value of a business can be increased. Strategy of efficiency aims to reduce emissions, material, and energy consumption through technical, organisational, and marketing innovations. This strategy is also referred to as eco-efficiency, which calls for producing the same or more amounts with less resources. Strategies of sufficiency are focused on reducing environmental damage by placing importance on durability and repairability of the products and focuses less on material values and how are things produced. The main idea behind this strategy is to figure out a way how we can satisfy our desire for new needs while living in a world with finite natural resources. Strategy of consistency strives for reusing the employed resources for creation of a new, useful product. This is also known as upcycling, which keeps resource use and emissions as low as possible. (Schaltegger 2003) The chosen sustainable strategy should mirror the company's values and goals. A suitable strategy should integrate social, economic, and environmental issues

together, as they become part of day-to-day decision making. (Epstein and Buhovac 2014, 56) In case of global corporations, companies are striving for a consistent global sustainable strategy, meaning the same principles are applied worldwide. But on the contrary, a locally adaptive strategy customs their corporate practices to various country cultures and market conditions. Global organizations therefore struggle with achieving a balance between the worldwide sustainability message and compliance with local regulations, and competitive conditions as well, because they diversify across different countries. (Epstein and Buhovac 2014, 57) Consequently, managers make decisions based on internal and external factors. Epstein and Buhovac (2014) mention following internal factors:

- Corporate culture
- Competitive positioning
- Sustainability performance

Corporate culture revolves around the autonomy of subsidiaries. Headquarters have the option of either delegating its rules and goals, or the subsidiaries maintain a high level of autonomy – their actions correspond with local standards. From the view of competitive positioning, the company can either focus on differentiation or cost-efficiency. A subsidiary trying to lower operational costs would tend to follow local adaptive strategy. Sustainable performance also depends on technology the organization uses. Facilities with older technological machines usually adopt local standards. In multinational companies, where risk is more probable, the chances of following a global sustainable standard are higher.
Secondly, the external factors are as follows:

- Regulations
- Market factors
- Geographic factors

In case of vastly different governmental regulations, local strategy would be advisable. But when a global strategy in other international organizations worldwide have been accepted, it is better to opt for the global standard as well. Concerning the market factors, international companies have now advanced to such a level that they choose to apply the same sustainable standards in every country. But variations in different cultures tend to create difficulties. In that case, the company is better off to assimilate to local standards. Lastly, various geographical locations, climate and temperature may alter the sustainable goals. For this reason, choosing a local sustainability standard puts the firm in a more advantageous position.

2 ENVIRONMENTAL MANAGEMENT SYSTEMS

Primary goal of every organization is accumulation of profit and expansion of the business, but nowadays in more and more cases, a company's survival rests on the success of environmental policy and strategies introduced inside the firm. Price competitiveness and business performance are very much enhanced, if the firm has a detailed, thought out, environmental policy put into place. Current forces of the market are pressuring companies to improve their products to a more environmentally compatible services, as well as still maintaining the same excellence in quality, performance, and price. Environmental management system can only work if it is implemented and put into place by the top management. Only top-level leadership can provide an adequate oversight of an environmental policy. The question must be asked "What is the role of our EMS?"

According to Antweiler, environmental management system is „a part of overall management systems in a company which consist of organizational structure, planning, activities, and practices leading to achievement and maintenance of environmental policy." (Antweiler 2014, 181)

Environmental management style can vary according to the company's culture, strengths, and weaknesses of the organization. In our day and age, for every company, being 'green' is in the foreground. However, the question of being green concerns some companies more than others, based on the industry they serve in. First and foremost, companies in the heavy engineering industry and resource extraction are largely exposed to environmental risks. Heavy industry will play an increasingly important role in the 21st century as the population expands, and it's very likely to become the target of environmental regulations. Even with all the necessary safety precautions and regulations taken, no system is foolproof and the risk of a chemical leakage or an oil spill is very high, which can result in a major environmental catastrophe concerning not just humans, but animals and all ecosystems as well. Facing tighter regulatory requirements may impact large companies with high brand exposure - non-compliance can cause brand damage and destruction of a sincere reputation. Apart from the concerns of the product's environmental damage, there is an issue of a product's healthiness. Even if the company is out of brand exposure, it is very important how the company is perceived through the eyes of the consumers, as well as the labor market. Companies that draw attention away from environmentally unfriendly business practices may be viewed as 'dirty', and therefore may be unable to attract skillful workers. This can be a specific problem when firms are investing a lot of resources into R&D, where workers with high expertise are

more aware of these concerns than other potential hires. Additionally, a company's reputation is a sensitive matter. If a company establishes a negative record, it may be very difficult to maintain its role and position on the market. The disadvantages resulting from negative green image of corporations are more discussed in the sixth chapter. Many businesses try to balance the negative media coverage by increasing their investments into corporate social responsibility, which positively, can lead to a higher environmental performance. (Antweiler 2014, 16-17) The key idea behind all these perceived disadvantages is to transform them into potential advantages. Thanks to these environmental challenges, through a well-established environmental management system, firms can realize these issues as strategic opportunities to achieve leadership, seize new sectors of the market and rack up competition.

However, a well-established environmental management system may satisfy environmental obligations, but it is not the only essential component in achieving leadership in sustainability performance. There are other actions, which an organization should work towards. Epstein and Buhovac (2014) introduce internal and external courses of action. Internal actions are applied within the company, such as benefits programs motivating the employees to think ecologically, employee volunteer programs, plant certifications, and training of employees. Training of employees will strengthen their capabilities in terms of sustainability, which can later be integrated to the organization. On the other hand, externally focused actions respond to the outside market forces and to the stakeholder's concerns. They take form of various community programs designed and funded by the company. Public reporting of sustainability performance is also regarded as a highly valued external action because it promotes the company's commitment to new investors. Nonetheless, there are many other proactive sustainability initiatives leading to success, such as redesign of products, ethical behavior, workforce diversity and investments in cleaner technologies (Epstein and Buhovac 2014, 36).

3 ENVIRONMENTAL COMPANY POLICY

Currently, environmental issues are affecting all companies, and pose all kinds of risks, pressures and even opportunities. Every response of an organization is specific to the nature of the situation, but it's a duty of the company's management to have a response strategy already in place. According to Brady (2005), there are two kinds of impacts that environmental issues have on an organization:

- Direct Impacts
- Indirect Impacts

As direct impacts are considered climate changes, warmer temperature, droughts, sea level rise or intensified air pollution. These changes can affect the operations of a company from a negative perspective, but also from a positive one. For example, the rise of sea levels may cause flooding on the company's property, but it can also bring wildlife and provide more support for farming, which benefits agriculture companies. However, many businesses are affected by the indirect impacts of environmental issues as well. These include legislation regulations imposed by the government, purchasing decisions of the customers, demonstrations and protests relating to the environment. Legal and financial perspectives are closely related. These issues are not just a concern of the operation management anymore, they are a core part of risk and strategic management. Now, environmental regulations impact a much larger range of companies, and if they don't comply with these regulations, the fines and costs can be quite substantial. Reducing these costs can serve as a financial drive for companies to reduce their impact on an environment. (Brady 2005, 98-100)

The beginning of the second half of the 20th century marks the adoption of new legislative measures which guided and regulated activities of businesses. To provide an example, in 2003, the European Parliament issued a directive called Restriction of Hazardous Substances (RoHS), with the main intent to reduce toxic material content in their products. In addition, three years later the EU set in motion the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation, whose objective is to limit usage of harmful chemicals. Manufacturers are forced to demonstrate safety of their products and to provide a list of banned substances they no longer use. (Modak 2017, 177-180)

These legislative regulations and norms mandated by the government are for all organizations compulsory and result in sanctions, interventions and environmental penalties if not followed. (Modak 2017, 177) The government's intervention to the firm's practices is in

form of various economic instruments, such as pollution fines, penalties, increased taxes, and charges for discharging or purchasing environmentally harmful substances. (Modak 2017, 182) In Slovak Republic, supervision of environmental legal norms is handled by the Slovak Environmental Inspectorate (SIE), with a principal goal to impose fines and introduce corrective measures in case environmental provisions are breached. (Slovak Environmental Inspectorate, n.d.).

According to SIE, its authority and competences are applied in following areas:

- Integrated pollution prevention and control
- Water protection
- Air protection
- Nature and landscape protection
- Biosafety
- Waste management

The main disadvantage stemming from imposing legislative regulations on companies is the discouragement of businesses to actively participate in the protection of the environment on their own.

Aside from the mandatory obligations, corporations often choose to implement voluntary standards and principles to demonstrate their commitment to sustainability. The most prominent voluntary environmental certifications are the European Union's EMAS (Eco-Management and Audit Scheme) or the standards of ISO (International Organization for Standardization) 14000 series. (Epstein and Buhovac 2014, 62-64) These are voluntary tools not mandated by the government, which testify to the employer's commitment to minimize the impact of his operations, products, and services on the environment. The vast majority of organizations realize that technical and economic innovations and quality of the product are no longer sufficient components ensuring success on the oversaturated market. The product must meet more advanced criteria. Registration in EMAS or complying with ISO 14000 standards contribute to fulfil the growing demands of customers. Hence, successful penetration of the competitive market can rest upon having an implemented environmental management system that is certified.

4 APPROACHES TO EMS IMPLEMENTATON

EMS is a fundamental tool that can be instituted by any kind of an organization striving for an improvement of its environmental performance. Further description and requirements of EMAS and ISO 14001 are provided below.

