



MANAGEMENT TRANSPORTATION SYSTEM

Solution by
Tean, 15
2024



Homepage	4
Contribution Evaluation	5
Underperformance Plan	7
Working Agreement	9
Latest Updates	12
Project Plan	14
Roles and Responsibilities	20
Risk Assessment Matrix	25
Persona & Empathy Map	31
Product Requirements	62
Team Health Monitor	64
Team Member Profiles	75
Meeting Notes	80



COS20031 - Computing Technology Design Project

Description

Transportation Management System (TMS) software solution to streamline and enhance transportation and logistics operations for ITL Logistics Group

Project Tracker

COS20031

Jira

Recently updated content

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Persona & Empathy Map

about 3 hours ago • contributed by [Đinh Việt Phát](#)

Entities Relationship Diagram (ERD)

about 3 hours ago • contributed by [Toan Truong](#)

Risk Assessment Matrix

about 5 hours ago • contributed by [Phung Gia Khang](#)

Roles and Responsibilities

about 5 hours ago • contributed by [Đinh Việt Phát](#)

Product Requirements

about 6 hours ago • contributed by [Nguyễn Hoàng Trung](#)

Homepage

about 6 hours ago • contributed by [Phung Gia Khang](#)

Contribution Evaluation

about 7 hours ago • contributed by [Nguyễn Hoàng Trung](#)

Meeting Notes

about 7 hours ago • contributed by [Phung Gia Khang](#)

Working Agreement

about 7 hours ago • contributed by [Phung Gia Khang](#)

Team Member Profiles

about 7 hours ago • contributed by [Phung Gia Khang](#)

Contributors

This list below will automatically update each time somebody in your space creates or updates content.

[Nguyễn Hoàng Trung](#), [Toan Truong](#), [Đinh Việt Phát](#), [Phung Gia Khang](#), [Lê Nguyễn Thái Sơn](#)



Welcome to Team 15

Team metrics	
Cycle Time Updated Oct 18, 2024	ON TRACK
Team Satisfaction Updated Oct 18, 2024	ON TRACK
Defect Density Updated Oct 18, 2024	ON TRACK

About	
<p>Welcome to the Homepage of the Software Development Project for the ITL Transportation Management System (TMS). This page provide concise information about our team members, each with their respective role and responsibilities. To support with the process of understanding and exploring our project, a Quick Navigation is supplemented with links to corresponding pages. To keep the stakeholders updated about the progress of this project. Latest contributions are updated and displayed in the homepage as soon as they are made. In summary, this homepage encapsulates our efforts in designing, developing, and implementing an effective Software Solution for ITL Corporation's TMS needs.</p>	

Meet the team		
 Nguyen Hoang Trung Kai Developer Email: 104772921@student.swin.edu.au Phone Number: +84935890195	 Toan Truong Jimmy Tester/Quality Manager Email: 104995838@student.swin.edu.au Phone Number: +84888309029	 Le Nguyen Thai Son Ray Business Analyst Email: 104991140@student.swin.edu.au Phone Number: +84909820512
 Dinh Viet Phat Vell Scrum Master/Project Coordinator Email: 104999348@student.swin.edu.au Phone Number: +84902958547	 Phung Gia Chang Andy Project Leader Email: 104993612@student.swin.edu.au Phone Number: +84906072005	

Quick Navigation

- [Homepage](#)
 - [Contribution Evaluation](#)
 - [Working Agreement](#)
- [Latest Updates](#)
- [Project Plan](#)
- [Roles and Responsibilities](#)
- [Risk Assessment Matrix](#)
- [Persona & Empathy Map](#)
 - [Logistic Manager](#)
 - [Supply Chain Manager](#)
 - [Warehouse Manager](#)
- [Driver](#)
- [Customer](#)
- [Product Requirements](#)
- [Entities Relationship Diagram \(ERD\)](#)
 - [Conceptual ERD Diagram](#)
 - [Logical ERD Diagram](#)
 - [Physical ERD Diagram](#)
 - [Data Flow Diagram \(DFD\)](#)
- [Team Health Monitor](#)
- [Appendix1: Team Member Profiles](#)
- [Appendix 2: Meeting Notes](#)
 - [06/09/2024 - Meeting Note](#)
 - [13/09/2024 - Meeting Note](#)
 - [20/09/2024 - Meeting Note](#)
 - [25/09/2024 - Meeting Note](#)
 - [30/09/2024 - Meeting Note](#)
 - [04/10/2024 - Meeting Note](#)
 - [11/10/2024 - Meeting Note](#)
 - [18/10/2024 - Meeting Note](#)

Resources

Restrict search to this space's space key.

Where to find us

- [Zalo Group Chat](#)
- 1049936162@student.swin.edu.au
- (+84) 906072005

Featured resources

- [Jira Timeline](#)
- [Request for Proposal](#)
- [ITL Corporation](#)

Latest updates

- Recent updates
- [Homepage](#) 3 minutes ago • contributed by [Nguyễn Hoang Trung](#)
 - [Physical ERD Diagram](#) 10 minutes ago • contributed by [Nguyễn Hoang Trung](#)

Contribution Evaluation

i This page outlines our guidelines for making individual adjustments to team marks in the case of poorly contributing students. Typically, marks are adjusted after a student fails to meet the conditions of a Performance Improvement Plan (PIP).

Contact your Facilitator if:

- Your team has an issue with a student contributing less than expected.
- You suspect you might be a poorly contributing student
- The number of contributing students in your team is less than 3

	0%	25%	50%	75%	100%
Contributing to the team's work and acquiring the necessary knowledge and skills	Produces no work or only extremely poor-quality outputs filled with errors and lacking basic knowledge or skills. Does not assign themselves to any tasks and consistently requires others to complete their work. Evidence includes no or incomplete Jira tasks, minimal Confluence contributions, and chat group threads showing repeated requests for help. Facilitator observations and interviews indicate a lack of required knowledge, skills, and abilities.	Produces low-quality work that frequently contains errors and shows limited understanding or skills. Rarely assigns themselves to tasks and often relies on significant help from others to complete assigned work. Evidence includes several unfinished or poorly executed Jira tasks, minimal Confluence updates, and frequent requests for assistance in chat threads.	Produces work of varying quality, with occasional errors and some gaps in knowledge or skills. Assigns themselves to tasks but often needs guidance or assistance to complete them. Evidence includes partially completed or corrected Jira tasks, moderate Confluence contributions, and multiple discussions in chat threads seeking clarification.	Produces good-quality work with few errors, demonstrating sufficient knowledge and skills. Regularly assigns themselves to tasks and requires minimal help to complete them. Evidence includes mostly accurate and complete Jira tasks, active Confluence contributions, and minimal reliance on others for help in chat threads.	Produces high-quality work that is error-free and demonstrates strong knowledge and skills. Proactively assigns themselves to tasks and completes them independently. Evidence includes well-executed Jira tasks, detailed and consistent Confluence contributions, and self-reliance with minimal need for assistance. Facilitator and team feedback show high competency and mastery of required skills and knowledge.
Teamwork - keeping the team on track	The individual never meets agreed work deadlines and fails to update the team on progress. They consistently come unprepared for classes and meetings, frequently	Rarely meets deadlines and seldom updates the team on progress. Occasionally unprepared for classes and meetings, with some instances of	Meets some deadlines but frequently requires reminders. Provides updates inconsistently and is sometimes unprepared for meetings. Arrives	Usually meets deadlines and regularly updates the team on work progress. Comes prepared to most classes and meetings, with only occasional tardiness	Always meets deadlines and proactively updates the team on progress. Comes fully prepared to all classes and meetings, always on time, and never

	arriving late or leaving early. Often distracted or doing unrelated tasks during meetings, they repeatedly steer discussions off topic. Evidence includes incomplete Jira tasks, meeting notes documenting absences or distractions, and negative feedback from the team and facilitator.	arriving late or leaving early. Sometimes distracted during meetings and occasionally brings up unrelated topics. Evidence includes sporadic Jira task updates, meeting notes indicating lack of focus, and minor negative observations by the facilitator.	late or leaves early on a few occasions and sometimes drifts off topic during discussions. Evidence includes several incomplete Jira tasks, meeting notes highlighting distractions, and multiple instances of being off-topic noted by the facilitator.	or early departures. Evidence includes consistently completed Jira tasks, meeting notes reflecting active participation, and mostly positive observations by the facilitator.	leaves early. Consistently stay focused and keep discussions on track. Evidence includes complete and well-managed Jira tasks, meeting notes showing strong leadership and positive observations by the facilitator and team members.
Interaction with teammates and quality of work	Does not attend any classes or meetings and is unresponsive to all communication. Displays consistent rude, aggressive, or discriminatory behavior, discouraging and undermining team members. Acts dishonestly and without integrity. Evidence includes meeting notes documenting absence or severe behavior, strong negative feedback from team members, and complete lack of engagement in chat groups. Intervention by facilitator or convenor is usually required.	Rarely attends classes or meetings and often ignores communication. Occasionally uses unprofessional or discriminatory language and offers little encouragement or support to the team. Minor lapses in honesty or integrity. Evidence includes minimal participation in meeting notes, some negative team feedback, and isolated problematic chat group threads.	Attends classes and meetings irregularly and responds to communication slowly. Often uses unprofessional language or makes discouraging remarks, with occasional lapses into discriminatory behavior. Shows limited support or respect towards team members, and there are some instances of dishonesty or lack of integrity. Evidence includes frequent mentions of absence or inappropriate behavior in meeting notes, multiple reports of concern from team members, and several problematic chat group threads. Ratings on relevant CATME dimensions are consistently low.	Regularly attends classes and meetings but may occasionally miss some without notice. Usually responsive to communication, with only rare delays. Generally maintains professional language and behavior, though there may be minor lapses. Shows good respect and support for team members, with overall honesty and integrity. Evidence includes consistent participation noted in meeting records, generally positive feedback from team members, and active involvement in chat group discussions. CATME ratings are mostly positive, with only a few areas needing improvement.	Always attends classes and meetings and is highly responsive communication. Consistently uses professional and encouraging language, demonstrating full respect and support for all team members. Acts with complete honesty and integrity, promoting a positive and inclusive team environment. Evidence includes detailed meeting notes highlighting full engagement, strong consensus among team members about positive behavior, and active, productive involvement in group threads. Receives high CATME ratings in areas and positive observations from facilitators or convenors.



Underperformance Plan

✉ Sample email

From:

To:

CC:

Date:

Subject: Performance Improvement Plan

Dear ,

The purpose of this letter is to clarify expectations regarding your role, document performance issues that are preventing you from meeting those expectations, and give you the opportunity to address those issues and raise your performance to a satisfactory level.

Starting on , you are being placed on a performance improvement plan to address the issues outlined below. Over the next days, you must constructively address these concerns and meet all expectations for performance. If you don't make adequate progress or we identify additional problems, we may terminate your employment at .

Review the information outlined below and ask me if you have any questions. I will meet with you regularly to review your progress, offer guidance, and provide feedback on your performance. For your next meeting, please prepare an action plan explaining how you plan to meet the expectations outlined below and what steps you will take during this period to improve your performance.

If you have questions about your performance improvement plan, please feel free to contact me or your HR Business Partner, , at .

☀ Performance improvement plan for

Expectation	Deficit	Examples
☀ Objective:		
Expectation	Deficit	Examples
		<ul style="list-style-type: none">•••
☀ Objective:		
Expectation	Deficit	Examples

		• • •
💡 Objective:		

Manager signature	
Employee signature	
Date	

Working Agreement

Team Preferences

Team Member	Nguyen Hoang Trung	Dinh Viet Phat	Truong Le Minh Toan	Phung Gia Khang	Le Nguyen Thai Son
Contact Information	104772921@student.swin.edu.au	104999348@student.swin.edu.au	104995838@student.swin.edu.au	104993612@student.swin.edu.au	104991140@student.swin.edu.au
Working location and time zone	Ho Chi Minh City (GMT +7)	Ho Chi Minh City (GMT +7)	Ho Chi Minh City (GMT +7)	Ho Chi Minh City (GMT+7)	Ho Chi Minh City (GMT+7)
Working hours and commitments	7:00 - 23:00 Available all days.	8:00 - 17:00 18:00 - 22:00 Available all days.	8:00 - 24:00, Available all days.	8:00 - 17:00 18:00 - 24:00 Available on all days except Sunday	8:00 - 24:00 Available all days.
Working environment and preferences	I prefer working at home or coffee shop.	Working in the coffee shop or Swinburne library	I prefer working from home and aspiring to learn new technology.	Work from home Meet up at café	Work from home Work at Swinburne library
How I like receiving feedback	I would like to receive feedback immediately.	All constructively negative and positive feedback.	Constructive feedback, clearly deadline defined	I would like to receive constructive criticisms with positive attitudes.	I would like to receive immediately with positive attitudes.
Context about me	I love to explore new technology, and I always support Arsenal.	I am a big fan of Art, Music, Sports, and learning something new.	I have a normal childhood like other kids, growing from the environment where people support together to grow.	I am fond of reading theory-heavy contents of many kinds of topics. I am also into open world games with captivating storyline and interesting characters.	I love watching movie and playing football, and Real Madrid is the team I love.

💬 Communication Channels

Channel	Purpose	Audience	Standards
Microsoft Teams	Documentation	Project Team	Follow the naming conventions for file sharing
Instagram	Daily work-related conversation	Project Team	Aim for a 24-hour response time to messages
Zalo	Connecting with the coordinator	Project Team and Coordinator	Avoid using Zalo for project-unrelated discussions

📅 Meetings

Objective	<ul style="list-style-type: none"> • Meeting and introducing members, voting for leaders • Choosing topics • Creating Jira, Confluence accounts and creating project 	<ul style="list-style-type: none"> • Complete the Team Agreement • Complete Team Member Profiles 	<ul style="list-style-type: none"> • Complete Persona page • Writing meeting note 	<ul style="list-style-type: none"> • Complete Project plan, ER Diagram and Empathy map
Outcomes	<ul style="list-style-type: none"> • Gia Khang is the team leader. • The topic for the project is Transportation Management System • Everyone created their own Jira, Confluence account. 	<ul style="list-style-type: none"> • All information in Team Agreement and Team Member Profiles have been filled 	<ul style="list-style-type: none"> • Everyone found and finished their personas. • All meeting notes were noted. 	<ul style="list-style-type: none"> • Everyone finished their empathy maps for each persona. • Finalizing every required resource for the Project Proposal Assignment.
Format	<ul style="list-style-type: none"> • Whole team • In class 	<ul style="list-style-type: none"> • Whole team • Offline 	<ul style="list-style-type: none"> • Whole team • Offline 	<ul style="list-style-type: none"> • Whole team • Offline
Who	<ul style="list-style-type: none"> • Phung Gia Khang - Team Leader • Nguyen Hoang Trung • Dinh Viet Phat • Le Nguyen Thai Son • Truong Le Minh Toan 	<ul style="list-style-type: none"> • Phung Gia Khang - Team Leader • Nguyen Hoang Trung • Dinh Viet Phat • Le Nguyen Thai Son • Truong Le Minh Toan 	<ul style="list-style-type: none"> • Phung Gia Khang - Team Leader • Nguyen Hoang Trung • Dinh Viet Phat • Le Nguyen Thai Son • Truong Le Minh Toan 	<ul style="list-style-type: none"> • Phung Gia Khang - Team Leader • Nguyen Hoang Trung • Dinh Viet Phat • Le Nguyen Thai Son • Truong Le Minh Toan
Resources	Laptops	Laptops	Laptops	Laptops, White board

How will we show up?	<ul style="list-style-type: none"> ◆ Friendly ◆ Respect each other ◆ Willing to finish all agendas 	<ul style="list-style-type: none"> ◆ Friendly ◆ Respect each other ◆ Willing to finish all agendas 	<ul style="list-style-type: none"> ◆ Friendly ◆ Respect each other ◆ Willing to finish all agendas 	<ul style="list-style-type: none"> ◆ Friendly ◆ Respect each other ◆ Willing to finish all agendas
How will we manage follow up?	<ul style="list-style-type: none"> ◆ Progress is checked on Jira and Confluence 	<ul style="list-style-type: none"> ◆ Progress is checked on Jira and Confluence 	<ul style="list-style-type: none"> ◆ Progress is checked on Jira and Confluence ◆ Personal tasks were tracked and reminded to the team members through group chat 	<ul style="list-style-type: none"> ◆ Project plan was done by the whole team during a meeting ◆ Empathy map and ER Diagram are divided into individual tasks which are tracked through Confluence

⬆ Escalation Process

Decider	How	Transparency	Feedback Loop
For day-to-day problems, the project lead is the one our team escalate to	We will add an Issue or Task to Jira	Decision is made with clear explanations and motives shown to the whole team	The stakeholders can follow the process through the Jira pages
For strategic decisions, we will consult the supervisor - Mr. Hang Sam Nang	We either consult him during face-to-face meetings, or through Zalo group chat	Decision making process is made	Escalated decisions are reviewed and learned lessons

💡 Continuous Improvement

Purpose	How	Standards
Self-reflecting, peer reviewing and exchanging feedback	1 to 1 Zoom meetings, face-to-face meetings	Constructive feedback, be honest and be responsible.
Sharing lessons learned, research outcome	Face-to-face meetings, Google Meets, text messages	Knowledge is shared by means of a brief presentation
Celebrating success	Feast at restaurant, hangout at billiards club	All members are welcome, but not obliged to come

NEW Latest Updates

i This page lists all new updates that we have applied to this project.

