

INTERNSHIP REPORT ON
“Welldev’s Operations, Service and Supply Chain
Processes”

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Executive Summary

This report aims to provide an overview of supply chain and logistics maintenance recommendations for a software development company based and headquartered in Switzerland with offices in Bangladesh, Austria, Canada, and South Africa. Efficient supply chain and logistics management are crucial for ensuring the timely delivery of software products and services, optimizing costs, and enhancing customer satisfaction. This report will outline key considerations, challenges, and recommendations to improve the supply chain and logistics operations for the company.

1. Introduction

Background Information

Welldev, headquartered in Switzerland, is a renowned software development company with a growing presence in Dhaka, Bangladesh. Alongside Switzerland and Bangladesh, Welldev has offices in Austria, Canada, and South Africa. With a diverse portfolio of cutting-edge software solutions, Welldev serves clients across the globe, including businesses, organizations, and individuals. The company's reputation for innovation, quality, and customer satisfaction has propelled it to the forefront of the software development industry.

Welldev's unique setup, with its primary development center in Dhaka and its headquarters in Switzerland, presents both opportunities and challenges. The company has been successful in leveraging the talents and expertise of a skilled workforce in Dhaka while maintaining a global outlook through its Swiss base.

However, to sustain and build upon this success, Welldev recognizes the need for continuous improvement in its supply chain and logistics management. The supply chain, encompassing procurement, production, and distribution processes, is the lifeblood of the software development industry. It directly impacts cost efficiency, product availability, and customer satisfaction, all of which are paramount to Welldev's competitive advantage and growth trajectory.

Purpose of the Report

The purpose of this report is to understand its current supply chain and logistics operations and offer recommendations for improvements. By enhancing these aspects, Welldev can achieve cost reduction, efficiency improvement, and better risk management. In doing so, the report aims to:

- **Identify Existing Challenges:** By scrutinizing current practices, the report will pinpoint areas of concern within Wellddev's supply chain and logistics, enabling the company to address these challenges proactively.
- **Recommend Strategies:** The report will outline strategies and solutions that, when implemented, can optimize inventory management, enhance supplier relationships, streamline transportation and distribution, and leverage technology for informed decision-making.
- **Mitigate Risks:** A robust risk management strategy will be discussed, helping Wellddev anticipate and prepare for potential disruptions, thereby safeguarding its operations and reputation.
- **Drive Efficiency and Cost Savings:** By embracing lean supply chain principles and performance metrics, Wellddev can realize cost savings and operational efficiencies, which are crucial in today's competitive landscape.

Methodology

The information presented in this report is based on a thorough analysis of Wellddev's existing supply chain and logistics processes. Data was gathered through interviews, internal documentation, and industry best practices. The methodology included:

- **Data Collection:** Interviews with key stakeholders at Wellddev, including supply chain managers, procurement officers, and IT specialists, to gain insights into current practices and challenges.
- **Internal Documentation:** A review of Wellddev's internal documentation, including supply chain records, logistics reports, and past performance metrics.
- **Industry Best Practices:** A comparative analysis of industry best practices to identify areas where Wellddev can align its operations with global standards.
- **Benchmarking:** Benchmarking against industry peers and competitors to identify opportunities for improvement.

- **Scenario Analysis:** Considering various scenarios and potential disruptions that could impact the supply chain and logistics, thereby enabling the development of effective contingency plans.

In conclusion, this report serves as a roadmap for Welldev's journey toward enhanced supply chain and logistics maintenance. It provides a holistic view of the company's current position, identifies opportunities for growth and optimization, and outlines strategies to ensure Welldev continues to thrive as a global leader in the software development industry. By implementing these recommendations, Welldev is poised to achieve sustainable growth, cost efficiencies, and enhanced customer satisfaction.

2. Current Supply Chain and Logistics

Overview

Supply Chain Processes

Welldev's supply chain encompasses the procurement of hardware and software resources, project management, and delivery to clients. Key processes include demand forecasting, procurement, inventory management, resource allocation, and order fulfillment.

