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Case Study Assignment   
SAP Customer Analysis: Royal Greenland

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# Part 1: Review Royal Greenland customer story materials

**Activity 1: Identify key stakeholders and explain their roles**

**Key Stakeholders:**

**SAP Project Team:**

1. A project manager responsible for building a business case for the project, setting up the schedule, setting up methods for tracking and reporting progress, determining priorities, budgeting, monitoring costs, and communicating with and supporting the team.
2. Functional consultant with experience in supply chain management, procurement and financial processes, preferably in agribusiness
3. Technical consultant(s) with:

Experience in supply chain management, especially procurement

Experience with designing and developing mobile and web applications

Experience implementing SAP BTP and cloud solutions that integrate with mobile apps, SAP ERP and other third party solutions

It would be ideal if these consultants also have domain experience in the agribusiness industry. They could then explain how technologies like Internet of Things (IOT) and cloud support Royal Greenland’s goal to automate processes like catch registration and track data

1. If necessary, a data analyst to work with the team to provide further insights on supply chain data e.g. wastage or spoilage, temperature controls during seafood distribution etc.

**SAP ecosystem partners:**

1. SAP (Software Provider): Royal Greenland collaborated with SAP, utilizing the SAP Business Technology Platform (SAP BTP), SAP Extension Suite, SAP BTP SDK for iOS, and SAP HANA. This partnership facilitated the development of intuitive apps for data digitalization and streamlining paper-based processes.
2. Trifork Smart Enterprise A/S (App Development Partner): Royal Greenland worked with Trifork Smart Enterprise A/S, a member of the SAP AppHaus Network. Trifork contributed its expertise and a design thinking approach to create consumer-grade apps using SAP BTP.

**Royal Greenland stakeholders –areas of the business involved:**

1. IT and Technology Teams: Involved in the development and implementation of digital solutions, ensuring that the technology infrastructure supports the new digital processes.
2. Procurement and Supply Chain Teams: Engaged in optimizing catch registration processes, improving data documentation, and ensuring the traceability and quality of the seafood products.
3. Finance and Accounting Teams: Involved in the simplified accounting and tax review processes resulting from the digitalization of data.
4. Frontline Users (Fishermen): The primary users of the digital tools and apps, crucial for capturing accurate catch data and complying with sustainability requirements.
5. Back-Office Staff: Involved in the approval of procurements made, utilizing the web-based app for comprehensive data processing.
6. Corporate Management: Responsible for decision-making and overseeing the overall success of the sustainable fishing initiative, ensuring alignment with business goals.
7. Legal and Compliance Teams: Ensuring that the digital processes comply with legal and regulatory requirements, especially in terms of data documentation and product traceability.
8. Marketing and Sales Teams: Supporting the communication of Royal Greenland's commitment to sustainability and the advantages of their products in the market.
9. Human Resources: Involved in any training or organizational changes related to the adoption of new technologies and processes.
10. Customers and Partners: External stakeholders, such as customers and partners, may also be involved or impacted by changes in the business processes.

**Remaining stakeholders who will be impacted:**

1. Marine Stewardship Council (MSC): As Royal Greenland is working on maximizing the financial benefits of MSC certification, the MSC may have an interest in the changes to catch registration processes and data documentation to ensure compliance with sustainability requirements.
2. Regulatory Authorities: Given the nature of the seafood industry, regulatory bodies overseeing fishing activities, data documentation, and product traceability may be impacted by the proposed changes. Compliance with regulations is crucial for the success of the initiative.
3. Local Fishing Communities: Beyond individual fishermen, the broader fishing communities may be impacted by the changes. The effectiveness of the initiative could influence the livelihoods and sustainability of these communities.
4. Environmental Organizations: Organizations focused on environmental conservation and sustainable practices may be interested in Royal Greenland's efforts to digitize processes and enhance sustainability in fishing activities.
5. Technology Partners: Beyond SAP and Trifork, other technology partners involved in providing specific tools or solutions within the SAP ecosystem may have a stake in the implementation process.
6. Logistics and Transportation Partners: Companies involved in the transportation and logistics of seafood products may be impacted by changes in procurement, catch registration, and quality control processes.
7. Training and Development Teams: Those responsible for training fishermen and other stakeholders on how to use the new digital tools and ensuring a smooth transition to the updated processes.
8. Quality Control Teams: Teams responsible for ensuring the quality and safety of seafood products may be impacted by changes in data documentation and the traceability of products.
9. IT Security Teams: Given the digitalization of data, IT security teams would have a stake in ensuring the security and integrity of the information captured and processed through the new solutions.
10. Boat Manufacturers and Suppliers: If Royal Greenland explores building an e-commerce platform for buying fishing equipment, stakeholders in the boat manufacturing and supply industry may be impacted.

