Aalto University
School of Business

Market analysis of e-bicycles in the EU region and recommendations to PEfunds to acquire an e-vehicle company

Capstone Case Report for EY

Ali Amaan

Ali	**Financial Consultant/Project manager**

Aalto University School of Business

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1.0 Case Brief

'Corp Co', a European corporation, established a corporate venture capital program leading to the creation of 'Green Bull', a thriving electric bicycle business unit. Despite its rapid growth in existing markets, 'Corp Co' has recently determined that the e-bicycle business doesn't align with its future corporate strategy. Consequently, 'Corp Co' has commenced discussions with a private equity investor, 'PEfund', interested in acquiring the business unit to transform it into an independent entity named 'Spin-off Co'.

The divestiture aims to separate the e-bicycle business from 'Corp Co' and enable 'PEfund' to drive its growth and operations under the new entity. This strategic move reflects 'Corp Co's intention to streamline its focus on core businesses while allowing the e-bicycle unit to thrive independently.

As consultants, the focus lies in facilitating a smooth transition of the business unit to 'Spin-off Co', ensuring the continuity of operations, managing the transfer of assets and talent, and strategizing for 'Spin-off Co's sustained success as an autonomous entity under 'PEfund's ownership. The emphasis is on maximizing value for both 'Corp Co' and 'PEfund' through a well-structured divestiture process.

1.1 Case challenge

Julia Smith, a partner at 'PEfund', leads discussions regarding the potential acquisition of 'Spin-off Co' from 'Corp Co'. Her goal involves evaluating whether 'Spin-off Co' would strategically complement PEfund's portfolio. Smith envisions transforming 'Spin-off Co' into a market leader within 5-7 years post-acquisition by injecting investment into its growth.

However, Smith lacks clarity on the market potential in key territories such as Germany, France, Denmark, Sweden, and Finland. She seeks to assess 'Spin-off Co's capability to attain market leadership in these regions, highlighting the need for market attractiveness and growth potential analysis.

Moreover, in the event of acquisition, Smith aims to ensure a seamless carve-out of the business unit from 'Corp Co', maintaining its standalone operational continuity. This involves strategizing to preserve ongoing operations, talent retention, and asset transfer to guarantee Spin-off Co's viability as an independent entity under PEfund.

Consulting support is crucial in conducting comprehensive market analyses for the identified territories, assessing Spin-off Co's potential to dominate these markets, and devising a robust carve-out strategy to ensure a smooth transition and sustained growth post-acquisition. The focus lies in providing actionable insights to guide PEfund's decision-making process and optimize the success of 'Spin-off Co' as a standalone venture within their portfolio.

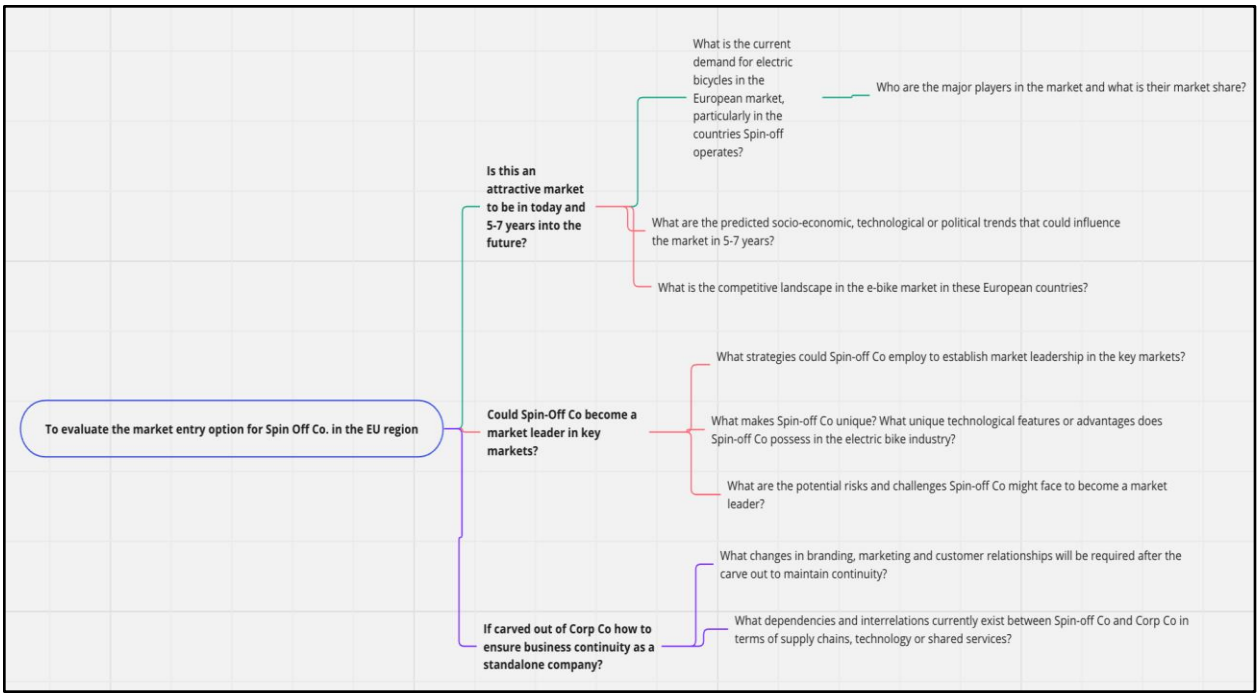
The project sets out to answer the following questions that Mrs. Smith, one of the key stakeholders of PEfunds has hired us for.

1. **Is this an attractive market to be in today and 5-7 years into the future?**
    - What is the current size and growth rate of the market?
    - What is the current demand for electric bicycles in the European market, particularly in the countries Spin-off operates?
    - What is the competitive landscape in the e-bike market in these European countries?
    - Who are the major players in the market and what is their market share?
    - Analytics on (electric) bike users in operating countries and other European countries. (Netherlands & Denmark could be good markets to enter etc.)
    - What are the predicted socio-economic, technological or political trends that could influence the market in 5-7 years?
        i. E-bike infrastructure such as charging spots
2. **Could Spin-Off Co become a market leader in key markets?**
    - What makes Spin-off Co unique? What unique technological features or advantages does Spin-off Co possess in the electric bike industry? → *data good for carve-out analysis* →
    - What strategies could Spin-off Co employ to establish market leadership in the key markets?
    - What are the potential risks and challenges Spin-off Co might face to become a market leader?
3. **If carved out of Corp Co how to ensure business continuity as a standalone company?**

- Gaining competitive advantage through pricing/technology/accessibility/functionality
- Utilizing core competences
    i. What dependencies and interrelations currently exist between Spin-off Co and Corp Co in terms of supply chains, technology or shared services?
- What changes in branding, marketing and customer relationships will be required after the carve out to maintain continuity?

1.2 Project Charter

Project Title: Market entry for Spin Off Co. electric cycles
Project Start Date: 30.10.2023 **Projected Finish Date:** 01.04.2024
Budget Information: Most of the costs are going into the research to determine potential growth, consumer and competitor research, etc.
Project Manager: Ali Amaan
Project Objectives: To evaluate the market entry option for Spin Off Co. in the EU region as well as sustaining their market place in the long run with its carve-out from Corp Co
Success Criteria: 1. Potential growth in market share in 5-7 years time. 2. Potential growth in profitability, EBIT aligned with the expectations from PEFund. 3. Standalone continuity of the Spin-Off Co
Approach: ● Conduct consumer and competitor research - how many people use electric bikes compared to normal ones? What is the market share in each country? Does any country have a larger potential growth? ● Who are the largest competitors in the market? What are the trends in electric cycle usage in the EU region?



Issue Tree for SpinOff Case (Link to the Issue Tree)

Proposed methodology & frameworks - "carve-out assessment"			
Key themes from issue tree	Market opportunity	Competitor research and benchmarking	Consumer research
Methodologies to approach analysis	PESTEL Framework SWOT analysis Market Entry Framework	SWOT analysis Porter's Five Forces	PESTEL Framework
Other methods & information	Online data on market for electric cycles in Europe Triple Bottom Line	Obtaining information from Google(?) and competitor own sites	Collecting information from survey studies done from large consultancies, EY etc.

Table 1. Methodology for key themes and approach to collecting data

1.3 Project plan

Phase 1

							PHASE ONE									
WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE	WEEK 1					WEEK 2				
							M	T	W	T	F	M	T	W	T	F
1	Project Conception and Initiation															
1.1	Completing Issue Tree		10/26/23	11/1/23	5	100%										
1.1.1	Project Charter		10/26/23	11/1/23	5	100%										
1.2	Budget planning		11/2/2023	11/3/23	2	100%										
1.3	Databases and materials		11/2/23	11/3/23	2	100%										
1.4	Stakeholders - employees & top management meeting at all firms		11/6/23	11/8/23	3	100%										
1.5	Finance Guidelines		11/6/23	11/8/23	3	100%										
1.6	Project Initiation		11/6/23	11/8/23	3	100%										

Phase I is the initiation phase where the main challenge is to list out all the challenging aspects of the analysis which includes the carve-out analysis, the timeline for the project and identifying the rationales of the market. This also includes estimating the duration of the project. We expect that the duration of the project with regards to analysis and planning is five weeks including communication with the employees of Corp Co and Spin-Off Co.

Most of the tasks in Phase I has been completed which included defining the issue tree, completing the project charter and then setting up a date to figure out a communication plan to employees affected with the migration. The project plan in Phase I is divided equally between five consultants in our team.

