MS, Information Technology Management Capstone

Anthony Vo

Western Governors University

Abstract

During the Expeditionary Distribution Company's (EDC) warehouse inventories, inefficiencies arising from current practices lead to productivity losses. On top of high worker turnover, non-standardized methods reduce efficiency and loss of resident knowledge. The proposed solution is to utilize SharePoint to serve as a centralized information hub accessible to all warehouse managers and planners to ensure accurate information for estimates and to standardize submissions. To facilitate implementation without disrupting operations, the regional IT department, having oversight over the warehouse IT teams, will predominantly handle the deliverables to allow the warehouse IT teams to focus on their core duties. Stakeholders for this proposal include corporate headquarters, warehouse managers, inventory planners, logistical partners, and warehouse workers. Corporate is keen on overall efficiency. Warehouse managers face manpower losses during inventories, while planners struggle with generating accurate estimates and schedules due to unreliable data. For logistical partners, a warehouse going through inventories will only process essential items, potentially harming the business relationship between EDC and the partner. Since workers are directly involved in handling, counting, and managing the inventory, the event adds additional strain due to the increased workload during this time. Implementing SharePoint benefits all stakeholders by streamlining inventory processes, enabling the warehouses to resume normal operations more quickly. Key metrics for the IT solution include the frequency of template and data usage and the time required for the warehouse inventories. Traditionally, warehouse managers are allocated 30 days for inventories, with 20 days for physical counting and ten days for processing paperwork. This proposal aims to condense the physical inventory phase to 12 days, with three days allocated for processing results. To summarize, the IT solution of SharePoint, a centralized document

repository, aims to improve the inventory process across the region's four logistics warehouses by providing readily available accurate information and standardized forms for planners and managers to conduct the inventories.

Keywords: Warehouse inventory, document repository, centralized information hub, SharePoint

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Improved Inventory Efficiency through SharePoint

Needs Analysis

EDC's current practices for warehouse inventory management are sub-optimal. With inventories occurring quite often, the potential for two of four warehouses operating with reduced capacity is moderate, negatively affecting the regional logistics capacity. Stakeholders include warehouse managers, inventory planners, logistical partners, and warehouse workers. The inefficiency of inventories also contributes to high turnover, affecting both the business relationship with partners and warehouse workers. For SharePoint to be an effective solution, the IT department must collect data from all parties involved with the inventory: corporate headquarters, warehouse managers, inventory planners, and warehouse workers. Some warehouse managers and planners have been using their own methods to facilitate inventories, such as Google Sheets, instant messaging group chats, and LibreOffice, while others still use the company email to conduct planning. The IT department has considered Microsoft Teams, Microsoft Access, and LibreOffice Base. Ultimately, the choice was Microsoft SharePoint due to its ease of use, familiarity, and interoperability with Office 365 and outputs from SAP ERP, the headquarters' proprietary software to track logistics.

Problem and Causes

Within the four logistics warehouses in this region that the company operates, annual inventories are conducted upon the appointment of a new warehouse manager, which can occur annually, every 1.5-2 years, or when a warehouse manager resigns, prompting the appointment of a new manager. The inventories (to be done in no more than 30 calendar days) for the new manager are to confirm current stock levels and to estimate the number of shortages that would need to be backfilled from other regional warehouse hubs. Due to the high turnover rate of warehouse workers, much of the residential knowledge on efficiency and best practices during this event is lost, causing

unnecessary delays during the inventory process, which takes away from regular warehouse operations. In addition, the four warehouse managers are not incentivized to work with one another; therefore, helpful information between the warehouse managers is kept to a minimum.

With four separate warehouses that could potentially go through the inventory process, much potential productivity is wasted on the preparation and execution of the inventory. This loss in productivity negatively impacts warehouse managers, inventory planners, logistical partners, and warehouse workers. Of the 30 days allocated for inventories, only 20 are used for physical inventory, with the remaining ten used for administrative processing and corrections. Currently, the company's regional management does not interfere with the methods of the warehouse manager when it comes to their cyclical inventories; they only require that certain documents are completed to standard. This step also causes minor issues since each warehouse manager would submit their inventory documents with slight variations in formatting, prompting additional delays due to format corrections.

Impact on Each Stakeholder Group

Stakeholders for this project are the warehouse managers, inventory planners, logistical partners, and warehouse workers. Warehouse managers lose valuable man-hours during the tedious inventory process. The managers are responsible for what the warehouse manages to achieve or fails to achieve. The implementation of SharePoint seeks to greatly expedite the inventory process, freeing up manhours for the warehouse manager to allocate toward more value-added activities. Inventory planners currently generate their own planning estimates to plan the inventory schedule. Mistakes or miscalculations due to incorrect data add delay to the timeline. Often, the delays result in crashing the schedule during the final days of physical inventory to meet the deadline. Since SharePoint acts as the document repository, it will provide

benchmarks from previous iterations for the planners to plot the inventory schedule. They will be able to compare their estimated timelines to actual times from previous inventories to determine the feasibility of the schedule day-to-day.

For logistical partners, a warehouse going through the inventories will only process essential items to reduce confusion, potentially harming the business relationship between EDC and the partner due to a lack of throughput. Through SharePoint, managers and planners can obtain information on current best practices for processes and will have an itemized timetable and pricing from the previous inventories to speed up the inventory via a highly optimized schedule. The added efficiency will reduce the window of limited warehouse operations, allowing the managers to work with the logistics partners for more time annually.

As for the warehouse workers, the inventory process adds additional strain since they are directly involved in handling, counting, and managing the inventory. A more efficient inventory through a highly optimized schedule enabled by SharePoint will reduce the likelihood of crashing the schedule to meet the inventory deadline. Warehouse workers will have more predictability during warehouse inventories, reducing the overall stress typically associated with this time. Additionally, an optimized schedule also saves costs due to fewer occurrences of overtime to meet deadlines.

To ensure effective stakeholder engagement for the SharePoint implementation, the IT team will schedule bi-weekly progress reports with the warehouse managers and their corresponding inventory planners. This meeting will discuss current progress, address concerns, and gather feedback from the personnel that the project primarily intends to benefit. These meetings also provide opportunities to focus on directly engaging with stakeholders. For the logistical suppliers and the warehouse workers, the IT team will work with the company’s public

affairs team to craft a monthly email newsletter on the proposed upcoming changes. The email newsletters will emphasize the project's focus on increased efficiency to minimize the disruptions caused by warehouse inventories. Email communications are intended to keep these specific stakeholders appropriately engaged and informed.

Solution Alignment

During the research for methods to increase inventory efficiency, potential programs and software considered included Google Drive, Tresorit, and instant messaging group chat, including Microsoft Teams. The solution had to be capable of acting as a shared document repository, not just a cloud drive. The program or software selected also had to be compatible with the inventory data outputs from the proprietary software that the corporation uses to track logistics, SAP ERP. After thorough consideration, Microsoft SharePoint was selected due to its ease of use, familiarity, and interoperability with the Microsoft Office suite. As of the time of writing, Microsoft includes SharePoint in the Microsoft 365 E5 license ("Microsoft 365 E5," n.d.). Using SharePoint would be the most logical and low-cost solution since EDC currently has Microsoft's Enterprise E5 license.

The use of SharePoint aligns with new and emerging technologies in several ways. First, it is a Platform-as-a-Service (PaaS) application that is part of the Microsoft 365 suite. Writers at Opencloudware, a blog covering the latest information on cloud development, state that PaaS technologies are currently on the rise due to increasing adoption and investment, leading to a surge in sector growth of 20.7% within the previous two years (2023). SharePoint utilizes cloud computing and offers scalability and accessibility that can match the company's requirements. SharePoint already boasts interoperability with major businesses and current organizational software, which allows EDC to integrate seamlessly with potential business partners.

As for current industry best practices, SharePoint acts as a centralized information repository, promoting organized and accessible data management, a practice that is critical for logistics operations. Some warehouse-level management and employees have already begun using Microsoft Teams to communicate and share data within EDC. SharePoint's native interoperability with Microsoft Teams allows for seamless integration, meaning that information can be shared, forwarded, and accessed swiftly and efficiently using the programs the end users already use for communication. The implementation should have minimal disruptions to current logistics operations. SharePoint currently can provide the executive suite (or IT management team) with a PowerBI dashboard and SharePoint Document Analytics to provide insight on usage and data visualization for data management, trend analysis, and making data-driven decisions (Romford, 2024). These additional capabilities will ensure that EDC remains competitive within the industry.