**Activity 2: Identify digital transformation goals**

1. Streamlining Procurement Processes: The goal is to offer simple digital tools to ease procurement, support local fishermen, and eliminate paper-based, error-prone processes. This aims to make procurement more efficient and responsive to the needs of fishermen and their communities.
2. Enhancing Data Digitalization: The objective is to digitalize the catch registration process, making it quicker and more accurate. This includes capturing the necessary data to fulfill legal and customer quality control and product-traceability requirements. The goal is to eliminate manual data entry and paper-based processes, reducing the risk of errors and noncompliance.
3. Improving Data Documentation and Quality Control: The focus is on optimizing catch registration processes and ensuring better allocation of procurement staff to handle incoming loads. This improvement helps speed up time to market and ensures the quality and traceability of seafood products, which is essential for meeting certification requirements and gaining a competitive advantage.
4. Simplifying Accounting and Tax Review: The goal is to simplify accounting and tax review processes for both fishermen and the company. This simplification is achieved through the digitalization of data, making it easier to manage financial records and comply with regulatory requirements.
5. Strengthening Supplier Loyalty: The digital transformation aims to strengthen relationships with local fishermen by providing them with user-friendly tools and platforms. This includes the development of consumer-grade mobile apps that add value to end users, ultimately boosting fishermen's income and fostering loyalty.
6. Gaining a Competitive Advantage: The overall goal is to achieve a stronger market position and a competitive advantage among the region's fishermen. This is accomplished by leveraging digital technologies to enhance efficiency, sustainability, and overall business processes.
7. Exploring Additional Scenarios for Development: The initiative includes exploring additional scenarios for development, such as building an e-commerce platform for buying fishing equipment, aiding authorities in finding lost boats at sea, and providing fishermen with financial overviews and tools for budgeting and savings.

**Activity 3: Explain which digital transformation component is impacted**

In the Royal Greenland case, the most impacted digital transformation component is business process transformation.

Example: Streamlining Procurement Processes

Royal Greenland aimed to simplify and digitize the procurement processes for seafood. The introduction of digital tools to ease procurement and support local fishermen, coupled with the elimination of paper-based processes, represents a significant shift in how procurement is conducted. This is a clear example of business process transformation, as it involves redefining and optimizing the steps involved in acquiring seafood from local fishermen.

By digitalizing the catch registration process and reducing reliance on manual data entry, Royal Greenland not only streamlines its procurement workflows but also enhances the overall efficiency and accuracy of data collection. This transformation impacts how procurement teams operate, bringing about a more agile and responsive approach to meeting legal and quality control requirements.

The shift from traditional, paper-based processes to a digitalized system is a fundamental change in the business processes related to procurement, demonstrating the emphasis on business process transformation in the broader digital transformation journey at Royal Greenland.

**Activity 4: Identify key metrics to demonstrate SAP solution value**

Key metrics that could demonstrate the value or success of the SAP implementation are:

* 70,000 purchase orders processed digitally instead of on paper
* 2,200 fishermen now have access to the technology and can register relevant data on the go
* In addition, adopting digital apps has also simplified accounting and helped reduce the risk of errors and ensure tax compliance for fishers and the company.
* By making it easier to record the catch data needed for MSC certification, fishers are more likely to get the higher rate for qualifying loads, strengthening Royal Greenland’s competitive advantage among the region’s fishing community.