Phase 2

The figure below represents phase II and doing consumer research of the electric bikes market in the EU region. This is divided between two of our consultants, one creative consultant and one junior consultant. The most important section is understanding the e-vehicle market with respect to e-bikes and we found out that Electric bike (e-bike) sales have grown steadily from 2016 to 2021. The pandemic significantly impacted the e-bike market as there was a spike in sales during 2020 (Statista Research Department, 2023), and the sales continued to increase even after. The top markets for e-bikes include Germany, Denmark and France.

This is vital information for Spin-Off Co who wants to be one of the market leaders in Europe while PEfunds looks to acquire them from Corp Co and have the first three legal entities based in Sweden, Finland and Germany. We also identified that the expected market share of Spin-Off Co will not drastically increase given other key players in the market indicating increased competition. Despite this risk the overall market in the EU of e-vehicles increases to almost 20 billion EUR by 2029.

2	General Electric Bikes Market as a Whole					
2.1	Scope & Goal Setting		11/1/23	11/3/23	3	100%
2.2	Consumer research		11/9/23	11/13/23	3	100%
2.3	Communication Plan with key stakeholders		11/9/23	11/13/23	3	100%
2.4	Meeting between PEfund x Spin-Off Co and Corp Co		11/10/23	12/14/23		
2.5	Risk Management analysis		11/13/23	11/14/23	2	100%

Phase 3

Phase III has a few overlaps with Phase II as seen in the figure below.

We identified that Germany has the largest growth of e-bikes in the EU region and also is the most dominated market by 4-5 key players. This poses some threat to Spin-Off Co's market entry and its being sustainable in its growth approach. Our recommendations still indicated that Spin-Off Co should continue to enter the market but with the manufacturing and production of e-bikes done in China or somewhere with low labor costs.

We also estimated the financial growth predictions that Spin Off Co will double their revenue growth in 5 years only in the regions of Germany, Sweden and Finland with even more opportunity to dominate by entering in other markets. This was assessed by our senior consultant.

3	Spinoff Co's role in the market and opportunity					
3.1	Scope & Goal Setting		11/15/23	11/17/23	3	100%
3.2	Competitor assessment		11/15/23	11/17/23	3	100%
3.3	Spin-Off to decide with PEfunds which markets to focus on		TBC	TBC		50%
3.4	Financial growth (potential)		11/16/23	11/20/23	3	100%

Phase 4

The final phase (Phase IV) was done by one of our consultants that took approximately five days. Some of the key things were financial considerations of the carve-out analysis with respect to IT infrastructure, employee costs, asset and shared deals and general communication plan to the employees from the senior management of Green Bull entities. This also included proposing the new employee organizational model.

4	Spinoff Co as a Standalone company					
4.1	Analysis and proposal of IT infrasturcture		11/20/23	11/23/23	3	70%
4.2	Finanical costs consideration		11/21/23	11/24/23	3	80%
4.3	Employee integration from three countries		11/22/23	11/25/23	3	40%
4.4	2nd Communication to Green Bull Employees to start the process of standalone and carve-out		11/23/23	11/26/23		30%
4.5	Project Performance and Final report		11/23/23	11/24/23	3	80%

1.4 Reflections on project plan

We estimated the entire analysis and report to take about five weeks - we did get a report and presentation completed to give detailed feedback to PEfunds. We believe the actual carve out analysis and execution of the acquisition by PEfund to take at least three months which is not mentioned explicitly in the project charter. While we had a clear waterfall method approach we used agile at times to go back and reiterate some of the tasks if they needed more attention. For example, we calculated the projections for market analysis in Germany incorrectly at the beginning, so we had to go back and make amendments. Since this value (of €7.5 billion) would impact Spin-Off's revenue projections this activity and mistake on our side made a delay for a few hours or so.

The project plan was filled to answer the issue tree questions in a detailed way while providing enough information to the stakeholders. We had five consultants allocated to the project, with a project manager, a senior consultant, a creative consultant and two junior consultants. We spent about ten hours on average per team member to execute the tasks in the project charter and Gantt chart. We used external sources to obtain data on the e-cycle and e-vehicle trends in the EU region.

Some of our key accomplishments in the project plan and report include:

- Thorough analysis of expected growth of market share, Spin-Off Co.
- Analysis of revenue projections of Spin-Off Co

- Analysis of market share growth of Spin-Off Co
- SWOT and PESTEL analysis of market trends among consumers
- Carve out analysis with respect to employees, IT systems and deal parameters

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Consulting Proposal and Analysis for PEFund

Consulting Slides Deck (in software presentation format)

2.1 Market Analysis & Overview

Electric bike (e-bike) sales have grown steadily from 2016 to 2021. The pandemic significantly impacted the e-bike market as there was a spike in sales during 2020 (Statista Research Department, 2023), and the sales continued to increase even after. In 2021, Germany sold the most e-bikes in Europe, with over 2 million e-bikes sold there. France had the second-largest e-bike sales as they sold 0,66 million e-bikes, and the Netherlands came third by selling 0,48 million e-bikes (Statista Research Department, 2023). Overall, the European e-bike market is a force to be reckoned with. In 2021, it boasted an impressive market size of 12.9 billion USD (Statista Research Department, 2023), and the industry shows no signs of slowing down. Experts predict that by 2027, the market will have almost doubled, reaching a staggering 32.1 billion USD (Statista Research Department, 2023).

The electric bike (e-bike) market is estimated to grow around 10% annually between 2022 and 2030, meaning that the sales will double from 36,5 million to 77,3 million e-bikes (Statista Research Department, 2022). According to market projections, the e-bike market is anticipated to experience significant growth in Luxembourg over the next few years, with an estimated annual growth of over 20% (Statista Research Department, 2023). Poland, Switzerland, Denmark, and the UK are also projected to witness significant growth in the e-bike market (Statista Research Department, 2023).

According to the latest market research, the e-bike industry was valued at 37.47 billion USD in 2022. This industry is expected to grow at a Compound Annual Growth Rate (CAGR) of 15.6%, reaching an estimated valuation of 119.72 billion USD by 2030. The Asia-Pacific market contributed significantly to this growth, with a market size of 23.37 billion USD in 2022. (Fortune Business Insights: Market research report, 2023)

2.2 Trade

The EU witnessed an import of over a million e-bikes in 2018, which dwindled to 706,000 units in 2019. However, the following years witnessed a resurgence in import numbers, surpassing the one million in 2021. According to the latest statistics, the EU e-bike market has mainly been supplied by Asian countries. Of all suppliers, Taiwan emerged as the leading provider of e-bikes, exporting close to 500,000 units to the EU in the same year. Vietnam and China followed as the second and third largest suppliers, respectively, with 168,948 and 162,856 units each. In addition, Switzerland also played a significant role as the fifth-largest supplier, providing 56,689 units. (Statista Research Department, 2022)

The export of e-bikes from the EU has constantly increased, with a growth rate of nearly 289% between 2017 and 2021. In 2021, e-bike exports reached approximately 316,000 units, significantly increasing from the 81,300 units exported in 2017. The top four destination countries of e-bikes exported from the EU during 2021: the UK (116 733 units), Switzerland (95 459 units), Norway (35,793 units), and the USA (26 297 units). The UK was the most significant importer of e-bikes produced in the EU and sold outside the trading bloc in 2021. During the same year, the EU supplied 117,000 electrically assisted bikes, including bicycles, tricycles, and quadricycles, to the UK. (Statista Research Department, 2022)

2.3 Consumers

In July 2021, a survey was conducted to evaluate the prevalence of e-bike usage among different age groups in Europe. The survey findings revealed that individuals aged 25 to 35 had the highest likelihood of purchasing or using e-bikes in 2021. Notably, 50% of the 18 to 24-year-olds in Sweden recorded the highest level of interest in purchasing or using e-bikes among all the European age groups. Conversely, the UK exhibited the lowest interest in e-bikes in Europe. Only 17% of the respondents aged 25 to 34 in the UK expressed interest in using e-bikes, and the interest levels were even lower among other age groups. (Statista Research Department, 2022)

In 2022, cost-related factors were the primary motivators for European consumers to purchase or lease an e-bike. Specifically, nearly half of the respondents acknowledged that the cost of living would encourage the adoption of e-bikes. In contrast, 41% of respondents believed that e-bike

subsidies would be an influential incentive. Furthermore, approximately one-third of respondents identified other factors such as environmental concerns, mental and physical health, and road safety as important considerations when contemplating acquiring or renting an e-bike. (Statista Research Department, 2022)

In 2021 city e-bike emerged as the most popular e-bike style among Europeans. City e-bikes were particularly favored by the older age group, 55 and above (figure 1.). On the other hand, e-bike styles with more sporty focus, such as e-mountain and e-road bikes, were more trendy among the younger age group, 18 to 34. Overall, there is a growing popularity of e-bikes as a mode of transportation in Europe and globally. E-city bikes are more comfortable and convenient, which is why the older demographic gravitates towards them. On the contrary, the younger demographic gravitates towards styles that offer more adventurous and active experiences. (Statista Research Department, 2022)