Implementing SharePoint ensures comprehensive alignment with current legal and regulatory standards since Microsoft, as a company, constantly maintains accreditation with ISO 27001 (Microsoft Compliance, 2023). Also known as ISO/IEC 27001, the certification demonstrates to stakeholders and customers that the entity holding their data complies with the International Standards Organization and International Electrotechnical Commission's standards for information security management (ISO, 2022). Another key regulatory piece of guidance is the General Data Protection Regulation (GDPR), a European Union data privacy law meant to protect individuals' personal data and privacy by giving them more control over their personal information (Intersoft Consulting, 2018). Microsoft, identified as a data processor by terms in the GDPR, must assist data controllers in ensuring compliance with provisions prescribed in the GDPR (Microsoft Compliance, 2023). Accordingly, using SharePoint is in keeping with current

and established regulatory frameworks for data security and protection. SharePoint facilitates the creation and maintenance of document copies, ensuring that data integrity is preserved, and also possesses advanced security measures, such as scanners that detect and flag Personally Identifiable Information (PII) and Protected Health Information (PHI) within the system to prompt users or the administration to take action to reduce the risk of non-compliance. Finally, SharePoint also allows system admins to control access to files by either role-based permissions or attribute-based access control, ensuring that sensitive documents can be locked or hidden to protect them from unauthorized access and maintain confidentiality. Through these features, SharePoint not only meets but often goes beyond industry standards for legal and regulatory compliance, making it a top choice for EDC to protect its data and operations upon implementation.

Cost Analysis

EDC currently utilizes and has licensing for Microsoft 365 E5 (with a separate Microsoft Teams license), which includes a whole suite of productivity tools, including SharePoint ("Microsoft 365 E5," n.d.). Although EDC has access to SharePoint as part of this package, it is not currently being utilized to its full potential within this part of the organization. This approach maximizes the value of the current Microsoft 365 E5 subscription without incurring additional licensing costs.

Figure 1

Projected Costs

Item	Price	Description
1	$700	Initial Consultant Session
2	$700	Development Phase Consultation
3	$499	Third-Party Assessment
4	$800	Staff Training
N/A	$2677	Total

Note. The data for Item 1 and Item 2 is from *SharePoint Hourly Consulting* by Sharepoint Maven, (https://sharepointmaven.com/SharePoint-consulting/). The data for Item 3 is from *SharePoint & Microsoft 365 Training Pricing* by Sharepoint Maven, (https://sharepointmaven.com/training-pricing/). The data for Item 4 is from *SharePoint Consulting Services* by Simplesharepoint, (https://www.simplesharepoint.com/Pages/SharePoint-Consulting.aspx).

A further breakdown of Figure 1 will be detailed in the Itemized Costs Section below.

As for the overall justification of the training and expert feedback, the goal of SharePoint implementation is to reduce the inventory timeline for each warehouse (consisting of approximately 100 people) from 20 days of physical inventory to 12 days, leading to 8 days of regained productivity for regular warehouse operations. The IT team responsible for development will be utilizing public information on SharePoint building and using consultants to fast-track the creation of the company's document library and to provide training from specialists to the staff. Justification by item to follow:

1. **Initial Consultant Session**: Enhances efficiency and shared knowledge before data collection.
2. **Development Phase Consultation**: Ensures the site is well-optimized through expert input and a Q&A session.
3. **Third-Party Assessment**: Provides a third-party perspective to identify and address any blind spots.
4. **Staff Training**: Focuses on comprehensive training for key personnel, ensuring proficient system use.

Itemized Costs

Figure 1.1

Projected Costs by Hour

Item	Raw Cost	Hours/Instance	Subtotal	Description
1	$350 per hour*	2	$700	Initial Consultant Session
2	$350 per hour*	2	$700	Development Phase Consultation
3	$499 per instance**	1	$499	Third-Party Assessment
4	$800 per session***	1	$800	Staff Training
			$2677	**Total**

Note. The data for Item 1 and Item 2 is from *SharePoint Hourly Consulting* by Sharepoint Maven, (https://sharepointmaven.com/SharePoint-consulting/). The data for Item 3 is from *SharePoint & Microsoft 365 Training Pricing* by Sharepoint Maven, (https://sharepointmaven.com/training-pricing/). The data for Item 4 is from *SharePoint Consulting Services* by Simplesharepoint, (https://www.simplesharepoint.com/Pages/SharePoint-Consulting.aspx).

Justification for Costs

The primary expenses will come from hiring consultants to increase efficiency in the development process and user experience. A report from the Association for Intelligent Information Management stated that 40% of perceived unsuccessful SharePoint implementations stemmed from issues related to user training, lack of support, and difficulty of use as the top reasons (2016). The costs for implementation will mostly be associated with enhancing the overall end-user experience through quality implementation and training.

1. **Initial Consultant Session**:
    - Raw Cost: $350 an hour, recommend 2 hours
    - Purpose: IT teams will learn best practices for data collection along with areas to focus on.
    - Outcome: Establishes a solid foundation for personnel conducting the initial data collection for the implementation.

2. **Development Phase Consultation**:
    - Raw Cost: $350 an hour, recommend 2 hours
    - Purpose: After data collection and during site development, the IT team will engage in a targeted Q&A session with the consultant.
    - Outcome: Fine-tunes the SharePoint site based on expert advice and specific needs.

3. **Third-Party Assessment**:
    - Raw Cost: $499

- Purpose: A different consultant will provide a third-party assessment to identify and address any blind spots, as well as to provide a second opinion.
- Outcome: Ensures a comprehensive and unbiased evaluation of the SharePoint site prior to deployment.

4. **Staff Training**:
   - Raw Cost: $800
   - Purpose: Train staff on using SharePoint, focusing on warehouse IT teams, management, planners, and anyone interacting with the system beyond basic file access.
   - Outcome: Ensures effective use and adoption of the new system.

Risk Assessment

Figure 2

Sharepoint Implementation Project Risk Register

Sharepoint Imeplementation Project Risk Register							
Asset	**Threat/Vulnerability**	**Existing Controls**	**Likelihood**	**Consequence**	**Level of Risk**	**Risk Priority**	**Type**
Sensitive Company Data	Insider Threat	Role Based Access Network Monitoring Security Awareness Training	Possible	Moderate	**High**	1	Qualitative
Inventory Data	Service Disruptions	Disaster Recovery Plan Regular back ups Manual inventory	Rare	Major	**High**	1	Quantitative
Sharepoint Data	User Error resulting in deletion of data	Conduct training Have extensive documentation	Rare	Moderate	**Medium**	2	Qualitative
Sharepoint Data	Regulatory Non-Compliance GDPR HIPAA	Ensure configurations comply with regulations Harden areas requiring greater data protection	Rare	Moderate	**Medium**	2	Quantitative
Sensitive Company Data	Data Breach	Internal Company Network Network Monitoring Password Policies	Rare	Moderate	**Medium**	2	Quantitative
Finance	Higher than expected costs for implementation and maintenance	Conduct detailed cost analysis Establish budget	Rare	Minor	**Low**	3	Qualitative
Physical Information	Integration Challenges into Sharepoint	Identify and utilize experience developers within the teams Hire consultants	Rare	Minor	**Low**	3	Qualitative

Quantitative and Qualitative Risks

To determine whether a risk was considered quantitative or qualitative, a table from a university information systems risk assessment methods paper [Figure 2.1] was used to assist with sorting the various types of risk (Shah & Murtaza, 2016). The Asana company had a project management guide that listed the common potential qualitative risks for a technology project, notably the theft of materials due to insufficient data security, which was also incorporated into this proposal as a potential risk (2024). Additionally, this proposal referenced concepts from a Project Management Institute conference paper on risk management that basic ideas such as a risk register, checklist, and evaluation criteria from a Nokia Siemens Networks guideline. (Lavanya & Malarvizhi, 2018).

As for the quantitative risks, the methodology followed the method prescribed in a university information systems risks assessment methods paper, where the monetary cost of risk was calculated based on the likelihood of the event occurring and the cost of potential losses (Shah & Murtaza, 2016). The likelihood aspect of this calculation spanned one year, following the examples from the Information Systems Audit and Control Association (ISACA) on ways to conduct a quantitative risk assessment (Evrin, 2021). The risk value was calculated using 'Single Loss Expectancy,' where the monetary value expected to be lost if the incident occurs multiplied by the annual rate of occurrence.

Figure 2.1

Information Systems Risk Assessment Methods Chart

Table 1. Comparison of Quantitative and Qualitative Approaches to risk assessment

Quantitative Approaches	Qualitative Approaches
Results are based on objective measures	Results are based on subjective measures.
Cost and benefit issues are important	Monetary value of assets is not important.
Requires large amount of historical information like threat frequency, likelihood, etc.	Limited effort is required to develop monetary value, threat frequency
More complex process, mathematical tools are required	Relatively straight forward, mathematical tools are not needed
Mostly performed by technical and security staff	Can be performed by non-technical and non-security staff

Note. The table in Figure 2.1 is from a paper in *Research Gate* by Shah, Jaymeen R., & Murtaza, Mirza, (https://www.researchgate.net/publication/253020332_Information_Systems_Risk_Assessment_Methods).