Demand Forecasting:

Demand forecasting is a critical component of Welldev's supply chain management. The company relies on accurate predictions of client demands for its software products and services to optimize production and resource allocation. However, the existing demand forecasting models require refinement to consider seasonality, market dynamics, and the ever-evolving software landscape. Collaborative efforts with the sales and marketing teams are also needed to gather real-time market intelligence for more accurate forecasting.

Procurement:

Welldev's procurement function involves the acquisition of a wide range of resources, including hardware components, software licenses, development tools, and infrastructure services. Procurement is both a global and local endeavor, as it requires sourcing from international suppliers to meet the company's diverse technological needs. While the procurement process is generally efficient, there is room for improvement in terms of cost optimization and supplier diversification.

Inventory Management

Inventory management is a pivotal aspect of Wellddev's supply chain operations. The company must strike a delicate balance between maintaining an adequate stock of essential resources and minimizing carrying costs. Currently, inventory levels are managed using traditional methods, and this approach has led to occasional overstocking or stockouts.

Logistics Framework

Logistics involve transportation, warehousing, and distribution. Currently, Wellddev relies on local and international partners for the transportation of materials and the delivery of finished products. Here's a brief overview of the logistics framework for Wellddev:

- **Resource Management:** Efficiently allocate software development resources, including personnel and equipment, to ensure projects are adequately staffed and equipped in both Dhaka and Switzerland.
- **Supply Chain Coordination:** Establish a streamlined supply chain for software and hardware components, ensuring timely procurement, shipping, and distribution between the two locations.
- **Communication Infrastructure:** Invest in robust communication tools and high-speed internet connections to facilitate real-time collaboration, video conferencing, and seamless communication between teams in Dhaka and Switzerland.
- **Data Security and Compliance:** Implement stringent data security protocols and compliance measures to protect sensitive information and adhere to Swiss and Bangladeshi regulations.
- **Project Management:** Utilize effective project management tools and methodologies to track progress, allocate tasks, and coordinate work across different time zones and

cultural

contexts.

- **Talent Development:** Foster talent development through training programs and knowledge sharing, promoting skill enhancement among employees in both locations.
- **Legal Framework:** Establish clear legal agreements, including intellectual property rights and employment contracts, to ensure legal compliance and protection for the company's assets.
- **Financial Management:** Implement financial controls, budgeting, and reporting mechanisms to manage costs efficiently and maintain financial transparency.
- **Logistics for Equipment and Hardware:** Plan for the transportation of hardware, equipment, and software licenses as needed, considering shipping logistics, customs clearance, and local distribution.
- **Disaster Recovery and Business Continuity:** Develop robust disaster recovery and business continuity plans to ensure operational resilience in the face of unexpected disruptions.
- **Cultural Awareness:** Promote cultural sensitivity and awareness among team members in both Dhaka and Switzerland to facilitate effective collaboration and teamwork.
- **Environmental Responsibility:** Incorporate sustainable logistics practices and eco-friendly initiatives to minimize the company's environmental impact.
- **Performance Metrics:** Define key performance indicators (KPIs) to measure the logistics framework's effectiveness and make continuous improvements as needed.

By implementing this logistics framework, Welldev can bridge the geographical gap between Dhaka and Switzerland, enabling efficient operations, collaboration, and long-term success for the company.

Key Challenges

Here are the key supply chain and logistics challenges that Wellddev may face:

- **Distance and Time Zone Differences:** Managing operations across distant locations with significant time zone differences sometimes leads to communication delays and coordination challenges.
- **Cultural and Language Barriers:** Overcoming cultural and language differences between Dhaka and Switzerland can affect effective collaboration and understanding.
- **Data Security and Compliance:** Ensuring data security and complying with different regulatory requirements in Switzerland and Bangladesh can be complex and resource-intensive.
- **Supply Chain Disruptions:** Global supply chain disruptions, such as transportation delays, customs issues, or equipment shortages, can impact project timelines and resource availability.
- **Hardware Procurement and Maintenance:** Sourcing, shipping, and maintaining hardware and equipment between the two locations can be logistically challenging and costly.
- **Talent Acquisition and Retention:** Recruiting and retaining skilled software developers in Dhaka while competing in a competitive talent market can be a continuous challenge.