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# Part 2: Understand SAP BTP capabilities

**Activity 1: Identify SAP BTP technology capabilities**

**SAP BTP technology capabilities**

1. Application Development
2. Integration
3. Data and Analytics
4. Artificial Intelligence

**Activity 2: Identify the SAP BTP capabilities needed to achieve customer goals**

Royal Greenland will utilize the following SAP BTP capabilities to achieve their digital transformation goals:

* **Integration**, as this will provide the capability to integrate data from the apps with SAP HANA®, the supply chain solution (SAP Integrated Business Planning) and the SAP ERP application for further processing and storage of data.
* **Application Development**: Leveraging the application development capabilities of SAP BTP, Royal Greenland can create and enhance consumer-grade apps that are intuitive and tailored to the specific needs of fishermen and procurement teams. This capability allows for the development of user-friendly interfaces, offline capabilities, push notifications, and other features that enhance the overall user experience. [Capability 3], as this will….
* **Data and Analysis:** The data and analysis capabilities of SAP BTP will empower Royal Greenland to perform in-depth analysis of the digitized data. This includes extracting insights, trends, and patterns from the captured information. The ability to use SAP HANA® in conjunction with data and analysis tools ensures that Royal Greenland can make informed decisions based on a comprehensive understanding of their seafood procurement and supply chain processes.
* **Artificial Intelligence**: The artificial intelligence capabilities of SAP BTP will enable Royal Greenland to explore advanced functionalities such as predictive analytics, machine learning, and automation. This can contribute to optimizing catch registration processes, improving procurement decisions, and enhancing overall efficiency in the seafood supply chain. AI can also be applied to support sustainability initiatives and compliance with certification requirements.

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# Part 3: Review the end-to-end SAP Solution

**Activity 1: Describe the end-to-end SAP solution**

The end-to-end SAP solution is a comprehensive ecosystem that integrates various components to provide a seamless and efficient business environment. At the forefront, user-facing applications, including e iPhone app fishermen can use to quickly and

digitally submit their catch data and legally required signatures. It also validates licenses

for specific species. A second native iPad app allows staff at procurement stations to

enter additional information – including texture, quality, temperature, and weight – that is

required for MSC certification. The third Web-based app then allows back-office staff to

approve the procurements made,

On the back-end, the SAP HANA Cloud plays a pivotal role as the database for data analytics and processing. It offers advanced in-memory processing capabilities, ensuring that the data required by the applications is processed efficiently. The SAP Integrated Business Planning for Supply Chain solution manages the complexities of the supply chain, providing features like demand planning, inventory optimization, and logistics.

The SAP ERP application, a robust enterprise resource planning system, is also integrated into the solution. It handles various business processes, such as finance, human resources, and procurement, offering a centralized platform for managing and coordinating different aspects of the organization. It also used for storage of data.

The architecture of the solution is characterized by the usage of the SAP Business Technology Platform, which enables connectivity and integration across the entire landscape. This integration is vital for creating a cohesive end-to-end solution. The architecture can be classified as a hybrid model, leveraging both on-premises and cloud-based solutions, providing flexibility and scalability to meet the dynamic needs of the business. The end result is a well-connected and streamlined SAP solution that enhances business processes, improves decision-making, and fosters innovation.

**Activity 2: Describe considerations for system design and development**

The project team will need to consider the following key aspects during the system design and development of the end-to-end solution:

1. **Computing Models:** Evaluate how end-user interactions and data flow through the solution, considering factors such as computing network storage and the balance between on-premises and cloud solutions. Determine the optimal computing model that ensures scalability, performance, and cost-effectiveness.
2. **Architecture:** Decide on the architecture of the solution, considering options like Private, Public, Hybrid, or Multi-Cloud deployments. Assess how the chosen architecture aligns with the organization's goals, scalability requirements, and data security considerations.
3. **Operating Systems and Platforms:** Ensure compatibility across the entire solution, especially with critical components like SAP BTP. Consider the implications of different operating systems and platforms on the overall system performance and integration.
4. **Application Development:** Tailor application development based on the nature of data, end-user conditions, and device compatibility. Determine whether the applications need to be mobile, web-based, or a combination of both to meet user requirements.
5. **Programming Languages:** Choose programming languages that best suit the development of different applications within the solution. Consider factors such as development speed, maintainability, and the expertise of the development team.
6. **Data Analytics:** Define the type of data that needs to be captured and analyzed within the solution. Consider data storage requirements, analytics tools, and the integration of SAP HANA Cloud for advanced in-memory data processing.
7. **Security:** Evaluate the security aspects across five layers: environment, system, application, process, and organization. Implement robust security measures to protect user data, ensure secure communication between components, and adhere to industry best practices for information security.

