**Federal State Institution of Higher Professional Education**

**Saint-Petersburg University**

**Graduate School of Management**

**Internationalization strategy for Division of serial drive technology of “Diakont” company**

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Saint-Petersburg

2023

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# **INTRODUCTION**

Historically, global pandemics have caused significant shocks to every field of human existence. Although the death toll relative to the population of the COVID-19 pandemic was much lower than that of the Black Death or the Spanish Flu, the macroeconomic effects of the pandemic are still prominent today. As the International Monetary Fund claims, "The great historical pandemics of the past millennium have typically been associated with subsequent low returns on assets. Measured by deviations in the natural rate of interest, these responses indicate that pandemics are followed by sustained periods—over multiple decades—with depressed real interest rates." [Jorda, Singh, Taylor, 2020] Pandemics negatively affect the investment activity of the population, which, in turn, creates both supply and demand disturbances for several decades to come. The reduced supply, accompanied by unchanged demand, creates upward pressure on prices, increasing inflation. Furthermore, stimulus checks, healthcare investments, and state and local aid issued by the majority of governments raised money supply and hence inflation as well. Consequently, in the post-pandemic contemporary world, a large number of countries not only have higher inflation rates than in previous years, but also lower real GDP per capita compared to pre-pandemic times. In 2022, these processes were exacerbated by the Russian special military operation on Ukrainian territory as a continuation of the ongoing conflict between the two countries. This new spiral of the Russia-Ukraine conflict has led to a global political crisis and economic downfall, as most European and North American countries halted trade relationships with Russia. As a result, the global economy was exposed to another shock, as Russia was one of the largest suppliers of energy and agricultural products to European and African markets, respectively. These circumstances suggest that investors and companies should consider redistributing their capital to avoid global political crisis risks and potentially gain a competitive position in markets least affected by both the COVID-19 pandemic and the ongoing Russia-Ukraine conflict.

Among companies currently searching for new markets, an eminent example is the Diakont group of companies. The organization is among a few Russian industrial enterprises that not only develops knowledge-intensive industrial equipment but also markets and manufactures it overseas. This provides the company with the opportunity to perform, compete, and diversify its operations in any market worldwide. Diakont is a Russian company that was founded in 1990 as a semi-governmental organization focusing on the production of optical systems for marine nuclear reactor monitoring applications. The company produced R&D-intensive products for specific areas, predisposing it to international markets as its home market was excessively turbulent during the 1990-2000 period. Accordingly, seven years after Diakont's establishment, the company concluded its first deal with Swedish company ABB TRC for a monitoring system required for nuclear reactors. The Swedish project paved the way to Europe as radiation-resistant cameras began to arrive there in 2001, and a year later to the largest consumer market in the world at that time, the USA. Diakont's partnership with the US distributor marked another milestone for its establishment as an international company, as the company realized the demand for its products and established two US-based subsidiaries and an office in Italy between 2011 and 2014. The creation of a branch in Italy pursued the core strategic goal of starting the production of electromechanical actuators for the motion control market, which would allow the company to participate in the rapidly growing international market of serial electromechanical actuators. In 2021, the company finalized the construction of its new Luciano plant, capable of producing over 14,500 units of serial actuators per year. Naturally, achieving the factory's full load requires substantial time and effort from the company. With an eye to achieving economies of scale, Diakont is already undertaking several strategies not only to promote its production but also the company itself. However, due to the current political and economic instability and the company's need to dramatically increase sales of actuators, Diakont requires a strategy not only to promote its production but also to enhance its presence in markets least affected by the global crisis.

For this purpose, Diakont has authorized me to create recommendation regarding an internationalization strategy for its Division of Serial Drive Technology (DSDT) to further promote the company's serial actuators globally and achieve the factories full load[[1]](#footnote-1). This consulting project will be based on an evidence-based approach, and a substantial managerial analysis of various industries, markets, and countries will be provided. The overall goal of the diploma thesis is to create recommendation concerning internationalization strategy for Diakont's Division of Serial Drive Technology. The objectives of the diploma thesis are as following:

* Describe Diakont company and its resources;
* Analytically identify the most favorable market for the company's internationalization strategy for the Division of Serial Drive Technology;
* Assess opportunities of Diakont on the most favorable market
* Analytically identify the most favorable internationalization mode for the most favorable market.
* Assess financial feasibility of the entry mode identified for Diakont;
* Create a recommendation for the company’s Division of Serial Drive Technology regarding the implementation of the internationalization strategy.

The diploma thesis is trichotomous due to the presence of three core chapters in its structure. The first chapter is devoted to the description of the Diakont company, its history and resources. The second chapter of the diploma thesis provides reasoning for internationalization and assessment of various international markets to select the most favorable one for the company's internationalization. In this part, international markets are assessed based on defined criteria, and the best one is selected. The best market is further analyzed with the help of managerial analysis methods to form a basis for a relevant recommendation for internalization strategy for Diakont’s division of serial drive technology. The third part includes the assessment of applicable entry modes, opportunities of Diakont in Chinese market, financial plan and an internationalization recommendation for the company’s division of serial drive technology (DSDT) based on Diakont's DSDT market opportunities and prior analysis of the most favorable market, and a mode for the internationalization strategy. Throughout the diploma thesis, a great deal of authoritative publications is used to achieve both reliability and timeliness of the project. Statistical data, expert suggestions, and scientific articles are present to prove and support statements made in the diploma thesis. The primary focus of the informational sources is placed on statistical data.

**METHDOLOGY**

This section delineates the research methodology implemented in the diploma thesis, which focuses on the internationalization strategy for the division of serial drive technology of Diakont. The research approach incorporates a combination of primary and secondary data sources, ensuring an extensive comprehension of the market landscape, industry trends, and specific company requirements. The research design for this study is exploratory and descriptive in nature, with the objective of investigating potential markets for expansion and devising an informed internationalization strategy for Diakont's division of serial drive technology. Furthermore, an integral part of this methodology is a systematic workflow that outlines the step-by-step process of the research, ensuring a cohesive and comprehensive analysis. This workflow, characterized by its interconnected steps, allows for the development of a robust internationalization strategy by exploring each aspect of the process in detail and in relation to one another. The end goal is to provide a detailed, replicable, and transparent process that results in an actionable and feasible internationalization strategy for Diakont’s division of serial drive technology.

1. *Workflow*
2. **Company Description and Resource Identification**: Start with a detailed analysis of Diakont's company profile and the Business Model Canvas for its Division of Serial Drive Technology (DSDT). This step helps identify resources and capabilities, and understand the need for internationalization.
3. **Identifying Favorable Markets**: Use multi-factorial analysis, the institutional approach, and the CAGE framework to identify the most promising markets. These identified markets will be the focus for the subsequent analysis.
4. **Market and Competition Analysis**: Perform PESTEL analysis and Porter's Five Forces analysis to understand the market's external environment. Carry out competitor analysis to identify significant players and their strategies in the chosen market. These findings directly influence the identification of Key Success Factors (KSFs).
5. **SWOT Analysis and Matching**: Conduct a SWOT analysis using insights from the PESTEL, Porter's Five Forces, and KSFs. The SWOT analysis provides a comprehensive understanding of Diakont's strengths and weaknesses relative to the opportunities and threats in the selected market. Subsequently, perform a matching SWOT to identify how Diakont can use its strengths to exploit opportunities and mitigate threats, while addressing its weaknesses.
6. **Entry Mode Identification**: Apply the OLI framework to identify the most suitable entry mode, integrating findings from the SWOT analysis, PESTEL, and Porter's Five Forces analysis. This step determines the strategic approach to entering the chosen market.
7. **Financial Evaluation**: create a financial plan to evaluate the project's financial feasibility. The aspect ensures the proposed strategy is robust and financially viable.
8. **Recommendation**: Finally, make recommendation for Dikont’s DSTD for executing the identified strategy. The internationalization recommendation is based on insights gleaned from the matching SWOT, and previous analysis, providing a roadmap to navigate the proposed internationalization process.[[2]](#footnote-2)

The selection of the managerial instruments mentioned above is justified in the literature review section, which underlines the significance and validity of these tools and frameworks in strategic management and international business research. Each of the chosen instruments provides valuable insights and contributes to a comprehensive, well-informed strategy for Diakont's internationalization.

1. *Data Collection*

## **Primary Data**

An in-depth semi-structured interview with my supervisor from Diakont who leader of strategic promotion group is was conducted as a primary data collection method. The interview focused on the following aspects:

1. Type of interview:

Apart from structured interview, a semi-structured interview was chosen because it allows flexibility in the interviewee's responses and facilitates a more in-depth exploration of the topics at hand. The open-ended questions enable the interviewee to provide detailed insights and offer the interviewer the opportunity to ask follow-up questions as necessary, leading to a richer understanding of the subject matter. The primary data, collected through the in-depth semi-structured interview with Diakont supervisor, was analyzed using thematic analysis. This involved identifying, coding, and categorizing key themes and patterns that emerged from the interviewee's responses.

1. Interview Structure and Content:

The semi-structured interview consisted of open-ended questions addressing the following topics:

* Diakont's current operations, encompassing the scope of their EMAs division and international presence.
* The organization's strategic objectives, including growth plans, market expansion, and product development.
* The company’s financial data and internal information regarding competitors

1. Interview Data Recording and Transcription:

With the interviewee's consent, the interview was audio-recorded to ensure accuracy in capturing their responses. Subsequently, the audio recording was transcribed verbatim, facilitating the qualitative analysis of the data.[[3]](#footnote-3)

## **Secondary Data**

Secondary data was collected and analyzed to understand the market landscape, industry trends, and potential target markets for Diakont's EMAs division. Triangulation was employed to ensure validity and reliability by corroborating information from diverse sources. Quantitative techniques, like market sizing and growth rates, were used to identify trends, assess market attractiveness, and compare potential target markets. Content analysis of the secondary data revealed themes, patterns, and insights relevant to the internationalization strategy and market dynamics. Various sources were utilized to collect secondary data, including Academic journals: To gather insights on internationalization strategies, market dynamics, and industry-specific trends.

* Market research reports: To obtain market size, growth rates, and competitor analysis in the target markets.
* Industry publications: To access up-to-date information on technological advancements, regulatory changes, and market developments.
* Company websites: To collect data on Diakont's competitors, their product offerings, and market positioning.
* Government databases: To access economic indicators, trade statistics, and policies affecting the EMAs industry in potential target markets.

This methodology offers a systematic approach to develop the internationalization strategy for Diakont's EMAs division. By merging primary and secondary data, and employing varied analysis techniques, this research design uncovers in-depth market insights. The outlined workflow integrates analytical tools and models, facilitating data-driven recommendation for Diakont's DSTD internationalization expansion strategy. The final output is a comprehensive and internationalization recommendation, anchored in the findings from the thorough analysis.

# **LIMITATIONS**

This diploma thesis, while striving to provide an analysis of the internationalization strategy for Diakont's electromechanical actuators division, acknowledges certain limitations that may impact the study's findings and internationalization recommendation.

1. Limited Access to Competitors’ Financial Information

One of the main limitations of this research is the unavailability of specific financial information about competing companies. Due to the laws and regulations in some countries, companies are not required to publicly disclose their financial statements. This creates a challenge in obtaining accurate and up-to-date financial data, which would have been beneficial for assessing the financial performance and market position of competitors.

1. Accessibility of Data Sources

Some of the secondary data utilized in this research were obtained from the library of GSOM SPbU. Access to these sources may be limited for readers who are not affiliated with the institution. Consequently, this may restrict the replicability of the study and the verification of the findings by external parties.

Despite these limitations, the diploma thesis aims to utilize a range of qualitative and quantitative data sources, including primary and secondary data, to deliver an informed and rigorous analysis of the internationalization strategy for Diakont's electromechanical actuators division. By acknowledging these limitations, the study seeks to provide a transparent and objective account of the research process and its findings.

# **LITERATURE REVIEW**

The process of internationalization and market selection involves a range of factors that companies must carefully consider when planning their expansion. It is a multifaceted endeavor that requires the synthesis of various theoretical perspectives, models, and analytical tools to successfully navigate the diverse landscapes of global markets. This literature review aims to explore these aspects, divided into three thematic segments: Theories of Internationalization, Market Selection in International Business. Each of these sections provides a critical examination of the prevailing theories, models, and tools, comparing them with alternative approaches, and highlighting their strengths and potential limitations. In doing so, this review offers an expansive understanding of the dynamics and complexities associated with international business expansion, informing the context within which companies like Diakont operate.

**Market selection strategies:**

Market selection is a crucial decision in the internationalization process of firms. The choice of target foreign market influences the strategy, resource allocation, and potential success of international business operations. Over the years, researchers have proposed several frameworks and theories to guide market selection in international business.

**Stages model:** Early models, such as the "stage" models, posit that internationalization is a series of sequential stages [Johanson & Vahlne, 1977, p. 30]. These models suggest that market selection is largely based on psychic distance, or perceived similarities and differences between home and host countries. However, these models' simplicity and linear progression have been critiqued for failing to account for the complexities and dynamics of modern international business [Knight & Cavusgil, 2004, p. 125].

**Portfolio models:** Similarly, the portfolio models, such as the PER model by Root [1994], provide an analytical approach to foreign market selection. These models propose that firms should consider multiple quantifiable factors, such as market potential, risk, and competitive intensity. However, these models have also been criticized for their heavy reliance on quantifiable variables and the tendency to overlook qualitative aspects of market selection [Madsen & Servais, 1997, p. 562].

**Network perspective:** The network perspective is another significant approach. This perspective emphasizes the role of relationships and network ties in determining foreign market entry [Johanson & Mattsson, 1988]. Nevertheless, it may not adequately account for external macro-level factors that could significantly influence market selection decisions.

**Internalization theories:**

Internationalization theories provide a vital lens to understand why and how firms expand their operations beyond their domestic borders. Among these theories, Dunning's Eclectic Paradigm, or the OLI model, arguably stands out due to its comprehensive and integrative nature.

**The Uppsala Model**: The Uppsala Model one of the earliest theories, proposes that firms increase their international involvement incrementally as they gain experience and knowledge in foreign markets [Johanson & Vahlne, 1977]. However, it has been critiqued for its linearity and limited applicability in explaining the internationalization of firms operating in fast-paced environments or the swift global expansion of born-global firms [Knight & Cavusgil, 2004].

**The Network Theory**: The Network Theory [Johanson & Mattsson, 1988], on the other hand, posits that firms internationalize through their existing relationships and networks. While this theory is certainly relevant in today's interconnected global economy, it may not fully consider the wider macroeconomic and strategic factors that can impact a firm's international expansion.

**Born Global theory:** Born Global theory is a more recent addition which articulates how certain firms can internationalize rapidly right from inception, rather than following the gradual steps suggested by the Uppsala Model [Madsen & Servais, 1997]. This theory is particularly pertinent in the digital age, but it may not completely account for the complexities and risks associated with international expansion.

**OLI model:** Among these, Dunning's Eclectic Paradigm or the OLI model [Dunning, 1988] has been widely recognized for its holistic approach. By considering Ownership, Location, and Internalization advantages, it provides a comprehensive explanation for why companies engage in foreign direct investment. Although some researchers question its relevance for service firms or digital companies, its integrative nature allows it to capture a wide range of factors affecting internationalization decisions, making it extremely valuable [Cuervo-Cazurra, Narula, & Un, 2015]. Indeed, according to [Cantwell, 2015], the OLI model's enduring appeal lies in its ability to adapt and expand its theoretical lens to encompass changes in the global business environment. It has also been lauded for its flexibility in explaining different modes of internationalization, not merely limited to foreign direct investment [Narula & Driffield, 2012].