- **Infrastructure and Technology:** Ensuring consistent access to high-speed internet, reliable power supply, and up-to-date technology infrastructure in Dhaka may require ongoing investments.
- **Logistics for Software Licensing:** Managing software licensing agreements and compliance, especially with varying regional requirements, can be complex.
- **Legal and Contractual Frameworks:** Maintaining clear legal agreements, intellectual property protection, and employment contracts that adhere to both Swiss and Bangladeshi laws can be demanding.
- **Currency Exchange and Financial Management:** Managing currency exchange rates, financial transactions, and budgeting across different currencies can be a financial hurdle.
- **Environmental Considerations:** Adhering to environmental sustainability standards and practices may pose challenges, especially in regions with varying regulations and awareness.
- **Disaster Recovery and Business Continuity:** Preparing for unexpected disruptions, such as natural disasters or political instability, and ensuring business continuity can be critical.
- **Custom Software Development:** Coordinating custom software development projects with clients in Switzerland while having development teams in Dhaka may require effective project management and communication.

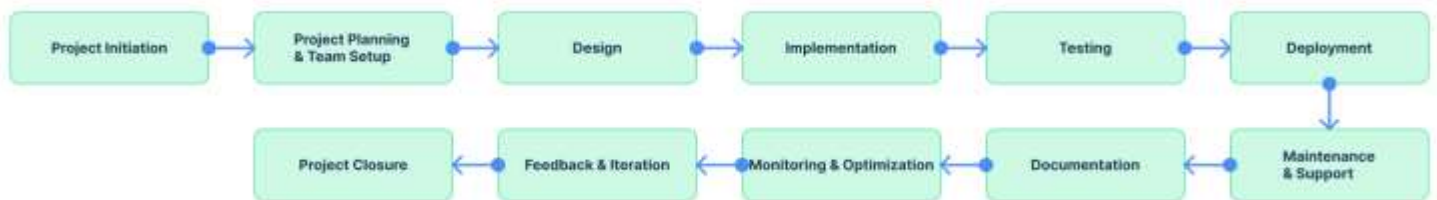
Addressing these challenges requires a well-thought-out logistics and supply chain strategy to ensure efficient operations and successful collaboration between the headquarters in Switzerland and the Dhaka-based Wellddev team.

3. Operations Management

As an agile software development firm, operations management is the big part of Wellddev’s actviaty. Wellddev’s operation management process is very efficient and maintain high degree of standard to properly utilize all its asset and increase profitability. Here we will discuss how wellddev maintain it’s overall operations, some of their failure and how they maintain change management.

3.1 Work Flow

Being an software development firm, project management is the core of it’s workflow. There are multiple stages in Wellddev’s workflow and we will discuss them below:



1. Project Initiation: Very first step of the work-flow of wellddev is starting the initiative of the project. In case of client project, our Customer Relation Manager (CRM)s first contact with the potential customer, try to negotiate with them and sign a contract. However, if the project is in-house, initiative starts with discussing with management level. In project initiation phase, we do below things:

- **Requirement Analysis:** Gather and analyze client/stakeholder requirements to understand the scope of the project.
- **Feasibility Study:** Assess the technical and financial feasibility of the project.

2. Planning: This is the second stage in the workflow but it starts the actual work. First thing of this stage is assign a team lead and then go forward with the below steps:

- **Project Planning:** Develop a detailed project plan outlining tasks, timelines, resources, and milestones.
- **Team Formation:** Assemble a cross-functional team with the necessary skills for the project.

3. Design: After creating the project plan and forming the team, design work begins. In this stage we try to understand the problem and solve it. In this stage the below functions are created:

- **System Architecture:** Define the overall system architecture and design the high-level structure of the software.
- **Detailed Design:** Create detailed design specifications, including data models, algorithms, and user interfaces.

