

Internship as an IT and Product Management Intern at Alpha
Commerz Ltd.

by

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An internship report submitted to the Department of Computer Science and
Engineering
in partial fulfillment of the requirements for the degree of
B.Sc. in Computer Science and Engineering

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Declaration

It is hereby declared that

1. The thesis submitted is my/our own original work while completing degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. We have acknowledged all main sources of help.

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Abstract

Course work is the pivotal support beam of an internship program and a central connecting link between theoretical principles and hands-on experience. My internship with Alpha Commerz Ltd. as an IT and Product Management Intern exposed me to a highly productive learning process that greatly expanded my understanding of digital product management and IT business operations.

During my tenure, I performed a series of activities from product listing and management, market analysis, demand and supply analysis, cost and price analysis, and strategic-level decision-making. Product content writing and management was one of the core aspects of my work that maintained consistency and differentiation across generations and devices. I was also significantly engaged in creating advertising materials to enhance product visibility and sales.

My responsibility was to become proficient in technical requirements, business trends, and customer requirements in order to provide data-driven suggestions for enhancing product performance. My experience made me proficient in handling digital product life cycles, monitoring IT systems, and content creation at a strategic level. In addition, working with multi-functional teams taught me to synchronize product and IT planning with market requirements and enhance my communication, team building, and analytical skills.

This internship served to link theoretical concepts learned in an academic setting to their practical implications in a business setting. It provided me with great insight into the way information technology and product management can be integrated to enhance business development. The experience and skills gained from this internship have enhanced my ability to adapt to changing and competitive situations of information technology and product management, thereby preparing me for future professional challenges. It has also provided me with a well-rounded perspective on the dynamic interactions among technology, product strategy, and market demand.

Keywords: Internship, IT Operations, Product Management, Market Research, Demand Analysis, Supply Analysis, Product Listings, Cost Analysis, Price Optimization, Digital Product Management, Data Analysis, Content Creation, Advertising Strategies, Product Compatibility, Market Trends, Electronics, Sweden Market, Product Performance, Sales Strategies, Cross-Functional Collaboration, Professional Growth.

Dedication (Optional)

A dedication is the expression of friendly connection or thanks by the author towards another person. It can occupy one or multiple lines depending on its importance. You can remove this page if you want.

Acknowledgement

Firstly, thanks to the Almighty Allah for giving me the strength to successfully complete my internship without any major inconvenience. Then my family, without their encouragement and prayers I wouldn't have been able to push myself to keep doing better. Their faith in my abilities has been the main factor behind my success. Moreover, I'm grateful to Alpha Commerz Ltd. for providing this excellent opportunity to practice as an IT and Product Management Intern. Also, I am indebted to my immediate supervisors and colleagues for their continued advice on shaping my skills by providing relevant tasks that ensure their success. I would also like to show my enormous appreciation to Brac University, my academic instructors, and my mentors, who have been a constant source of knowledge, and encouragement to me.

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Chapter 1

Introduction

1.1 Preamble

Internship is among the most significant requirements of undergraduate students because it provides an exposure to observing how professional institutions operate within real circumstances. Although theoretical expertise gained through course work represents the essence of a student's educational development, internship provides the experience to experiment, practice, and refine this learning by engaging in everyday working practices. In today's competitive job market where employers are seeking individuals who not only know the theory but also how to implement it, an internship bridges a vital gap.

For students of Computer Science and Engineering, the learning frontier is even broader. The domain of information technology is a dynamic and changing discipline that is connected to almost all the areas of modern life. Working experience in IT-related ventures through an internship enhances technical and analytical skills while at the same time maximizing people skills and professional communication skills. It also facilitates knowledge on organizational procedures, working in teams, and project management, which cannot be easily taught in classes.

Here, I had the opportunity to complete my internship at Alpha Commerz Ltd., which is an IT-enabled services and e-commerce firm. As an Intern in IT and Product Management, I was given responsibilities such as uploading products, making and optimizing product content, conducting demand and supply analysis, conducting cost and pricing analysis, and supporting marketing campaigns. These projects allowed me to have a direct contribution to the company's objectives as well as to develop my own skills within IT operations and product lifecycle management.

1.1.1 About the Internship

The internship aimed to expose me to the company's IT and product management processes with the primary focus on the practical aspect of the work. I was placed in the Product and IT Department, where I actively participated in tasks that entailed technical, analytical, and creative aspects.

My responsibilities were to upload products with correct descriptions and specifications, ensuring images, compatibility, and generational differences were accurately represented. Since electronic and electrical goods often vary from one model to another and from one generation to the next, I needed to meticulously verify technical

specifications and highlight them for customer clarity. Besides this, I conducted market research and patterns of demand to understand consumer behavior, supply chain problems, and price competitiveness.

Another notable feature of my internship was assisting the marketing department. My input was in the form of producing advertisement content and designing email marketing copies for the sake of customer acquisition and sales generation. These responsibilities exposed me to digital marketing operations and how IT systems facilitate the execution of campaigns.

By these activities, I gained overall insight into how IT operation and product management are blended in a business setting. The internship, besides making my technical expertise more polished, also familiarized me with teamwork, deadlines, and problem-solving in a working environment.

1.1.2 About this Report

This report is submitted as part of fulfilling the Department of Computer Science and Engineering, BRAC University's undergraduate internship requirement. The report is a reflection of my work experience, activities, and learning accomplishment during my internship period in Alpha Commerz Ltd.

The report includes a series of chapters for the sake of clarity and proper organization. Chapter 1 outlines the study by giving the background, objectives, methodology, and scope. Chapter 2 presents a general picture of Alpha Commerz Ltd., such as history, mission, vision, and organizational structure. Chapter 3 provides an overview of the specific work and activities carried out during the internship, such as the posts and duties I performed. Chapter 4 presents the methodology followed in performing these tasks, while Chapter 5 presents the outcomes and analysis of my work. The report ends with Chapter 6, that presents conclusions, contributions, and suggestions for future enhancement.

The intent of this report is twofold: one, to demonstrate how the academic knowledge I gained through my undergraduate program was applied in real professional work; and two, to reflect on skills acquired, challenges faced, and things learned during the internship. This report in this sense acts as a full account of the internship experience and how it contributed towards academic and professional growth.

1.2 Objective

The objectives of this internship can be understood from academic and organizational perspectives. Academically, the objective was to apply my class learning to real-world problems and gain hands-on experience in IT operations and product management. Organizational-wise, the objective was to be in a position to contribute meaningfully to Alpha Commerz Ltd.'s business processes by offering its support to its product and IT management process.

1.2.1 Goal

The ultimate aim of my internship was to bridge theoretical knowledge and professional practice. Learning concepts such as database management, software systems, and digital marketing from class, the internship process allowed me to see how the

concepts are practiced in a business setting. The aim was also to learn skills like market analysis, pricing strategy, and product lifecycle management and, in the process, help improve the performance of the company.

1.2.2 Key Focus Area

The key areas of focus for my internship were:

- **Product Upload and Content Writing:** Uploading electronic and electrical products onto the platform with complete specifications, compatibility details, and generational differences. Creating accurate and SEO-friendly content to increase visibility and customer interaction.
- **Market and Demand Analysis:** Analyzing customer demand trends, supply chain volatility, and competition pricing strategies in order to facilitate data-driven decision-making.
- **Cost and Pricing Analysis:** Analysis of cost structures and pricing levels in order to be profitable without compromising competitiveness in the marketplace.
- **Marketing Campaign Support:** Participation in creating ad copies and email content that assisted in increasing the visibility of products and engaging with customers.
- **Utilization of IT Tool and Platforms:** Gaining first-hand experience in working on content management systems (CMS), spreadsheets, and shared drives in order to automate processes.

By working on these domains, I directly added to the company's strategic objectives alongside furthering knowledge and skills suiting my career development.

Overall, the objective was about forming a solid backbone of product and content management, intuitively working and feeling right for the end-user, driving growth, and being profitable to the company. The project needs to achieve all these targets by painstakingly planning and thus opening ways for future improvements.

1.3 Methodology

The methodology of the project is structured to ensure that the tasks are well conducted in a manner that meets the set objectives of the project. First, there is the collection of requirements through stakeholder consultations involving the project manager, market analysts, and IT specialists. This phase will help highlight the gaps in the current processes that make product management inefficient, content creation inconsistent, and data-driven insights insufficient for decision-making.

Once the requirements are noted down, there is a huge amount of data collection and analysis. Market research studies are conducted to assess demand, supply, and pricing trends in the Swedish market for electronics and electrical equipment. This forms the basis for devising strategies that will enhance product performance and customer interaction. At the same time, detailed and friendly product descriptions

are created, focused on compatibility, generation differences, and key features that meet customer demands.

This will also involve the optimization of marketing campaigns, including strategies in email marketing and the development of ad content toward proper testing to ensure that maximum reach and engagement are attained. Finally, performance monitoring shall be continuous, availing analytics tools for tracking effectiveness from product listing to marketing efforts. Inferences drawn from such analyses are used to fine-tune those strategies continuously in conformity with project objectives. It ensures the holistic execution of the project while addressing potential challenges effectively.

1.4 Objective

The project mainly focuses on how the product management and marketing of electronic and electrical products can be made easier and more effective for the Soldfy platform in Sweden by uploading accurate and efficient product information, high-quality captivating content showcasing the features of the products, and optimization of market strategies for increasing customer engagement and optimizing sales performance.