4.1 ISO 14001

The International Organization for Standardization was established in 1946, in Geneva, Switzerland. In the early 1990s, ISO's Strategic Advisory Group on the Environment (SAGE) specified the need for environmental management standard. During the development of ISO 14000 standards, many corporate leaders of major world industries have participated in the development of ISO 14000 standards, which were built upon ISO 9000 Quality Management Standards. (Čerkala and Kočická 2010, 86)

In 171 countries, there are more than 300,000 certifications of ISO 14001. The central objective of these international management environment standards is the improvement of the organization's environmental performance under the full compliance of legal regulations. The main emphasis is put on continual improvement of the firm's environmental policy and on the maintenance of the documented targets. The first ISO 14001 standard was developed in 1996. This standard consists of a framework that sets out the steps the organization follows when setting up its environmental management system. The year 2004 brought a revision of the standard concerning changes to text and structure. The last and final version was issued in 2015, which was comprised of a 10-level framework, with the main purpose of creating a unified structure integrating other management systems together, for instance with a Quality Management System ISO 9001:2015. (Cornell 2017, 34) ISO 14001 can be applicable in any organization worldwide. The most common industries where this standard is instituted are construction industries, machinery, motor vehicle industries and retail trade. ISO 14001 is intended for all sized businesses. Largest number of ISO 14001 certified sites are found in South Asia, Japan, China, and Europe. (Cornell 2017, 33) According to Cornell (2017), ISO 14000 series include other standards and guidance documents:

- ISO 14031 standard covering environmental performance evaluation
- ISO 14020 series covering Eco-labelling
- ISO 14040 series covering Life Cycle Assessment

4.2 EMAS

According to the European Commission, The Eco-Management and Audit Scheme (EMAS) is a premium management instrument developed for companies to evaluate, report, and improve their environmental performance. Establishment of EMAS dates back to 1993 by European Commission, which was based on a progressive elimination of an organization's environmental footprint. European Commission lists more than 4 000 organizations and 12 000 sites registered by EMAS since November 2022. In Slovak Republic, registrations are on the increase. (European Commission, n.d.) Companies which are listed in the EMAS system indicate that their operations, activities, and goods are produced with minimal ecological footprint. The key benefit of EMAS is the enhanced credibility and reputation of the firm which helps to form loyal relationships with customers, while multiplying business opportunities in the market. High quality environmental management positively impacts the financial performance and leads to cost and resource savings, and due to a solid personnel involvement, the employees are more motivated to work. (European Commission, n.d.)

EMAS requirements include compliance with environmental legislation, employee integration in the process of continual improvement, commitment of transparency via publication of environmental performance in the annual report and a third-party verification audit. (European commission, n.d.) In case of non-compliance, the organization is penalized in form of suspension or deletion from the EMAS register. The final necessary step is for the organization to apply for registration. After proper verification of all the required documents, the organization is enlisted in the European EMAS register. Afterwards, the organization is authorized to use EMAS logo in marketing campaigns, in advertisements and the firm's environmental publications.

Fig. 1 EMAS logo. Source: European Commission, 2023

4.3 Differences between ISO 14001 and EMAS

Both EMAS and ISO 14001 propose similar structure, adoption process and requirements for implementation. The primary aim of both is the same, however, they may be considered as two competing entities with important differences. First and foremost, ISO 14001 has a global cover, therefore is valid worldwide. EMAS authorization doesn't surpass European Union. Organizations which desire to introduce ISO 14001 may use it as a stepping-stone to additionally implement EMAS, as they automatically become a suitable candidate. EMAS is more demanding and introduces a more stringent approach for the legal compliance than ISO 14001. ISO 14001 standard doesn't require any publication of the firm's environmental performance, and since organizations with EMAS are obligated to produce a public annual report, EMAS may offer wider transparency and trustworthiness. EMAS goes beyond the scope of ISO 14001 and requires more stringent employee participation on all levels of EMS, and pushes for an open communication with the employees, customers, and all other interested parties as well. Additionally, EMAS requires a registration by a public authority after third party verification. (Čerkala and Kočická, 2010)

The selected company analyzed in the analysis part has implemented EMS in accordance with the ISO 14001 standard. Because of this reason, the following chapter focuses on requirements of ISO 14001.

5 REQUIREMENTS OF ISO 14001

Environmental management system conforming to ISO 14001 standards consists of several requirements, which the company adheres to. The following subchapters describe requirement specifications of the standard in more detail.

5.1 Environmental company policy

Corporate environmental policy can be defined as a set of certain principles and guidelines which establish the company's direction in order to fulfill its vision (Darabaris 2019, 33). Over the course of recent years, as EMS has become an essential part of leading a successful business, companies were forced to establish more and more environmental positions inside the firm. For the company to fulfill its duty, its environmental policy must have a clear goal. The company should have a clear understanding of what its environmental position will be. Whether its goal is to achieve a top-of-the-line leadership position in environmental activities and public safety, or whether it's enough to maintain a simple, consistent, and cost-effective commitment to the established standards. Commitment to environmental policy serves as a foundation base of this system. The company's commitment to its objectives is communicated to the employees and the public in form of a company's code of conduct. This document outlines environmental initiatives, operations, health and safety practices and business ethics. (Darabaris 2019, 34) Senior management commitment highlights environmental performance of a company. Top-level leadership participates in potential conflict with the regulations and represents the company's interest in the environment on the market. Darabaris mentions that the management's commitment can be emphasized by establishment of environmental subcommittee on the board of directors, enacting EMS principles. Another useful initiative is the establishment of environmental risk oversight committee, which stimulates risk awareness, and cooperates with other departments in the company, such as human resources, IT, marketing, or operations. (Darabaris 2019, 34) The 2015 revision brought positive contributions to top-management involvement. This final revision brought new specific responsibilities to leadership roles, which lead to improved outcomes. (Fonseca 2015, 3-4) Company personnel and the general public should be provided with easy access to see the regulations and standards set by this policy. A vital role of the environmental personnel is their reporting function. Their reports to regulatory agencies confirming the firm did not breach any violations are crucial in proper integration of the environmental management. (Darabaris 2019, 51-52) From the point of communication, environmental policy must en-

sure external and internal communication. The goal is to be seen as a on organization committed to proactive initiatives protecting the environment. The firm externally communicates to the local community and shareholders via its website, environmental annual reports, annual surveys, company literature, publications, and guidebooks. With regard to internal communication, employees are acknowledged about upcoming goals and their ongoing fulfillment. An effective internal communication plan can be carried out with the help of newsletters, quarterly internal communications reports distributed via email, employee/manager meetings, notice boards etc. (Darabaris 2019, 45-46) ISO 14001 standard requires that employees are properly briefed and are being continually educated in the field of environment. To be professionally qualified, all employees are assigned relevant training suitable to their specific roles and are acknowledged about their responsibilities with respect to environmental risk and potential threats on the environment stemming from their jobs. (Čerkala and Kočická 2010, 95) Environmental management system is in many businesses based on a "plan, do, check, act" model, which ultimately leads to a continual enhancement of the company's strategies and goals. (Darabaris 2019, 69) This Deming cycle represents an EMS, which is a continual cycle of planning, implementing, reviewing, and improving all environmental activities. (Darabaris 2019, 69) It serves as a management process tool adhering to ISO 14001.

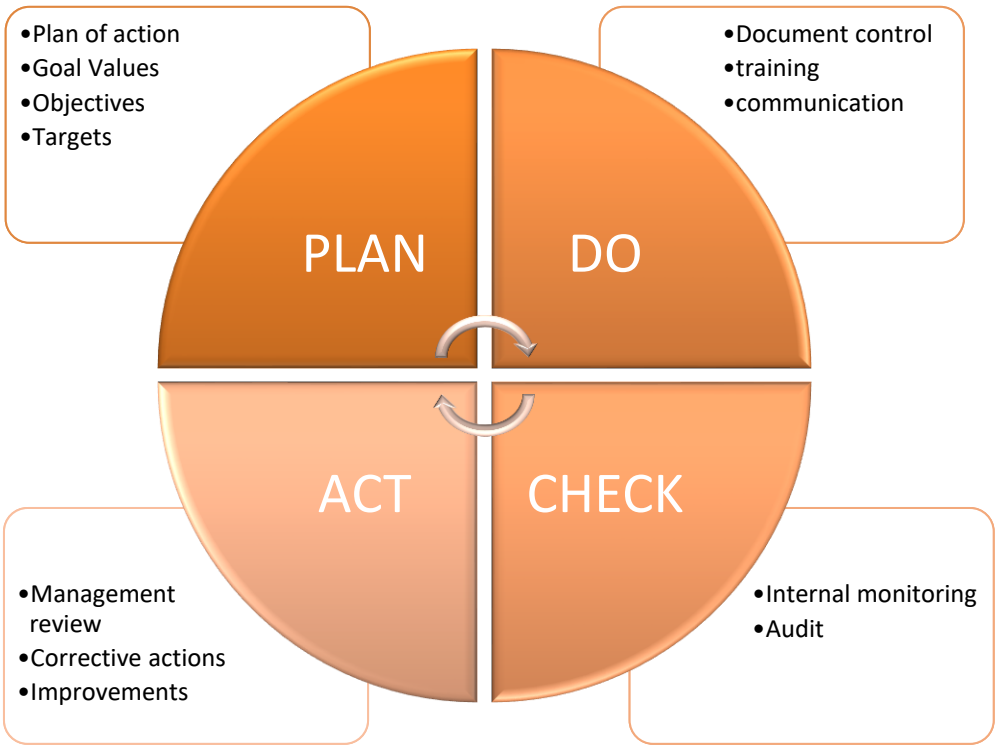

Fig. 2 Deming model according to ISO 14001. Source: Own elaboration based on Čerkala and Kočická, 2010.