Qualitative

Sensitive Company Data / Threat: Insider Threat

SharePoint implementation for company data introduces a significant risk of insider threats due to the digital consolidation of data. Employees or contractors may misuse their access to sensitive information to steal, leak, or alter. The likelihood of this occurrence is assessed as 'possible' due to the number of personnel within the warehouse and the company's relatively high turnover rate. The consequences of a leak of sensitive data are moderate due to loss of productivity and/or fines and fees from improper security measures.

The assessed risk level is 'High' due to a possible likelihood and moderate consequences.

The current existing controls for this are role-based access, network monitoring, and security awareness training.

- Role-based Access: Access to the data is granted based on a user's role within the organization to ensure that only authorized or vetted personnel can view or modify the sensitive data.
- Network Monitoring: Once baselines are established, network monitoring helps detect and respond to suspicious activity or behavior that may indicate an insider threat.
- Security Awareness Training: Having a quarterly training program for employees helps them recognize signs of an insider threat to report to their security manager.

SharePoint Data / Threat: User Error

Accidental deletion of data is a possibility when using SharePoint for data management. The consequences are considered 'moderate' since mistakes can lead to the loss of important data, disrupt business operations, and reduce productivity due to efforts spent to recover the lost data. The likelihood of this occurrence is assessed as 'rare.' The combination of a rare likelihood with moderate consequences classifies this risk as 'Medium.' Existing controls to deal with this potentiality are user training and extensive documentation.

- User Training: Providing users with training on how to utilize SharePoint effectively and safely reduces the chances of accidental data deletion.
- Extensive Documentation: Having comprehensive documentation to guide users and IT staff in not only SharePoint usage but also document recovery should alleviate most accidental issues.

Finance / Threat: Higher than expected costs

SharePoint implementation could have financial risk in the form of being over budget. Although existing controls aim to mitigate this risk, unforeseen consequences could still arise, prompting budget re-adjustments or reallocating funds from other projects. The risk is assessed

as ‘Low’ due to a rare likelihood of minor consequences. The existing controls are detailed cost analyses and clearly established budgets prior to execution.

- Detailed cost analysis: Thorough analysis helps anticipate costs and plan for potential expenses for successful SharePoint implementation.
- Clear Budget Establishment: Setting a well-defined budget to guide spending ensures effective management of financial resources.

Physical Information / Threat: Integration challenges

Integrating existing physical information (paper records, printed documents, physical data) into SharePoint has unique challenges with each instance. Some documents could be irrelevant, damaged, or difficult to digitize. The risk is assessed as ‘Low’ due to a rare likelihood and minor consequences. The current controls to deal with potential issues are using experienced developers and utilizing consultants.

- Experience Developers: They can foresee and mitigate many common issues during the integration process in addition to preventing major integration mishaps.
- Utilize Consultants: Consultants bring specialized expertise and best practices on how to deal with certain digitization challenges.

Figure 2.2

Quantitative Risks

Quantitative Analysis						
Asset	**Threat/Vulnerability**	**Existing Controls**	**Level of Risk**	**Cost ($)**	**Likelihood**	**Estimated Risk Cost ($)**
Inventory Data	Service Disruptions	Disaster Recovery Plan Regular back ups Manual inventory	**High**	16986.30	5%	849.32
Sensitive Company Data	Data Breach	Internal Company Network Network Monitoring Password Policies	**Medium**	450000.00	5%	22500.00
Sharepoint Data	Regulatory Non-Compliance GDPR HIPAA	Ensure configurations comply with regulations Harden areas requiring greater data protection	**Medium**	1050000.00	5%	52500.00

Inventory Data / Threat: Service disruptions

Implementing and utilizing SharePoint for warehouse inventories now subject EDC to substantial setbacks if there are service disruptions by the provider. The likelihood of this occurrence is assessed as ‘rare’ due to the tech industry’s substantial investments in cloud technology. The consequence of disruption is major due to the integral nature of SharePoint usage in inventories. The assessed risk level is ‘High’ due to rare likelihood paired with major consequences. The existing controls for this are disaster recovery plans, regular backups, and manual log sheets.

- Disaster recovery plans: Provide roadmaps for warehouse managers to continue to conduct operations with limited resources while the IT team works to restore functionality to the system.
- Regular backups: The backups mitigate data loss risk pending the intervals between the backups.
- Manual Inventory/Log Sheets: At worst, operations can continue via manual logs. They can be cumbersome due to the sheer number of items and may not capture real-time inventory changes. They are also prone to human error.

Quantitative Impact Calculation:

- The estimated annual operating cost for a warehouse is $6.2 million.
    - The daily operating cost is $16,986.30.
    - Warehouse operations can still be conducted without SharePoint, although they will be at a reduced efficiency level.
    - Rapid disaster recovery plan implementation to resort to fallback options to include manual inventories and log sheets can reduce the impact of service disruptions.
    - Total Cost: $16,986.30
    - Likelihood: Rare (<5%)
- Estimate Risk Cost: $849.32 (per day)

Sensitive Company Data / Threat: Data Breach

With SharePoint for data management, a data breach could be a significant risk. Loss of sensitive data, legal implications, and operational disruptions are all possibilities. Implementing controls such as having an internal network, network monitoring, and strong password policies reduces the likelihood of data breaches being rare. The consequences are still moderate, prompting an overall risk level of 'Medium.'

- Internal network: A company intranet reduces exposure to external threats.
- Network monitoring: This measure assists in the early detection of a data breach.
- Password policies: Strong password policies that are up to date with industry standards for complexity and length make user accounts and logins more resistant to brute-force password attacks.

Quantitative Impact Calculation:

- The estimated annual operating cost for a warehouse is $6.2 million.
    - The daily operating cost is $16,986.30.
    - Business Disruption: $100,000 (considering a fraction of the annual operating cost)
    - Revenue Loss: $200,000 (potential business impact due to reputation damage)
    - Reputational Damage: $150,000
    - Total Cost: $450,000
    - Likelihood: Rare (<5%)
- Estimate Risk Cost: $22,500.

SharePoint Data / Threat: Regulatory Non-Compliance

Implementing and utilizing SharePoint for managing data now risks non-compliance with regulatory standards such as GDPR and HIPAA, among others. The likelihood of this occurrence is assessed as ‘rare’ coupled with ‘moderate’ consequences in the form of fines, legal action, and damage to EDC’s reputation. Therefore, the assessed risk level is ‘Medium.’ The existing controls are proper configurations in addition to hardened network and document library areas.

- Proper configurations: Ensure that permissions, encryption, and data access controls are in accordance with regulatory requirements.
- Hardened Network and Document Library: Critical areas on both the network and document libraries are hardened to strengthen security and protect sensitive data.

Quantitative Impact Calculation:

- The estimated annual operating cost for a warehouse is $6.2 million.
    - The daily operating cost is $16,986.30.
    - Potential Fines: $500,000

    - Legal Fees: $150,000
    - Remediation: $200,000
    - Reputation Damage: $200,000
    - Total Cost: $1,050,000
    - Likelihood: Rare (<5%)
- Estimated Risk Cost: $52,500.

Cost Benefit Analysis

Figure 2.3

Cost Benefit Analysis

Cost Benefit Analysis					
Asset	**Threat/Vulnerability**	**Level of Risk**	**Estimates Risk Cost**	**Mitigation**	**Benefit**
Sensitive Company Data	Insider Threat	**High**	$ 52,500.00	Enhanced Access Controls Data Loss Prevention Tools Periodic Audits	Ensures only authorized personnnel can access sensitive data, reducing risk. Prevents unauthorized outflow of data or transfer of critical information. Identify and rectify vulnerabilities
Inventory Data	Service Disruptions	**High**	$ 849.32	Increase backup frequency Vendor Support and SLAs Training & Awareness	Ensures minimal loss and quick recovery. Guarantee timely assisstance and resolution of technical issues. Staff equipped with skills to seamlessly transition to back up systems .
Sharepoint Data	Regulatory Non-Compliance GDPR HIPAA	**Medium**	$ 52,500.00	Regular Compliance Audits Advanced Encryption Compliance Management Tools	Ensures adherence to regulatory standards and identify potential issues before they become violations. Data is better safeguarded and is in compliance with security standards.
Sharepoint Data	User Error resulting in deletion of data	**Medium**	Up to $20,000	Training and Awareness Roles-based Access Control	Employees are educated on best practices, reducing likelihood of mistakes. Only authorized personnel can modify or delete critical data, which minimizes the risk of accidental deletion.
Sensitive Company Data	Data Breach	**Medium**	$ 22,500.00	User Access Reviews Security Audits Advanced Threat Detection	Greater overall security posture for network and data. Security audits identify vulnerabilities and ensure adherence to best practices. Proactive identification of breaches can reduce magnitude of damage
Finance	Higher than expected costs for implementation and maintenance	**Low**	Up to $20,000	Contingency Fund In-House Experience Stakeholder Communication	Greater flexibility to address unforeseen expenses with minimal disruptions. Team builds the knowledger address issues internally prior to consulting with experts. All parties are informed of budget issues beforehand which reduces the delay in fund reallocation.
Physical Information	Integration Challenges into Sharepoint	**Low**	$ 1,000.00	User Feedback OCR Expert consultants	Greater user experience. Increased flexibility with digitizing documents. Expert knowledge to address complex problems efficiently.

