

Report on

**“Enhancing the Security, Usability, and Operational
Efficiency of the Web-Based Freight Management Portal at
Cargo Point Limited”**

By

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An internship report submitted to the BRAC Business School in partial
fulfillment of the requirements for the degree of
Bachelor of Business Administration

BRAC Business School
BRAC University
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Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report 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 report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Letter of Transmittal

Noushin Laila Ansari

Lecturer,

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Kha 224, Bir Uttam Rafiqul Islam Ave, Dhaka 1212

Subject: Submission of Internship Report titled : **“Enhancing the Security, Usability, and Operational Efficiency of the Web-Based Freight Management Portal at Cargo Point Limited “**

Dear Sir / Madam,

This is my pleasure to display my Internship report AS a requirement for my degree of the Bachelors of Business Administration Programme in BRAC Business School, BRAC University.

This report provides a detailed discussion about the enhancement of the Web-based freight management system in a freight forwarding company Cargo Point limited, along-side my experience in this company.

I have attempted my best to finish the report with all the important and recommended data and propositions within this report and tried my absolute best to provide all the necessary information asked for in my report.

Sincerely yours,

—

Dayee Alam Toqi

21204030

BRAC Business School

BRAC University, Date: December 1, 2025

Non-Disclosure Agreement

I, Dayee Alam Toqi, solemnly state that the internship report, “**Enhancing the Security, Usability, and Operational Efficiency of the Web-Based Freight Management Portal at Cargo Point Limited**” has been prepared and written by me during my 3 months internship in the said company: Cargo Point Limited. I testify that the report is prepared by me and is not been submitted under any other circumstances or used other than to satisfy the BBA program requirements at BRAC University.

Acknowledgement

Alhamdulillah, I am grateful towards Allah the Almighty for giving me the strength and wisdom to be in this internship program and complete this role alongside my internship research project. I am grateful to my Lord for providing me this huge opportunity for my academic and career path.

I appreciate my supervisor, **Noushin Laila Ansari** who is a lecturer at BRAC Business school for guiding me throughout my preparation of this report and encouraging me with constructive feedback as well as adequate perseverance and inspiration from finalizing and helping me prepare my project proposal to finishing this internship report.

I would like to extend my gratitude towards my industry supervisor as well, Iftekhairul Alam Chowdhury PIYASH, Assistant Manager of Cargo Point Limited, who constantly and consistently gave me guidance and support throughout my internship role at Cargo Point. His knowledge towards the International Logistics and forwarding industry helped me grasp a better understanding towards the international supply chain as well as giving me valuable insights about IT integration in this industry.

Lastly, I would like to thank all my seniors and other team members at Cargo Point Limited, who helped me to gain more insights and knowledge regarding the industry and the importance of the business in this global market.

Executive Summary

This report is made for examining the operational bottlenecks created from the existing web-based portal for the freight management used by the Cargo Point Team, with proper solutions that can create improvements in security, usability and workflow efficiency.

This following paper figures out the issue via direct system usage, discussions with the operational staffs, personal observations from documentations and operational processes like Bill of lading issuance, invoice preparation and other such things, finding out problems like delays in the system navigation, inconsistent data output, absence of a structured and strong authentication controls and interface complexity towards new users (new users have to get intensive training in order to just run the system).

The project evaluates all these issues with the industry practices and employee suggestions and recommends enhancements, including redesigning the UI flows, automation of data fields, integration of encrypted login mechanisms, structured dashboard elements alongside consistent performance of the web interface (e.g. consistent Bill of Lading issuance). These proposed improvements will aim towards strengthening the data reliability, reduction of operational delays and creating a more user-centric system that will improve organizational efficiency.

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Chapter 1

Overview of the Internship

1.1 Introduction to Myself:

My name is Dayee Alam Toqi, and I am a student from the Bachelors of Business Administration (BBA) program at BRAC Business school in BRAC university, and I am currently majoring in Management Information Systems (MIS) with a minor in Finance. My major focuses on combining technology with business functions, mainly emphasizing on digital process transformation, information systems development and productions, and technology usage in an organizational environment. My academic expertise and knowledge provided me proficiency in the IT infrastructure starting from database management, UI/UX design principles/analysis, system analysis and digital workflow optimization and adaptation , which directly aligns with the responsibilities that i am carrying out in this internship as a Logistics Information Systems Coordinator. This internship program has helped me extend my knowledge over theoretical learning, helping me understand real-world implementations of “a logistics information system” within an active organizational environment (e.g. in a logistics standpoint)

1.2 Internship Information:

1.2.1: Period, Company Name, Department/Division, Address:

My internship officially started on October 05, 2025, and will conclude on January 05, 2026, which totals to three months of my professional engagement in this field, and the company that i am doing my internship goes the following:

Name: Cargo Point Limited

Industry: Logistics and Freight Forwarding

Address (Corporate Office): N.I. Tower (Level-5), House-01, Road-10, Block-E, Banani, Dhaka-1213, Bangladesh.

I was assigned here as an intern participating the role of Information Systems and Operations Coordinator, where I was responsible for supporting daily operational information activities and providing assistance regarding with the intranet system and logistics communication, alongside i also worked with documentation, accounting/finance, sales input and output using the intranet used by cargo point to perform their operational activities.

My department acts as a central functional unit which connects operations, documentation ,accounting/finance inputs and logistical communication and coordination within the system and other online softwares and tools necessary for IT functional benefits. This department also exposed me in a lot of activities including shipment documentation (Export and Import formalities of both sea and air which includes: Bill of lading, invoice creation, Airway Bills, financial and accounting activities involving each type of shipment), data handling and system + activity process monitoring.

1.2.2: Internship Company Supervisor's Information: During my internship period, my supervisor assigned was Mr. Iftekhairul Alam Chowdhury (PIYASH), whose designation is Assistant Manager at Cargo Point Limited. His role as an Assistant manager goes as follows:

1. Maintaining operational oversight towards specific shipments (mainly ranging for Australia and certain North and South American regions)
2. Coordinating and cooperating with freight partners specifically on those regions mentioned above
3. Ensuring workflow consistency is achieved by the subordinates who work with the documentation and other operational activities
4. Maintaining initial communication and sales pitch with the (mentioned above regions) forwarding partners

Under his supervision I got utmost guidance, task-specific instructions as well as accountability for operational deliverables. His supervision also helped me shape my understanding of documentation protocols, shipment processing activities, internal and external task processes as well as sales pitch processes.

1.2.3 Job Scope – Job Description/Duties/Responsibilities:

My job responsibilities involved with a lot of direct interaction within the organization's digital freight management system that is mainly used by me alongside other employees for various type of activities revolving around their roles, as well as assisting in tasks involving processing, monitoring and validating operational activities.

Here are my duties;

- Working with the portal data in order to verify shipment, documents and stakeholder records (checking the physical documentations with the portal records in order to verify their integrity due to software bugs creating errors that needs fixing)
- Supporting shipment tracking via monitoring pending, ongoing and delivered shipments towards the consignee (the receiver/buyer) via accessing shipping line's portal or any other tracking sites
- Assisting, generating and reviewing Bill of Ladings (BLs), related invoices and shipment documentations
- Reporting discrepancies and issues found from mismatched shipping details or missing entries
- Identifying any operational inefficiencies caused via system lags, broken interface flows or incorrect data processing
- Helping other employees to use current or better software and AI tools more efficiency based on their operational workflow and challenges

These responsibilities are tailored towards my MIS expertise and also gave me knowledge regarding the logistics and forwarding industry.