4. Implementation (Coding): After the design, development work begins. However, some of the development process like system architecture and database creation starts with the design phase and continues parallelly. In this implementation phase we do below functions:

- **Coding:** Write and implement the code according to the design specifications.
- **Version Control:** Use version control systems (e.g., Git) to manage and track changes to the codebase.

5. Testing: After the implementation or development phase, testing phase starts. In this phase we try if the software is functional and solving the problem. We usually do below tests:

- **Unit Testing:** Test individual components or functions in isolation.

- **Integration Testing:** Verify that integrated components work together as expected.
- **System Testing:** Test the entire system to ensure it meets the specified requirements.
- **User Acceptance Testing (UAT):** Validate the system with end-users to ensure it meets their needs.

6. Deployment: Once the testing phase is done successfully, we deploy the software. In this stage, we do:

- **Deployment Planning:** Plan and coordinate the release of the software.
- **Deployment:** Deploy the software to production servers or other environments.

7. Maintenance and Support: After the deployment, we do maintenance and support tasks if needed. Sometimes these tasks starts with initial development phase as well. Here we do:

- **Bug Fixing:** Address and fix any issues identified after deployment.
- **Updates and Enhancements:** Implement updates, patches, or new features as required.
- **User Support:** Provide ongoing support to end-users.

8. Documentation: In this stage we start creating documentation so the in future we can easily understand the context and functionalities and do troubleshooting if needed. We do:

- **Technical Documentation:** Create documentation for developers, including code documentation and architecture documentation.
- **User Documentation:** Provide documentation for end-users, such as user manuals and guides.

9. Monitoring and Optimization: Throughout the flow, we also monitor the development and designs and try to optimize. We do:

- **Performance Monitoring:** Monitor the software's performance and address any issues.
- **Optimization:** Continuously optimize the codebase for better performance and efficiency.

10. Feedback and Iteration: While the development and design is running, we continuously take feedbacks and iterate to solve the problem.

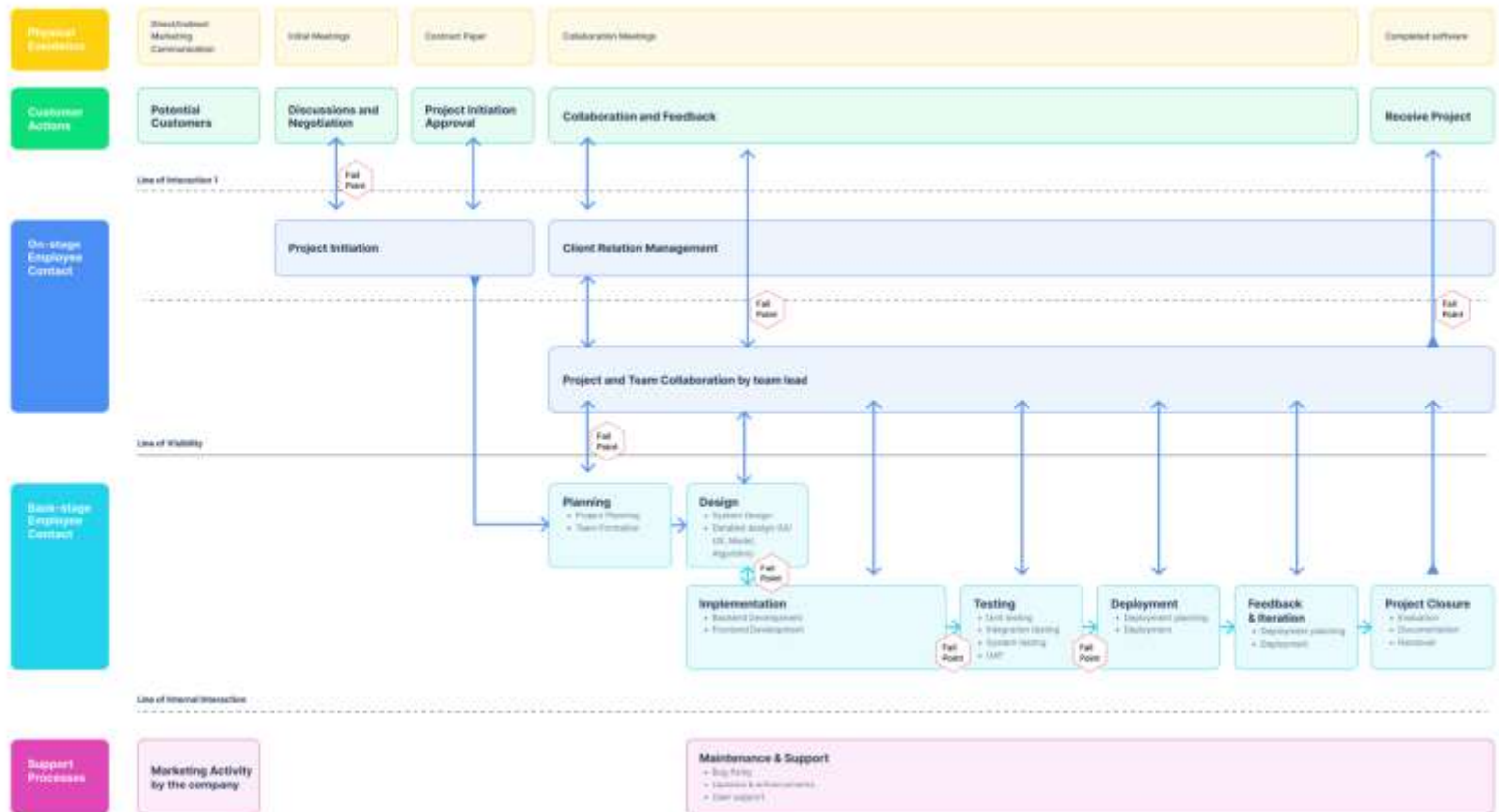
- **Collect Feedback:** Gather feedback from users and stakeholders.
- **Iterate:** Use feedback to make improvements and iterate on the software.