The literature on internationalization theories, market selection, and analytical frameworks provides crucial insights for businesses' international expansion strategies. The range of theories and models, such as Uppsala Model, Eclectic Paradigm, Network Theory, and Born Global theory, highlight the complex nature of internationalization, necessitating a nuanced understanding of firms' expansion dynamics. Market selection models offer valuable perspectives on factors influencing market entry decisions, including psychic distance, market potential, network relationships, and institutional aspects. Analytical tools like CAGE framework, PESTEL analysis, Five Forces analysis, KSF, and SWOT analysis complement theoretical perspectives by assessing macro-environmental factors, industry competitiveness, and internal capabilities. Effective application relies on quality data, timeliness, and contextual appropriateness. Overall, the literature emphasizes the importance of a systematic approach to international market selection and expansion, while acknowledging the need for continual learning, adaptation, and strategic flexibility in a changing global landscape.

# **CHAPTER 1. Diakont and it resources**

## **1.1 History of Diakont group of companies**

Diakont is a Russian company that was established as a state-owned small enterprise in 1990 cooperating with Murmansk Shipping Company. Its founders, Mikhail Fedosovsky, had experience in developing satellite instruments and was interested in optoelectronic devices. He wanted to create a television camera that was highly sensitive optically and protected against ionizing emissions, which would be useful in the nuclear industry. Fedosovsky believed that Diakont could offer competitive products and services in the international market for monitoring and diagnostics by uniting super-professional sientitsts from the Soviet military-industrial complex. The company started in marine power engineering and developed a radiation-resistant television camera for monitoring nuclear reactors in 1991. Diakont expanded to stationary energy and created a successful television control system for nuclear fuel overload in 1994. By the early 2000s, their control systems were in place at 30 sites with VVER-1000 reactors in Russia, Bulgaria, China, and Ukraine. Diakont also created a new television measuring control system for the reactor vessel that identified defects overlooked by other methods. The company's success was based on its improved radiation-resistant camera. They continued to equip Soviet-designed nuclear power plants and soon became known to Western nuclear scientists. Diakont's place in the global nuclear power industry was beginning to be justified.

In 1997, Diakont signed its first international contract with Swedish ABB TRC for the development and manufacture of a robotic complex for monitoring reactor fuel channels. This project was a great financial success, and Diakont became a self-sufficient and commercially successful company, financing promising R&D. The Swedish project paved the way for Diakont's expansion into Europe and the United States, where it entered into a partnership agreement with Remote Ocean Systems, becoming the exclusive representative of Russians in the United States for special television systems and their service. Diakont squeezed out of the niche market the Anglo-American IST-Rees, which dominated it before the arrival of the Russians.

In 2007, Diakont won a tender for the modernization of a nuclear fuel reloading machine for the Finnish nuclear power plant in Loviz, becoming the first private Russian company to win a tender for the supply to a Western country of a control system that ensures safety at nuclear facilities during complex technological manipulations. Diakont proposed a model of quantitative assessment of security based on the theory of reliability and safety of complex systems by Rear Admiral Igor Ryabinin. The model determines the impact of each node of equipment, software, and personnel errors on safety during complex technological manipulations. The company uses this system for daily production control. The equipment for nuclear power now constitutes 45% of Diakont's revenue, with growth of up to 15% per year.

In 2011, Diakont registered its branch in San Diego, California to expand its activities in the United States, overcoming informal guidelines that prevented companies of Russian jurisdiction from cooperating with Americans and Europeans. This move allowed Diakont to engage in direct sales and quickly make Westinghouse a major customer. Diakont's development of robotic systems and pipeline diagnostics also contributed to its success. The company launched the production of robots for the inspection of gas pipes in cooperation with Gazprom in 2005 and created a unique robotic complex for the restoration repairs of telescopic connections of high-power reactors, contributing to the modernization and extension of the service life of Leningrad NPP power units. Mikhail Fedosovsky saw potential in the global pipeline diagnostics and repair market and extended his non-destructive testing business to the United States. Diakont Advanced Technologies partnered with Structural Integrity Associates, Inc. to conduct pipeline inspections using Russian-developed technology. Diakont has also won tenders for pipeline diagnostics in California and Alaska and opened divisions in Houston and Italy. The company developed diagnostic and cleaning tools for oil storage tanks and carried out underwater robotic work on inspection and cleaning at an American nuclear power plant. Despite receiving a tempting offer to buy the company, Fedosovsky refused, wanting to master the entire American pipeline and tank market.

Diakont registered a branch in Italy to produce precision electromechanical drives for the Motion Control market, which is worth over $15 billion. The company have been working on this topic for over 10 years, initially for nuclear power plants. Diakont have developed EMFs for aviation gas turbine engines, steam turbine installations, launch vehicles, helicopters, jet engines, and aircraft compartments. Diakont is focusing on developing a competitive product for general industrial use to meet the growing demand for robotization and mechanization of enterprises. The global industry requires high productivity and environmental safety, in line with the requirements of Industry 4.0. Diakont set up a precision electromechanical drives (EMF, actuators) production in Italy for the Motion Control market. Diakont's inverted roller-screw transmission has more than a five-fold resource and load advantage over competitors' analogues, making the company a global leader. In 2021 Diakont finalized the construction of Lucio plant which is capable to produce over 14500 actuaors a yeat further establishing company as a global corporation.

## **1.2 Diakont’s company profile**

Diakont is a Saint Petersburg-based Russian full-cycle engineering company providing innovative services and solutions to various industries. Diakonts’s revenue is steadily growing and was over 4 billion rubbles in 2021 despite the fluctuations in COVID time. The company has a strong asset base, healthy liquidity, and good profitability. Its financial ratios, including the autonomy coefficient (0.65), current liquidity ratio (2.8), and return on equity (6%), are all within or above normal ranges. Earnings before interest and taxes (EBIT) is substantial at 328,456. Based on key financial indicators, AO "Diakont" appears to be financially stable.The company legally registered in 1993 as joint stock company and currently employ over 1300 people. The first CEO and founder of the company is Michail Feodosovsky, who swapped his job position in 2022, authorizing new CEO of the company, Sergei Alekasanin. Diakont’s mission is to ensure safety and efficiency in science-intensive industries through the development and creation of high-tech equipment.

**Figure 1 Revenue/Profit of Diakont**

JSC Diakont is core a first organization in informal Diakont group of companies to which Gazproekt company, Diakont SRL and Diakont advanced technology (DAT) are attributed. Diakont JSC is engaged in 3 separate fields of business, namely, motion control, robotized diagnostics, nuclear expertise, and control systems. The research, development, and portion of production of Diakont production line is performed in company’s head office in Saint Petersburg. Diakont is spending over 8% of revenue on R&D, highlighting the strong R&D capabilities and focus on engineering capabilities of the company. The greater part of production is performed in Diakont Italian Luciano plant capable of production of more than 14500 units of actuator, which is designed to be supportive for motion control segment of Diakonts operations. The factory was created to produce motion control devices, namely, electromechanical actuators to conquer 5% of worlds actuator market. A service of robotized diagnostics is performed by separate organization called Gasproekt, while DAT is realize the production and service of Diakont company to USA.   
The Diakonts JSC organizational structure is a classical hierarchical divisional structure. There are seven departments in the company under management of CEO which represent different product lines of the company and supportive functions to them possessing separate budgets and internal administration. The Electric Drive Division (EDD) emphasizes the examination, advancement, and distribution of specialized drive technology catered towards electromechanical drives and control units, including frequency converters, prevalent in sectors such as energy, aviation, space, shipbuilding, and defense.

The Control Systems and Technological Equipment Division (CSTED) holds accountability for comprehensive development and global provision of both equipment and software solutions designed for nuclear power plants. The scope of CSTED's responsibilities extends to testing, commissioning, and diagnosing an array of devices and systems, encompassing console, process, and lifting equipment, refueling apparatus, diesel generators, and both automatic and automated control, regulation, and protection systems. The Division of Serial Drive Technology (DSTD) is at the forefront of designing and manufacturing a diverse assortment of electromechanical drives, tailored to meet the needs of various industries such as general industrial, automotive, aviation, power, and maritime sectors. The Robotics, Television, and Diagnostic Equipment Division (RTDED) dedicates its efforts towards research and development of serial equipment for nuclear power plants. This encompasses radiation-resistant television systems and robotic complexes, which prove useful for diagnostics and repair of equipment subjected to extreme operating conditions, including high levels of background radiation, high-temperature zones, and confined spaces. These robotic systems find their utilization in sectors such as nuclear, oil and gas, and public utilities. The Production Division (PD) constitutes a mechanical production unit, outfitted with cutting-edge machinery supplied by leading global manufacturers. This division encompasses assembly and installation units, a chemical-thermal and vacuum heat treatment workshop, a control and measurement laboratory, and testing benches. The Management Company (MC) shoulders the responsibility of formulating strategies and establishing homogenous corporate principles for overseeing financial and economic processes, along with personnel management. This encompasses administrative activities, both internal and external communication, and departments such as Financial and Economic Services (FES), Personnel Management and Communications (PMC), Quality Services (QS), Secret Regime Department (SRD), and Corporate Information System Development and Maintenance Services (CISDMS).The Administrative Support Department (ASD) guarantees seamless enterprise operations by addressing any issues related to electricity, ventilation, water supply, and heating. They also ensure meals are provided in the dining room, cleanliness is maintained in all rooms, and minor repairs to furniture and office equipment are undertaken. Moreover, the department provides assistance with relocation, and engages in loading and unloading operations.

Изображение выглядит как линия, диаграмма, Шрифт, снимок экрана

Автоматически созданное описание

**Figure 2 organizational chart of Diakont**

The Division of Serial Drive Technology (DSTD) at Diakont is a dynamic unit made up of four departments managed by head of department. The Engineering-Development, team drives product innovation and provides vital customer support, enhancing Diakont's reputation. The Logistics department ensures smooth and efficient product delivery, effectively managing inventory and supplier relationships. The Strategic Promotion team leads global sales and marketing efforts, reinforcing Diakont's position in the actuator market. Lastly, the Financial-Legal Department safeguards Diakont's fiscal health and legal compliance, overseeing crucial aspects like financial planning, risk management, and regulatory adherence. Together, these departments contribute to the successful global operation of Diakont's DSTD.

Изображение выглядит как текст, Шрифт, диаграмма, снимок экрана

Автоматически созданное описание

**Figure 3 organizational chart of DSDT**

## **1.3 Diakont’s DSDT business model canvas**

As an introduction to this section, it is essential to reiteratively highlight that this work is specifically tailored to Diakont's Serial Drive Technology Division (DSDT)[[4]](#footnote-4). This division specialises in providing advanced electromechanical drives to various sectors, reflecting its strategic importance in the company's overall business profile. Understanding the business model of the DSDT division is paramount for elaborating targeted and effective strategies for expansion into new markets, as outlined in this thesis. The following business model canvas will, therefore, be centered around this particular division, outlining its unique characteristics in relation to product and service offerings, customer segments, value propositions, channels of distribution, customer relationships, revenue streams, key resources, key activities, key partners, and cost structure. This in-depth examination will provide the necessary foundation for the ensuing recommendation for internationalization for Diakont’s DSTD.

Products and Services:

* Electromechanical drives (actuators) for various industries, including aviation, space, shipbuilding, automotive, marine, energy.

Customer Segments:

* Aviation industry
* Shipbuilding.
* OEM and Tier 1 automotive manufacturers.
* System integrators.

Value Proposition:

* Advanced electromechanical drives (actuators) designed with high precision, reliability, and adaptability for use in a diverse range of industries.
* Experienced and skilled team offering tailored solutions to meet specific industry requirements.
* Highly efficient manufacturing capabilities with cutting-edge machinery.
* Customizable solutions which Diakont can create adopting to needs of clients

Channels of distribution:

* Direct sales to industrial clients in the identified sectors.
* Partnerships with other companies in the industry to offer complementary products or services.

Customer Relationships:

* Regular communication with clients to ensure product satisfaction and address concerns.
* Continual support and maintenance services for the products.
* Feedback collection for product and service improvement.

Revenue Streams:

* Sales of electromechanical drives (actuators).

Key Resources:

* Specialized team with expertise in electromechanical drive technology.
* Advanced manufacturing facilities with state-of-the-art machinery.
* Intellectual property rights related to the technology.

Key Activities:

* Research and development for continuous product enhancement.
* Manufacturing of high-quality electromechanical drives.
* Marketing and customer relationship activities for brand recognition.
* Providing ongoing support and maintenance services.

Key Partners:

* Suppliers of raw materials and components.
* Industrial businesses within customer segments.
* Research institutions and universities.

Cost Structure:

* Costs of raw materials and components for manufacturing products.
* Manufacturing and assembly costs.
* Salaries and wages for the division's employees.
* Marketing and advertising expenses.
* Research and development costs.
* Maintenance and support services expenses.

Fixed Costs:

* Salaries and wages for division employees.
* Maintenance and support services expenses.
* Utilities for the division's facilities.

Variable Costs:

* Raw materials and components for manufacturing products.
* Manufacturing and assembly costs.
* Marketing and advertising expenses.
* Research and development costs.
* Additional salary expenses as per business growth.

In conclusion, Diakont's Serial Drive Technology Division excels in delivering advanced electromechanical drives to diverse industries. By maintaining strong customer relationships and leveraging specialized teams, state-of-the-art facilities, and intellectual property rights, it ensures high-quality manufacturing and continuous product enhancement. Through careful management of costs associated with materials, manufacturing, marketing, R&D, and salaries, the division fosters sustainable growth and delivers valuable, adaptable solutions to its customers.

# **CHAPTER 2. Market analysis**

**2.1 Various markets analysis**

### **2.1.1 Reasoning for internationalization and regional analysis**

In the rapidly evolving global economic landscape, businesses are persistently seeking opportunities for growth and diversification. This is particularly pertinent for companies like Diakont, a renowned Russian engineering firm specializing in the development and production of actuators, a crucial component in the motion control industry. While Diakont, as a whole, has already achieved significant progress in the international arena, there's always potential for further expansion. This potential is especially true for Diakont's Serial Drive Technology Division (DSDT), which harbors its own unique reasons for international expansion The following analysis delves into the rationale behind the pursuit of additional international market opportunities in the actuator segment, taking into consideration the current state of the global economy marked by the post-pandemic crisis and the ongoing Russia-Ukraine conflict. By examining various factors such as production capacity optimization, risk diversification, new market opportunities, geopolitical ramifications, and the growing demand for Industry 4.0 solutions, this discussion aims to provide a comprehensive understanding of the benefits that internationalization can offer both Diakont and its DSDT division in their quest for sustained growth and long-term success in the actuator market. Both Diakont as a whole and its DSDT division have their respective reasons for internationalization.

For Diakont, broadening its international footprint is a strategic move to diversify risk and explore new market opportunities. On the other hand, the DSDT division has the potential to increase its production vloume and capitalize on the global demand for Industry 4.0 solutions. The ensuing discussion will detail these reasons and provide insights into how international expansion can further solidify Diakont's position as a global industry leader.

* 1. Diakont’s reasons for internationalization:
  2. Diversification of risk exposure

Although Diakont has already penetrated international markets, further expansion can provide additional risk diversification. The persisting post-pandemic crisis and political instability emanating from the Russia-Ukraine conflict have resulted in increased market turbulence, inflation, and diminished real GDP per capita. By expanding operations to additional foreign markets, Diakont can diversify its risks and reduce dependence on any single market, thereby ensuring the company's long-term stability and growth prospects.

* 1. Exploitation of new market opportunities

The post-pandemic economic landscape and the Russia-Ukraine conflict have created supply and demand disturbances across various industries worldwide. Consequently, potential opportunities have emerged for Diakont to penetrate markets that have been less affected by these crises. Further expansion into foreign markets allows Diakont to establish itself as a dependable supplier of electromechanical drives, catering to industries experiencing supply chain disruptions. In the long run, this strategy can lead to increased market share and a more robust global presence for the company.

*2)* Diakont’s DSDT reasons to internationalization:

* 1. Capitalizing on global demand for Industry 4.0 solutions.

The worldwide shift towards automation, robotization, and environmental safety, integral components of Industry 4.0, presents a considerable opportunity specifically for Diakont's Serial Drive Technology Division (DSDT). As businesses globally continue to embrace Industry 4.0 technologies, a burgeoning demand for products and services facilitating this digital transformation, like the advanced electromechanical drives that DSDT specializes in, has emerged. Expanding DSDT further into foreign markets allows Diakont to capitalize on this trend and position the division as a preeminent provider of advanced technology solutions. This strategic move not only bolsters DSDT's global reputation but also ensures that it remains at the forefront of technological innovation.