5.2 Planning

Efficient environmental management plan intact is key for establishment and implementation of EMS. Proper environmental planning can be only accomplished when fully backed by the senior management, whose role is to link it with the rest of the business plan. The goal of strategic environmental planning is to list environmental aspects and compliance obligations, stating the goals and the goal values of EMS, as well as elaboration of a program to achieve these goals. The process of planning proposes a system how will the management measure and evaluate fulfillment of its goals afterwards. (Fildán 2016, 24)

The plan should also include a pollution prevention plan (P2) and environmental emergency plan (E2). The P2 plan focuses on elimination of pollution and recycling of materials. According to Antweiler (2014), it is composed of several parts, some of which are:

- an outline of pollution sources
- a reference to a code of conduct
- a description of the P2 team members and a description how other departments will report to P2 team

- pollution prevention measures and evaluation of previous and ongoing P2 activities

P2 activities can be categorized as preventative measures and control measures. Examples of preventative measures are reformulations of design of the product, prevention of leaks and spills, and recycling. Control measures can include waste disposal off-site, on-site waste reduction. The facility is expected to come up with their own projects on reduction of their individual waste streams. Employees need to be trained on P2 projects and the results are being reported annually, to see the extent to which the pollution is reduced at a facility. E2 plan entails all the necessary information about the product in a potential emergency case scenario. E2 plan firstly includes damage assessment, the characteristics of the substance, its location, its consequences on human health, list of individuals responsible for this event and emergency response equipment. These two plans are indispensable key parts in an environmental management plan. (Antweiler 2014, 184-189)

5.3 Functional implementation of environmental policy

Full implementation consists of several points. After the objectives and the goals are clearly structured, they are fully integrated and kept under surveillance. EMS principles involve changes in organizational structure and production processes. Each business adheres to an organizational chart which identifies roles, functions, and responsibilities of each environmental staff member (Darabaris 2019, 53). Executive management is responsible for full documentation of the system, and for data collection for further performance evaluation. As discussed earlier, employee involvement is one of ISO 14001 requirement. If the implementation of EMS is to be successful, the existence of one designated person fully responsible for the implementation process is crucial. This reserved authority holds accountability for shutting down manufacturing sites presenting risk of environmental damage, delegating tasks and activities executed within the cost-estimates (Morris 2004, 21) Process of implementation of EMS results in costs to certain extent, which varies depending on the type of the company. The newest pollution reduction technology on the market may be costly, and ISO 14001 aims to reduce environmental impact to the minimum within the constraints of what is financially and economically possible for the company (Morris 2004, 17). Among other costs, availability of human resources such as hiring external consultants can result in a notable expenditure as well (Alberti et al. 2000, 4-5).

5.4 Measurement systems and audits

Selection of metrics is necessary for evaluation of the implemented environmental activities. Metrics indicate the performance of EMS, and they are a responsibility of the top-management. The target of these metrics is to define whether the environmental performance is in alliance with the established objectives. Highest utilized tool used for the measurement process are audit programs. This critical part addresses company's compliance to environmental standards, checking facility's equipment, verifying its records, environmental training, and emergency response checks. (Darabaris 2019, 68) Audits are conducted on a regular basis and Morris (2014) distinguishes two types:

A) Internal Audit – Internal audit is conducted either by the employees within the organization or by an outside entity. Audit examines legal compliance and assesses whether EMS meets its targets and requirements of ISO 14001. The organization produces a documented report which serves as evidence of the implementation (Morris 2014, 37). In case of any deviations or deficiencies, top management is aware of the situation, and corrective procedures and modifications are put into place to rectify the problem.

B) External Audit – Audits are thoroughly conducted only by an outside third party. This audit procedure is a mandatory requirement to achieve ISO 14001 certification. (Morris 2014, 37) This auditing procedure documents system conformance and should be conducted on annual basis. A good quality audit verifies emergency responses, and environmental trainings, and checks facility equipment The goal of the auditing management should be to encourage executives in their efforts towards environmental practices. Instead of criticizing the environmental staff, employees should be assertively made aware of the consequences and how to improve them. (Darabaris 2019, 70) In case of satisfactory conformance, the audit will result in accreditation of ISO 14001 certificate. Alternatively, if the audit unveils discrepancies in system requirements, corrective measures are undertaken, the system is reaudited. (Morris 2004, 38) Afterwards, the firm receives the certificate.

5.5 Continual Improvement

In response of the introduced corrections and preventative measures, the organization undergoes a continual improvement of its environmental performance. The main objective of EMS according to ISO 14001 is to improve the management, therefore it's focused more on the process and less on the outcomes. (Antweiler 2014, 197) However, firms pursuing

ISO certification expect improvements in environmental performance. Depending on the context of the organization, improvements will vary. For example, a large chemical plant or an oil refinery with certified EMS will benefit from eliminating environmentally challenging materials or from introducing initiatives supporting better soil quality. On the other hand, consumer product manufacturers, or manufacturers of electrical components may focus on improvements regarding product disposal and Life Cycle Assessment (LCA). LCA is also a key focus of the third revision of ISO 14001:2015, which centres on environmental impact during each stage of the product. Life Cycle Thinking is an undeniable part of decision-making. Through this approach, firms may upgrade their waste management through improvements in reuse and recycling. (Modak 2017, 193) Organizations bear the necessity to continually improve their environmental policy and verify the effectiveness of adopted measures in accordance with ISO 14001 standard.

5.6 Costs and benefits of EMS implementation

The process of designing an efficient EMS must account for making an accurate assessment of the development and operating costs. Environmental targets have to be set with regard to accurately known costs, otherwise the final price of the eco-friendly product may be too high. However, as the EMS improves and evolves over time, costs can change with newer technology and newly set environmental targets. (Morris 2004) Moreover, costs estimates should be as accurate as possible, therefore, they should be ratified by the company's account department, which should corroborate with Environmental Health and Safety (EHS) engineers for capturing correct results. According to Morris (2004), the costs are divided into 4 main categories:

1) Training and day-to-day operation costs
2) Modifications to manufacturing operations effecting the environment
3) Pollution reduction equipment
4) Inspection costs of EMS

Hiring relevant environmental engineers and training them may be easily quantifiable but measuring other EMS cost factors is difficult and may result in inaccuracies. Accounting for day-to day operations is difficult to estimate. Modifications to improve industrial targets are measured more easily. Modifying and redesigning manufacturing technology in order to

achieve a better environmental performance may be accurately quantified by technical engineering personnel. Additionally, quantifying costs of implementing new equipment to reduce emissions is complicated to estimate accurately but can be done with the help of skilled personnel. Engineers are able to estimate these costs more accurately when they are provided with access to cost information of other similar companies. (Morris 20014, 35)

With regard to financial benefits, some are better quantifiable than others. Financial savings that stem from reduced energy consumption and waste minimization may be calculated from measurements taken before and after the implementation of EMS. Another financial benefit from introducing EMS may be in form of increased sales coming from a good environmental reputation. This may be measured by monitoring the sales figures before and after introduction of newly implemented environmental policy. However, this element is highly subjective, because this metric is influenced by the current market situation and the state of the competitors on the marketplace. (Morris 2004, 36) When EMS is in conformance with ISO 14001, financial savings are also generated by not having to pay fines for transgression of environmental legislation. Apart from legal matters, reorganization of management to accommodate the needs of the International Standard is seen as an improvement in operating efficiency as well. Besides focusing on operations, financial performance may be enhanced through green supply chain management (GSCM), by stimulating the firm's supplier to reduce ecological footprint from its own activities (Miroshnychenko et al. 2017, 341-342). As a result, the company achieves better financial results because it leads to environmental collaborations with different stakeholders. Furthermore, ISO 14001 certification encourages stakeholders' involvement which may improve organizational skills, and consequently may have a positive impact on financial performance as well. (Miroshnychenko et al. 2017, 341)

6 GREEN CORPORATE IMAGE

Sustainability and environmentalism now play an important role in whether the customer chooses to purchase the product or not. Companies using green marketing strategies have a higher chance of selling their product. Generating a green product incurs additional costs resulting in a green price premium, meaning the price for a "green" product is higher when compared with a "non-green" product. The goal of the producers is to add environmental attributes to the product, which are: locally manufactured goods, usage of recyclable materials, less packaging, no animal testing, handmade production with organic materials etc. (Antweiler 2014, 220).

During the process of purchase, the customer often evaluates whether the product is environmentally friendly or not, based on trusted credentials. The company's credibility is a difficult task to establish and can be only achieved when the performance matches the firm's rhetoric. However, once the consumers become sceptical and the false claims under scrutiny are proved as dishonourable, the customer's confidence in the brand is lost and may never be established back. To avoid the credibility gap, trustworthiness and experience play a key role in retaining credibility. Trustworthiness is ensured through evaluated and verified information about the product. But characteristics such as no usage of toxic materials or reduced energy use – they can't be verified by an individual consumer. Therefore governments, researchers, journalists, and analysts draw up elaborate analyses. Experience comes from direct usage of the product, which is important in repeated purchases. (Antweiler 2014, 222)

Green branding must be the core value of the company. When green branded companies don't measure up to its claims, they can face harsh consequences of "greenwashing". Strong green leaders must have a risk strategy in place. If their supplier was to be labelled as a user of banned toxic materials, the strings with this organization must be publicly and rapidly cut. Nonetheless, a green label can support the company's competitiveness and help to enforce the green price premium. (Antweiler 2014)

Labelling a product "green" is not enough to charge a green premium price. Eco-labelling is considered as a voluntary tool that organizations implement, to increase demand, competitiveness, to achieve a better corporate image and to raise consumer awareness. (Modak 2017, 194) Eco-labels are symbols or logos which serve as evidence that the company holds legally binding certifications proving environmental superiority and sustainable practices. They are issued on behalf of the government, environmental non-

governmental organizations, or individual organizations, whose reputation holds the utmost importance. According to Antweiler (2014), eco-labels take three different forms:

- Seal of approval
- General claims
- Graded label

Products awarded with a seal of approval indicate their top environmental performance and provide a certification. On the other hand, general claims are simple referrals to the product, such as "green" or "organic". They do not need any certification, therefore can be viewed as doubtful in the eyes of the consumers. Graded labels are eco-labels, which provide a comparison between similar products in areas like material composition, or energy consumption (Antweiler 2014, 215). However, consumers who are not reassured or are not aware of eco-labelling may be the victims of "the greenwashing trap". Greenwashing is the act of claiming the product is eco-friendly without any confirming certification or supporting evidence. (Antweiler 2014, 217). All environmental achievements must be verified by an independent third party with all approving information accessible to consumers.