11. Project Closure: Once all our design, development and testing is completed, it's time to deliver the software to our client/stakeholder. In this stage, we do:

- **Evaluation:** Evaluate the project against initial goals and objectives.
- **Documentation Update:** Update documentation with any final changes or lessons learned.
- **Handover:** Hand over the project to the client or relevant stakeholders.

3.2 Process Blueprint

As project management workflow in welldev is not exactly straight forward, we created a process blueprint to understand the process properly. From this process blueprint, we can easily understand how the workflow is in real life and also where is the possible fail points are.



Major Fail Points: From the above process blueprint, we can easily see some of the major fail points in the overall flow. Let discuss them below:

- 1. Project Initiation Phase:** One major failpoint is the miscommunication in the project initiation phase. Sometimes Clients and the welldev have some misunderstanding about the scop of the project which lead to possible failure in the future.

2. **Planning Phase:** In the project planning phase, there is also a possible fail point as improper plan could lead the project to a wrong direction.
3. **Gap Between Design and Implementation Phase:** Another possible possible failpoint could be the gap between design and implementation as if there is no smooth communication, building a successful product will not be possible.
4. **Testing Phase:** In testing phase, project could fail as well as if the testing is not done properly, it could ended up in a inefficient or broken software.
5. **Deployment Phase:** In deployment phase, if the software codes are not carefully deployed, it could delay or even pause the product launce.
6. **Project Handover Phase:** Product could also get failed in the handover process if not properly handed over to client with proper documentation.

Ways to avoid failpoints: As we have seen some possible failpoints in the above blueprint and have understood how they could be fatal for business. These failpoints could be easily avoided by improving the communication and feedback among different teams and stakeholders.

3.3 Failures

Though we maintains a high standard to manage its projects and deliver high quality software, failure could happen here as well. Here we will discuss a challenging case:

Problem Scenario: In one of our project in welldev, we had a great start. Client onboarding was good, they were so excited to excited with us. From welldev side, everything also goes

well as. Team was formed, project was formed, roadmap was created. Alongside those design task was also started and collaboration with the client was also good.

