Our research focuses on Kozmetika Afrodita d.o.o., a leading Slovenian cosmetics company, and the impact of blockchain technology on its business environment. The cosmetics industry is increasingly emphasizing natural products and transparency, with health-conscious consumers demanding more insight into what they put on their skin. Many companies have adopted blockchain technology for transparency from ingredient sourcing to final production. We analyzed Kozmetika Afrodita internal and external environments, identifying opportunities, threats, strengths, and weaknesses. We found that digital transformation and blockchain technology would significantly benefit Kozmetika Afrodita. The new technology would enable the company to have excellent product transparency, consumer trust and competitiveness at home and abroad. Revenues would also increase. Despite some potential disadvantages, we do not perceive these as risky. Blockchain technology is a powerful tool for promoting sustainability, supporting green production processes, and enabling real-time collection and analysis of low-carbon or green data. We analysed the internal and external factors of the company using STEEP (sociocultural, technological, economic, ecological, political-legal environmental factors) and IFAS (internal factors synthesis) methods. We found that blockchain technology would have a positive effect on the company’s product quality, customer loyalty, market position and revenue.
1 Introduction

The 21st century has witnessed the emergence of a number of disruptive technologies that have had a major impact on the cosmetics industry. The cosmetics industry is poised for explosive growth. In 2020, it was worth around USD 532 billion and is growing rapidly (Kaur, 2020). The global cosmetics market is expected to reach $758.4 billion by 2025, driven by a surge in skincare and natural products (Owens, 2021). Unfortunately, although cosmetic brands seem to be booming, they are still facing various problems that limit their growth.

In the business world, the power of suppliers has long since shifted to the side of consumers. Today, consumers are far from satisfied with the old sales approaches, as they are better informed and expect more from their product providers. Consumers are increasingly demanding better insight into what their products are like and do not believe what advertisers say, as brands in the cosmetics industry have already been accused of misleadingly claiming to be more environmentally responsible than they really are. This can have a detrimental effect not only on the brand's reputation but also on consumers' health. The risks to public health posed by the lack of regulation of cosmetics production are wide-ranging. In view of these trends and the issues to be addressed, the cosmetics industry is increasingly technologically evolving (Kaur, 2020).

A number of internal and external factors directly or indirectly affect a company's performance. Some of these factors can be influenced by the enterprise, but most cannot, and the enterprise must adapt to avoid being affected by changes in these factors. Together, these two factors form the business environment (Kamble, 2021). Knowledge of a firm's external and internal environment plays a vital role in shaping a firm's strategy, but the environment in which organizations compete is increasingly dynamic and rapidly changing, requiring constant changes in strategies and activities to reflect these changing circumstances (Kennerley & Neely, 2003). Different environments, in turn, offer different development opportunities for firms, accompanied by different obstacles. Both (development opportunities and development constraints) provide a testing ground for the firm to play its development game. The players of the company have a decisive influence on the success of this game, but so do the competing teams. The firm must be able to
overcome the development obstacles, turn opportunities into development possibilities and then exploit them for its own development (Belak, 1998).

In this paper, we examine the development planning of Kozmetika Afrodita d.o.o. by introducing blockchain technology due to the problems faced by consumers already listed above. The use of blockchain technology in the company involves numerous tasks, including enhancing product transparency, combating false claims, digitizing data, protecting against counterfeiting and improving security. However, in the paper we mainly focus on a more detailed examination of the external and internal environment of the company and the impact of blockchain technology on these two environments of the company.

2 Theoretical Background

2 The Company's Business Environment

2.1.1 Examining the External Environment of the Company

The business environment is the internal and external forces of a company that influence the way the organisation operates. This may include customers, employees, stakeholders, other organisations or resources. The elements that create the business environment are important for the survival of the business. How the business improves and develops depends on these aspects. It is important that an organisation understands and examines its business environment in order to adapt to potential changes (Indeed, 2021).

The business environment is broadly divided into the external environment and the internal environment. The external environment consists of variables outside the business over which the business has no significant influence in the short term. The internal environment is represented by variables within the company. The external environment is further divided into the wider external environment and the operating environment of the firm (Jaklič, 2005, str. 1).