Additional supporting characteristic of green branding is eco-design of a product. Eco-design's primary intention is to create a product with minimal impact on the environment during its life cycle. (Krause 2019, 156) Top executive management is held responsible for enforcing the proper strategy of eco-design. The design of the product undertakes a reconstruction of its image to be perceived as green. Eco-design offers numerous advantages, such as higher attraction to consumers and improved competitiveness on the market. Further changes can be conducted in regards with material composition, improvement of manufacturing processes, and optimization of waste management of the product. (Krause 2019, 157)

II. ANALYSIS

7 CHARACTERIZATION OF A SELECTED COMPANY

The selected company of this bachelor's thesis is an international corporation, now headquartered in the Scottsdale, Arizona state of USA. For protective purposes, the organization will be named XY. XY develops technology and semiconductor products and holds one of the leading positions on the semiconductor market worldwide. On July 4, 1999, the organization spun off from its parent company and in 2000 it became a publicly traded organization. The transistors of the parent company created for commercial use served as a foundation of the current organization. XY carried out a series of acquisitions that laid a framework for many innovations we enjoy today. Now, the organization employs more than 33,000 people worldwide in its global network of manufacturing facilities, sales and administrative offices and engineering centres.

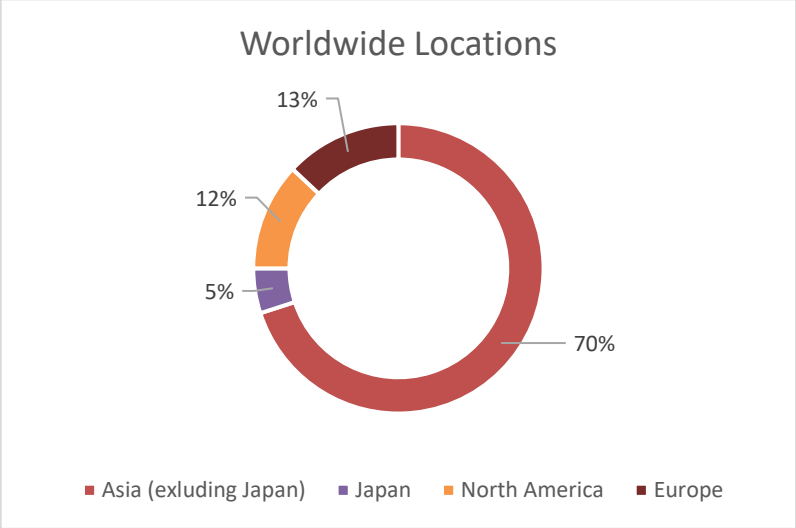

Fig. 3 Locations of the selected company. Source: Internal documents, 2023

Its broad portfolio ranges from discrete and power modules, diodes, transistors, and interfaces to integrated circuits. The company's technology provides solutions mainly in automotive and industrial market sectors. The corporation's net income for the whole fiscal year ending December 31, 2022, was $1.904 billion, which is approximately 80% increase from 2021. Based on its significant revenue streams, the American organization has been listed on the 2022 Fortune 500 companies. (Public documents of the company XY, 2023) The organization provides vast technology systems implemented in the medicine field, aerospace, cloud, and security. In this highly competitive semiconductor industry, the conglomerate faces rigid competition. The company has many legal partnerships with several independent successful companies, such as Bosh, IBM, Panasonic, ZF, and many others. The extensive community of partners help the organization to accelerate the

development of their products. These customers are original equipment manufacturers, but the organization's customer base is also made of other distributors and electronic service providers. XY operates multiple manufacturing and logistics sites near the customers to ensure supply continuity. The organization has an extensive global supply chain composed of many direct materials suppliers and subcontractor providers, mainly in North America, Europe, Asia, and Middle East. In 2019, the organization had over 10 000 suppliers, and the number annually increases. (Public documents of the company XY, 2023) This reflects the corporation's vision: *"XY is dedicated to becoming the supplier of choice for energy efficient solutions."* (Public documents of the company XY, 2023) The corporation maintains strong on-time delivery performance with major customers of approximately 95%. The corporation serves thousands of customers in a number of international markets. Therefore, as of December 31, 2022, the company was organized into three operating segments: Power Solutions Group (PSG), Advanced Solutions Group (ASG), Intelligent Sensing Group (ISG). PSG is responsible for power conversion components and integrated circuits, ASG oversees development of data storage applications and integrated power solutions. Lastly, ISG develops applications and components that reduce the number of faults in finished products. (Sustainability report, 2022) Each business unit takes care of their customers in their specialized field and their commitment is reflected in the global corporation's mission statement: *"To provide our customers with high-quality, cost-effective solutions to solve their demanding power and signal management design challenges."* (Internal documents, 2023)

There are three Slovakian branches of the corporation. Bratislava is the location of a design development centre, which was originally established in 2000 as a research and development centre. In 2006, it fully developed into a development centre, now focusing on technology development activities and improvement of software and cloud solutions.

Žilina site is a technical support centre which designs innovative application solutions and communicates with American and European customers. The team's workplace is located directly on the grounds of university of Žilina, which proposes unique opportunities for young students to contribute to find innovative solutions on behalf of the company and gain significant amount of knowledge and skills in their area of expertise.

Piestany is the home of solution engineering with a primary focus in providing technical, marketing and sales support, as well as a better service to the customers, who are producing electronic systems for various purposes. Piestany site provides only administrative offices with no manufacturing operations. This site is composed of multiple departments, such as

customer service, quality, finance, sales support, IT department and technology service centre. The finance department is responsible for complex accounting activities for the Slovenian and Polish branches, as well as for the management of receivables for American and European region. The department of corporate pricing in Piestany oversees negotiating price terms with their customers to achieve the highest market share and profit margin. This team takes care of preparation of price contracts concerning individual parts but is responsible for extensive product portfolios as well. (Public documents, 2023) All Slovakian locations together employ approximately 400 people. Piestany site will be the main subject of the cost and benefit analysis of environmental programs characterized in the 10th chapter. The international corporation has a certified environmental management system that conforms to ISO 14001:2015 standard and ISO 45001 – Occupational Safety and Health Standard. These certifications were acquired in July 2012 and are valid until 31st October 2023. All Slovakian branches have ISO 14001 certification as well.

8 ANALYSIS OF EMS IN A SELECTED COMPANY

The multinational organization is dedicated to reducing its environmental impact and operating in an environmentally responsible manner. In 2021, the company's executive management introduced its goal to be net-zero by the year of 2040, which will happen one decade ahead of the Paris Agreement's goal. To achieve this ambition, the organization plans to transition from coal to 50% renewables by 2030, and by 2040 the transition to renewable sources will be 100% complete. Its focus is placed on reducing emissions and energy consumption, as well as harmful chemicals in industrial processes. This goal will be tracked in the sustainability reports produced annually, which is a key resource for tracking all progress regarding sustainability and corporate social responsibility. Primary focus is to achieve sustainable manufacturing through savings projects on water conservation, recycling of end-of-life products, material optimization and less chemicals. (Sustainability report, 2021) The organization measures and reports Scope 1, 2 and Scope 3 emissions, which are types of green-house gas (GHG) emissions:

Scope 1 emissions are direct emissions stemming from wafer fabrication, assembly, and test operations. These are being continually reduced by eliminating fluorinated gases and using more efficient manufacturing techniques, which generate less CO_2. (Sustainability report, 2021) Scope 2 emissions are indirect emissions, generated from purchased electricity used for manufacturing. Scope 2 emissions are being reduced by making investments into renewable projects (Sustainability report, 2021). The corporation's plan for 2023 and 2024 is to secure the renewable sources of energy that will replace the traditional ones for supplying electricity. (Internal documents, 2023) The following graph illustrated on the next page depicts total amount of Scope 1 and Scope 2 emissions generated from all worldwide facilities combined.

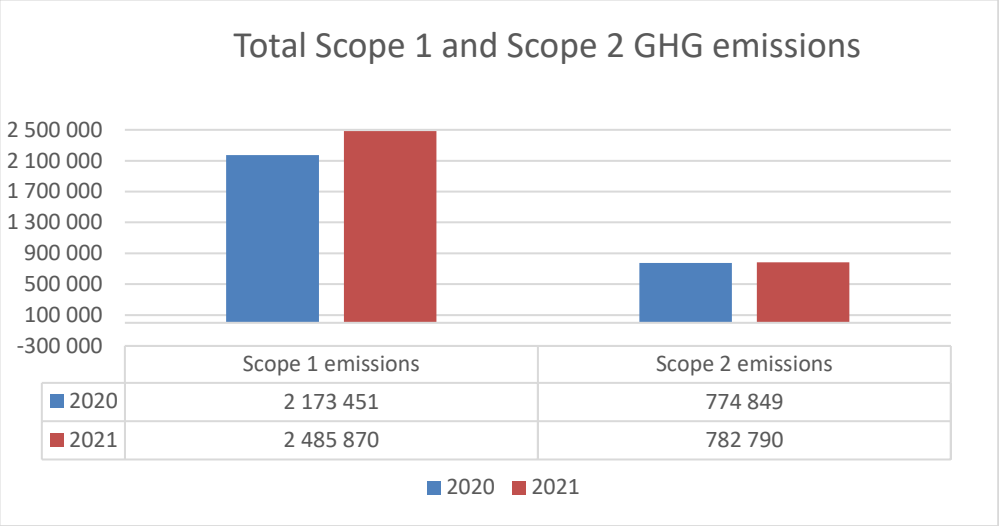

Fig. 4 Total Scope 1 and Scope 2 GHG emissions in metric tons of CO_2 produced in 2020 and 2021. Source: Own elaboration, 2023

Scope 3 emissions are business-travel air emissions generated from transportation of final products to end-customers, and emissions generated from supplier's manufacturing of purchased products. Covid-19 pandemic has caused GHG emissions to significantly drop since the beginning of 2020. These CO_2 emissions are being reduced by active cooperation with the suppliers helping them to reduce their Scope 1 and 2 emissions. (Sustainability report, 2021) Figure 5 shows only Scope 3 GHG emissions from all worldwide facilities of the corporation.