Mitigation of Risks

Figure 2.4

Risk Mitigation List

Migitation (in-depth)				
Asset	**Threat/Vulnerability**	**Level of Risk**	**Estimates Risk Cost**	**Mitigation**
Sensitive Company Data	Insider Threat	**High**	$ 52,500.00	Enhanced Access Controls Data Loss Prevention Tools Periodic Audits
Inventory Data	Service Disruptions	**High**	$ 849.32	Increase backup frequency Vendor Support and SLAs Training & Awareness
Sharepoint Data	Regulatory Non-Compliance GDPR HIPAA	**Medium**	$ 52,500.00	Regular Compliance Audits Advanced Encryption Compliance Management Tools
Sharepoint Data	User Error resulting in deletion of data	**Medium**	Up to $20,000	Training and Awareness Roles-based Access Control
Sensitive Company Data	Data Breach	**Medium**	$ 22,500.00	User Access Reviews Security Audits Advanced Threat Detection
Finance	Higher than expected costs for implementation and maintenance	**Low**	Up to $20,000	Contingency Fund In-House Experience Stakeholder Communication
Physical Information	Integration Challenges into Sharepoint	**Low**	Less than $1000	User Feedback OCR Expert consultants

Sensitive Company Data / Threat: Insider Threat

Mitigation Strategy:

- Enhanced Access Controls – Methods such as role-based access control and multifactor authentication for critical or sensitive data make it more difficult for potential inside threats to get access to the information.
- Data Loss Prevention Tools – These tools act as preventive measures by blocking the unauthorized transfers or sharing of data that does not meet organizational security requirements.
- Periodic Audits – Monthly audits of access logs help identify unusual access patterns for potential threats.

Inventory Data / Threat: Service Disruptions

Mitigation Strategy:

- Increase backup frequency – More instances of backups minimize data loss in the event of a disruption.
- Vendor Support and SLAs – Utilizing metrics standardized in the service level agreement (SLA) ensures prompt support and quick resolution of issues depending on the severity.
- Training & Awareness – Training employees to use backup or failover options during service disruption, minimizing transition time to continue business operations.

SharePoint Data / Threat: Regulatory Non-Compliance

Mitigation Strategy:

- Regular Compliance Audits – This minimizes legal fees or regulatory fines EDC may face by proactively identifying potential compliance issues. It also provides an audit trail that demonstrates compliance efforts.
- Advanced Encryption – Advanced encryption methods for data at rest and data in transit ensure that information remains protected against unauthorized access or improper handling of secure data.
- Compliance Management Tools – This maintains a proactive approach to automate tracking and enforcement of regulatory requirements and helps identify compliance gaps to remediate within the system.

SharePoint Data / Threat: User Error

Mitigation Strategy:

- Training and Awareness – Conduct regular refresher training sessions to reinforce best practices and update users on new features or procedures. This helps to keep the knowledge fresh and reduces the likelihood of errors.
- Roles-based Access Control – Implement these measures for critical areas to prevent accidental or untimely movement or data removal.

Sensitive Company Data / Threat: Data Breach

- User Access Reviews – Conducting monthly reviews of user access to ensure that only authorized personnel have access closes the loop on potential threats that may not have had their access removed during out-boarding.
- Security Audits – Conducting regular audits and performing penetration testing to access data within the SharePoint environment helps identify and remediate vulnerabilities.
- Advanced Threat Detection – Implementing advanced tools such as intrusion prevention systems and intrusion detection systems helps identify and mitigate potential threats in real-time.

Finance / Threat: Overbudget

Mitigation Strategy:

- Contingency Fund – A pre-allocated fund can cover minor overrun costs without the delay in requesting additional funding.
- In-house experience – Promoting, recognizing, and utilizing in-house talent can help with potential issues if additional funding is not available for further consultation with specialists.
- Stakeholder Communication – Engaging with stakeholders can increase the speed of reallocating funding to meet requirements.

Physical Information / Threat: Integration challenges

Mitigation Strategy:

- User Feedback – For more challenging items to integrate or digitize into SharePoint, leveraging user feedback on the document's importance or which part of the document is considered critical helps satisfy all parties involved.
- OCR – Utilizing optical character recognition tools concurrently with high-quality scanning ensures that information on the documents is accurately digitized and archived.
- Expert consultants – Asking specialists in this field for their recommendations on challenging problems improves efficiency during implementation.

Justification of Approach

The decision to use the Waterfall project methodology for this proposal is based on the relatively sequential nature of SharePoint implementation. The data must first be collected, followed by system planning, development, user training, and then deployment. Each phase depends on the completion of the previous, hence the ideal fit with the waterfall methodology.

Other methodologies considered were agile, kanban, and the critical path method. Agile is highly user-focused, making it rather ideal, but the potential for not only team rotation but also the warehouse managers and inventory planners could have led to differing and changing requirements due to the constant turnover of the end customer. Kanban was highly promising, especially with the board entries for greater awareness of task progression within the work breakdown structure and the critical path method focused on essential tasks and their timelines.

Overall, the waterfall project methodology’s simplicity and ease of planning made it a more suitable choice for this project. The implementation will, however, include practices from

both kanban and the critical path method since they both have highly effective techniques. The overall backbone and classification will still be the waterfall methodology.

The project will have three key phases: Phase 1 Planning, Phase 2 Development, and Phase 3 Documentation and Use. A more detailed breakdown of the phases will be provided below in the Project Plan portion of the report. Key Performance Indicators (KPIs) for phases 1 and 2 will be useful internally to the IT team to enhance the user experience for phase 3.

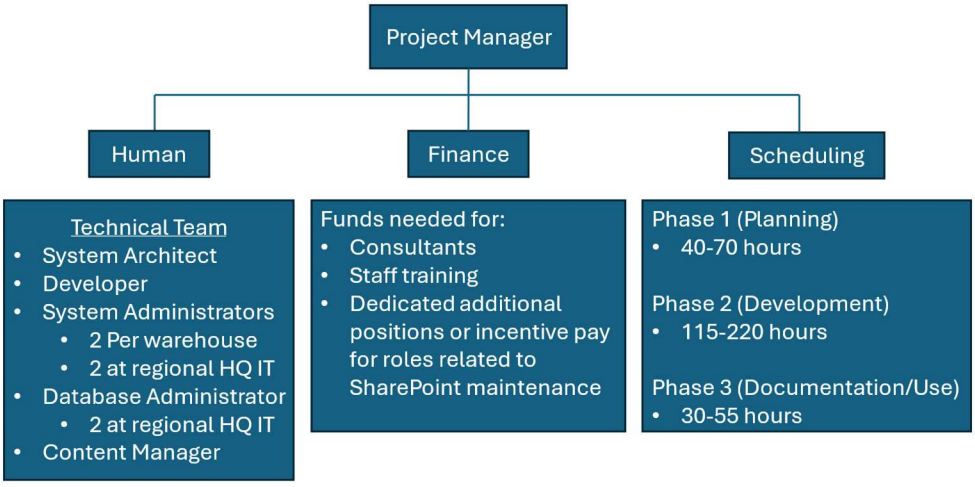
Phase 1 (Planning) KPIs will be based on data collected during the planning stage. IT teams will interface with warehouse managers and planners to understand their needs and ensure that the SharePoint solution being developed will be in alignment with company objectives. Phase 2 (Development) KPIs will focus on adherence to project timelines, achievement of development milestones, tracking the number of bugs/issues, and measuring user satisfaction during QA/QC and user acceptance testing. Phase 3 (Documentation and Use) KPIs will include measuring downtime during the transition, gathering post-deployment user feedback, tracking response times for support requests, assessing the relevancy of data collected for use in SharePoint, and evaluating the effectiveness of dashboards.