The external environment is very important for the company to study, as strategic planning aims to exploit opportunities from the environment with the company's strengths and to reduce threats from the environment by eliminating the company's
weaknesses or creating new strengths. Thus, the study of the environment must give us an answer to the question 'which influencing factors, given the environment and future developments in the environment present opportunities and threats for the company'. (e.g. Lombriser, Abplanalp, 2005; Hunger, Wheelen, 1993, summarised in Duh, 2015, p. 185) Environmental uncertainty is a reflection of the degree of complexity of the environment and the degree of change in the firm's external environment. "On the one hand, it is a danger for the firm because it hinders the formulation of long-term plans and strategic decision-making to maintain the firm's equilibrium with the external environment, but on the other hand, it is an opportunity because it creates new areas in which firms' innovation and creativity can be expressed" (Duh, Upravljanje podjetja in strateški management, 2015, str. 185).

There are different methods for studying the external environment of a company, such as the STEEP and PESTEL analyses (Duh, 2015, p. 209), the scenario method (Duh, 2015, p. 219) and the EFAS table (Duh, 2015, pp. 223-224). In the empirical part, we have presented the external environment of the company Kozmetika Afrodita by means of the STEEP analysis.

2.1.2 Examining the Internal Environment of the Company

However, attention should not only be focused on the external environment, but also on the internal environment of the company, in order to identify those key strengths and weaknesses that are likely to affect the company's ability to take advantage of opportunities and avoid risks. The purpose of examining the internal environment is to identify those variables within the firm that may represent significant strengths and weaknesses for the firm, particularly in comparison with existing or potential competitors. The firm needs to have information on the interdependence, structure and mode of action of these factors in order to assess what the firm is able and capable of doing (Duh, Upravljanje podjetja in strateški management, 2015, str. 196). The internal environment of a firm can be studied in a variety of ways, taking as a starting point one of the basic strategies (Müller-Stewens, Lechner, 2005, p. 213, summarised in Duh, 2015, p. 196):

- resources/resources,
- capabilities,
Methods for studying the internal environment of a company include the analysis of the company's resources and/or capabilities (Duh, 2015, pp. 225-227) and the internal factors synthesis or IFAS table (Duh, 2015, pp. 227-229).

### 2.2 Blockchain Technology in the Cosmetics Industry

The last ten years have witnessed exponential growth in the cosmetics sector. The beauty industry is now valued at over $532 billion and is growing rapidly. By 2024, it is estimated to be worth up to $750 billion. Technology-enabled cosmetic brands will surely continue to transform the beauty world in the years to come (Kaur, 2020). Today's beauty scene has changed dramatically. With the advent of technology, mankind has brought the art of beauty closer to man. From customised skin care to personalised solutions from experts, everything is at your fingertips (Rathod, 2019). Consumers are increasingly demanding better insight into what their products look like and often do not believe what advertisers say. This is especially true as "the link between certain cosmetic ingredients and health problems is becoming more and more apparent". (CB insights, 2019, summarised in Kaur, 2020, p. 2) Transparency of product ingredients has become a top priority not only for cosmetics and personal care brands, but also for consumer packaged goods, not least for retail companies. A clean beauty movement has also emerged, driven by consumer demand for ingredient transparency - "the global natural and organic beauty market is estimated at $22 billion" (Kaur, 2020).

The Ipsos report (2019, summarised from BSN, 2021) highlighted a number of trends and challenges for the industry if it continues to grow at such an impressive pace. Three words keep cropping up in relation to the product attributes that attract cosmetics buyers to new brands: "clean", "natural" and "sustainable". The report also notes that "two thirds of consumers responded positively to the statement: 'I would be interested in trying new products from other brands if they are natural', while 59% agreed with the statement: 'I would be interested in trying new products from other brands if they are clean'." These data were derived from surveys of consumers in the US, but similar themes emerge in all major cosmetics markets (BSN, 2021).
"70% of consumers hardly believe the sustainability claims made by brands, 94% think they should be more transparent and 71% would even be willing to spend more money on brands that guarantee product traceability. This is a key problem. If blockchain becomes democratic, I think this is the future," says Maxime Finaz de Villaine, CEO of Bloomup Energie Fruit, in a recent article (Milet, 2022).