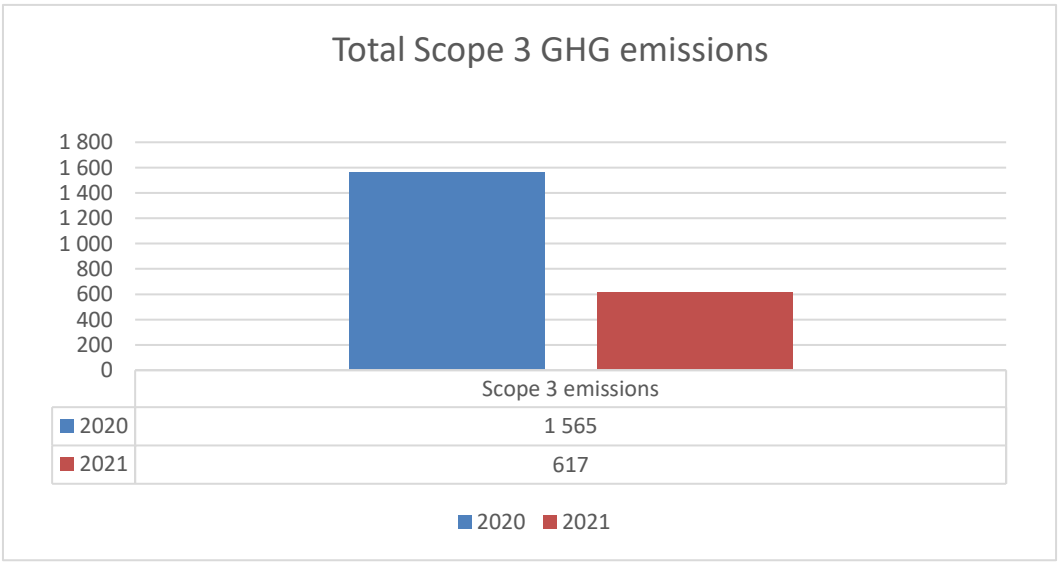

Fig. 5 Total Scope 3 GHG emissions in metric tons of CO_2 produced in 2020 and 2021. Source: Own elaboration, 2023

Moreover, the success of the company depends on energy efficiency. The organization possesses a portfolio of more than 800 patents in energy saving product design techniques.

The brand positioning statement is: "*Driving innovation in Energy Efficient Electronics*". (Internal documents, 2023) The whole company's foundation is based on innovation of their products that empowers a strong sustainable ecosystem. This is the reason the organization develops intelligent technologies that propel industry 4.0. These intelligent technologies improve safety and reduce consumption of finite resources.

Technology of XY listed below support the sustainable energy evolution:

- Intelligent power technology helps to prevent 30 000 home fires in the U.S. annually, and simultaneously reduces the risk of electrocution 11 times more than traditional receptacles. (Internal documents, 2023)
- The company's intelligent motor technologies reduce energy consumption, which equals to approximately 16 fossil fuel power plants. (Internal documents, 2023)
- 1 million units of their low energy processors save almost one metric ton of lithium over their lifespan compared with regular processors. Because of their reduced cooling requirements, they are cost-efficient as well. (Internal documents, 2023)

Total energy consumption in 2021 was 1 781 685 megawatt hours, which was reduced by 26 266 MWh compared to the previous year. (Sustainability report, 2021)

In 2021, the organization also reduced its water withdrawal by 4,9 % compared with the previous year (Sustainability report, 2021). The water used for semiconductor manufacturing is being supplied by a third-party, which reports all necessary data to EHS manager. All industrial facilities ensure that wastewater technologies are operating per local regulations, and discharged water doesn't damage the environment. EHS departments in all worldwide facilities are responsible for reducing wastewater and pollutants, and for improving the rate of reused water as much as possible. (Internal documents, 2022) The organization is actively committed to recycling water. Globally, 5 779 megalitres of wastewater were recycled in 2021.

Moreover, the corporation is continually improving their waste management techniques and practices to be more cost-saving. In 2021, the organization has produced 9 842 metric tons of hazardous waste, and 27 167 metric tons of non-hazardous waste, which was generated from all manufacturing and non-manufacturing facilities globally. (Sustainability report, 2021) To maximize waste management strategies and enhance the corporate image as well, the organization has implemented "Take back and Recycle Program", which provides customers the opportunity to recycle and safely dispose their used electronic waste. As a result, in 2021, approximately 614 810 kilograms of scrap materials and precious metals

from all the company's facilities were recycled, sold, and reused, which recouped more than $26 million USD. (Sustainability report, 2021)

8.1 Environmental policy

The environmental health and safety policy at the organization is committed to achieving environmental objectives and strives for a continuous improvement. The organization takes care to ensure safe and healthy working environment with the aim of preserving it for future generations. The organization's environmental policy statement declares:

"XY's policy is to conduct manufacturing activities, including silicon wafer fabrication, assembly, testing, and support activities, in a responsible manner, eliminating known risks, with respect to environment, safety and health employees, customers, suppliers and neighbouring entities and respect all relevant laws, regulations and other requirements related to environmental protection, safety work and health protection at work. The organization provides resources and support at all levels of responsibility for the following facts:

- *Continuous improvement of activities related to environmental protection and employee health protection*
- *Setting short-term and long-term goals in the field of environment, health, and safety*
- *Regular assessment of short-term and long-term environmental protection goals*
- *Education of employees to perform their work in a responsible manner for health, environment protection and occupational safety*
- *Investigation of environmental problems and occupational accidents, and implementation of appropriate corrective measures*
- *Ensuring all employees proceed with their activities in accordance with the corresponding safe work practices*
- *Implementation of plans and methods aimed at preventing pollution that are suitable for the campus and which are technologically and economically acceptable.*
- *Efforts to reduce the consumption of chemicals and raw materials*
- *Efforts to reduce the negative impacts of company's components purchased by customers on the environment."* (Environmental policy, Internal document, 2023)

The organization maintains all documented information of its compliance to obligations. The environmental policy is communicated within organization and is available to interested parties. Environmental policy is being reviewed on a 12-month basis, to ensure its continued

effectiveness. From the point of organizational roles and responsibilities, top management assigns authority for ensuring that the EMS conforms to the International Standard. Environmental performance is being reported by these authorities to top management.

8.2 Essential stakeholder's groups of EMS

From the customer's perspective, the primary customers of the organization are automotive and industrial manufacturers and other distribution centres acting as intermediaries for the end customers. The company's customers are the main drive of having an ISO 14001 certification, which serves as a proof of operating in accordance with the legislation, and simultaneously represents the company in a plausible light on external markets for potential investors.

From the suppliers' perspective, the organization works with chosen suppliers who are 100% conformant to environmental laws and regulations and behave ethically. The supply chain is compliant with ISO 9000 and ISO 14001 requirements as defined in the internal documents of the firm. (Sustainability report, 2021). Having these environmental certifications are one of the main determinants when choosing new potential suppliers.

From the employees' perspective, environmental policy is communicated directly to all concerned employees. Communication is secured via various mediums including internal communication messages, "all hands meetings", blog posts and monthly newsletters. All employees are required to comply with the content and requirements of the EMS.

8.3 The purpose of EMS implementation

The aim of implementation of environmental management system according to ISO 14001 standard is to demonstrate the firm's commitment to protecting the environment, lowering emissions and to maintain the international standard. Implementation of this standard was also initiated from the side of the customer. Cooperating with environmentally and socially responsible suppliers also increases the chances of developing new business partnerships and sparks interest from the side of investors.

9 ENVIRONMENTAL MANAGEMENT SYSTEM IN XY

The organization's environmental management system conforms to all the requirements of ISO 14001. All subsidiaries and affiliates of the parent company are obligated to follow its environmental policy and adhere to the ISO 14001 standard. Therefore, all XY branches are coordinated by the decisions made by the top-executive management team and board directors. However, employees and personnel from all worldwide facilities are encouraged to bring their own innovative ideas to the table.

9.1 Planning

During the process of planning, the organization determines potential emergency situations and keeps documentation of risks and opportunities that need to be addressed. Within the scope of environmental management system, the firm considers a life cycle perspective as well and considers the environmental impacts their products and services have. The organization also maintains active processes for identification of hazardous materials that can create emergency situations. The objectives of the environmental policy are clearly communicated and measured. When planning, the firm considers all technological options and financial requirements of the suggested targets. Objectives and targets may be proposed by management as well as personnel but must be reviewed and approved by the EMS Coordinator of a specific site. (Internal documents, 2023) Environmental program managers retain documented information of the environmental program, such as financial approvals, justifications, time frame for completion and schedule. Afterwards, management determines what will be done, what resources will be needed and how will be the results measured.

9.2 Measurements, controlling and auditing

Environmental objectives and targets are set with quantifiable numerical targets, so they can be easily monitored and properly measured. Key performance indicators (KPI) of objectives are regularly reviewed and reported on the intranet of the organization. Afterwards, the organization considers the effectiveness of these actions and makes sure they are in alignment with the environmental policy.

According to the International Standards the company also evaluates its conformance to legal requirements and other requirements of ISO 14001 standard. The organization also conducts internal audit conforming to this standard in planned intervals and takes corrective actions if any deviations or deficiencies are found. (Internal documents, 2023) Audit results are reported to relevant management and authorities. All environmental data is verified by a

third-party company called Trucost, a subsidiary of an international American corporation called S&P Global, with its primary business in analytics and financial information. (Sustainability report, 2021) This organization collects, assesses, and objectively evaluates the extent to which the EMS audit criteria set by the organization are fulfilled.

After corrective measures are taken, management conducts a review of adequacy and effectiveness of environmental management and integrates new strategies for continual improvement. The company's planned improvements and focus points in the year of 2023 are centred around waste and cost reduction, less incidents in manufacturing and testing facilities concerning electrical incidents and slip, trip and fall incidents. (Internal documents, 2023) The organization annually conducts EHS management reviews. The 2022 management review revealed that there was a 50% reduction in chemical incidents (spills, overflows, toxic gas alarms) compared to year 2021. (Internal documents, 2023) The firm targets these incidents and works on ergonomic improvements in office areas as well. Company's management inspected that EHS resources are currently sufficient for effective continual implementation of environmental management system. There were no external or internal complaints received, and EMS is adequate and effective.