Upon implementation, SharePoint-generated dashboards that reflect individual warehouses can help decision-makers and upper management reach operational and strategic goals. The dashboards aggregate various data points, including stock levels, asset turnover, storage utilization, overall capacity, and heat maps, to identify trends and patterns and help forecast future needs and opportunities.

Project Resource Management Plan

Figure 3

Resourcing Outline



Through strategic planning and adequate resource allocation, the SharePoint implementation is poised to support company objectives by streamlining company inventory processes. On the human front, the project requires a team to conduct the planning, design, development, and deployment of the solution. Utilizing specialists with either dedicated roles or incentivized pay reinforces a successful outcome. From a financial perspective, allocating funds to consultants increases the efficiency of the implementation. There is a multitude of open-source information out there on SharePoint implementation. Utilizing experts brings efficiency, customizing, and cost savings on time and effort spent on the project. There is also a deliberate project schedule not only to minimize the impact on current company operations but also to

establish timelines and deliverables due dates to keep the project on task throughout the next quarters.

Resources

The team for the SharePoint implementation project will be composed of several key roles to ensure a comprehensive and efficient deployment. The project manager will oversee the project. The technical team will consist of a system architect, a developer, at least system administrators per warehouse, and two system administrators at the regional headquarters. Additionally, there will be two database administrators at the regional headquarters IT level and a content manager.

Project Manager

- Technical Team (additional roles to be created from current team or hired)
    - Architect
    - Developer
    - System Administrators (1 per warehouse + alternate, and 2x at regional HQ)
    - Database administrator (2 at regional HQ IT level)
    - Content Manager (pref. former planner or will work in tandem with inventory planners to determine requirements)

Financial Resources

- The project will require $2,677 of funds to be allocated for consultants and training.
    - (Once implementation is complete, the recommendation is to pre-allocate funds ranging from 5-10% on top of an employee's base pay to act as incentive pay commensurate to their additional responsibilities in maintaining the SharePoint system going forward. This will require both the Human Resources and Finance

Department's involvement and will be discussed post-implementation via formal channels.)

Scheduling Considerations

- Estimated range of project duration [Total: 185-345 hours]
    - Planning [40-70 hours]
    - Development [115-220 hours]
    - Documentation and Use [30-55 hours]
- Conversion to 'working days' methodology is [time/8 hours]
    - 185/8 = 23 working days and 345/8 = 43 working days, and so on…
    - Planning Phase: 5-8 days
    - Development: 14-27 days
    - Documentation and Use: 4-7 days
- In other words, the project duration can range between one to two months and includes all planning, design, development, customization, deployment, and implementation.

Justification of Resources

The project will require a dedicated team in order to be successful. Implementing SharePoint requires planning, development design, deployment, and support. Therefore, roles and responsibilities within the team need to be identified. The roles are tailored to collect data, design, development, and maintain the system post-implementation. Throughout the duration of the project, the personnel within these roles will continue to develop proficiency. Once the project is implemented, the administration will determine the amount of incentive pay to grant to that specific role. Cultivating a group of in-house experts can lead to significant long-term

savings. Their expertise will directly contribute to warehouse logistics operations efficiency, enhancing EDC's overall productivity.

As for finance, the funds will be used to encourage user adoption, enhance efficiency within the project, and promote knowledge retention on the use of the system. For successful implementation, the use of specialists during the initial configuration will allow the project to reach its full potential. Hiring consultants to give the IT team advice and guidance on avoiding common pitfalls and making the most of the platform's advanced features will greatly expedite the implementation process. This will allow EDC to use the platform sooner to enhance business operations, improving overall productivity and efficiency. Furthermore, the consultants can also provide training to the staff, which reduces the learning curve for the system and thereby improves user adoption and satisfaction.

Resource Allocation Plan

Figure 3.1

Resource Allocation

Resource	Planning	Development	Documentation and Use
Project Manager	100%	100%	100%
Sharepoint Architect	100%	100%	25%
Sharepoint Developer	100%	100%	25%
System Administrator	100%	100%	25%
System Administrator	100%	100%	25%
System Administrator	10%	100%	50%
System Administrator	10%	100%	50%
System Administrator	10%	100%	50%
System Administrator	10%	100%	25%
System Administrator	10%	100%	25%
System Administrator	10%	100%	25%
Database Administrator	100%	100%	30%
Database Administrator	100%	100%	30%
Content Manager	25%	25%	100%
Consultant 1	Session 1 Initial Guidance	Session 2 In-Depth Q/A	Session 3 Staff Training
Consultant 2	N/A	N/A	3rd Party Assessment
Legend			
Resource			
Phase			
Utilization % or Method			

Project Manager

- Responsibilities: Overall project coordination, timeline management, stakeholder communication, risk management.
- Time Allocation: 100% throughout the duration of the project.

SharePoint Architect

- Responsibilities: Design the SharePoint infrastructure and site libraries to align with business requirements
- Time Allocation: 100% during the Planning and Development phases. 25% during the Documentation and Use phase.

SharePoint Developer

- Responsibilities: Customize functionality, develop custom web parts to meet business requirements and workflows, and integrate with other systems
- Time Allocation: 100% during the Planning and Development phases. 25% during the Documentation and Use phase.

System Administrator (8)

- Responsibilities: Maintain servers and user permissions and assist with customer technical issues. Assists architect and developer when needed during the Planning and Development phases.
- Time Allocation: Rotational 100% usage between all eight personnel during the Planning and Development phases. Higher rotational usage all across the board is used during the Documentation and Use phase to assist with the final polish and assist customers once implementation is complete.

Database Administrator (2)

- Responsibilities: Manages SharePoint databases and is responsible for backup and recovery.
- Time Allocation: 100% during the Planning and Development phases. 25% during the Documentation and Use phase.

Content Manager

- Responsibilities: Organizes and manages content; ensures consistency and compliance and user training on content.
- Time Allocation: 25% during the Planning and Development phases. 100% during the Documentation and Use phase.

Consultant 1

- Responsibilities: Will be utilized to provide specialist expertise.
- Time Allocation:
    - Session 1. Provides Technical Team with initial guidance, best practices, lessons learned, and general advice on implementation.
    - Session 2. Provides knowledge and troubleshooting advice on problems and issues the Technical Team encounters during development.
    - Session 3. Conducts a staff training session prior to release.

Consultant 2

- Responsibilities: Will be utilized to provide a third-party assessment
- Time Allocation: To be conducted after development and prior to deployment.

Gaps and Impact on Other Projects

Once implemented, SharePoint is set to significantly enhance company performance by potentially reducing the inventory timeline for a warehouse. The goal is to reduce the physical inventory from twenty days to twelve. This reduction would translate to an eight-day returned productivity gain, allowing the warehouse to return to full operational capacity more quickly. The centralized document repository, with streamlined data access and improved communication channels, will facilitate more efficient inventory management, which reduces delays and errors that usually accompany manual processes.

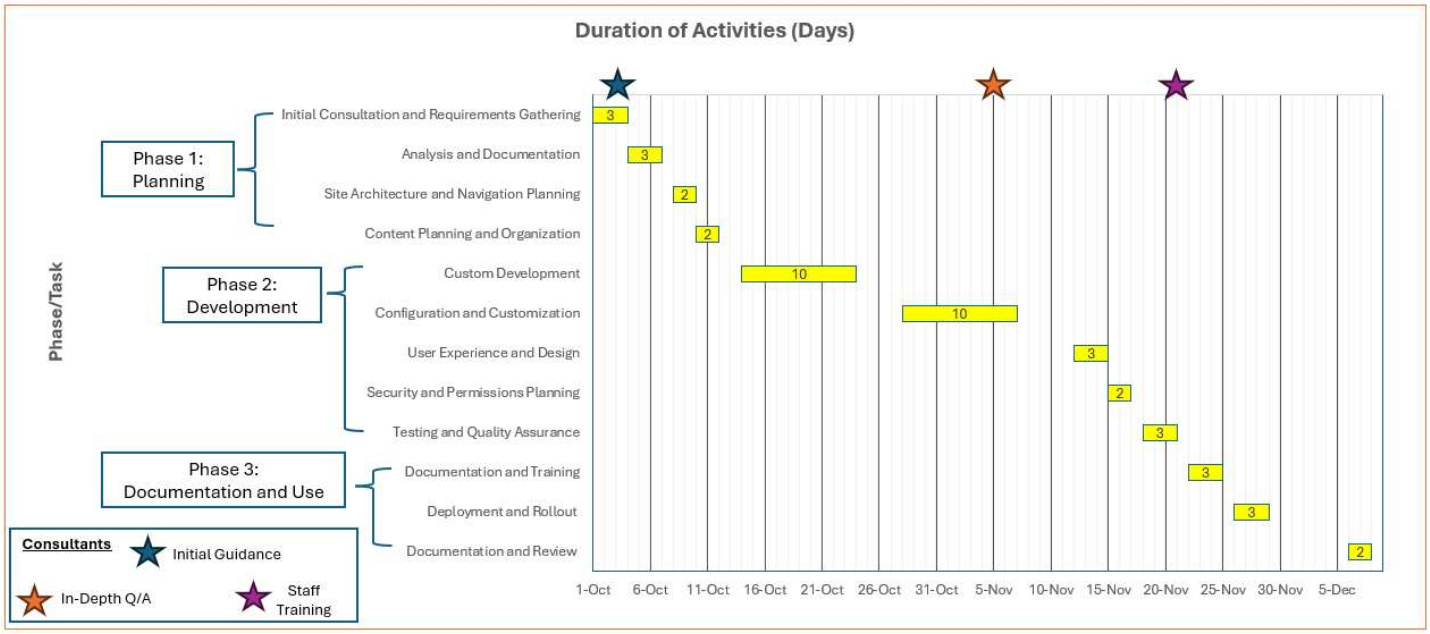
The focus on SharePoint implementation, however, will no doubt affect existing IT projects. The current project involving switch labeling and cable management across all warehouses will experience delays. The updates to Windows 11 for all users will be delayed, but users will still have functional operating system software to continue business operations. Life