However, despite the widespread use of the terms 'natural' and 'clean', the use of cosmetics and skincare products is unregulated and therefore lacks uniform standards in the cosmetics and personal care sector. As a result, brands have been accused of making misleading claims in order to portray themselves as more environmentally responsible than they really are. This can have a detrimental effect not only on the brand's reputation but also on consumers' health, as false green advertising ("greenwashing") is misleading. Increased experimentation with blockchain technology in the consumer packaged goods and retail market is creating initiatives in the cosmetics and personal care sectors on ingredient transparency (Kaur, 2020).

The risks for public health posed by the lack of regulation of cosmetic products are wide-ranging. In view of these trends and the issues to be addressed, the cosmetics industry is increasingly developing technologically. Blockchain is a very open, incorruptible and decentralised technology, which provides a fair and trustworthy way to verify information from a brand and its supply chain to the end customer (Kaur, 2020). Blockchain can enable brands to show consumers exactly what they want to know about the products they buy (BSN, 2021).

Many foreign brands are already making use of blockchain technology in different ways. Because of its time-stamped and verified data entry, blockchain represents an innovative solution to the problem of supply chain visibility. A very common example cited in many reports and articles is Cult Beauty, an online retailer that has partnered with blockchain technology company Provenance to implement an in-store system called "proof points". Brands selling through Cult Beauty will be able to verify their product information using open information from NGOs and lab reports, for example on vegan ingredients or sustainability. This will enable consumers to make informed purchasing decisions (Owens, 2021). We would recommend such an application of blockchain technology for Kozmetika Afrodelta.
to further increase its competitiveness and provide greater transparency to customers.

Looking ahead, it seems likely that blockchain will play an increasing role in this sector in the coming years (BSN, 2021). Consumers can make more informed purchasing decisions, have more flexible loyalty incentives and access to a unique and personalised product offering. Cosmetic brands that engage in these developments now will be best positioned to build sustainable loyalty in the future (Owens, 2021).

So why would the introduction of blockchain technology be a game-changer for Kozmetika Afrodita? Firstly, the cosmetics industry is not yet using blockchain technology; at least not the vast majority of it. In Slovenia, Afrodita would be the first example of information verification and transparency. On the packaging or on the website, it would be possible for the consumer to check all the information behind the claims made, the ingredients. The company could then use the chosen platform to ensure transparency for customers who want to know more (Provenance).

3 Methodology

In this paper, we will use secondary sources for our research, which will be gathered from external online sources and literature, based on scientific and professional literature, relevant articles and sources. The research is static.

In the theoretical part of our study, we'll employ various research methods: the descriptive method to detail and clarify the topic; the compilation method to summarize key insights from sources; the synthesis method to integrate data into a cohesive whole; the analysis method to examine the company's external and internal environments; and the classification method to define key concepts related to enterprise development and business environment. The empirical part of the paper belongs to the case studies, because we are researching on a case. The research will be carried out on the case of the cosmetics company Kozmetika Afrodita d.o.o. The external environment of the company will be examined by means of a STEEP analysis. STEEP analysis (Duh, 2015, p. 209) aims to study and monitor development trends in the wider/social and natural environment. It includes the
study and monitoring of socio-cultural, technological, ecological, economic and politico-legal environmental factors (Duh, 2015, str. 209). We have used the chosen analysis to study the external environment of the company, focusing more on the impact of blockchain technology on this environment. In doing so, we took into account trends that are relevant to Kozmetika Afrodita.

The internal environment of the company will be examined by means of an internal factors synthesis or IFAS table (Duh, 2015, pp. 223-224). The IFAS table is designed to synthesise the internal factors, which can be used to summarise, among other things, the main insights into the internal factors that affect the performance and development of the company itself. This table is used to identify the strengths and weaknesses of a company, to analyse how management responds to these factors and how important these factors are for the company (Duh, 2015, str. 227). With this table we show the strengths and weaknesses of the company Kozmetika Afrodita.