9.3 Communication in EMS

The organization effectively communicates with external parties – it sends yearly and monthly reports to suitable authorities such as wastewater analysis reports, hazardous waste inventory reports, air emission analysis report etc. All employees are obligated to follow the EMS policy, which is available on the firm's internal and external web sites and posted on the bulletin boards. Acting in accordance with these policy obligations results in safe work areas, which is vital to the success of the company. Employees understand their associated roles and responsibilities in implementing EMS policy. Examples of these responsibilities are:

- Meeting regulatory compliance requirements
- Regular reporting of environmental performance to regulatory agencies
- Participating in solid waste and chemical waste recycling programs

Employees are being regularly informed of all upcoming environmental programs, initiatives, and workshops mostly via online meetings.

9.4 SWOT analysis

The following part contains a SWOT analysis, which explains the main strengths, opportunities, weaknesses, and threats of the company in the context of environmental health and safety. The analysis is based on the internal documents of the parent company and answers to the organization on a global level, therefore includes information from all worldwide facilities.

Strengths	Weaknesses
• Active participation of employees in reporting of unsafe conditions • Compliance to legal requirements • Strong leadership of EHS team	• Antiquated tools and infrastructure – potential health hazards • Weaker safety culture among production workers • Lowered environmental awareness in manufacturing facilities
Opportunities	**Threats**
• Optimization of waste reduction • Development of better emergency responders • Improvement of safety culture	• Risk of exposure to dangerous chemicals • Limited available technology on waste disposal • New emerging legal and customer requirements

Tab. 1 SWOT analysis. Source: Own elaboration based on internal documents, 2023

- Strengths

The company's strength stems from its EMS strictly adhering to all requirements of ISO 14001:2015 standard. Skilled and matured EHS professionals are a competitive advantage. Employees are actively interested in all environmental programs and are welcome to provide their own ideas through a suggestion box available online, anonymously, or not. Internal communication between management and employees is fully supported, the environmental objectives and targets can be proposed by program managers or other personnel, and they are approved by EMS coordinator.

- Weaknesses

When it comes to weaknesses, many facilities have older infrastructure which can result in potential health hazards. There may be many physical injuries from tripping, slipping, improper handling of machinery etc. Employee struck by a machine in 2021 contributed to no. 1 incident (Internal documents, 2021). As a following action, safety culture plan was reviewed and explained to management and employees. Employees are often prone to walk across the building while using a mobile phone, or not hold a handrail when using the stairs, having a bad posture during heavy lifting etc. The following graph shows recorded incidents across all industrial sites in previous years.

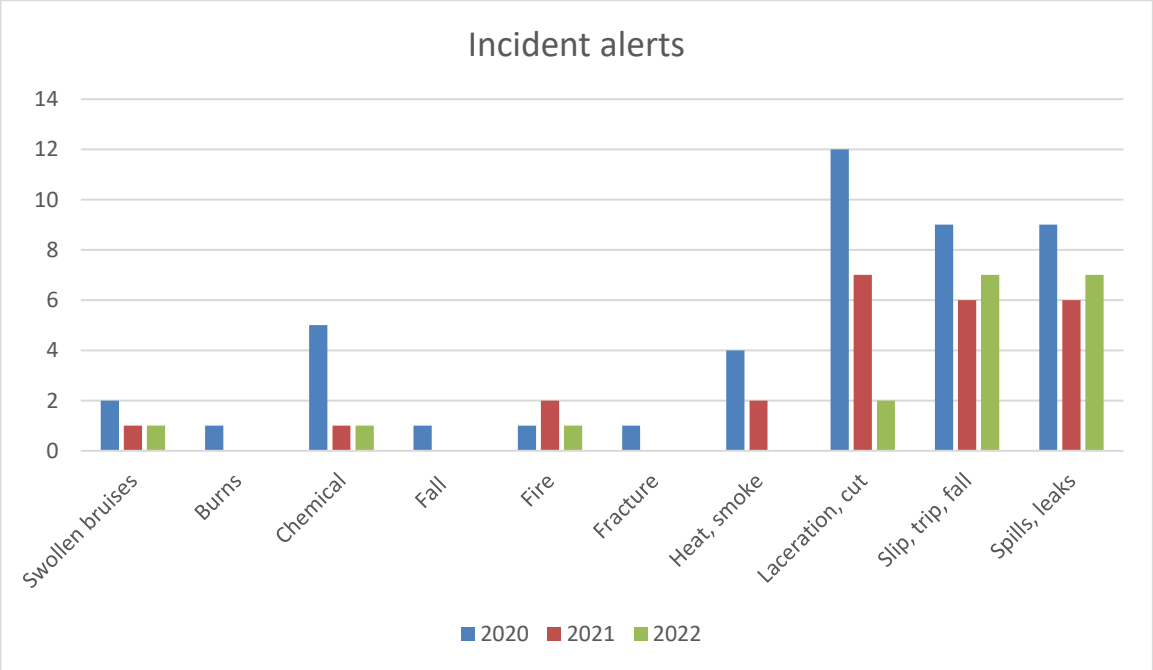

Fig. 6 Health incidents in industrial facilities. Source: Own elaboration based on internal documents, 2023

These risks are being assessed by EHS staff & committee, and as a suggested course of action, the employees should be given an ergonomic and materials handling, and an awareness training as well. Regarding the physical injuries from chemicals, the organization is actively focusing on reduction in number and severity of these incidents. Hence, the improvement of solid fall protection measures is definitely suggested.

- Opportunities

Opportunities stem from weaknesses. Waste reduction can be continually improved by introducing new environmental and recycling programs. To reduce physical injuries and

health hazards, elimination of manual chemical handling at industrial sites is advisable. Other plan of action for continual improvement are updated EHS trainings, which will be mandatory and will secure and improve safety culture.

- Threats

Regarding the nature of the main industrial operations, the threat of environmental damage caused during the production is high. The organization should be cautious of elimination of repeating similar incidents. Another relevant threat regarding previously mentioned physical injuries, is a poor mental health that may lead to employee unsatisfaction. Therefore, mental health is an important issue that the management pays attention to via various mental health programs providing numerous articles, trainings, podcasts, helpful webinars, and videos, which are accessible to all employees on the intranet and bulletin boards.

9.5 Emergency preparedness and a response system

The organization has a developed emergency preparedness system in case of potential occupational injuries. The organization is a full member of the Responsible Business Alliance (RBA) and adheres to RBA Code of Conduct, which is a set of social, environmental and ethic industrial standards. Therefore, the organization has site specific emergency plans in place. These procedures include emergency reporting, evacuation plans and employee notification. Employees in manufacturing facilities are being continually trained on how to behave in emergency situations and all information regarding global security and safety is available in the internal documents of the firm.

In non-manufacturing facilities, training and testing is vital to ensure emergency plans work as well. Employees working in administrative positions are being trained on following risks: cyber-attacks on information technology systems, recurring natural disasters, fire, and infrastructure disruptions. (Internal documents, 2023) EHS engineers are responsible for briefing relevant senior managers on how to introduce necessary measures to protect the health of employees in case of an emergency or in the event of immediate threat to life. (Internal documents, 2023)

10 EVALUATION OF COSTS AND BENEFITS FROM IMPLEMENTED PROGRAMS

This part of the thesis will describe incurred costs and savings of the selected environmental activities that were implemented in accordance with ISO 14001 standard. These environmental programs were realized in Slovakia branch located in Piestany. The environmental programs were authorized by the executive team of the company in Slovakia. The programs are set to be evaluated annually. In the process of conducting these programs, from the point of organization, the environmental health and safety team was responsible for the following:

- Designing and implementing individual programs
- Control and evaluation of compliance
- Cooperation with employees
- Propagation of the programs in form of conferences, competitions, newsletters
- Cooperation with outside council

The environmental programs were set to achieve multiple goals:

- Energy, water, and waste reduction
- Waste recycling
- Transfer of hazardous waste to companies authorized for hazardous waste disposal
- Carrying out control of compliance with established directives, instructions, and regulations in environmental legislation
- Motivation of personnel to protect the environment by allowing them to actively participate in solutions, while establishing conditions for effective cooperation with the top-management (Internal documents, 2023)

The following environmental programs were implemented as a result of the company having an ISO 14001 certification. These are the environmental initiatives introduced in Piestany, concerning electricity consumption in this specific site:

Environmental program	Year of realization	Costs incurred	Annual savings	Return on investment
LED lamp installations on the parking lot	2018	3 800 €	330 €	11,5 years

Replacement of air conditioning on 2nd and 3rd floor	2019-2020	210 000 €	21 000 kWh = 2 600 €	N/A
Replacement of lights for LED lights in the whole building	2019-2021	35 000 €	42 900kWh = 4800€	6,6 years

Tab. 2 Electricity consumption savings programs realized in Piestany site. Source: Internal documents, 2023

In 2018, the LED lamp installation project, realized on the parking lot, was finished. After completion, LED lamps now generate 1% in savings from total annual consumption of electricity. Additionally, in 2019, the installation of new LED lightning in the whole administrative building was undertaken. This was a considerably larger project and it emerged as a successful program. LED lamps on the parking lot and in the building now generate approximately 8-10% in total annual electricity consumption. Compared with the original lightning, the annual savings from the LED lightning in the whole campus are now 50% higher. Another project, which was finished at the end of 2020, was the replacement of air conditioning. This project was initiated on account of outdated technology installed in 2000, which was expected to malfunction. Now, the newer technology represents 5% in annual total electricity consumption. This project has taken a longer period of time to finish. The final date of completion was in the end of 2020. Furthermore, Table 3 shows environmental initiatives in thermal energy consumption:

Environmental program	Year of realization	Incurred costs	Annual savings	Return on investment
Replacement of outdated heaters in canteen / renovation of the main heat station	2018	10 000 €	1 260 €	8 years

Tab. 3 Thermal energy consumption programs realized in Piestany site. Source: Internal documents, 2023

The renovation of the heating system resulted in reduced inside temperature by 1°C, which represents 6% in total savings from total energy consumption. The company's personnel were properly informed of the renovation in form of introductory conference. In 2021, it was the firm's management intention to initiate another project – a complete roof insulation of the whole administrative building. This would result in 9000 € in annual savings, which would save approximately 201 500 kWh. However, this project would require a 100 000 € investment, therefore its launch is still being debated. (Internal documents, 2023)

Water conservation is another area where the firm's management places their interest. The main eco-friendly project in Piestany was initiated in 2018, focusing on obtaining water from a well, which is located on the company's property.