**Activity 3: Draw a diagram to show how data flows through solution**

**Data flow through the solution**

Firewall

SAP HANA

SAPLandscapeTransformation replication server

Database

SAP ERP

SAP Gateway

Cloud connector

End user(Back office)

End user(Fisherman)

Laptop

App Clients

iPad

Phone

App Clients

SAP IPB for supply chain

Web App

Identity authentication tenant

SAP Mobile

Connectivity services

**SAP BPT**

**On pPremise**

**Activity 4:** **Describe technology areas impacted by further solution development**

E-commerce Platform Development:

Data Integration and Security: Building an e-commerce platform involves integrating data related to fishing equipment purchases. Ensuring seamless integration with existing systems and implementing robust security measures for financial transactions is crucial.

User Experience (UX): Enhancing the user experience through intuitive design, personalized recommendations, and a user-friendly interface will be essential for the success of the e-commerce platform.

Lost Boats Tracking Apps:

Geospatial Technology: Developing apps to help authorities find boats lost at sea requires the utilization of geospatial technologies. Integrating GPS and satellite tracking systems can provide real-time location data for lost boats, aiding in efficient search and rescue operations.

Emergency Communication Systems: Implementing effective communication systems within the apps will be crucial for coordinating rescue efforts. Integration with emergency response systems and protocols should be considered.

Financial Literacy Innovation:

Data Analytics and Visualization: Providing fishers with an overview of their finances requires advanced data analytics and visualization tools. Dashboards and reports can help fishers understand their financial status, track earnings, and make informed financial decisions.

Budgeting and Savings Tools: Developing interactive tools for budgeting and savings will involve creating features that allow fishers to set financial goals, track expenditures, and receive personalized financial advice.

Advanced Analytics for Fisheries Management:

Machine Learning Algorithms: Leveraging machine learning algorithms can enhance the analysis of fishing data for financial planning. Predictive modeling can assist in forecasting catch quantities, optimizing procurement, and improving overall financial sustainability.

IoT Integration: Integrating Internet of Things (IoT) devices on fishing vessels can provide real-time data on catch quantities, vessel performance, and environmental conditions. IoT data can contribute to advanced analytics for better decision-making.

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# Part 4: Assess how the SAP solution supports digital transformation

**Activity 1: Describe how SAP BTP supports customer digital transformation goals**

SAP Business Technology Platform (BTP) plays a pivotal role in supporting Royal Greenland's digital transformation goals and its journey toward becoming an intelligent and sustainable enterprise. SAP BTP offers a unified and integrated environment that simplifies the development, deployment, and management of applications. By leveraging SAP BTP, Royal Greenland can achieve the following:

1. **Unified Data Integration:** SAP BTP facilitates seamless integration of data from various sources, including the apps developed for catch registration, procurement, and financial literacy. This unified data environment ensures a holistic view of operations, supporting Royal Greenland's goal of optimizing processes.
2. **Scalable Application Development:** The platform enables scalable application development, allowing Royal Greenland to expand its digital capabilities to include an e-commerce platform, lost boats tracking apps, and financial literacy tools. The scalability ensures that the solutions can grow in tandem with evolving business needs.
3. **Advanced Analytics and Insights:** SAP BTP provides advanced analytics capabilities, empowering Royal Greenland to derive meaningful insights from its data. The platform supports machine learning and predictive analytics, contributing to better decision-making in areas such as fisheries management, financial planning, and sustainability practices.
4. **End-to-End Connectivity:** SAP BTP ensures end-to-end connectivity across the entire solution architecture, linking front-end applications with back-end systems, including SAP HANA, SAP Integrated Business Planning, and SAP ERP. This connectivity enhances the efficiency of data flow, contributing to improved operational performance.
5. **Security and Compliance:** Ensuring the security of sensitive data and compliance with industry regulations are paramount in Royal Greenland's digital transformation journey. SAP BTP provides robust security features and compliance measures, safeguarding data integrity and maintaining the trust of stakeholders.