In this paper, we tested the following hypotheses:

H1: There is an opportunity in the environment to introduce blockchain technology into the enterprise.
H2: There is an opportunity to introduce blockchain technology in an enterprise environment.
H3: The introduction of blockchain technology into a company has a greater impact on the external than the internal environment of the company.

4 Results

To analyse the company's business environment, we used two methods, the STEEP analysis to examine the external environment and the IFAS table to examine the internal environment. We have described a number of opportunities and threats, as well as strengths and weaknesses of Kozmetika Afrodita, which have been used in this chapter to analyse the impact of the introduction of blockchain technology on the external and internal environment of the selected company.

We have found that the biggest problem leading to the adoption of blockchain technology is consumer health and the distrust of empty words from cosmetic brand advertisers. The EU has much stricter laws than the US, which is why cosmetics in
Slovenia also have to go through several stages of product safety checks before a brand can even launch it on the market. Kozmetika Afrodit also adheres to strict legal regulations and expects the same from its suppliers. However, despite the strict legal regulations and the slightly increased trust in the Slovenian brand, the issue of increased transparency and consequently increased customer loyalty and possibly increased sales and competitiveness in the market still remains in the background.

The attractiveness of blockchain technology stems precisely from its ability to support transparent data exchange, optimise business processes, improve operational efficiency, reduce operating costs and develop a system that does not need to explicitly incorporate trust in its control. It also enables new ways of green production and storage of data related to activities responsible for pollution and environmental degradation, and the collection and analysis of low-carbon or green data in real time for timely decision-making (Bai, Cordeiro, & Sarkis, 2020).

### Table 1: STEEP analysis for Kozmetika Afrodit.

<table>
<thead>
<tr>
<th>Economic environment</th>
<th>Political-legal environment</th>
<th>Socio-cultural environment</th>
<th>Ecological environment</th>
<th>Technological environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>− GDP growth</td>
<td>− laws on cosmetic products</td>
<td>− humanitarian work</td>
<td>− recycling waste</td>
<td>− research development</td>
</tr>
<tr>
<td>− economic growth</td>
<td>− consumer distrust</td>
<td>− organising and supporting</td>
<td>− natural technological</td>
<td>− development of innovation</td>
</tr>
<tr>
<td>− high inflation</td>
<td>− uncertainty of liability</td>
<td>− various events and institutions</td>
<td>processes introducing</td>
<td>− developme nt of new technological processes</td>
</tr>
<tr>
<td>− low unemployment</td>
<td>− manufacturing and</td>
<td>− charity work</td>
<td>− GMP for safer products</td>
<td></td>
</tr>
<tr>
<td>− lack of adequate human resources</td>
<td>− supporting various events and institutions</td>
<td>− ethical behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>− increased domestic consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The company's external environment was analysed using STEEP analysis, where we looked at five different environments and identified opportunities and threats for each of them. Opportunities for Kozmetika Afrodit are GDP growth, economic growth, the growing boom in natural cosmetics, care for employees, the environment and consumers, a wide range of cosmetic products, social responsibility, high brand awareness and popularity, excellent technological development, especially in the field of research, and reduced energy consumption.
However, the main risks for the company are the current high inflation, the lack of adequate staff, the renewed crisis due to covid-19, the cost of training employees, possible changes in legislation, the high competition in the cosmetics market and the growing mistrust of people towards cosmetic products and the brand.

Regarding the external factors of Kozmetika Afrodita (Table 1), we found that Europe is one of the world's largest producers of cosmetic products and that the cosmetics industry is a major contributor to the European economy; the production of cosmetic products alone directly contributes around €11 billion of gross value added to the European economy each year. We have also found from our research that cosmetic products containing natural ingredients without controversial chemicals are and will continue to contribute to market growth, and that Slovenia is forecast to experience favourable economic and GDP growth in 2022. On the other hand, the company is facing competition and customer disloyalty, precisely because of the huge volume and choice of cosmetic products. The introduction of the chosen technology would represent a major opportunity for Kozmetika Afrodita both at home and abroad, as it is particularly attractive for this sector because it has the effect of increasing consumer confidence, which is an important prerequisite for the company's growth. The company would thus establish or improve transparency and, consequently, the trust of current and new consumers. It would increase revenues, improve competitive advantages in the market and raise brand awareness. Many foreign cosmetics brands such as Cult Beauty, The Ordinary, Tropic that are already using blockchain technology in their business have confirmed increased trust, loyalty and competitive advantages. With just one click or scan of a QR code, consumers can easily access all the information they may have doubted before.