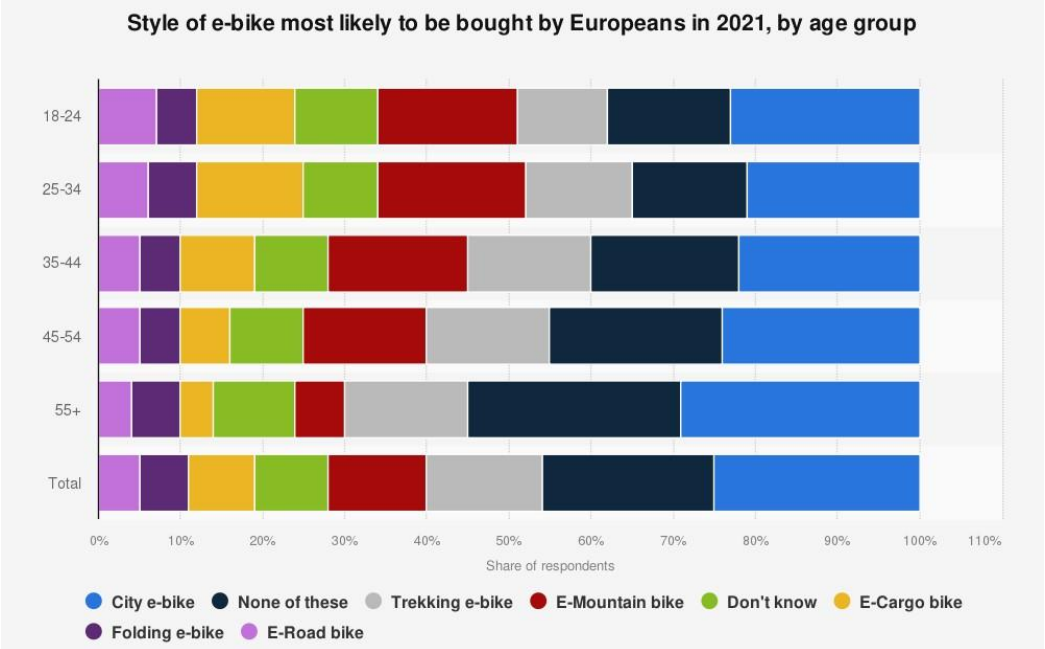


Figure 1. Style of e-bike most likely to be bought by Europeans in 2021, by age group. (Statista Research Department, 2022)

2.4 Analyzing The Market Size and The Market Shares

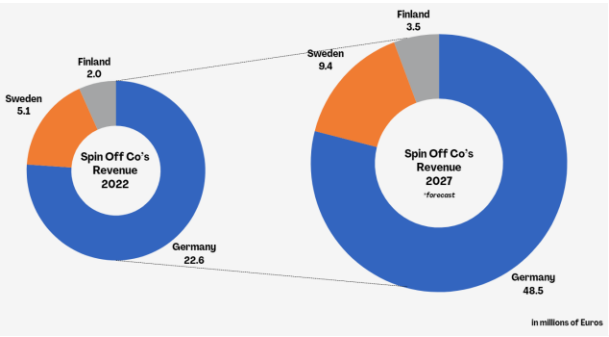
2.4.1 Spin Off Co's Revenue Projections (current trajectory)

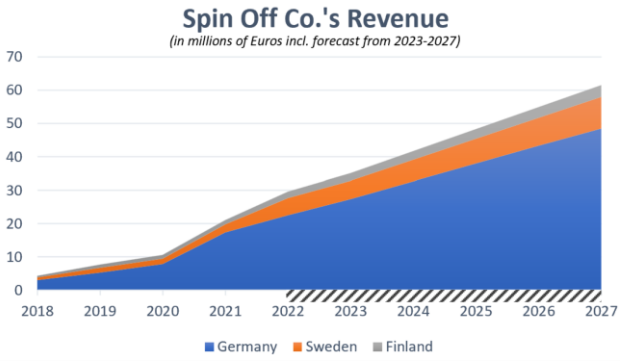
The forecast analysis utilizes data sourced from Spin Off Co.'s revenue figures spanning 2018 to 2022, employing and leveraging the Exponential Triple Smoothing (ETS) algorithm (*using the FORECAST.ETC function on Excel*). This advanced technique incorporates intricate elements like seasonality, trends, and errors inherent in the data to generate precise forecasts. By considering these multifaceted aspects, the analysis aims to offer insights into the future trajectory of Spin Off Co.'s revenues, enabling strategic decision-making based on robust and dynamically informed predictions.

The table below presents the data used and the projections made as well as the percentage growth on an year-on-year basis.

Spin Off Co. (Revenue)	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Germany	3	5.3	7.8	17.4	22.6	27.39	32.68	37.96	43.25	48.54
Sweden	0.8	1.5	1.7	2.4	5.1	5.43	6.43	7.44	8.44	9.44
Finland	0.6	0.9	1.1	1.3	2.0	2.21	2.54	2.86	3.19	3.52
Total	**4.4**	**7.7**	**10.6**	**21.1**	**29.7**	**35.03**	**41.65**	**48.27**	**54.89**	**61.50**
Growth Rate (%)										
Germany		77%	47%	123%	30%	21.19%	19.31%	16.18%	13.93%	12.23%
Sweden		88%	13%	41%	113%	6.53%	18.44%	15.57%	13.47%	11.87%
Finland		50%	22%	18%	54%	10.33%	14.91%	12.97%	11.48%	10.30%
Overall Growth Rate		**75%**	**38%**	**99%**	**41%**	**17.94%**	**18.90%**	**15.89%**	**13.71%**	**12.06%**

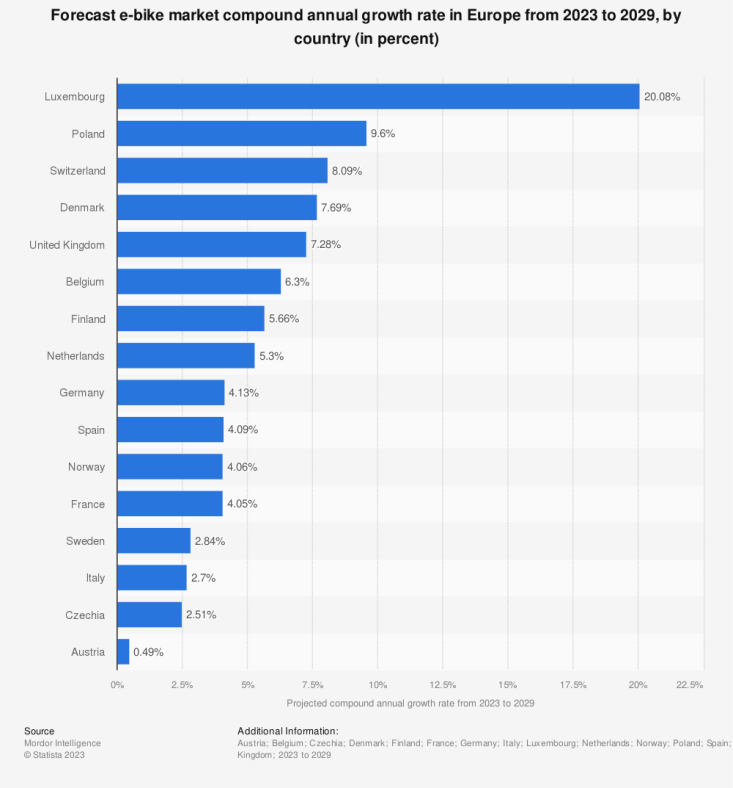
Based on the data above, we derived the following insights and trends for projection of Spin Off Co's Revenue.





Overall, we notice an increasing trend which presents a growth business opportunity for the PEFund.

2.4.2 E-Bike Market Sizes & Growth for Germany, Sweden, and Finland

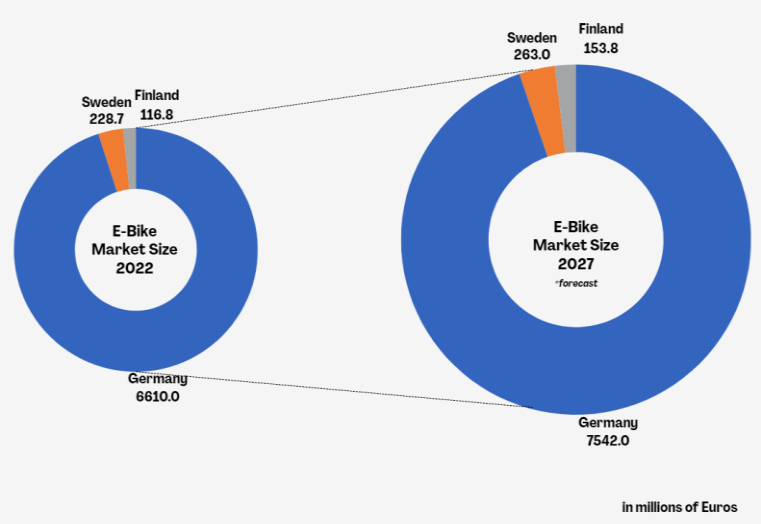


Using the forecasted annual growth rate in Europe as estimated in the Statista (2023) report statistics, we utilize the rates of growth and apply them to the current market sizes, which are the average e-bike price multiplied by the units sold, on an year-on-year basis to estimate the market sizes in the next 5 years. This is also known as the bottom-up-extrapolation method.

According to Statista (2023), Germany exhibits an estimated annual market growth rate for E-bikes at 4.13%, with the current and historical market price averaging at 2,800€. In Sweden, the annual market growth stands at approximately 2.84%, while the prevailing and historical market price for E-bikes in the rest of Europe is noted at 2,425€ (Stenberg, 2023). Similarly, Finland demonstrates an estimated annual market growth rate of 5.66%, aligning with the market price of 2,425€ (Vapaus.io, 2023) for E-bikes in the rest of Europe. These statistics, derived from Statista's comprehensive analysis, shed light on the varying growth dynamics and market prices for E-bikes across Germany, Sweden, and Finland, providing valuable insights for industry stakeholders and market observers.

The table below shows the data projected for market sizes and subsequently the infographic to better contextualize.