1.3 Internship Outcomes:

1.3.1: Contributions to the Company:

My role here is primary focused on observation, support, and documentation assistance alongside creation, however i also actively contributed to the team in several ways, my work included the following:

- Logging shipment updates on my internal note application recording the status of the shipment (pending, sailed, reached its destination)
- Assisting in documentation procedures like invoice preparations for any charges incurred during shipment, logistics documentation for Export like the House Bill of Lading, preparation and collection of documents like the Master Bill of Lading from the shipping line, sending proper documents via courier to the buyer for goods collection from the destination port or any types of surrendered documents and Bank and shipper NOC preparation + collection, submission of any surrendered documents (like Master surrender towards the shipping line for goods release), providing the EGM (Export General Manifest) right after goods sailing, and lastly import documentations and formalities required for the consignee to receive the goods at the best condition possible.
- Preparation of detailed Excel sheets which includes loaded container details each month
- Creating monthly reports for import and exports that have been completed (with the

finalized cost calculation)

- Updating customer and stakeholder entries
- Structuring data in a presentable way for operational review and usage (creating them in a way that can be readable and understandable for the superiors)
- Teaching and encouraging Technological and AI related tool usage for operational benefit and efficiency (e.g. encouraging to use AI to solve questions, increasing the awareness of certain applications to increase workflow)
- Understanding any errors that may come from the current web-based system used by Cargo Point and addressing the issues from the system and coming up with fixes with the IT Individual outsourced from a third party.

My responsibilities here spanned across a lot of places with the addition of MIS related activities, which helped with operational activities as well as influenced the managers to re-evaluate long term goals of Cargo Point.

1.3.2 Benefits to the Student:

This internship experience gave me comprehensive knowledge (with physical experience) that enhanced my technical and interpersonal skills alongside my theoretical knowledge.

Throughout the continuous involvement in this industry with MIS activities, I have developed:

- Practical knowledge regarding the shipment process via the system
- Record and data documentation, storage and analysis
- Knowledge of the freight forwarding industry alongside with documentation
- Improvement with interpersonal and communication skills from interaction with foreign and domestic shipper & consignee in person or virtually (through meet/teams,

emails, and chatting or phone calls)

Beyond these I have also gained industry exposure towards how the pricing, shipment schedule, negotiation with agents or other parties involved, and follow-ups are managed in this business, which is outside my role but was taught to me as a bonus for increasing more knowledge about this industry for better operational efficiency in my designated field (getting more knowledge of this industry = less confusion and better work). I also gained insights about how sales interactions with other supply chain stakeholders work with the help of the Cargo Point team and my Industry supervisor, which expanded my understanding and knowledge about this company. Overall the extra insights gained helped me expand my understanding regarding the importance of this industry in the global market.

1.3.3 Problems/Difficulties Faced During Internship:

Although my personal experience via working in this company is not bad at all and i never faced any difficulties working in here, however certain issues arise from system-related challenges (the web interface powering the internal operations of Cargo Point), and among those issues here are the ones which were the most important:

1. Delays in operational workflow due to slow backend response creating access errors or slow runtimes
2. Lack of structured operational features which needed manual corrections (which was part of my work)
3. A very steep learning curve due to non existent documentations and limited training resources
4. The system presents inconsistent data due to poor design in the infrastructure
5. Very sophisticated UI/UX experience due to poor design in the interface
6. Very slow system fixes due to depending on an external developer (individual not a team) who lacks experience in both logistics requirements and software development

These were the issues that affected the overall workflow of the company, affected decision making and required the employees to either delay their work, or do it manually.

1.3.4 Recommendations to the Company on Future Internships

In order to improve future internship experiences alongside operational quality, here are the following recommendations from me:

1. Creating structured operational manuals along with a standard operating procedure (SOP) document for newly recruited interns which will help them new beginners get a better understanding by themselves instead of asking around for what to do or not to do
2. Providing MIS interns in the future any involvement in the front end or backend evaluations for project proposals created for anyone interested
3. Allowing access towards a sandbox/testing version of any current platform helping any new interns understand or explore underlying functions safely without hampering operations
4. Having a week of guided training session about the basics of the company to eliminate any further confusions
5. Working via using documented workflows instead of just verbally transmitting instructions (assignments assigned via documents rather than verbally)

Cargo Point Limited does not need much when it comes to improvements for anyone as an employee (with their good work environment), however these certain recommendations may boost up any new employees or interns to become job ready as fast as possible in the best effective way

Chapter 2

Organization Part

2.1 Introduction

This chapter will include organizational assessment about Cargo Point Limited; Cargo Point Limited is a freight forwarding and logistics services provider that operates mainly in Bangladesh, with its Corporate office located in Banani and another Office that takes care of the sea depot operations in Chattogram.

What is a Freight Forwarding Company?

A Freight forwarding organization is an intermediary in the supply chain that facilitates the following things: movement of goods, documentation management, customs processing, space booking with carriers (airline and shipping lines) and synchronize, communicate and coordinate with local and overseas partners. Freight forwarders highly engage with international trade (Exports and Imports of goods from the origin to destination). A freight forwarding company like Cargo Point helps to understand how actually certain goods are exported or imported (which is not as black and white as everyone thinks it is).

The insights provided in this following chapter comes from the active participation during my internship in Cargo Point Limited as a Logistics information systems coordinator with the direct involvement of the firm as well as the systems involved in it. This whole internship period enabled me to have direct observation and analysis of internal workflows, documentation preparation processes involved in a shipment and outside shipment related

activities, system usage mechanisms, the logic behind shipment handling, cost related activities (accounting and finance) and market engagement.

This chapter will try to bridge the gap between theoretical understanding of MIS, International logistics supply chain management, organizational structure, finance and operations with real life examples and application inside a growing service organization like Cargo Point Limited.

2.1.1 Objectives of this Chapter:

The specific objectives of this chapter goes as follows:

- Analyze how Cargo Point Limited functions internally through each departments, with task delegation, managerial supervision and the structure of their workflow
- Investigating how management practices, recruitment processes, compensation methods, training facilities and performance evaluation would influence employee efficiency collectively
- Evaluate the marketing practices of Cargo Point via network positioning, relational lead generation and service awareness
- Assessing financial performance via audited reports across 3 fiscal periods (2021-2022 , 2022-2023, 2023-2024).
- Examine how their current MIS usage supports documentation processes, shipment monitoring, invoicing and communication with the internal & external stakeholders
- Assess company's competitive position through the Porter's Five Forces framework and SWOT evaluation
- Identify operational limitations from technological constraints and suggesting realistic organizational improvements

2.1.2 Scope of the Study:

The scope of this chapter includes the organization's whole functions as well as their position in this growing global market, which includes the following:

1. Export and Import management
2. Client (Consignee/Supplier) communications
3. Agent-based coordination
4. Carrier space procurement (with shipping lines, airlines, consolidators etc)
5. Documentation procedures (Bill of Lading (House and Master), Shipping Instructions, Manifest, Invoice preparations, Debit and Credit notes etc)
6. MIS-based operations support
7. Shipment scheduling and cost determination + negotiation
8. Monthly performance report (from sales)

However, this is to be noted that the scope does not include confidential pricing and buyer/consolidator/shipper information, profitability ratio per client, negotiation strategies or any other documented trade contracts due to the confidentiality restrictions from Cargo Point, hence this will cover only what is allowed to be perceived and analyzed by the public.

2.1.3 Methodology:

The methodology that is used in this chapter is based in qualitative and experimental research, and the data source includes:

- Extensive observation and analysis of daily operational activities via direct involvement

- Guided instructions provided from the employees (GM, AGM, accounts and depo handlers)
- Personal involvement regarding the documentation procedure and in the MIS system
- Studying the MIS web based portal
- Reviewing internal company profile documentation
- Reviewing audited financial reports from the fiscal years
 - ❖ FY 2021-2022
 - ❖ FY 2022-2023
 - ❖ FY 2023-2024

However to be noted: exact amounts were not allowed to be exposed due to company policy for secrecy.

- Discussion with the employees

These were the following sources that helped to shape the whole research methodology and helped to come up with internal information, bottlenecks and potential solutions.