cycling user workstations will also be delayed, but this is a low-priority task. Additionally, the help desk response time for non-critical issues will increase due to more resources being allocated to the SharePoint project. Critical issues will still be addressed, and senior management's issues will still receive prompt support. The reallocation of IT staff's priorities to SharePoint means that less immediate attention will be available for these ongoing and planning initiatives. Fortunately, they are considered non-critical and a low priority for the next two quarters.

Project Plan

Figure 4

Project Plan Gantt Chart



Time [total: 185-345 hours]

- Phase 1: Planning [40-70 hours / 10 days]
  - Initial Consultation and Requirements Gathering
    - 10-20 hours / three days
  - Analysis and Documentation
    - 10-20 hours / three days
  - Site Architecture and navigation planning
    - 10-15 hours / two days
  - Content Planning and Organization
    - 10-15 hours / two days
- Phase 2: Development [115-220 hours / 28 days]
  - Custom Development
    - 40-80 hours / ten days
  - Configuration and Customization
    - 40-80 hours / ten days
  - User Experience and Design
    - 15-25 hours / three days
  - Security and permissions planning
    - 10-15 hours / two days
  - Testing and Quality Assurance
    - 10-20 hours / three days
- Documentation and Use [30-55 hours / 8 days]
  - Documentation and Training
    - 10-20 hours / three days
  - Deployment and Rollout
    - 10-20 hours / three days
  - Documentation and Review
    - 10-15 hours / two days

Scope

Objective:

- Centralized SharePoint portal for logistics management
- Document library with all required and necessary documents for warehouse inventories, logs, schedules, historical contracts

Inclusions:

- Setup and configuration of SharePoint for each warehouse
- Migration of existing data to SharePoint
- Documentation
- Training for staff and IT team
- Compliance with industry standards and regulations
- User testing with feedback

Exclusions:

- Maintenance of warehouse-level libraries beyond the implementation phase
- For this iteration, non-logistical related features/pages such as HR, finance, marketing, etc.
- Extensive customization, i.e., third-party integration with other programs that may require significant development effort.
- Migration of non-logistical data or systems to SharePoint
- Support for end-point hardware will be for company devices and will not cover personal computers or mobile devices
- Advanced SharePoint development training that is not necessary for end-users or administrators to operate the logistics solution

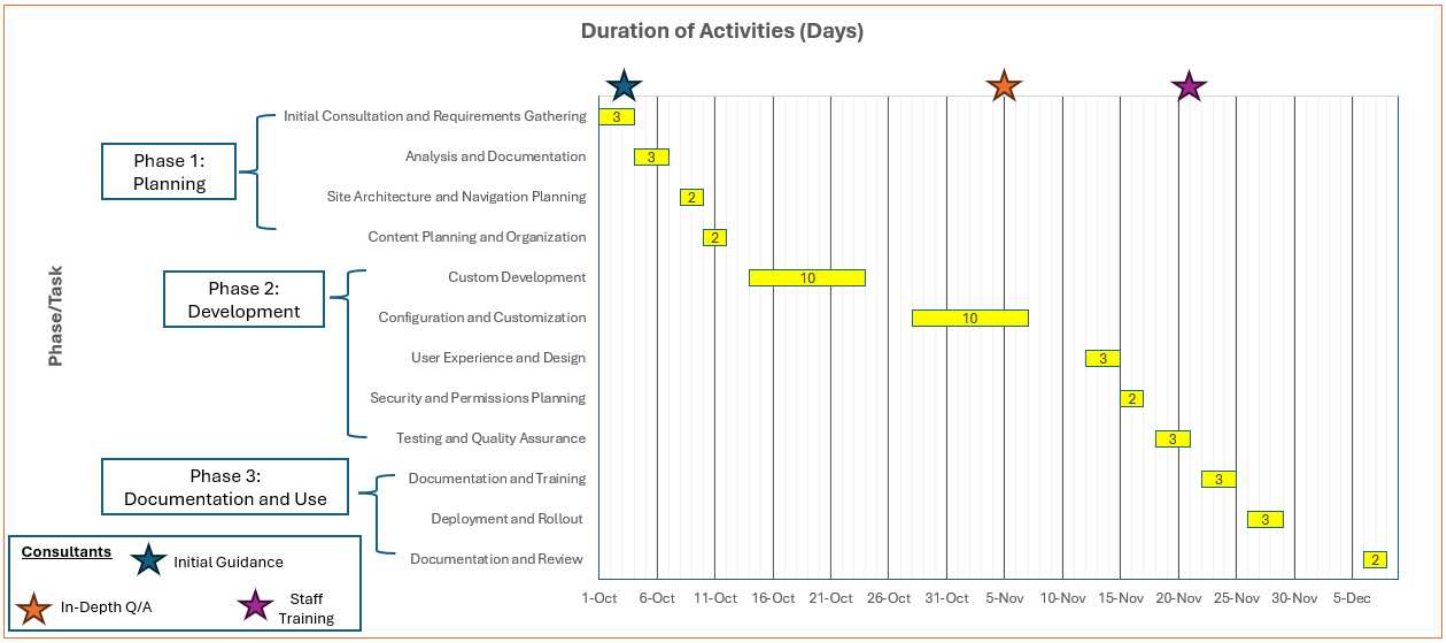
Assumptions

- The company will still retain Microsoft 365 E5 license during the duration of this project since it includes SharePoint and PowerBI as part of the suite.
- SharePoint will continue to receive regular updates and support from Microsoft to ensure it remains current with technological advances.
- SharePoint will have no issues with Windows 11 since they are both hosted by the same parent company.
- Security settings to enable file conversion software are available to update older files from ‘doc.’ to ‘docx.’ format during data migration.
- There will be no change to regular business hours for the next two quarters. Project task durations are based on the regular 9-5 (8-hour) workday for staff.
- The company will have no additional holidays in FY2025 QTR 1 besides Columbus Day, Veterans Day, and Thanksgiving. The project planning factors in days off from federal holidays.
- EDC’s existing IT infrastructure will support the integration and deployment of SharePoint without the need for major upgrades.
- EDC will still maintain reliable and high-speed connectivity required for user satisfaction when using SharePoint.
- Staff possess the basic IT skills necessary to use SharePoint or can quickly acquire them through staff training.
- SharePoint can scale with company growth and accommodate more users and data as needed.

Project Phases and Timeline

Figure 4

Project Plan Gantt Chart



The project will be broken up into three distinct phases with a tentative (T) start date of October 1st.

Kick-off Meeting: 30 September

Phase 1: Planning [10 Days]

Start Date: 1 October

End Date: 14 October

Activities:

- Initial Consultation and Requirements Gathering
    - Meet with key stakeholders to gather requirements, understand business needs, and define objectives for the SharePoint page.