Name	Old Description	Updating description	Link to update
<i>ERD level 0 (conceptual diagram)</i>	The previous version of this diagram is overly simple and lacks sufficient tables, rendering it inadequate for the project's requirements.	We have revised the diagram by adding some new tables and segmenting it into different sections, such as driver and user sections, etc.. This enhanced version provides greater detail and aligns more effectively with our proposed solution.	 Conceptual ERD Diagram
<i>ERD level 1 (logical diagram)</i>	This old diagram is based on the level 0 Entity-Relationship Diagram (ERD), making it quite basic and insufficient in detail. As a result, it fails to adequately illustrate the relationships and complexities inherent in the system. Furthermore, this version does not encompass the complete scope of the system's data structure and constraints.	We have created the attributes for all tables and established complex relationships, including foreign keys, along with many-to-many, one-to-many, and one-to-one associations.	 Logical ERD Diagram
<i>ERD level 2 (physical diagram)</i>	The previous version proposal does not include a Physical ERD Diagram	We create a physical level for our project based on ERD level 0 and level 1. In Physical level, we add the type of the attributes (integer, date, varchar...).	 Physical ERD Diagram
<i>DFD level 0 (conceptual diagram)</i>	The previous version proposal does not include a Data Flow Diagram (DFD)	We created a conceptual Data Flow Diagram (DFD) to visualize the flow of data. It will help both technical and non-technical stakeholders understand the process of data transfer throughout the entire system. The initial diagram represents the entire system as a single process, with input and output entities including the Customer, Logistics Manager, Driver, Consignee, and others.	 Conceptual Data Flow Diagram (Level 0)
<i>DFD level 1 (logical diagram)</i>	The previous version proposal does not include a Data Flow Diagram (DFD)	The improved version of the DFD will break down the central system into multiple processes. Each process interacts with entities as well as with one another.	 Logical Data Flow Diagram (Level 1)

<i>Team Health Monitor</i>	The previous version proposal does not include Team Health Monitor	We conducted a meeting to discuss the process of working together during previous milestones. This helped us identify weaknesses and find ways to address them, as well as improve the strengths of the team. We divided the level of satisfaction with teamwork into different criteria, allowing us to evaluate, vote on satisfaction levels, and discuss them. It also provided an opportunity for team bonding and sharing experiences.	 Team Health Monitor
<i>Jira TimeLine</i>	The previous version of the Jira timeline only included one sprint with tasks related to the project proposal.	This version of the timeline will include a new sprint for the process report, along with related epics. Additionally, relationships between different tasks are established to visualize the workflow.	 Jira Timeline
<i>Jira Chart</i>	The previous version proposal does not include Jira Chart	The Jira chart is used to visualize the number of epics, tasks, and user stories in the entire project, as well as provide a summary of their statuses.	 Jira chart
<i>Meeting Notes</i>			 Meeting Notes



Project Plan

Driver	Phung Gia Khang
Approver	Hang Sam Nang
Contributors	Dinh Viet Phat Le Nguyen Thai Son Truong Le Minh Toan Nguyen Hoang Trung Phung Gia Khang
Informed	Indo Trans Logistics Corporation
Objective	To design, develop, implement, and maintain a comprehensive Transportation Software Solution (TMS) for the ITL Logistics Group. The product of this project is planned to optimize and enhance the corporation's operation in transportation and logistics. Resources saving and cost optimization are the core of this project.
Due date	September 29, 2024
Key outcomes	<ul style="list-style-type: none">• Enhance transportation network in terms of visibility, control and report capabilities• Optimize utilization of resource and reduce operational costs• Provide a scalable and fault-tolerance system• Improve the corporation's employees and customers' experience during system operation
Status	IN PROGRESS

Problem Statement

In the context of complex logistics landscape, ITL Logistics Group faces with several challenges in managing its transportation and logistics operations efficiently. The company seeks for a solution to address the issues related to manage resource inefficiencies, rising operational cost, and lack of synchronization in entire operation process. These challenges are compounded by the need to optimize online managing transportation, supply chain, real-time shipment tracking, and streamline order processing.

Key pain points include:

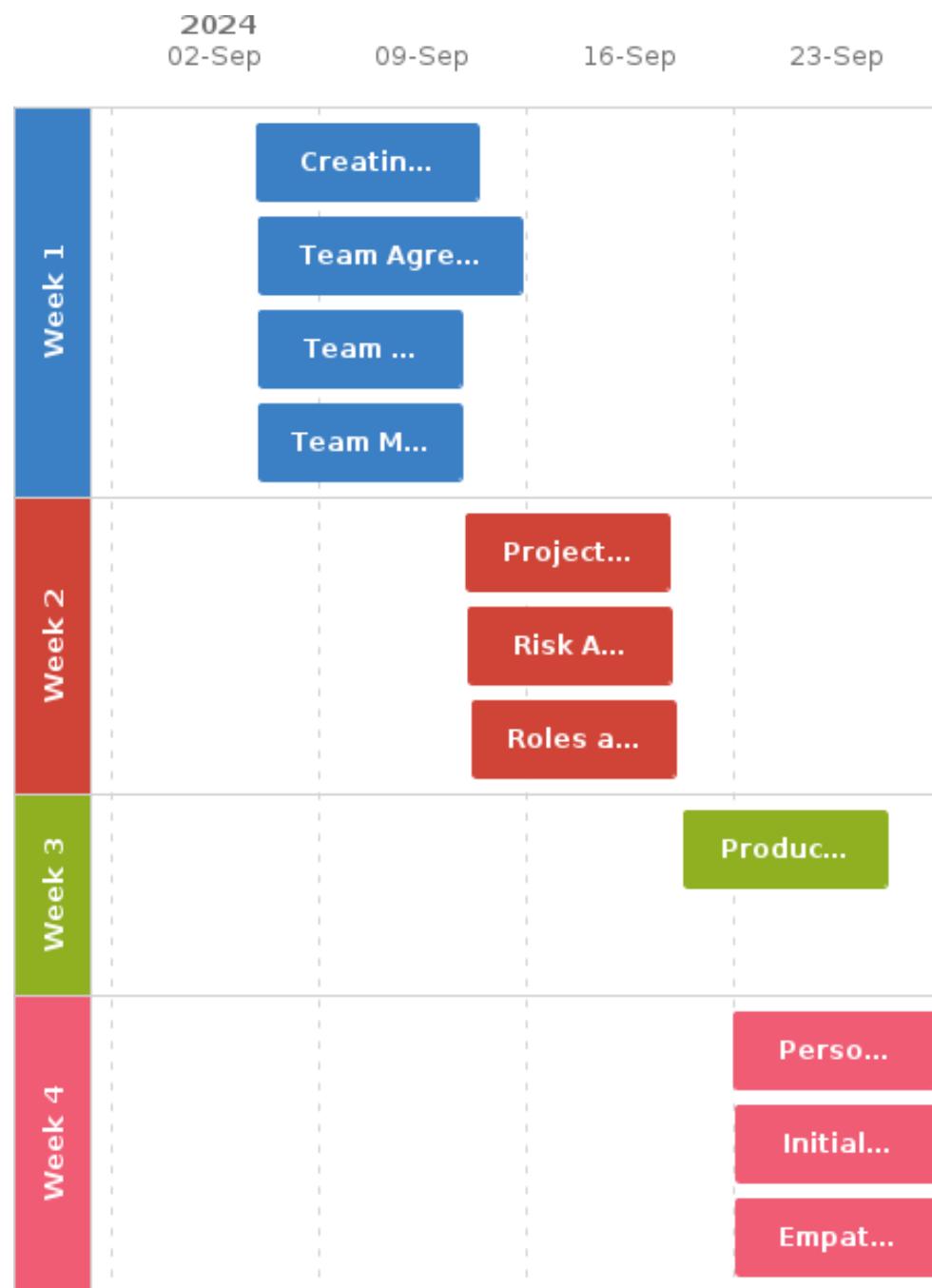
- **Lack of real-time visibility:** Real-time tracking of shipments and inventory management during transportation limits the ITL's ability to respond quickly to delay potential storage, or route disruptions.
- **Inefficient resource utilization:** With the traditional experience of driver and transportation manager in choosing delivery route. They struggle with optimizing route choosing, as well as inefficiently managing carrier assignments, leading to higher operational costs and underutilization of resources.
- **Complex and error-prone invoicing:** Inaccurate billing, resulting from a lack of automation in handling various billing structures for different purpose, delays the invoicing process and affects financial accuracy.
- **Disjointed inventory and warehouse management:** Difficulty in monitoring and managing inventory levels in transit and across warehouses leads to potential shortages and missed fulfillment deadlines, contributing to delay in entire process.
- **Problem of reporting analytic:** ITL Logistics Group encounter difficulty in managing and visualizing statistical data related to transportation performance, costs, and KPIs results in a lack of clear insights. This harm the ability to track and optimize performance, identify trends, and make data-driven decisions, contributing to inefficiencies in the overall logistics process.

For the above challenges, successful implementation of a comprehensive Transportation Management System (TMS) at ITL Logistics Group will bring several positive results:

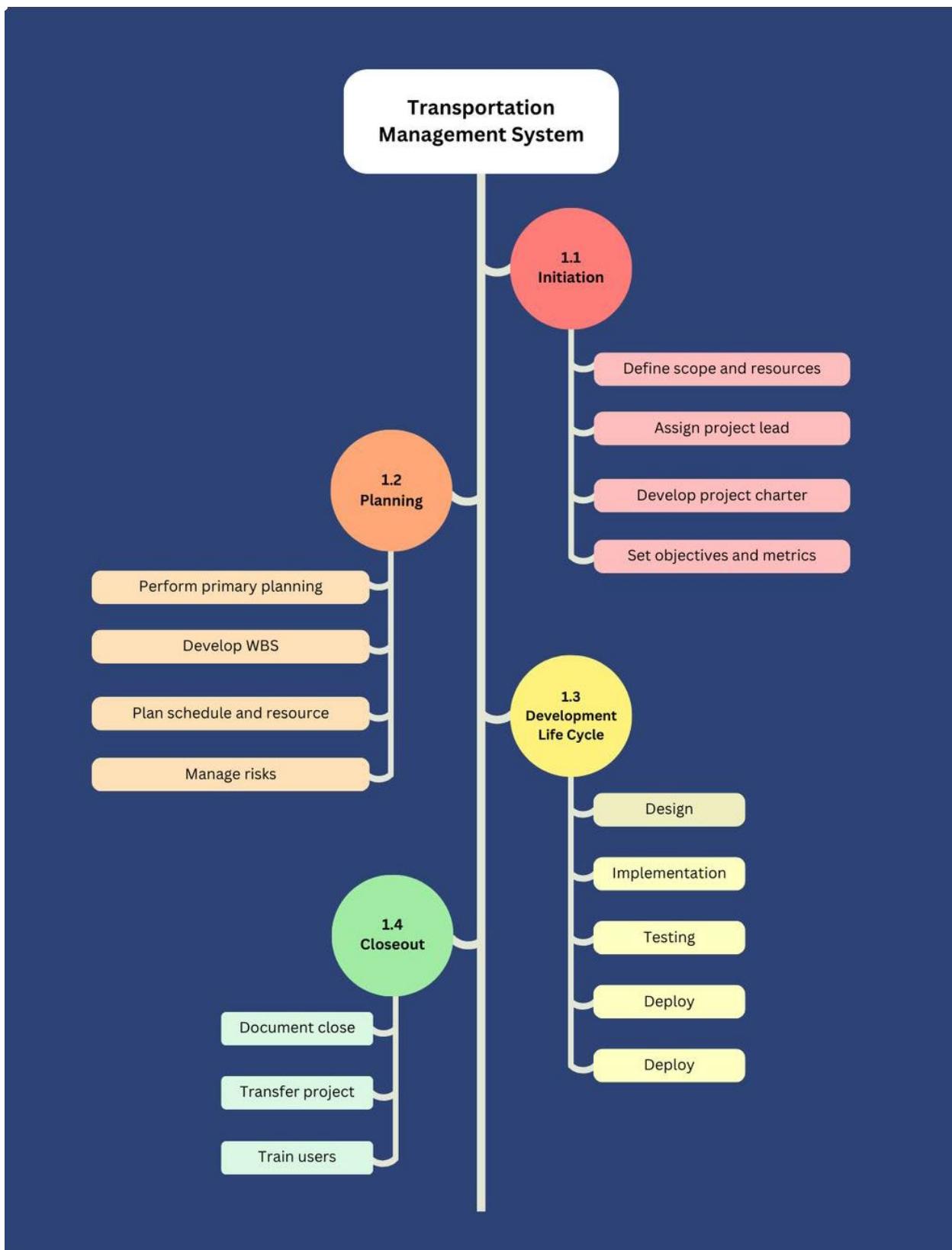
- **Enhanced operational efficiency:** By optimizing route planning, supply chain management, and resource utilization, the new system will reduce operational costs and ensure time effective deliveries.
- **Accurate invoicing and financial management:** Automated billing processes will help the company reduce errors, and ensure timely and precise financial reporting.
- **Optimized inventory management:** Regularly tracking of inventory levels in transit and across warehouses will help prevent shortages and missed deadlines, ensuring smoother operations.
- **Data-driven decision-making:** Advanced reporting and analytics capabilities will enable ITL to visualize transportation performance, analyze trends, and make informed decisions, improving overall transportation performance.
- **Scalability for future growth:** By utilizing online platform, allow the ITL's growing business needs. The TMS gives them a flexible solution that can adapt to the increasing in demand and expanding scale of operations.

Must have:	<ul style="list-style-type: none">• Order Management• Carrier Management• Inventory Management• Route Planning and Optimization• Design and Development• Documentation• Support and Maintenance• Testing and Quality Assurance• Training staff
Nice to have:	<ul style="list-style-type: none">• Sustainability Tracking• Blockchain for Shipment Security• Predictive Analytics for Shipment Delays• Customer Self-Service Portal
Not in scope:	<ul style="list-style-type: none">• Human Resources Management• Third-Party Fleet and Driver Scheduling• Virtual Reality (VR) Training Systems

📅 Timeline



Work Breakdown Structure (WBS)



▶ Milestones and deadlines

	Milestone	Owner	Deadline	Status
Project Proposal	Join Jira, Confluence, and Atlassian	Everyone	Sep 8, 2024	DONE
	Create Team Agreement	Everyone	Sep 8, 2024	DONE
	Create Team Member Profiles	Everyone	Sep 8, 2024	DONE
	Create Team Homepage	Khang, Trung	Sep 8, 2024	DONE
	Create Risk Management Matrix	Phat	Sep 15, 2024	DONE
	Create Project Plan	Everyone	Sep 15, 2024	DONE
	Create Roles and Responsibilities	Son, Toan	Sep 15, 2024	DONE
	Create Product Requirements	Everyone	Sep 22, 2024	DONE
	Create Personas	Everyone	Sep 29, 2024	DONE
	Create Empathy Map	Everyone	Sep 29, 2024	DONE
Project Progress	Create Initial ER Diagram	Everyone	Sep 29, 2024	DONE
	System Design	Everyone	Oct 13, 2024	IN PROGRESS
	Core Module Development	Khang, Son	Oct 20, 2024	IN PROGRESS
	Frontend Development	Trung, Phat	Oct 20, 2024	IN PROGRESS
Final Report	Testing Quality Assurance	Toan	Nov 10, 2024	IN PROGRESS
	Deployment and User Training	Everyone	Nov 23, 2024	IN PROGRESS
	Updating	Everyone	Nov 30, 2024	IN PROGRESS

🔗 Reference materials

- [Empathy Map vs Persona: What's the Difference and Why You Need Both](#) ([userpilot.com](#))
- [FlexTrade Revolutionizes Digital Trading with AWS | Amazon Web Services](#) ([youtube.com](#))
- [Data Flow Diagrams \(DFDs\)](#) ([youtube.com](#))
- [Product Lifecycle vs. Project Lifecycle | Firebrand Learn](#)



Roles and Responsibilities

📋 Overview

Identify and discuss team responsibilities by following the instructions for the [Roles and Responsibilities Play](#).

Team	Team 15
Team members	Nguyen Hoang Trung, Dinh Viet Phat, Truong Le Minh Toan, Phung Gia Khang, Le Nguyen Thai Son
Date	Sep 13, 2024
Team mission	Our team's mission is to create a project for the COS20031 course, aiming to improve the efficiency and effectiveness of transportation and logistics operations in a business.

📘 Roles and responsibilities

Name	Roles	Responsibilities	Characteristics (make you suitable for the role)	Skills (that you have)
Phùng Gia Khang	Project Manager, Team Leader	<ul style="list-style-type: none"> • Keep track of the schedules and maintain project plans • Representing the needs of many stakeholders in the Product Backlog • Maximizing the value of the product from the work of all team • Conducting and coordinating project meetings and team's discussion • Managing the Product Backlogs (including creating, ordering, ensuring transparent, visible and understood) • Developing the Product Goal and making it clear to 	<ul style="list-style-type: none"> • Responsible: represent the whole team, and take responsibility for any mistake the team has • Patient and tolerant: able to take criticisms and complaints from stakeholders and customers • Empathetic: build trust and strong relationships to motivate team members • Optimistic and positive: remain calm in harsh situations and motivate the team 	<ul style="list-style-type: none"> • Technical knowledge: understanding of SDLC, programming skills, and project management tools like Jira, Confluence, Bitbucket • Backlog prioritization, to managing task and assign to members • Time management and organization

		team members	<ul style="list-style-type: none"> • Visionary and decisive: make well-informed, long-term decisions on behalf of the team 	<ul style="list-style-type: none"> • Problem solving and decision making • Ability to handle stresses and pressures • Skilled in negotiating and conflict solving • Risk management
Dinh Việt Phát	Scrum Master, Project Coordinator	<ul style="list-style-type: none"> • Leading and training team for adopting Scrum framework • Maintain relationship between stakeholders and team • Helping team with managing Product Backlog items, Product Goal definition, achieving Definition of Done • Advising implementations of Scrum for the team to solve the problem • Coaching members about self-management and cross-functionality • Ensuring the Scrum events follow the timebox 	<ul style="list-style-type: none"> • Neutral and objective: encourage the team to progress without taking sides in discussion • Transparency: make sure the everything related to the project is visible to the stakeholders • Patient and enthusiastic: Patience when convincing the supplier and partner • Detail-oriented: make sure all tasks are complete, all risks are managed and nothing is overlooked • Assertive: Confidently expresses needs and expectations, ensuring that team objectives are met without being overly aggressive 	<ul style="list-style-type: none"> • LinkedIn certificate in Planning and Releasing software with Jira • LinkedIn certificate in Agile Software Development: Scrum for Developers • Mastering project management tools • Real-life experience in coaching and tutoring • Managing and understanding Scrum Project, Agile methodologies in Jira and Confluence, Bitbucket • Fluency in communication and solving conflicts • Professional time management, skilled at setting milestones and handling time-critical issues

Nguyễn Hoàng Trung	Developer	<ul style="list-style-type: none"> • Developing the software solutions and system architects for the problem • Develop clean, efficient, and maintainable code. • Reviewing code and provide constructive feedback to other members • Researching for innovative approach and best practice for solving problem • Following the Definition of Done, to adapt with the Sprint Goal • Creating plan for completing Sprint Backlog 	<ul style="list-style-type: none"> • Responsible: Holding each other accountable as professionals. • Time management: Ability to manage several projects and tasks, adhere to deadlines. • Adopting new technologies: optimizing the system by using advanced technologies • Attention to detail: avoiding making mistake and developing from the basis of things • Adaptable: adapting with different kind of available approaches for choosing the optimize ones. 	<ul style="list-style-type: none"> • Mastering PHP, Python, JavaScript coding • Mastering building the cloud architecture (using AWS, Azure, and Google Cloud) • Experience with SQL and NoSQL databases, as well as knowledge of database design and optimization. • Mastering of applying software design pattern (singleton, factory, observer, facade...) • Strong understanding of data structures (e.g., arrays, lists, trees, graphs....) and algorithms for optimizing code suiting for project requirements. • Proficient in a wide range of coding paradigms (OOP, functional, procedural...) • Version control application (Github, bitbucket)
Trương Lê	Quality Manager,	<ul style="list-style-type: none"> • Designing and executing test plans to ensure product 	<ul style="list-style-type: none"> • Visionary Thinking: See the bigger 	<ul style="list-style-type: none"> • Ability to lead and motivate a