* 1. Achievement of economy of scale

Despite Diakont's established presence in international markets, the company's DSDT division's manufacturing facility, constructed in 2021, currently operates at just 20% of its maximum capacity. Expanding DSDT further into additional foreign markets would enable Diakont to augment production and fully utilize the manufacturing capabilities of this specific division. This increased utilization would enhance the division's operational efficiency, facilitate economies of scale, and ultimately lead to reduced production costs and heightened competitiveness in the global market. The global expansion of DSDT thus directly contributes to the overall growth strategy of Diakont.

In conclusion, the turbulent global economic landscape engendered by the post-pandemic crisis and the Russia-Ukraine conflict has given rise to both challenges and opportunities for businesses such as Diakont. Expanding to additional foreign markets can yield numerous benefits, including increased production capacity utilization, diversification of risk exposure, access to new markets and customers, and the ability to capitalize on global demand for Industry 4.0 solutions. By seizing these opportunities, Diakont can further solidify its position as a global leader in its field and ensure long-term growth and stability.

In the Americas, Diakont's presence in the United States currently covers the market. The region's automation market is substantial, accounting for around 30% of the global market, with a projected value of $44.49 billion by 2026 (Source: Mordor Intelligence). Despite the considerable size of the market, several factors make the region less attractive for further expansion of Diakont's electrical actuator division. Firstly, the economic impacts of the pandemic have been significant in both North and Latin America, with widespread job losses, reduced consumer spending, and a decline in GDP. The U.S. GDP contracted by 2.8% in 2020 (Source: World Bank), while Latin America and the Caribbean's GDP contracted by 6.7% (Source: World Bank). Sectors directly related to the EMAs market, such as manufacturing and automotive, have faced challenges in their recovery. Secondly, the ongoing geopolitical tensions surrounding the Ukrainian crisis have resulted in disruptions to global supply chains, further straining businesses in the Americas that rely on international trade. Freight rates have sharply increased since the pandemic affecting the manufacturing sector that requires raw materials and components for their products. Thirdly, the actuator market in the Americas is relatively mature and saturated, evidenced by the presence of numerous well-established competitors, such as Emerson Electric, Honeywell, and Rockwell Automation. In 2020, the global actuator market was valued at $54.28 billion, with the Americas accounting for approximately $16.28 billion or 30% of the total market share (Source: MarketsandMarkets). This market saturation makes it more challenging for new entrants or existing companies to expand further. Fourthly, Latin America has faced challenges in its infrastructure development, which could potentially hinder the growth of the automation market. A report by the Inter-American Development Bank (IDB) highlights that the region's infrastructure gap amounts to $150 billion annually, indicating that investments in infrastructure have lagged behind the needs of the growing population and economy (IDB, 2020).

Lastly, the lingering effects of the pandemic and the geopolitical tensions have created economic uncertainty in the region. A study by Deloitte found that 40% of surveyed CFOs in North America cited "uncertainty" as a reason to delay investments in Q1 2022, indicating a reluctance among companies to make long-term investments and expansion plans in the current unpredictable business environment. In conclusion, while the automation market in the Americas is substantial, the combination of the pandemic's economic impacts, supply chain disruptions, market saturation, infrastructure challenges in Latin America, and economic uncertainty make the region less attractive for further expansion of Diakont's electrical actuator division. Focusing on other regions with more favorable conditions for growth may be a more strategic approach for Diakont.

* 1. *Europe*

In Europe, Diakont's office in Italy currently covers the market. Although Europe's automation market is significant, representing about 25% of the global market (Source: Mordor Intelligence), several factors make the region less attractive for further expansion of Diakont's electrical actuator division. Firstly, the economic impacts of the pandemic have been considerable in Europe, with widespread job losses, reduced consumer spending, and a decline in GDP. The Eurozone's GDP contracted by 6.1% in 2020 (Source: World Bank), and sectors directly related to the EMAs market, such as manufacturing and automotive, have faced challenges in their recovery. For instance, the European manufacturing sector's output declined by 8.6% in 2020 (Source: Eurostat). Secondly, the ongoing geopolitical tensions surrounding the Ukrainian crisis have resulted in disruptions to global supply chains, further straining businesses in Europe that rely on international trade. The increase in freight rates by more than 300% since the start of the pandemic (Source: World Bank) has affected the manufacturing sector that requires raw materials and components for their products. Thirdly, the actuator market in Europe is relatively mature and saturated, evidenced by the presence of numerous well-established competitors, such as ABB, Siemens, and Schneider Electric. In 2020, the global actuator market was valued at $54.28 billion, with Europe accounting for approximately $13.57 billion or 25% of the total market share (Source: MarketsandMarkets). This market saturation makes it more challenging for new entrants or existing companies to expand further. Lastly, the lingering effects of the pandemic and the geopolitical tensions have created economic uncertainty in the region. A study by PwC found that 46% of surveyed CFOs in Europe cited "uncertainty" as a reason to delay investments in Q1 2022, indicating a reluctance among companies to make long-term investments and expansion plans in the current unpredictable business environment. In conclusion, while the automation market in Europe is substantial, the combination of the pandemic's economic impacts, supply chain disruptions, market saturation, and economic uncertainty make the region less attractive for further expansion of Diakont's electrical actuator division. Focusing on other regions with more favorable conditions for growth may be a more strategic approach for Diakont.

* 1. *East-Africa*

East Africa presents a less attractive market for the expansion of Diakont's electrical actuator division when compared to Europe, and the Americas. Several factors contribute to this assessment. The region is still predominantly focused on agriculture and lacks the robust manufacturing base found in other regions. As a result, the demand for advanced automation solutions, such as electrical actuators, is limited. Secondly, the economic impact of the pandemic has been severe in many East African countries, slowing down investment and growth. For instance, according to the World Bank, Kenya's GDP growth slowed down to 0.3% in 2020 compared to 5.4% in 2019. This economic downturn has led to reduced investment in infrastructure and industrial projects, further limiting the potential market for electrical actuators. Thirdly, the political and regulatory environment in some East African countries can be challenging for foreign businesses. Bureaucracy, corruption, and political instability are factors that can create obstacles to market entry and successful business operations. Lastly, the impact of the Ukrainian crisis on the East African region has been relatively minor compared to Europe and the Americas. However, the disruption of global supply chains and potential economic fallout from the crisis could further affect investment and growth in East Africa, making the region less attractive for Diakont's internationalization efforts. In conclusion, East Africa's relatively low level of industrial automation, reduced investment due to the pandemic, challenging political and regulatory environment, and potential impacts from the Ukrainian crisis make the region less attractive for the expansion of Diakont's electrical actuator division.

* 1. *Asia-Pacific*

Asia, particularly the Asia-Pacific region, presents a more favorable market for the expansion of Diakont's electrical actuator division. The region's automation market is rapidly growing, accounting for around 40% of the global market (Source: Mordor Intelligence). There are several factors that make Asia an attractive destination for Diakont's internationalization efforts.

Firstly, the economic impact of the pandemic has been comparatively less severe in many Asian countries, with faster recovery rates observed. China, the largest economy in the region, reported a GDP growth of 2.3% in 2020 (Source: World Bank), while other economies such as Vietnam and Taiwan also demonstrated resilience. This faster economic recovery in Asia has created a more favorable investment environment for businesses. Secondly, the actuator market in Asia is less mature compared to Europe and the Americas, offering potential opportunities for growth. In 2020, the global actuator market was valued at $54.28 billion, with Asia accounting for approximately $21.71 billion or 40% of the total market share [Source: MarketsandMarkets]. The region is also characterized by a higher demand for automation due to rapid industrialization and the need to improve production efficiency. Thirdly, the geopolitical tensions surrounding the Ukrainian crisis have had a lesser impact on the Asian market compared to Europe and the Americas. The disruption of global supply chains has been felt less acutely in Asia, as many countries in the region have been able to establish alternative trade routes and partnerships to mitigate the impact. Lastly, the prospects for economic development in Asia are strong, with a rising middle class and increasing demand for higher-quality products and services. This creates a favorable environment for companies that provide advanced automation solutions, such as Diakont's electrical actuators. In conclusion, the Asia-Pacific region offers a more attractive market for Diakont's electrical actuator division expansion due to its faster economic recovery from the pandemic, less mature and rapidly growing actuator market, lower impact from the Ukrainian crisis, and strong prospects for economic development. By focusing on the Asia-Pacific region, Diakont can capitalize on these favorable conditions and secure a competitive position in the market.

### **2.1.2 Country analysis**

With a brief regional analysis, the most promising regional market for Diakont have been identified, Asisa-Pacific. Countries in the Asia-Pacific region:

Afghanistan, Armenia, Australia, Azerbaijan, Bangladesh, Bhutan, Brunei, Cambodia, China, Fiji, Georgia, India, Indonesia, Japan, Kazakhstan, Kiribati, Kyrgyzstan, Laos, Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, Nepal, New Zealand, North Korea, Pakistan, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, South Korea, Sri Lanka, Taiwan, Tajikistan, Thailand, Timor-Leste, Tonga, Turkmenistan, Tuvalu, Uzbekistan, Vanuatu, Vietnam

In order to filter the countries mentioned, the grouping method should be applied. High-income economies with advanced technology and strong manufacturing sectors:

1. High-income economies with advanced technology and strong manufacturing sectors:

* Australia, Japan, South Korea, Singapore, Taiwan

According to the World Bank's classification of income levels, these countries are classified as high-income economies. This group generally has a high level of industrialization, infrastructure development, and technology adoption. Firstly, the actuator market in these countries is characterized by intense competition due to the presence of established domestic and international players. This makes market entry more challenging for Diakont, as they would have to compete with well-known brands and advanced technologies already present in these markets. Secondly, the cost of doing business in high-income countries tends to be higher due to factors such as higher wages, rent, and operational costs. This could impact Diakont's profitability and the competitiveness of its products in these markets. Australia, although a high-income economy, has a smaller manufacturing sector compared to Japan and South Korea, which may limit the demand for electromechanical actuators.

Additionally, Taiwan and Singapore have smaller market sizes compared to Japan and South Korea [World Bank, 2021].

1. Emerging economies with significant growth potential and increasing industrialization:

* China, India, Indonesia, Malaysia, Thailand, Vietnam, Philippines

These countries are classified as middle-income economies [World Bank, 2021] and are experiencing rapid industrialization, infrastructure development, and economic growth. According to a report by McKinsey Global Institute (2019), these emerging Asian economies are expected to contribute to 50% of global GDP growth by 2040. Among these countries, China, India are the most populous and have the largest market sizes in the region [World Bank, 2021].

1. Low-income economies with limited industrialization and infrastructure development:

* Afghanistan, Bangladesh, Bhutan, Cambodia, Laos, Myanmar, Nepal, North Korea, Pakistan, Sri Lanka

These countries are classified as low-income or lower-middle-income economies [World Bank, 2021] and have limited industrialization and infrastructure development. According to the World Economic Forum's Global Competitiveness Report [2019], these countries have lower scores in infrastructure, innovation, and business environment, making them less attractive for Diakont's internationalization.

1. Countries with small populations and limited market size:

* Armenia, Azerbaijan, Fiji, Georgia, Kazakhstan, Kiribati, Kyrgyzstan, Maldives, Marshall Islands, Micronesia, Mongolia, Nauru, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tajikistan, Timor-Leste, Tonga, Turkmenistan, Tuvalu, Uzbekistan, Vanuatu

These countries have small populations, limited market sizes, and lower levels of industrialization [World Bank, 2021]. As a result, they are less likely to offer significant growth opportunities for Diakont's electrical actuator division.

Based on the evidence and academic sources provided, it can be can narrow down the list of potential countries for Diakont's internationalization to Japan, South Korea, China, India. These countries offer the most attractive market sizes, industrialization levels, and growth potential in the Asia-Pacific region. While Japan and South Korea are also prominent countries in the Asia-Pacific region with advanced technology and strong economies, there are specific reasons why they may not be the most suitable options for Diakont's internationalization strategy for the electromechanical actuator division:

1. Japan:

Japan is well-known for its highly advanced technology and automation industry, with many established and reputable companies already operating in the electromechanical actuator market. Major Japanese companies like Yaskawa, Mitsubishi, and SMC Corporation have a strong presence in this sector, leading to a highly competitive environment. Additionally, Japan's aging population and declining workforce could limit the growth potential for Diakont in the long term. According to the World Bank [2021], Japan's population is expected to decline from around 126 million in 2020 to 109 million in 2050, which might lead to a stagnating market.

1. South Korea:

South Korea is another technologically advanced country with a strong manufacturing and automation industry. However, similarly to Japan, the South Korean market is already saturated with well-established local companies, such as Hyundai Heavy Industries and LS Mtron, dominating the electromechanical actuator market. Furthermore, South Korea's population growth is also slowing down, with the country's fertility rate being one of the lowest in the world [World Bank, 2021]. This demographic trend could limit market growth and reduce the potential for Diakont's long-term expansion in the country.

1. India

India represents a burgeoning market for Diakont, considering its rapidly growing manufacturing sector, industrial automation, and robotics. The Indian automation market is expected to register a CAGR of 12.6% during the period 2020-2025 (source: Mordor Intelligence). This growth is primarily driven by the increasing adoption of automation technologies across different industries, including automotive, food & beverages, electrical, and electronics, where electromechanical actuators find significant application. However, the market for advanced electromechanical actuators in India is still in its nascent stage. Despite this, the Indian government has launched the "Make in India" initiative to position India as a global manufacturing hub, which provides a favorable environment for Diakont's entry. Moreover, the vast population, coupled with a growing middle-class consumer base, offers a large market for the manufacturing sector, thus leading to a substantial demand for electromechanical actuators.

1. China

China, the world's largest manufacturer, provides a substantial market opportunity for Diakont. According to the National Bureau of Statistics of China (2021), the Chinese manufacturing sector's output has been growing at an average rate of 6.7% per year from 2016 to 2020, despite the global economic slowdown. In addition, the Chinese government's "Made in China 2025" initiative aims to upgrade the country's manufacturing sector, further driving the demand for high-quality electromechanical actuators. Despite a competitive market, the vast scale of the manufacturing sector and the shift towards high-tech manufacturing indicate potential market opportunities for Diakont. However, it's important to note that entering the Chinese market comes with its unique set of challenges, including regulatory complexities and cultural nuances. Therefore, a detailed understanding of the local market dynamics is crucial. Considering the market size, growth prospects, competitive landscape, and government initiatives, both India and China appear to be promising markets for Diakont's international expansion. However, a more detailed market analysis would be beneficial to make an informed decision.

In conclusion, after examining various markets within the Asia-Pacific region, it is evident that China and India stand out as potential candidates for Diakont's internationalization strategy due to their significant market sizes, fast-paced growth, and increased industrialization. Both countries present promising opportunities for Diakont's electromechanical actuators in their burgeoning industrial automation and manufacturing sectors. Japan and South Korea, while technologically advanced with robust manufacturing sectors, present significant competition and market saturation, alongside demographic trends that could potentially limit long-term growth. These factors make these markets less ideal for Diakont's expansion. Therefore, it would be beneficial for Diakont to focus its efforts on exploring the Chinese and Indian markets further. These markets, with their vast potentials, could offer the firm opportunities for expansion and growth in the electromechanical actuator market.

**2.1.3 CAGE analysis**

With an eye to understand the best country for Diakont internalization strategy CAGE will be applied.