    - Meet with a consultant for initial guidance for the project.
    - Duration: 10-20 hours or no more than three days
- Analysis and Documentation
    - Analyze gathered requirements, documenting user stories, use cases, and functional specifications for the SharePoint page.
    - Duration: 10-20 hours or no more than three days
- Site Architecture and Navigation Planning
    - Design the site structure, hierarchy, and navigation model for the SharePoint page based on documented requirements.
    - Duration: 10-15 hours or no more than two days
- Content Planning and Organization
    - Plan and organize content types, metadata, and document libraries to ensure effective content management and searchability.
    - Duration: 10-15 hours or no more than two days

Phase 2: Development [28 days]

Start Date: 15 October

End Date: 25 November

Activities:

- Custom Development
    - Develop custom features, web parts, workflows, and integrations to meet the warehouse business operation requirements.
    - Duration: 40-80 hours or no more than ten days
- Configuration and Customization

    - Configure settings, templates, lists, libraries, and other components to align with the planned architecture and design.
    - Meet with a consultant to discuss issues, complex problems, or suggestions.
    - Duration: 40-80 hours or no more than ten days
- User Experience and Design
    - Design the user interface, page layouts, and branding elements to make the site visually appealing.
    - Duration: 15-25 hours or no more than three days
- Security and permissions planning
    - Plan and configure security settings, user permissions, and access control in accordance with regulatory requirements.
    - Duration: 10-15 hours or no more than two days
- Testing and Quality Assurance
    - Conduct testing and quality assurance to ensure the SharePoint solution meets the functional requirements and performs as expected.
    - Duration: 10-20 hours or no more than three days

Phase 3: Documentation and Use [8 days]

Start Date: 26 November

End Date: 9 December

Activities:

- Documentation and Training
    - Document the development process, prepare user guides, and provide training to users on how to utilize the SharePoint workflow.

    - Conduct staff training with a consultant
    - Duration: 10-20 hours or no more than three days
- Deployment and Rollout
    - Deploy the SharePoint solution and coordinate rollout with the stakeholders
    - Duration: 10-20 hours or no more than three days
- Documentation and Review
    - Document the planning and design decisions and conduct an initial review with stakeholders for feedback.
    - Consultant 3rd party assessment can be done at this time or within 90 days.
    - Duration: 10-15 hours or no more than two days

Dependencies

The successful implementation of SharePoint relies on several factors. Firstly, SharePoint is part of the EDC's Office Enterprise E5 license with Microsoft. The availability of this license provides the necessary access and permissions to use SharePoint as part of the Office suite. Any modifications of the license toward a version without SharePoint will impact the project. Secondly, there is an overabundance of how-to guides on SharePoint implementation available online from both Microsoft and open-source forums. They will be a crucial reference for the IT team since the solution will be developed in-house rather than outsourced. In the same vein, having consultants and specialists provide guidance to the technical team leading the development and conducting training for the staff prior to rollout greatly increases the success of the project by enhancing efficiency and encouraging user adoption. Finally, a major assumption for this project is that the technical infrastructure will be sufficient to handle SharePoint. Disruptions or damage to the technical infrastructure will impact SharePoint. This is currently

not an issue since the company already uses Teams, which hosts the data on an unsorted SharePoint. An aspect of the SharePoint implementation is consolidating and sorting the Teams' data on the unsorted SharePoint.

Risk Factors

As discussed earlier, this project has several risks that would be of benefit to restate with the planned mitigation strategy.

Within the human domain of risk, sensitive company data during the transition and implementation could face threats such as insider threats and data breaches. The existing controls to mitigate these risks include role-based access, network monitoring, and security awareness training. To further protect sensitive information, the team will enact enhanced access control and multi-factor authentication. If the data is both physical and critical, the two-person integrity will also be used. Data loss prevention tools will act as preventive measures by blocking unauthorized data transfers, while intrusion detection and prevention systems can both identify and mitigate potential threats by alerting the staff to investigate further. Audits will be used to help identify unusual access patterns, and regular security audits and penetration testing of the SharePoint environment will also be conducted to identify and remediate vulnerabilities.

Another risk identified was that the SharePoint data was susceptible to user errors, such as being accidentally deleted by an unwitting operator. Current existing controls to address this potentiality are conducting regular backups, having a disaster recovery plan, and having resources available to conduct a manual inventory if needed. Luckily, SharePoint has a robust data recovery system, but the issue can still be mitigated through additional training and awareness to reduce the likelihood of mistakes. For more critical data, having role-based access also further prevents accidental or untimely movement of data.

As for environmental risk factors, the SharePoint data must be managed properly to avoid regulatory non-compliance. Existing controls include ensuring that configurations comply with regulations and hardening areas that require greater protection. Additional methods to mitigate this risk are conducting regular compliance audits to demonstrate proactiveness and compliance efforts. Implementing advanced encryption for sensitive data at rest and in transit ensures that the data remains protected against unauthorized access or improper handling, while compliance management tools help automate tracking and enforcement of regulatory requirements to identify and remediate compliance gaps within the system.

With the SharePoint data being susceptible to human interference, the environmental version of that is service disruptions. In other words, if the cloud environment goes offline for a certain amount of time, how will EDC function? The controls are the same: disaster recovery plan, backups, and capacity to conduct a manual inventory. To further mitigate the impact of disruptions, increasing the frequency of backups can minimize data loss. Leveraging vendor support and adhering to strong service level agreements (SLAs) can ensure prompt resolution of service provider issues. Another mitigating factor is the training for employees to transition to failover options to minimize the transition time and get back on track with business operations at a degraded state. The sooner they can transition to the disaster recovery plan, the less time the company operates at a loss.

Another environmental risk factor is the various types of data that need to be integrated into SharePoint. There will likely be data in formats that will present the IT team with challenges. The threat from integration challenges is the potential loss of data for business continuity at worst and delays to the project at best. The current controls are to identify and utilize the more talented or experienced developers and administrators on the team to deal with

the more difficult issues and to hire consultants to get their advice. Additional mitigation strategies presented are factoring in user feedback and using optical character recognition tools. With user feedback, understanding what document is important to the user or which part of the document is critical can help satisfy all parties involved. The optical character recognition tools can ensure that the information on the document can at least be accurately digitized and archived in addition to high-quality scanning.

For the financial side of the SharePoint implementation, as with many projects, the implementation could run into a risk of going over budget. Existing controls include having a detailed cost analysis done prior to execution and establishing a clear budget. The issue with going over budget is the project stalling due to having to gather or reallocate funding to continue with a critical step. In this specific scenario, the IT team could potentially require or request more time with a specialist. The other possibility is having to conduct more than one staff training session due to the non-availability of all to show up that day. To mitigate cost overruns, a contingency fund should be set aside to cover unexpected expenses. In addition, maintaining open communication with all stakeholders to ensure transparency can allow for budget adjustments in a timely manner if needed.

Important Milestones

Figure 5

Project Milestones

- Kick-off Meeting [30 Sept]: The project kick-off meeting is tentatively scheduled for 30 September to communicate with the project's stakeholders and to provide a detailed overview of the project's objectives, scope, and timelines.
- Progress Reports: Within each phase, the project manager will produce a progress report to provide structured updates on the project's progress and to communicate issues if they arise. It also serves as a platform to realign objectives with stakeholders and to provide a documented history of the project as it progresses. At the end of each phase, the progress reports will also be used as a reference point to determine if crashing or fast-tracking the schedule is warranted to stay on track.
- Final Conditions Check [2 Dec]: This is set to occur right before the deployment to ensure that all project deliverables and requirements have been met to agreed-upon standards.
- Deployment [5 Dec]: This is the tentative date for the SharePoint deployment to the company intranet for use. IT teams will be on standby afterward to ensure a smooth transition and to respond to issues.

Details of Project Launch

Upon project approval, the project kick-off meeting is set to occur on September 30th to communicate with the project's stakeholders and to provide a detailed overview of the project's objectives, scope, and timelines. The focus will be on how SharePoint can be used to improve warehouse logistics, streamline the inventory process, and enhance communication among the four warehouses within this region. At a minimum, the expected audience is all warehouse managers, inventory planners, and all IT managers from their respective warehouses. All else are welcome to attend.

The meeting will begin with a brief overview of the business problem, the project's background, and reasons for choosing SharePoint as the solution. The presenter, tentatively the project manager (PM), will then discuss the project timeline and the projected deployment date. The follow-on topics will be the roles and responsibilities of the technical team and what they will be requesting from the warehouse managers. It is critical to get support from the warehouse managers and inventory planners since the purpose of the project is to alleviate the strain and pressure of the cyclical warehouse inventories.

For the warehouse workers (if present), despite having little formal impact on the project, their informal presence and satisfaction can be of benefit to support the project. An efficient and streamlined inventory system will decrease the critical time needed for warehouse operations, reducing the overall burden for workers. If C-suite level executives are present, the SharePoint implementation project seeks to reduce errors in a necessary but lengthy process with the goal of reducing the time spent on inventories to focus on business operations to support logistics supply partners. The presenter will outline the communication plan and close with a Q&A session to address any concerns.