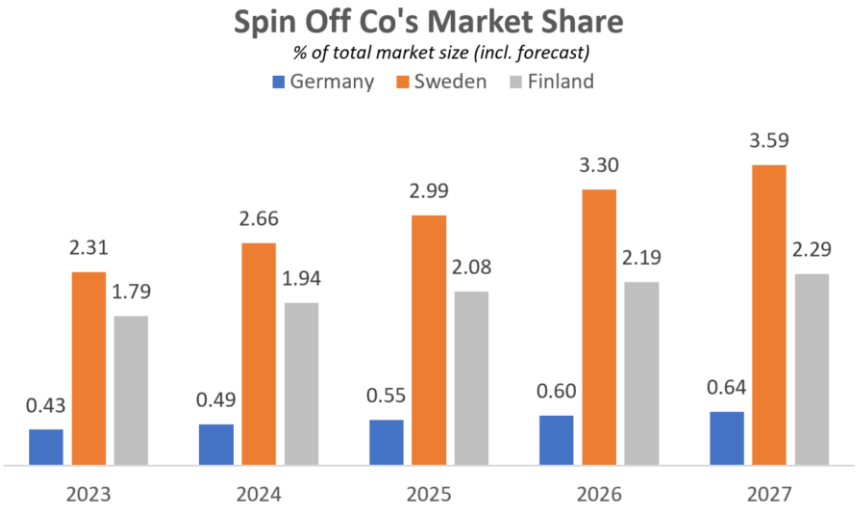
Market Size (mEUR)	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Germany (AGR: 4.13%)	6160	6414.41	6679.32	6955.18	7242.43	7541.54
Sweden (AGR: 2.84%)	228.7	235.20	241.90	248.70	255.80	263.00
Finland (AGR: 5.66%)	116.8	123.40	130.40	137.80	145.60	153.80
Total	**6505.5**	**6773.01**	**7051.62**	**7341.68**	**7643.83**	**7958.34**



2.4.3 Spin Off Co's Market Share (as a percentage)

Using the data above, we calculated and projected Spin Off Co's market share from 2022-27. The table below and the infographic better helps to contextualize the growing nature and business opportunity for PEFund as a result of this carve out.

Spin Off Co. Market Share (%)	2022	2023	2024	2025	2026	2027
Germany	0.37	0.43%	0.49%	0.55%	0.60%	0.64%
Sweden	2.23	2.31%	2.66%	2.99%	3.30%	3.59%
Finland	1.71	1.79%	1.94%	2.08%	2.19%	2.29%
Total	**4.31**	**4.53%**	**5.09%**	**5.61%**	**6.09%**	**6.52%**



2.5 SWOT ANALYSIS

The electric bike (e-bike) industry demonstrates significant promise as a sustainable, cost-effective, and health-conscious transportation solution (Best Buy, n.d.). E-bikes offer health benefits, facilitate longer distances, and conquer steep terrain, making them an attractive option in an evolving transportation landscape increasingly focused on sustainability (Best Buy, n.d.).

However, challenges exist, notably in the cost and maintenance of e-bikes (Environmental Conscience, n.d.). Maintenance can be complex due to electrical components, and their heavier build presents maneuverability challenges. Regulatory variations, battery limitations, and safety concerns on roads further complicate their adoption (Environmental Conscience, n.d.).

Despite these challenges, the e-bike industry is witnessing remarkable growth (Lucintel, n.d.). Recognized for eco-friendly and noise-reducing features, e-bikes are gaining popularity in urban areas, benefitting from cycling infrastructure development (Metsäranta, 2018). However, hurdles like limited recharging stations, competition from other e-vehicles, and potential future taxation policies pose threats (Metsäranta, 2018).

This market expansion offers Spin-off Co. opportunities but demands proactive measures to overcome challenges (Metsäranta, 2018). Adopting strategies to address infrastructure gaps, navigate competition, and diversify offerings becomes pivotal for sustaining competitiveness in a dynamically evolving e-bike market (Metsäranta, 2018).

(Table 1: SWOT analysis, Metsäranta, 2018)

Table 1. SWOT analysis

STRENGTH	**OPPORTUNITY**
● Fast & Flexible ● Health benefits	● Growing market ● Less noise

• Less effort required • Cheaper than cars • Sustainable • Easy to use • Sturdy design	• Climate-friendly • Parking it like a regular bicycle • Urbanization • High supply and mass production
WEAKNESS	**THREAT**
• Pricier than regular bikes • Maintenance and repair is expensive • Heavy • Different regulations • Batteries weaken over time • Long charging time • Limited distance • Safety	• Limited charging stations • Other e-vehicles • Taxation • Price sensitive market • Lack of diversity

2.6 PESTEL Analysis

Political:

The growing demand for affordable and sustainable modes of transportation has prompted the emergence of policies and regulations supporting the adoption of e-bikes, which have the potential to reduce pollution and congestion in urban and suburban areas (Grey Views, 2022). For instance, current laws in Finland have exempted e-bikes from income tax, which has contributed significantly to promoting e-bikes as an alternative mode of transportation (Sähköpyöräkeskus, n.d.). With the increasing need to reduce greenhouse gas emissions and encourage sustainable transportation, the popularity of e-bikes as a viable option for commuters and urban dwellers is expected to grow exponentially.

Environmental:

E-bikes are a sustainable mode of transportation that does not emit environmentally harmful pollutants. They are highly energy-efficient and require minimal maintenance compared to their counterparts that run on gasoline, owing to their efficient electric motor and fewer components. Furthermore, electric bicycles are cost-effective in terms of maintenance due to their lower overall costs of upkeep (Grey Views, 2022). The escalating costs of petroleum products in developing countries have resulted in a growing demand for electric vehicles that offer superior efficiency and lower operating costs compared to conventional vehicles (Grey Views, 2022).

Social:

The region's economic growth is being fueled by the government's concerted effort to mitigate air pollution, investment in electric vehicle charging infrastructure, and promotion of shared e-scooter use (Grey Views, 2022). Furthermore, the increasing popularity of e-bikes in urban areas can be attributed to the expansion of bike-sharing and rental programs (BrandEssence Market Research and Consulting, 2022). These initiatives have been instrumental in transforming the transportation sector and have paved the way for a more sustainable and eco-friendly future.

Technological:

As technological progress accelerates, e-bikes incorporate increasingly sophisticated features such as GPS and mobile applications (BrandEssence Market Research and Consulting, 2022). These innovations enable riders to track their routes and distances easily while providing crucial information on battery life and maintenance. To remain at the forefront of this dynamic technology and maximize your cycling experience, it is advisable to consider these advanced features. In addition, e-bikes have sophisticated theft protection systems (BrandEssence Market Research and Consulting, 2022).

Economical:

The cost of e-bikes is comparatively higher than traditional bikes, primarily due to the materials employed in their manufacture, such as the lithium battery. This renders them more expensive to produce than petrol-powered vehicles or conventional bicycles. Nonetheless, measures are underway to increase the accessibility of charging stations for e-vehicles. For instance, Helsinki plans to build over 200 new charging stations by 2023.

Legal:

E-bikes are subject to specific regulations dictating maximum permissible motor power and assistance speed. Expressly, e-bike motors are limited to a continuous input of 250 watts and can only provide assistance up to a speed of 25 kph in Europe. In Denmark, the minimum age requirement for e-bike riders is 15 years, and helmets are mandatory. Additionally, several countries do not require licensing or number plates for e-bikes. It should be noted that e-bikes fall under the purview of the EU directive 2002/24/EC. Further details regarding this directive can be found at the following link: [here]. (Martin Atanasov, 2022)

2.6.1 Market Entry Strategy

Tariff barriers

Exporting goods presents an excellent opportunity for businesses to broaden their horizons and augment their profits. However, it is imperative to bear in mind the tax obligations that arise when selling to other countries within or beyond the European Union (EU) confines. Strict record-keeping is essential to sell to other EU countries, and the specifics of these sales must be detailed on your VAT return. Additionally, an Intrastat Supplementary declaration must be completed if sales to EU countries reach a certain threshold. Failure to comply with these obligations can result in punitive measures and a negative impact on the reputation of your business. As such, it is crucial to ensure that you adhere to these requirements to establish a successful and reputable enterprise. (Northern Irland Business Info, n.d.)

Market Entry Mode

Spin-off Co. operates an SCM team in Sweden and Germany, with a Business Transformation Manager stationed in Finland. The company's product design is done in in-house facilities in Poland and Hungary, which we have recommended to be outsourced to China and the key managers to be moved to Germany. The manufacturing process is currently outsourced to third-party facilities under Corp Co, and our recommendation is to move it to China. Distribution is also outsourced through several distribution partners. Spin-Off Co. presently sells its products through retail channels, with the main channels including sports goods stores and bicycle shops.

We recommend that Spin-Off Co. continues to sell bikes through retailers and expands into new markets. With the growing popularity of electric bike rentals, there is potential for Spin-Off Co. to tap into this market. The company should consider forming strategic alliances with existing companies in those markets to enter new markets and expand existing ones. Spin-Off Co. can also partner with food delivery companies to expand its reach and customer base.

Possible alliances could include partnering with Kaupunkipyörät (so they can also offer e-bikes) and Helsingin Seudun Liikenne (HSL). We also felt it wise to partner with companies like Lime Micromobility and Bolt to set up electric bike stations all over cities where the bikes can also be charged. Spin-Off Co. can also collaborate with food delivery companies such as Wolt, Foodora, and Uber Eats to expand its reach and customer base.