The internal environment was analysed using the IFAS table, where we identified the key strengths and weaknesses of Kozmetika Afrodita. Under strengths we mentioned sustainable development, human resources management, innovation and product quality, which is one of their main strengths. Under the weaknesses we identified the business processes that the company needs to improve, digital business, which aims to optimise business and production processes and thus facilitate the introduction of blockchain technology into the company, the introduction of a completely new system into the company, which can bring various risks, and the lack of adequate human resources, which will be caused by the introduction of blockchain technology into the company. The weighted score that
we have obtained here as a final result is above average, which means that the company is responding well to the environmental factors and is at an advantage compared to the competition.

Table 2: IFAS table for Kozmetika Afrodita.

<table>
<thead>
<tr>
<th>Internal factors</th>
<th>Weight</th>
<th>Assessment</th>
<th>Weighted assessment</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable development</td>
<td>0.15</td>
<td>4</td>
<td>0.6</td>
<td>A great responsibility</td>
</tr>
<tr>
<td>Human resources management</td>
<td>0.05</td>
<td>5</td>
<td>0.25</td>
<td>Good</td>
</tr>
<tr>
<td>Innovation</td>
<td>0.10</td>
<td>4</td>
<td>0.4</td>
<td>Keeping up with consumer trends and needs</td>
</tr>
<tr>
<td>Product quality</td>
<td>0.20</td>
<td>4</td>
<td>0.8</td>
<td>Good quality</td>
</tr>
<tr>
<td>Disadvantages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business processes</td>
<td>0.10</td>
<td>3</td>
<td>0.3</td>
<td>Process improvements</td>
</tr>
<tr>
<td>Digital commerce</td>
<td>0.10</td>
<td>3</td>
<td>0.3</td>
<td>Optimisation of business and production processes</td>
</tr>
<tr>
<td>New system</td>
<td>0.15</td>
<td>2</td>
<td>0.3</td>
<td>High challenge and risks</td>
</tr>
<tr>
<td>Adequate staff</td>
<td>0.15</td>
<td>3</td>
<td>0.45</td>
<td>New system</td>
</tr>
<tr>
<td>Overall assessment</td>
<td>1.00</td>
<td>3.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In terms of internal company factors (Table 2), Kozmetika Afrodita is particularly concerned about sustainability, employees, quality and innovation. Every day we buy products that have an impact on people and the planet. And brands often make sustainability claims that are difficult to determine whether they are genuine or not. By adopting the chosen technology, Kozmetika Afrodita would save a lot of time and energy, as it would be able to manage a huge number of sustainability claims for its large volume of annual product launches in one place, where consumers could easily get information about the ingredients in the product, the origin of the suppliers, the composition of the packaging and the production. By obtaining this information, the company would be able to demonstrate its environmental and social responsibility and the quality of its products. We see a bigger problem in the current workforce, which is not sufficiently skilled and educated in this area. It would be necessary to recruit a completely new cadre of specialists, which is necessary for the smooth operation of the company when blockchain technology is introduced. This would mean an increase in costs for the company, but does not represent a
significant risk for the company. The purchase of a specific blockchain-enabled platform, which the company needs for this type of business, also entails an additional cost. Kozmetika Afrodita wants to improve its digital business and business processes, which will make it easier for the company to implement and understand the new technology. At the same time, we would like to improve the competences of the company's employees in the field of digitalisation through the necessary trainings and seminars. In particular, by going digital, the company will increase the transparency of its business processes and reduce its exposure to business risks, as we have already established in the previous chapter.

The final weighted assessment, which was obtained by examining the company's internal factors, is 3, 40. This score shows that Kozmetika Afrodita is above the industry average.