Minh Toàn	Tester	<p>quality</p> <ul style="list-style-type: none"> • Conducting functional, non-functional, and regression testing • Reporting bugs and collaborating with the development team to fix issues • Verifying that features meet the Definition of Done and adhere to product requirements • Maintaining testing documentation and providing feedback for continuous improvement • Participating in Sprint planning and retrospective meetings to address quality concerns 	<p>picture and align quality processes with the company's long-term goals.</p> <ul style="list-style-type: none"> • Problem Solver: Quickly identify issues, evaluate options, and implement effective solutions that improve quality processes. • Organized and Systematic: Manage multiple tasks effectively, from audits to implementing quality improvements, ensuring nothing falls through the cracks. • Good Written Communication: Clearly document test cases, bugs, and reports in a way that developers and other stakeholders can easily understand. • Analytical Mindset: Approach testing with a problem-solving attitude, able to break down complex systems to find issues. 	<p>team to ensure quality goals are met.</p> <ul style="list-style-type: none"> • Proficiency in executing both manual tests and developing automated testing scripts. • Automation tools (e.g., Selenium, JIRA, or TestRail) and bug-tracking software. • Analytical skills to resolve quality issues and implement corrective actions. • Mastering of unit testing (JUnit or PyTest,...) and performance testing. • Strong understanding of Agile and Scrum methodologies to work efficiently within sprint cycles.
Lê Nguyễn Thái Sơn	Business Analysis	<ul style="list-style-type: none"> • Gathering and documenting business requirements from stakeholders • Identifying stakeholders, sketching persona • Analyzing and translating business needs into technical specifications • Conducting market research and feasibility studies to support project decisions • Collaborating with the development team to 	<ul style="list-style-type: none"> • Good communication: communicate with the stakeholders and team members • A problem solver: Solving the problem of the business with optimize solutions. • Critical thinking: Identifying stakeholders, translating business requirement 	<ul style="list-style-type: none"> • Market research for searching to different aspects of business, the product and the customers • Proficiency in analyzing data sets, trends, and metrics to support business decisions (using Excel, SQL, or data

	<ul style="list-style-type: none"> • ensure business requirements are met • Providing insights and recommendations to improve and avoiding risk of business processes • Facilitating communication between stakeholders and the development team 	<ul style="list-style-type: none"> • Decision-making: making decision for fulfill the problem of business 	<ul style="list-style-type: none"> visualization tools). • Ability to negotiate requirements, priorities, and deadlines between stakeholders and development teams. • Basic understanding of system architecture, software development lifecycle (SDLC), and database management to bridge the gap between business and technical teams. • Strong technical writing skills to produce clear and comprehensive documentation, such as functional specifications, user stories, or business case reports.
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Risk Assessment Matrix

- i** The Risk Management page acts as the detailed information book of risks in this system to comprehend and alleviate possible obstacles within the project. Besides, this page pinpoints and classifies each risk, assigning them a rating according to their potential consequences and likelihood. Moreover, it delineates the project's background and emphasizes the importance of proficient risk management. Finally, it furnishes an action plan to actively deal with and resolve identified risks, guaranteeing seamless project advancement with minimal interruptions.

Background

In the scope of ITL Corporation's endeavor to implement a comprehensive Transportation Management System (TMS), conducting a thorough risk assessment stands as a crucial factor for the project's success. The TMS is designed to oversee various logistics facets, including order tracking, carrier management, route optimization, and real-time shipment monitoring. It is imperative that this system seamlessly integrates with ITL's existing ERP and CRM systems, all while upholding scalability, security, and compliance with transportation regulations.

Potential risks encompass challenges related to system integration, scalability limitations, and external threats like regulatory modifications or dependencies on GPS and traffic data from third parties. Furthermore, ITL must address financial risks such as cost overruns, along with operational risks like stakeholder misinterpretation and data inaccuracies. Effectively managing these risks is paramount in bolstering ITL's logistical efficiency and ensuring that the project stays aligned with its long-term strategic objectives.

Risks management

Identify and prioritize risks based on their probability and severity. Then define what further actions you need to take to control the risks, and who needs to carry out these actions.

Risk list

This is a list of all risks in Transportation Management System (TMS) solution for ITL Corporation company.

	Risk	Risk description	Risk Categories
1	System Integration Issues	High risks when integrating the TMS with existing ERP and CRM because of different data structures and formats, data synchronization,.....	Technical Risks
2	Scalability Concerns	If the TSM can not scale efficiently as the high volume of transactions and data because of growing demands, this will lead to slower processing, system crashes, or longer response times,....	
3	Data Loss or Corruption	When the system error, some important transactions or data of shipment, inventory, routes,... can be lost or corrupted. This may occur due to software bugs or hardware failures,...	
4	Security Vulnerabilities	The hacker can exploit vulnerabilities and expose sensitive customer or logistics data. This will result in financial and legal consequences.	
5	Unoptimized System Performance	An unoptimized logistics system poses risks such as delays in order processing, route planning, and tracking, ultimately leading to decreased efficiency and customer satisfaction.	
6	Time Management	Team members can not manage the time of deadline, this causes the delay in the project	Project Management Risks
7	Lack of Resource	Lack of critical human resources such as developers, analysts, or hardware can lead to a delay of the project	
8	Lack of Participation	Team members have not shared their ideas to contribute to the project, resulting in a lack of utilization of good ideas and potentially missing out on valuable insights.	
9	Unequal Distribution of Work	Unequal distribution of tasks within a team can create a situation where some members feel overwhelmed, while others may not be contributing adequately. This imbalance can compromise the overall quality and efficiency of the project.	

10	Stakeholder misunderstanding	Misunderstandings among stakeholders about the project can cause low or misguided decisions.	
11	Scope Creep	The features and functions of the project keep expanding beyond the original plan. This may result in overspending, missing deadlines,....	
12	System Downtime	System crashes can disrupt logistics operations, transactions, and cause revenue loss,....	Operational Risks
13	Data Inaccuracy	The employees can input incorrect or incomplete data into the system that lead to operational inefficiencies of route planning,....	
14	Bad User Interface and Experience	This risk can arise from inadequately designed or unintuitive user interfaces, resulting in inefficiencies during application use and operational delays,....	
15	Cost overruns	This risk is the result from unanticipated technical issues or extended project timelines. Besides, Inaccurate budget planning can also increase costs	Financial Risks
16	Law enforcement	Changing the law of transportation could lead to additional compliance requirements,....	External Risks
17	Financial movements	Inflation, fluctuations in currency exchange rates, and other relevant factors necessitate the update of data in the TSM model.	

Risk rating

LOW	MEDIUM	HIGH	EXTREME
<ul style="list-style-type: none"> • Acceptable • Ok to proceed 	<ul style="list-style-type: none"> • As low as reasonably practicable • Take mitigation efforts 	<ul style="list-style-type: none"> • Generally unacceptable • Seek support 	<ul style="list-style-type: none"> • Intolerable • Place event on hold

LIKELIHOOD	SEVERITY			
	ACCEPTABLE <i>Little to no effect on event</i>	TOLERABLE <i>Effects are felt, but not critical to outcome</i>	UNDESIRABLE <i>Serious impact to the course of action and outcome</i>	INTOLERABLE <i>Could result in disaster</i>
IMPROBABLE <i>Risk is unlikely to occur</i>		<ul style="list-style-type: none"> • Data Loss or Corruption 		<ul style="list-style-type: none"> • System Downtime • Scalability Concerns • Financial movements • Law enforcement
POSSIBLE <i>Risk will likely occur</i>	<ul style="list-style-type: none"> • Lack of Resource 	<ul style="list-style-type: none"> • Time Management 	<ul style="list-style-type: none"> • Unoptimized System Performance • Unequal Distribution of Work 	<ul style="list-style-type: none"> • Scope Creep • Cost overruns
PROBABLE <i>Risk will occur</i>	<ul style="list-style-type: none"> • Bad User Interface and Experience • Lack of Participation 	<ul style="list-style-type: none"> • Data Inaccuracy 	<ul style="list-style-type: none"> • Stakeholder misunderstanding 	<ul style="list-style-type: none"> • System Integration Issues

Action items

After risks rating, we formulated a series of strategies aimed at effectively managing and reducing all risks to the greatest extent possible.

1: System Integration Issues:

- Conduct a thorough analysis of existing ERP and CRM data structures
- Implementing robust data mapping strategies is essential
- Using API solutions to facilitate data synchronization

2: Scalability Concerns:

- Implementing a cloud-based infrastructure is crucial for enabling scalability such as AWS, Google Cloud, AZURE
- Regularly testing load performance for preparing the increased demand
- Plan for updating and expanding the system to accommodate future growth

3: Data Loss or Corruption:

- Creating a backup data storage system.
- Implementing automated backups at regular intervals.
- Regularly conducting system audits is crucial for early detection of potential issues.

4: Security Vulnerabilities

- Implementing end-to-end encryption for all sensitive data
- Installing intrusion detection systems and firewalls.
- Regularly conducting security audits and vulnerability assessments is important.

5: Unoptimized System Performance

- Implementing load balancing and resource (pictures, video, transactions,...) allocation optimization.
- Optimizing algorithms for route planning and inventory management.
- Regularly monitor system performance on key features of logistics and identify bottlenecks.

6: Time Management

- Tasks are not completed on time, causing project delays.
- Additional tasks added without timeline adjustment.
- Too many high-priority tasks cause delays.

7: Lack of Resource

- Not having enough team members to handle workload.
- Not enough or outdated equipment to perform tasks effectively.
- Resources are not allocated effectively across tasks or projects.

8: Lack of Participation

- Fostering an friendly and supported project environment where every opinion is valued.
- Encouraging team members to share ideas through meetings or collaboration tools.
- Establishing a well-defined deadline plan to ensure everyone stays on course with their assigned tasks and responsibilities.

9: Unequal Distribution of Work

- Ensuring clear role descriptions
- Assigning tasks based on individual skills and managing the tasks on project management tools such as Confluence, Jira,...
- Promoting collaboration and teamwork to ensure that all team members contribute equally

10: Stakeholder misunderstanding

- Development of features that do not meet stakeholder needs.
- Confusion about project goals and deliverables.

- Lack of feedback can lead to unresolved misunderstandings.

11: Scope Creep

- Defining a clear scope and project requirements at the start of the project and carefully analyze any revisions that may arise during the project lifecycle.
- Stick to the project plan or proposal and avoid adding non-critical features.
- Regularly review the scope and requirements with the team member and stakeholders.

12: System Downtime

- Immediate shutdown of systems and potential data loss.
- Mistakes during system updates or configurations causing downtime.
- Dependence on third-party services leading to unplanned downtime.

13: Data Inaccuracy

- Implementing data validation rules and automated data entry checks enhances the accuracy and reliability of data inputs.
- Regularly conducting audits and maintenance on the database to pinpoint and rectify any inaccuracies present.
- Utilizing machine learning algorithms to identify and address data anomalies promptly.

14: Bad User Interface and Experience

- Conducting user experience (UX) testing during the development phase.
- Offering training, resources, and a comprehensive guide to help users gain a better understanding of the system.
- Updating the system's new versions based on user feedback to enhance the interface.

15: Cost overruns

- Developing a comprehensive project budget is essential for effective financial planning and ensuring to include precise cost estimates for every phase of the project.
- Utilizing a change management process to assess the cost implications of any new requests.
- Creating backup funds to handle unexpected expenses effectively.

16: Law enforcement

- Stay informed about the latest transportation and logistics regulations.
- Regular legal reviews and compliance audits should be conducted consistently.
- Collaborating with legal experts to ensure the timely implementation of necessary system changes.

17: Financial movements

- Regularly monitor inflation rates, currency fluctuations, and financial markets to stay informed and make informed decisions.
- Employing financial forecasting tools for anticipating and alleviating the repercussions of economic fluctuations.
- Preparing the backup plan to lessen the effect of economic fluctuations.



Persona & Empathy Map

Persona - Logistic Manager

Persona name	Tran Tuan Anh (Ben Anh)
Persona role	Logistic Manager
Job description	Mr. Ben Anh is responsible for leading the department of logistics and supply chain. In addition, his key tasks include identifying and implementing ways to optimize the strategic planning of transportation route development, building long-lasting relationships with both international and domestic third-party logistics companies, conducting contract negotiations, and optimizing the routine depending on costs and the logistics ecosystem. Furthermore, Ben must make decisions to address external crisis situations like supply chain distribution disruptions and regulatory changes, all while focusing on enhancing sustainability and profitability. Lastly, he also focuses on implementing new technology techniques to optimize profits and keep up with global trends in this industry.

🏢 Company

Company name	Indo Trans Logistics Corporation
Company size	201-1500 employees
Industry	Logistics Management, Supply Chain Management (SCM), and Storage

👤 Demographic information

Age	52
Gender	Male
Income	from \$1500 to \$2000 per month / around \$20,000 per year
Education level	Master of logistics and supply chain management from IU university
Residential environment	Metropolitan

✍️ Personal quote

"Creating value for the Logistics industry is ITL goal" - Ben Anh

Biography

Mr. Ben Anh, born into an educated family in Ho Chi Minh City, had easy access to abundant resources for his education and knowledge acquisition. After he graduated with a master's degree in Logistics and Supply Chain Management from IU University, he had an internship at ITL Corporation, where he took on the role of demand-supply planning. Through his hard work, dedication, and passion for this industry, he has now attained the position of Logistic Manager at the company with the dream of driving Vietnam's logistics industry forward and making the ITL Corporation the country's first billion-dollar logistics firm by 2029.

Professional goals	Motivators
<ul style="list-style-type: none">• Strengthening ITL's position as the leader in Vietnam's fragmented logistics market• Building new logistics infrastructure and ecosystem related to aviation, warehousing, cold chain,...• Apply new and innovative technologies ideas or solutions for logistic management such as automated warehousing, real-time tracking,....	<ul style="list-style-type: none">• Making the ITL Corporation one of the best logistics companies in Vietnam• Passion for jobs in the logistics and supply chain industry• Having high social status and being respected by family, colleagues and friends• Having a high income for a comfortable life
Challenges	Sources of information
<ul style="list-style-type: none">• Managing the high logistic cost to optimize the profit and increase the competitiveness in the global marketplace.• Lack of human resources having knowledge and skills of this industry.• Intense competition from both local and international firms.• The increasing demand of customers such as flexibility, agility and optimal service from logistics companies.	<ul style="list-style-type: none">• LinkedIn posts from ITL Corporation provide insights of the logistics sector in the company.• Ben regularly reviews logistics reports from McKinsey, DHL, and <i>Vietnam Logistics Review</i> to stay updated on trends and innovations.• He attends events like the <i>Vietnam Logistics Forum</i> to connect with industry leaders and keep up with advancements.• Ben analyzes ITL's logistics performance metrics to guide strategy and improve efficiency.

Customer Interview - Logistic Manager

Date of interview	Sep 20, 2024
Interviewers	Dinh Viet Phat
Customer name	Tran Tuan Anh (Ben Anh)
Customer contact info	(84-8) 3948 6888
Company name	Indo Trans Logistics Corporation



Top takeaways

- Cost Management & Profit Optimization with route optimization and strategic partnerships
- Exciting Technologies in TMS model: He is particularly excited about integrating **AI-driven route planning, shipment tracking, and predictive analytics**

- Key Performance Metrics: On-time delivery, cost per shipment, and inventory turnover are the most valuable metrics for assessing logistics performance and ensuring customer satisfaction and profitability.

Background

▼ Interview questions and answers

- Q1: What are the biggest challenges you face when managing the high logistics costs while optimizing profit?
 - Mr. Ben Anh's answer: "One of the major challenges in effectively managing high logistics costs while maximizing profits involves striking a balance between efficiency and cost control. For example, factors such as escalating fuel prices, lack of human resources, and unpredictable demand frequently drive up operational costs, posing a challenge to optimize profitability. Moreover, guaranteeing prompt deliveries while minimizing transportation expenses necessitates meticulous route optimization and real-time tracking systems. So, we believe your transportation management system solution will help us solve this problem. Moreover, we also have a plan to forge strategic partnerships to reduce carrier expenses. Finally, maintaining a seamless inventory management system to prevent stockouts or excess inventory introduces another layer of complexity."
- Q2: What new technologies are you excited about in the TMS model, and how do you plan to implement them at ITL?
 - Mr. Ben Anh's answer: "For the TMS model, I am enthusiastic about the integration of AI-powered route optimization, real-time IoT-based shipment tracking, and predictive analytics. AI will improve route planning by taking into account real-time data such as traffic and weather, optimizing for cost-efficiency and delivery speed. Moreover, some technologies like GPS and RFID will enable real-time tracking, so we can make immediate operational adjustments if the driver has problems. Besides, predictive analytics will aid in forecasting demand and optimizing resource utilization to prevent inefficiencies. Our strategy involves a phased implementation of these technologies, commencing with AI and tracking technologies trials, followed by a gradual expansion across ITL's complete logistics network."
- Q3: What performance metrics do you find most valuable in assessing ITL's logistics operations?
 - Mr. Ben Anh's answer: "Some of the important metrics that are central to the appraisal of the logistics operations of ITL include the delivery rate, on-time performance data, cost per shipment, and return on inventory ratio. The delivery rate enables us to check how many orders within a given period and to ascertain how effective the delivery routes through the customer satisfaction index. Moreover, on-time delivery data holds significant importance in ensuring customer satisfaction, as delays can signal operational shortcomings. Besides, on the cost analysis per shipment, we will understand the profitability of a business, ensuring that every shipment is worth more than the total costs incurred in the process. Finally, I focus on the return on inventory ratio and carrier metrics to optimize inventory levels and enhance carrier relationships for better service quality and efficiency at lower costs."