1. *INDIA*

Cultural:  
Although India and Russia have shared historical connections with diplomatic relations dating back to the Cold War era, their cultural backgrounds are significantly different. Language distinctions are substantial, with Hindi and English widely spoken in India and Russian in Russia. The religious landscape also varies, as Hinduism is predominant in India, while Russian Orthodoxy is the primary religion in Russia. Hofstede's dimensions reveal differences in cultural values, such as power distance, individualism vs. collectivism, masculinity vs. femininity, and long-term orientation between the two countries. Educational systems and social norms also contributed.  
Administrative:  
India and Russia have moderate administrative distance, with different political systems, India being a federal parliamentary democratic republic and Russia being a presidential republic. According to the Heritage Foundation's Index of Economic Freedom, India ranks 120th while Russia ranks 92nd, indicating differences in regulatory environments, levels of corruption.  
Geographic:  
India and Russia do not share a border but are part of the same continent, which can facilitate trade and investment. Geographic distance between the two countries remains a barrier, and differences in topography and climate can impact trade and investment opportunities. Initiatives such as the International North-South Transport Corridor (INSTC) are pursued to improve connectivity.  
Economic:  
India is the sixth-largest economy globally, while Russia ranks 11th [World Bank, 2021]. India's economy is driven by services, agriculture, and manufacturing, whereas Russia's economy relies heavily on natural resources and energy exports (UNCTAD, 2020). The GDP per capita in India was around 2,191 US dollars in 2021, compared to Russia's 11,543 US dollars [World Bank, 2021]. The average salary in India was approximately 200 US dollars per month in 2020, while Russia's average salary was around 600 US dollars (Source: Trading Economics). Both countries have pursued trade partnerships and have established economic ties through various agreements and collaborations, such as the Bilateral Investment Treaty (BIT) and the India-Russia Intergovernmental Commission on Trade, Economic, Scientific, Technological, and Cultural Cooperation (IRIGC-TEC).

1. *CHINA*

Cultural:

Considering cultural remoteness, China and Russia have had historical interactions and cooperation, particularly during the Cold War era. Both nations have also been part of the BRICS group, promoting economic cooperation and political coordination. However, the two countries have different languages, with Mandarin being the dominant language in China and Russian in Russia. While Russian Orthodoxy is the primary religion in Russia, China has a more diverse religious landscape with Buddhism, Taoism, and Confucianism playing significant roles. In terms of cultural values, as mentioned earlier, Hofstede's dimensions show differences in long-term orientation and uncertainty avoidance between the two countries.

Administrative:

Administratively, China and Russia have a relatively close relationship, with both being part of the Shanghai Cooperation Organization (SCO) and having numerous bilateral agreements in place. However, differences exist in their political systems and business legislation. According to the Heritage Foundation's Index of Economic Freedom, China ranks 107th and Russia ranks 92nd, reflecting disparities in areas such as regulatory frameworks, corruption levels, and the protection of property rights [Heritage Foundation, 2021].

Geographic:

Geographically, China and Russia share a long border, reducing the distance between them. The two countries have developed transportation infrastructure and logistics links, including railways, roads, and ports. The Belt and Road Initiative, launched by China, also aims to improve connectivity between China and Russia, further strengthening their economic ties.

Economic:

In terms of economic distance, China's economy is the second largest globally, while Russia ranks 11th. Although Russia possesses abundant natural resources, particularly in the energy sector, China has a more diversified economy, with significant manufacturing and export capabilities. The GDP per capita in China was around 10,582 US dollars in 2021, compared to Russia's 11,543 US dollars. However, the average salary in China was approximately 1,040 US dollars per month in 2020, while Russia's average salary was around 600 US dollars. Despite these differences, both countries are members of various international trade organizations and have a relatively close economic relationship.

On the basis of a comparison between India and China, using the CAGE distance framework, it becomes evident that China provides a more conducive environment for Diakont's expansion plans. Cultural distance between India and Russia is significant, given the distinct linguistic, religious, and social norms. This cultural gap extends to Hofstede's dimensions, revealing divergences in power distance, individualism vs. collectivism, and long-term orientation. Conversely, while China and Russia possess different languages and religious landscapes, they share historical interactions and cooperative ties, reducing cultural distance. Administratively, India and Russia share a moderate distance due to divergent political systems and differing regulatory environments. In contrast, China and Russia's administrative distance is relatively less, despite dissimilarities in their political systems and business legislation, thanks to their participation in the Shanghai Cooperation Organization and numerous bilateral agreements. Geographically, India and Russia don't share a border, and the physical distance poses a barrier, notwithstanding initiatives like the International North-South Transport Corridor aimed at improving connectivity. China, however, shares an extensive border with Russia, and initiatives like the Belt and Road promote better connectivity. Economically, India and Russia's economic landscapes are markedly different, with India's economy being more service-driven, compared to Russia's resource-driven economy. Additionally, income disparities, as reflected in GDP per capita and average salary, further amplify this economic distance. China, on the other hand, boasts a larger and more diversified economy and maintains a closer economic relationship with Russia, despite differences in GDP per capita and average salaries.

Therefore, the comprehensive assessment suggests that China, with its lower cultural, administrative, and geographic distance and robust economic ties with Russia, is the preferable choice for Diakont's expansion over India.

## **2.2 Identified market analysis**

### **2.2.1 PESTEL analysis**

In order to analyze the external factors of the Chinese electromechanical actuators industry for Diakont, PESTEL analysis was performed.

**Political factors**

1. **China's Political Stability**

China has consistently demonstrated political stability over the past few decades, positioning itself as a leading global economy (World Bank, 2021). The Chinese government has implemented various policies to foster foreign investment and stimulate economic growth (Xinhua, 2020). A primary objective has been to create a more open and market-oriented economy. To achieve this goal, China has continuously liberalized its markets and minimized entry barriers for foreign businesses (World Trade Organization, 2021).

*Impact on the industry*

China's political stability and dedication to promoting foreign investment positively impact numerous industries, including electronic and mechanical products (KPMG, 2020). Trade barrier reductions and the supportive environment for foreign enterprises have facilitated the growth and expansion of the EMA industry in China (EY, 2021). This development creates opportunities for foreign companies to engage in the Chinese market and capitalize on the rising demand for EMAs.

*Impact on the company*

For Diakont, China's political stability and openness to foreign investment present a favorable business environment. As the company seeks to internationalize its electromechanical actuator division, it can benefit from the diminished trade restrictions and the collaborative atmosphere promoted by the Chinese government (McKinsey, 2021). This environment will ease Diakont's expansion into the Chinese market and streamline the import of EMAs. Additionally, the stable political landscape reduces the risk of abrupt policy changes that could adversely affect Diakont's operations, ensuring a more predictable and secure market for growth.

1. **Foreign investment law 2021**

The Chinese government has increased the access of foreign companies to its market and reduced the restrictions on investment in certain industries, including electronics and mechanics. With the update of foreign investment law in 2021 published by National Development and Reform Commission People Republic of China, foreign companies are no longer required to have a Chinese partner, making it easier to do business.

*Impact on the industry*

The increased access to the Chinese market will have a positive impact on the industry as it would lead to competition and innovations, leading to better quality of EMAs.

*Impact on the company*

For Diakont, this is an opportunity to expand their business in China, without need for a partner, giving them more control over business operations and potential for greater profitability.

**Economic factors**

1. **Economic growth**

China is known to be one of the fastest growing economies globally, which has been fueled by industrialisation and urbanization. It observed an all-time high in 2021 at 18.7% according to Trading Economics. It is slower with the recovery from COVID, but is promising with 4.5% in Q1 of 2023.

*Impact on the industry*

The fast growth would lead to increased demand for industrial automation, which in turn drives up the demand for electromechanical actuators.

*Impact on the company*

With this growth rate, Diakont is presented with opportunities for their expansion in China. The increasing demand for EMAs in various industries, Diakont may tap into the market and increase market share.

1. **Foreign Direct Investment**

The FDI of China was up to 20.2 % in 2022 according to China Briefing as the government actively promotes it. This has led to many foreign companies increasing their presence in China.

*Impact on the industry*

The increase in FDI may attract more foreign companies to invest in the industry and bring in new technological innovations, leading to increasing competition and growth of the EMA industry.

*Impact on the company*

It is an opportunity for Diakont to expand its presence in the Chinese market through foreign investment. This could help the company establish new partnerships, gain access to new resources and thus increase their competitive advantage.

1. **Strong competition in industry**

China's business environment is not just robust but also highly competitive on a global scale. According to the Global Competitiveness Index by the World Economic Forum (2022), China ranks 14th out of 141 countries, showcasing its strong competitive position in the international landscape. This high ranking reflects the country's substantial economic resilience, technological advancements, market size, and innovative capabilities.

*Impact on the industry*

As China is economically developing well and expanded 5.2. In 2023 alone, a number of companies are involved in the EMA industry currently. The Chinese market of EMAs is witnessing a high growth and has 6.3% CAGR (Giireaserch, 2022).

*Impact on the company*

Consequently, a company like Diakont will need to compete effectively in the industry to gain customers with existing players in the Chinese market.

**Social factors**

1. **Large population rate**

The population of China is approximately 1.4 billion, which is urbanizing significantly. This includes a growing middle class, which demands higher quality and technologically advanced products.

*Impact on the industry*

This would drive demand for higher quality and technologically advanced goods such as EMAs, as China continues to shift towards a more technologically driven economy.

*Impact on the company*

For Diakont, the large market can create a significant demand for their EMAs. Further to that, the large population provides Diakont with a large pool of skilled labor who may be employed for R&D in the future.

1. **Technological capabilities**

Technological capabilities of China have been developing recently with the increasing investment into R&D and the pool of skilled workers in technological sectors. This has caused an increase in population’s demand for advanced technological products.

*Impact on the industry*

The increasing technological capabilities have made the Chinese market more competitive for products like EMAs. The use of advanced technologies means that companies in the industry need to continually invest in research and development in order to remain competitive and meet changing needs of the market.

*Impact on the company*

This presents an opportunity for Diakont to introduce their advanced EMAs to the market and appeal to customers looking for cutting-edge technologies. At the same time, Diakont has the opportunity to expand their product offerings of EMAs to meet the evolving needs of the Chinese market.

**Technological factors**

1. **Made in China 2025**

Made in China 2025 (Global Times,2019) is an initiative by the Chinese government which strives to secure Chinese position as a global powerhouse in high tech industries, with the aim to reduce reliance on foreign technology imports and invest more in their domestic companies R&D.

*Impact on the industry*

This strategic plan leads to increased government support for domestic manufacturers of EMA and increased investment into the R&D in the said industry, making the market for EMAs more competitive in China due to focus on advancing technologies and improving product quality.

*Impact on the company*

For foreign companies like Diakont, the initiative may present challenges and opportunities. The increased support of domestic manufacturers will cause more competition with the domestic companies, however it also presents possibilities for collaboration with these companies to leverage expertise and resources for development of advanced technologies.

1. **Technology Development:**

The government has been investing heavily in technological development lately, including industries such as robotics and automation. Global Times highlighted how the investment has been soaring, particularly in the high-tech sector by 37.7%, which is one of the users of EMAs. These technological advancements in the EMA industry such as development of new types of smart actuators, miniature actuators, energy efficiency actuators etc. are driving the Chinese industry’s growth.

*Impact on industry*

The technological advancements have made the EMA industry in China more competitive, thus requiring companies existing or entering to invest into R&D regularly and continually. The integration of IoT technology into this in China has also made new opportunities in the market for remote monitoring and controlling, thus providing companies more facilities to advance.

*Impact on the company*

Diakont can leverage these technological developments to develop more cutting edge EMAs, thus appealing to businesses and customers looking for advanced technologies. However, this also means that the company will need to increase their investments into R&D to remain competitive in the industry.

**Environmental factors**

1. **National emissions trading scheme**

The Chinese government implemented the national emissions trading scheme in 2021, making it an obligation for big emitters in the power sector to account for their emissions (ChinaDialog,2019). This impacts all the producers, putting a price on carbon emissions and compliance to the regulation.

*Impact on the industry*

The scheme would increase the cost for companies as they would need to purchase emission allowances to continue production in case their EMAs would emit more than the allowed amount. Thus, it may incentivise companies to invest in components to produce more energy efficient EMAs and reduce their energy consumption, shifting toward more sustainable practices.

*Impact on the company*

As Diakont produces products which are energy efficient and have lower carbon emissions, it could benefit them as they would meet the necessary environmental standards and comply with the regulations, helping in achieving competitive advantage in the market.

1. **Energy efficiency improvement**

There is increasing effort to improve energy efficiency across various sectors, such as industry, building and transport. The National Development and Reform Commission (NDRC) China is responsible for promoting energy efficiency and conservation (Energy Character, 2020). As a result of this, they create more demand for manufacturers of EMAs to produce energy efficient products.

*Impact on the industry*

The energy efficiency improvements would lead to reduced energy consumption and fall in demand for high energy consumption EMAs.

*Impact on the company*

For Diakont this would have a positive impact as they produce energy efficient EMAs, helping them position themselves as a sustainable and environmentally friendly option in the market,enabling them to capture a greater market segment focused on energy efficient solutions.

**Legal factors**

1. **Safety and quality standards**

China Compulsory Certification (CCC) is a mandatory system which covers a wide range of products, including EMAs, and it is required for all products sold in the Chinese market. This certification sets out standards i.e. safety, health and environmental protection, which products must meet. On the other hand, China Restriction of Hazardous Substances (RoHS) are regulations which govern use of substances in electronic and electrical products including EMAs, which are hazardous.

*Impact on the industry*

Compliance with these standards is crucial for companies operating in the Chinese EMAs industry to gain market access. Thus, companies would need to invest in equipment, materials etc to meet the specifications, causing higher production costs, potentially leading to increased prices of EMAs.

*Impact on the company*

This implies that Diakont’s EMAs which are to be imported into China must comply with both CCC and RoHS standards to be eligible for sale on the Chinese market. In case there are any substances which are hazardous according to these regulations, Diakont would need to declare their use and information on their disposal and recycling.

1. **Government policies**
2. **Import licensing**

Ministry of Commerce (MOFCOM) and General Administration of Customs (GAC) includes in their catalog of goods subject to import licensing certain electromechanical products which require import licenses (China Briefing, 2022). This means that EMAs fall under the import licensing administration in China.

1. **Trade policy**

The Chinese government imposes a standard value added tax (VAT) on sale and import of goods of 13%.However, for the technological goods, such as Electromechanical actuators (EMAs), the rate is lower i.e. 6%. (Avalara, 2021)

1. **Import tariffs**

The regulations in China on customs valuation are based on the Measures of China Customs on Determination of Dutiable Value of Imports and Exports. According to this measure, the dutiable value of goods, including electronic and mechanical ones, imported is assessed based on transaction value i.e. complete actual price of goods (Avalara, 2022).

*Impact on the industry*

The import licensing may cause certain delays due to administrative aspects on importing of EMAs into China. For VAT rate, it may incentivise the import of VAT as the lower rate reduces the cost of purchase for consumers in China. However, the import tariffs may increase the cost of EMAs, potentially impacting their demand.

*Impact on the company*

Diakont would need to navigate the import licensing process and incur additional costs on import to China. They will also need to factor in the VAT rate when pricing the products and ensure that they comply with the payments and regulations. Lastly, the import tariffs would mean that Diakont needs to adjust their pricing strategy and profit margins in the Chinese market.

|  |  |
| --- | --- |
| **Political**   * China's Political Stability * Foreign investment law 2021 | **Economic**   * Economic growth * Foreign Direct Investment * Strong competition in industry |
| **Social**   * Large population rate * Technological capabilities | **Technological**   * Made in China 2025 * Technology development |
| **Environmental**   * National emissions trading scheme 2021 * Energy efficiency improvement | **Legal**   * Safety and quality standards * Government policies: * Import licensing * Trade policy * Import tariffs |

**Table 1 “Pestel analysis”**

### **2.2.2 Porter's 5 forces analysis:**

The Porter's Five Forces model is a critical strategic tool that enables an organization to comprehend the general competitive landscape within an industry. This model analyses five key forces: the threat of new entrants, the bargaining power of suppliers, the bargaining power of customers, the threat of substitute products, and the intensity of competitive rivalry. For Diakont, applying Porter's Five Forces model is integral for understanding the dynamics within China's actuator market. Since it is impractical to individually examine every potential competitor in the market, this analysis offers a more holistic view, providing insights into the forces that shape industry competition. Consequently, these insights feed into Diakont's market entry strategy and inform the competitive positioning in China's actuator market.