5 Discussion

The business environment is very diverse and dynamic. We can never fully predict how it will affect a company's growth and development, so companies need to constantly adapt and keep up with trends if they want to remain competitive in their industry. Development must lead to greater success and employee satisfaction, which is why successful development requires an examination of the company's business environment. Technology and technological processes are increasingly evolving and offer companies the opportunity to optimise their business and other processes, which makes knowing your business environment in your industry all the more important for success and further growth.

We tested three hypotheses:

H1: There is an opportunity in the environment to introduce blockchain technology into the enterprise.

Through various research, a review of foreign companies using blockchain and an analysis of the external and internal environment of Kozmetika Afrodita, we found that there is an opportunity for the company to introduce the technology into the company. We have demonstrated this by using a STEEP analysis, where we present the opportunities and threats of the company and the strengths and weaknesses
through a synthesis of internal factors or an IFAS table. Finally, based on the internal and external factors identified, we analysed the impact of introducing blockchain technology in the selected company, where we found that it would provide the company with competitiveness, consumer trust, transparency and increased revenues. However, from the analysis of the annual report of Kozmetika Afrodita, the potential higher costs of purchasing the necessary blockchain platform, hiring new people do not pose a significant risk to the company's operations.

Based on the data and analysis, we confirm hypothesis 1.

**H2: There is an opportunity to introduce blockchain technology in an enterprise environment.**

Foreign cosmetics companies that have implemented blockchain technology in their business processes have confirmed better and easier future operations. The use of this technology saves them a lot of time by proving their sustainability and quality. As this is still a relatively new technology in the cosmetics industry, many companies do not know or understand it. It is therefore important for a company to understand the growing importance of digital business and the development of technology that will bring it new opportunities and greater visibility. And with it, more revenue, competitiveness and customers. For Kozmetika Afrodita, the analysis of the impact of blockchain on the business environment has shown that the introduction of this technology would have a positive impact on the further growth and development of the company, as blockchain technology represents the future not only in the cosmetics industry, but also in many other industries. The selected company is aware of the importance of digital transformation, is able to analyse its business environment and therefore the introduction of blockchain technology would be the right choice for its future development.

Hypothesis 2 is confirmed from the data and analysis.

**H3: The introduction of blockchain technology into a company has a greater impact on the external than the internal environment of the company.**

The STEEP analysis identified opportunities and threats in Kozmetika Afrodita's external environment. The final findings identified the successful external impact of blockchain technology on the company's environment. Consumers are extremely
important to cosmetics companies, who are increasingly concerned about their health and what they put on their skin. Consumers are one of the main reasons why cosmetic companies choose blockchain, to give them transparency of their cosmetic products and to have more trust in the company. Internally, however, we perceived some more downsides that can come with the adoption of the chosen technology. Blockchain affects both environments to its extent, but it certainly has a greater impact on the external environment of Kozmetika Afrodita, as this is where the results of its use are most visible, and this can also be detected from the previous chapters in the paper.

Therefore, hypothesis 3 is confirmed from the data and analysis.

Unfortunately, we did not have enough information about blockchain technology in the cosmetics industry to further deepen and substantiate our paper. For further research, we could also have personally contacted the company Kozmetika Afrodita, which could have given us a better insight into the company's operations and their further development. We were also not able to make a concrete comparison of Kozmetika Afrodita with other companies using blockchain technology, as the data was poor or unavailable.

6 Conclusion

Blockchain technology is the technology of the future in many industries. In the cosmetics industry, too, more and more companies will start to understand the deeper meaning of natural products and their relevance to consumers. Consumer awareness of clean cosmetic products is increasing day by day. Their demands for greater transparency in product formulation will become a necessity and it is important for cosmetics companies to analyse and better understand their business environment, analyse successful competitors and listen to their consumers as soon as possible.

Blockchain would provide opportunities for Kozmetika Afrodita in the business environment, opening the door to a complete digital transformation of the company and positively impacting the growth, development, internal and external factors of the organisation. Kozmetika Afrodita would operate in a more sustainable way, with greater consumer confidence and a strong competitive position in the cosmetics
market. It can be argued that blockchain is truly a technology of the future that will change the world of beauty for the better.

References

(n.d.). Preuzeto 15. 7 2022 iz Provenance: https://www.provenance.org/about