**Activity 2: Identify how the SAP solution contributes to the Quadruple bottom line**

|  |  |  |  |
| --- | --- | --- | --- |
| **People** | **Planet** | **Profit** | **Purpose** |
| Mobile Apps for Fishermen: The mobile apps developed through SAP BTP contribute to the well-being of fishing communities. Fishermen benefit from simplified catch data submission, reducing administrative burdens and allowing them to focus on their core activities. The financial literacy tools further empower fishermen with insights into their finances, helping them set budgets and build savings. | Sustainability through MSC Certification: The digitalization of catch registration and data logging processes contributes to environmental sustainability. By using SAP BTP to enhance the accuracy and documentation of catch data, Royal Greenland supports initiatives like the Marine Stewardship Council (MSC) certification. This ensures responsible fishing practices and promotes the long-term health of marine ecosystems. | Optimized Procurement Processes: The SAP solution, with its apps and integrated systems, optimizes procurement processes. The efficient allocation of procurement staff, facilitated by digital catch registration, leads to faster time-to-market for seafood products. This optimization enhances profitability by reducing operational costs and increasing the efficiency of procurement operations. | Supporting Fishing Communities: The overall purpose of Royal Greenland's initiatives is to support fishing communities. The development of an e-commerce platform for buying fishing equipment and tools to help authorities find lost boats at sea demonstrates a commitment to the purpose of enhancing the fishing industry's resilience and supporting the livelihoods of those involved. |

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***Project Name:* Intelligent SeaHarbor Transformation**

*Introduction:* The Intelligent SeaHarbor Transformation is a comprehensive initiative aimed at digitizing and optimizing Royal Greenland's seafood procurement and processing operations. This endeavor is centered on leveraging SAP solutions to achieve digital transformation, enhance sustainability, and support fishing communities. As the project lead, my role involves overseeing the strategic implementation of SAP technologies to align with Royal Greenland's business objectives.

**Royal Greenland Customer Context:**

*Digital Transformation Goals:* Royal Greenland's digital transformation goals are multifaceted. They include streamlining catch data processes, achieving Marine Stewardship Council (MSC) certification for sustainable fishing, optimizing procurement, and fostering financial literacy among fishermen.

*Key Metrics:* Key metrics for success encompass improved catch data accuracy, reduced procurement processing time, increased MSC certifications, and the successful implementation of financial literacy tools.

**SAP End-to-End Solution:**

*Solution Description:* The SAP end-to-end solution integrates various components, including SAP Business Technology Platform (BTP), mobile and web applications, SAP ERP, and SAP Integrated Business Planning. This unified solution digitalizes catch registration, streamlines procurement, and provides financial tools to fishing communities.

*SAP BTP Capabilities:* SAP BTP plays a pivotal role by providing a unified environment for app development, facilitating seamless integration with SAP ERP and other systems, and ensuring scalability and flexibility for future enhancements.

**System Design and Development Considerations:**

Considerations in system design and development involve computing models, architecture (private, public, hybrid), operating systems, application development strategies, programming languages, data analytics, and security. The solution aims for compatibility, efficiency, and scalability across all these dimensions.

**Solution Data Flow:**

The solution's data flow begins with the capture of catch data through mobile apps, progresses to analysis and validation in SAP ERP, and extends to further processing and storage. The data flow ensures accurate documentation, optimized procurement, and enhanced financial insights for fishing communities.

**Data Flow Diagram for Royal Greenland SAP customer story**

Firewall

SAP HANA

SAPLandscapeTransformation replication server

Database

SAP ERP

SAP Gateway

Cloud connector

End user(Back office)

End user(Fisherman)

Laptop

App Clients

iPad

Phone

App Clients

SAP IPB for supply chain

Web App

Identity authentication tenant

SAP Mobile

Connectivity services

**On Premise**

**SAP BPT**

**SAP Intelligent and Sustainable Enterprise and Quadruple Bottom Line (4Ps):**

The SAP solution contributes to a Quadruple Bottom Line:

* *People:* Empowering fishing communities with simplified processes and financial tools.
* certification.
* *Profit:* Optimizing procurement processes for increased efficiency and profitability.
* *Purpose:* Supporting the fishing industry's resilience and community well-being.

**Next Steps:**

Next steps involve the continuous refinement and expansion of the solution. Future plans include the development of an e-commerce platform for fishing equipment, aiding authorities in finding lost boats, and further innovation in financial literacy tools. Ongoing collaboration with SAP and stakeholders will ensure the sustained success of the Intelligent SeaHarbor Transformation.Top of Form