However, as we progress into design and move to deeper into the project, a slight disagreement starts to appear. And overtime those little disagreements began to getting bigger and at one stage, it create the situation of halting the project.

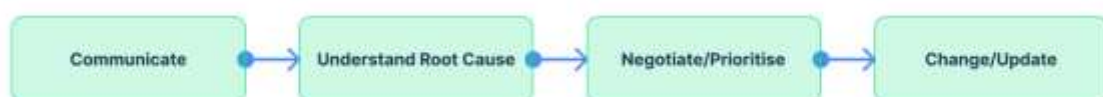
Root Cause: The core reason behind the disagreement was misunderstanding about the project scop. From client side, they were expecting some features which was not part of the project as per our perspective. According to the client, they expected some of the features are very basic and will be included in the contract. On the other hand, from our perspective, we have billed them only for the features specifically stated in the contract. Anything else will be considered as new requirements and need to be billed accordingly.

Solution: Intensity of the problem stated above was very embarrassing. To mediate the problem, we reached out the client through our management level and customer relations manger, renegotiated and reached to a mutual understanding.

Details about how we managed to overcome this is described in the change management section.

3.4 Change Management

Though we try to take all sort of precautions to avoid failpoints, still sometimes failures occurs. As we can see in the above scenario, sometimes we have to deal with failures as well. However, to avoid those possible failures, we follow the below change management procedure:



1. **Communicate with client/stakeholders:** Whenever, we detect a problem, we first try to communicate with the client or stakeholders to understand their perspective.
2. **Try to understand the problem:** After communicating with the stakeholders, we try to listen their opinion to understand what is the root cause.
3. **Try to negotiate:** After understanding the root cause, we try to solve the problem through negotiation and reach to a situation which will be win-win for both.
4. **Do Changes:** After negotiation, once we agree on a decision, we do necessary changes to the needed stages (ex- in roadmap, design, development etc.)

4. Supply Chain and Logistics

Improvement Strategies

Supply Chain and Logistics Improvement Strategies for Wellddev, a software development company headquartered in Switzerland:

- **Agile Project Management:** Implement Agile methodologies to enhance project management and software development processes, allowing for quicker response to changes in customer requirements.
- **Collaborative Tools:** Invest in collaborative software tools and platforms to streamline communication and project coordination among remote development teams and clients.
- **Supply Chain for Software:** Treat the software development process as a supply chain, emphasizing efficient workflows, version control, and automated testing to minimize delays and errors.
- **Logistics Efficiency:** Optimize the distribution of software updates and releases, using cloud-based solutions for seamless deployment and reducing lead times.
- **Quality Assurance:** Implement robust quality assurance processes to minimize software defects and ensure high customer satisfaction, reducing the need for post-release support.
- **Continuous Improvement:** Establish a culture of continuous improvement, regularly reviewing and refining software development and delivery processes to enhance efficiency and competitiveness.

5. Cost Reduction and Efficiency Enhancement

Cost Reduction and Efficiency Enhancement Strategies for Wellddev, a software development company headquartered in Switzerland:

- **Lean Development:** Implement lean principles in software development processes to eliminate waste, improve productivity, and reduce development time.
- **Automation:** Invest in automation tools for tasks like testing, deployment, and infrastructure management to reduce manual effort and improve software development efficiency.
- **Open Source Software:** Leverage open-source software and libraries to reduce licensing costs.
- **Cloud Computing:** Utilize cloud services to scale resources as needed, reducing infrastructure costs and improving scalability and flexibility.
- **Vendor Negotiations:** Negotiate favorable terms with software vendors and service providers to secure cost-effective solutions and reduce licensing expenses.
- **Continuous Improvement:** Establish a culture of continuous improvement, regularly reviewing and optimizing processes to enhance efficiency and reduce costs.