Another critical objective of the project was to bridge gaps between customer needs and product offerings by providing, among other important information, such as product compatibility, generation differences, and technical specifications. Presentation of this material clearly and concisely is expected to provide an enhanced experience for the customer, eliminating confusion and dissatisfaction. Along with customer-oriented objectives, there will be some market and data analysis for informed business decisions regarding demand and supply cost and pricing trends for the best positioning of products and to ensure of competitive pricing strategy. Innovative marketing techniques, such as email campaigns and ad content, will be implemented to increase product visibility manifold for better conversion rates.

Overall, the objective was about forming a solid backbone of product and content management, intuitively working and feeling right for the end-user, driving growth, and being profitable to the company. The project needs to achieve all these targets by painstakingly planning and thus opening ways for future improvements.

1.5 Scopes and Challenges

It includes wide coverage involving critical aspects of product management, content creation, and market analysis for electronics and electrical equipment listed on the Soldfy platform to ensure the smoothening of processes in products, optimize digital marketing efforts, and generally improve the customer journey within the Swedish market. Precise product representations focus on enhancing customer satisfaction and ensuring good sales performance.

However, everything is not a bed of roses in this project. Product compatibility analysis is one of the major challenges. Ranging from a variety of electronics over various generations, it is important and vital to state clearly which devices shall be compatible with which particular product. This involves extensive research and paying great attention to detail. The rapidly changing trends in demand and sup-

ply of the electronics market bring in another critical challenge. Strategies need adaptation to outdo these trends by constant monitoring and flexibility.

The other important challenge is cost and price analysis. The balancing of competitive pricing with the level of profitability involves exhaustive research and a proper understanding of the market. Lastly, consistency and accuracy in product description and marketing content are quite challenging to deal with when the number of products is huge. Such challenges are addressed with the help of detailed planning, consultation with stakeholders, and application of the most advanced instruments and techniques in the course of the project for the successful attainment of project objectives.

1.6 Key Learnings and Insights

The internship at Alpha Commerz Ltd. was an enriching experience and a learning process, wherein I had an all-rounded view of product management in the e-commerce industry, particularly in the field of electronic and electrical products. Studies by e-commerce scholars indicate that extensive product descriptions, coupled with high-quality images, build customer trust and satisfaction, thereby influencing sales [4], [5]. By indulging in hands-on work like making accurate and comprehensive product content, I was able to lay a very strong foundation regarding the articulation of the products and descriptions that could convincingly communicate the value to the target audience. This included needing attention to detail, and an in-depth understanding of the technical aspects of these products: analyzing compatibility between different devices and spotting the differences between generations of a product.

Other high-growth areas I experienced in this internship include market and demand analyses. These activities have presented an opportunity for me to understand consumer preference trends, and the dynamics of competition, and hence find opportunities where the company can further improve its product offerings. A study of supply and demand data showed how market dynamics influence pricing strategies and product positioning; this became so critical in supporting decision-making processes.

I also deepened my knowledge in cost and pricing analysis, studying factors of production costs, market demand, and the pricing of competitors. In this way, I was capable of recommending pricing strategies that balanced profitability with customer satisfaction. Pricing literature and market analysis indicate that pricing models need to be established in line with customer needs and underlying competitive forces. To maximize sales performance and profitability, dynamic pricing models with real-time use of market intelligence are being implemented [2]. Demand and supply analysis research emphasizes the importance of accurate forecasting for maintaining optimum levels of inventory to avert the potential risks of overstocking or stockouts [1].

Literature in digital marketing substantiates that targeted ad content and value-based email campaigns improve sales and customer retention. Literature has established that value-based emails have higher open rates and click-through rates compared to mass emails [6]. Further, customer value-based and preference-based advertising enhances conversion rates substantially [3]. I have also worked extensively on marketing campaigns, creating ad content and email communications de-

signed to resonate particularly with the Swedish market. This experience showed how a customer-centric approach should be applied to crafting messages that appeal to the needs and expectations of the target audience.

This opportunity further refined my organizational and technical skills in the management of product listings within the platform. I learned to optimize the display of products, raising visibility and enabling engagement while considering the accuracy and timeliness of the information given. This sets a combination of creative, analytical thinking, and technical know-how in place that helps create frictionless customer experiences.

Work experience has provided me with hands-on experience in the implementation of digital marketing practices, sales strategies, email campaigns, and targeted ads that drive conversions. It was a very good opportunity that allowed me to see practically how marketing efforts are getting materialized into real business outcomes.

In fact, this internship gave insight into how well technical, analytical, and creative skills are combined in this industry of e-Commerce and product management. What I learned while working at Alpha Commerz Ltd. has grown my technical and professional skill set but also prepared me for other future roles within which I can exercise this knowledge and contribute to innovations and successes that will take root in related industries.

Chapter 2

Company Profile

2.1 Overview

Alpha Commerz Ltd. is a technologically driven organization that has carved a niche for itself as an end-to-end solutions company in the field of e-commerce and IT solutions. Having been incorporated with the vision to empower business houses to thrive in the digital economy, the company has positioned itself as a provider of reliable, innovative, and scalable solutions to a vast range of clients. Alpha Commerz has grown from a traditional IT company in the past to a trusted digital transformation partner. Its portfolio includes web and software development, mobile app development, digital marketing, content management systems, and data analytics, offering a one-stop solution for businesses seeking to strengthen their online presence. It is particularly known for its ability to match creativity with technical acumen. By a mix of design and functionality, Alpha Commerz makes every project technically viable and user-friendly as design-friendly. Alpha Commerz has worked with both B2C and B2B clients, addressing each of their unique challenges through custom solutions. In doing so, Alpha Commerz has enabled businesses in other industries to become more functional and contemporary, especially in the competitive online shopping space. Strong emphasis on professionalism, integrity, and customer service by the company has enabled it to cultivate long-term customer relationships while being attuned to the complexities of the global digital marketplace that continues to change day by day.

2.2 Vision of the Company

Alpha Commerz Ltd.'s vision revolves around providing seamless digital experience and becoming a world leader in e-commerce solutions. The firm hopes to serve as a trusted partner to businesses that desire to harness the power of technology so that they may expand and compete on both international and local levels. Alpha Commerz envisions a world where businesses of every size and shape, regardless of how much capital they may have or where they are located, can use technology as an enabler to connect with their customers.

At the heart of this vision is the idea of innovation, sustainability, and accessibility. Alpha Commerz aims not only to offer IT services but also to bring change by making high-level technology accessible and affordable for companies. Via this vision, the company guarantees it will continuously improve its products, adopting new

technology and developing with future trends in the market so that clients remain ahead.

2.3 Company Mission

The mission of Alpha Commerz is to provide customized, effective, and scalable IT solutions that match the specific requirements of its clients. The mission of Alpha Commerz emphasizes customer-focus, where customers' needs and expectations are emphasized at every stage of service delivery. Whether through careful product management, developing engaging content, or embracing cutting-edge digital marketing strategies, Alpha Commerz seeks to deliver optimum customer satisfaction through anything but conventional solutions.

The second key aspect of the mission is to bridge the gap between technology and business development. Most firms struggle to integrate digital tools to the best of their capabilities, and Alpha Commerz bridges this gap by offering end-to-end solutions—from concept to execution. The firm also adds professionalism, creativity, and innovativeness to the mission, thereby ensuring that each solution is pragmatic, efficient, and futuristic. By maintaining such a mission, Alpha Commerz is positioned to be not only a service provider but also a growth partner for its clients.

2.4 Services of Alpha Commerz Ltd.

Alpha Commerz Ltd. offers the entire gamut of services that assist companies in their efforts to develop and establish their online presence. The solutions range across the entire spectrum of digital business development, assisting customers to work better, reach more people, and achieve greater profitability.

2.4.1 Web Development

The company is involved in the development of professional, responsive, and secure websites. Its web development services are tailored to address the branding, functionality, and performance requirements of every client so that websites look great and are technically strong.

2.4.2 Software Development

Custom software solutions are also another core product of Alpha Commerz. From the unique processes of each client, the company develops and designs software programs that streamline processes, ease workflows, and optimize productivity in any sector.

2.4.3 Mobile App Development

Realizing the increasing prevalence of mobile technology, Alpha Commerz creates mobile applications for Android, iOS, and cross-platform. The applications are developed with ease of use and optimization for clients to reach more and retain customers directly.

2.4.4 UI/UX Design

User experience design is one of the company's signature services. Alpha Commerz utilizes innovative and technical design teams to create easy-to-use, pleasant, and functional interfaces. Such designs are intended to provide effortless navigation, enhanced user satisfaction, and improved conversion rates.

2.4.5 CMS Development and Management

The company integrates, designs, and hosts content management systems (CMS), allowing businesses to easily manage their web content. CMS solutions are flexible, scalable, and easy to use, so it is easy for clients to optimize and edit content without the need to incur technical complexities.

2.4.6 Digital Marketing

Alpha Commerz offers end-to-end digital marketing solutions like SEO optimization, Google Ads campaign, email marketing, social media management, and content creation. These solutions are results-driven and data-driven, tailored to generate visibility, engagement, and measurable sales growth for the customer.

2.4.7 Graphics, Animation, and Video Production

Alpha Commerz's design crew produces intriguing visual content such as banners, promo graphics, animations, and video content. The visual materials are utilized for strengthening brand activities and assisting companies in communicating effectively with the audience.

2.4.8 Data Services and Digital Transformation

The company provides data analysis and management services, which enable customers to obtain insights regarding market trends, customer behavior, and business performance. By incorporating advanced tools, Alpha Commerz helps organizations make informed, data-driven decisions. The company also works with businesses to adopt digital transformation strategies, enabling them to compete in the digital economy.