In conclusion, Spin-Off Co. should consider exploring new markets and forming strategic alliances to expand its customer base and revenue streams. With the potential for growth in the electric bike rental market and partnerships with food delivery companies, Spin-Off Co. can increase its market share and continue to thrive.

2.7 Competitive analysis

E-bike Industry Surge: The e-bike industry has experienced rapid expansion, notably amplified by global occurrences such as the COVID-19 pandemic, leading to a surge in cycling for exercise and commuting. This trend caters to various demographics, including the elderly, providing less physically demanding options for staying active (European Council, 2023; Statista Search Department, 2022a).

Environmental and Financial Consciousness: Heightened environmental concerns and escalating fuel prices have been pivotal in driving the e-bike industry's growth. Governments are incentivizing eco-friendly transportation due to restrictions on greenhouse gas emissions, while individuals seek cost-effective alternatives amidst geopolitical incidents (European Council, 2023; Statista Search Department, 2023a).

Market Trends and Sales: The European e-bike market has witnessed significant expansion, with sales surpassing 5 million in 2021, a stark rise from 2.8 million in 2018. Germany leads in sales

volume, followed by France, Denmark, Finland, and Sweden. The disparity in cycling investment per capita among countries, such as Finland's leading expenditure, notably influences cycling's prevalence (Statista Search Department, 2022a; McCarthy & Richter, 2020; Statista Search Department, 2022b).

2.7.1 Consumer trends for e-bikes

Other incentives for usage of e-bikes include reduced traffic congestion and assisted cycling (for elderly for example). 70% of the world's population is estimated to live in cities by 2050 (UN Statistic Division, n.d.). Increased traffic congestion is a serious problem all countries in the globe have to consider. Due to this, many countries in Europe for example are providing "benefit biking" as a concept to their workers where bikes (especially electrical bikes) are leased from a manufacturer and given to an employee for a reduced price. Tax free benefits are also often prevalent in benefit bikes (Vero, 2022). However, e-bikes in general are pricey, often ranging from $1500-$2500 (REI, 2022). Cost difference can be seen between Europe and Asia due to less technical advancement of e-bikes (E-bike Market, 2023). Additionally, e-bike components can have restrictions and guidelines affecting their usage. Safety concerns regarding e-bikes and e-scooters are on the rise, especially due to their batteries. These are all aspects SpinOff Co. needs to consider, in general as well as from the view of gaining competitive advantage. Pricing can for example be the key focus in differentiating from other players in the market.

2.7.2 Technological advancements in e-vehicles in different regions

Emerging technologies offer an advantage to e-bikes when compared to non-electrical bicycles. B2V-technology (bicycle-to-vehicle) – which describes connectivity of e-bikes is being researched and manufactured as prototypes as of 2021 (Fortune Business Insights: Market research report, 2023). This would provide increased safety measurements when riding a bike via alerts and direct communication with surrounding vehicles. It is important for SpinOff Co. to prepare itself for such emerging technologies. Can its e-bikes be modified for future innovations? Many of the current operators in the market have advantage on the technical side, meaning their core competence is well suited for the evolving characteristics of e-bikes.

Finland

As it was mentioned before, Finland has been heavily investing in cycling friendly infrastructure after COVID-19. As of now, Finland is in the midst of building Kruunuvuori bridges (Kruunusillat) which is where cycling paths are being located. Helsinki alone has 1200 kilometers of cycling routes in which 730 kilometers of them are paved (Flanders Investment & Trade Market Survey, 2018). Finland's e-bike market is competitive and somewhat consolidated with examples of largest e-bike sellers being Helkama (30% market share in 2019) and Tunturi (UVT, 2019, Flanders Investment & Trade Market Survey, 2018). However, it is worth mentioning that Finland possesses the most market fragmentation in relation to other key markets. Other players in the market include Pelago, Nopsa and tähtipyörä as well as smaller players like startups emerging in the market. In 2022, 329 000 bikes were sold in general, 16% of them being e-bikes (Muoti ja Urheilukauppa, 2023). The estimated compound annual growth rate (CAGR) for the e-bike market between 2023-2029 is 5.66%. Work-related (e-)bike leasing is also gaining attention in Finland (Nord.News, 2020). Tax (Vero) introduced a tax-free up to €1,200 of taxable value per year (Vero, 2022). Finland presents itself as a potential market for SpinOff Co, due less consolidation and steep growth trajectory for e-bike usage.

Sweden

Sweden's e-bike market is somewhat consolidated with the top five companies occupying 47.90% (Mordor Intelligence, 2022a). These companies include Blix (offers direct-to-consumer model, focus on product design), Giant manufacturing (retail network, wide product range) and Kalkhoff Werke (retail network) for example. Government incentives such as bike benefits are also offered to employees. Estimated CAGR for 2023-2029 is 2.84% for Sweden and in 2021, 90 000 e-bikes were sold in total. Thus, Sweden is also a potential market for SpinOff Co.

Denmark

Denmark's e-bike market is also leaning towards consolidation, with top five companies occupying 59% of the market, major players including Batavus (focus on urban mobility), MHW Bike-House GmbH, Qwic (focus on design and innovation). In 2022, it was studied that Denmark possesses the highest e-bike owner proportion among consumers (after China) across 17 markets (25%), which included Germany (7%), Finland (5%) and France (5%) as well (Shah, 2022). In 2022, the Danish Ministry of Transportation launched an initiative where 458 million dollars are

planned to invest in cycling infrastructure (VisitDenmark, n.d.). Copenhagen alone is expected to aim for 50% of work and school related transportation to be via biking (VisitDenmark, n.d.). In 2021, 100 000 e-bikes were sold across Denmark.

France

In France, 740 000 e-bikes were sold in 2022. This number was 660 000 the previous year and 515 000 in 2020 (Statista Search Department, 2023b). Between 2019 and 2020, the number of e-bikes sold grew with 175 000 units. The growth of the e-bike market size can be seen in Figure 1. In 2021, e-bikes accounted for 24% of the market (Jobo 2022). France has an estimated 4.05% CAGR for the e-bike market between 2023-2029 (Mordor Intelligence, 2022c). The e-bike market in France is fairly consolidated with the top five companies occupying 52% of the market. Some of the largest players include Moustache, Lapierre and Decathlon . France has a total of 57 000 km of cycling paths and the government is aiming to increase this number to 100 000 km by 2030 (Punsalang, 2023). Parking areas for bikes are also increased. Additionally, France follows in the footsteps of other European countries in offering incentives and bonuses to citizens who purchase bicycles (e-bikes included) until 2027 (Punsalang, 2023). One of said bonuses include up to 4000€ to citizens who shift from using cars to using e-bikes (Balkan Green Energy News, 2022). This makes France an attractive market to enter for SpinOff Co as well.

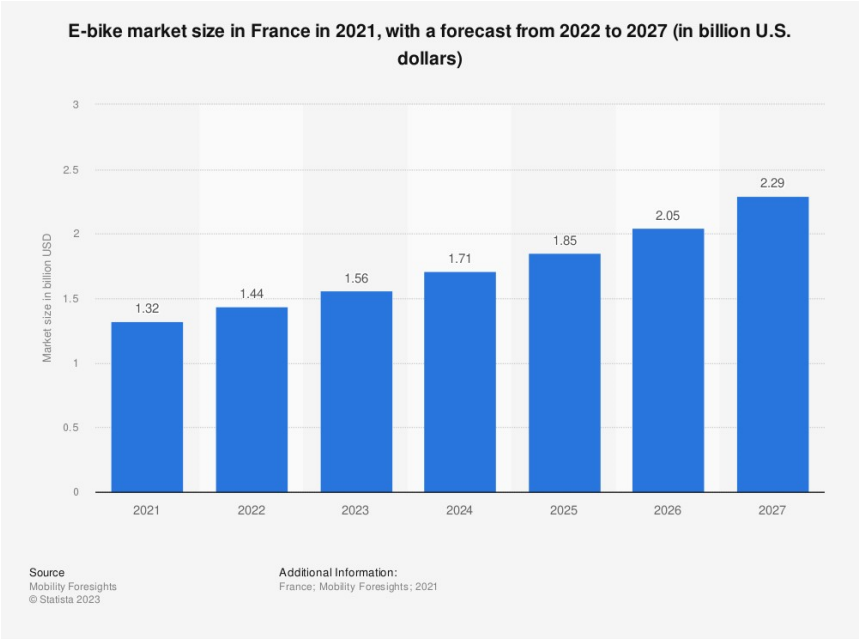


Figure 1. E-bike market size in France in 2021, with a forecast from 2022 to 2027. (Statista Research Department 2022c)

Germany

Germany is leading the e-bike market in Europe, 7.1 million e-bikes owned by citizens in 2021 (Mordor Intelligence, 2023). The estimated CAGR for e-bike market in Germany is 4.16% between 2023-2029. Five of the largest operators in the market account for 61%, making it the most consolidated market so far (Mordor Intelligence, 2023). Some of the operators include Fishcer and Haibike. Sold e-bike units skyrocketed after COVID-19: in 2019 the sales volume was 1.36 million, by 2020 the number reached 1.95 million (Statista Research Department, 2023c). Last year, the number of sold units was 2.2 million, steadily but surely growing. Bicycle production is also experiencing growth; in 2022 2.6 million bikes and e-bikes were produced, electric bikes holding 48% of the market share (Harker, 2023). This growth was detected even before 2021, as demonstrated in Figure 2 . Benefit biking and subsidies are also strongly present in Germany (UrbanArrow, 2022). E-bikes are introducing a serious threat to traditional car riding as ownership of private cars is expected to decrease by 25% in the next five years (Hurford, 2023; based on a study from PwC). It goes without saying that Germany certainly is in the interest of SpinOff Co due to the potential of a continuously growing market, despite its relative consolidation.