**Competitive rivalry: high**

In China, several major players operate in the EMA market. In total there are over 163 registered companies producing them.  The companies with the biggest market share in China, as stated in research by QY group, are Rotork, ABB, Auma, EMG-DREHMO and others. They are known for high quality devices and technological advancements.

*Industry life cycle: growth*

As the Chinese economy is growing and expanding, there is a growing demand for equipment such as EMAs as it is being incorporated into various industries.  The market is still expanding and new players are entering it, as there is room for growth. The number of companies is relatively large, however, they are producing different sorts of actuators, not only electromechanical ones.

*Homogeneity of products: medium*

With EMAs being considered standardized products and most companies offer actuators with similar functionality and features (high reliability, increased safety, reduced weight, easy maintenance, motion control etc) the homogeneity is not high. But, there are variations in design and purposes of these actuators, so homogeneity may vary according to their application, making the overall level medium.

*Fixed costs: high*

There are a number of fixed costs which have to be incurred with production of EMAs, including: equipment and machinery, renting of factory, insurance of the facility and the salaries to the employees.

*Variable costs: high*

EMAs production requires several variable costs, e.g.: steel, magnets, plastic, copper wires etc, as seen on diagram 1. Similarly, labor cost, utilities cost, equipment repair and maintenance, packaging materials, quality control are some of the other variable costs which are incurred. Therefore, they may be relatively high due to their precise and meticulous nature.

Diagram

Description automatically generated

Figure 4 Components of an electromechanical actuator (EMA)

**Supplier power: Medium**

Suppliers of an EMA company would include 2 major kinds: raw materials suppliers and equipment suppliers.

For raw materials suppliers, depending on the materials and components required for the specific actuators, there are several of those. The common raw materials needed in EMA production, as mentioned before, include steel, aluminum, copper, magnets for the creation of a magnetic field for motion of EMA, components such as transistors and resistors, gears for motion control and lastly adhesives to keep the components in place. Due to China’s availability of resources and several suppliers, there is relatively low power.

For the equipment suppliers, there exist several of those. These include: CNC machines, insulation machines, extruder machines etc. In general, they have medium or high power as there is a high fixed cost of purchasing them. However, as there exist many suppliers providing this equipment in China, their power is more likely to be medium.

Therefore, overall the power of suppliers is considered to be medium.

**Buyer power: medium**

*Information availability: buyer has the required information*

All the information regarding EMAs - their technical specifications (load, speed, voltage, finish, dimensions etc), country of origin, prices, reviews and rating make it possible for anyone who wishes to buy the product on the website or in person possible to receive all the details. This information is available on the company’s own website as well as on e-commerce platforms such as Alibaba or on specialized marketplaces which focus on industrial equipment sales, in the likes of Made in China.com. Thus, all of this makes it possible for the buyer to compare all the EMAs and then buy after making an informed decision.

*Switching costs: varies*

Оnce the product has been bought from a certain manufacturer of EMA, it is relatively expensive to switch from 1 supplier to another one. The reason for this is that the equipment which was produced with the use of the electromechanical actuator will need to be remade or in better cases re-tooled or modified. However, the are several other type of actuators that might server almost the function as electromechanical actuator, namely, pneumatic actuators and hydraulic actuators. These types of actuators my be used to convert the rotary motion to linear one as EMA. However, technical characteristics of these types of actuators are not the same as the EMA ones and sometimes cannot be replicated.

**Threat of substitution: Low**

*Substitution product by product: varies*

The substitution of products in case of EMAs may refer to different types of actuators which exist and perform similar functions. These include pneumatic, which works with air pressure and hydraulic, which work with fluid pressure. However, their mechanism is different and therefore can be used in various devices. In case a hydraulic actuator performs the function required of an electromechanical one at a lower cost, there may be risks of substitution. But, the specific level would depend on the type of EMA and the specific application it is intended for.

*Substitution of product category: low*

Due to the absence of technologies which can replace EMAs completely and their use in several industries including automation, the threat of substitution in the Chinese market is low. Certain types of actuators, which can convert energy into linear or rotary, may be used in place of EMAs but may not be as effective. Additionally, as per a study comparing EMAs with pneumatic and hydraulic ones, there were energy savings up to 90% when using them versus using fluid power. Thus, for businesses which wish to reduce their energy usage, EMAs are more likely to be used.

**Threat of new entrants: Low**

This factor provides an indication of the market and competition. The following factors may pose as threat to competition by new entrants:

*Amount of initial investment: high*

For a company which wishes to establish their EMA manufacturing in China, a manufacturing facility has to be rented, leased or bought, equipment required for manufacturing electromechanical actuators needs to be purchased (e.g. CNC machines to control the high accuracy manufacturing process, drilling and grinding machines, assembling equipment etc.), raw materials to produce them (e.g. steels, magnets, plastic components, copper wires etc), labor wages to produce the EMA, utility costs etc. Thus, as the manufacturing is very capital intensive, the amount would be high.

*Economies of scale: significant*

Talking about the EMA production as such in a large quantity and significant production volume, the cost per unit does decrease, giving the companies which are established in the market an edge and competitive advantage over the new entrants. Due to this, the new entrants may struggle to achieve this benefit due to smaller quantities.

*Government policies: strenuous*

In order to register a company in China, under the wholly foreign-owned enterprise (WFOE) and a limited liability company, the initial capital required is approximately CNY 1 million for a manufacturing WFOE and CNY 500,000- 1,000,000 for a trading WFOE. The process is likely to take 1-3 months  and the procedure is likely to include the following:

1. Choose an agency to help with registration
2. Select preferred company scope
3. Prepare assortment of documents
4. Apply for approval certificate from Ministry of Commerce (MOFCOM) and State Administration of Industry and Commerce (SAIC)
5. Apply for a business license
6. Register with Public Security Bureau (PSB)
7. Open a chinese bank account
8. Register at tax bureau

Overall, it is a significant and intensive task. Therefore, the government policies may be named strenuous due to a great deal of effort required.

Chart, radar chart

Description automatically generated

**Figure 5 Porter’s 5 forces**

### **2.2.3 Competitor analysis**

In order to form internationalization strategy, the competitor analysis is required to define particular features present of companies that are already present in China market. On the basis of interview, the companies that Diakont consider as direct competitors are:ABB Measurement & Analytics, ARO, Emerson Electric, Asahi / America, Inc., Exlar, Festo Corporation, Tolomatic Rotork plc, LINAK U.S. Inc., Actuonix Motion Devices, igus® inc., Columbus McKinnon Corporation, Tamagawa, Ewellix. However, in order to conduct competitor analysis the companies have to narrowed down with funnel approach.

Three criteria are considered for grouping these companies:

1. Comparable Product Portfolio: Does the company offer similar types of electromechanical actuators as Diakont?
2. Overlapping Geographical Markets: Does the company have a significant presence in the Chinese market, a key target market for Diakont?
3. Technological Capabilities: Does the company have a similar level of technological advancement in electromechanical actuator manufacturing as Diakont?

Based on these criteria, the companies can be grouped as follows:

*Group 1 - Mismatched Product Portfolio:*

1. **ABB Measurement & Analytics**: Their focus extends beyond actuators to measurement and analytical products, differing from Diakont's actuator-centric portfolio.
2. **Emerson Electric**: Their wide product range, including HVAC and industrial automation solutions, broadens their market focus compared to Diakont's emphasis on actuators.
3. **Asahi/America, Inc.**: Despite producing actuators, they specialize in corrosion-resistant fluid flow solutions, a niche that Diakont does not primarily target.

*Group 2 - Limited Presence in Chinese Market:*

**Festo Corporation**: Known for their proficiency in automation technology, they have a limited presence in the Chinese market which reduces their competition with Diakont in this region.

**Rotork plc**: Although they manufacture industrial actuators, their limited visibility in China narrows the overlap with Diakont's market presence.

**LINAK U.S. Inc.**: Mainly focused on the U.S market, LINAK's limited presence in China lessens their direct competition with Diakont.

*Group 3 - Dissimilar Technological Capabilities:*

**Actuonix Motion Devices**: Specializes primarily in miniature motion systems, which may not directly compete with the larger, more heavy-duty actuators Diakont provides.

**igus® Inc.**: Specializes more in polymer-based products and drylin drive technology, which is a unique approach to actuator design compared to Diakont's electromechanical actuator technology.

**Columbus McKinnon Corporation**: While they do produce actuators, their primary expertise lies in lifting and motion control technologies, potentially catering to different customer needs than Diakont's actuators.

**Resultant List of Competitors:**

Given these groups, the most representative competitors that not only have a comparable product portfolio and similar technological capabilities as Diakont, but also a significant presence in the Chinese market, are Exlar, Tamagawa, Ewellix, ARO, and Tolomatic. These companies represent the most direct competition to Diakont in the electromechanical actuator industry within the Chinese market.

* + 1. Tolomatic

Tolomatic is an American manufacturer of industrial equipment and components for industrial automation and mechatronic systems. Since 1954, the company started to expand its product range with innovative motion control goods that solve the automation tasks of the customers. Currently Tolomatic has a corporate headquarters that located in USA, a European office in Germany, service center in Mexico and a factory in China. The company’s presence in China allows it to create a strong distribution network there, as well as in USA and Europe. Besides presence in different countries, the strong distribution network is supported by various partnerships. The partners of Tolomatic include such big companies as Rockwell Automation, Solve NYC, Control Techniques, JVL Intelligent Motors and Mitsubishi Electric. Tolomatic offers various products including different types of pneumatic linear actuators, electric linear actuators and power transmission. Among pneumatic linear actuators the client can find different rodless pneumatic air cylinders and pneumatic thrusters. The range of electric linear actuators includes several electric rodless actuators, electric rod actuators, ServoWeldⓇ actuators, motors, drivers and roller screws. As for the power transmission, Tolomatic proposes various tools for industrial caliper brakers, industrial right angle gearboxes, industrial cone clutches and roller screws. Tolomatic offers one year warranty its product offering customer support “during business hours (7:30 AM to 5:00 PM CST)”**.** Moreover, except wide range of goods, Tolomatic’s in-house modeling and testing facilities in combination with highly experienced, educated and trained team of mechanical, electrical, and application design engineers allows the company to work on individual projects and design special customized actuators to meet all customers’ needs and solve specific problems. In order to develop and improve manufactured products, the company has its own research & development lab, which allow to conduct different tests and experiments. Concerning Tolomatic financial position, it can’t be defined as stable, since according to several resources, the company’s revenue decreased in 2022: in 2021 the revenue accounted for $49 million, while in a year it dropped and was equaled to $31.6 million (Tolomatic).

* + 1. Ewellix

Ewellix is a global provider of linear motion and actuator solutions, which started its operation in 1968. Currently the company belongs to the Schaeffler Group. During Ewellix’s existence, it has become quite large speaking about the number of its branches. Currently it has 16 sales units, that cover a lot of countries, namely China, India, South Korea, Canada, USA, England, Netherlands, Germany, Sweden, Hungary, France, Italy and Switzerland. Moreover, Ewellix has 2 competence centers in Italy and Sweden, as well as 6 factories, one of which is located in USA, 3 – in Europe, and 2 – in China. This relatively big number of production facilities indicates that Ewellix has strong industrial capabilities. Also, ownership of 2 plants in China implies strong distribution network there and direct access to Chinese market. Besides, Ewellix has various partnerships, that in addition strengthen the distribution network across countries that are supported by sales units. The list of partners includes such companies as IPH-Brammer, Motion Industries, Rockwell Automation, Dunkermotoren and SDT. Also, Ewellix has strong relationships with customers, among which there can be found big producers like Philips, Siemens, GE Healthcare, Festo, STANLEY and Atlas Copco. Regarding the range of products, Ewellix produces a lot of various goods. The company offers various types and tools for linear actuators, high performance actuators, lifting columns, balls and roller screws, linear guides, linear systems, and 7th axis for robots. Except for basic goods in product line, Ewellix works on individual projects and can execute specials requests if the customer has a unique case and search for customized non-standard decision. The company offers 3 levels of customization, namely based, advances and complete. The level depends on specific requirements and complexity of realization.The company offer two years warranty for its product, providing customer support via email request during business hours. Ewellix doesn’t stop on achieved and continue to develop, as evidenced by the company’s sales manager Francesca Cavallotti declaring long-term investments in research and development, which have been already resulted in the yearly growth over the last seven years, as well as in grow of skills and know-how team of professionals. As concerns Ewellix’s financial performance, according to the report of Schaeffler, in 2021 the company’s revenue was equal approximately to €216 million, while in 2022 this indicator was expected to increase up to €250 million [Ewellix].

* + 1. TAMAGAWA SEIKI

TAMAGAWA SEIKI is a Japanese company world-renowned company that specializes in the production of components for automation systems in different areas of industry. It was established in 1938. Now, TAMAGAWA has 4 plants (including headquarters), 1 office in Japan. 4 currently operating plants imply big volumes of production and extensive industrial capabilities. Moreover, company has several overseas business divisions, specifically TAMAGAWA TRADING CO., LTD.(TTC), TAMAGAWA HONG KONG LTD., Tamagawa Seiki Suzhou Co., Ltd. and Tamagawa Europe GmbH. On TAMAGAWA SEIKI’s website the company declare about 23 agencies across the word: 7 of them are located in Asia, 11 – in Europe area, 1 – in Oceania area and 4 – in South & North America area. What is remarkable is that 2 agencies are located in China, which implies direct access to the Chinese market and strong distribution network there. TAMAGAWA SEIKI has several major clients, among which can be found world-famous companies, for instance Mitsubishi Heavy Industries and Mitsubishi Electric, Kawasaki Heavy Industries, TOYOTA, HONDA, NEC, Toshiba, Hitachi, Matsushita Electric Industrial, ABB Automation Technology Products AB, Honeywell Inc., Rockwell Collins Ministry of Defense and Japan Aerospace Exploration Agency. As concerns product range, the company has wide assortment of production and offers different goods of the following categories: rotary encoders, resolvers and synchros, servo motors, drivers and controllers, step motors and drivers, gyros, aerospace products, space products, TUG-NAVI, FG beads and other products that currently comprises trackballs.. According to company website, it provide customer support via mail request on only working day. Besides, on the website company possesses a section of so-called future products with 2 goods, namely non-shaking system and optical level gauging system. Tamgawa offers 1 year warranty for its actuators. However, on TAMAGAWA SEIKI’s page there is no information about customization, but the according to Dikaont information the company offers only minor customization related to type of product that will be connected to actuators. Regarding R&D, the company is engaged in different studies. It has 4 research and development hubs in Japan. Also, the firm collaborate with Tokyo Bio R&D Center. In terms of financial performance, as for November 2022 TAMAGAWA SEIKI CO., LTD. made a sales revenue of ¥ 46.4 billion [Tamagawa].

* + 1. Exlar

Exlar is a designer, producer and supporter of products and systems that are used in various markets, such as aerospace, defense and industrial automation. The company manufactures and develops screw drives, rotary servomotors and electronic motion control goods. Exlar was founded in USA in 1986. In 2012 it became a part of the Curtiss-Wright Corporation – the producer of leading edge sensors, controls, sub-systems and mission critical components. The Exlar’s headquarters is located in Chanhassen (MN, USA). Also the company has European repair facility in Germany. Except being a part of a huge corporation with facilities all over the world, Exlar has a strong and long-term partnership with ATB Automation, which is one of the strongest distributors in Europe. This partner helps in creating a strong distribution network across Europe area. As for access to Chinese market, Curtiss-Wright Corporation has several branches in China, which can serve as a bridge between Exlar and China. Regarding the product line, the company has relatively small range of goods. The company offer two years warranty for its products providing customer support via email request. The users of Curtiss-Wright Corporation’ website can observe universal linear actuators, integrated linear actuators, intelligent linear and rotary actuators produced and offered by Exlar. In 2012 Exlar posted a document called “Advanced Electromechanical Actuation — Components to Solutions”. In this document Exlar’s Systems group declared the ability of working on customized actuators that are designed, constructed, tested, and delivered specially for customer’s unique requests.. The company continue to progress and invests in R&D. For instance, the company funneled more than $23 million into the development of patented roller screw technology. As regards financial indicators, the revenue of Exlar in 2022 accounted for $41.9 million[Exlar].