2.1.4 Significance of the Study

This study is significant due to the following reasons:

1. This study will highlight how a good MIS system will transform logistics activities from converting manual documentations into structured database entries
2. This study will evaluate organizational functions of an SME where the responsibilities are decentralized, yet the decisional accountability follow a hierarchical structure
3. This study will identify operational bottlenecks that would arise due to poor optimization in the system creating poor data and workflow
4. This study will show how marketing is not just advertisement-driven, but also derives from maintaining strong relationships and networking

5. The study will help to understand the financial performance scale of Cargo Point as shipment volume increases
6. This study will capture the industry competitiveness from pricing and service reliability POV

2.1.5 Limitation of the Study

Whilst preparing this study, there were certain limitations faced:

1. Access to the system back-end development files were restricted due to the external developer refusing to cooperate
2. Strategic decision documents and certain contractual rate agreements were confidential
3. Certain financial and historical accounting and financial records were analyzed, however could not be used directly in this case due to company restriction towards confidentiality.
4. Peak business period (October-December) created limited availability of employee which hampered lengthier discussions
5. Internal SOP documents were not created, which needed assistance from real time interactions (and as said in the previous point, it was not as helpful as it could have been due to peak business period)

However, despite certain limitations, this study was possible with extensive organizational understanding, analysis of confidential information (that will not be used directly but will be used indirectly to show an example) and on-site observation during operational activities.

2.2 Overview of the Company:

Cargo point Limited: a privately owned international Freight forwarding and logistics service providing company that operates in Bangladesh since 2019. This company specializes in complete supply chain facilitation internationally like ocean freight, air freight, warehousing coordination, customs brokerage, consolidation routing and trade documentation support facilities. The company follows a simple yet powerful moto: “Carry Fast, Carry Safe”; showing its commitment towards timely cargo shipment while maintaining compliance and document integrity.

2.2.1 Business Services:

Cargo Point limited provides the following services:

- Ocean-Freight
 1. FCL (Full Container Load) and LCL (Low Container Load) shipments
 2. Consolidation services
 3. NVOCC-based routing
 4. GOH containers
 5. Heavy duty Cargo
 6. DG (Dangerous Good) Cargo
 7. Personal commodities Cargo
- Air-freight
 1. Airport-to-airport Cargo
 2. Same-day Flight booking for urgent Cargo
 3. Documentation issuance and customs handling

- Customs Brokerage Support
- Project Cargo Handling
- Express and time-sensitive freight logistics

The Organization works with consolidators, airlines and shipping lines based on seasonal rate feasibility.

2.2.2 Industries Served:

Cargo Point helps to serve multiple sectors in Bangladesh, including:

- Ready-Made Garments (RMG) manufacturers
- Pharmaceutical exporters and importers
- Industrial project shipments (machinery)
- Food processing and agricultural commodities

This diversified industry base creates continuous shipment cycles and reduces dependency on a single seasonal business segment.

2.2.3 Workforce Structure:

There are around 12 full-time personnel operating in this organization, which includes the following:

- The Managing Director (roles: Business leadership, Negotiation, partner alignment networking, and followups)
- The General Manager (roles: Follow-ups, task delegation, Import management (fully))
- Two Assistant Managers (roles: handles exports based on regional allocations, task delegations towards operations, client care and communication and sales lead)

- Two Operational support executive (roles: handles operational documentations, followups based on documentations of each shipment and tracking)
- Two air-freight handling personnel (roles: airfreight export and supports airfreight import with the GM)
- Two depo-side operators stationed in Chittagong
- One accounts personnel

However there are more third-parties involved like external CNF and customs brokerage, airport handling agent, legal consultant, IT and many more who are not directly involved with the company. With this Cargo Point maintains smooth operational flow with rapid coordination whilst incurring less overhead costs.

2.3 Management Practices

2.3.1 Leadership style Analysis

CargoPoint Limited follows a participative model, where team members contribute viewpoints, identify issues, propose routing changes, evaluate shipping cost alternatives and provide solutions; everyone in this company is involved with every final decision the MD makes, which is the final decision after assessing all the risks, values and customer implications.

After the MD's final call, the General Manager drives the whole execution as follows:

- Delegating shipments regionally
- Monitoring every correspondence (mail cc, communication with the person responsible)
- Allocates necessary resources and manpower

- Handling any escalations or complexity (if too complex then the MD also gets involved)
- Conducting further negotiations if needed

This type of Participative leadership has enabled the following:

- Greater accuracy with cost decisions
- Increase in response time towards customers
- Less internal communication conflicts
- Higher confidence and cooperation amongst every employees (Makes them feel more involved)

This type of leadership style is even followed during peak shipment periods so that everything at the end of the day runs according to the MD and GM for efficient shipment procurement.

2.3.3 Training & Development Initiatives

Cargo Point provides Training in these certain ways:

- Verbal instructions
- Scenario-based exposure
- Real-time problem resolution

This method benefits interns and any new employees due to being actively involved and in pressure, helping with quick training and crafting experience based knowledge which contributes to being job ready as fast as possible.

2.3.4 Compensation & Appraisal Framework

Employees receive compensation monthly, and get extra bonus based on performance (e.g. performed a very complex task or based on any new sales created), which is broken down as follows:

1. Shipments made by an individual
2. Customer feedback
3. Error Frequency
4. Response speed
5. New sales ability

2.4 Marketing practices

2.4.1 Marketing Strategy

A freight forwarding SME like Cargo Point Limited does not deploy mass digital marketing, rather they acquire Clients via:

1. Industrial referrals
2. Buying house engagement
3. Email quotations and marketing
4. Participation in logistic networks like

- CLN (Combined Logistics Network)
- FIATA (International Federation of Freight Forwarders Associations)
- PPL Network (Pacific Power Logistics)

Using certain networks Cargo point acquires ‘Partners’ who are different country forwarding agents, and from them Cargo Point gets sales; the overseas partner asks for a sales quotation to well-known forwarders in Bangladesh within a network (due to security and safety reasons), and from there they select the one providing the best rate based on requirements (sales rate depending on the INCOTERM (payment term on the shipment) used), and lets say if Cargo Point provides the best sales rate compared to the other agents, then the overseas partner nominates them for shipment. In short, networking via a logistics network allows Cargo Point to get ‘nominated’ as the partner agent for a specific shipment (Import or Export; Sea and Air), which contributes significantly towards the sales.

2.4.2 Customer Targeting and Positioning Strategy

Primary customer segments of Cargo Point includes the following:

- Export-oriented organizations(primary RMG)
- Import dealers with special needs from overseas
- International forwarding agents seeking for routing partners in Bangladesh

Cargo Point strategized their positioning with reliability, transparency with their costings and operations and fast service delivery (responsiveness, cooperation and documentation)

2.4.3 Marketing Channels Used

Non-Traditional channels like:

- Sales meetings
- Industrial events

- Conference participation

Digital channels:

- Facebook
- LinkedIn
- Company website posting

However, any use of paid advertisement has yet to be deployed.

2.4.4 Critical Marketing Gaps Identified:

Cargo Point's marketing strategy follows a person-driven approach rather than system-driven, hence here are some market gaps identified whilst researching about Cargo Point's market feasibility:

- Limited brand content visibility
- No structured advertisement calender
- No newsletter-based relationship marketing
- No online based marketing strategies (just regular social media posting regarding Cargo Point's services and achievements without any 'paid' advertisements)