6. Risk Management and Contingency Planning

Risk Management and Contingency Planning for Welldev:

- **Identify Risks:** Begin by identifying potential risks that could impact your projects or business, such as technical challenges, scope changes, or market shifts.
- **Assess Impact and Likelihood:** Evaluate the potential impact and likelihood of each identified risk. Prioritize risks based on their severity and probability.
- **Risk Mitigation:** Develop strategies to mitigate or reduce the impact of high-priority risks. This might involve allocating additional resources, adjusting project timelines, or revising project scope.
- **Contingency Planning:** Create contingency plans for high-impact risks that cannot be fully mitigated. These plans should outline specific actions to take if the risk materializes, ensuring a swift response.
- **Resource Allocation:** Ensure you have access to the necessary resources, both human and financial, to address contingencies effectively.
- **Communication Plan:** Establish clear communication channels and protocols to keep stakeholders informed of risks and contingency actions.
- **Regular Monitoring:** Continuously monitor projects and the business environment for new risks or changes in the severity of existing ones.
- **Learn from Experience:** After each project or risk event, conduct a thorough review to identify lessons learned and update risk management and contingency plans

accordingly.

- **Insurance:** Consider appropriate insurance coverage, such as professional liability insurance, to mitigate financial risks associated with software development projects.
- **Cross-Training:** Ensure team members are cross-trained to handle various aspects of projects, reducing reliance on specific individuals and enhancing resilience.
- **Data Backup and Security:** Implement robust data backup and cybersecurity measures to safeguard against data loss or breaches, which can pose significant risks to software development projects.
- **Legal and Compliance:** Stay updated on legal and compliance requirements related to software development and ensure adherence to mitigate legal risks.

By proactively managing risks and having well-defined contingency plans in place, a software development company can minimize disruptions, protect its reputation, and increase the likelihood of project success.

7. Recommendations

Prioritizing Improvements

To address the identified challenges in Wellddev's supply chain and logistics, it is essential to prioritize the recommended improvements. Here is a suggested order of priority:

- **Supplier Relationship Management:** Simultaneously, work on strengthening relationships with key suppliers. Establish clear communication channels, define performance metrics, and develop contingency plans to ensure a reliable and responsive supplier network.
- **Technology Integration:** Invest in technology solutions such as Supply Chain Management (SCM) software, and Internet of Things (IoT) for real-time tracking and data-driven decision-making. This will provide visibility across the entire supply chain, enabling better decision-making.
- **Transportation and Distribution:** Evaluate and optimize transportation routes, modes, and partners for cost-efficiency and reliability. Consider long-term contracts with reliable logistics providers and explore innovative last-mile delivery solutions.

Implementation Roadmap

Developing a clear implementation roadmap is essential to execute these recommendations effectively. It should include the following elements:

- **Timelines:** Set specific timelines for each improvement initiative, outlining milestones and completion dates.
- **Responsibilities:** Clearly define roles and responsibilities for each aspect of implementation, ensuring accountability throughout the process.
- **Budgets:** Allocate budgets for technology investments, process improvements, and any necessary training or skill development.
- **Change Management:** Implement a change management plan to ease the transition and ensure buy-in from all stakeholders.

Monitoring and Evaluation

To track progress and measure the effectiveness of the recommended improvements, establish a set of performance metrics and monitoring mechanisms. These should include:

- **Key Performance Indicators (KPIs):** Identify relevant KPIs to measure success in areas such as cost reduction, inventory turnover, supplier performance, and delivery reliability.
- **Regular Reviews:** Conduct periodic reviews to assess the progress of each initiative and make necessary adjustments.
- **Feedback Mechanisms:** Establish feedback loops with internal teams, suppliers, and customers to gather insights and continuously refine processes.
- **Risk Assessment:** Continuously evaluate and mitigate potential risks that may arise during implementation.

By following this structured approach, Weldev can systematically implement the recommended improvements, ensuring a smooth transition and the achievement of desired outcomes.

8. Conclusion

Efficient supply chain and logistics maintenance are crucial for Welldev's continued success as a software development company with a global reach. By implementing the recommended strategies, Welldev can achieve cost reduction, efficiency enhancement, and better risk management, ultimately positioning itself as a leader in the industry.

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