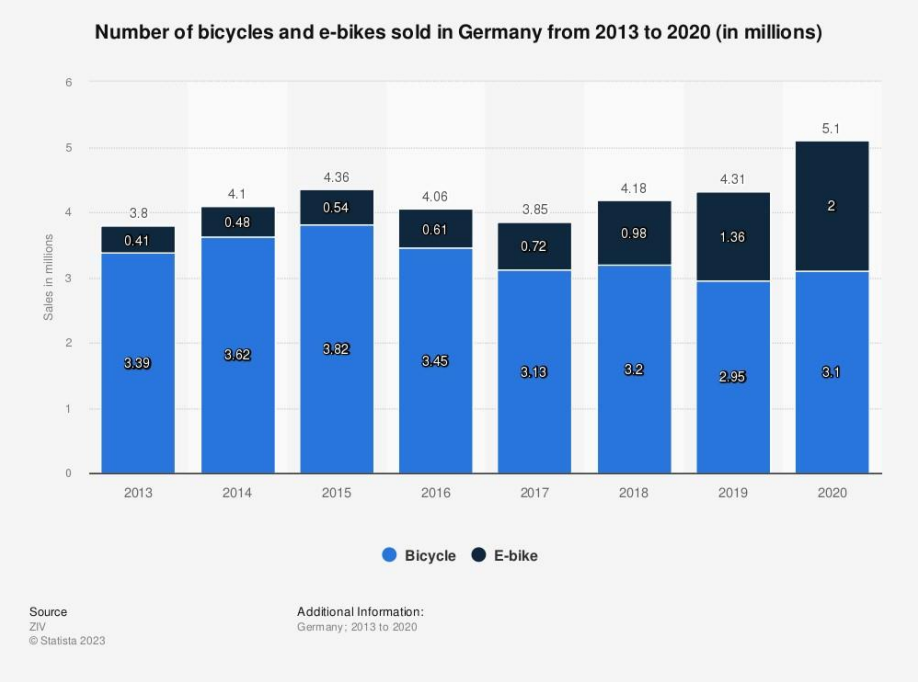


Figure 2. Number of bicycles and e-bikes sold in Germany from 2013 to 2020. (Statista Research Department, 2021)

3.0 Business analysis

The European electric bike market is undergoing significant expansion, fueled by multiple growth drivers. Valued at USD 37.47 billion in 2022, it is projected to reach USD 119.72 billion by 2030, achieving a CAGR of 15.6%. This surge is attributed to the e-bikes' efficiency, eco-friendliness, and convenience for daily commutes, enhanced by technological advances in batteries and motors. Government initiatives are playing a pivotal role, with various countries implementing incentive programs to encourage e-bike adoption and reduce carbon emissions. For instance, the U.S. has introduced the E-BIKE Act Scheme, offering subsidies on e-bike purchases, while European countries, like France, provide targeted subsidies to promote sustainable transportation. Moreover, the COVID-19 pandemic has shifted consumer behavior towards e-bikes, seeking safer and more convenient travel alternatives to public transport. Despite challenges such as high costs and regulatory disparities, the growing inclination towards eco-friendly commuting solutions and infrastructural improvements suggest a promising trajectory for the e-bike market (Fortune Business Insights, 2023; The Insight Partners, 2023; Allied Market Research, 2021).

3.1 Key market trends to becoming a market leader

Spin-off Co has the potential to ascend to market leadership in the electric bicycle industry by strategically capitalizing on prevailing market trends. Although it has not yet fully exploited these trends, its foundational strengths in financial stability and operational efficiency position it well to do so. The company's impressive financial trajectory, demonstrated by a growth from €4.3 million in revenue in 2018 to €33.5 million in 2022, equating to a CAGR of +67% (Deloitte, 2021), indicates a robust platform for expansion.

One key opportunity for Spin-off Co lies in aligning with the rising demand for sustainable mobility. By integrating green technologies and emphasizing eco-friendliness in its electric bicycles, Spin-off Co could tap into the growing consumer consciousness about environmental issues. Furthermore, the company could benefit from exploring electric bicycle leasing deals, a market trend gaining traction in Finland. Partnering with Finnish companies, as suggested by the trend where a significant number of firms are interested in electric bicycle leasing (Stenberg, 2023), could open new revenue streams and customer segments for Spin-off Co.

Another avenue for growth is the brick-and-mortar retail preference in Germany, where 72% of consumers favor physical stores for e-bike purchases (Deloitte, 2021). By strengthening its presence in traditional retail channels, Spin-off Co could enhance its market penetration and customer reach in this key market. Additionally, leveraging the trend of e-bike leasing through employers, which accounts for around 5% of e-bikes in circulation in Germany (Deloitte, 2021), presents an opportunity for Spin-off Co to establish itself in the corporate sector.

Spin-off Co's journey from a business unit within Corp Co to an independent entity offers valuable insights into its capabilities. Within Corp Co's New Venture Businesses, Spin-off Co honed its skills in business development, quality and risk management, and operational functions like sales, engineering, and supply chain management. These foundational skills, coupled with its integration into Corp Co's IT landscape, provide Spin-off Co with the tools necessary to exploit emerging market trends effectively.

To achieve market leadership, Spin-off Co must proactively harness these market trends and its operational strengths. By focusing on consumer preferences, sustainable mobility, and innovative

leasing models, and by reinforcing its retail strategies, Spin-off Co could significantly enhance its market position and emerge as a leading player in the electric bicycle industry.

3.2 Challenges in the electric bike industry

Spin-off Co. faces a number of obstacles in the rapidly changing electric bike market that could hinder its rise to the top of the market. Stakeholders have concisely defined key industry concerns, which vary from the need for secure infrastructure and lithium-ion battery prohibition to the classification of electric vehicles, fire dangers, and rider education (Lovell, 2022). Despite the growing popularity of e-bikes in the region, Spin-off Co's path to market leadership in Finland is impeded by varying sales volumes and the country's unique climate conditions that impact sales periods (Kuva, 2023).

Spin-off Co. has to negotiate a challenging and complicated regulatory environment in Europe. Complying with many regulations—like GDPR—requires a significant investment of resources; it is necessary for compliance but difficult to implement. Moreover, the competitive environment in Germany, a market leader for e-bikes, presents significant challenges. The task at hand is to set Spin-off Co.'s products apart in a congested market full of well-known brands, where customers are drawn to high-end materials and cutting-edge features (Mordor Intelligence, 2023). Due to the dynamic nature of the German industry and the entry of established automakers into the e-bike sector, Spin-off Co. must innovate and differentiate its brand in order to survive (Eddy, 2023).

Technological developments, especially in the field of batteries, present a two-pronged challenge: they can create potential for differentiation but also necessitate large R&D expenditures. The urban market's preference for foldable e-bikes due to their portability and convenience gives a significant growth opportunity, but it also presents unique manufacturing and design constraints (Basic Insights, 2023). The COVID-19 epidemic brought attention to supply chain resilience, which is still a major concern. This underscores the necessity of strong production strategies and innovation in response to environmental consciousness (Coherent Market Insights, 2022).

The regulatory landscape is always changing, and new EU laws are making things unclear for the market. The electric bicycle sector, which includes Spin-off Co., foresees upheavals in the market

that call for redesigning products and modifying service networks. Particular difficulties that could affect battery performance and sustainability initiatives include the new regulations' demand for individual cell replacement in e-bike batteries and the focus on disclosing the CO2 footprint of battery packs (van Schaik, 2023). The need for proactive regulatory compliance and adaptability is highlighted by the CPSC's development of new safety regulations, notably with regard to lithium batteries (Hurford, 2023).

In conclusion, Spin-off Co. faces a variety of obstacles on its journey to become the market leader, including shifting consumer preferences, strict regulations, supply chain resilience, and technology advancements. Successfully navigating these challenges will be essential to Spin-off Co.'s expansion and ascent to the top of the electric bike market.

Germany's market leader

One of the biggest bicycle producers in Europe, Derby Cycle is well-established as the industry leader in Germany, especially when it comes to the e-bike sector. With its headquarters located in Germany, Derby Cycle has established a strong reputation for producing a wide variety of bicycles, including e-bikes, under several well-known brand names. Prominent brands like Raleigh, Univega, Rixe, Focus, Kalkhoff, and Univega are among the company's portfolio items; they all target different market niches. For example, Raleigh and Kalkhoff are more focused on urban and electric bikes, while Focus serves the high-performance road and mountain bike market. This strategic brand positioning is especially beneficial in Germany, one of the most important bicycle and e-bike markets in Europe. (Derby Cycle, 2011)

Derby Cycle's commitment to innovation in the e-bike industry contributes to its success in the German market. The company's continued investments in motor efficiency, digital technology integration, and battery technology demonstrate its dedication. These developments make sure that their e-bikes have cutting-edge parts, with an emphasis on improved performance and user experience. Derby Cycle's position as a market leader in the German e-bike sector is largely due to its emphasis on cutting-edge technology and a broad brand range. (Derby Cycle, 2011)