2.5 Financial Performance and Accounting Practices:

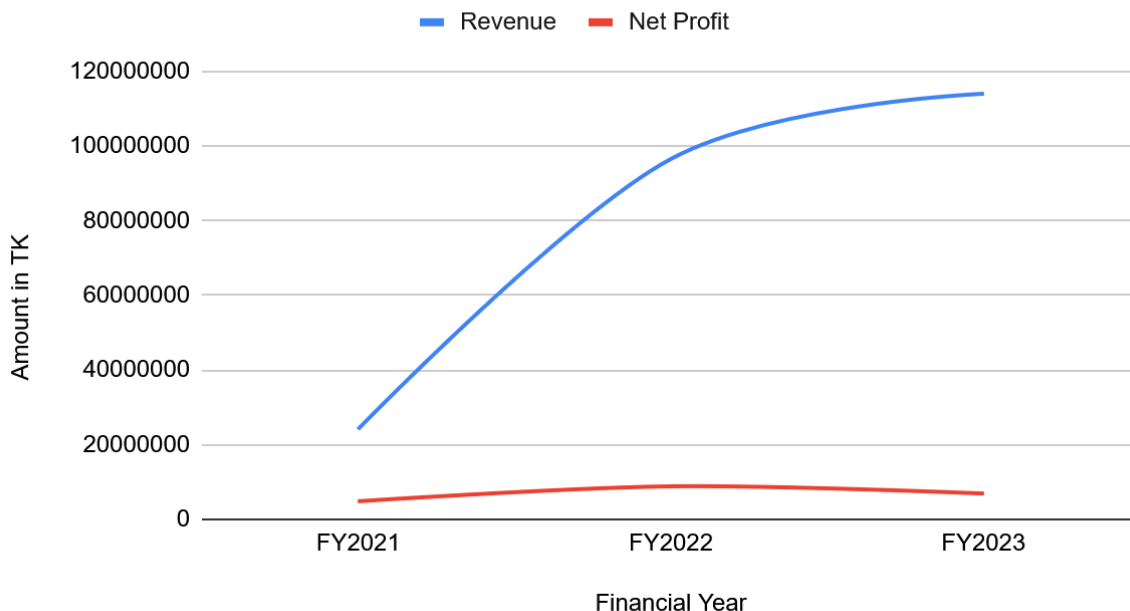
Cargo Point Limited's financial performance had shown a gradual and stable expansion over the last three reported fiscal years. The figures audited from the financial statements are explained below extensively

2.5.1 Multi-year Financial Trend Overview:

The financial statements that were shared from Cargo Point between the 3 quarters 2021 till 2024 showed consistent sales volume increase between these years, although as per the

company's policy the show couldn't be directly interpreted however, here is a graph that may represent the steady growth of Cargo Point's sales volume:

Cargo Point (revenue and net profit)



Here we can see that over the last three fiscal years, Cargo Point Limited showed consistent revenue growth support via increase in shipment volume, stronger overseas partner nominations and broader client acquisition activities.

Cargo Point Limited experienced a strong upward revenue trend between FY2021 and FY 2023. In FY2021 the total revenue was approximately tk 24.2 lac, but that sharply rose towards tk 96.5 lac within FY2022, and finally coming to tk 1crore and 39lac taka in FY 2023. This growth occurred due to an increase in the international routing opportunities, higher sales volumes that increased due to a lot of reasons (mostly outbound agent partnerships and buying house referrals).

Net profits however appear slightly different where initially they increased a little from 4.8 lac towards 8.8 lac but then in FY 2023 it jumped down toward 6.9 lac despite revenue growth, which according to the accounts, was due to increase in operational expenses and

new equipments and renovation activities of the Office, also introduction of new staffs and creation of a their own catered MIS system contributed towards the hike in operational expenses.

From a financial interpretation perspective, we can understand that:

1. Revenue scaling indicates stable demand as well as a proper and successful relationship between their customers and clients
2. Profit fluctuations (after knowing the full story) suggests reinvestments are being made in the business for further expansion and efficient business flow
3. The Gap between the revenue and profit line widened in the FY2023, due to the huge investment made in the business

2.5.2 Profitability Analysis

Via comparing the profit figures with revenue, we can understand the approximate net profit margins would look like as follows:

- FY2021 = 19.83% (0.48/2.42)
- FY2022 = 9.12% (0.88 / 9.65)
- FY2023 = 6% (0.69/ 11.39)

Here these margins show consistent profitability, however margins have compressed over time, and there are several reasons for this;

- Higher salary and allowance expenditure due to the size of the team and responsibilities growing
- Increase in operations expenses such as rent, utilities, communication, travel and network membership costs
- More investments in MIS and other software solutions

(Data was taken from the accountant and the financial statements)

As per the DuPoint Perspective, the return on equity (ROE) is pulled onto two opposite directions where there asset turnover has improved a lot (due to much more revenue is generated than assets compared to FY2021), however the profit margins have declined as costs have scaled up with growth.

Here are further calculations of each terms:

- FY2021

Calculations:

1. Profit Margin

$$484,279 \div 2,420,150 = \mathbf{0.2001} \rightarrow \mathbf{20.01\%}$$

2. Asset Turnover

$$2,420,150 \div 3,183,227 = \mathbf{0.76}$$

3. Equity Multiplier

$$3,183,227 \div 2,882,336 = \mathbf{1.10}$$

4. ROE

$$\begin{aligned} \text{ROE} &= 0.2001 \times 0.76 \times 1.10 \\ &= \mathbf{0.167} \rightarrow \mathbf{16.7\%} \end{aligned}$$

ROE here was driven mainly due to high profit margin earned here (around 20%), reflecting efficient cost control during the first term here. Asset turnover was modest here (around 0.76) with the equity multiplier (1.10) indicated very low leverage.

- FY2022

Calculations:

1. Profit Margin

$$882,882 \div 9,649,166 = \mathbf{0.0915} \rightarrow \mathbf{9.15\%}$$

2. Asset Turnover

$$9,649,166 \div 4,121,378 = \mathbf{2.34}$$

3. Equity Multiplier

$$4,121,378 \div 3,765,218 = \mathbf{1.09}$$

4. ROE

$$\begin{aligned} \text{ROE} &= 0.0915 \times 2.34 \times 1.09 \\ &= \mathbf{0.233 \rightarrow 23.3\%} \end{aligned}$$

In this term, ROE increased significantly from the last term despite lower margins (9.15%), because here the asset turnover sharply rose towards 2.34, which indicated heavy revenue growth compared to assets. The equity multiplier here remained stable, (1.09).

- FY2023

Calculations:

1. Profit Margin

$$689,759 \div 11,394,239 = \mathbf{0.0605 \rightarrow 6.05\%}$$

2. Asset Turnover

$$11,394,239 \div 6,497,840 = \mathbf{1.75}$$

3. Equity Multiplier

$$6,497,840 \div 4,454,978 = \mathbf{1.46}$$

4. ROE

$$\begin{aligned} \text{ROE} &= 0.0605 \times 1.75 \times 1.46 \\ &= \mathbf{0.155 \rightarrow 15.5\%} \end{aligned}$$

ROE here declined even though the equity multiplier rose to (1.46). The profit margins fell to 6.05% due to rising operational expenses, and asset turnover decreased to 1.75 as here assets grew faster than revenue (indicating reinvestment in business)

The overall summary here:

Cargo Point's Return on Equity is not driven with leverage as their leverage is extremely low, and their ROE depends on margin and asset turnover. Their profit margins are decreasing each year due to higher cost incurrence however despite all, financially CargoPoint is doing extremely well as an expanding SME

2.5.3 Accounting Practices

Cargo Point limited's audited financial records from FY2021, FY2022, FY2023 indicates a strong compliance with generally accepted accounting principals that are practiced in Bangladesh as they reflect alignment with the IFRS-based presentation format with the conventional SME-level reporting structure necessary for the freight forwarding sector.

Core Accounting Principles Followed by Cargo point:

Based on the annual reports of Cargo Point, they follow these certain core accounting principles,

1. Historical Cost principle: Assets liabilities are reported on actual transactional value (value that was bought on), not with adjusted market value
2. Matching Principle: Expenses related to service revenue are recorded in that same period of that service performed
3. Prudence Concept: the company recognizes income properly with its expenses (like salaries, provisions and liabilities) fully recorded (even if unpaid) indicating a conservative treatment

Method of Accounting used: CargoPoint uses a Accrual Basis of accounting, and the evidence suggests it uses that basis which goes as follows:

1. Revenues are recorded when a freight service is completed, not when the payment is received (following the Prudence Concept here)
2. Expenses like salary payable, audit payable, agent payable are shown even before cash settlement
3. VAT and other payables remain recognized in the period incurred

Hence according to these analysis, the company does not operate on a pure cash basis, and this makes sense for a freight forwarding company like Cargo Point because ;

- Freight forwarding activities operate in multiple time periods
- Documentation is often issued before any cash settlement
- Liability recognition is essential for any agent settlement cycles

Accounting Cycle Completeness:

The following audited statements suggest that the full accounting cycle is followed:

1. Transaction identification and documentation preparation (invoice issued via the portal, creation of Debit/credit vouchers, Clearing and completion of payments)
2. Recording transactions into journals (via the system and manually)
3. Ledger creation
4. Trial Balance Preparation
5. Financial statement creation and finalization (income statement, statement of financial position and a cashflow statement)
6. Year-End Adjustments (Salary payable, Provision for auditing, Accrual earnings)

Depreciation Methods Used:

Cargo Point uses a simple straight-line depreciation method (which is the most common method for SME's in Bangladesh), and we can understand this via seeing how,

1. The Asset value reduces gradually
2. No accelerated depreciation patterns
3. Accounting notes align with the IFRS format

For an SME like Cargo Point, a straight-line depreciation is appropriate because the company owns mainly office equipment/laptops and not heavy machinery.