* + 1. ARO

ARO is a global producer of fluid handling equipment and industrial fluid management solutions. The company is a subsidiary of Ingersoll Rand – American multinational manufacturer and provider of flow creation and industrial products with over 10 factories located globally. ARO was founded in America in 1930. Its headquarters is located in Ohio, USA and factories in USA and China. Also ARO has another branch in North Carolina, USA. The company doesn’t declare information about its partners on the website and social networks. As regards the range of product, ARO offers a lot of different goods and tools. On the company’s website the customer is provided with the following categories of products: diaphragm pumps, electric diaphragm pumps, piston pumps, filter regulation lubricators, lubrication equipment, pneumatic valves and cylinders, peristaltic pumps, parts and accessories. Also, website users can find several devices, such as backpressure ratio calculator, chemical compatibility guide, diaphragm pump selector tool, ARO product park, repair kit finder and others in a section “technologies”. ARO doesn’t provide data concerning customization and working on individual projects according to specific customer needs, according to Diakont internal documents that ARO provide only minor customization. The same is with R&D, however it can be noted that Ingersoll Rand invested $74 million in research and development in 2022. Regarding ARO financial position, it can be identified as stable and growing. According to financial reports of Ingersoll Rand for a three-year period from 2020 to 2022, in 2020 the demand for ARO pumps was stable, while in 2021 orders increased 37% in comparison to the previous year orders which was caused by double-digit growth from the ARO® product line, and in 2023 ARO Systems was one of two key drivers for 6.4% growth of organic revenue. [ARO]

### **2.3.4 Key success factors**

Based on the PESTEL, Porters 5 forces analysis and competitor analysis of Exlar, Tolomatic, Tamagawa, Ewellix, ARO the key success factors in the electromechanical actuator industry can be identified as follows:

* 1. **Strong Distribution Network**

In the context of high competitive rivalry of China, having a strong distribution network is vital within the country for multiple reasons. Firstly, it ensures product accessibility and visibility in the market, helping to attract and retain customers. Secondly, an extensive distribution network assists in faster delivery and better customer service, which can be crucial differentiators in a highly competitive market.

**Tolomatic**: With a factory in China and partnerships with several global companies, Tolomatic has a robust distribution network in China.

**Ewellix:** Ewellix has two factories and sales units in China, indicating a strong distribution network in the country.

**TAMAGAWA SEIKI:** With two agencies in China and several major clients worldwide, TAMAGAWA SEIKI have a strong distribution network in China.

**Exlar**: Exlar's connection to the Curtiss-Wright Corporation, which has branches in China, could imply a substantial distribution network in the country.

**ARO**: The specific details of ARO's distribution network in China are unclear, although its parent company, Ingersoll Rand, is a global entity posing offices in China.

**Diakont**: Even though the company possess global distribution network, it is still not present in China.

* 1. **Research and Development**

R&D is a key factor in maintaining a competitive edge, particularly in a technologically advanced and rapidly evolving Chinese market. Innovation borne out of R&D can lead to superior products, unique features, or improved efficiency—all of which can differentiate a company from its rivals. Furthermore, the creation of patented technologies can establish a protective barrier, making it harder for competitors to mimic products, thereby offering a sustained competitive advantage.

Tolomatic: Tolomatic conducts in-house R&D with a dedicated lab, focusing on developing innovative motion control products and customizing actuators for unique customer needs.

Ewellix demonstrates a strong commitment to R&D, resulting in consistent growth and expertise within their professional team.

TAMAGAWA SEIKI operates multiple R&D hubs in Japan and collaborates with the Tokyo Bio R&D Center, indicating substantial investment in research and studies.

Exlar, part of Curtiss-Wright Corporation, has invested over $23 million in developing its patented roller screw technology, showcasing a strong emphasis on advancing core technologies.

ARO, under Ingersoll Rand, benefits from the parent company's significant R&D investments of $74 million in 2022, suggesting access to integrated R&D capabilities.

Diakont: Diakont invests over 8% of its revenue in R&D, which higher then industry average, indicating focus of company on R&D.

* 1. **Customized Solutions**

China is a large market with diverse industry sectors requiring actuators. This diversity, coupled with regional variations in industrial practices, makes offering customized solutions a vital factor. Furthermore, Chinese customers value high-quality and tailored products, which makes customization a way to gain market preference.

**Tolomatic**:Tolomatic offers customized solutions. The company's in-house modeling and testing facilities along with a highly experienced team of mechanical, electrical, and application design engineers allow it to work on individual projects and design special customized actuators to meet all customers' needs and solve specific problems.

**Ewellix**: Ewellix offers customized solutions. The company works on individual projects and can execute special requests if a customer has a unique case and is searching for non-standard solutions. Ewellix offers three levels of customization based on specific requirements and complexity of realization.

**TAMAGAWA SEIKI**: TAMAGAWA SEIKI offers minor customization related to the type of product that will be connected to the actuators, according to the information from Dikaont.

**Exlar**: Exlar offer customized solutions as declared in a document posted in 2012.

**ARO**: ARO provides minor customization according to Diakont internal documents.

**Diakont**: Diakont provide full customization for their products with ability to redesign a solution for customers’ needs.

* 1. **Financial Stability**

China's high growth rate, combined with high competitive rivalry and entry costs in the actuator industry, necessitate significant initial and ongoing financial investments. Therefore, companies with better financial stability are more capable of withstanding these pressures and sustaining their operations in the long run.

**Tolomatic**: Tolomatic's financial stability is questionable as their revenue decreased from $49 million in 2021 to $31.6 million in 2022.

**Ewellix**: Ewellix appears financially stable with increasing revenue – €216 million in 2021 expected to rise to €250 million in 2022.

**TAMAGAWA SEIKI**: With a sales revenue of ¥46.4 billion as of November 2022, TAMAGAWA SEIKI appears financially stable.

**Exlar**: Exlar reported a revenue of $41.9 million in 2022, indicating financial stability.

**ARO**: ARO appears to be financially stable with growth in demand for their pumps and being a key driver for an increase in organic revenue.

**Diakont**: The company's financial ratios are optimal, with favorable autonomy coefficient, current liquidity ratio, return on equity, and substantial EBIT of 328,456.

* 1. **Broad and Diverse Product Range**

Given the broad spectrum of industries in China requiring electromechanical actuators, having a diverse product range allows a company to cater to different sectors effectively. In an environment where there is a high threat of substitutes and medium product homogeneity, a diverse product range can help a company stand out and attract different customer segments.

**Tolomatic**: Tolomatic offers a diverse range of motion control products, including linear actuators, servo drives, and gearboxes, allowing them to meet various customer needs.

**Ewellix**: Ewellix's product portfolio is broad and includes linear guides, actuators, bearings, and related accessories, catering to a diverse set of industrial requirements.

**TAMAGAWA SEIKI**: TAMAGAWA SEIKI boasts a wide range of products, including gyroscopes, encoders, servo motors, and aviation equipment, making them versatile in multiple industries.

**Exlar**: Exlar provides a variety of motion control products, such as electric actuators, servo motors, and roller screws. Their patented roller screw technology further diversifies their product offerings.

**ARO**: ARO's product line is extensive, encompassing air-operated diaphragm pumps, piston pumps, filters, regulators, and lubricators, ensuring a diverse selection for customers in various sectors.

Diakont: Diakont offers actuators for four industries, namely aerospace, power generation, marine and automotive, which is all products related to motion control

* 1. **Industrial Capabilities:**

In China's fast-paced industrial environment, robust manufacturing capabilities, and scalability are key. The high fixed and variable costs and the medium power of suppliers of EMA industry of China, as discussed in the Porter analysis, suggest that companies with robust and scalable industrial capabilities would be in a stronger position to negotiate with suppliers and maintain cost-effective operations.

**Tolomatic**: Tolomatic has a corporate headquarters in the USA, a European office in Germany, a service center in Mexico, and a factory in China. This indicates that Tolomatic has strong production capabilities with facilities spread across multiple continents.

**Ewellix**: Ewellix has 16 sales units and 6 factories, with one located in the USA, three in Europe, and two in China. The presence of multiple factories in diverse locations indicates significant production capabilities.

**TAMAGAWA SEIKI**: TAMAGAWA SEIKI has 4 plants, all located in Japan, demonstrating a strong domestic production capacity.

**Exlar**: Exlar's production facilities are not specifically mentioned in the resources. However, it is part of the Curtiss-Wright Corporation, which 7 facilities all over the world. Curtiss-Wright's global presence suggests that Exlar could potentially access extensive production capabilities.

**ARO**: ARO, a subsidiary of Ingersoll Rand, has its headquarters in Ohio, USA, branch in North Carolina, USA and two factories located in China and USA indicating great industrial capabilities.

**Diakont**: Diakont possess two factories Russia based plant and Luciana plant, which is did not achieved economy of scale.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Strong Distribution Network | Research and Development | **Customized Solutions** | **Financial Stability** | **Broad and Diverse Product Range** | Industrial Capabilities |
| **Tolomatic** | 3 | 2 | 3 | 1 | 2 | 2 |
| **Ewellix** | 3 | 2 | 3 | 3 | 2 | 3 |
| **TAMAGAWA SEIKI** | 3 | 3 | 1 | 3 | 2 | 2 |
| **Exlar** | 2 | 3 | 3 | 2 | 2 | 2 |
| **ARO** | 2 | 3 | 1 | 3 | 3 | 3 |
| Diakont | 1 | 2 | 3 | 3 | 1 | 1 |

* 1. Lowest score, 3 – highest

**Table 2 KSF**

# **CHAPTER 3 Strategy Development**

* 1. **SWOT**
     1. **Primary SWOT**

For Diakont, a SWOT analysis is particularly important to assess the potential for successful market entry in China's actuator market. The strengths and weaknesses have been identified based on a competitive analysis and an assessment of Diakont's performance against the key success factors for the industry. On the other hand, the opportunities and threats have been derived from the PESTEL and Porter's Five Forces analyses that shed light on the various external factors that may impact Diakont's business operations and market potential in China. This analysis will allow Diakont to identify its areas of advantage, areas that need improvement or strategic change, potential avenues for market growth, and external challenges it needs to prepare for entering China market.

**Strengths**

**Strong Research and Development (R&D):** Diakont's relentless focus on R&D enables it to consistently develop cutting-edge electromechanical actuator technology. This commitment to R&D results in innovative and competitive product offerings that meet the evolving needs of the electromechanical actuator industry. In the fast-paced Chinese market, where technological advancement is paramount, this strength positions Diakont as a leading player, capable of delivering products with advanced features and superior performance.

**Customization Capabilities:** Beyond merely offering a variety of products, Diakont has the capability to provide solutions tailored to the specific needs of its customers. Diakont's ability to understand and respond to unique client requirements in various industries in the Chinese market enhances its value proposition. This flexibility to cater to specific customer needs sets Diakont apart from many competitors in the Chinese electromechanical actuator market, giving it a competitive edge.

**Financial Stability:** Diakont's robust financial health enables it to withstand market fluctuations and invest confidently in long-term growth strategies. This financial stability, particularly critical in a dynamic and competitive market like China, strengthens Diakont's ability to fund the payback periods associated with the development and rollout of new, innovative solutions. This solidity fosters trust among Chinese clients and partners, crucial in a market where long-term reliability and stability are major considerations.

**Weaknesses**

**Limited Distribution Network:** Compared to local competitors or companies with a longer presence in the Chinese market, Diakont might not have as extensive a distribution network. This could potentially limit their market reach and affect the company's ability to deliver their products promptly and provide high-quality customer service and support.

**Less Diverse Product Range:** Diakont's focus on electromechanical actuators, while positioning it as a specialist, might restrict its ability to serve a wider range of customer needs in different industries compared to competitors with a broader product portfolio. As the Chinese market demands versatility and diverse options, this could potentially limit the company's market share growth.

**Scaling of Industrial Capabilities:** As Diakont's manufacturing plant in Italy is relatively new, it may not have yet reached the level of operational efficiency and economies of scale enjoyed by competitors with more established manufacturing facilities. This could potentially impact the company's ability to swiftly scale up production to meet rising demand, manage quality control systems effectively, and ensure efficient supply chain management. This condition could be more pronounced in the Chinese market, where swift response to market demands and cost efficiency are crucial.

**Threats**

1. **Regulatory Compliance:** Compliance with China's stringent safety and environmental regulations, including China Compulsory Certification (CCC) and China Restriction of Hazardous Substances (RoHS), can impose significant costs on Diakont. Non-compliance or any adjustments required to meet these regulations could escalate production costs, affecting the company's profitability.
2. **China's National Emissions Trading Scheme:** The introduction of this scheme can increase the cost of production for companies whose products emit more carbon than the allowed amount. Though Diakont's products are energy-efficient, any changes in these standards could necessitate adjustments to their products to maintain compliance, impacting profitability.
3. **Market Competition and Cost Structure:** The EMA industry in China is growing, leading to increased competition as more players enter the market. With EMAs being considered standardized products, Diakont faces the challenge of differentiating its products to maintain its market share. Additionally, high fixed and variable costs associated with EMA production could significantly impact Diakont's profitability in this competitive market.

**Opportunities**

1. **Foreign Investment Law 2021:** The recent changes in Chinese foreign investment laws provide a tremendous opportunity for Diakont to expand its operations in China without the requirement of a Chinese partner. This gives Diakont more control over its business operations and opens up possibilities for greater profitability.
2. **Technological Development:** China's heavy investment in high-tech sectors, including robotics and automation, provides an excellent opportunity for Diakont to innovate and develop more advanced EMAs. Leveraging these technological developments can make Diakont's products more appealing to businesses seeking advanced technologies. However, this also implies that Diakont needs to bolster its investments in R&D to stay competitive.
3. **Low Threat of Substitution:** With EMAs offering specific functionalities and efficiency that can't be fully replaced by pneumatic or hydraulic actuators, the threat of substitution is low. This situation allows Diakont to maintain its market position in the Chinese market.
4. **Low Threat of New Entrants:** Given the high initial investment, significant economies of scale, and stringent government policies required to establish EMA manufacturing in China, the threat of new entrants is relatively low. This condition provides Diakont a considerable opportunity to strengthen its position in the Chinese EMA market without immediate worry of fresh competition.

|  |  |
| --- | --- |
| **Strengths**   * **Strong Research and Development (R&D** * **Customization Capabilities** * **Financial Stability** | **Weaknesses**   * **Limited Distribution Network** * **Less Diverse Product Range** * **Scaling of Industrial Capabilities** |
| **Opportunities**   * **Foreign Investment Law 2021** * **Technological Development** * **Low Threat of Substitution** * **Low Threat of New Entrants** | **Threats**   * **Regulatory Compliance** * **China's National Emissions Trading Scheme** * **Market Competition and Cost Structure** |

**Table 3 SWOT**

### **3.1.2 Matching SWOT**

The Matching SWOT Analysis builds on the initial SWOT analysis by identifying relationships and strategic alignment between Diakont's strengths, weaknesses, opportunities, and threats. This process involves pairing Diakont's internal characteristics (strengths and weaknesses) with its external factors (opportunities and threats) to generate actionable strategies.The aim of the Matching SWOT Analysis is to leverage Diakont's strengths to take advantage of opportunities, while also addressing its weaknesses and mitigating threats. This process helps to prioritize and focus efforts in areas where Diakont can realize the greatest impact or improvement.

By conducting a Matching SWOT Analysis, strategies that play to its strengths and capitalise on market opportunities cam be designed, as well as devise action plans to improve areas of weakness and reduce exposure to potential threats.