Chapter 3

Workplace Details

3.1 My Responsibilities

During my internship at Alpha Commerz Ltd., I was primarily stationed in the Product and IT Department, where I held responsibilities that spanned technical operations, system administration, and analytical responsibilities. While some of my work impinged on business and marketing operations, most of my responsibilities rested on IT-process such as product uploads, database maintenance, system content management, and technical optimization. The exercise taught me the accurate way in which IT processes enable the overall functioning of an e-commerce company and taught me the importance of precision, consistency, and reliability in technical operations.

3.1.1 Product Upload and Management

One of my most critical responsibilities was uploading products to the company website through a Content Management System (CMS). It wasn't a simple matter of entering product names and images—this was something that required precise technical care. For each item, I had to insert good-quality images, input technical specifications, and ensure all features such as model number, compatibility details, generation differences, and product versions were accurately recorded. The CMS interface compelled me to navigate through a series of input fields, dropdowns, and configuration options, which made me enhance my technical skills in handling large quantities of structured data. This assignment made me learn the real-world application of how front-end systems interact with databases. For instance, any incompatibility in the information of compatibility or absence of product features could result in customers being confused or products being returned directly. By being always correct and double-verifying entries, I not only contributed to the integrity of the platform but also achieved precision and attention to detail, which is much required in IT-based environments.

3.1.2 Content Optimization and Writing

While product uploading was a technical task, search visibility and customer engagement optimization was also necessary. I composed SEO-optimizable titles for the products, meta tags, and structured data inputs within the CMS so that the prod-

ucts were ranked higher on search and internal search. This wasn't copywriting—this was technical content management, in which I had to balance keyword usage with actual technical description.

I also assisted in enabling the IT-driven marketing operations by organizing data to fit into Google Ads and automated mail campaigns. This involved more technical skill than visual flair, as I was re-checking that data formatting, links, and product mentions were all correctly in sync so that the campaigns could progress without a hitch. This process made me appreciate how IT procedures closely couple with marketing automation.

3.1.3 Market and Demand Analysis

The other significant activity was research on demand, supply, and competitor data. I monitored trends in supply chain inventory levels and the demand for goods using the Excel spreadsheet and formalized logs. I constructed data sheets to represent seasonal trends, competitors' prices, and customer decisions. There was data cleaning and formatting involved to organize the records and numbers in a way that could help make decisions.

By accomplishing this task, I learned how raw data is transformed into meaningful insights in an IT-enabled process. For example, I worked often with incomplete or inconsistent data sets, which I needed to normalize and correct before I could use them for analysis. This sharpened my skill at basic data preprocessing, a common IT practice while working with product or customer data sets.

3.1.4 Cost and Pricing Evaluations

Cost and pricing analysis was one such area where IT tools played a significant contributing role. I used data from suppliers, competitors, and internal sources to estimate best-practice pricing strategies. The task was not only about suggesting a selling price but also about developing formal spreadsheets, setting up formulas, and developing automations to make the task efficient and error-free.

I often needed to match inputs to data updates in real time, and that made me realize the value of data accuracy for consolidated systems. This brought home to me that pricing is not a business but a highly technical one where structured data management ensures products are profitable and competitive.

3.1.5 Coordination with IT and Marketing Team

While most of my activities were technical, I also collaborated with the marketing team to ensure that IT infrastructure supported their activity. For example, I utilized my expertise to design product sheets for email campaigns, generating structured ad content in ad formats that could be directly imported into Google Ads, and ensuring CMS-integrated product information for campaigns going live. This collaboration led me to understand the role of IT as a back-end to marketing processes. As the marketing function performed strategy and communication, I ensured that data, content inputs, and technical integrations were appropriate to enable campaigns to run smoothly. It exposed me to considerable cross-functional collaboration, demonstrating how business teams and IT teams must work together to enable an e-commerce business to succeed.

3.2 Organization Structure

Alpha Commerz Ltd. had a clearly established organizational hierarchy to ensure smooth coordination between its departments. All departments had clearly defined functions, and cross-functional communication was encouraged for achieving business goals.

3.2.1 Team Overview

The project team should be a multidisciplinary team composed of various professionals who shall help in delivering the project objectives and goals, including but not limited to the following:

- **Project Manager:**

The project manager is to take responsibility for all issues pertaining to the project; hence, he has to ensure the development goes hand in hand with strategic goals and timeframes. They shall oversee communications across the team so that any challenge arising in its way is resolved while keeping progress and efficiency right on target.

- **Content Writer:**

The Content Writer will develop compelling product descriptions and marketing materials that improve the customer experience. Their work supports consistency in tone and helps drive sales and brand loyalty campaigns.

- **UI/UX Designer:**

The UI/UX Designer creates intuitive interfaces that make going through the platform instinctive and easy. They emphasize enhancing the customer journey through wireframing and prototyping of the best interaction.

- **Data Analyst:**

The Data Analyst migrates the data and maintains the accuracy and consistency of product information across the board. His analysis will inform the decisions on inventory, pricing, and market strategies.

- **Market Analyst:**

The Market Analyst is responsible for researching market trends in demand, supply, and price to facilitate strategic decisions. Their insight into this will help adjust product offerings and find growth opportunities.

- **Quality Assurance Specialist:**

The Quality Assurance Specialist tests the platform for bugs and issues. Features are implemented to ensure that fixes are applied so that the system performance works flawlessly.

- **IT Specialist:**

The IT Specialist will be uploading products and managing the technical aspects of Soldfy, along with ensuring a smooth user experience. He will be doing front-end work, which means platform maintenance.

- **Graphics Designer:**

A graphics designer works on developing various forms of visual aids to improve aesthetic appeal. Product imagery, and promotional graphics, among others, ensure good looking after customers and prospects retention and attraction.

- **Intern:**

This was my role. I contributed as an IT and Product Management Intern in product uploadings, content creation, market and demand analysis, cost, and price evaluations. Also, supported the marketing team with ad content development and email campaigning while practically getting a taste of digital marketing and product management.

All these were achieved through collaboration, which was necessary in solving some challenges of the projects and therefore promoting business growth in the market.



Figure 3.1: The Alpha Commerz Ltd. Team

3.2.2 Management Hierarchy

The company had a standard top-down management. Directors and senior managers were at the top, with the responsibility of setting strategy and overseeing company performance at an aggregate level. Departmental operations were handled by mid-level managers who ensured that the teams produced within deadlines and targets. I was directly supervised by my immediate team supervisor as an intern and was told what to do on a daily basis and received feedback regarding my work.

3.2.3 Team Dynamics

The Product and IT Department was one unit where work was assigned according to expertise. The department included product managers, IT professionals, content writers, data analysts, and interns. They all worked in their respective domains but

together made teamwork necessary to integrate these endeavors into harmonious outputs. Product managers and IT professionals created smooth technical operations, for instance, and content writers and analysts provided the inputs necessary for accurate and efficient listings.

3.2.4 Interdepartmental Communication

Interdepartmental communication was normal and inevitable, especially between the Product and IT Department and the Marketing Department. Marketing coordination enabled alignment of content with promotion strategies, while coordination with data analysts ensured accuracy of pricing and demand forecasting. This collaboration process ensured the achievement of efficiency and consistency in operations for the company.

3.3 Communication Channels

Good and clear communication was needed to complete daily tasks and to ensure different departments coordinated efforts. The company used a combination of online tools and regular meetings to provide communication.

3.3.1 Internal Communication Tools

For internal communications, the company relied on the use of resources such as email, instant messaging systems, and shared drives. The systems offered a convenient way to exchange files, track updates, and keep in touch with supervisors and colleagues. Shared Google Drive spreadsheets were particularly useful to maintain product logs and track upload and campaign progress.

3.3.2 Customer and Stakeholder Communication

Although I did not have direct customer interaction, I was indirectly making a contribution by providing assurance that the product and content details uploaded were accurate, readable, and user-friendly. This was an important aspect of the company's communication with customers. Communication with stakeholders usually lay in the sphere of senior managers, but the results produced by the Product and IT Department, such as detailed product descriptions and market reports, were often used to enable stakeholder engagement.

3.3.3 Weekly Meetings and Reporting

Regular meetings were conducted within the department to monitor progress, reflect on challenges, and establish new objectives. In these meetings, members of the team gave an update on what they had accomplished, and interns such as myself could also give a report on our progress. The meetings also acted as forums for comment and critiquing, which assisted me in sharpening my work and aligning it with organizational standards.



Figure 3.2: Weekly Meeting Session

3.4 Workplace and Facilities

3.4.1 Work Environment

The workplace of Alpha Commerz was professional but warm in its work environment that encouraged productivity as well as collaboration. Though the company was very small compared to multinational corporations, the culture was structured in a way that made employees and interns feel valued. Colleagues at senior levels and supervisors were amiable and open to ideas, offering the possibility for me to clarify any questions as well as learn firsthand from experienced professionals. This congenial atmosphere reduced the tensions that normally face new interns and made it easy for me to adapt to the workflows easily. With the passage of time, I was self-assured in playing my roles and even building good relations with the group.

3.4.2 Technical Resources

To effectively execute my roles, Alpha Commerz offered the necessary technical resources at any time. All the interns, including myself, were provided with access to a full-fledged workstation equipped with all the necessary aids such as spreadsheets to record data, email accounts for communication, and CMS websites to publish and update products. Google Drive and shared folders were also used extensively in order to provide team-wide access to documents and materials so that collaboration became easier and less prone to miscommunication. Having such online resources at disposal not only made the work process easier but also introduced me to real-life applications of platforms and technologies extensively used in e-commerce enterprises.