Use cases

With our product, the logistic manager (Mr Ben anh) and his logistic team can have some benefits:

- Route Planning and Optimization: A dispatcher uses the TMS to generate the most efficient delivery route for a fleet of trucks, factoring in current traffic conditions and estimated delivery times.
- Shipment Tracking: A customer service representative accesses the TMS to provide a customer with the current location and estimated arrival time of their shipment.
- Reporting and Analytics: The logistics manager reviews monthly reports from the TMS to assess transportation costs, identify trends, and make informed decisions about future operations

Observations

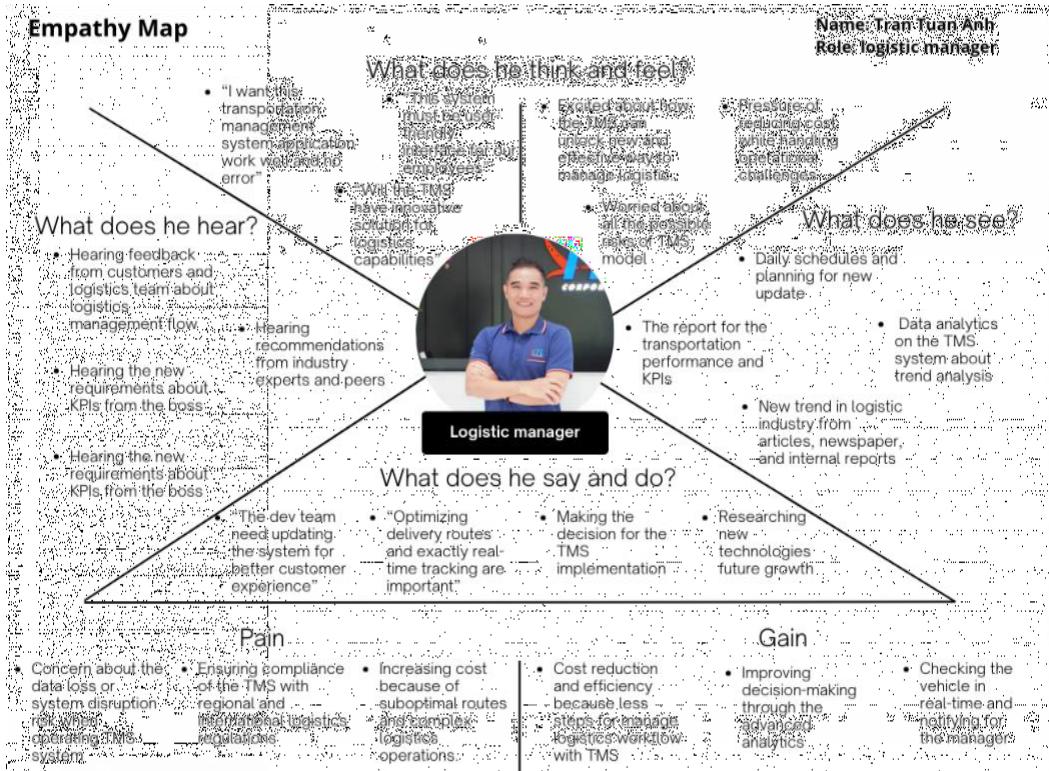
Problem: Logistics Management with a Transportation Management System (TMS) model that incorporates innovative technologies to reduce cost and optimize profitability.

Takeaway:	Mr. Ben Anh faces significant challenges in controlling logistics costs without compromising on efficiency. Emphasizing the need for strategic partnerships and advanced technology to optimize profitability.
Opportunities:	The implementation of AI for routes, Tracking technology, and data analytics within the Transportation Management System (TMS) presents a substantial opportunity for ITL to enhance operational efficiency and responsiveness to market demands.
Tickets:	Performance measures like delivery rate and on-time performance are crucial for evaluating logistics operations. It is essential to consistently monitor these metrics to uphold customer satisfaction and operational efficiency.

Problem: Operational efficiency and team performance of logistics in the new TMS model.

Takeaway:	The apply of the new Transportation Management System (TMS) promotes improved teamwork among colleagues, resulting in more efficient logistics processes and enhanced communication.
Opportunities:	The TMS offers sophisticated analytics and reporting tools that empower teams to make data-driven decisions. This capability allows the team to quickly pinpoint and resolve operational inefficiencies.
Tickets:	Enhanced accountability is achieved by implementing task tracking in the TMS, enabling team leaders to closely monitor performance metrics. This capability ensures prompt interventions and boosts operational efficiency.

Empathy map - Logistic Manager



Persona - Supply Chain Manager

Persona name	Bui Quang Lien
Persona role	Supply Chain Manager
Job description	Mr. Bui Quang Lien oversees departmental supervisors and daily operations, ensuring efficient supply chain processes. Key responsibilities include maintaining inventories, optimizing production, establishing performance metrics, and negotiating with suppliers. The manager collaborates across departments to enhance efficiency, monitors supplier performance, and participates in product development discussions.

Company

Company name	Indo Trans Logistics Corporation
Company size	201-1500 employees
Industry	Transportation, logistics, supply chain, and storage

Demographic information

Age	49
Gender	Male
Income	High income, around \$160,000 annually
Education level	Master of Business Administration
Residential environment	Metropolitan

Personal quote

"Effective supply chain management is not just about moving products; it's about creating value through collaboration and innovation." – A loyal client who appreciates Mr. Lien's dedication to efficiency.

Biography

Bui Quang Lien, 49 years old, growing in a poor farming family in rural Vietnam, where he learned the fundamentals of supply chain management through managing water, fertilizer, and seeds on his family's farm. Determined to create a better life, he worked hard in school and eventually earned a Bachelor of Science in Operations Management. Mr. Lien moved to Ho Chi Minh City to pursue his career and started as an intern at Indo Trans Logistics Corporation. Through hard work and dedication, sometimes, he often traveling hundreds of kilometers to oversee supply chain operations. After all, he rose to the position of Supply Chain Manager, fulfilling his dream of a successful career, being respected by many people while supporting his family.

Professional goals	Motivators
<ul style="list-style-type: none"> Enhance operational efficiency across the supply chain. Implement innovative solutions that reduce costs. Improve service delivery to exceed customer expectations. Foster a culture of continuous improvement within the team. 	<ul style="list-style-type: none"> Desire for professional recognition and respect within the industry. Passion for sustainable supply chain practices and reducing environmental impact. Drive to mentor and develop the skills of his team members.
Challenges	Sources of information
<ul style="list-style-type: none"> Managing supply chain disruptions caused by global events (e.g., pandemics, trade disputes). Balancing cost efficiency with the need for high-quality products and services. Keeping pace with rapidly changing technology and integrating it into existing systems. 	<ul style="list-style-type: none"> Industry publications such as Supply Chain Management Review and Logistics Management. Participation in Council of Supply Chain Management Professionals (CSCMP). Online courses and webinars on emerging technologies in supply chain management. Networking with peers and industry experts through LinkedIn and professional forums.

Customer Interview - Supply Chain Manager

Date of interview	Sep 20, 2024
Interviewers	Truong Le Minh Toan
Customer name	Bui Quang Lien
Customer contact info	Facebook account: Facebook Link (Lien David) LinkedIn profile: LinkedIn Link (David Lien)
Company name	Indo Trans Logistics Corporation



Top takeaways

- Vision for applying technology in managing supply chain of ITL Corporation
- Challenges to current supply chain managing methods
- Management and leadership style of Mr. Lien

Background

Interview questions and answers

- Q1: What do you feel and think about the current landscape of the logistics field and the supply chain industry in particular?
 - Mr. Lien's answer: "The logistics and supply chain industry is rapidly growth, and I constantly thinking about how to optimize our operations to reduce costs without sacrificing quality. There's a delicate balance between efficiency and innovation, especially as customer expectations rise and the competitive landscape shifts. I feel a strong responsibility to stay ahead of these changes, but I'm also aware of the challenges, particularly the disruptions caused by global events like pandemics or economic crises can change the market situation at any time. These events highlight the vulnerabilities in supply chains and make it clear that we need to be more resilient. At the same time, I see opportunities to leverage advanced technologies, for automation, to enhance operational efficiency and develop our business."
- Q2: Which kind of solutions would you like to see ITL Corporation integrate to drive the development of its supply chain operations?
 - Mr. Lien's answer: "I believe ITL Corporation needs to focus on integrating innovative technologies into our supply chain processes. We've already heard a lot about how AI, automation, and data analytics can optimize operations, and I've spoken to the board about making these investments. Technologies like online managing platform can enhance the productivity, while predictive analytics can help us avoid disruptions and adjust accordingly. It's not just about cost-saving; it's about positioning ourselves as leaders in an industry that's changing rapidly. By implementing these solutions, we can not only meet rising customer expectations but also improve supplier relationships and gain better control over pricing fluctuations."
- Q3: Can you share the difficulties you encounter when managing the operations of the supply chain department?
 - Mr. Lien's answer: "Managing the operations of the supply chain department is not easy, especially when it comes to balancing the internal harmony of the team with external challenges. One of the main difficulties is ensuring that my team consistently performs at a high level, avoiding delays and inefficiencies, while adapting to the evolving demands of the industry. Each team member has unique strengths, and it's part of my responsibility to mentor and develop those skills to create a efficient workforce. I communicate regularly with my team, focusing on clear objectives and fostering a culture of continuous improvement. However, external factors, such as fluctuating supplier prices and market disruptions, make my workload more heavy. Negotiating with suppliers to ensure timely deliveries while maintaining cost efficiency can be a challenging task. Despite these difficulties, I take pride in seeing my team succeed, and I believe that by keep track of their growth, we can achieve operational excellence across the supply chain."

Use cases

- With our product, the supply chain manager, and his department will benefit from having a system including:
 - **Inventory Management:** Real-time data about inventory levels in warehouse, and during transportation
 - **Supplier Management:** Having a database of approved supplier, their capabilities, and performance history.
 - **Reporting and Analytics:** generating comprehensive report for tracking performance, KPIs, billing,...

Observations

Problem: Supplier Management and Integration of Technology

Managing supplier and ensure timely delivery has become the complex problem due to different aspects including fluctuating price, disruption caused by global event, and changing logistics trend.

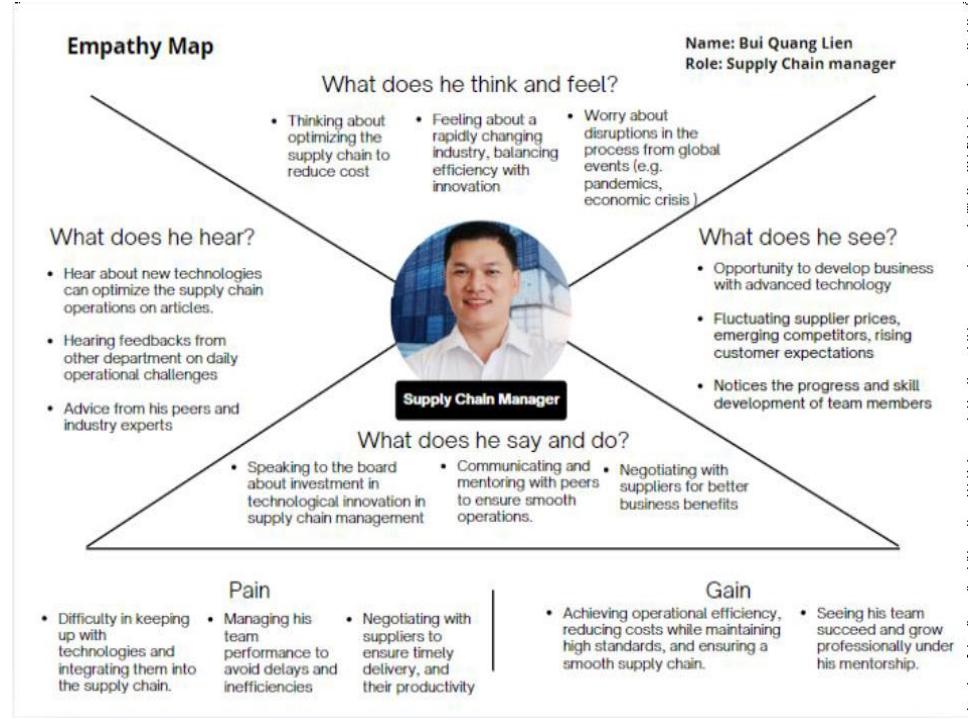
Takeaway:	The supply chain department faces challenges in both external and internal forces including the market volatility, supplier performance, need for technological upgrades. Mr. Lien focused on increasing efficiency but needs support with technology integration.
Opportunities:	Software function to access and query the database of approved supplier will be needed to manage and ensure the performance of supplier. Moreover the needs of implementing inventory management platform to optimize the product management.
Tickets:	<ul style="list-style-type: none">• Implement function to track the inventory in the application• Implement management tools and database for keeping track of supplier

Problem: Team Performance and Operational Efficiency

Managing the team's performance, ensuring that each member contributes effectively to avoid delays, and mentoring them while keeping track of operational demands is current challenges.

Takeaway:	Mr. Lien has made great effort in adapting different kind of improvement, his team could benefit from better collaboration tools and clearer performance metrics to optimize their contributions.
Opportunities:	Introducing the function in managing software for tracking the performance and monitoring deadlines for staff. Offer training programs to ensure that all team members are equipped with the latest skills in supply chain management and using technology.
Tickets:	<ul style="list-style-type: none">• Implement a performance management tool to track team KPIs.• Conduct workshops or training sessions on new supply chain technologies for the team.

Empathy Map - Supply Chain Manager



Persona - Warehouse Manager

Persona name	Ho Vo Thanh Binh
Persona role	Warehouse Manager
Job description	Mr. Binh is responsible for overseeing the daily operations of the warehouse, ensuring the efficient and effective management of goods in accordance with company standards and regulatory requirements. This role involves coordinating staff activities, maintaining inventory accuracy, optimizing storage solutions, and ensuring a safe working environment.

Company

Company name	Indo Trans Logistics Corporation
Company size	201-1500 employees
Industry	Transportation, logistics, supply chain, and storage

Demographic information

Age	47
Gender	Male
Income	Around \$100,000 per year
Education level	Certified Warehouse Logistics Professional
Residential environment	Metropolitan

Personal quote

"Efficient operations and a dedicated team are the backbone of our success. A well-organized warehouse doesn't just store goods; it drives our business forward." – A satisfied customer of Indo-Trans Logistics Corporation

Biography

Ho Vo Thanh Binh is 47 years old, born in Can Tho and is currently a warehouse manager at Indo Trans Logistics Corporation. Since childhood, his parents taught him to work hard to get him a good job, so he studied hard and got a Bachelor of Science in Operations Management. He decided to go to Ho Chi Minh City to easily get a good job. And he has fulfilled his dream with a good job and can help his family.

Professional goals	Motivators
<ul style="list-style-type: none"> Move into higher-level roles like Operations Manager or Regional Logistics Manager, overseeing larger teams and more complex operations. Implement systems to improve inventory accuracy, reducing stock shortages and excesses. Reduce environmental impact by implementing green practices like waste reduction and energy-efficient systems. 	<ul style="list-style-type: none"> Delivering on-time shipments and high-quality service for clients. Motivated by building and leading a high-performing team. Seeing a well-run warehouse operate smoothly and achieving business goals. Logistics and warehousing are essential industries, often providing long-term career opportunities.
Challenges	Sources of information
<ul style="list-style-type: none"> Balancing employee satisfaction with productivity demands and reducing turnover. Managing unexpected disruptions like delays from suppliers, transportation issues, or equipment failures. Adopting new systems while ensuring staff training and minimizing disruption. 	<ul style="list-style-type: none"> Connecting through professional forums and LinkedIn with colleagues and industry experts. Industry websites and associations such as Warehousing Education and Research Council (WERC)

Customer Interview - Warehouse Manager

Date of interview	Sep 20, 2024
Interviewers	Le Nguyen Thai Son
Customer name	Ho Vo Thanh Binh
Customer contact info	Mail: hvthanhbinh78@gmail.com Phone Number: +84767579961
Company name	Indo Trans Logistics Corporation



Top takeaways

- Challenges in balancing team satisfaction with productivity and managing unexpected disruptions.
- Aim to improve inventory accuracy and move into higher logistics roles.
- Prioritizes operational efficiency, team leadership, and sustainability.

Background

↳ Interview questions and answers

- Q1: What inspired you to pursue a career in logistics and warehouse management?
 - Mr. Binh's answer: "Logistics has always fascinated me because of the impact it has on every business. From an early age, I wanted to be in a field that's essential and constantly evolving. My education in Operations Management gave me the foundation to understand how businesses run, and moving into logistics felt like a natural step. It's both challenging and rewarding."
- Q2: What's your primary focus in your current role at Indo Trans Logistics Corporation?
 - Mr. Binh's answer: "Right now, my focus is on ensuring that our warehouse operates as efficiently as possible. I oversee daily operations to make sure our team is working effectively, and that inventory levels are accurate. I'm also paying close attention to how we can reduce waste and improve energy efficiency to support the company's environmental goals. Keeping our team motivated and productive is another priority."
- Q2: What are the main challenges you face on a day-to-day basis?
 - Mr. Binh's answer: "One of the biggest challenges is finding the right balance between pushing for high productivity and maintaining a positive work environment. I want my team to feel valued and not overworked, but we still need to hit our targets. Another challenge is handling unexpected disruptions, like delays from suppliers or equipment breakdowns. These can slow us down, so we need to act quickly and find solutions that don't disrupt operations too much."

Use cases

- Warehouse Management Optimization: Systems that improve inventory tracking, prevent shortages, and reduce excess stock.
- Team Productivity Tools: Keep his team motivated while maintaining high productivity.
- Sustainability Practices: Make warehouse operations more environmentally friendly by reducing energy consumption and waste.

Observations

Problem: Inventory Management and Sustainability Initiatives

Facing challenges in maintaining accurate inventory levels, leading to shortages or excess inventory. At the same time, find ways to incorporate more environmentally friendly practices into warehouse operations.

Takeaway:	Despite his efforts to optimize inventory processes, there is room for improvement in accuracy. Implementing more advanced tracking systems and green technologies could help Mr. Binh achieve his goals of operational efficiency and sustainability.
Opportunities:	Implement automated inventory management tools that reduce human error and track stock levels in real-time. Introduce eco-friendly solutions like energy-efficient lighting and solar power systems, aligning with Mr. Binh's commitment to reducing the warehouse's environmental impact.
Tickets:	<ul style="list-style-type: none">• Deploy a modern inventory management solution to track stock automatically and provide real-time updates on inventory levels.