Environmental program	Year of realization	Incurred costs	Annual savings	Return on investment
Water obtained from the well	2018	3 500 €	1 100 €	4-5 years

Tab. 4 Water consumption program realized in Piestany site. Source: Internal documents, 2023

This program annually saves 604 m^3 of water, which is 19% of the annual water consumption. Water obtained from the well is being used for plant watering in the whole campus. The next preventative measure concerning water conservation was also implemented in 2018, when the firm made a 400 € investment to connect water dispensers to the municipal water distribution facility. This investment was highly appraised by the employees and annually saves approximately 8 654 €. (Internal documents, 2023) The following graph represents water consumption of the individual areas of the Slovakia Piestany building after the implementation of the program.

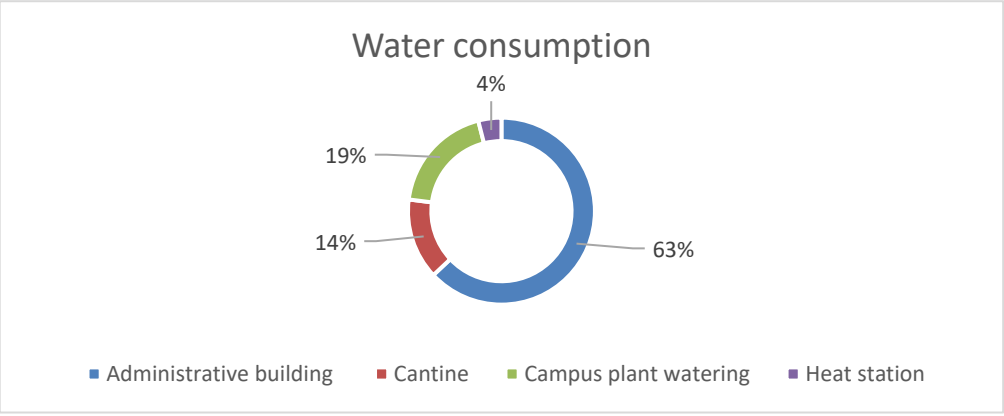

Fig. 7 Annual water consumption in Piestany site. Source: Own elaboration based on internal documents, 2023

Another potential project for reducing water consumption is replacement of regular flush urinals in men restrooms for waterless urinals. Installation of waterless urinals would result in significant savings of water. However, the overall initial price and installation of one urinal equals to 700 €, which would make the cost of the investment high and the return on investment would be approximately 22 years.

10.1 Waste management

The Piestany support site has a detailed waste management policy put into place. It was developed by the top management of the company. EHS department ensures that waste management programs are fully implemented and followed. EHS team conducts quarterly inspections to check compliance and ensures that all legal requirements are satisfied during disposal of waste. (Internal documents, 2023) Piestany location is not an industrial site, therefore no hazardous industrial waste is being produced. This site generates ordinary scrap and domestic waste, such as cartons, drinking bottles and used paper. Waste bin relocation environmental program was initiated by EHS department on 3rd of July 2019. This program relocated all trash cans (trash cans for paper, plastic, biological waste, metal, and mixed waste) which are now situated in the hall corridors. Collection bins are no longer situated in individual offices. All employees are obligated to put waste into right classification collection bins, which are stored in defined locations according to a detailed bin layout plan.

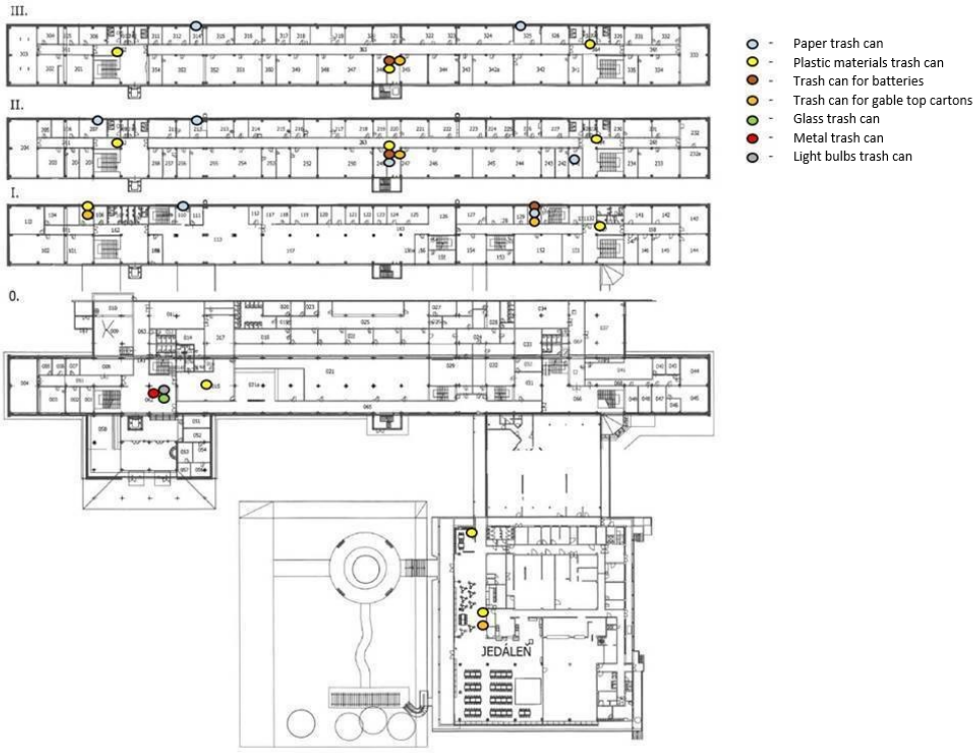

Fig. 8 Collection bins layout map. Source: Internal documents, 2023

All employees are required to comply with the waste management policy and recycling measures in the workplace. This initiative was later improved by providing additional bins for used batteries, light bulbs, and glass. (Internal documents, 2023) On-site recycling of waste is permitted and guided by Environmental Health and Safety department, which complies with legal regulations. The measures are being controlled by the direct supervisor and the Environmental protection specialist. The EHS department fulfils following obligations:

- Classifying waste into relevant categories according to the Waste Catalogue and determines the method of handling it
- Preparing documentation for conducting contracts with authorized waste collection organization
- Ordering waste removal by an authorized organization
- Keeping records and submitting reports on the generation of waste to relevant authorities
- Ensuring compliance of waste management with valid Slovak regulations
- Carrying out inspections of compliance (Internal documents, 2023)

Piestany site's management introduced several preventative measures to reduce production of plastics and paper waste. The company has invested into buying all interested employees their own ceramic mugs with the company's logo. Before, the average usage of plastic cups was 39 000 pieces a year, now the usage of plastic cups from the vending machines is significantly reduced. Preventative measures were taken in the canteen area as well, where most of the plastic dishes and cutlery were replaced for glass ones. Paper production was significantly higher in 2017 and 2018 when annual average paper use was approximately 375 000 sheets of paper. After revision of individual department's paper usage, employees were instructed to reduce their paper generation, print on both sides of the paper, and the company started buying recycled paper from a different supplier.

Annually, the Piestany site management organizes several voluntary activities concerning waste collection in local areas of Piestany. The employees are offered to participate in voluntary programs initiated by local non-governmental organizations to collect waste and clean the city's surroundings before the tourist season begins. Consequently, the employees are provided with the opportunity to participate in local community development and still be financially compensated for the day being.

Piestany site operates in accordance with the environmental corporate regulations, policies and decisions made by the headquarters. However, based on the conversation with the EHS engineer employed in Piestany site, employees are actively coming up with new environmental initiatives to support sustainable development and protection of the environment. Their interest initiated a new environmental program in Piestany site, which allows employees to bring used cooking oil to the workplace, where it's collected by a company called Meroco. Meroco is a joint stock company with a primary focus in biodiesel production. Their biofuel products significantly reduce green-house gas emissions, reduce the dependence on oil imports to the Slovak republic, and help keeping the car's engine in a good condition. (Meroco 2023) Meroco is responsible for regular collection of the used cooking oil from their mobile containers placed on the premises of the XY in Piestany site. As a compensation, the employees may choose to receive a bottle of fermented vinegar for collecting 1 litre of used cooking oil, or a bottle of sunflower cooking oil for 6 litres of used cooking oil. (Meroco 2023) The employees' resourcefulness has driven another environmental program, which supported revitalization of green surroundings on the Piestany premises. As a result, the management has bought raised garden beds, where the employees are allowed to plant and harvest their own fruit and vegetables. The company's top management continually focuses on implementing practices that incentivize the workplace green behaviour and environmental commitment of the employees, hoping to improve the sustainable development.

10.2 Analysis of the implemented programs

From a critical standpoint, all of the completed environmental programs that were launched in XY's branch in Piestany are considered as successful projects increasing the quality of the environmental management system. Table 5 on the following page provides a summarization of the environmental projects.

Area of environmental effort	Environmental projects	Costs incurred (€)	Annual Savings (€)	Return on investment
Reduction of electricity consumption	LED lamp installation on the parking lot	3800	330	11,5 years
	Replacement of LED lights in the whole building	35 000	4 800	6,6 years
	Replacement of air conditioning	210 000	2 600	N/A
Reduction of thermal energy	Replacement of the heating system	10 000	1 260	8 years
Water conservation	Water acquisition from a well	3 500	1 100	4-5 years
	Water dispensers	400	8 654	N/A
Total	6	262 700	18 744	N/A

Tab. 5 Summarization of all environmental programs initiated in Piestany. Source: Own elaboration, 2023

Table 5 depicts total incurred costs and total savings derived from six implemented projects in Piestany. Costs and income from the savings of the individual projects occur at a different time, therefore total annual savings serve only as an illustration, because the investments will return in a range from 4-11 years. From a personal perspective, the annual savings are rather significant.