3.4.3 Lunch and Refreshments

Another pleasant aspect of the work environment was the provision of lunch facilities, which was saving time and effort during the workday. This meant that staff and interns could focus more on their work without wasting time planning meals. Alongside lunchtime, there were free tea and coffee provisions to tap into throughout the day. For many, including myself, this was a means of refreshment when work was manic. These small but thoughtful gestures played an important role in maintaining working comfort and contributed positively to total productivity and employee happiness.

3.4.4 Celebrations and Team Culture

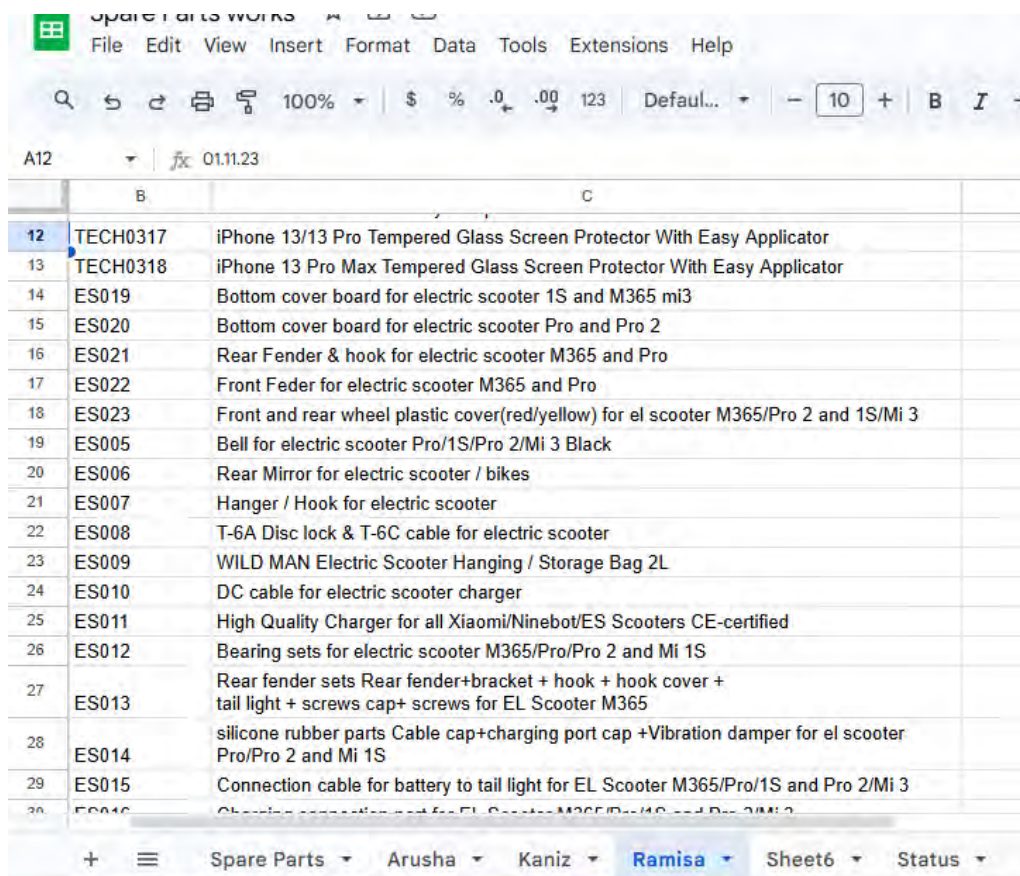
Low-key milestones and birthday celebrations were also encouraged by the company as a way of promoting a warm and welcoming work culture. Such activities, as low-key as they were, offered opportunities for team bonding and informal conversations away from official functions. Such interactions served to form closer relationships among workers and make the office setting a community. For interns such as myself, these activities were especially helpful in getting accustomed to the office environment and reducing the feeling of being "just temporary staff." Overall, these activities were the company's effort to maintain not just an efficient but also an inviting and inclusive environment.

Chapter 4

My Contributions

4.1 Project Overview

During my internship at Alpha Commerz Ltd., I was placed in the Product and IT Department, where I involved myself in a series of tasks that comprised technical IT operations, product management, and digital process improvement. My project was aimed at improving the accuracy, efficiency, and overall quality of product management processes for electrical and electronic products. One of the fundamen-



	B	C
12	TECH0317	iPhone 13/13 Pro Tempered Glass Screen Protector With Easy Applicator
13	TECH0318	iPhone 13 Pro Max Tempered Glass Screen Protector With Easy Applicator
14	ES019	Bottom cover board for electric scooter 1S and M365 mi3
15	ES020	Bottom cover board for electric scooter Pro and Pro 2
16	ES021	Rear Fender & hook for electric scooter M365 and Pro
17	ES022	Front Feder for electric scooter M365 and Pro
18	ES023	Front and rear wheel plastic cover(red/yellow) for el scooter M365/Pro 2 and 1S/Mi 3
19	ES005	Bell for electric scooter Pro/1S/Pro 2/Mi 3 Black
20	ES006	Rear Mirror for electric scooter / bikes
21	ES007	Hanger / Hook for electric scooter
22	ES008	T-6A Disc lock & T-6C cable for electric scooter
23	ES009	WILD MAN Electric Scooter Hanging / Storage Bag 2L
24	ES010	DC cable for electric scooter charger
25	ES011	High Quality Charger for all Xiaomi/Ninebot/ES Scooters CE-certified
26	ES012	Bearing sets for electric scooter M365/Pro/Pro 2 and Mi 1S
27	ES013	Rear fender sets Rear fender+bracket + hook + hook cover + tail light + screws cap+ screws for EL Scooter M365
28	ES014	silicone rubber parts Cable cap+charging port cap +Vibration damper for el scooter Pro/Pro 2 and Mi 1S
29	ES015	Connection cable for battery to tail light for EL Scooter M365/Pro/1S and Pro 2/Mi 3
30	ES016	Charging connection set for EL Scooter M365/Pro/1S and Pro 2/Mi 3

Figure 4.1: Sample Work Update Log

tal aspects of this contribution was working on the content management system (CMS). My tasks included inserting products into the system, associating product

images, and ensuring that every entry was complete and technically accurate in terms of specifications. This was not a matter of merely inserting descriptions or titles; it was a deep involvement with issues of compatibility, generational differences in electronics, and precise technical specifications. These assignments demanded diligent attention to detail because any incomplete or erroneous specification could potentially mislead customers and erode trust in the platform. The other equally important aspect was managing data-heavy processes such as demand analysis, supply tracking, and price analyses. In this respect, my task was to analyze market data, competitors' prices, and seasonal demand trends. By applying Excel-based analysis techniques, I helped develop intelligence that informed the firm's product placement and pricing strategy.

Each task was conceptualized and executed through an iterative critical cycle: planning, content/data collection, analysis, development, internal review, and publication. The design ensured that the product information published was correct, visually cohesive, and aligned with customer expectations. I also created documentation for recurring tasks and maintained well-organized progress logs to ensure quality control throughout the work cycle. Internal reviews by team members enhanced the refine of deliverables and ensured goals were aligned with the strategic objectives. In addition to the analytical and technical roles, I also assisted in content optimization and communication, particularly in IT processes involved in marketing. I created ad copy for Google Ads and email campaigns and ensured that the content was not only customer-oriented but also SEO-friendly. In this way, I had an appreciation for how IT systems, product management, and digital marketing come together in a real e-commerce setting.

4.1.1 Product Upload and Management

One of my most frequent and detailed tasks was uploading products to the CMS. Each product entailed a careful input of numerous fields: product name, model, generation, compatibility, technical specifications, and images. For example, when uploading networking products, I had to specify the generations of routers or adapters they were compatible with. When uploading electrical products, I had to list wattage, voltage ranges, and protection features.

Accuracy was critical as even a single mismatch (e.g., marking a product as 5G capable when it is only 4G capable) would lead to customer dissatisfaction and returns. Over time, I developed a step-by-step workflow to minimize the risk of error. I cross-referenced specifications with supplier documentation, verified compatibility lists, and ensured product images were uploaded at the right resolution and following SEO-friendly naming conventions. This task also gave me practical exposure to understanding how backend data entries connect with frontend displays on an e-commerce platform. I often tested the listings after uploading to check if the technical specifications and images were rendered correctly on the live site. Through this, I became more familiar with the functionality of CMS platforms, database-driven content handling, and the importance of maintaining consistency across different layers of the system.