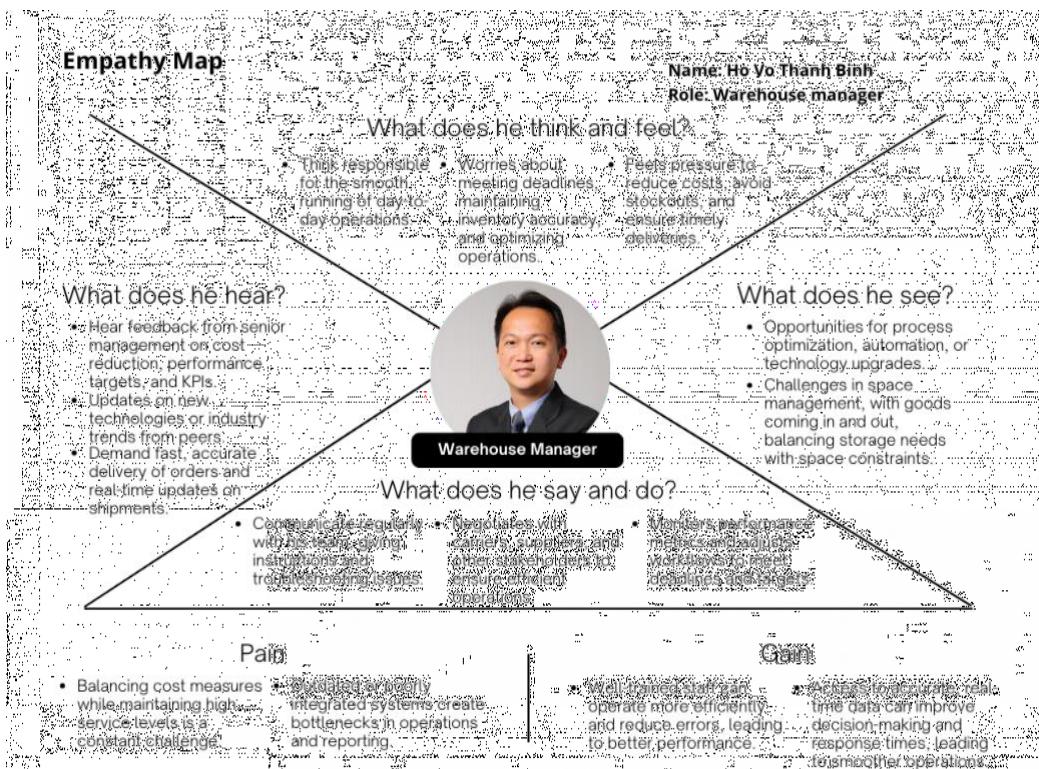
- Integrate green technologies such as renewable energy systems and energy-saving warehouse solutions.

Problem: Adapting to new technologies

Facing challenges in adopting and integrating new technology within his warehouse. While he recognizes the importance of digital transformation, ensuring smooth adoption and adequate staff training has been difficult, leading to inefficiencies.

Takeaway:	Mr. Binh has shown interest in modernizing his operations but could benefit from more structured implementation strategies and comprehensive staff training programs to ensure technology adoption aligns with operational goals.
Opportunities:	Develop a phased technology integration plan to introduce new systems gradually. Provide tailored training programs to help staff adapt to new technologies such as warehouse automation, digital inventory systems, and performance analytics tools.
Tickets:	<ul style="list-style-type: none"> • Implement a step-by-step plan for rolling out new technologies, with clear timelines and goals. • Arrange technology-focused training workshops to ensure all team members are comfortable using the new systems. • Regularly evaluate and optimize the use of newly integrated technologies to ensure they deliver value.

Empathy Map - Warehouse Manager



Persona - Driver

Persona name	Do Huu Di
Persona role	Driver
Job description	Mr. Di's responsible for operating a light truck for the distribution of goods within Ho Chi Minh City and surrounding provinces.

🏢 Company

Company name	Indo Trans Logistics Corporation
Company size	201-1500 employees
Industry	Transportation, logistics, supply chain, and storage

👤 Demographic information

Age	39
Gender	Male
Income	3750\$ - 6250\$ annually, based on route.
Education level	High School, Vocational Training, Professional Driver's License (Class C)
Residential environment	Metropolitan

✍ Personal quote

"If everything seems under control, you're just not going fast enough." - This is his personal quote that he gains through many years of driving.

📜 Biography

Do Huu Di is a 39-year-old professional driver working for Indo Trans Logistics Corporation. He comes from Tay Ninh Province, where living standards are not as high as in Hồ Chí Minh City. As a result, his dream is to explore more places in Vietnam one day. Despite facing various challenges, he worked hard to complete high school. However, due to financial difficulties, he realized that university was not the right path for him. Instead, he chose to follow his family's tradition of becoming a truck driver, which also allows him to pursue his dream. He moved to Ho Chi Minh City to obtain his truck driving license. Now, he is content in his job, as it provides him with a stable and consistent income to support his family.

Professional goals	Motivators
<ul style="list-style-type: none"> To continue improving his driving skills and maintain an impeccable delivery record. To ensure financial stability and provide for his family through consistent and reliable driving work. 	<ul style="list-style-type: none"> Achieving timely deliveries and meeting company goals. Earning based on performance, with a direct link between efficiency and income.
Challenges	Sources of information
<ul style="list-style-type: none"> Managing long work hours and physical fatigue associated with long driving hours. Navigating through traffic-heavy urban areas and dealing with unpredictable road conditions. Balancing time management between different delivery routes while meeting deadlines. 	<ul style="list-style-type: none"> Online forums and communities of professional drivers. Company updates and industry news from Indo Trans Logistics Corporation.

Customer Interview - Driver

Date of interview	Sep 20, 2024
Interviewers	Nguyen Hoang Trung
Customer name	Do Huu Di
Customer contact info	Phone number: +84935890195 Social platform: Facebook, LinkedIn
Company name	Indo Trans Logistic Corporation



Top takeaways

- Key Challenges Faced
- Future Goals and Aspirations
- Improvement Opportunities

Background

▼ Interview questions and answers

- ◆ Q1: "What are the most difficult situations you've faced while delivering goods for logistics customers in urban and rural areas, and how did you adapt to overcome them to meet customer expectations?"
 - A1: "One of the biggest challenges I've faced is dealing with heavy congestion in Ho Chi Minh City, especially during peak hours. I used to manually plan my routes, but without real-time updates, it wasn't effective. I then started using a navigation app that provides real-time traffic conditions, allowing me to adjust my route on the go. I keep dispatchers and customers informed and always look for the fastest, safest alternative route when delays occur. This way, I ensure deliveries remain on schedule, despite the traffic. And I believe that the application can still be more advanced to include predictive traffic patterns, allowing drivers to anticipate congestion and optimize routes even more effectively."
- ◆ Q2: "What are your long-term career goals as a professional driver in the logistics and supply chain industry, and how do you see this role at ITL Corporation helping you achieve them?"
 - A2: "My long-term career goal is to continue growing within the logistics and supply chain industry by taking on more complex, or shorter routes and potentially mentoring new drivers. My aim is to expand my skills in route optimization and fleet management. I see this role at ITL Corp as an opportunity to learn from a well-established company with strong operational standards. I'm confident that working here will help me to best practices in logistics, delivering and help me develop the skills necessary in the future."
- ◆ Q3: "If you could suggest one improvement to logistics operations that would enhance customer satisfaction or reduce delivery times, what would it be and why?"
 - A3: "One improvement I'd suggest is implementing a more robust vehicle tracking system that allows both the company and customers to have real-time visibility of delivery progress. This transparency would help customers anticipate delivery times more accurately and reduce the number of status inquiries we receive, which can slow down communication. It would also help us drivers plan for unexpected delays, thereby improving overall efficiency and customer satisfaction."

Use cases

For drivers, there will be many use cases for our product or service:

- Fuel Consumption and Vehicle Health Monitoring
- Route Planning and Optimization
- Performance Analytics and Incentives

Observations

Indo Trans Logistics Corporation has been experiencing challenges in managing delivery routes and optimizing fuel consumption, particularly in high-traffic areas within Ho Chi Minh City. Ensuring efficient deliveries while maintaining vehicle health and driver performance is critical for the company. Drivers like Mr. Đỗ Hữu Di, who operate light trucks for goods distribution, face difficulties in managing long work hours and navigating unpredictable traffic conditions.

Problem: Managing Delivery Routes and Vehicle Efficiency

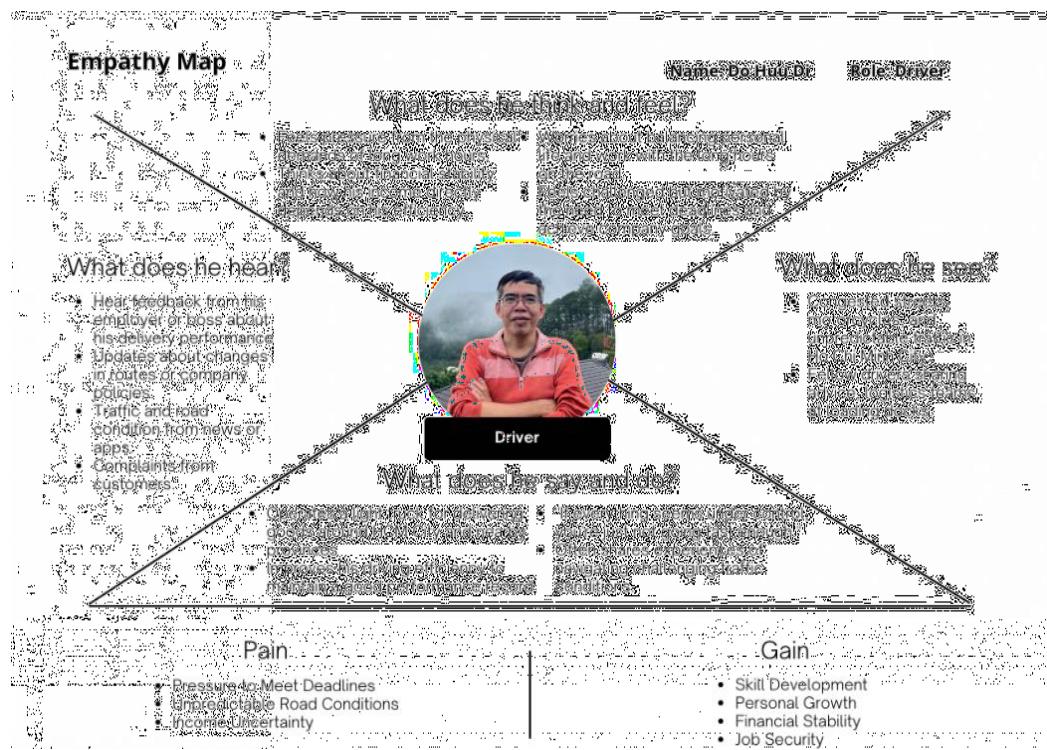
Takeaway:	Mr. Di recognizes the importance of having tools that can support more efficient route planning and fuel management. Digital solutions that provide real-time traffic updates and fuel consumption analytics are crucial to reducing delivery times and costs, thereby improving overall efficiency.
Opportunities:	Developing a platform that offers real-time route optimization and vehicle health monitoring would help drivers like Mr. Di make data-driven decisions to avoid traffic congestion and manage fuel consumption more effectively. Additionally, integrating predictive analytics for traffic patterns and vehicle maintenance schedules could enhance driver performance and reduce vehicle downtime.

Tickets:	<ul style="list-style-type: none"> • Implement a real-time route optimization system that offers drivers live traffic updates and alternative route suggestions based on current road conditions. • Create a fuel consumption monitoring tool that tracks and analyzes fuel efficiency based on driver behavior and road conditions, allowing drivers to optimize fuel use. • Develop a vehicle health monitoring feature that provides alerts on maintenance needs, reducing the risk of breakdowns and ensuring vehicle longevity.
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Problem: Lack of Advanced Navigation and Driver Performance Tools

Takeaway:	A comprehensive driver management system that tracks performance and integrates with vehicle navigation would allow drivers like Mr. Di to better plan their routes, manage delivery times, and achieve performance goals. This would also improve communication between drivers and dispatchers, ensuring smoother coordination during complex delivery schedules.
Opportunities:	Implementing a driver management system that integrates with the company's logistics operations could streamline communication and support route planning based on delivery priorities and driver schedules. Moreover, incorporating a performance tracking feature could help motivate drivers by linking performance metrics to incentives, encouraging consistent quality and efficiency.
Tickets:	<ul style="list-style-type: none"> • Integrate a driver management system that provides detailed performance metrics, including driving speed, fuel consumption, and delivery punctuality. • Create a communication platform that connects drivers with dispatchers for quick updates and route changes, ensuring smoother logistics coordination. • Implement a reward system based on performance metrics to recognize and incentivize drivers for achieving efficiency and safety goals.

Empathy Map - Driver



Persona - Customer

Persona name	Kim Vy Ha
Persona role	Supply Chain Manager
Job description	Ms. Kim Vy Ha is responsible for Ricoh's entire supply chain process, from forecasting and purchasing to delivery. Her duty varies from ensuring shipments, warehousing, cost managing to overseeing delivery for distributors and end-users. Ms. Ha is experienced in cost managing, third party logistics management, and Information and Technology solution.

🏢 Company

Company name	Ricoh Vietnam
Company size	51-200 employees
Industry	Office automation and digital services industry

👤 Demographic information

Age	37
Gender	Female
Income	\$25,000 - \$30,000 annually
Education level	Bachelor's Degree in Supply Chain Management - University of Economics HCMC
Residential environment	Ho Chi Minh City

✍ Personal quote

"Without logistics the world stops." ~Dave Waters.

📜 Biography

Ms. Ha Kim Vy is a supply chain manager at Ricoh Vietnam, a mid-sized company specialized in office automation and office digitalization solution. After graduating from the University of Economics HCMC, she started her career as a Sales Executive at Vinatrans. During her 6 years at Vinatrans, she gained a great deal of knowledge and experience in the fields of Transportation, Freight, Customs clearance, and Warehousing. She was also awarded "Good employee of the year". When opportunity arose, she took her chance to become an Assistant Manager at Ricoh Vietnam. After 7 years of hard work and outstanding contribution, she was promoted to the Supply Chain Manager position. Until now, her concern is the guarantee of shipment and delivery, making sure her customers receive the best service they deserve. Currently, she is most interested in finding a reliable, high-quality LCL (less than container load) shipment solution to transport Ricoh's digital devices internationally.

Professional goals	Motivators
<ul style="list-style-type: none"> • Strengthen third-party Logistics relationship and find reliable shipment service providers • Expand Ricoh's Regional Supply Chain Network • Establish a guaranteed, flexible and scalable supply network 	<ul style="list-style-type: none"> • Ms. Ha Kim Vy wants to learn new skills and advance her career and earn herself some remarkable achievements • She also wants to meet and make acquaintance with like-minded people, who can be both good friends and trust-worthy business partners
Challenges	Sources of information
<ul style="list-style-type: none"> • Achieve a balance in work life and personal life • Actively keep herself up to date about international economic factors (e.g. Market fluctuations, global economic conditions) • Cost-effective, reliable LCL solution 	<ul style="list-style-type: none"> • Economics publications • Company database and ERP (Enterprise Resource Planning) system • Professional social media (e.g. LinkedIn, Facebook, YouTube)

Customer Interview - Customer

Date of interview	Sep 20, 2024
Interviewers	Phung Gia Khang
Customer name	Ha Kim Vy
Customer contact info	Phone number: (+84) 906072005 Gmail: HakimvyRicoh@gmail.com Social media: Facebook, LinkedIn
Company name	Ricoh Vietnam



Top takeaways

- Aim at applying newest technology into managing and maintaining supply chain management and logistics system to expand Ricoh Vietnam's influence on the marketplace
- Challenges Ms.Ha faces when managing logistics and third-party suppliers
- Ms.Ha's concern for effective shipment solution and long-term third-party partnership

Background

▼ Interview questions and answers

- ◆ Q1: How has the logistics landscape evolved recently, and what trends are most influencing your role?
 - A1: "The logistics world has seen significant changes recently, especially during the emergence of global e-commerce and digitalization. At Ricoh, there is an increasing focus on speed and flexibility. We need to adapt to market fluctuations quickly. We are constantly finding ways to optimize resource utilization and save costs in our processes. The new digitalization trend has pushed us to apply newest solutions that make use of cutting-edge technology. These tools are becoming more and more important in helping us forecasting potential issues and keep track of complicated logistics challenges."
- ◆ Q2: What specific tools or systems do you think would most improve Ricoh's supply chain processes?
 - A2: "We are searching for services that enhance accessibility and control over the supply chain. An important area for improvement is our LCL (less than container load) shipping, helping us transport digital devices to all corners of the world. A software that displays real-time information from shipping providers, tracks transport route, and helps us predict delays. I believe a solution that allows us to follow the transportation of our goods., as well as their conditions would be helpful for the employees and our customers. Moreover, predictions about delays or changes in shipping fee would help us make more informed decisions in a timely manner."
- ◆ Q3: What are the main challenges you face in managing international logistics, and how do you approach them?
 - A3: There are many challenges I face when maintaining the safe and timely delivery of our goods. Since our product are mainly digital devices for offices, they are often quite costly. Another challenge is that there are so many variables, for example changes in shipping routes, unexpected faulty goods, or fluctuations in freight rate. Those factors make it difficult to provide consistent service to our customers. In response to this hardship, I find keeping a strong partnership with our third party providers especially helpful. By working tightly with them, I can keep myself and my team up to date about the goods condition, and act accordingly as soon as the problems arise.

Use cases

- ◆ Transportation Navigation and Shipment Tracking
- ◆ Supplier and Logistics Partner Management
- ◆ Predictive Analytics and Decision Making

Observations

Ricoh Vietnam struggles with managing LCL shipments efficiently, especially with international partners. Maintaining strong relationships with third-party logistics providers is essential, but fluctuating costs and unpredictable delays make consistent service challenging.