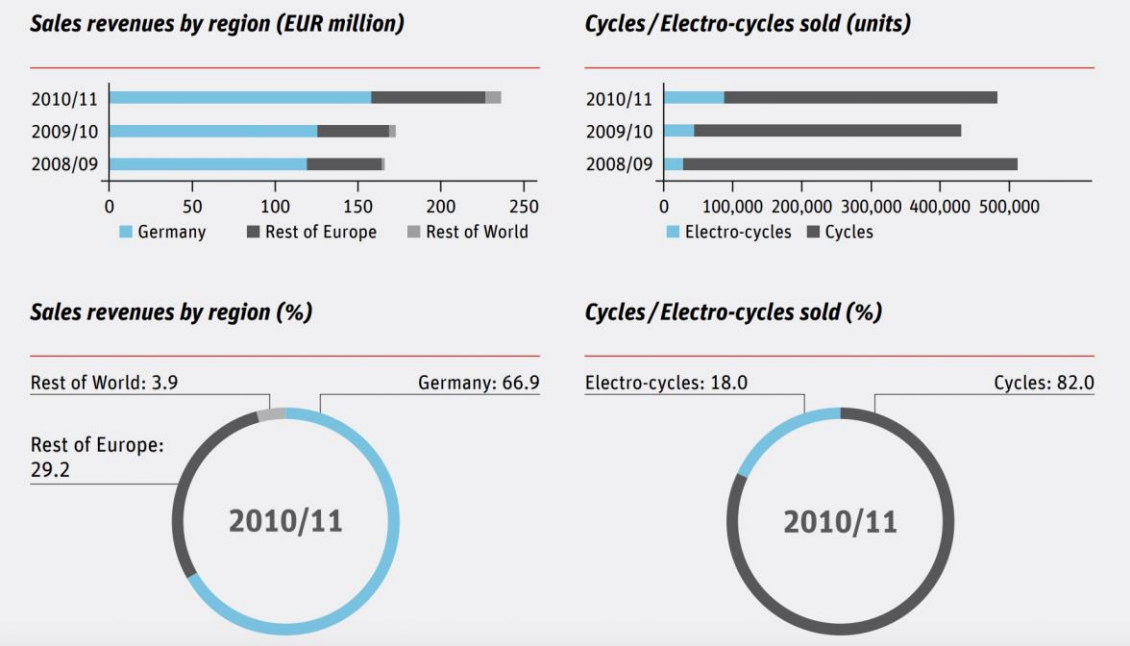


Figure 3: Derby Cycle sales revenue and sold bikes from 2010 to 2011 (Derby Cycle, 2011)

4.0 Carve-out analysis

The carve-out analysis is one of the crucial elements of the report to Mrs.Smith of PEfunds to recommend whether they should acquire Spin-Off Co or not. The carve-out analysis is divided into four segments: IT infrastructure and business systems; Employee carve-out and database; Outsourcing of engineering and manufacturing; and combined cost of asset and share deals.

Key rationales in the carve-out analysis:

- All IT applications transferring are used 'globally' across all countries where Spin-off Co is operating – i.e. there are no local-only IT systems
- All legal entities part of the transaction perimeter will be acquired 100% by the PEfund.
- PEfund will acquire 100% of the shares of the Green Bull Oy, and all its subsidiaries.
- Green Bull Oy will be the parent company of the new legal group of Spin-off Co companies.
- All more than 50% dedicated personnel to Spin-off Co will transfer with the target business in the transaction.
- PEfund does not have any existing legal entities in place in asset deal countries Estonia, Latvia, Poland and Hungary suitable to used in this transaction

4.1 IT Infrastructure Carve-Out

Rationale for the following Figure shown below of the IT infrastructure is to keep the most essential related to the business such as Customer Management and Product Development. However, from Finance, Accounting and HR there are simpler and economical tools that can be used. For now, we suggest to:

1) Downgrade from Workday to using something significantly more economical and user-friendly such as Hi-Bob, Sympa or Personio.
2) Given the numbers of employees it could be reasonable to shift to Google IT Infrastructure for affordability reasons such as Google Docs, Google Meets.
3) Since the customer base of Spin-Off Co at least initially will be less than CorpCo, it is better to prioritize the procurement tools i.e. choose one of DocuSign or SAP Ariba.
4) SAP tools are generally expensive → assuming that PEfunds does not have any existing tools and does not use SAP, we should use something more central and less complex.

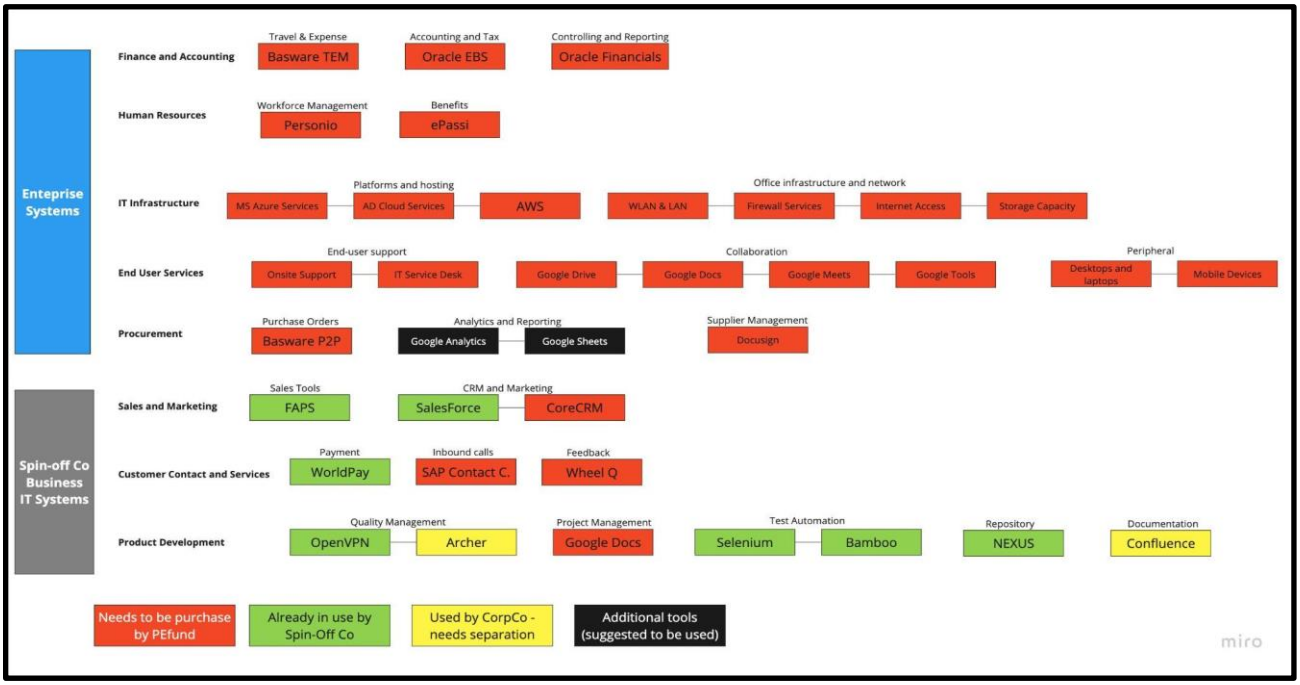


Figure 4 - Carve-out of IT Infrastructure, Enterprise and Business IT Systems

Figure 5 - Spin-Off Co's IT Infrastructure analysis				
System Type	Department	Amount of tools or services to be used	Expected cost per annum (in EUR)	Notes
Enterprise Systems	Finance and Accounting	3	12,000	Basware systems are marked at 300 EUR per month and Oracle systems between 6-10k EUR per year.
	HR	2	10,000	Personio is priced at 2,0-6,0k EUR for smaller sized firms depending on the features used. E-passi is usually a tax benefit, so the payment for the companies is between 3-5k EUR for a 50 employee sized firm.
	IT Infrastructure	7	15,000	This section is marked as one of the expensive ones since they are a critical enterprise system.
	End-user	6	40,000	Here the most costly

	services			tools are the laptops and mobile devices to be bought by the company for existing employees and / or the cost to maintain them.
	Procurement	2	2,000	Docusign is chosen as one of the platforms in supplier management with Basware P2P taken into account in the section above.
Spin-Off Co Business IT Systems	Customer Contact and Management	3	5,000	The estimated cost of tooling for the customer support and CRM management.
	Sales and Marketing	3	2,000	
	Product Development	7	5,000	Test automation; documentation and quality management for the tooling.
Total Cost		**33 tools**	**91,000**	

We have identified with Mrs. Smith that the core business functions are Sales, Engineering and Manufacturing. Whereas the support functions are: Supply chain management, product development and customer services for the roles. This means to be a standalone organization, Spin-

Off has to recruit for their engineering and manufacturing department which is based outside of Finland, Sweden and Germany.

4.2 Employee carve-out for Spin-Off Co

For the separation we recommend PEfunds to acquire all 56 employees of the current three entities in Sweden, Finland and Germany. The departments that would need to be recruited or built up later include marketing; IT and cybersecurity and also the People Operations Team. Our initial suggestion is to outsource the following departments to another agency or temporary consultants for the first six months.

Figure 6 - Employees distribution in three legal entities involved in the acquisition by PEfunds.

Entity	Department	Employees (as of 2022)	Total Cost per annum in EURs
Green Bull AB Total HC = 35	Customer Service	6	195,194
	HR, General Management & Administration	3	136,200
	Product Development	9	584,000
	Sales	13	688,420
	Supply Chain Management	4	175,110
Green Bull Oy Total HC = 1	General Management & Administration	1	178,160
Green Bull GmbH Total HC = 20	Customer Service	5	162,674
	General Management	1	112,200

Annual Cost Total	& Administration		
	Product Development	2	177,200
	Sales	6	661,080
	Supply Chain Management	4	217,640
Potential recruits across three entities or more over the next 12 months	People Operations Team	8	€300,000
	Marketing	5	€200,000
	IT and Cybersecurity	3	€150,000
	Customer Service	8	€200,000
Totals		**56 employees (+24)**	**3,288,000 (+850,000)**

4.3 Outsourcing opportunity to China for Engineering and Manufacturing

Due to the manufacturing and engineering being based in Hungary and Poland - PEfunds needs to decide whether it should invest (outsource) the business like CorpCo to those countries where they know the manufacturers. An alternative option is to outsource the manufacturing to Asian countries such as China. This comes at a significantly cheaper labor cost which is almost twice as less meaning they can produce and also have the ability to be the market leader in terms of production. Spin-Off Co would benefit this especially since they have operations in Germany and data shows that the Europe E-Bike Market size is expected to grow from USD 10.71 billion in 2023 to USD 19.28 billion by 2028, at a CAGR of 12.48% during the forecast period 2023 to 2028.