This project allowed me to develop hands-on skills in content management systems, a highly transferable skill for IT-based product management roles. It also developed my knowledge of electronic products, as I was required to differentiate between

Part Edit ☐ Part Number ☐ D ☐ S ☐ No\$ Select SO Select PO [Adv Cart](#)

STOCK CREDIT **TedoList()** **FUNCTIONS**

C1 01CV760 New# Cost: 300 Sell: 383 Wgt: 3.1 Lsell: 343 EW: 30 MCost: 300
LGF: 383 GO: 383 MSRP: 0 Test Price

LENOVO - CONTROLLERS - FIBRE CHANNEL - HOST BUS ADAPTER 390

Change Title Case **Short Description** Change Title Case **Full Description**
 Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter. Refurbished. In Stock.
 Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter.
 Main Specifications:
 Device Type : Host Bus Adapter

Same As: 01CV763 01CV762 01KRS86

BD Remarks: Alta 12.20.2024

Title: Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter Ref

Ny Remarks:

HS Code:

STOCK = 0 Cond: REF PRep: Ramisa Img YES Yes imglink LUPC: 889488417322
GO PSO BB Inventory Location: Garbage NO Rank Rank 3 BB isSerial

History Update Clone SysConfig Suggestion ConfigBuild Split StockRequest MetaData
SameAsDefault

Ramisa - 1/8/2025 - 10:23:36 AM 323 Days ago last sales Parts Inserted on 6/17/2016

30 Days ADW Hits 0 Cost 0	30 Days GO Hits 0 Cost 0	30 Days GO Sales 0 GP 0
1 Year ADW Hits 0 Cost 0	1 Year GO Hits 4 Cost 12.32	1 Year Sales 545 GP 220

C1 01CV760 New# Cost: 0 Sell: 0 Wgt: 3.1 Lsell: 7 EW: 0 MCost: 0
LGF: 0 GO: 0 MSRP: 0 Test Price

Figure 4.2: Product Upload Interface (1)

C1 01CV760 New# Cost: 300 Sell: 383 Wgt: 3.1 Lsell: 343 EW: 30 MCost: 300
LGF: 383 GO: 383 MSRP: 0 Test Price

LENOVO - CONTROLLERS - FIBRE CHANNEL - HOST BUS ADAPTER 390

Change Title Case **Full Description**
 Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter.
 Main Specifications:
 Device Type : Host Bus Adapter
 Form Factor : Plug-In Card
 Interface (Bus) Type : PCI Express 3.0 x8
 Ports : 16GB Fibre Channel x 2
 Dimensions (WxDxH) : 6.6 In x 2.7 In
 Data Link Protocol : 4GB Fibre Channel, 8GB Fibre Channel, 16GB Fibre Channel
 Data Transfer Rate : 14.025 Gbps
 Performance : Maximum IOPS: 1300000
 System Requirements: Microsoft Windows Server 2012 R2, Red Hat Enterprise Linux 6 x64 Edition, Microsoft Windows Server 2012 R2, Red Hat Enterprise Linux 7, SUSE Linux Enterprise Server 12, VMware vSphere 5.5 Update 2, SUSE Linux Enterprise Server 12 SP1, SUSE Linux Enterprise Server 11 SP4 for AMD64/EM64T, SUSE Linux Enterprise Server 11 SP3 for AMD64/EM64T, VMware vSphere 5.5 Update 3, VMware vSphere 6.0, VMware vSphere 6.0 Update 1, VMware vSphere 6.0 Update 2
 Designed For: NextScale IX360 M5, System x3500 M5, x3550 M5, x3650 M5, x3750 M4, x3850 X6, x3950 X6
 Condition: Refurbished.
 Availability: In Stock.
 Our Warranty: 30 Days.

Change Title Case **Short Description**
 Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter. Refurbished. In Stock.

Same As: 01CV763 01CV762 01KRS86

BD Remarks: Alta 12.20.2024

Title: Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter Ref

Ny Remarks:

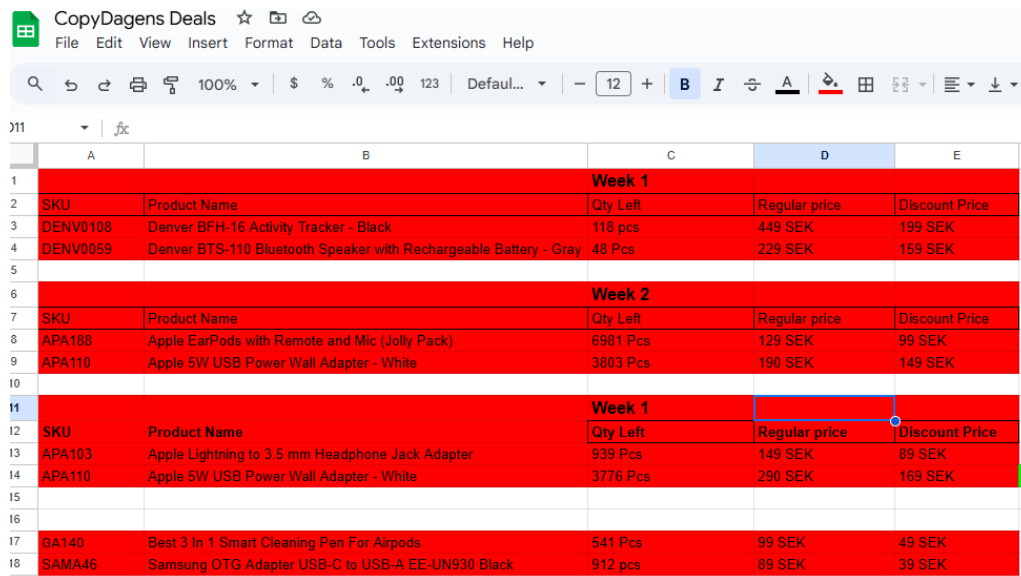
Figure 4.3: Product Upload Interface (2)

product generations and understand the technical constraints of each device.

4.1.2 Content Structuring and Optimization

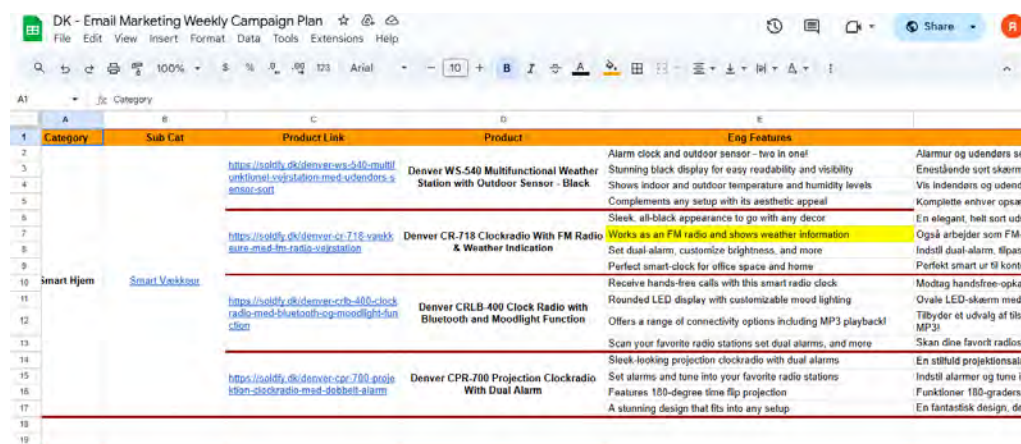
Apart from uploading, I was also responsible for content optimization for visibility and ease of use. This included writing product descriptions and titles that were both technically descriptive and SEO-friendly. So, instead of saying "Router", I would say "Dual-Band Wi-Fi 6 Router with Gigabit Ports – Model X", which not only informs the customer what it is but also makes it more likely to appear in search results.

I also created marketing materials, such as Google Ads ad copy and email campaign templates. These required a mix of technical accuracy and persuasive writing. Working on these gave me an understanding of the part IT systems play in the structure and delivery of marketing communications.



	A	B	C	D	E
1			Week 1		
2	SKU	Product Name	Qty Left	Regular price	Discount Price
3	DENV0108	Denver BFH-16 Activity Tracker - Black	118 pcs	449 SEK	199 SEK
4	DENV0059	Denver BTS-110 Bluetooth Speaker with Rechargeable Battery - Gray	48 Pcs	229 SEK	159 SEK
5					
6			Week 2		
7	SKU	Product Name	Qty Left	Regular price	Discount Price
8	APA188	Apple EarPods with Remote and Mic (Jolly Pack)	6981 Pcs	129 SEK	99 SEK
9	APA110	Apple 5W USB Power Wall Adapter - White	3803 Pcs	190 SEK	149 SEK
10					
11			Week 1		
12	SKU	Product Name	Qty Left	Regular price	Discount Price
13	APA103	Apple Lightning to 3.5 mm Headphone Jack Adapter	939 Pcs	149 SEK	89 SEK
14	APA110	Apple 5W USB Power Wall Adapter - White	3776 Pcs	290 SEK	169 SEK
15					
16					
17	GA140	Best 3 In 1 Smart Cleaning Pen For Airpods	541 Pcs	99 SEK	49 SEK
18	SAMA46	Samsung OTG Adapter USB-C to USB-A EE-UN930 Black	912 pcs	89 SEK	39 SEK

Figure 4.4: Creating SEO Optimized Product Listing



	A	B	C	D	E
1	Category	Sub Cat	Product Link	Product	Eng Features
2			https://solidfy.dk/denver-ws-540-multifunktions-vejrstation-med-uden-dens-sensor-avgit	Denver WS-540 Multifunctional Weather Station with Outdoor Sensor - Black	Alarm clock and outdoor sensor - two in one! Stunning black display for easy readability and visibility Shows indoor and outdoor temperature and humidity levels Complements any setup with its aesthetic appeal Sleek, all-black appearance to go with any decor
3			https://solidfy.dk/denver-cr-718-vejrstation-med-fm-radio-vejrstation	Denver CR-718 Clockradio With FM Radio & Weather Indication	Works as an FM radio and shows weather information Set dual alarm, customize brightness, and more Perfect smart-clock for office space and home
4			https://solidfy.dk/denver-crlb-400-clock-radio-med-bluetooth-sog-moodlight-funktion	Denver CRLB-400 Clock Radio with Bluetooth and Moodlight Function	Receive hands-free calls with this smart radio clock Rounded LED display with customizable mood lighting Offers a range of connectivity options including MP3 playback!
5			https://solidfy.dk/denver-cpr-700-projektions-clockradio-med-dobbelt-alarm	Denver CPR-700 Projection Clockradio With Dual Alarm	Scan your favorite radio stations set dual alarms, and more Sleek-looking projection clockradio with dual alarms Set alarms and tune into your favorite radio stations Features 180-degree time flip projection A stunning design that fits into any setup
6					Alarmur og uden-dens sensor Enestående sort skærm F Vis indendørs og uden-dens Komplette enhver opsæt En elegant, helt sort udse Også arbejder som FM-ra Indstil dual-alarm, slæp l Perfekt smart ur til kontor
7					Modtag hands-free-opkald Orale LED-skærm med til Tilbyder et udvalg af tilsku MP3!
8					Skån dine favorit radiostæ En stilfuld projekti Indstil alarmer og tune inc Funktioner 180-graders fl En fantastisk design, der