Accounting Disclosures:

They go as follows:

1. Notes to the accounts (prior period comparative figures, classification structures and prior period comparative figures)
2. Segregation of Current Liabilities (Payables, expense accruals, salary settlements)
3. Presentation of Profit Retained
4. Disclosure of audit certification

2.6 Operations Management and Information System Practices

2.6.1 Operational Workflow

Cargo Point's operation starts with inquiring a quotation and ends with the final document sharing and settlement (depends on the INCOTERM use that offer either port to port, or door to door). The major step includes the following:

- Booking identification
- Draft HBL (HOUSE BILL OF LADING) / HAWB (HOUSE AIR WAY BILL)
verification and SI submission
- Manifest confirmation
- Receipt of master
- Either delivery of HBL/ HAWB with MBL/MAWB via courier for goods release

Or

- Submitting Surrendered HBL to shipping line and surrendering the MBL for Telex release of goods (a method that does not require original BL documents for release of goods from customs)

2.6.2 MIS Usage and the Effectiveness of MIS usage:

The organization utilizes a web-based intranet system known as Elink 24, which is a custom web-based url created by one third-party individual which acts as the ‘brainchild’ of the operations in Cargo Point Limited. This Elink24 helps Cargo Point achieve the following:

- Shipment-wise entry tracking
- Documentation generation
- Monthly reporting
- Agent/consignee/shipper/cnf and other parties involve-wise segregation

Strengths:

- Uses a hosting server storage (from hostinger), hence no need for an internal server inside the office
- Makes the documentation and operations easier as everything is centralized into one system

Weaknesses:

- Delayed backend and frontend fixes
- Limited automation validation (requires for manual checks)
- UI / UX not properly catered as “user friendly”
- Not much tracking options (if the shipment is pending, onboard or completed / payment is pending, in progress or completed)
- Load time disruptions

Alongside this webportal, Cargo point uses Microsoft office apps for mailing (outlook), and documentation (MS WORD, EXCEL), shipping/air lines portals for booking and tracking

purposes and the ASYCUDA (Automated System for Customs Data) software for customs formalities.

2.7 Industry and Competitive Analysis

According to the Article titled “Bangladesh’s freight forwarding sector at crossroads” (2025), freight forwarders manage over 95% of Bangladesh’s cross-border trade. This Industry in Bangladesh is growing rapidly but is highly dynamic (depends on demand of the exported/imported goods), Highly relation-driven and sensitive to global trade conditions. Cargo Point Limited operates as an SME-level logistics service provider competing in a market which is dominated by multinational logistics entities, large domestic firms as well as similar fast growing small/medium sized freight companies. The competitive position of this organization can be evaluated through the Porter’s Five Forces and SWOT analysis framework.

2.7.1 Porter’s Five Forces Evaluation:

- *Competitive Rivalry : Very High*

The competitive intensity within the freight forwarding industry in Bangladesh is very strong, and there are multiple reasons behind it;

1. There are hundreds of forwarders that are listed under BAFFA (Bangladesh Freight Forwarders Association) that offer similar LCL, FCL, and air services in competitive prices
2. Switching costs of customers are not that much due to a lot of forwarding agents present in Bangladesh, meaning buyers and factories frequently shift based on rate differences (some companies may offer cheaper rates due to

better negotiation with shipping/airlines and other parties involved, which may reduce costs of certain things) or services responsiveness and quality

3. Destination agents asks for quotation from multiple forwarding agents simultaneously to find the best rate and service, which increases competition
4. Large competitors maintain structured systems, global networks and stable routing allocations

Here, Cargo Point maintains its competitive advantage via offering flexible negotiation and quick pricing response, managing a variety of shipments through verified partner networks (using verified partners for protected shipments) and maintaining strong communication and brand image in the industry with their superior value proposition. However, despite this, they must continuously improve themselves with their lead generation , maintain their brand image via providing superior service all the time, and MIS integration (which they lack and causes delay in operations) to sustain rivalry pressure

- *Threats of New Entrants : Moderate to High*

Entry barriers are relatively low in this field as it requires:

1. Small office infrastructure to begin operations
2. Most operational cost is variable, not fixed (which is not much)
3. Digital footprint (like a website, or social media) can substitute for a physical presence (no need a physical office at first)

Entry barriers that do exist:

1. Network credibility as well as awareness on the industry takes a lot of time

2. Access towards global routing agents requires association memberships
(which is costly as u need to give subscription costs to be a member of an association)
3. Trust-based business relationships prevent from newcomers to do business (if you are not well-known in the industry, u may not get business)

Cargo Point's Benefit:

- The MD and the GM has been in this industry for more than 30 years, meaning they have experience as well as they know a lot of partners/consignees/shippers
 - The business has been running well since 2018, and they have been increasing their network from conferences and referrals
 - Their presence from 2018 has given them a lot of long-term buyers and partners
-
- *Bargaining power of Customer : High*

A freight forwarder's customers include factories, trading houses, importers, buying houses, overseas agent and overseas customers.

They have strong bargaining power as;

- They request for multiple quotations whenever they have a shipment
- They often prioritize freight price differences and chose the least expensive one
- They can switch forwarding agents easily

- Many of them evaluate freight forwarders based on delivery time, cost and documentation accuracy

Cargo Point mitigates this issues via:

- Having direct negotiation or contract with airlines, shipping lines and consolidators for cheaper rates
- Fast and cooperative responsiveness
- Accurate and fast documentation (despite their MIS system being a bottleneck to their operations, Cargo Point still manages to provide fast and proper documentation)
- Relationship-driven retention

Despite all, unfortunately due to the highly competitive nature of this market, the power remains mostly towards the customer.

- *Bargaining power of Suppliers : Moderate*

In this industry the suppliers are not what you would expect. They are:

- Shipping lines
- Airlines
- Consolidators
- Destination Agents

Cargo point has limited pricing influence here due to the rates being externally controlled, however there are certain conditions to it which in the end gives them favourable offers to use:

1. Cargo Point uses multiple carriers (multiple airlines, shipping lines, consolidator, destination agents, warehouses) so they can provide multiple rates and schedule to the buyers giving them the liberty to choose the most cost effective and quick schedule possible
2. Cargo Point has good connections with certain suppliers which gives them better and cheaper rates to provide to customers than other forwarders
3. Destination agents under any membership networks may provide preferential allocations towards Cargo Point

However, it is important to know that despite all this, suppliers may have more power due to:

- Space becoming limited
- Global disruptions that may occur
- Routes experience congestion
- Peak season where suppliers do not decrease their price, increase them a lot

Hence, from here we can understand that supplier leverage is moderate, but it shifts seasonally.