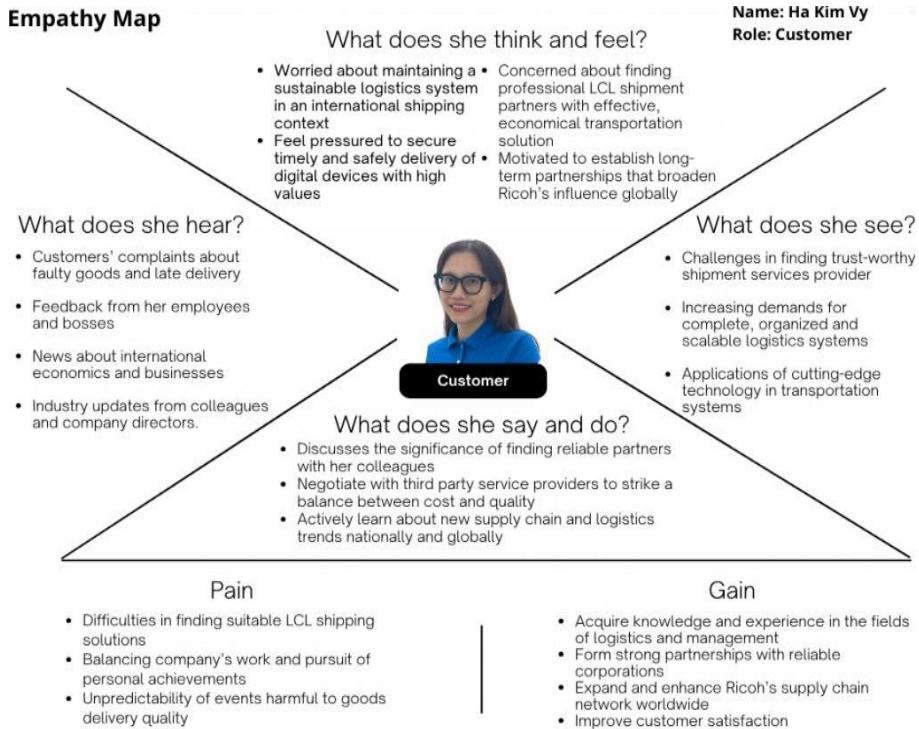
Problem: Managing LCL Shipments and Supplier Relationships

Takeaway:	Ms. Ha is keen on finding tools that can streamline the management of LCL shipping and enhance communication with suppliers. Digital solutions that offer real-time tracking and performance analytics are crucial for improving visibility and control.
Opportunities:	Developing a platform that consolidates shipment information and supplier performance metrics would help Ms. Ha make data-driven decisions. Additionally, tools that provide predictive analytics could assist her in forecasting disruptions and minimizing delays.
Tickets:	Implement a supplier performance tracking system that provides detailed reports on logistics partners.

Problem: Lack of Centralized Transport Management System (TMS)

Takeaway:	A centralized TMS would allow Ms. Ha and her team to manage transportation more effectively by consolidating all shipping data into one platform. This would provide a clear overview of shipment statuses, carrier performance, and delivery timelines, enabling faster and more informed decision-making.
Opportunities:	Implementing a TMS that integrates with Ricoh's existing ERP system and third-party logistics providers could streamline transportation operations. The system would enable automated route optimization, real-time tracking of shipments, and cost analysis, helping Ms. Ha manage both international and domestic shipments more efficiently. Moreover, a TMS with predictive analytics could assist in proactively addressing potential delays.
Tickets:	<ul style="list-style-type: none"> • Deploy a TMS system that supports multi-carrier management, real-time tracking, and automatic updates on shipment status. • Develop a module within the TMS for optimizing shipment routes and selecting the most cost-efficient transportation options.

Empathy Map - Customer





Product Requirements

Target release	24/11/2025
Document status	IN PROGRESS
Document owner	Team 15 - Akatsuki
Designer	Dinh Viet Phat, Nguyen Hoang Trung
Tech Leader	Phung Gia Khang
Technical writers	Le Nguyen Thai Son
QA	Truong Le Minh Toan

🎯 Objective

- Design, develop and create a cost-effective, high quality Transportation Management System Software solution
- Enhance logistics operations in terms of convenience, ease of use, and effectiveness
- Optimize utility of resources and budgets
- Maintain a database to manage warehouse inventory with records of carriers, their capacity, and shipment history with high scalability
- Support effortless reporting and analytics, enhance precision in billing and invoicing
- Provide smooth user experience
- Apply protective and security measures to defend unauthorized access into the system
- Develop a highly scalable supply chain management software with data backup and recovery

📊 Success metrics

Goal	Metric
Having a database system to streamlines order processing and inventory management.	Optimizing order processing time, minimize number of order fulfillment errors. Measuring stock-out frequency.
A database which compatibility with third-party logistics provider and carriers to access and query the supplier data.	Number of successful integrations with third-party systems. Ensure data exchange accuracy between different systems. Optimize the query response time from external providers' database.
Implementing optimal algorithm for route planning, which fit for different kind of transportation	Route optimization success rate. Integrating GPS for having the real-time location, and using AI-based algorithms to find optimal route for transportation. Alerts for shipment delays.
Real-time shipment tracking	Accuracy of GPS tracking transportation. Manage a large of shipments in real-time and alerts, send notification when there are delays or exceptions.

Tracking KPIs, cost, performance and generate comprehensive Reporting and Analytics	Generating number of KPIs and performance of staff being tracked. The usage rate of analytics for decision-making.
System for generating billing and invoicing, which ensure the accuracy and support different kind of billing structure.	Invoice and billing must be generated accurately, limit time to generate billing and supporting different billing structures.
Implementing strict security measures to safeguard user data, payment, and billing.	Reduce the number of security incidents, time taking for encryption data for safety. User data protection against unauthorized access
User friendly interface	Ensuring 100% user can proficiently interact with the software with less than 1 months training.
Having a backup database for storing important data which is used for recovery data when disruption and collapse	Always having backup data for the emergency situation. Optimizing speed of recovering to optimize the generated profit
User training and support for ITL staff	Ensure the entire ITL corporation, can integrate, and operate smoothly with the support of TMS application.

🤔 Assumptions

Enhanced Customer Experience:

A focus on improving customer interactions through timely communication, transparent tracking systems, and responsive support channels is critical for maintaining strong relationships and satisfaction.

Optimized Route Planning:

The logistics management system should include advanced algorithms for route optimization to enhance efficiency and reduce transportation costs. This will ensure timely deliveries and better resource allocation.

Data-Driven Decision Making:

The platform should leverage analytics and reporting tools to provide insights into transportation trends and operational performance. This data will enable informed decision-making and strategic planning.

Sustainability Initiatives:

As part of the commitment to enhancing sustainability, the logistics system should incorporate features that support green practices, such as optimizing fuel consumption and reducing carbon emissions in transport operations.

Regulatory Compliance:

The system must ensure compliance with local and international transport regulations. This includes adhering to customs procedures, safety standards, and environmental regulations, which are crucial for maintaining operational integrity.

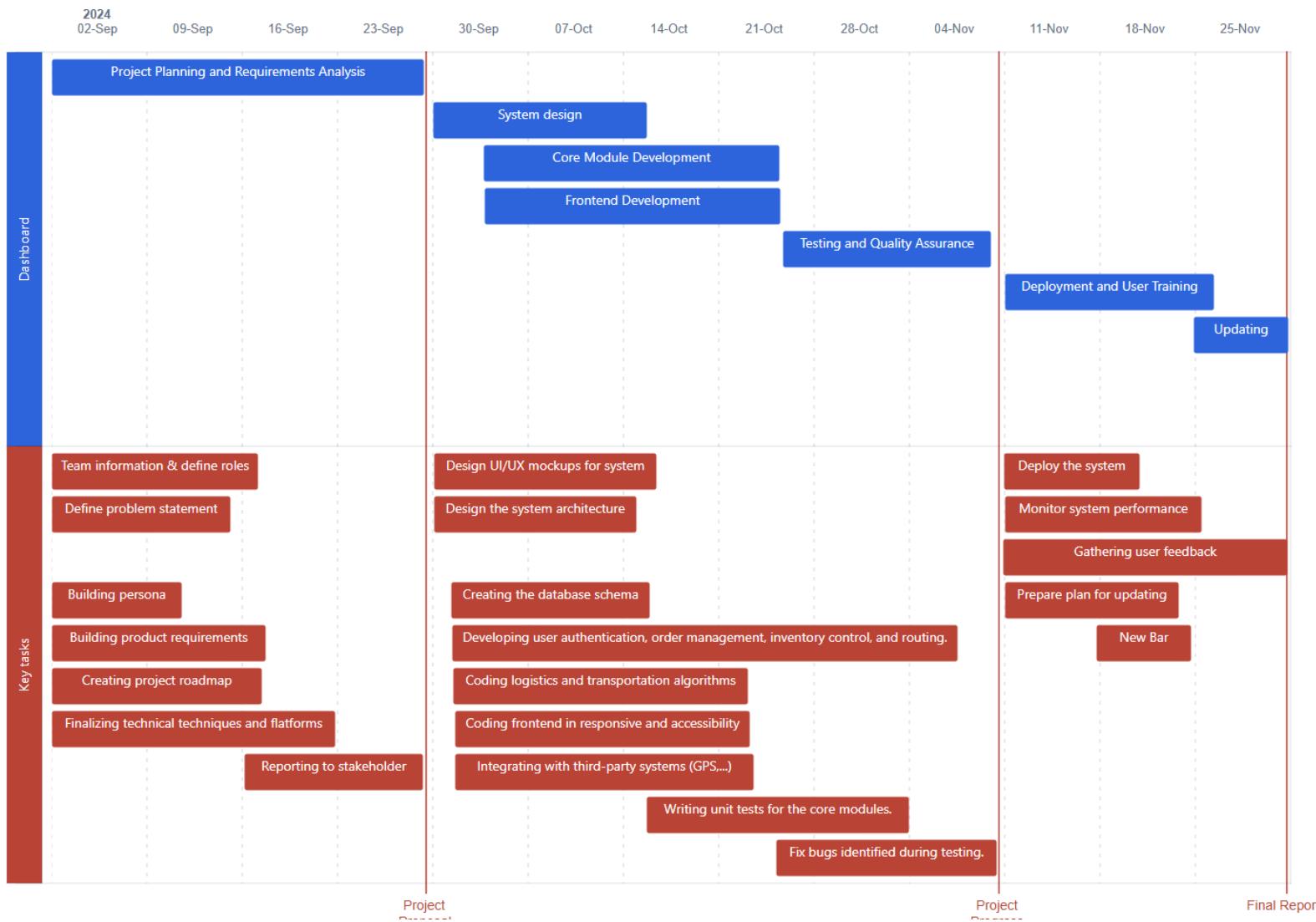
Scalability and Flexibility:

The logistics platform must be designed to scale with the growth of the business. It should accommodate fluctuating demand and allow for the quick onboarding of new clients and logistics partners without significant system overhauls.

Collaboration with Clients:

Clients expect seamless communication channels to track their shipments in real-time. The system should provide clients with updates on shipment status and delivery timelines, fostering transparency and trust.

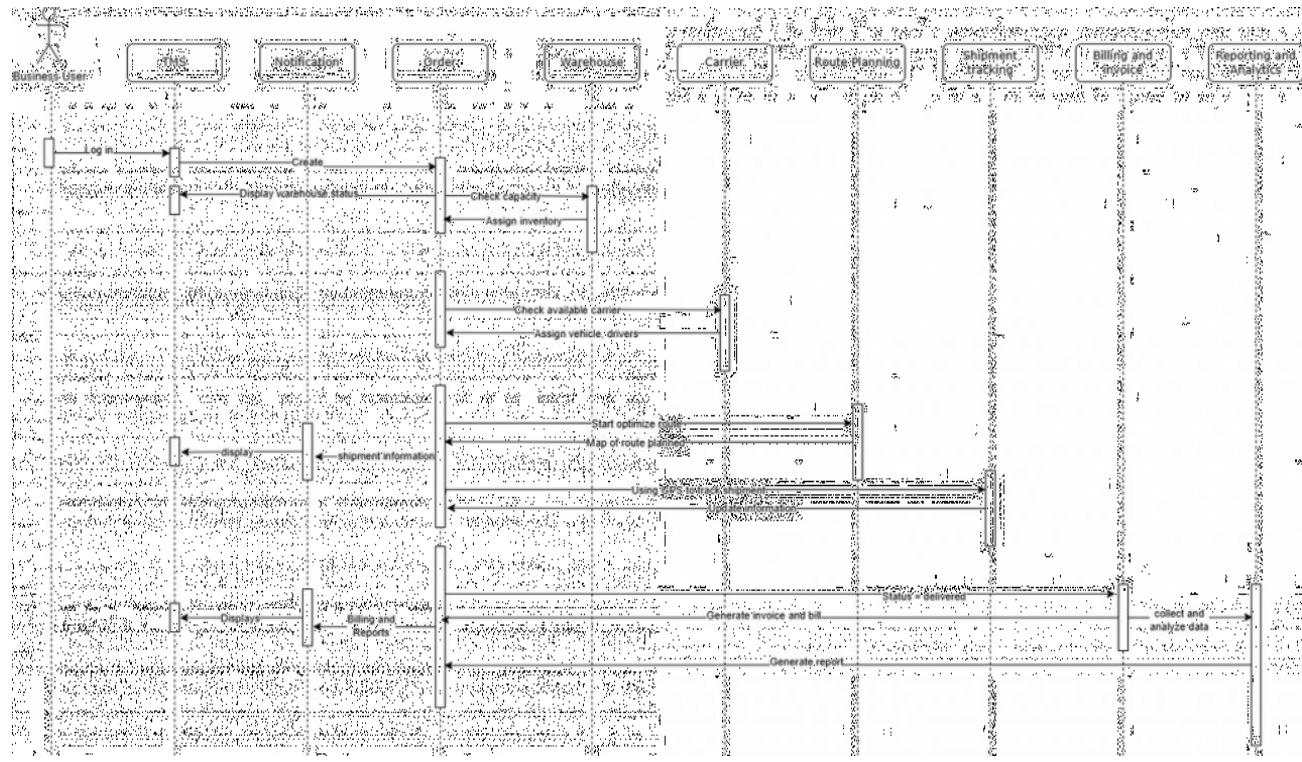
🌟 Milestones



Requirements

Requirements	User Story	Importance	Jira Issue	Notes
Reporting and Analytics	Mr. Anh is a logistics manager who wants to receive detailed reports on goods, so he can analyze the data for better decision-making.	MEDIUM	COS20031-23: Reporting and Analytics <small>to do</small>	
Data Backup and Recovery	Mr. Eric, a technical developer, wants to ensure that all data is securely backed up to prevent any potential data loss or issues in the future.	HIGH	COS20031-24: Data Backup and Recovery <small>to do</small>	
Security	Mr. Brandon, a technical developer, believes that all the corporation's data must be stored securely to protect against potential risks and ensure data integrity.	HIGH	COS20031-25: Security <small>to do</small>	
Route Planning and Optimization	Mr. Di is a driver who wants to optimize his routes to ensure he can deliver goods on time as efficiently as possible.	HIGH	COS20031-26: Route Planning and Optimization <small>to do</small>	
Inventory Management	Mr. Binh is a warehouse manager who wants an effective inventory management system to track stock levels, streamline operations, and prevent overstocking or shortages.	MEDIUM	COS20031-27: Inventory Management <small>to do</small>	
Order Management	Mr. Lien is a supply chain manager who is looking for an efficient order management system to streamline order processing, track shipments, and ensure timely delivery to customers.	MEDIUM	COS20031-28: Order Management <small>to do</small>	

🎨 User interaction and design



🎨 UI-UX Design Mockup



❓ Open Questions

Question	Answer	Date Answered
• Which tasks distributed approach would be suitable for the team?	• A group task would be divided into smaller work and assigned to individuals. Each will complete them according to the deadline assigned by the team lead and the overall results are combined to complete the group task.	Sep 6, 2024
• How to determine meetings time	• We use a website called When2meet which allows the team members to fill in their free time. The time with most free members is chosen as the meeting time. • Members who are not able to come will be updated about the meetings' content later	Sep 6, 2024
• How do we plan to manage our risks	• Risks are evaluated by the probability that it will happen and the impact of its consequence. • After thorough evaluation, the whole team make decisions on what should be done to handle those risks.	Sep 13, 2024
• What are some skills that the team need to improve on	• Communication and presentation are essential skills for teamwork and information exchange with stakeholders. • Product management tools like Jira and Confluence are mandatory for collaborating.	Sep 20, 2024

⚠️ Out of Scope

These are some features that are out of scope when we discuss. We would like to visit later if it meets the requirements of the project.

- Human Resources Management
- Third-Party Fleet and Driver Scheduling
- Virtual Reality (VR) Training Systems



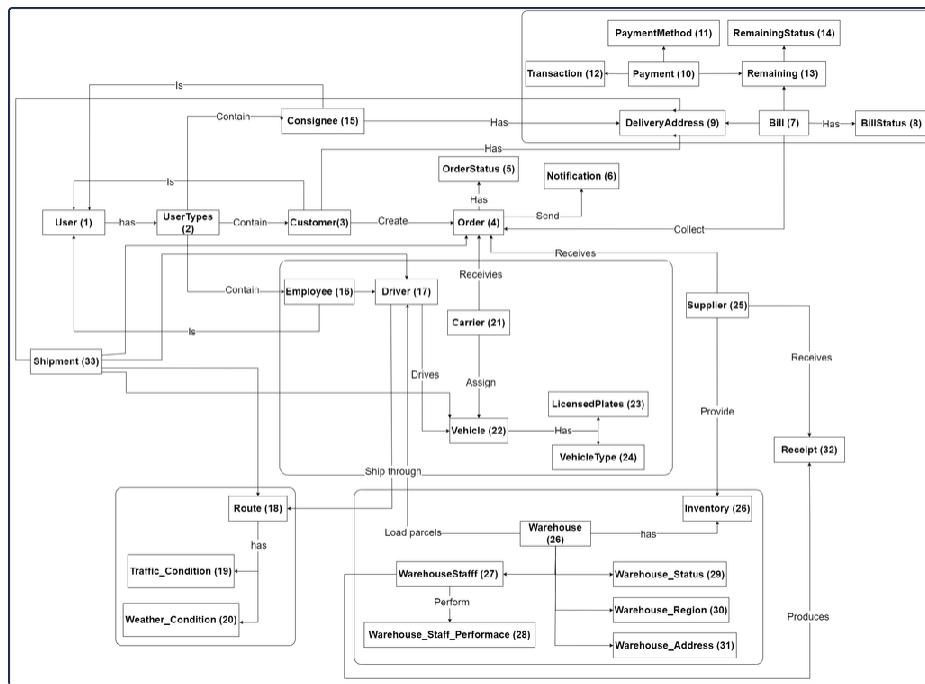
Entities Relationship Diagram (ERD)

- i Following a comprehensive evaluation of the requirements for a Transportation Management System (TMS), we have identified the core entities, along with their associated attributes and cardinalities. Below is the Entity-Relationship Diagram (ERD) that has been constructed based on this analysis.