Figure 4.5: Email Marketing Sheet (1)

DK - Email Marketing Weekly Campaign Plan		
Product Url	English Feature	DK Feature
https://soldfy.dk/apple-airpods-med-5mm-hoyestelefoner-til-gad	En perfekt blanding av mote og funksjonalitet i ett ørepropp. Opplev rike bass, krystallt klar og engagerende lyd. Få langvarig ytelse, komfortabel passform for langvarig bruk. Tilbyr enkel kommunikasjon, enkle kontroller og operasjoner.	En perfekt kombinasjon af mode og funktionalitet i et høreapparat. Oplev rig bas, krystallklar og engagerende lyd. Få langvarig ydelse, behagelig pasform til langvarig brug. Tilbyder nem kommunikation, enkle kontroller og betjening.
Product Link	Eng Features	DK Translation
https://soldfy.dk/apple-airpods-3rd-gen-2021-tradefase-hoyestelefoner	Immersive sound, active noise cancellation, perfect for multitasking. Enjoy seamless MagSafe connection, long battery and quick charging.	Immersiv lyd, aktiv støjreduktion, perfekt til multitasking. Nyd problemfri MagSafe-forbindelse, lang batterilevetid og hurtig opladning.
https://soldfy.dk/apple-airpods-pro-2nd-gen-2022	Delivers advanced noise cancelling features and superior sound quality. Perfect choice for active lifestyle with its comfortable fit, water resistance.	Leverer avancerede støjreducerende funktioner og overlegen lyd-kvalitet. Det perfekte valg til en aktiv livsstil med sin behagelige pasform og vandtæt design.
https://soldfy.dk/apple-airpods-med-3-5mm-hoyestelefoner-til-kab	A budget friendly option with reliable sound quality and compatibility. Offers a durable build, comfortable fit and ideally for everyday listening.	Et prisvenligt alternativ med pålidelig lyd-kvalitet og kompatibilitet. Tilbyder et slidstærkt design, behagelig pasform og er ideel til daglig lytning.
https://soldfy.dk/apple-airpods-med-3-5-mm-hoyestelefoner-til	You get a seamless, universal compatibility and durability for longer use. Experience comfort along with crisp audio for music, calls and more.	Du får en problemfri universal kompatibilitet og holdbarhed til langvarig brug. Oplev komfort sammen med skarp lyd til musik, opkald og mere.

Figure 4.6: Email Marketing Sheet (2)

Category	Sub-Category	Graphics URL	YouTube Link	Link	Headlines - English (Max 30 characters)	C Limit	Headlines - Swedish (Max 30 characters)	C Limit	Link
Klockor	Smartklocka	https://drive.google.com/drive/folders/1gusksup2M4H9QaRHA7ZQDR-FillgQ2vnp-share_link	https://www.youtube.com/watch?v=hem-sch-filidM-oshen-smartklocka-1	https://soldfy.se/produkter/smartklockor	Best quality watches at Soldfy	30	Kvalitetsklockor hos Soldfy	27	Soldfy
					Premium smartwatches for all	28	Premium-smartklockor för alla	29	Get it
					Buy smartwatches from Soldfy	28	Köp smartklockor av Soldfy	26	Shop
					Order your smartwatch now	28	Beställ din smartklocka nu	26	Find
					Smartwatches at the best rate	29	Smartklockor till bästa priset	30	We h
Aktivitetssamband	Aktivitetssamband	https://drive.google.com/drive/folders/1gusksup2M4H9QaRHA7ZQDR-FillgQ2vnp-share_link	https://www.youtube.com/watch?v=hem-sch-filidM-oshen-smartklocka-1	https://soldfy.se/produkter/smartklockor	Fashionable activity watches	28	Eleganta aktivitetsarmband	26	Orde
					Buy activity watch from Soldfy	30	Aktivitetsarmband hos Soldfy	28	Soldfy
					Top quality activity bracelets	30	Klockrens aktivitetsarmband	27	Get it
					Best watches for fitness lovers	31	Armband för fitness-freaks	26	Brow
					Fitness tracker for any gender	30	Fitnessplåre som passar alla	29	Soldfy

Figure 4.7: Google Ads Sheet (1)

Category	Sub-Category	Graphics URL	YouTube Link	Link	- 55 characters	C Limit	Long Headlines - Swedish (Max 60 characters)	C Limit	Short Description
Högtalare	Högtalare	https://drive.google.com/drive/folders/1gusksup2M4H9QaRHA7ZQDR-FillgQ2vnp-share_link	https://www.youtube.com/watch?v=hem-sch-filidM-oshen-smartklocka-1	https://soldfy.se/produkter/smartklockor	Find them all here	51	enhet för hemmet	58	yourself in the best au
					voice assistant	58	Vi säljer portabla högtalare med smarta röstassistent	55	Browse Soldfy to find i
					from our branded	59	Upplev den bästa ljudkvaliteten med våra märkeshögtalare	56	Get a smart speaker f
					audio streaming	59	Skaffa en TV-box och få tillgång till din favoritstreaming	58	Get the best deals on
					in 4K with our TV	57	Semiotis streaming och appåtkomst i 4K med våra TV-stickor	56	Check our store for the
TV och Bild	TV och Bild	https://drive.google.com/drive/folders/1gusksup2M4H9QaRHA7ZQDR-FillgQ2vnp-share_link	https://www.youtube.com/watch?v=hem-sch-filidM-oshen-smartklocka-1	https://soldfy.se/produkter/smartklockor	chromecast from	56	Uppgradera din TV-upplevelse med en Chromecast från Soldfy	58	Stream your favorite s
					the best prices	57	Du får de senaste TV-boxarna och stickorna till vrakpriser	58	Grab your TV stick at t
					boxes from the top	60	Soldfy har det vassaste utbudet av TV-boxar från toppmärken	59	Upgrade your home w
					care items and	61	Kolla in vår stora kollektion av personvårdsartiklar	52	Browse Soldfy for the
					the best prices	61	Effektiva epilatorer för kvinnor till riktigt bra priser	56	From electric tooth br
Hem och fritid	Hem och fritid	https://drive.google.com/drive/folders/1gusksup2M4H9QaRHA7ZQDR-FillgQ2vnp-share_link	https://www.youtube.com/watch?v=hem-sch-filidM-oshen-smartklocka-1	https://soldfy.se/produkter/smartklockor	and women at	56	Kolla in grooming-kit för både män och kvinnor	54	Order your personal g

Figure 4.8: Google Ads Sheet (2)

I learned from this activity how content accuracy, consistency, and structure are important in engaging customers. Content optimization was not just writing, it was about making sure that the product information was structured in a way that could be effectively processed by both systems (search engines, CMS) and humans (customers).

4.2 System and Analysis Design

Aside from structuring and uploading content, I was also tasked with ensuring that the data flowing into the CMS was accurate, consistent, and usable. Towards this, I was engaged in activities that seemed to be system analysis and data preprocessing.

4.2.1 Requirements Gathering

Before entering any new set of products, I worked with supervisors and co-workers in gathering requirements. For instance, we decided which specifications needed to be prioritized most for each electronics category. In laptops, generation (11th Gen vs 12th Gen), processor compatibility, and RAM were prioritized. For home appliances, power consumption and safety features were prioritized.

1	MA-MNT-MR-15	ACCESSORIES	BRACKET	WIRELESS	CISCO	NEW	0	50	85	0	1/13/2025	
2	MA-MNT-MR-17	ACCESSORIES	BRACKET	WIRELESS	CISCO	NEW	0	30.39	55	0	12/20/2024	
3	876139-001	ACCESSORIES	RACK MOUNTING KIT	Hardware Kits	HPE	NEW	0	152	500	0	12/11/2024	
4	P48926-B21	ACCESSORIES	SERVER OPTIONS	Blank Kit	HPE	NEW	0	144	210	0	12/11/2024	
5	X2N98	CABLES	ASSEMBLY CABLE	SERVER OPTIONS	DELL	REF	0	27	75	0	12/12/2024	
6	CVEM04	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	REF	0	245	300	0	1/9/2025	
7	CVPM05	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	NEW	25	62.07	80	0	1/9/2025	K15
8	05-50039-00	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	NEW	0	62.07	80	0	1/9/2025	K21
9	LSI00418	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	REF	3	65.71	45	0	1/6/2025	K20
10	LSI00418	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	NEW	0	145	195	0	1/22/2025	
11	FBU345	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	NEW	0	62.07	80	0	1/9/2025	
12	49571-22	CONTROLLERS	ACCESSORIES	CACHEVAULT	BROADCOM	NEW	0	62.07	80	0	1/9/2025	
13	00JY023	CONTROLLERS	BATTERY	BATTERY BACKUP UNIT	LENOVO	REF	0	10	45	0	1/22/2025	
14	00JY022	CONTROLLERS	BATTERY	BATTERY BACKUP UNIT	LENOVO	REF	0	10	45	0	1/22/2025	
15	01KN513	CONTROLLERS	BATTERY	BATTERY BACKUP UNIT	LENOVO	REF	0	40	130	0	1/6/2025	
16	P1V45	CONTROLLERS	CACHE UPGRADE	POWEREDGE	DELL		0	109	140	0	1/9/2025	
17	4C57A85377	CONTROLLERS	EXPANSION MODULE	BOSS CONTROLLER	LENOVO	NEW	0	155	185	0	1/8/2025	
18	7Y37A01092	CONTROLLERS	EXPANSION MODULE	1 PORT	LENOVO	NEW	0	56	122	0	1/8/2025	
19	7Y37A01093	CONTROLLERS	EXPANSION MODULE	2 PORT	LENOVO	REF	0	60	142	0	1/8/2025	
20	W1M0VN	CONTROLLERS	FIBRE CHANNEL	4 PORT	DELL	REF	1	0.001	40	0	1/9/2025	J4D
21	QME2742-DELL	CONTROLLERS	FIBRE CHANNEL	MEZZANINE CARD	DELL	REF	0	110	160	0	1/21/2025	

Figure 4.9: Product Description Draft

4.2.2 Data Cleaning and Transformation

Raw product details used to be full of inconsistencies, missing details, or supplier-specific jargon. I cleaned these details by completing missing fields, normalizing

units (i.e., converting GB to MB where necessary), and simplifying technical descriptions for consumers. Transformation also included normalizing data formats—for example, representing "256 GB" instead of inconsistency like "256GB" or "256 Gb."