- *Threat of Substitutes: moderate to low*

Despite clients having the ability to switch from one freight forwarder to another, there isn't a 'true' substitute of a freight forwarder as you always need one if you are trying to export or import goods in Bangladesh, however;

- Some large factories operate via using direct carrier contracts
- Some importers handle all the customs and airway bill formalities by themselves instead of using a forwarder

- Some businesses may choose to use courier services for small shipments
(however the scope of a substitute decreases for bulk FCL/LCL containers)

2.7.2 SWOT Analysis

Strengths:

- Established relation-driven engagement via networks like CLN, PPL, FIATA
- Strong operational skillset and knowledge with FCL, LCL, AIR export, Customs liaison
- Lean cost structure compared to large competitors
- Fast quotation and shipment follow-ups
- Good financial stability whilst incurring low leverage
- Structured hierarchical and communication chain through the AGMs and GM
- Positive revenue growth trend identified from the auditing reports

Weaknesses

- Dependence on a third-party MIS platform with limited features
- Documentation processing delays due to system bottlenecks
- Lack of any CRM-style follow-up mechanisms
- Brand visibility still limited against multinational forwarders (due to limited marketing opportunities)
- Limited technological and MIS integration inside the organizational workflow and departments
- Fluctuating profit margins due to increased costs

Opportunities

- Rising export volume in apparel, FMCG, Ceramics and home textiles rather than just RMG
- Export increase due to government subsidizing exports (e.g. Bangladesh providing zero fare export possibilities in UK (According to a news report published from AB news saying the contract of zero fare export to expand until 2029))
- Expansion on the pharmaceuticals and agricultural logistics business
- Favour for social media marketing in this era for lead generation

Threats

- Freight price changes due to global issues (storm, bad weather, volume of shipments)
- Competitors with their own partners getting preferential rates
- Regulatory delays due to the slow system in Bangladesh
- Delayed system modification and fixing due to poor IT support

2.7.4 Linking industry Forces with MIS findings:

Both SWOT and Porter's Five Forces analysis show that Cargo Point Limited operates in a very highly competitive freight forwarding environment that is heavily influenced by high rivalry and strong buyer bargaining power; and with the addition of the bottleneck coming from the current MIS system, this intensifies the current competition they are in right now.

This industry consists of a lot of market competitors where a client can easily switch to another just based on the speed, accuracy and responsiveness coming from any forwarders in the industry. Hence, strengthening the MIS with improved UI/UX design, automation and data analytics is not just an operational necessity, but is **required** for a competitive advantage in this industry (people will choose a good quality partner rather than a weak inefficient partner).

2.7.3 Competitive Advantage Interpretation

Cargo Point Limited's Competitive sustainable advantage lies in less with pricing but more with their service responsiveness. With their fast quoting, quick documentation procedures and corrections and real-time follow-ups they provide efficient service towards customers. Cargo Point also has their network driven lead generations with their strong overseas agent connections and membership credibility creating trust in their service. They also try to maintain flexibility with their service and they think about customers first when it comes to providing service, following a 'customer is always right' approach.

Financially, Cargo Point Limited also maintains low leverage and strong liquidity with promising financial performance during the 3 fiscal years that has been audited over.

2.8 Summary and Conclusions

Chapter 2 gave an overview about Cargo Point Limited's organizational structure, financial and marketing approach, management practices, operational process and competitive position.

The company operates in a highly competitive logistics supply chain market, however it grows due to its operations and sales from relationship-based networks, quick response in pricing and effective handling of export documentation.

Financial results are strong showing proper revenue growth across three consecutive years, stable liquidity and low external debts. They had good profit margins however it declined due to higher operational expenditures.

Operationally the company executes their service effectively using MIS but still rely on manual coordination due to bottlenecks in the system.

Overall, Cargo Point Limited as an organization works well in this industry due to their profitability and their sustainable advantages as an SME.

2.9 Recommendations

1. Develop clear SOPs for operations in order to reduce errors and dependency on individuals
2. Enhance MIS with better features like reminders, tracking shipments, structured reporting and strong backend and functional web interface which is easy for employees to operate in
3. Introduce basic structured training for operational staff for consistent performance
4. Increase their visibility beyond just network relationships like improving social media activity and their digital presence

Chapter 3

Project Part

3.1 Introduction

This chapter here presents a detailed description, explanation with analytical assessment of the inefficiencies that came from Cargo Point Limited's web-based freight management portal (Elink24), which is an internally used operational portal serving as the primary Management Information System that helps to create freight documentation, invoicing and operational coordination.

The chapter explores and explains the existing system architecture, functional and non functional issues, and evaluates the need for any improvements from both the technical perspective and user experiences (experiences faced from the stakeholders used).

All the findings that are said in this chapter (which is explained more below) are derived from direct system interaction, continuous observation via usage of the system during the internship period on Cargo Point.

With the issues this chapter also contains recommendations and enhancement strategies, including UI/UX restructuring and redesigning, security strengthening and system logic improvement that aims to improve efficiency, accuracy and long-term scalability.

3.1.1 Background and Problem statement

Cargo Point Limited currently uses an internally web based system (as discussed in this paper previously which is known as Elink24) which is hosted on Hostinger (a cloud based hosting site). The system enables the users to handle shipment records, create and process bookings / Bill of Lading / Airway Bills, various other documentations that may require for both export and import of sea and air, invoicing and do basic financial activities and accounting (mainly for the accounts).

The Elink 24 portal, despite serving the basic functional requirements, has certain weaknesses that affect the operational efficiency, workflow accuracy, data security and system reliability of Cargo Point Limited (and they particularly become a nuisance during peak shipment seasons, where the volume of work increases monumentally).

These identified problems can be sorted into two inefficiencies: a. Functional inefficiencies and b. Non functional inefficiencies.

a. Functional inefficiencies (affecting operational workload, slow down processing, raise risk of compliance):

- Incorrect reporting records which leads to discrepancies in data representation
- Mixed-up financial recordings, which require manual cross-checking and recalculations
- Frequent system freezing during document creation and processing
- Error generation during invoice preparation, like Mismatched BL numbers and incorrect values

b. *Non-Functional Inefficiencies (lacking robustness, security enhancement and user-centered design):*

- No SSL certifications and HTTPS security which exposes the system towards potential data interception (didnot happen yet but may happen in the future)
- Absence of any two-factor authentication (2FA) during login, which increases the risk of unauthorized access (if password gained)
- Unstructured and cluttered UI, which makes navigation difficult for existing users and makes it harder for new users to get used to.
- Delayed system maintenance and error fixing from the external IT personnel (very slow response and fixing time)

3.1.2 Objectives

This project aims to achieve these following objectives to ensure it aligns with the organization's need to improve service quality whilst maintaining cost efficiency:

1. Identify and document the key operational, technical and usability issues in the Elink
- 24
2. Analyze the real causes of inaccurate outputs, system performance bottlenecks and faulty reporting.
3. Design a simplified, efficient and user friendly UI framework that focuses on usability, even if it is not aligned with advanced industry ERP standards.
4. Recommend these improvements to Cargo Point Limited in order to enhance accuracy, data security, workflow efficiency and operational reliability

3.1.3 Significance:

This study is extremely useful and important for a Freight forwarding SME like Cargo Point Limited, where operations rely on heavy documentation (driven and time sensitive). Every minor system inefficiencies or documentation errors lead towards shipment delays, regulatory issues, financial losses and client relationship issues (instability in the system slows down documentation processes affecting client relationships).

Enhancing the existing system will ensure:

- Reduction in inconsistencies and documentation error
- Lower customer dissatisfaction (that occurred due to inconsistencies in documentation)
- Faster and more efficient shipment processing
- Reduced dependencies with manual follow-ups
- Faster onboarding of new employees with the help of the simplified UI and more clearer and proper workflow
- Stronger data protection with the reduced exposure towards cyber risks

3.1.4 Scope of Study

The Scope of the study includes the following:

- Continuous system observation with user-based testing (by own and other employees)
- Detailed analysis of the existing system structure (like the shipment modules, invoice module, BL generation and depo reporting)
- Security evaluation of logging flow, backend responsiveness.
- UI/UX evaluation of navigation, workflow clarity as well as usability
- User feedback collection coming from actual users
- Creating redesigned prototype screens that addresses the issues faced

However the scope excludes:

- Full database development from scratch (time consuming)
- Integration with third party custom systems (except the hosting and deployment)

3.1.5 Impact on the Return in Investment (ROI):

The proposed MIS with the UI/UX improvements are expected to impact the organizations ROI in a positive manner, and this comes from understanding why it was necessary in the first place. The project aims to reduce the documentation errors, minimizing system downtime (due to a change in the hosting and deployment environment to a better place) and improving the operational work. Cargo Point can save massively on their employee time and their operational workflow as this system is their main bottleneck. With the advantage of invoice management via stricter rules implemented on certain users as well as a possibility of downloading all the financial calculations on an excel spreadsheet will eliminate the manual checkpoints necessary for every invoice calculation.