**SO**

**Leveraging R&D to capitalize on technological development**: Diakont's strong Research and Development (R&D) capabilities can be a significant asset in navigating China's rapidly evolving high-tech landscape. As China continues to make considerable investments in robotics, automation, and other advanced sectors, opportunities for technological innovation are expanding. Diakont can focus its R&D resources on creating advanced, industry-leading electromechanical actuators (EMAs) that respond to these advancements. It can also collaborate with Chinese tech firms, participate in industry conferences, and monitor industry trends to remain at the forefront of technological developments in the actuator market. This proactive approach to innovation can help Diakont maintain its competitive edge and meet the growing demand for high-tech EMAs in China.

**Utilizing customization capabilities to meet diverse market needs**: The ability to provide customized solutions is another strength that Diakont can leverage to its advantage. This strength can be particularly valuable in China, a market known for its diversity and dynamic industrial needs. By offering EMAs tailored to the specific needs of various industries in China, Diakont can distinguish itself from competitors and strengthen its value proposition. To do this effectively, Diakont should invest in understanding the unique requirements of different sectors in China, establish a dedicated local team to manage customization requests, and ensure that its production processes can accommodate customization without compromising on quality or delivery timelines.

**Leveraging financial stability to manage expansion and mitigate risks**: Diakont's robust financial health can be instrumental in managing the risks and costs associated with expanding into the Chinese market. This includes costs related to establishing a local presence, marketing and promotion, hiring and training local staff, compliance with local regulations, and more. In addition, Diakont's financial stability can also enable it to manage potential market fluctuations and mitigate the risks associated with the relatively low threat of new entrants in the EMA market. To make the most of this strength, Diakont should create a detailed financial plan for its China entry strategy, including a budget, revenue projections, and contingency plans for managing risks.

**Ensuring a strong market position through innovation and customization**: Given the low threat of substitution for EMAs, Diakont can solidify its market position in China by focusing on continuous innovation and customization. By harnessing its R&D capabilities and deep understanding of customer needs, Diakont can ensure that its EMAs offer unique features and efficiencies that cannot be replicated by other types of actuators. Furthermore, by customizing its offerings based on specific industry needs, Diakont can further differentiate itself from competitors and strengthen its appeal to Chinese customers. To implement this strategy effectively, Diakont should invest in regular product updates, maintain a close relationship with its customers to understand their evolving needs, and ensure that its customization capabilities are communicated effectively in its marketing and sales efforts.

**ST**

**Leveraging Strong R&D to Navigate Regulatory Compliance**: Diakont's solid R&D base can prove instrumental in addressing China's stringent safety and environmental regulations, including China Compulsory Certification (CCC) and China Restriction of Hazardous Substances (RoHS). Given these regulations can impose significant costs, Diakont can use its R&D capabilities to develop solutions that not only meet but exceed these standards. This proactive approach to compliance could enhance Diakont's reputation, establish it as a responsible corporate citizen, and potentially lead to cost savings in the long run.

**Utilizing Customization Capabilities to Differentiate in a Competitive Market**: The electromechanical actuator (EMA) industry in China is highly competitive. Diakont's ability to provide customized solutions could serve as a key differentiator. By understanding and meeting specific customer requirements across various industries, Diakont can offer unique value and stand out from competitors. It's important for Diakont to continuously monitor market trends, customer feedback, and competitor activities to keep its customization strategies relevant and effective.

**Capitalizing on Financial Stability Amid Market Competition and Changing Cost Structure**: Diakont's robust financial health can help it navigate the competitive market landscape and manage the high fixed and variable costs associated with EMA production in China. This financial stability could enable Diakont to invest in advanced manufacturing processes, efficient supply chain management, and superior customer service, all of which can enhance its competitiveness. It would also allow Diakont to adopt flexible pricing strategies, thereby attracting a wider customer base without compromising profitability.

**Leveraging R&D and Financial Stability to Manage Risks of China's National Emissions Trading Scheme**: China's National Emissions Trading Scheme could increase production costs for companies whose products exceed the permitted carbon emissions. Diakont's strong R&D capabilities and financial stability can help it manage this risk effectively. It can use its R&D resources to develop and implement energy-efficient production processes, and its financial stability can provide a safety net for any associated costs. This approach would not only ensure compliance with the scheme but also position Diakont as a company committed to environmental responsibility, thereby enhancing its brand reputation.

**WO**

**Expanding Distribution Network Leveraging the New Foreign Investment Law**: One of Diakont's weaknesses is its limited distribution network in China. However, the recent changes in the Chinese foreign investment law could present a significant opportunity to overcome this weakness. Diakont could use the new law as a chance to invest in building a wider, more robust distribution network in China without the requirement of a Chinese partner. This could increase the company's market reach and improve customer service and support, thereby enhancing its overall competitiveness.

**Diversifying Product Range Aligned with Technological Development**: Although Diakont's product range is currently less diverse compared to competitors, the ongoing technological advancements in China present an opportunity to address this weakness. With China's heavy investment in high-tech sectors, Diakont could leverage this trend and broaden its product portfolio, developing more advanced electromechanical actuators (EMAs) that cater to a wider range of customer needs across various industries.

**Achieving Operational Efficiency through Foreign Investment Law**: Diakont's relatively new manufacturing plant in Italy might not yet have reached the level of operational efficiency and economies of scale enjoyed by competitors. With the new foreign investment law in China, Diakont can establish manufacturing facilities in China and work on improving operational efficiency and achieving economies of scale. Having a manufacturing presence in China could also help with faster response times and improved supply chain management.

**Overcoming Scaling Challenges through Technological Development**: The challenge of scaling up its industrial capabilities swiftly, particularly in response to rising demand, is a known weakness for Diakont. But the technological development in China can be harnessed as a potential solution to this challenge. By embracing advanced technologies in production processes, Diakont could potentially improve its manufacturing efficiency and scalability. This strategy can allow Diakont to keep pace with demand fluctuations in the Chinese market and maintain its service quality.

**WT**

**Mitigating Limited Distribution Network with Regulatory Compliance**: Diakont's limited distribution network in China can be a drawback in the face of strict Chinese safety and environmental regulations that require compliance across all points of distribution and supply. To address this weakness and threat combination, Diakont should prioritize strengthening its regulatory compliance capabilities. Developing a robust system that ensures regulatory compliance can enhance the company's reputation and foster trust among Chinese clients and partners, which may ultimately enable Diakont to expand its distribution network.

**Addressing Product Range Diversity in the Face of Market Competition**: The electromechanical actuator industry in China is growing rapidly, leading to increased competition. Diakont's relatively narrow product range may limit its ability to compete effectively. To mitigate this, Diakont should look into diversifying its product range, potentially by introducing variants of its existing products or developing new products. Such a strategy would allow Diakont to cater to a wider variety of customer needs, thus bolstering its competitive position.

**Improving Scaling of Industrial Capabilities Amid Regulatory Changes**: The introduction of China's National Emissions Trading Scheme can potentially escalate production costs for Diakont, especially if the company needs to scale up its operations quickly to meet growing demand. To tackle this issue, Diakont can invest in greener, more energy-efficient manufacturing technologies that align with the new emissions regulations. Such investments would not only enable Diakont to comply with the new regulations but also improve its operational efficiency and scalability, thereby turning a potential threat into an opportunity.

**Strengthening the Distribution Network in Light of Increased Market Competition**: As competition increases in China's EMA market, Diakont's limited distribution network could potentially impede its market penetration efforts. To counter this threat, Diakont could look into strategic partnerships with local distributors or consider joint ventures with established Chinese companies. Such alliances could extend Diakont's market reach, improve its customer service, and bolster its position in the increasingly competitive Chinese EMA market.

|  |  |
| --- | --- |
| **SO**   * **Leveraging Strong R&D to Navigate Regulatory Compliance** * **Utilizing Customization Capabilities to Differentiate in a Competitive Market** * **Capitalizing on Financial Stability Amid Market Competition and Changing Cost Structure** * **Leveraging R&D and Financial Stability to Manage Risks of China's National Emissions Trading Scheme** | **ST**   * **Leveraging Strong R&D to Navigate Regulatory Compliance** * **Utilizing Customization Capabilities to Differentiate in a Competitive Market** * **Capitalizing on Financial Stability Amid Market Competition and Changing Cost Structure** * **Leveraging R&D and Financial Stability to Manage Risks of China's National Emissions Trading Scheme** |
| **WO**   * **Expanding Distribution Network Leveraging the New Foreign Investment Law** * **Diversifying Product Range Aligned with Technological Development** * **Achieving Operational Efficiency through Foreign Investment Law** * **Overcoming Scaling Challenges through Technological Development** | **WT**   * **Mitigating Limited Distribution Network with Regulatory Compliance** * **Addressing Product Range Diversity in the Face of Market Competition** * **Improving Scaling of Industrial Capabilities Amid Regulatory Changes** * **Strengthening the Distribution Network in Light of Increased Market Competition** |

**Table 4 Matching SWOT**

* 1. **Entry conditions**
     1. **Entry mode choice**

The OLI (Ownership, Location, Internalization) paradigm is a framework commonly used in international business to explain why companies engage in foreign direct investment (FDI) and operate in certain markets. Through an assessment of Diakont's OLI advantages, the company can determine the most suitable and beneficial approach to entering and operating in the Chinese market.

*Ownership*

**Strong Research and Development (R&D)**: Diakont's strong focus on R&D has yielded innovative electromechanical actuator technology, which is well-suited to the high-tech focus of the Chinese market. With China's heavy investment in sectors like robotics and automation, and a supportive policy framework encouraging foreign technological investments, Diakont's technological prowess translates into a major ownership advantage. This places the company in a favorable position to cater to the technologically advanced needs of the market.

**Unique and Sustainable Resources:** Diakont's ability to offer customized solutions tailored to the specific needs of its customers serves as a critical resource-based advantage. This capability of understanding and catering to unique customer requirements in a fast-evolving market like China provides a competitive edge to Diakont. It is a scarce and unique resource that contributes to the firm's sustainable competitive advantage.

**Management Competencies:** Diakont's financial stability, resulting from its robust management and organization skills, underpins its strategic advantage. Financial stability provides the necessary resources for the company to invest confidently in long-term growth strategies, withstand market fluctuations, and handle the payback periods associated with the development of innovative solutions

*Location*

**Large and Growing Market**: As suggested in the Economic factors of the PESTEL analysis and the Market Size element of Porter's Five Forces, China's robust economic growth, urbanization, and large population base create a substantial demand for industrial automation and EMAs. These aspects present a significant location advantage, offering a substantial customer base for Diakont.

**Government Support and Investment Incentives**: The Political factors in the PESTEL analysis suggest that China's political stability and pro-foreign investment policies create a conducive business environment. The "Made in China 2025" initiative, the liberalization of markets, and the revised Foreign Investment Law provide favorable conditions for foreign companies, serving as location advantages for Diakont.

**Low Threat of New Entrants**: The Porter's Five Forces analysis reveals a relatively low threat of new entrants in China's EMA industry, largely due to the industry's capital-intensive nature and regulatory hurdles. This scenario reduces competitive pressures and adds to the location advantages for Diakont in China.

**Skilled Labor Force and Technological Capabilities**: As noted in the Social and Technological factors of the PESTEL analysis, China's large pool of skilled workers and the growing investment in R&D and high-tech sectors offer significant location advantages. This environment can support Diakont's innovation efforts and operational efficiency.

**Competitive Supplier Base**: In Porter's Five Forces analysis, the bargaining power of suppliers is a critical aspect. China, with its extensive industrial sector, provides a wide range of potential suppliers for EMA production, allowing Diakont to negotiate better terms and achieve cost efficiencies.

**Lower Import Taxes for Technological Goods**: As highlighted in the Legal factors of PESTEL analysis, China's trade policy provides a reduced VAT rate for technological goods, including EMAs. This policy potentially reduces the cost burden for Diakont, enhancing the location advantage.

*Internalization*

**Limited Experience in Asian Markets**: Diakont boasts substantial experience in European and North American markets, with successful operations in Italy, the United States, and its native Russia. However, the company has not yet ventured into Asian markets, and more specifically, China, which is distinctly different in terms of market dynamics, consumer behavior, regulatory landscape, and business culture. As CAGE analysis revealed, the Russian head office management team and Chinsese businessmen remains to be remote in terms of culture and habitual administrative systems. While the knowledge and insights gained from Diakont's operations in other parts of the world can certainly be valuable, they might not wholly translate to the Chinese context. The learning curve to understand and adapt to this new market could be steep, potentially impacting the speed and efficiency of market entry, customer acquisition, and business operations.

**Uncertain Global Economic Environment**: While Diakont has shown financial stability, the decision to internalize operations in China would need to consider the broader global economic context. The post-pandemic economic recovery is still in progress, with varying degrees of resilience observed across different economies. Additionally, geopolitical tensions such as the conflict in Ukraine could potentially disrupt global economic stability and trade dynamics. In this uncertain environment, the financial risks associated with establishing direct operations in a new country like China could be significantly higher. These could include costs related to setting up operations, adapting products to local market needs, building brand recognition, and navigating legal and regulatory hurdles. Moreover, should the economic situation deteriorate further, recovering these investments could prove challenging, and there might be increased risks of financial loss.

Having considered that Diakont will possess both ownership and location advantages, but not internalization one the following entry modes might be excluded.

1. **Exporting**
2. **Joint Ventures (equity based)**
3. **Wholly-Owned Subsidiary**
4. **Mergers & Acquisitions**
5. **Greenfield Investment**
6. **Management contracts**

The applicable entry modes left are:

1. Turnkey Projects
2. **Franchising**
3. **Licensing**
4. **Contract Manufacturing**
5. **Joint Ventures (Contractual based)**

In order to decide the most applicable entry mode the ones that left have to be compared based on factor crucial to undertake an internalization decision.

**Market Entry Risk Mitigation**:

**Turnkey Projects**: These allow Diakont to extend its reach but exposes the company to considerable risk due to reliance on foreign operations and local laws which might not fully protect its interests.

**Licensing, Franchising, and Contract Manufacturing**: These are not viable options for Diakont, as they require a direct disclosure of intellectual property which the company aims to protect.

**Joint Ventures (Contractual based)**: This method appears to be the most risk-averse, as it allows Diakont to share risks with a local partner while gaining valuable market-specific knowledge from them.

**Local Network Utilization**:

**Turnkey Projects**: This approach doesn't offer direct access to local networks or existing relationships.

**Joint Ventures (Contractual based)**: This method provides the most significant opportunity for leveraging local networks, with direct access to the partner's distribution channels, customer relationships, and suppliers.

**Shared Investments and Risks**:

**Turnkey Projects**: These involve considerable investments from Diakont without sharing the risks.

**Joint Ventures (Contractual based)**: This mode shares both investments and associated risks between partners, spreading the risk more evenly and making it a more balanced option.

**Flexible Arrangement**:

**Turnkey Projects**: These are often rigid and offer limited flexibility to accommodate changes in market conditions or strategic objectives.

**Joint Ventures (Contractual based)**: These provide the most flexibility as they can be structured in numerous ways to suit the specific needs and objectives of the involved parties.

In light of these parameters, a contractual joint venture to provide the most balanced and beneficial approach for Diakont's entry into the Chinese market, particularly considering the company's need to protect its intellectual property.