Most of my responsibilities involved gathering data for product specifications, market comparisons, and promotion needs. Data was sourced from supplier-provided spreadsheets, public product websites, competitor sites, company documents, and technical data sheets. For price and demand patterns, I searched local and global e-commerce listings. I also utilized archived documents and shared documents provided by the company, including email marketing records and catalog updates.

The data was collected systematically in sheet-wise data categorized in sheets. Data concerning the products had model numbers, key features, supported device generations, warranty information, and compatibility tags.

C1 01CV760 New# Cost: 300 Sell: 383 Wgt: 3.1 Lsell: 343 EW: 30 MCost: 300

LGF: 383 GO: 383 MSRP: 0 Test Price

LENOVO - CONTROLLERS - FIBRE CHANNEL - HOST BUS ADAPTER 390

Change Title Case **Full Description**

 Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter.

 Main Specifications:

 Device Type : Host Bus Adapter

 Form Factor : Plug-In Card

 Interface (Bus) Type : PCI Express 3.0 x8

 Ports : 16GB Fibre Channel x 2

 Dimensions (WxDxH) : 6.6 In x 2.7 In

 Data Link Protocol : 4GB Fibre Channel, 8GB Fibre Channel, 16GB Fibre Channel

 Data Transfer Rate : 14.025 Gbps

 Performance : Maximum IOPS: 1300000

 System Requirements: Microsoft Windows Server 2012, Red Hat Enterprise Linux 6 x64 Edition, Microsoft Windows Server 2012 R2, Red Hat Enterprise Linux 7, SUSE Linux Enterprise Server 12, VMware vSphere 5.5 Update 2, SUSE Linux Enterprise Server 12 SP1, SUSE Linux Enterprise Server 11 SP4 for AMD64/EM64T, SUSE Linux Enterprise Server 11 SP3 for AMD64/EM64T, VMware vSphere 5.5 Update 3, VMware vSphere 6.0, VMware vSphere 6.0 Update 1, VMware vSphere 6.0 Update 2

 Designed For: NextScale HX360 M5, System x3500 M5, x3550 M5, x3650 M5, x3750 M4, x3850 X6, x3950 X6

 Condition: Refurbished.

 Availability: In Stock.

 Our Warranty: 30 Days.

Change Title Case **Short Description**

Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter. Refurbished. In Stock.

Same As: 01CV763 01CV762 01KR586

BD Remarks: Alta 12.20.2024

Title: Lenovo 01CV760 QLogic 16GB FC Dual-Port(Enhanced Gen 5) Host Bus Adapter Ref

Ny Remarks:

Figure 4.10: Sample Work Update After Data Collection

4.2.3 Data Integration

After cleaning and transformation, I integrated the cleaned data into the CMS. This included not only entering data but also mapping fields to backend database requirements. This phase also acquainted me with how CMS systems integrate with backend databases and frontend presentation systems.

4.2.4 Data Reduction

In the interest of simplicity and ease of use, not all technical parameters in supplier documentation were exposed on the CMS. I had to balance reducing fields

that were unnecessary while including the most helpful specifications. For example, internal supplier codes were excluded, but customer-pertinent specifications such as Bluetooth version or Power efficiency rating were retained.

4.3 Project Responsibilities

In addition to data handling and product upload, I had responsibilities in documentation and collaboration. **Technical Documentation:** I maintained Excel logs of products uploaded, including product IDs, upload dates, and verification status. This documentation was crucial for tracking updates and ensuring accountability.

Teamwork with Teams: I worked regularly with IT experts, data analysts, and marketing staff. For example, I collaborated with the design team for web optimization of product images and with analysts for validating demand patterns. File-sharing tools like Google Drive were used, enabling smooth collaboration.

4.4 Work Plan

The internship employed a structured work plan modelled after the Iterative Development Life Cycle. Given the nature of activities such as product uploads, content writing, data analysis, and marketing content writing, the process incorporated loops of planning, review, testing, and refinement. Every phase of work was accomplished in small, manageable cycles beginning with understanding and analysis of requirements and proceeding to content or data preparation, review, and revision. Feedback from supervisors and team leads was central to every cycle. This approach offered flexibility when product specifications were altered, market data changed, or marketing strategies shifted. The iterative approach functioned best in solving activities such as price analysis, mapping for compatibility, and planning ads, which required continuous validation and refinement. Instead of trying to get it all correct at one time, activities were broken up and honed in individual cycles. This preserved accuracy, consistency, and business objective alignment while allowing for creativity and learning. The work plan illustrated below is the one which was done during internship employing the iterative method.

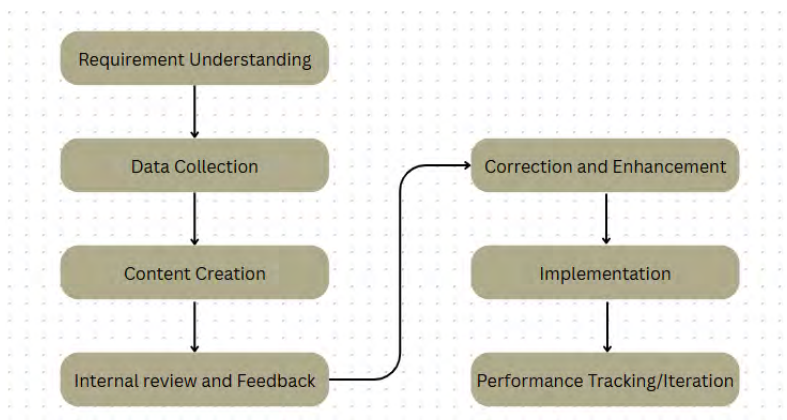


Figure 4.11: Work Plan

4.5 Implementation of Tasks

Once data preparation was complete, I proceeded with the addition of product listings and campaign material. Products were uploaded with complete titles, formatted technical descriptions, SEO fields, price information, and plain images. Categories and tags were carefully chosen for correct filtering and better visibility.

I used an internal product management tool with built-in support for uploading product images through the imglink feature. It had editable fields for title, specs, pricing, and stock status. This was used for entering refurbished electronic components into the backend system. This interface allowed me to associate each product listing with optimized images, assign image names to match product codes, and verify image dimensions before upload.

On the marketing side, I wrote Google Ads and email marketing copy. Those were titles, meta tags, and promotional tags for different types of users. We maintained an archive for each version of content, monitored engagement metrics where necessary, and substituted less effective copy.

I also assisted in bi-weekly content updates and promotion campaign rollouts, monitoring progress on Excel sheets and asset management within a structured Google Drive folder.

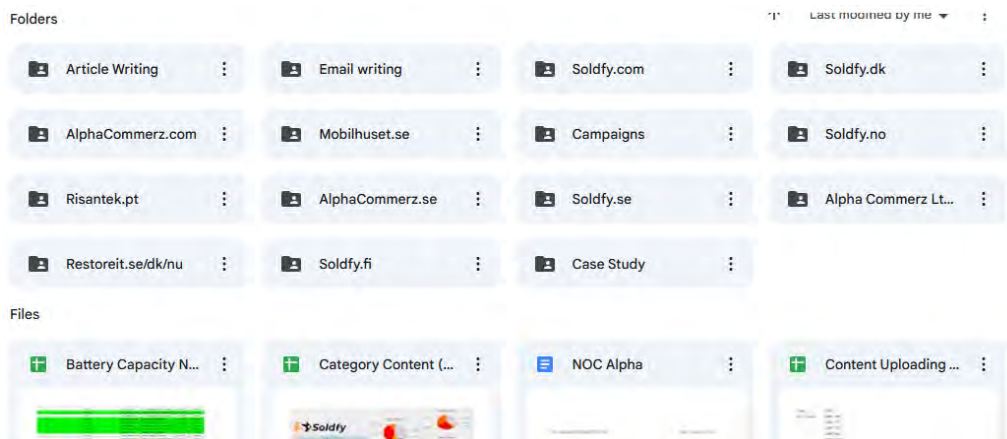


Figure 4.12: Drive Overview of all the Work and Processed Data

Chapter 5

Growth

5.1 Professional Development

5.2 Becoming an Industry Contributor from a Student

Of all the valuable elements of this internship, the most worthwhile aspect was becoming an active contributor to a professional team from a student. While university studies had allowed me to learn theoretical ideas in computer science and engineering, the internship experience enabled me to apply these concepts to real-world environments. I learned how the database, networking, and content structure concepts learned in class come into play when uploading products, managing massive amounts of product information, and getting it all to work together nicely on a CMS. A few times, I felt overwhelmed by the sheer amount of work and the responsibility of working with live product information, where mistakes would be seen immediately by customers. With time, I developed confidence in self-working but also in recognizing the importance of cross-checking with other team members. The transformation tremendously boosted my self-confidence as well as equipped me with a clear understanding of what it takes to work in the corporate environment.

