**Analysis of feasibility study factors for a global logistics cloud-based system**

**Operational feasibility**

**Analysis of current operational processes:**

The first step in an operational feasibility assessment involves a thorough review of Global Logistics' existing processes to identify deficiencies and areas for improvement. This analysis will cover how to track shipments, manage inventory, and optimize routes. Understanding these processes will ensure that the new system effectively addresses current challenges and enhances operational efficiency.

**Evaluation of solution integration:**

Assessing the extent to which the proposed cloud system can be integrated with existing operations is crucial. This includes technical compatibility checks, workflow modifications, and ensuring minimal disruption during system transition. The integration plan should include a detailed step-by-step process that shows how to migrate existing data to the new system and how different departments will transition to using the new platform.

**Compatibility with organizational objectives:**

It is essential to ensure that the new system is in line with Global Logistics' long-term strategic objectives. This includes enhancing customer satisfaction by improving service delivery, reducing costs by managing pathways efficiently, and ensuring scalable growth capabilities. The project must support these objectives to justify the investment and the effort needed to implement it.

**Stakeholder Engagement:**

Engaging with key stakeholders – ranging from IT staff and logistics managers to end customers – is essential to gathering insights and rallying support for the system. Their feedback will benefit from important aspects of system design, usability and functionality, ensuring that the final product effectively meets the diverse needs of its users.

**Analysis of the impact of this process:**

This includes predicting how the new system will affect existing operations in the short and long term. Considerations include potential disruptions during the transition period, training needs for employees, and timelines for realizing benefits. This impact analysis will help prepare for any challenges and facilitate more smooth implementation.

**Technical feasibility**

**Technology Assessment:**

This includes evaluating the technologies chosen for the development of the new system. Factors considered include the strength, scalability and performance of these technologies, ensuring that they are suitable for a high-demand logistics environment. The evaluation will also consider emerging technologies that may enhance the capabilities of the system.

**Availability of resources:**

Assess whether Global Logistics has the necessary technical resources, including skilled personnel and technology, to support the ongoing development and maintenance of the new system. If there are gaps, the company may consider hiring new employees or training existing ones, which could affect project timelines and costs.

**Infrastructure Requirements:**

This entails identifying the infrastructure needed to support the new system, including servers, network capabilities and physical facilities. Considering choosing a cloud-based solution, considerations will include choosing the right cloud service provider and understanding the requirements for integration with your existing IT infrastructure.

**Security and compliance considerations:**

Security is crucial, especially in handling sensitive logistics data. The system must comply with international data protection regulations such as the General Data Protection Regulation (GDPR) and local laws. This requires implementing robust cybersecurity measures, regular security audits, and ensuring that the cloud provider adheres to industry-standard compliance protocols.

**Technology Roadmap:**

Developing a technology roadmap to guide the evolution of the system over time is essential. This roadmap will outline future technology integrations, system upgrades, and scalability plans to ensure the system remains sophisticated and adaptable to future business needs or technology trends.

**Economic feasibility**

**1. Initial investment**

**Development costs:** Covers software development, including internal and external labor costs and the tools and technologies needed to build a cloud-based logistics system.

**Infrastructure costs:** including expenses related to acquiring and setting up servers, storage, and network resources in the cloud.

**License Fee:** Costs associated with purchasing the necessary software licenses or subscribing to third-party services required to operate the system.

**2. Operational costs**

**Maintenance and support:** Ongoing costs of software maintenance, including updates, patches, and support services to address any issues that may arise.

**Training costs:** Expenses related to training employees on how to use and manage the new system effectively.

**Cloud Service Fee:** Recurring fees paid to cloud providers for system hosting and cloud infrastructure management.

**3. Benefit Analysis**

**Efficiency gains:** Measure improvements in operational efficiency, such as reduced time to process orders or improved inventory management, which can lead to cost savings.

**Revenue improvements:** Potential increase in revenue resulting from better customer service, faster delivery times, and the ability to handle a higher volume of transactions or orders.

**4. Calculate ROI**

**Cost-benefit ratio:** Calculates total benefits (both direct and indirect) versus total costs over a specific period, usually 3-5 years.

**Payback period:** Estimate the time it will take for the system to pay for it through direct and indirect financial benefits.

**Net Present Value (NPV):** Discounting savings and future income to present value to assess the profitability of an investment.

**5. Risk assessment and mitigation strategies**

**Technical risks:** Potential issues such as system failures or integration problems with existing platforms and their impact on operations.

**Financial risk:** including the risk of overestimating costs, underestimating ongoing costs, or overestimating financial benefits.

**Mitigation measures:** Plans to address these risks, such as phased implementation, regular system audits, and contingency budgets.

**Feasibility of the schedule**

The successful deployment of a global logistics cloud system involves careful planning and implementation across several distinct stages. Each stage must be meticulously designed to accommodate the necessary tasks, with buffer periods also included to address any unexpected challenges or delays. Here is an expanded overview of the estimated project timeline:

**Phase I: Planning and Design - 3 months**

**Objectives:** Define the scope of the project, identify key requirements and design the overall system architecture.

**Activities:**

**Weeks 1-2:** Hold stakeholder meetings to define project objectives and collect detailed requirements.

**Weeks 3-4:** Develop a comprehensive project plan, including resource allocation, risk assessment, and project management tools.

**Second month:** Design the system architecture, focusing on scalability, security and integration needs. Choose a technology stack and tools.

**Third month:** Completion of design specifications, purchase of cloud services and necessary software licenses. Review and revise the design based on feedback received from all stakeholders.

**Deliverables:** project plan, system architecture documentation, procurement of core technologies.

**Phase II: System Development and Integration - 6 months**

**Objectives:** Build system components according to design specifications and integrate them into existing IT infrastructure.

**Activities:**

**Months 1-2:** Development of basic system modules. Implement continuous integrations.

**Months 3-4:** Development of supporting facilities and integration components. Start the initial integration test.

**Months 5-6:** Integration of new system components with existing systems. Hold regular review meetings to ensure that the system is in line with business needs and technological standards.

**Deliverables:** Completed system units, integration test reports, and initial performance metrics.

**Phase III: Testing and Training - 3 months**

**Objectives:** Test the system thoroughly for errors and problems. Training employees to use the new system.

**Activities:**

**First month:** Conduct a comprehensive test including functional testing, performance testing and security audit.

**Second month**: Address any issues detected during testing. Start a user acceptance test with actual end users to collect feedback.

**Third month:** Providing training courses for end users and IT staff. Prepare detailed user manuals and troubleshooting guides.

**Deliverables:** Fully tested cloud-based system, training materials, and user feedback reports.

**Phase IV:** Full deployment and direct start - two months

**Objectives:** Deploy and operate the system across the organization.

**Activities:**

**First month:** Final pre-launch checks. Deploy the system in a phased manner to monitor performance and collect early feedback.

**Second month:** Officially live broadcast. Create a support and maintenance team. Closely monitor system performance to handle any immediate issues after deployment.

**Deliverables:** Cloud-based operating system, deployment reports, and ongoing support protocols in place.

**This detailed schedule ensures that all important aspects of the system deployment are carefully managed and monitored. The inclusion of buffer time slots within each phase is essential to accommodate unforeseen circumstances, thereby reducing the risks associated with delays and ensuring a smooth transition to the new system. This timeline is designed not only to manage the technical aspects of the project but also to facilitate organizational change, ensuring that all teams are set up and the entire system is optimized to achieve Global Logistics' strategic objectives.**