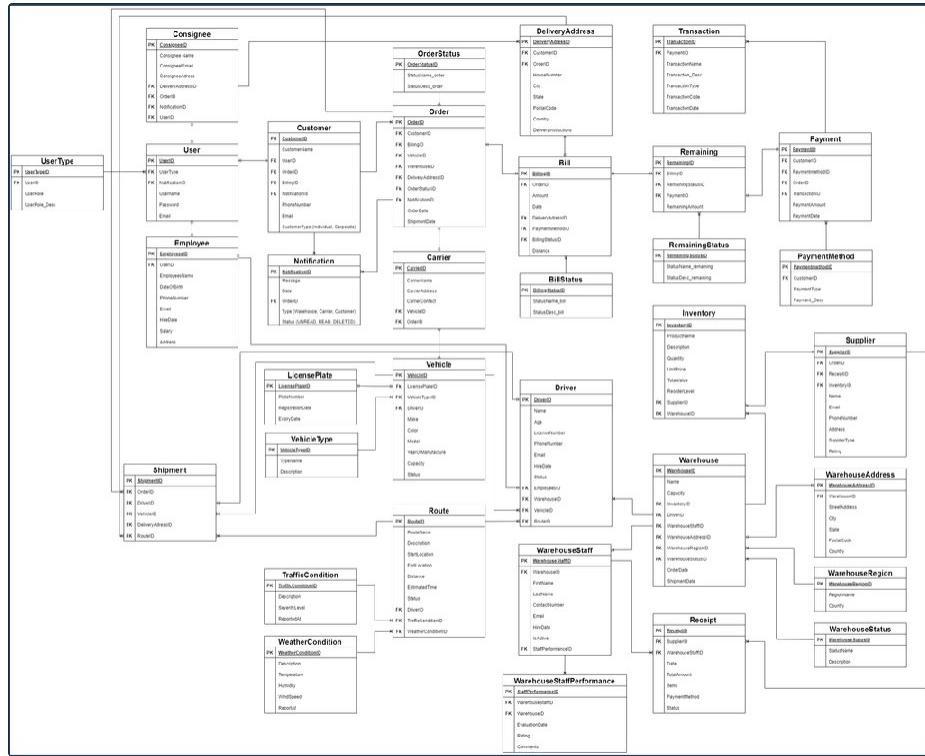
- i After thoroughly assessing the requirements for the Transportation Management System (TMS), we have also created a Data Flow Diagram (DFD) to visualize how information moves between the various components of the system and external entities. This DFD outlines the flow of data across processes and interactions, ensuring a clear understanding of how the system operates at each stage.



Conceptual ERD Diagram



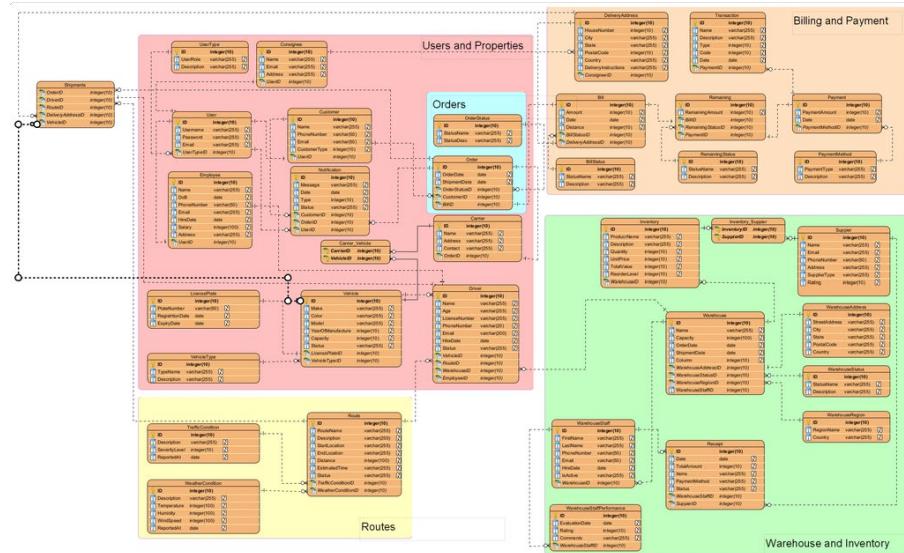
Logical ERD Diagram



Physical ERD Diagram

This version of Physical ERD contains data types and constraints. It is a detailed schematic of the main parts of the transportation management system for logistics organizations.

To create this Physical ERD Diagram, we used Visual Paradigm as our tool.

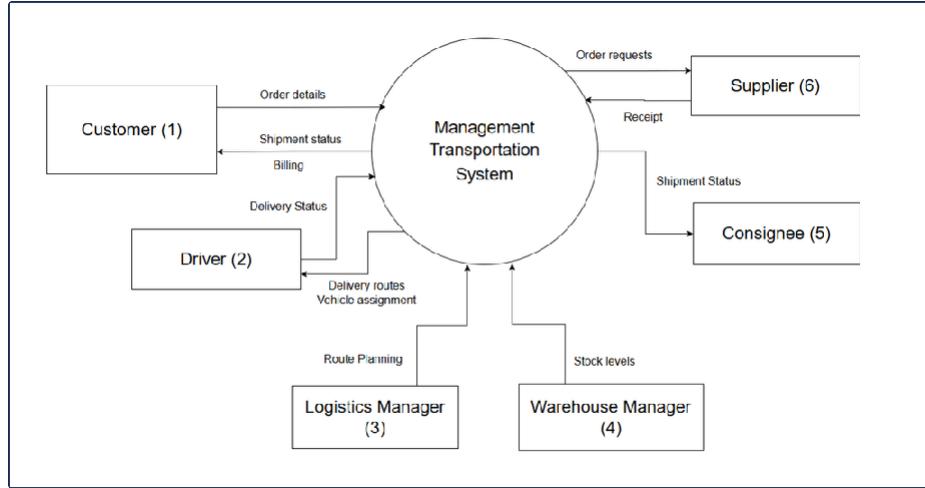




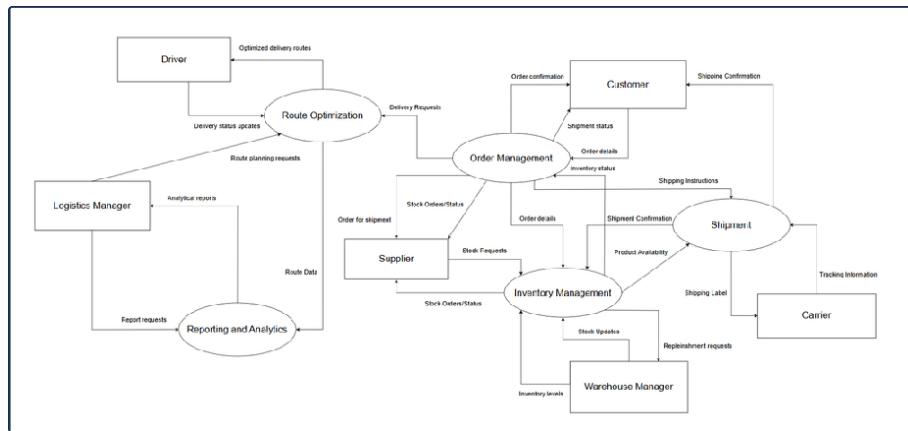
Data Flow Diagram (DFD)

i A data flow diagram (DFD) maps out the flow of information for any process or system.

Conceptual Data Flow Diagram (Level 0)



Logical Data Flow Diagram (Level 1)





Team Health Monitor

- i** Purpose: Assess how your team is working together and identify next steps to improve
- i** Team health checks or team health monitors are like medical check-ups for a team's wellbeing, focusing on emotional wellness, relationships, work-life balance, and efficiency.
- i** The goal is to identify and address issues that may affect functionality and productivity by evaluating metrics like happiness, morale, communication, trust, and psychological safety.

Team Cohesion

- i** We have the mutual trust and respect necessary to be an effective team for healthy collaboration. We have a strong sense of connectedness between members.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	OK	We have the mutual trust and respect necessary to be an effective team for healthy collaboration. We have a strong sense of connectedness between members, which enhances our ability to communicate openly and work together toward common goals. This positive atmosphere allows us to support one another and fosters a greater sense of belonging within the team.
Dinh Viet Phat	MODERATE	In our team, cohesion has been strong due to open communication, mutual respect, and collaboration. For example, we always support each other's when they have had problems to make sure all tasks are completed efficiently and on time. However, I think we can improve the cohesion by giving positive and constructive feedback to members of the team. Thanks, team!
Truong Le Minh Toan	OK	In our team, everyone shows respect for one another and actively communicates to enhance our collaborative performance.
Phung Gia Khang	OK	I felt involved with the team. Everyone works effectively and complete deadlines on time. Whenever a problem arises, the whole team cooperate to find a solution together. I received a great amount of support and learned from all team members. Thank you all very much. <3
Le Nguyen Thai Son	OK	The support I've received from my teammates has been invaluable. Learning from each other's experiences and expertise has not only enhanced my skills but has also created a culture of continuous improvement within the team. I am grateful for the

collaboration and camaraderie we share, which makes our team not only effective but also enjoyable to be a part of. Thank you all for your contributions and support!

Balanced Team

- i We have the right people, with the right skills, in the right clearly-defined roles. This enables us to successfully deliver the value for which this team is accountable.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	MODERATE	We have the right people in clearly defined roles, which enables us to deliver the value for which this team is accountable. However, while our team does have the right people for this project, we still lack some individuals with the necessary skills. Although our roles are well-defined, most are related to IT. To work more efficiently, we also need team members with expertise in business or media. I believe that with the addition of these people, we will be able to complete the project successfully with technical aspects.
Dinh Viet Phat	MODERATE	I believe that each member of the team possesses a strong IT background, which is essential for the technical requirements of this project, such as building the database, ERD diagram, etc. However, there are some tasks like risk matrix, stakeholder communication, etc. that may require additional coordination and soft skills. Therefore, we need to make sure we allocate resources effectively for these non-technical aspects to maintain overall project balance and success.
Truong Le Minh Toan	ALERT	In our project to release a software, while we all have IT backgrounds, we each take on different roles. However, we recognize that we may not excel in areas like design, planning, and human resources management, so we need someone with expertise in those fields to join us.
Phung Gia Khang	MODERATE	Rather than having a specialist in each specific field, each member of our team can take on a wide variety of tasks and cover for each other. One drawback is that all members of our team majored in Computer Science. While we have sufficient technical skills to manage, build and develop fully functional, cost-effective software, we may lack some skills in finance, supply chain management, and business orientation to understand our customers to great depth.
Le Nguyen Thai Son	OK	Our team is well balanced, even though not all team members have specific expertise, everyone takes on roles that exceed expectations. This allows us to effectively execute our goals and ensure accountability.

Encouraging Difference

i We seek and voice different viewpoints from diverse sources, both internally and externally, and we take the time to respectfully work through points of difference.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	OK	I believe that the success of any project depends on gathering information from a wide range of sources. This includes actively seeking input from team members, as their perspectives help shape a more well-rounded final product. By embracing these different viewpoints, we can create a solution that meets everyone's needs and ensures a higher-quality outcome.
Dinh Viet Phat	OK	I believe that our team actively encourages diverse viewpoints from teammates and external sources such as ideas from teachers, research papers, etc. Moreover, we understand that different perspectives bring different and valuable insights for our team to design and build the best solution for the ITL company problem. Besides, when teammates have differing opinions, we always take the time to respectfully discuss because we want to ensure all viewpoints are considered. I conclude that this approach will foster a more inclusive environment and help us make well-rounded decisions.
Truong Le Minh Toan	OK	In our team, we value every member's opinion equally, treating each person with the same respect. As a result, all contributions and ideas are genuinely appreciated.
Phung Gia Khang	OK	Our team often has different, even opposing, opinions. However, there is one thing that we all agree on: "Innovation is impossible without the clash of ideas." When we do not see eye to eye about something, we would not mind spending time discussing it until we all feel convinced by one unanimous idea. It is often through these discussions that we come up with a holistic solution. Staying open-minded not only encourages a friendly, respectful working environment but also bear a chance for creative ideas.
Le Nguyen Thai Son	OK	Our team members accept each other's perspectives promoting dialogue and respect within our team. This approach enhances our problem-solving and decision-making abilities by considering all perspectives.

Shared Understanding

 We share an understanding of our mission and purpose and our key milestones to deliver our strategic plan effectively as a team.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	OK	From the moment we formed as a group, we all understood that our goal is to achieve an HD grade by delivering a successful project for the unit. Therefore, we are focused on aligning our efforts, ensuring consistent progress, and meeting the expectations set for the project to reach that goal.
Dinh Viet Phat	OK	I believe that our team has a clear understanding of the mission and purpose of the project, the HD score, and the smart solution for the ITL company. As a result, we have online and offline meetings to identify the key milestones and the steps required to achieve them, which helps us stay focused and organized through the process. Finally, this shared understanding enables us to work efficiently as a cohesive and friendly unit.
Truong Le Minh Toan	OK	We hold weekly meetings to ensure that all information is communicated effectively and that everyone understands each other's workload.
Phung Gia Khang	OK	I feel I have found like-minded partners when I met my teammates. Our common goal is to provide a comprehensive software for ITL corporation in enhancing supply chain management and resource utilities. We are equally responsible for delivering our strategic plan and keeping our stakeholders up-to-date with the project's timeline.
Le Nguyen Thai Son	OK	As a team, we are all aligned on our mission and purpose, which keeps us focused on our goals. Understanding our key milestones allows us to work efficiently and collaboratively to achieve our strategic objectives.

Value and Metrics

i We understand the value we provide and the value back to the business, our definition of success and how that value is tracked and measured. We ultimately leverage our metrics to make decisions and action as necessary.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	OK	Our team recognizes the importance of the value we bring to the business and how it contributes to our overall success. We have established clear criteria for measuring this value, ensuring that we can effectively track our progress. By using these metrics, we make informed decisions that drive our actions and enhance our performance.
Dinh Viet Phat	MODERATE	We have a general understanding of the value we provide to the project and make it align with the goals of the company. Besides, we track progress through key metrics such as persona, task completion rates, and the accuracy of deliverables to ensure we are in the right way to make the value solution for the company. However, with all IT background members, we must improve our understanding of business-specific and supply-chain metrics to find better insight and deliver meaningful results.
Truong Le Minh Toan	MODERATE	Due to the limitations of the metrics, we have, we strive to deliver the best possible results for the business. However, in my opinion, this isn't enough. It requires deeper research into the workings of the business to gain insights that can effectively evaluate its performance and develop suitable solutions.
Phung Gia Khang	ALERT	We define our values and key metrics as a team of software developers, which means we may not recognize and satisfy the requirements that are in the fields of finance, supply chain management, and business.
Le Nguyen Thai Son	MODERATE	Our team has a clear understanding of the value we create and how it aligns with business goals. We track our success with defined metrics, using these insights to guide our decisions and actions when necessary

Suitable Ways of Working

i Our ways of working together within the team enable us to do our jobs effectively, whether we are distributed or co-located. This includes the tools we use, how we meet and collaborate, and how we make decisions.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	OK	We have established clear communication channels like Zalo, Microsoft Teams and use collaborative tools such as Jira, Confluence that keep everyone aligned, regardless of location. Regular meetings ensure we stay on track, and decisions are made through open discussions where everyone's input is valued, allowing us to work efficiently as a cohesive unit.
Dinh Viet Phat	OK	We have developed effective ways to collaborate efficiently, whether we are working remotely or in the same location. For example, we use Zalo group and Microsoft Teams for discussions and Confluence, Jira to build our proposals and manage tasks. Additionally, we utilize any available class time to make important decisions for the team and ensure to remain aligned and productive. In my opinion, this structure allows us to perform our roles effectively and deliver our best work.
Truong Le Minh Toan	OK	We use various platforms to communicate when we can't hold in-person meetings. Additionally, tools like Jira, Confluence, and Agile help us organize our tasks, meet deadlines, and keep track of all our work efficiently.
Phung Gia Khang	OK	Most of our tasks are completed online. Most meetings took place on Microsoft Teams, with Zalo as our main communication channel. Thanks to the SDLC tools, we can work effectively even in remote areas. However, every week, we make sure to meet at least once to share our progress, discuss disagreements, and map out the directions for our upcoming collaboration.
Le Nguyen Thai Son	OK	Our team's collaboration methods, whether we're working remotely or in the same location, allow us to perform efficiently. This includes the tools we use, our meeting and communication practices, and the decision-making processes we follow.

Engagement and Support

 It is clear to other teams how and when to engage with us, teams do this effectively and consistently receive the support they need to progress. We have a clear understanding of who we depend on, and who depends on us.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	MODERATE	The way our group works is by working independently. This doesn't mean that we don't communicate with other groups, but rather that we want to complete the project through our efforts. Although we don't seek help from other groups, we still maintain good relations with them.
Dinh Viet Phat	MODERATE	I think that we have assigned clear tasks to each member of the team, and we effectively track the progress through online tools. Therefore, we do not need communication except for discussions relating to the project. However, I believe that we need better engagement to ensure smoother collaboration and build strong relationships and connections with teammates.
Truong Le Minh Toan	MODERATE	Since our entire team is small, we don't need extensive communication between different teams to collaborate effectively; we mainly interact with a few individuals. Despite this, we still maintain connections with others and receive support when needed.
Phung Gia Khang	MODERATE	Apart from meetings, we rarely find the need to communicate. The reason is because our tasks are effectively separated into individual pieces of work, which are completed, updated and supervised with online tools. However, whenever support is needed, it is actively provided by all team members.
Le Nguyen Thai Son	MODERATE	We have a clear understanding of who we depend on and who depends on us. It's evident to other teams how and when to engage with us, and they consistently receive the support they need to move forward.

Continuous Improvement

i We always make time to celebrate our successes as well as earnestly reflect on, take action against, and fulfil our improvement opportunities. We have regular and intentional feedback loops within and outside of the team to make improvement decisions.

Name	Vote	Discussion Vote
Nguyen Hoang Trung	OK	Although we haven't received feedback or grades for our assignments yet, we still celebrate each success by reaching the milestones and goals we've defined together. After achieving these, we always gather to provide feedback on each other's work. This continuous feedback not only strengthens our project but also helps us grow as a team, ensuring that we're always learning and evolving.
Dinh Viet Phat	OK	We consistently make time to celebrate our achievements and reflect on areas for improvement when submitting the assignment or finishing the final design for each part of the project. After the happy moment together, we always actively listen to some feedback from the team leader and external sources like peers, teachers, etc. to identify opportunities for growth in the future. I believe that this continuous feedback helps us to gain more knowledge, learn from mistakes, and have experience with partial projects.
Truong Le Minh Toan	OK	After reaching each milestone, we hold a small party to celebrate our achievements. These meetings also provide an opportunity to discuss our vision for future milestones and gather feedback for improving our work. I feel very cozy, like our team is a small family
Phung Gia Khang	OK	While working on the project, I developed useful Software Development Life Cycle skills and knowledge. To be more specific, I familiarize myself with and apply software management tools like Jira, and Confluence. Other than that, I gained a deeper insight into relational database management systems, which is useful not only for this project's scope but also for my future work.
Le Nguyen Thai Son	OK	We prioritize both celebrating achievements and addressing areas for growth. By fostering regular and intentional feedback loops, both within the team and with external stakeholders, we ensure continuous improvement and shared success. This approach helps us stay aligned, motivated, and focused on delivering the best results while learning from every experience.