This does also mean that there are significant factors such as partnering with a Chinese production plant and having the know-how to operate in China. Therefore having the right connections is the

most important thing to succeed in making e-bikes. One key factor is that the plant is far away meaning this influences shipping costs and potential challenging repair problems which can not be handled by the local offices.

The rationale for the cost per annum was taken from the Spin-Off Co Employee Data:

- The average cost for the engineering department headcount is €50k per annum
- The average cost for the manufacturing department headcount is €45,5k per annum
- Since the employee data includes Spin-Off Co employees that are working for CorpCo who are not involved in the Green business, the assumption is to start building the workforce with 30% of the total headcount.

Figure 7 - Analysis of two different strategies for Spin-Offs core business functions

Strategy	Department	Employees headcount (30% of CorpCo)	Total Cost per annum (in EUR)
Option 1 - Similar to CorpCo to have core functions in Hungary and Poland	Engineering	7	350,000
	Manufacturing	4	182,000
Option 2 - To have engineering and manufacturing (80-90% outsourced to China)	Engineering	5 design and sales engineers (in China) at €15k per annum 2 engineers in Germany at €60k per annum	195,000
	Manufacturing	4 project engineers in China ¨	90,000

		1 Head of Manufacturing in Germany	

Based on our SWOT analysis of market entry and operations into China we would highly recommend the secondary option (Option 2). Based on the key assumptions of the carve-out analysis, we would recommend the following organizational structure in Figure 8 as shown below. This figure illustrates the numerical breakdown of Figure 6 including the headcount (FTEs) to be recruited to the firm.

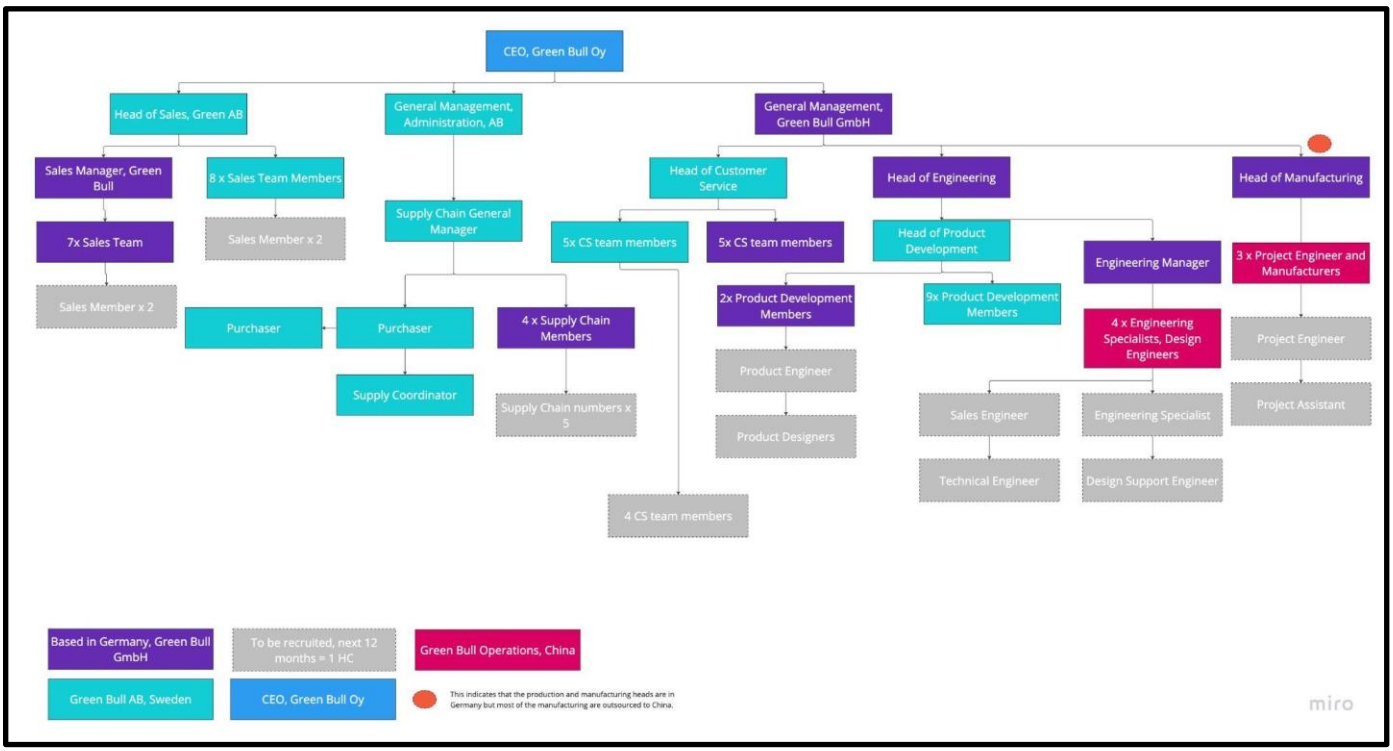


Figure 8 - Proposed organizational structure of Spin-Off Co

The table below summarizes the share deals and asset deals that were discussed. The vendor contract management were expected to be ranked at €1,000 per contract. Overall the combined cost of the deals are expected to be at **3,76 million euros.**

Deal Type	**Categories**	**Total costs per annum (in EUR)**
Share deal	Employees	3,288,000
Share deal	Core business HR, manufacturing and engineering	285,000
Asset deal	IT infrastructure systems	91,000
Share deal	Vendor management (55 vendor contracts for the deal perimeter in Finland, Sweden and Germany)	55,000
Combined costs of deals		**3,760,000**

5.0 Synthesis that summarizes key recommendations to Ms. Smith

We would recommend Mrs. Smith acquired Spin-Off Co. for the three markets and deal parameters due to the above average market growth in Germany, Sweden and Finland; the revenue growth by 200% in all markets; and the market opportunity in the three markets which increased drastically. We give three reasons to proceed with the purchase of Spin-Off Co.

1. Spin-Off Co. has an **average revenue growth rate of 16% (year on year)** from 2023 to 2027, which indicates that the firm can go from making €29 million euros in 2022 to €60 million euros at the end of 2027. This is a **strong buy indicator for purchasing** Spin-Off Co.
2. The **market size of e-bikes increases by approximately 15% from 2022 to 2027**, the largest market opportunity being in Germany at €7,5 billion euros for e-bikes and also the similar ratio increase (10-15%) in Finland and Germany of the e-bike market size. It has to be noted that there are market entry opportunities in other countries such as France, Italy

and Poland that have not been accounted for in the revenue projections. Hence this can be strongly considered as an attractive market for the next 5 to 7 years.

3. The expected **market share growth of Spin-Off Co is supposed to grow exponentially** from 2022 to 2027 at a year-on-year growth of 10-15%. While Spin-Off Co is not a leader among these markets with the right marketing and branding it has the opportunity to increase market share in an increasing market size. Overall from 2022 to 2027 the market share increases by 50-65% in each market. In short, despite these growths, the market is extremely competitive and hence Spin Off Co can not become a market leader in these regions.
4. To gain a competitive edge among other competitors we recommend PEfunds to re-evaluate their operations and systems with regards to outsourcing manufacturing and engineering to China & for a stand-alone function to be able to invest in decentralized IT infrastructure tools such as Personio and Google. Allowing their production to be done from China allows for higher scale production for e-vehicles and to invest in higher R&D while being economical.

Overall we suggest that once the business is established Spin-Off Co should consolidate in Finland, Sweden and especially Germany before making a market entry to Denmark and France. We want to ensure that Spin-Off Co to a large extent grows organically through strategic partnerships but also improves their technological know-how to obtain diverse revenue streams from the e-vehicle industry.

6.0 Key Learnings and Reflections

Our learnings from the course and doing the business case analysis was three-fold:

- **Learning and Development:** All of our team members learnt about project management and key pitfalls that we tried to avoid in the group. We felt that we used a fairly agile process to do the presentation and the report. We knew while there was not a great deal of information it was important to read the rationales and key assumptions provided by EY. We were also content to apply several frameworks such as SWOT analysis, bottom-up approach, triangulation method and PESTEL framework throughout the course and then also in our case analysis.

- **Expectation Management**: this one was a difficult one overall since our expectations varied and were not entirely consistent among the group. We had different synergies and for some parts some team members put in more of an effort which meant there was a lack of expectation management and not entirely concrete way of communication feedback among the group. On the other hand, we had good highlights by being selected amongst the top 5 of the groups to present on the day to EY.
- **Market Know-How, Hard Skills**: We became well acquainted with the e-vehicle industry and respective trends in the EU region over the next 5-7 years. The case also allowed us to brainstorm creative ways to ensure the acquisition of Spin-Off Co while providing alternative strategies to ensure stand-alone continuity and carve-out possibility.

We would highly recommend this capstone for the intensity and the collaboration aspect.
Thank you Matti.

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