5.2.1 Project Workflow Understanding

While interning, I acquired the experience of viewing and participating in structured project workflows. Tasks such as product data preparation, detail checking, description optimization, and uploading to the CMS were not done randomly; they had a clear, predetermined sequence in adherence to company goals. I observed how projects were segmented into steps that could be acted upon, distributed across the team, and tracked for progress. For example, product upload tasks started with collecting raw data from vendors, cleansing and authenticating the information, and finally organizing it into the CMS. Similarly, digital marketing tasks entailed brainstorming, developing, reviewing, and finally publishing. Understanding these workflows helped me make connections between classroom subjects like Software Development Life Cycle (SDLC) and project management principles to the actual workplace. It was an opener in understanding how important planning, iterative inspection, and final assessment are for real projects.

5.2.2 Team Collaboration and Team Interaction

Working within the team setting was yet another method of professional development. I was working on a regular basis in close contact with different members of the Product and IT Department, which introduced me to a number of working atmospheres. For example, while IT professionals were focused on the technical backend of product uploading and CMS optimization, content writers focused on writing user-friendly and SEO-embellished product descriptions. I learned the effective way of interacting with these two teams and bridging technical jargon to customer-facing text. Collaborative working in meetings, delivering updates through spreadsheets, and monitoring progress also increased my ability to excel in a group setting. This teamwork not only enhanced my communication skills but also taught me how professionals depend on the other's expertise to achieve common goals.

5.3 Technical Development

5.3.1 Content Management System (CMS) Competence

Throughout the internship, I gained hands-on experience with content management systems on a grand scale, which was one of my most prominent technical development areas. I had theoretical knowledge beforehand about how websites display products and deal with backend information. During the internship, I came to realize that the CMS is the go-between between product technical details and customer displays. I learned how to upload products, adjust descriptions, add links for images, and change categories. For instance, while uploading an electric product, I had to input wattage, voltage, model data, and compatibility with extreme care. Over time, I learned a methodical process: initially organizing the content in Excel for consistency checks, cross-referencing against supplier data, and then uploading into the CMS. Hands-on experience added to my technical understanding of how content management works in e-commerce and also made me more efficient and accurate.

5.3.2 Data Handling and Analysis

Handling big datasets was yet another significant technical learning opportunity. I would typically spend my time collecting product information, cleaning it, and preparing it to upload or analyze. This included dealing with missing values, duplicate records, or inconsistencies in data from the suppliers. For example, model numbers may have been missing or missing compatibility data, so cross-checking data from external sources was necessary. With Excel, I learned how to clean up, filter, and manipulate data to render it useful for business purposes. This role also introduced me to analyzing market trends and demand, such as competitor price research, seasonal demand shifts, and customer preferences. All these activities improved my data processing and analysis skills, an essential technical skill for any CSE graduate venturing into the IT sector.

5.3.3 SEO and Content Structuring

One unique area of technical advancement was studying search engine optimization (SEO) and content structuring. Though SEO is generally related to marketing, I

found that its intimate connection with IT systems and content management. Developing SEO-compliant titles, including metadata, and using structured keywords in product descriptions directly affected the presentation of products on search engines and the company site. This taught me that it is not enough to be accurate in terms of technology, but content also needs to be written in a way in which it becomes discoverable to customers. Finding the balance between technical details like model numbers and compatibility and customer-facing words, I learned to write accurate content that was optimized for visibility.

5.3.4 Expose to Digital Tools

Throughout my internship, I was exposed to and trained in various digital tools. To manage data, I utilized Excel frequently to design product logs and analyze datasets. To collaborate with teams, Google Drive was an essential tool to exchange and hold on to resources. I also applied spreadsheets to plan email marketing campaigns and Google Ads ad copy. These applications may seem simple, but using them within an enterprise setting taught me how to utilize them better. I also realized how much even a small error in spreadsheets or campaign drafts can affect company outputs, and so I was trained to be more precise in working with technical tools.

5.4 Interpersonal Development

5.4.1 Communication and Teamwork Skills

This internship provided me with a platform for honing my interpersonal skills significantly. I was trained to effectively communicate with supervisors, co-workers, and even cross-functional employees. For instance, in collaborating with the marketing team on campaign copy, I had to make the technical aspects of products easy to understand. Similarly, in collaborating with IT staff, I had to get technical as well as more specific while explaining things. This adaptability in communication supplemented my ability in communicating with diverse sets of people.

5.4.2 Problem-Solving in Technical Settings

Problem-solving was a regular part of my internship experience. There were times when the information I had about a product was incomplete or conflicting. Instead of giving up, I habituated myself to approach the problem from different angles, looking at supplier sheets, asking superiors, or double-checking similar products. These problem-solving exercises taught me patience and how to approach real-world technical challenges. I realized that technical problem-solving is not just learning the solution but learning how to learn the solution.

5.4.3 Time and Task Management

Time and task management was also a critical skill I had developed. During the internship, I often had to do several tasks at the same time, uploading products, content preparation, data analysis, and writing campaigns. Each activity was time-bound, and delayed action would affect team performance. I created strategies such

as organizing task lists for a day, establishing priority uploading, and scheduling time to review content before submitting. These routines improved my productivity as well as enabled me to understand the importance of remaining disciplined with time and work organization.

Chapter 6

Conclusion

6.1 Conclusion

The Alpha Commerz Ltd. internship has been one of the most educational experiences in my academic life. It provided me with the opportunity to connect the theories, concepts, and skills gained as a CSE student to actual working conditions. The job at the Product and IT Department allowed me to be involved in a broad range of activities such as product uploads through CMS platforms, creating and optimizing product content for electronic and electrical products, preprocessing data, and supporting digital campaigns. Each of these positions presented challenges and learning opportunities that not only enriched my technical knowledge but also enhanced my ability to succeed in dynamic work settings. This internship helped me appreciate the extent to which IT processes determine the effectiveness of an organization. For example, working with structured and unstructured data helped me appreciate the importance of precision and attention to detail in customer-facing systems. Similarly, content optimization and technical validation of product information taught me the importance of combining technical correctness with presentability to the user. These practical experiences were lessons in the relation between technical input and end-to-end customer experience, which is of utmost importance in today's e-commerce business. Overall, the internship helped me improve my problem-solving skills, my teamwork skills, and my confidence levels in performing technical work. The experience has indeed placed me in a good position to take up more advanced roles in the IT and software development sector in the future.

6.2 Recommendations

6.2.1 Tips to Future Interns and Company Improvement

To future interns, I would recommend approaching this internship with a mindset of patience and precision. Working with product data can sometimes be monotonous, yet even the smallest mistakes — e.g., entering a wrong product generation or mis-tagging a compatibility feature — can have serious consequences such as product returns or buyer dissatisfaction. It is therefore very important to continue focusing and double-check all inputs. Also, learning to manage time in a balanced way is very important since tasks like product uploads, market analysis, and campaign preparation tend to overlap. Interns would also use this platform to learn newer IT

tools, ask questions, and experiment with technical tasks beyond their immediate scope since the internship opens one's eyes to both analytical and technical realms. As far as improvement areas from the company's side are concerned, one recommendation would be to provide interns with a more structured training process during the first few weeks. A compilation of technical requirements, CMS walkthroughs, and step-by-step data handling processes could save time and reduce confusion in the beginning. Another recommendation is to include automated validation scripts within the CMS that can detect inconsistencies within product data, like, invalid voltage ranges or blank fields. This would significantly reduce errors and make upload processes more efficient. Providing interns with access to advanced analytics software would also allow them to perform an improved function in data-driven decision-making.

6.2.2 Company Improvement Recommendations

Although Alpha Commerz has accomplished a lot in e-commerce, there are several enhancements whose implementation would strengthen its technical and operational framework. One such enhancement is the utilization of advanced data management systems. Occasionally, I found that large datasets required manual cleaning and reshaping, which was time-consuming and prone to errors. Automating such solutions, for instance, employing machine learning algorithms for classification or authoring validation scripts for attribute consistency, would not only be a time-saver but also improve data quality. From a collaborative point of view, while Excel spreadsheets and Google Drive worked well for us, the use of project management software like Trello, Jira, or Asana would further improve workflow tracking, inter-departmental communication, and task ownership. Also, with Alpha Commerz expanding its digital business, stronger cybersecurity and frequent database backups will be required to prevent data loss or breaches. Lastly, investment in more advanced product visualization tools, such as 360-degree product views or AR-based previews, would enhance customer experience and make the platform stand out from the rest.

6.3 Final Reflection

This internship has been a turning point for me as a CSE student, as it offered a real-world platform where I could apply my academic concepts on real-world industry problems. I not only acquired technical expertise in data handling, content optimization, and CMS utilization but also how these competencies realistically affect business outcomes. It has opened my eyes to how IT is not just coding or algorithms but is about solving real-world challenges that are meaningful to users, customers, and enterprises. At a personal level, the experience has raised my self-confidence in working in professional teams, handling responsibility, and taking ownership of tasks. It made me realize that my long-term professional goals lie at the intersection of IT, product management, and data-driven decision-making. I now aspire to specialize further in domains like data science, software engineering, or systems management, where I might engage in developing efficient, scalable, and innovative solutions. In summary, the Alpha Commerz internship was more than a career requirement for me, it was an opportunity to grow, both technically and personally. It provided me with the real-world exposure that I needed to translate my book

knowledge into industry practices and provided me with the clarity to pursue an IT career with greater determination and confidence.

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