Team Member Profiles

🐱 Nguyen Hoang Trung

Name	Nguyen Hoang Trung
Communication preferences	<ul style="list-style-type: none">Using some social platforms for casual communication and exchanging files.Keep the conversation focused and productive.
Things I need	<ul style="list-style-type: none">All my teammates have to contribute their ideas to build a good project.Finish all the tasks meticulously and on time.
How I learn best	<ul style="list-style-type: none">In a working spaceClarify all ideas so that I can understand them all.
Things I struggle with	<ul style="list-style-type: none">When teamworking, I need all of my teammates to contribute their ideas and communicate with others.
Things I love about COS20031	<ul style="list-style-type: none">This is a good project unit to improve skills that related to teamworking.We can access and explore various kinds of tool such as Jira, Confluence.
My aim for this project	<ul style="list-style-type: none">My main goal for this project is achieving HD score.Building connection with my peers.
My favorite saying	<p>“Logic will get you from A to B. Imagination will take you everywhere.”</p> <p>Albert Einstein</p>
Other things I want you to know about me	<ul style="list-style-type: none">I'm a big fan of Arsenal

 Đinh Việt Phát

Name	Dinh Viet Phat
Communication preferences	<ul style="list-style-type: none"> • Using Zalo group and verbal conversation • Each member shares the idea for the project in friendly and constructive way.
Things I need	<ul style="list-style-type: none"> • Exactly time for the deadlines • The feedback from each member
How I learn best	<ul style="list-style-type: none"> • Private, quiet, and cozy space
Things I struggle with	<ul style="list-style-type: none"> • Deadline and time management • Apply the knowledge from the theory to practical for building the best solution for company
Things I love about COS20031	<ul style="list-style-type: none"> • The certificate from LinkedIn Learning • Learning how to manage a project practically with real problems of company
My aim for this project	<ul style="list-style-type: none"> • Gain more knowledge about project management • Can get the HD score base on our best solution for the company
My favorite saying	<p>“Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning.”</p> <p>Albert Einstein</p>
Other things I want you to know about me	<ul style="list-style-type: none"> • Everyone can call me Vell

 Truong Le Minh Toan

Name	Truong Le Minh Toan
Communication preferences	<ul style="list-style-type: none"> • Face-to-face communication will be preferred for communication at work • Social media for casual communication
Things I need	<ul style="list-style-type: none"> • All members do not miss the deadline • Collaborating for improving solution
How I learn best	<ul style="list-style-type: none"> • A private workspace, rain falling outside, and a drink
Things I struggle with	<ul style="list-style-type: none"> • Urgent deadline • Teammates with lack of effort to complete a project
Things I love about COS20031	<ul style="list-style-type: none"> • Understanding about how to manage a project using different technique • Mastering Agile, Jira, and Confluence
My aim for this project	<ul style="list-style-type: none"> • Complete all the requirements • Trying to build a complete solution that can work in real context
My favorite saying	<p>“What does not kill me makes me stronger.”</p> <p>Friedrich Nietzsche</p>
Other things I want you to know about me	<ul style="list-style-type: none"> • I'm Itachi

Phung Gia Khang

Name	Phung Gia Khang
Communication preferences	<ul style="list-style-type: none"> ◆ Both verbal and emails ◆ Friendly, constructive, avoid unnecessary emotions
Things I need	<ul style="list-style-type: none"> ◆ Clear deadlines for each task ◆ Quick response during work hours (response in 4 hours)
How I learn best	<ul style="list-style-type: none"> ◆ In a private, quiet atmosphere
Things I struggle with	<ul style="list-style-type: none"> ◆ Noisy environment ◆ Short-tempered teammates
Things I love about COS20031	<ul style="list-style-type: none"> ◆ A wide range of tools and knowledge for project management ◆ Teamwork and collaboration experience
My aim for this project	<ul style="list-style-type: none"> ◆ Satisfactorily fulfill most of the requirements ◆ Deploy a complete solution for the assigned problem
My favorite saying	<p>“Art is an explosion”</p> <p>Deidara</p>
Other things I want you to know about me	<ul style="list-style-type: none"> ◆ I like anime



Le Nguyen Thai Son

Name	Le Nguyen Thai Son
Communication preferences	<ul style="list-style-type: none"> ◆ Both verbal and emails ◆ Friendly and willing to share with everyone
Things I need	<ul style="list-style-type: none"> ◆ Clear deadlines for assigned tasks ◆ Clear feedback from each
How I learn best	<ul style="list-style-type: none"> ◆ In private and quiet place like my room
Things I struggle with	<ul style="list-style-type: none"> ◆ Teammates do not speak clearly or do not contribute ideas
Things I love about COS20031	<ul style="list-style-type: none"> ◆ I can work on a project with my friends. ◆ Get to know and learn many new tools
My aim for this project	<ul style="list-style-type: none"> ◆ I can work on a project with my friends ◆ Get to know and learn how to use many new tools
My favorite saying	<p>"If you're not a good shot today, don't worry. There are other ways to be useful."</p> <p>Sova</p>
Other things I want you to know about me	<ul style="list-style-type: none"> ◆ I solo beat Faker

 For a facilitation guide and more info on running this play with your team, visit <https://www.atlassian.com/team-playbook/plays/my-user-manual>



Meeting Notes

📅 Overview

Team	Members
Team 15	<ul style="list-style-type: none">• Phung Gia Khang• Truong Le Minh Toan• Nguyen Hoang Trung• Dinh Viet Phat• Le Nguyen Thai Son

📅 Meeting dates

Date	Goal
6/9/2024	Organize a meeting to introduce members, vote for leaders, choose project topics, and set up Jira and Confluence accounts for project management.
13/9/2024	Finalize the Team Agreement and complete individual Team Member Profiles for project documentation.
20/9/2024	Complete the Persona page and document meeting notes for reference and progress tracking.
25/9/2024	Finalize the Project Plan, ER Diagram, and Empathy Map to establish clear project direction and user understanding.

Meeting Note - 6/9/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Meeting and introducing members, voting for leaders
- Choosing topics
- Creating Jira, Confluence accounts and creating project

🗣 Discussion topics

Time	Item	Presenter	Notes
20 minutes	Topic discussion	Phung Gia Khang	<ul style="list-style-type: none">• Choosing the topic about managing transportation and do research about it
90 minutes	Learning Jira and Confluence	Dinh Viet Phat	<ul style="list-style-type: none">• Taking the Linkedin Learning certificates about operating Jira, Confluence• Joining the Jira project

✓ Action items

- Every member joining Jira and Confluence
- Applying template for Canvas for proposal creating
- Members learn to use Agile and Scrum

⌚ Decisions

- Phung Gia Khang will be the leader
- Topic: Transportation Management System (TMS) Software

Meeting Note - 13/9/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Complete the Team Agreement
- Complete Team Member Profiles
- Assign Role and Responsibility

🗣️ Discussion topics

Time	Item	Presenter	Notes
30 minutes	Complete Team Agreement	Phung Gia Khang, Nguyen Hoang Trung	<ul style="list-style-type: none">• All team members unified about the communication platform, setting up meetings online and offline.• Complete the team agreement to discover the working style of each members.
30 minutes	Complete Team Member Profiles	Phung Gia Khang	<ul style="list-style-type: none">• Times for each member reflect about themself (hobby, lifestyle, strength, weakness, ...)• Discuss with each other about the personal information to bond between members• Complete the team member profiles page
1 hour	Role and Responsibilities	All team members	<ul style="list-style-type: none">• Khang conducts a discussion for team to introduce about themself and if they nominate themself for a role in a team, all team members will consider to assign role based on skill of each members.• Complete the Role and Responsibilities page. Inside that page includes skill of themself and what they think the responsibilities of their roles.

✓ Action items

- Team Agreement completed
- Team Member Profiles completed

⌚ Decisions

- Next meeting will be used to find out Persona for the problem
- Starting to write meeting notes for each meetings

Meeting Note - 20/9/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Complete Persona page
- Complete the Project Plan
- Writing meeting note

🗣️ Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Truong Le Minh Toan	<ul style="list-style-type: none">• Keep track of the meeting and jot down• Starting creating backlog and sprint in Jira to tracking the process of each page needed in the proposal.
120 minutes	Complete Persona page	Phung Gia Khang	<ul style="list-style-type: none">• Discussion and researching about the stakeholders• Forming a list of stakeholders, some key group, people, and sorting it based on the priority, who play the most important role in entire process.• Choosing from that list 5 stakeholders from different category (Staff, Customer, Manager)• Forming the persona about above stakeholders, connecting with them for more information (if it necessary)• After connecting with stakeholders, try to setting up an interview with them after a few days to understand about themselves and having data for researching and creating empathy map

✓ Action items

- Researching and understanding the persona of problem
- Having persona for key person of the problem
- Writing meeting note

⌚ Decisions

- Next meeting will be held on 25/09/2024

Meeting Note - 25/9/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Complete Project plan, ER Diagram and Empathy map, Project Requirement, Risk Assessment Matrix

🗣️ Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Truong Le Minh Toan	<ul style="list-style-type: none">• Keep track of the meeting and jot down
60 minutes	ER Diagram	All team members	<ul style="list-style-type: none">• Listing the entity for the problem of the ITL Corporation• Try to figure out how to connect entities and researching about the optimal way to draw a ER Diagram• Learning about how to use draw.io• Collaborating through draw.io to draw the ER Diagram and sharing it with other members
45 minutes	Empathy map	All team members	<ul style="list-style-type: none">• Researching about appropriate empathy map template for applying to the proposal• From the information when interviewing stakeholders, each members present about their stakeholders. To exploit information about stakeholder, other member need to ask questions about what they hear/ think/ feel/ say/ do about the current situation of their job or their experience.• The presenters do research for missing information and try to combine all of the information of their stakeholders to create Empathy maps• Filling the page customer interview to give an overview about team members' findings during the interview with stakeholders

1 hour	Project Requirement	All team members	<ul style="list-style-type: none"> • Sketching the overall idea of the project, drawing the interface and listing some open questions that can encounter during the project. • Researching about objectives, assumptions, and requirements of the project
1 hour	Risk Assessment Matrix	Dinh Viet Phat	<ul style="list-style-type: none"> • Evaluate the risk that will occur during the project and listing it in the risk assessment matrix page

Action items

- Learn about ER Diagram and Empathy map through online sources
- Fill in missing details in the project plan
- Draw ER Diagram and Empathy map

Decisions

- Deadline for project proposal completion is on 27/09/2024
- Review of project proposal is due at 10PM 29/09/2024
- Project proposal will be submitted as soon as review and fault checking is completed

Meeting Note - 30/9/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Review the quality of the team members' contributions to the project proposal

🗣️ Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Phung Gia Khang	<ul style="list-style-type: none">• Keep track of the meeting and jot down
30 minutes	Quality review	Phung Gia Khang	<ul style="list-style-type: none">• Compliment and nominate members with on-time, high-quality task completion.• Point out the team's shortcomings in communication, collaboration, and punctuality• List upcoming tasks, which include self-learning about relational databases, Data Flow Diagrams, and Entity Relational Diagrams• Review the underperformance plan
15 minutes	Jira	Dinh Viet Phat	<ul style="list-style-type: none">• Add epics, tasks, and sub-tasks into Jira• Remind the team of good practices when using SDLC management tools• Some team members forgot to update the status of the tasks they were working on. This is critical to the team's workflow because it may cause overlap tasks
45 minutes	Reflection	All team members	<ul style="list-style-type: none">• All team members take turns to say what they are satisfied/unsatisfied with the first-month teamwork experience.• List any tasks they need help with
2 hours	Individual task	All team members	<ul style="list-style-type: none">• All team members are required to complete their individual weekly quiz at the end of the week• Although this does not directly affect the project's outcome, we believe that failure to personal affairs on time negatively affects members' mental health and leads to procrastination and consequently failure to complete assigned group tasks.

Action items

- Learn about relational databases and first, second, and third normal forms
- Reflect on past contributions and collaboration
- Complete personal weekly quiz

Decisions

- The team deadline will be 1 day earlier for peer review
 - Team members who fail to meet the deadline without appropriate reasons will be punished
 - Evidence of self-learning about normal forms of databases must be provided by all members in the next meeting
 - The next meeting about SQL physical design will be held on 4/10/2024
-

Meeting Note - 4/10/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Master SQL physical database

🗣️ Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Phung Gia Khang	<ul style="list-style-type: none">• Keep track of the meeting and jot down
30 minutes	Relational database	Le Nguyen Thai Son	<ul style="list-style-type: none">• Review the whole team about tables, primary keys, foreign keys compound keys, relationships• Demonstrate the creation of a database and tables in SQL with MariaDB, accessed through phpMyAdmin tools• Perform field creation and management with SQL commands: SELECT, INSERT, UPDATE, DELETE, JOIN
30 minutes	Normalization presentation	Nguyen Hoang Trung	<ul style="list-style-type: none">• Definitions and examples of first normal form, second normal form, third normal form• How to discriminate between the second normal form and the third normal form, which is confusing to most team members at first
45 minutes	Normalization practice	All team members	<ul style="list-style-type: none">• Work on different examples of the first normal form, second normal form, and third normal form to gain first-hand experience and deeply understand these concepts• Practice separating tables to turn first normal form tables into second normal form tables, second normal forms tables into third normal form tables
10 minutes	Upcoming meeting preparation	Phung Gia Khang	<ul style="list-style-type: none">• List tasks that need to be prepared for the next meeting:<ul style="list-style-type: none">◦ Personal weekly task◦ Data Flow Diagram (DFD)◦ Entity Relationship Diagram (ERD)• Set out the date and content for the next meeting

Action items

- Learn about Data Flow Diagram and Entity Relationship Diagram
- Personal practice with SQL querying and table management
- Normalization revision

Decisions

- Evidence of SQL physical database must be provided by all members in the next meeting
 - Work distribution for the Progress Report will be done in the next meeting
 - The next meeting about DFD and ERD will be held on 11/10/2024
-

Meeting Note - 11/10/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Understand DFD and ERD
- Distribute tasks for the Progress Report

🗣️ Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Phung Gia Khang	<ul style="list-style-type: none">• Keep track of the meeting and jot down
45 minutes	Entity Relationship Diagram	Le Nguyen Thai Son	<ul style="list-style-type: none">• Discriminate different levels of Entity Relationship Diagram:<ul style="list-style-type: none">◦ Level 0: conceptual level◦ Level 1: logical level◦ Level 2: physical level• Types of relationships in ERD: one-to-one, one-to-many, many-to-many; conjunction tables• Introduce the DrawIO, a comprehensive diagram drawing that is optimized for live cooperation
60 minutes	Data Flow Diagram	Dinh Viet Phat	<ul style="list-style-type: none">• Introduce important Data Flow Diagram concepts (e.g. process, entities, data flows, etc.)• Discriminate different levels of Data Flow Diagram:<ul style="list-style-type: none">◦ Level 0◦ Level 1• Use cases, advantages, and limitations of data flow diagrams
15 minutes	Task distribution	Truong Le Minh Toan	<ul style="list-style-type: none">• Assign the task of updating the Entity Relation Ship Diagram to 3 team members• Creation of Data Flow Diagram levels 0, and 1 are assigned to 2 members

Action items

- Complete the Entity Relationship Diagram and Data Flow Diagram
- Learn about Trello
- Update MySQL tables in the database with more information
- Research about the importance of team health monitor and how it should be observed and taken care of

Decisions

- Tasks on Jira and spaces on Confluence will be rechecked for appropriateness before being submitted with the progress report
 - All members must understand why team health should be carefully monitored and its effect on the outcome of the project
 - The next meeting about team health monitor and the progress report will be held on 18/10/2024
-

Meeting Note - 18/10/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Team health monitor
- Wrap up for project progress report

🗣️ Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Phung Gia Khang	<ul style="list-style-type: none">• Keep track of the meeting and jot down
45 minutes	Trello	Nguyen Hoang Trung	<ul style="list-style-type: none">• Introduce Trello - a project management tool that help visualize projects using boards, cards, and lists.• The difference between boards, lists, and cards. How to manage them efficiently, and which information should be stored in which level of management• Learn how team health monitoring can be achieved with Trello
60 minutes	Team health monitor	All members	<ul style="list-style-type: none">• All members are required to join the project Trello's board• Each member review the team's collaboration process, vote for their level of satisfaction, and leave comments in the cards
25 minutes	Progress report	Phung Gia Khang	<ul style="list-style-type: none">• Review the required content of the progress report• Consult the facilitator - Dr Hang Sam Nang for advice on improvements

Action items

- Complete individual tasks that are parts of the progress report
- Constantly check and adjust any changes on Jira
- Complete the list of update
- Add team health monitor page to Confluence

Decisions

- All individual tasks must be completed on 19/10/2024
 - Last meeting before progress report submission is on 20/10/2024
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Meeting Note - 20/10/2024

👤 Participants

- Phung Gia Khang
- Truong Le Minh Toan
- Nguyen Hoang Trung
- Dinh Viet Phat
- Le Nguyen Thai Son

📋 Goals

- Final revision for progress report
- Submit the project progress report

🗣 Discussion topics

Time	Item	Presenter	Notes
5 minutes	Meeting note	Phung Gia Khang	<ul style="list-style-type: none">• Keep track of the meeting and jot down
15 minutes	PDF export	Phung Gia Khang	<ul style="list-style-type: none">• Export Jira timeline to PDF• Check if all team members have filled the health monitor page and add it to Confluence• Export to PDF the Confluence page of the project
90 minutes	Progress report review	All team member	<ul style="list-style-type: none">• Each team member read and review the progress report carefully to check for any literacy or technical issues• Fix the issues and make changes to the report
5 minutes	Progress report submission	Phung Gia Khang	<ul style="list-style-type: none">• Submit the progress report• Notify stakeholders about the submission

✓ Action items

- Review and submit the progress report
- Learn how to use dummy data to supply the database with useful information
- Update MySQL tables in the database with dummy data

⌚ Decisions

- All members must be able to prove their outcome of learning about dummy data in the next meeting
- Celebration for progress report submission will be held on 21/10/2024, all members are invited to come to K34 restaurant
- The next meeting about dummy data and will be held on 25/10/2024