As Diakont has its own R&D, manufacturing capabilities and other factor related to production are development of products, but lacks its distribution network and assess to China market, the company should engage in a contractual joint venture creating selling agreement to provide its products to JV, which further use its distribution network to provide Diakont actuators to China market. The average selling partner commission is 6% accrding to Global Negotiation which will be used in financial plan

**3.2.2 Criteria for selecting JV**

When entering a new market, the choice of a JV partner significantly impacts the chances of successful market penetration. In Diakont's case, venturing into China's complex and diverse market, the JV partner's selection is a critical strategic decision. Below are suggested criteria that Diakont could use to evaluate potential JV partners:

1. **Sales Figures:** A JV partner's sales figures provide a clear indication of their market performance and capabilities. Strong sales figures suggest that the company has a robust market presence, successful sales strategies, and a good understanding of customer needs. This could translate into a higher probability of successful market entry for Diakont.
2. **Market Knowledge:** In-depth knowledge of the Chinese market is crucial for navigating its complexities. A potential JV partner's understanding of local consumer behavior, market trends, regulations, and competition can inform strategic decisions and reduce risks associated with market entry.
3. **Distribution Network:** The extent and effectiveness of a JV partner's distribution network should be another critical criterion. A wide and efficient distribution network can ensure that Diakont's products reach the right consumers at the right time, thereby maximizing their market reach.
4. **Reputation and Brand Image:** The reputation and brand image of the JV partner could significantly impact Diakont's brand perception in the new market. A partner with a strong and positive reputation can enhance customer trust and acceptance of Diakont's products.
5. **Financial Stability:** The financial stability of the JV partner is a vital consideration as it ensures that they can support the JV's operational costs and invest in necessary areas like marketing and infrastructure.
6. **Technical Expertise:** Given Diakont's sophisticated product line, a JV partner with strong technical expertise would be valuable. This expertise could assist in servicing and maintaining products, training staff, and addressing customer queries, thereby enhancing customer satisfaction.
   1. **Financial plan**

This financial plan outlines Diakont's projected market entry into China over three years. It considers a percentage sales approach based on competitor, Tamagava's performance, while factoring in operating costs, revenues, partner shares, and taxes. Three financial scenarios (positive, neutral, negative) are offered for risk management, and the discount rate is based on the Weighted Average Cost of Capital (WACC).

It is assumed on the basis on interview that, under the neutral scenario, in the year 1 the company will sell 20% of the 6,000 products Tamagawa, the China-oriented competitor Japanese firm sells annually; thus, Diakont will sell 1,200 goods. In years 2 and 3, the number of products sold will grow at the rate equal to the Chinese CAGR of 6.3% for the industry of actuators. The negative and positive scenarios suppose that the quantities sold each year will differ from those under the neutral scenario by -25% and +25%, respectively.

The price for one actuator is set at Euro 2000 and is not subject to change within the projected period of three years.

Operating expenses include COGS, workers’ wages, managers’ salaries, costs of maintaining the factory, logistics, and quality control. Unfortunately, there is no information available about the separate numbers inside the operating expenses. Overall, OPEX for one good is approximately 85% of its price: this is more than the competitors have (70-80%) due to the additional logistics expenses incurred on the production stage. The company receives payment upon delivery and launches the production process when the order is placed. I did not manage to obtain any information on the level of bad debt; therefore, I assume it to be none. For this project, Diakont pays three types of taxes: China VAT (13%), China import tax (2.8%) and Italian production tax (3.9%); hence, the overall tax rate is 19.8%. JV partner receives 6% of revenue before taxes.

Capital expenses are zero because the factory with additional capacity was already constructed two years ago, and the consequent expenses were already reflected in the company’s previous statements of cash flows.

Discounting rate is calculated as the Weighted Average Cost of Capital (WACC). No debt was drawn to finance the project.

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where

rf is the yield of Chinese 3-year government bonds;

rm is the mean return of the Chinese main index SSE Composite for the last five years;

β is the Beta-coefficient of volatility in the broad industry of electronics.

All figures below are in Euros.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2024 | 2025 | 2026 |
| **Cash Flow from Operations** | 129,924 | 138,109 | 146,810 |
| Revenue | 1,800,000 | 1,913,400 | 2,033,944 |
| OPEX | (1,530,000) | (1,626,390) | (1,728,852) |
| JV partner share | (108,000) | (114,804) | (122,037) |
| Tax expense | (32,076) | (34,096) | (34,096) |
| **Cash Flow from Investing** | 0 | 0 | 0 |
| **Cash Flow from Financial Activities** | 0 | 0 | 0 |

**Table 5 cashflow for negative scenario**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2024 | 2025 | 2026 |
| Cash Flow from Operations | 173,232 | 184,146 | 195,747 |
| Revenue | 2,400,000 | 2,551,200 | 2,711,926 |
| OPEX | (2,040,000) | (2,168,520) | (2,305,137) |
| JV partner share | (144,000) | (153,072) | (162,716) |
| Tax expense | (42,768) | (45,462) | (48,326) |
| Cash Flow from Investing | 0 | 0 | 0 |
| Cash Flow from Financial Activities | 0 | 0 | 0 |

**Table 6 cashflow for negative scenario**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2024 | 2025 | 2026 |
| Cash Flow from Operations | 216,540 | 230,182 | 244,683 |
| Revenue | 3,000,000 | 3,189,000 | 3,389,907 |
| OPEX | (2,550,000) | (2,710,650) | (2,881,421) |
| JV partner share | (180,000) | (191,340) | (203,395) |
| Tax expense | (53,460) | (56,828) | (60,407) |
| Cash Flow from Investing | 0 | 0 | 0 |
| Cash Flow from Financial Activities | 0 | 0 | 0 |

**Table 6 cashflow for positive scenario**

The financial projections reveal that all scenarios - negative, neutral, and positive - suggest positive Net Present Values (NPVs) for Diakont's entry into the Chinese market. This is indeed promising, particularly considering there are no initial capital expenditures involved. The range of NPVs from €364,372 to €607,287 underscores the viability of the expansion while providing a valuable cushion for any market uncertainties. Hence, this comprehensive plan underlines the financial feasibility and promising outlook of Diakont's market expansion into China.

**3.4 Recommendation on internationalization for DSDT**

1) Country, mode

**Country Selection – China:** Based on an in-depth regional and country analysis along with the CAGE (Cultural, Administrative, Geographic, Economic) Distance Framework, China emerged as the most suitable country for Diakont's internationalization efforts. China's robust industrial sector, rapid technological advancement, and burgeoning automotive industry make it a promising market for Diakont's products.

**Mode of Internationalization – Joint Venture (contractual):** Based on the Ownership, Location, and Internalization (OLI) paradigm, a Joint Venture was determined as the ideal mode of entry for Diakont. Previous analysis revealed that contractual form is best type of JV. A contractual JV provides a balance between maintaining control over operations and benefiting from a local partner's market knowledge and established networks. This choice reduces potential risks associated with unfamiliarity with local business practices and regulations.

2) Strategy

**Leverage R&D for Regulatory Compliance and Innovation:** Diakont should invest more in R&D, focusing on developing technologies that not only meet but exceed regulatory standards such as CCC and RoHS. This would not only help manage potential regulatory costs but also reinforce Diakont's reputation as a responsible and innovative player in the industry.

**Differentiate through Customized Solutions:** To stand out in the highly competitive EMA industry, Diakont should leverage its ability to provide customized solutions. By understanding specific customer requirements, Diakont can offer unique value propositions, ensuring its offerings remain relevant and competitive in the market.

**Expand Distribution Network:** Taking advantage of the new Foreign Investment Law, Diakont should invest in expanding its distribution network. This could help increase market reach and improve customer service and support, enhancing its overall competitiveness in the Chinese market.

**Diversify Product Range:** To counter the challenge of a less diverse product range, Diakont could tap into the ongoing technological advancements in China to develop a wider range of EMAs. This diversification strategy would allow Diakont to cater to a broader market segment, enhancing its competitive position.

**Enhance Scaling of Industrial Capabilities:** With the help of technological advancements in China, Diakont should aim to improve its manufacturing efficiency and scalability. This will allow Diakont to manage demand fluctuations effectively and maintain its service quality.

**Strengthen Regulatory Compliance:** Diakont needs to develop robust systems to ensure strict compliance with Chinese safety and environmental regulations. This strategy could enhance the company's reputation and trust among Chinese customers, potentially aiding in the expansion of its distribution network.

**Strategic Partnerships for Improved Distribution:** Diakont should consider forming strategic partnerships with local distributors or enter joint ventures with established Chinese companies. These alliances can extend Diakont's market reach and improve its position in the highly competitive Chinese EMA market.

**CONCLUSION**

Indeed, the global landscape is grappling with the enduring ramifications of major crises such as the COVID-19 pandemic and the Ukrainian crisis. These phenomena have engendered multifaceted impacts on global societies, economies, and particularly, businesses. Under these circumstances, firms aspiring to penetrate new markets are necessitated to meticulously strategize their plans, rooted in comprehensive research and astute foresight. In this context, companies like Diakont discern unique opportunities amidst these crises. Given that Diakont's factory is currently operating merely at 20% of its potential capacity, the current global dynamics provide an impetus for the company to augment its sales figures. To leverage these emerging opportunities and address the prevailing managerial challenges, certain objectives were defined and subsequently fulfilled in the course of this diploma thesis. Each segment of the thesis was tailored to accomplish these objectives, with the ultimate goal of crafting an internationalization recommendation for Diakont's Division of Serial Drive Technology.

The first chapter delivered a comprehensive depiction of Diakont, tracing its historical evolution, corporate profile, and resource capabilities. This portrayal allowed for a keen understanding of Diakont's unique standing and potential as an international entity. An exhaustive business model canvas was employed to elucidate the core aspects of Diakont's operation, from value propositions and customer relationships to revenue streams and key activities. These detailed analyses equipped us with the necessary understanding of the company's resources, positioning, and business dynamics, facilitating an informed assessment of its internationalization potential and strategy formulation.

The second chapter performed a methodical analysis of Diakont's potential for internationalization, discerning the optimal market through an in-depth regional and country analysis to understand the most. This evaluation was narrowed down using the CAGE framework, which explored the cultural, administrative, geographic, and economic differences between Russia and prospective countries. Once the market was selected, it was thoroughly examined using the PESTEL model and Porter's Five Forces analysis to uncover its macro-environmental aspects and competitive environment. A meticulous competitor analysis and an identification of key success factors (KSFs) were also carried out, providing crucial insights into industry trends and benchmarks. These strategic instruments informed the development of a robust and informed internationalization strategy for Diakont’s DSDT.The third chapter appraised potential entry modes, dissected the selected market, and gauged Diakont's DSTD opportunities within it, serving as the foundation of the recommendation on internationalization.

The third chapter of the thesis provided the strategic bedrock for Diakont's internationalization, intricately constructed on the solid foundation of the previous analytical findings. Initiating this chapter, a SWOT analysis gave an all-encompassing view of Diakont's strengths, weaknesses, opportunities, and threats specific to the chosen market. This analysis led to a Matching SWOT, designed to formulate strategies essential for Diakont's entry into the most favorable market, aligning identified opportunities with the company's strengths and objectives.The subsequent application of the OLI (Ownership, Location, Internalization) model, informed by the SWOT, PESTEL, and Porter's Five Forces analyses, delineated the best-suited entry mode for Diakont in the target market. Futher,the financial plan constituted an evaluation of the financial feasibility and profitability of Diakont's DSTD market entry strategy. An array of strategies and financial projections was then encapsulated in the recommendation, laying a strategy for achieving optimal factory load and ensuring successful penetration into the selected market.

In conclusion, in the face of uncertainty and rapid global transitions, efficacious strategic planning remains a critical determinant of success. For Diakont’s DSDT, the recommendation provides not only a trajectory towards augmented sales and factory utilization, but also delineates a blueprint for navigating the opportunities and challenges presented by the current global crises. This strategic approach, anchored in meticulous analysis and foresight, positions Diakont on a trajectory towards growth and success in the international market.

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**APPENDIX**

* 1. Authorizing letter:
  2. A close-up of a document

     Description automatically generatedThe workflow

Изображение выглядит как текст, диаграмма, Параллельный, линия

Автоматически созданное описание

* 1. Interview:

Interviewer: Welcome and thank you for joining us today. Could you please tell us about the value proposition that Diakont brings to its customers?

Diakont Representative: Absolutely, our primary offering lies in our advanced electromechanical drives or actuators. They're designed with high precision, reliability, and adaptability in mind, making them useful for a wide range of industries. But, I'd say our real strength is our experienced and skilled team that's adept at offering tailored solutions to meet specific industry requirements. We've also invested in highly efficient manufacturing capabilities with cutting-edge machinery. This allows us to offer customizable solutions, adapting to the specific needs of our clients.

Interviewer: You have quite a broad spectrum of competitors, don't you?

Diakont Representative: Indeed, we operate in a competitive landscape. Some of the companies we consider as direct competitors are ABB Measurement & Analytics, ARO, Emerson Electric, Asahi / America, Inc., Exlar, Festo Corporation, Tolomatic Rotork plc, LINAK U.S. Inc., Actuonix Motion Devices, igus® inc., Columbus McKinnon Corporation, Tamagawa, and Ewellix.

Interviewer: You've mentioned that Diakont's team plays a major role in delivering these tailored solutions. Could you elaborate more on the kind of expertise that your team brings?

Diakont Representative: Absolutely, our team is composed of highly skilled engineers and technical experts who have vast experience in a range of industries. They bring with them not only their technical know-how but also a deep understanding of the various industry-specific challenges our clients face. This allows us to provide solutions that not only meet the technical requirements of our clients but also help them overcome industry-specific hurdles.

Interviewer: You've talked about the customizable solutions that Diakont offers. Could you provide some examples of the types of customizations that you've done for clients?

Diakont Representative: Certainly, we've worked on a range of customizations to meet the unique needs of our clients. For instance, we've designed actuators with specific torque capacities or speed ranges for certain industrial applications. We've also created actuators with unique physical dimensions to fit in tightly confined spaces. In other instances, we've incorporated specific communication protocols or power requirements based on our client's infrastructure.

Interviewer: As a part of the competitive market, how does Diakont differentiate itself and continue to grow despite the intense competition?

Diakont Representative: Our differentiator is our relentless commitment to innovation and customer satisfaction. We are always exploring ways to improve our products, and our substantial investment in R&D is a testament to this. Our ability to deliver customized solutions also sets us apart. While many companies may offer off-the-shelf products, we work closely with our clients to develop solutions that are tailored to their needs. This customer-centric approach has helped us to sustain and grow in this highly competitive market.

Interviewer: Can you tell us more about the role of cutting-edge machinery in your manufacturing capabilities?

Diakont Representative: Sure, we have invested heavily in our manufacturing capabilities, using state-of-the-art machinery to produce our actuators. This ensures we maintain high precision and quality in our products. Furthermore, this machinery allows us to be highly efficient in our manufacturing process, which in turn supports our ability to deliver custom solutions in a timely manner. We believe this investment is critical to maintaining our competitive edge and meeting the high expectations of our clients.

Interviewer: I've noticed that you invest a significant portion of your revenue into R&D. Can you talk a little about that?

Diakont Representative: That's right. At Diakont, we believe that continuous innovation is key to maintaining our competitive edge. This is why we invest over 8% of our revenue on research and development. We are committed to developing cutting-edge solutions and driving technological advancements in our field.

Interviewer: On that note, customization seems to be a recurring theme. How do you compare to companies like Tamagawa and ARO in this respect?

Diakont Representative: While each of our competitors has their own strengths, we believe that our commitment to customization sets us apart. For instance, Tamagawa is a formidable player, selling around 6,000 actuators a year. However, they offer only minor customization related to the type of product that will be connected to the actuators. Similarly, ARO is another significant competitor, but they don't provide extensive data concerning customization or work on individual projects according to specific customer needs. We believe our ability to tailor our solutions to meet the unique needs of each client is a significant advantage.

Interviewer: Pricing and cost efficiency are key aspects in any business. Could you comment on that in the context of Diakont?

Diakont Representative: Of course, the average price for one of our actuators is approximately 2000 Euros. We strive to keep our operational expenses (OPEX) as efficient as possible, but it currently stands at approximately 85% of the price of our goods. This might be slightly more than what some competitors have, which tends to be around 70-80%. However, we believe our high level of customization and superior product quality provide a value proposition that justifies this expense.

Interviewer: So, it seems that it everything I need to know. Thank for your time.

Diakont Representative: you are welcome.

1. The authorizing letter is present in Appendix 1 “Authorization letter” [↑](#footnote-ref-1)
2. The detailed workflow is present in Appendix 2 “Workflow” [↑](#footnote-ref-2)
3. The complete interview is present in Appendix 3 “Interview” [↑](#footnote-ref-3)
4. Further Within the work DSDT division is called “Diakont” to simplify the perception information in all cases unless other is specified. [↑](#footnote-ref-4)