Strategy for Implementation

The strategy for implementing SharePoint first begins with the project proposal outlining the business problem along with the need for change to ensure that the project aligns with the company's objectives. In this case, the problem is the reduction in efficiency for warehouse operations during cyclical inventories. The proposed solution is a project focused on innovation and intends to boost the company's competitive advantage by streamlining and standardizing expectations for data management and content organization in all four warehouses in this region during the cyclical inventories.

The next step involves setting clear expectations and setting the end goal of the project with stakeholders, including the sponsor, users, and the team building SharePoint. The IT teams will begin by consolidating information and gathering data to construct the architecture for the SharePoint library. They will rely on the inventory planners' and warehouse managers' input on what pieces of the process and which documents are critical during the data gathering. During the development process, the IT teams will be engaged with the project, so there may be slight delays in remediating non-critical issues. However, once the solution is implemented and part of the company systems, IT teams at all levels will play an integral role in the company's operations to facilitate overall collaboration and assist with the use of the system.

Figure 5.1

Project General Timeline

Figure 5.2

Project Key Dates

Key Dates		
Date	**Item**	**'So what'**
30 September	Project Kick-Off Meeting	Recommend attendance for general awareness
1 October	Project Start	IT teams engaged in data collection and development
5 December	SharePoint Implementation	IT teams will be heavily engaged in responding to potential issues

As stated above, the SharePoint implementation aligns with EDC's strategic goals by focusing on enhancing customer relations (in this case, the suppliers and logistics partners) by working internal processes to allow employees and management to interface with them more often. The project will also allow for improved business continuity by providing management with the ability to access documents and data from anywhere with an internet connection. The use of SharePoint optimizes the time spent on important yet repetitive tasks by streamlining inventory management through a centralized data management system. This reduces the manual effort required and minimizes errors, thereby making warehouse operations more efficient. SharePoint's framework also supports the integration of new technologies and innovative solutions that EDC may pivot toward in the future to maintain market dominance in the logistics sector.

A core IT principle that SharePoint aligns with is disaster recovery. Since SharePoint is cloud-based, it has inherent protections against physical disasters such as floods, fires, and hardware failures. The solution increases redundancy at the enterprise level because Microsoft operates several data centers that mirror the information with one another and can still provide service if one of them goes down.

For enterprise architecture, SharePoint integrates local systems and data into the company's broader enterprise. Since this region will be the first to implement SharePoint as part of business operations, we will be setting a standard for other regions to follow if they establish their own centralized document repository. At the local level, SharePoint increases collaboration and communication due to its ability to create team sites for each section, division, and department. In addition to its seamless integration with Microsoft 365, the search function tethers all systems together to include the data hosted on Microsoft Teams Channels, enabling enterprise search capabilities for easy access to data across the organization.

The IT staff, after implementation, will play a much more active role in boosting the company’s bottom line rather than having a passive function. The increased involvement increases IT relevancy for the company in a rapidly technologically progressing society and business environment. This increase also necessitates further specialization within the IT team to deal with specific IT issue scenarios in an efficient manner. As the volume of data grows, continuous improvement of the system will be essential. The IT staff will be closely integrated with company business operations.

As for information security and assurance, SharePoint inherently falls under Microsoft’s purview in terms of physical security at the data centers. The IT team’s influence on local operations involves managing user permission, configurations, roles-based access, intrusion detection systems, and intrusion prevention systems, and ensuring regulatory compliance with international and national standards on data storage, security, and personal privacy protections such as ISO 27001, GDPR, and HIPAA. Furthermore, the team has access to real-time audit and activity logs that provide detailed records of users to detect suspicious activity, ensuring accountability and improving information assurance for EDC. SharePoint’s security features,

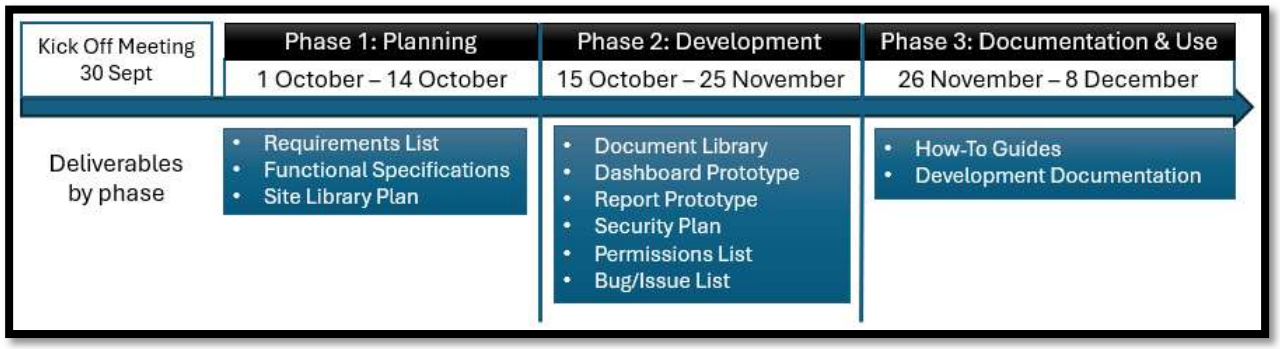
along with the IT department's guidelines, will ensure that the company's information and data are secure, reliable, and accessible only to authorized users.

By adopting SharePoint, the company can better align its goals, drive innovation, enhance disaster recovery capabilities, integrate with the greater enterprise architecture, and improve IT operations and information security for EDC.

Documentation Deliverables

Figure 5.3

Project Deliverables



Hardware and Software Deliverables

The SharePoint implementation project will have little to no hardware or deliverables due to the nature of the SharePoint framework. It is considered PaaS or SaaS, depending on the version, and all features are inclusive within this framework. An on-premises solution would involve hardware procurement and software considerations for security and database functions. The current project's scope does not consider an on-premises solution at this time, as the focus will be on determining if the pilot program can improve business functions with cloud storage as the backbone. The decision to allocate additional funding and resources to build an on-premises

data center will hinge on the outcome of the project and its effects on business operations for the next two to four quarters.

Evaluation Framework

Monitoring, evaluating, and assessing the implementation will be interwoven throughout the entire duration of the project. In order to reduce potential costs in the future, the Project Management Institute highly recommends management responsibility to increase buy-in with the quality assurance of the project (2017). The regional IT leadership will conduct regularly scheduled audits to ensure compliance with governance policies, security standards, and operational procedures. These audits, serving as standards and regulatory compliance checks throughout the project, also serve as a forcing function to create a culture where the team is committed to quality in the processes and final product.

During implementation, IT teams will maintain an issue log and a lessons-learned register that will be updated and reviewed by IT leadership at the end of every phase. An obvious acceptance criterion during implementation is the website's functionality and ease of use. Interfacing with the inventory planners throughout the data gathering and development phases to ensure that the final product is suitable for the power users is crucial for customer satisfaction.

Figure 6

Evaluation Metrics Considerations

Audit	• Compliance rate with governance policies • Number of findings & severity • Resolution time per finding
Survey	• User satisfaction scores • % Positive feedback • Response Rate
Issue Log	• Number of issues logged per month • Number of recurring issues • Average resolution time
Lessons Learned	• Number of lessons learned documented
Training	• Number of training sessions conducted • Percentage of users trained

Activities to be done post-implementation are performance monitoring, user activity monitoring, security monitoring, and continuous improvement of the site. IT teams will track server response times, page load times, up/downtime, and resource usage (CPU/RAM) for devices. As for user activity, metrics to account for would be the amount of document uploads and downloads, user engagement, and collaboration patterns. Security monitoring would be tracking login attempts, unauthorized access attempts, and compliance with security policies.

Figure 6.1

Post-Project Evaluation Intervals

Quarterly	• Internal Audits • Usage analytics • Refresher training • Maintenance cycles
Semi-Annually	• System health checks • User satisfaction surveys • Configuration review
Annually	• IT Team Advanced Training • Warehouse Managers/Planners business case alignment survey • Compliance audit (thorough) • Roadmap review
Continuous	• Security

Once the project has reached the post-implementation phase, user satisfaction surveys will be distributed to get additional feedback on SharePoint's usability and functionality. It is critical for the Warehouse manager and inventory planners to complete their surveys since the purpose of SharePoint's implementation was to help improve their ability to meet business objectives. The IT team will conduct continuous improvement to finetune deficiencies or inadequacies with the site.

Once enough data is collected to establish a sufficient baseline, the IT management can analyze the audit findings, survey results and issue logs to identify trends, satisfaction levels, and

areas for additional improvement. They will then compile these reports and present the findings to the regional IT leadership with actionable recommendations.

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