Every individual project has made a significant contribution in achieving the organization's goal to be net-zero by 2040. These environmental activities have supported the sustainable development of the company. From my personal observations, the employees were very welcoming of these new changes and are currently more inclined to participate in eco-friendly endeavours, because of the management's proactive involvement. Moreover, the SWOT analysis conducted on a global level, which provided a description of the company's strong suits and weaker sides can be applied to the Piestany site as well. Based on a personal

experience, the strong suit of the Piestany branch is indeed the strong leadership encouraging environmentally conscious behaviour. The employees are frequently making new suggestions on how to improve the environmental projects. EHS engineers and employees assigned in the quality department are discussing newly improvements of the programs on a daily basis, along with the executive management of the company and the headquarters. As for the weaknesses, the Piestany site has no longer any antiquated infrastructure. The company's management actively responds to weaknesses. Because of the renovation of the outdated heat station and the renovation of the air conditioning, the employees are provided with better working conditions and are not prone to any potential health hazards. The management of the Piestany site has actively recognized the environmental opportunities as well, primarily in the waste management area and recycling. The recycling efforts and the collection bin layout plan has improved the company' ethical culture, boosted the employees' effort to contribute, and simultaneously made a positive impact on the environment. From a personal point of view, the environmental health and safety department adequately reacts to potential threats in form of conducting frequent seminars regarding mental health, burnout and stress resulting from large workload. To conclude, the executive management of the Piestany site actively responds to all areas of the SWOT analysis and tries to make improvements through their environmental efforts on a daily basis.

11 GREEN IMAGE OF THE SELECTED COMPANY

Green image of the company is described from the point of the whole corporation on a multinational level. The organization has a strong commitment to environmental sustainability. Compliance to ethical business is highly valued to stakeholders and customers. To support their green image, the company participates in many environmental programs, publishes annual sustainability reports and corporate social responsibility reports. To represent the company's green leadership, the organization is a proud holder of various environmental certificates. The organization has received many awards on the global level. The organization meets the requirements of RoHS. Because of this EU directive, the organization doesn't use mercury, chromium, and other toxic chemicals in their daily operations. (Public documents, 2023) EcoVadis, one of the world's most trusted sustainability rating providers, has awarded XY in 2022 with its highest ranking – a platinum medal. EcoVadis rates companies' performances in environment, ethics, labour and human rights and sustainable procurement. XY has managed to reach a 79/100 score, ending up in the top 1% of all the 912 companies assessed in manufacture of electronic components industry. (Sustainability Report, 2021). Additionally, in 2021, XY has been marked as the top semiconductor company on Barron's 100 most sustainable companies. The organization has also been added on the list of "The World Most Ethical Companies" by the Ethisphere Institute, for the seventh year in a row since 2015. (Public documents, 2023) This award has been achieved thanks to the company's ethical culture and ethical principles of doing business. These awards and certifications received from the most prominent environmental evaluation institutes in the world support the evidence that XY is not an organization that complies with the environmental regulations only to enhance their green image on the market. On the contrary, the multinational corporation is devoted to continual improvement of their environmental practices to lower their carbon footprint and to reduce their waste production to the minimum.

CONCLUSION

This thesis provides support and promotion of green practices in the corporate sector, which leads to sustainable economic growth. Increased sustainable performance has been shown to enhance corporate value and improve the bottom-line. As was already stated, sustainability is paving its way into the centre of corporate's value ladder and will play a key part in achieving success for many multinational corporations. The primary objective of this thesis is to outline the topic of environmental management system and provide its most influential benefits through conducted analyses in the analytical part. After brief descriptions of the sustainable development, the following part of the thesis goes into more detail of EMS and environmental policy. Environmental management system has been proven to be an undeniable part of the company's success and an important determinant in achieving an excellent financial performance. Nowadays, potential customers are more interested in working with organizations possessing a certification of ISO 14001 or EMAS and are more inclined to do business with certified suppliers as well. The theoretical part of the thesis has stated this multiple times by showing how much are certified environmental management systems important for the company's prosperity. Additionally, along with mentioned array of benefits EMS brings, its costs of implementation are outlined as well. The final section of the theoretical part focuses on the outside image and branding of companies in terms of sustainability and green decision-making. In our modern age, many corporations are making their green efforts with the sole intention of being perceived as "green" to be as much profitable as possible, while having no real regard for the protection of the environment at all. This section therefore explores the strategies behind green branding and explains why executive leadership of an organization needs to fulfil their promises, and not just talk the walk but walk it as well. In the analytical part of the thesis, the primary subject, which was marked as XY, was briefly characterized. More elaborative description of its practices in areas of sustainability were provided. Next, the description of its environmental policy provided the reader with a necessary overview of the company's practices connected with the environmental health and safety department. The implemented environmental management system conforming to ISO 14001 has been analysed in more detail in individual areas. Its effects were illustrated in a SWOT analysis, which revealed the strong suits along with weaker sides of the company. This analysis has also provided new suggestions on further improvements of some of the company's weaknesses, along with preventative measures and actions that were implemented on behalf of the management. The next chapter

of the analytical part explores and describes the environmental programs implemented in a Slovakian branch of the multinational organization. These programs, which were initiated by the management, has been instituted because the organization has an EMS conforming to ISO 14001 standards. More detailed analyses of these programs reveal that financial savings and organizational benefits derived from the programs serve as evidence, that all of them were successful operations. The second part explains the waste management policy of the company in the Slovakian branch. Lastly, the final part contains information about various awards received from the top environmental institutions in the world, which contribute to the firm's strong environmental performance, its eco-friendly and socially responsible representation, and finally, it serves as an undoubtful confirmation of the corporation's claims of being "green".

BIBLIOGRAPHY

Alberti, Marco, Luisa Caini, A. Calabrese, and Diana Rossi. 2000. "Evaluation of the Costs and Benefits of an Environmental Management System." *International Journal of Production Research* 38 (17): 4455–6. https://doi.org/10.1080/00207540050205226.

Antweiler, Werner. 2014. *Elements of Environmental Management*. Toronto: University of Toronto Press.

Brady, John. 2005. *Environmental Management in Organizations: The IEMA Handbook*. 1st ed. London: Earthscan.

Cornell, Garry. 2017. *The ISO 14001:2015 Companion. A Straightforward Guide to Implementing an EMS in a Small Business.* 1st ed. Zagreb, Croatia: Advisera Expert Solutions.

Čerkala, Emil, and Erika Kočická. 2010. *Environmentálny Manažment a Environmentálne Manažérske a Audítorské Systémy.* Zvolen: Technická univerzita.

Darabaris, John. 2019. *Corporate Environmental Management*. 2nd ed. Boca Raton,, FL: CRC Press.

Epstein, Marc J., and Adriana Rejc Buhovac. 2014. *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental, and Economic Impacts*. 2nd ed. Sheffield: Greenleaf Publishing.

European Commission. n.d. "Eco-Management and Audit Scheme (EMAS)." Accessed April 11, 2023. https://green-business.ec.europa.eu/eco-management-and-audit-scheme-emas_en.

European Commission. n.d. "Statistics and Graphs." Accessed April 11, 2023. https://green-business.ec.europa.eu/eco-management-and-audit-scheme-emas/about-emas/statistics-and-graphs_en.

Fildán, Zdeněk. 2016. *Příručka EMS podle ISO 14001*. Praha: ENVI GROUP.

Fonseca, Luis Miguel Ciravegna Martins da. 2015. "ISO 14001:2015: An Improved Tool for Sustainability." *Journal of Industrial Engineering and Management* 8 (1): 3-4. https://doi.org/10.3926/jiem.1298.

Krause, Josef. 2019. *Podniková Environmentální Strategie*. Praha: Wolters Kluwer.

Meroco. n.d. "Predstavenie spoločnosti." Accessed March 31, 2023. https://www.meroco.sk/

Miroshnychenko, I., Barontini, R. and Testa, F. 2017. "Green practices and financial performance: A global outlook." *Journal of Cleaner Production* 147:340-351. https://doi.org/10.1016/j.jclepro.2019.01.058

Modak, Prasad. 2018. *Environmental Management towards Sustainability*. Boca Raton, FL: Taylor and Francis.

Morris, Alan S. 2004. *ISO 14000 Environmental Management Standards*: *Engineering and Financial Aspects.* Hoboken, NJ: John Wiley & Sons.

Responsible Business Alliance. n.d. "Responsible Business Alliance." Accessed 15 April, 2023. https://www.responsiblebusiness.org/.

Schaltegger, Stefan, Roger Burritt, and Holger Petersen. 2017. *An Introduction to Corporate Environmental Management: Striving for Sustainability*. London: Routledge.

Slovak Environmental Inspectorate. n.d. "About Us." Accessed 12 April, 2023. https://www.sizp.sk/slovak-environmental-inspectorate/about-us.

World Commission on Environment and Development. 1987. "Our Common Future." https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf.

LIST OF ABBREVIATIONS

ASG	Advanced Solutions Group
CO_2	Carbon Dioxide
GHG	Green House Gas emissions
GSCM	Green Supply Chain Management
ISG	Intelligent Solutions Group
ISO	International Organization for Standardization
E2	Environmental Emergency Plan
EMS	Environmental Management System
EHS	Environmental health and safety
SAGE	Strategic Advisory Group on the Environment
SIE	Slovak Environmental Inspectorate
LCA	Life Cycle Assessment
P2	Pollution Prevention Plan
RBA	Responsible Business Alliance
PSG	Power Solutions Group
U.S.	United States of America
USD	The United States Dollar
WCED	World Commission on Environment and Development

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