3.2 Literature review (Brief Summary of the whole report)

According to the article from research gate titled - Impact of Real-Time MIS on Supply Chain Management: A Case Study Approach - Real - Time MIs contributes massively towards the supply chain workflow and processes of an organization improving performance and workflow with a 45% increase in performance impact on the logistics processes.

Now lets come back to small to medium enterprise, where another article coming from the same research gate publishing site titled - The Impact Of Cloud-Based Management Information Systems On HRM Efficiency: An Analysis Of Small And Medium-Sized Enterprises (SMEs) - suggests that cloud based MIS systems indicates scalability increase advantage, as core functionality increase like employee management, performance tracking and decision making will be managed pretty well if increased in the future (which the hosting

sitelike hosting is willing to provide if the database along with its functionalities increase)

This particularly is relevant for a logistics SME company like Cargo Point Limited which promises growth from their business activities.

Technological adoption towards developing countries especially in a SME would be very beneficial and also considered to be a competitive advantage due to the large absence of technological seriousness. An Article from MDPI emphasizes on technology adoption which talks about the importance of digital transformation and integration of information systems helping organizational learning, operational adaptability and strategic alignment (where developing countries donot understand the importance of IT integration contributing towards inefficiencies).

Furthermore, The UI/UX suggestions and solutions came directly from the suggestions coming from the stakeholders that were directly responsible with the usage of the system, and from that they just wanted a clean and simplified UI system that doesnot look as clustered like before. From the article from research gate titled- The Usability of Management Information Systems Applications- suggests poorly designed interfaces negatively affect the productivity of the users using the web system, from increase in error rates to hindrance of user acceptance and a better UI will help with cognitive satisfaction, user ability and operational efficiency.

Taking all these studies together indicate that effective MIS implementations will contribute towards a better operational workflow, decision making and user performance (indicating Cargo Point limited's MIS improvement will be beneficial for them given their competitive and documentation driven work nature).

3.3 Methodology

Research Approach - Observational and Qualitative:

The methodology used in this project is based on observational and qualitative nature where everything was denoted from what actually the problems are from a set number of stakeholders (as the whole project is to improve the quality of the UI itself).

The analysis was conducted through direct involvement with daily operational activities, continuous system interactions, and detailed observations during the internship period in Cargo Point Limited, and the following methodological approaches were used:

3.3.1 System Observation

Via observation of the system during daily operational work involved from shipment entry, BL, invoice preparation and report generation. The continuous involvement with the system helped to identify the recurring performance and workflow issues in the system.

Key observations include the following:

1. Frequent slow system performance and response during peak hours of operations; especially during large volume of shipments that needed to be handled within one day
2. Inconsistencies and inaccurate results during invoice calculations and reporting
3. Slow loading times during BL generation (sometimes even freezing completely)

These inefficiencies found during the observation directly affect daily operational productivity.

3.3.2 Stakeholder Discussion

In order to gain more insight and information, taking only self assessment is not enough, hence informal discussions were conducted with key stakeholders who interact with the software more.

Stakeholders that were consulted were the following:

1. **The Managing Director (MD):** the head of everything who's the main admin of Elink24 with all access and everything. Reported issue: hearing complaints from the other stakeholders regarding the system (collected from the GM), absence of ERP,

financial amounts mismatch, clustered and complicated UI, very laggy and slow experience.

2. **The General Manager (GM):** Monitors the overall system from analysing operational accuracy, reporting reliability, and business shipments and takes in complaints from stakeholders. Reported issue: same issues like MD except ERP full control (as full control is only viable for the MD)
3. **Assistant General Managers (AGM):** Overseeing export operations (regionally) and they rely on the system for checking for shipments and booking purposes (though not as much as the documentation and operational staffs). Reported issues: same as the rest MD and GM.
4. **Documentation and Operation staff:** Extensively use the elink24 software for data entry and documentation. Reported issue: same as everyone else with the addition of BL documentation, invoice, report generation bugs creating unnecessary slowdowns during workflows.
5. **Accounts:** Another user of Elink24 for financial and accounts related data entry. Reported issues: same as the MD, GM and AGM with the added issue of inaccurate financial and account data presentation creating mismatches that gets reported to the MD.

These following discussions show certain common issues with everyone which affects frustrations, operational inefficiencies which calls for expectations for system improvement.

3.3.3 System Audit:

Auditing the system was necessary to access the structural and technical aspects of the portal, though backend access was limited, the technology used in the system for the front end and the back end was disclosed. Here are the things found out during the observation:

1. Hosting environment

2. Mechanism responsible for login and security protocols
3. Logic and framework analysis
4. Accuracy and consistency of the system during operations

This Audit helped to identify exactly how the flaws came in the system from a technical standpoint, contributing to an insecure and inconsistent system.

3.3.4 UI/UX Evaluation:

The Usability of the system was analyzed through the evaluation via the stakeholders and self made through interactions and navigation flow. The evaluation focused on identifying the key areas where users face difficulties or confusion whilst using this system on a daily basis.

The evaluation criteria include:

1. User confusion during workflow due to complex and clustered UI
2. Navigation complexity
3. Onboarding confusion

The analysis highlights one thing; a very big need for a cleaner and simpler interface to reduce interaction complexity.

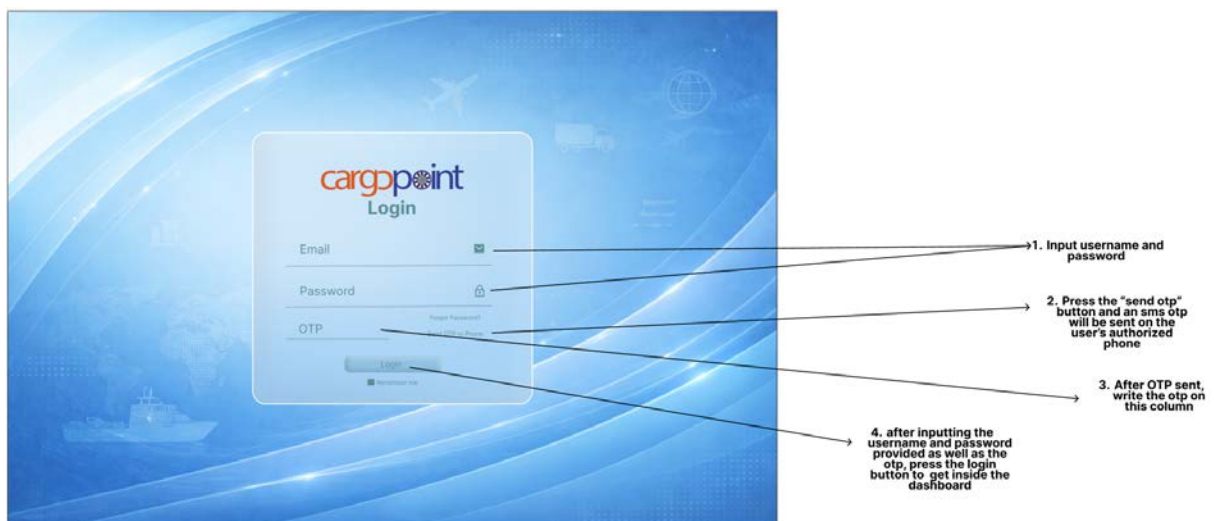
3.3.5 Prototype Development:

Based on the findings coming from the system observations, discussions with stakeholders, auditing the whole system and the UI/UX evaluation, a redesign was made as a prototype with certain stakeholder development, aiming to do the following:

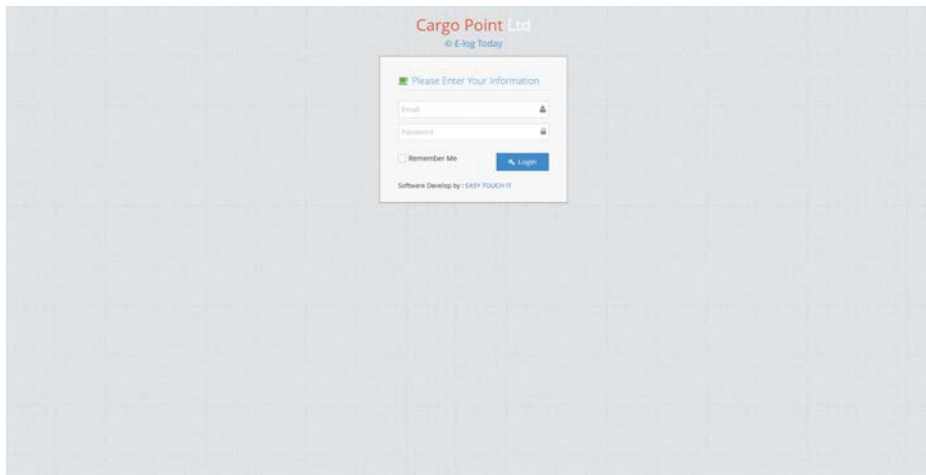
1. Simplifying navigation flow
2. Reducing the number of steps which is required to complete tasks
3. Improving data visibility and validation
4. Enhancing security awareness with a structured login design

This prototype will serve as the initial concept solution which will be given to a new IT team (as suggested) to make a full fledged system and workflow structure, with some additional suggestions and tips taken from the IT team themselves. Prototype of the UI:

New Login Screen:



Old Login Screen:



The Login screen:

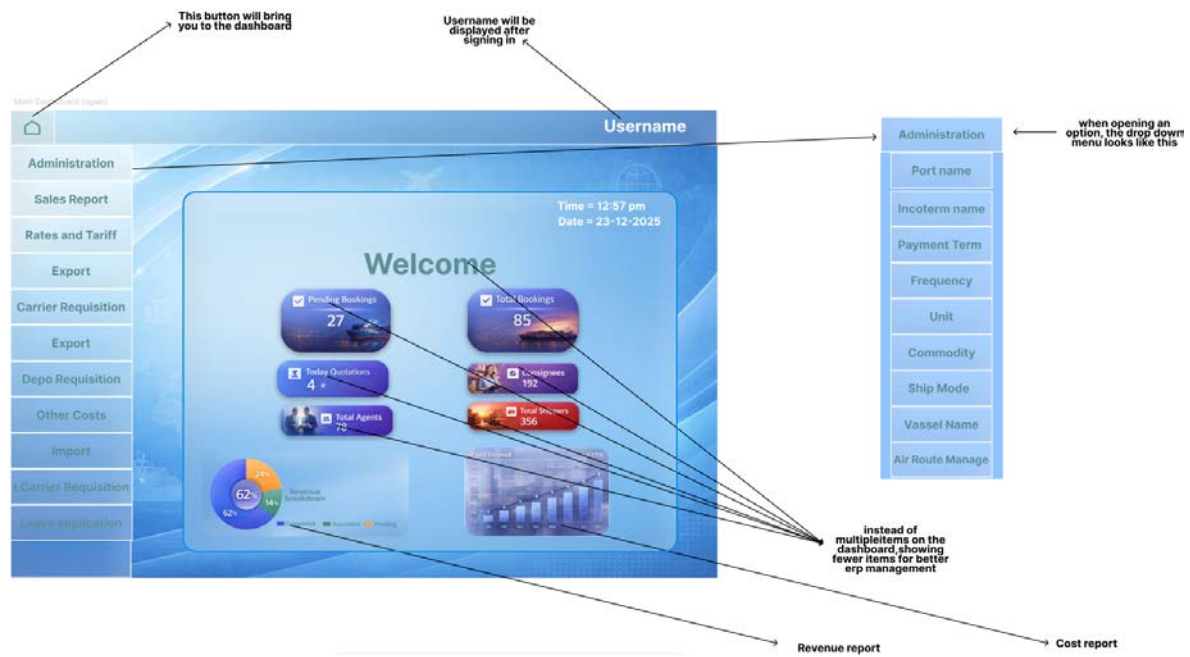
When the user decides to go to the portal, they are greeted with this layout instead of the old layout that looked cluttered and didnot have the option for otp.

As we can see from the old UI, the interface looks backdated and there is no option for otp login, and the remember me button doesnot work as everytime any user working in this portal gets out or restarts the season, it logs out nonetheless.

However the new UI was prepared with the help and knowledge of the stakeholders, it was prepared to be cleaner and more useful with the addition of OTP sign in, which is very important if the user logs out or the user id is being signed in from any other computer

besides the user's personal computer. The remember me option will keep the user signed in for only one day (Due to security reasons it has been decided that 1 day is the best time frame for an account to be saved due to the sensitive information a user may hold).

New Dashboard:



Old dashboard:



Main Dashboard:

The old dashboard looked very cluttered and filled with unnecessary information, in the new dashboard only necessary information (according to all the stakeholders in the company) is filled with extra ERP data for only approved users (like the MD) who does not need to go to the sales report but rather can get a glimpse of certain things from the dashboard itself.

The new dashboard also incorporates the glass look coming from the lockscreen (according to the stakeholder preference) with all the features necessary still packed inside but with faster animation and spacious UI not making it suffocating for any users when using.

This is the general UI that will be followed through the whole project.

3.4 Findings and Analysis:

3.4.1 Functional Findings

- According to the analysis the reports showed inaccurate data and information regarding a lot of documentation procedures
- The invoice printing needs manual proofreading
- Values get overwritten or underwritten
- BL generation often freeze during creation and processing

3.4.2 Security Findings

- No encryption used anywhere (no ssl, https) and possibility of not the backend being encrypted (as the IT personnel denied to use it) posing a risk
- No multi-factor sign in verifications

3.4.3 UI/UX Findings:

- Very clustered UI
- Not responsive
- No proper erp dashboard system

3.4.4 Other findings

Outside all the technical issues found, the response time and support of that one IT personnel is very slow and inefficient, with lack of communication, software development experience, and taking a lot of time for finding out a solution and fixing takes immense time for Cargo Point out of their operational workflow.

3.5 Summary and Conclusion

This project was made for the sole purpose of upgrading Cargo Point's existing portal as their current portal may get the job done but lacks structural robustness.

The Absence of security layers, inaccurate data representation, slow system responsiveness and poorly structured UI significantly impacts the operational reliability, as per as the findings that were confirmed. With the structural improvement and redesigning of the webportal, Cargo Point may properly perform their operational activities efficiently.

3.6 Recommendations and Implications

These are the following recommendations that are proposed to Cargo Point in order to improve operational efficiency, which are:

1. Implementing SSL certifications and HTTPS protocols that would help to secure data transmission
2. Introduction towards two-factor authentication via using mobile sms verifications whenever signing in towards the portal
3. Enabling auto-calculated invoicing after any shipment is performed (the ability to store amount data for different types of services (which can be added edited if any editing is required) and then just adding them on the invoice when creating instead of manually entering the type of service with amount)
4. Building a secured and logically structured database (using any good backend database framework using Django and MySQL instead of current PHP database which is outdated)
5. Redesigning the complex UI/UX using figma to prototype.

6. Enabling monthly, quarterly or annually excel financial data generation to further reduce manual checking (with final value calculation and error detection on the software itself if there is any mismatch of any financial data)
7. Recruiting an IT team rather than one personnel and letting a team be responsible for this web design for faster solution response time as well as better and faster building and also suggesting them the current UI/UX prototype for final building

If Cargo Point implements these within their operations as soon as possible, they can work seamlessly and it will also improve the work environment for the current employees as well as any new employees who would be joining.

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