East Canada Paper (ECP)

Technical Solution Design

Vvan
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High-level functional requirements

1. **single-source-of-truth system** manageable by a **small IT team**
2. **data**-intensive real-time computing and large traffic access
3. efficient **buying events** management system and a mobile app for taking customer orders
4. an app for comprehensive **customer** information profile and visual analytics
5. an app for streamlined tracking and accurate analysis of water and pulp **waste**
6. an app for effective **equipment** monitoring with lower Mean Time Between Failures (MTBF)

Solution approach I

	Requirement	Solution
1	single-source-of-truth system	implement SAP Warehouse Management system and Payroll system and integrate with other 5 on SAP S/4HANA
2	data-intensive real-time computing and large traffic access	deploy hybrid-cloud with IBM Cloud, transfer data to cloud
3	An app for managing buying events with suppliers to reduce the total time taken for individual events and supplier optimization	Order Management foundation and SAP Ariba Buying app through which ECP employees can buy from suppliers. • Option to choose a supplier based on comparative evaluation • Contact with customers and suppliers

Solution approach II

	Requirement	Solution
4	an app for comprehensive customer information profile and visual analytics	implement SAP Sales Cloud and SAP SCM to get unified customer view and AI-driven analytics
5	an app for streamlined tracking and accurate analysis of water and pulp waste	implement SAP S/4HANA Cloud for EHS environment management to track GHG emissions and effluents, generate compliance report and allow information shown to customers
6	an app for effective equipment monitoring with lower Mean Time Between Failures (MTBF)	deploy IoT sensors on equipment and apply SAP Predictive Asset Insights for predictive analytics on devices, and achieve efficient maintenance

Design considerations from Design Thinking Exploration I

Buying Event Management App & Online Order App

	ECP's employees	ECP's business customers
Empathize	conduct procurements from suppliers based on orders	purchase newspapers and magazines, or packing, board, and other heavy-duty paper products
Define	tedious work without an integrated system for communication, documentation etc.	no online order platform to check products' environmental impact quickly place order with customized requests

Design considerations from Design Thinking Exploration II

	ECP's employees - BEMA	ECP's business customers - OOA
Ideate	● import orders ● status tracking ● API to Sales and plants ● task assignment ● customer communication ○ real-time chat on the order app ○ email & call API with notepad ● supply chain management ○ check inventory and create procurement list ○ email & call API ○ logistics tracking API ○ procurement details	● show product specifications and environmental impact indices ● take multiple selection of preset customizations & manual input ● order placing with down payment ● collect customer contact details ● online real-time communication portal with ECP's employees ● display order status and delivery progress

Design considerations from Design Thinking Exploration III

	ECP's employees - BEMA	ECP's business customers - OOA
Prototype	● all orders list labeled by responsible employee, status, customer and order time ● API to Sales and plants with relevant information ● customer communication and notes module ● supplier communication, procurement and notes module	● categorized product lists and detailed page ● order and payment module ● customer service (chat) module ● order progress module

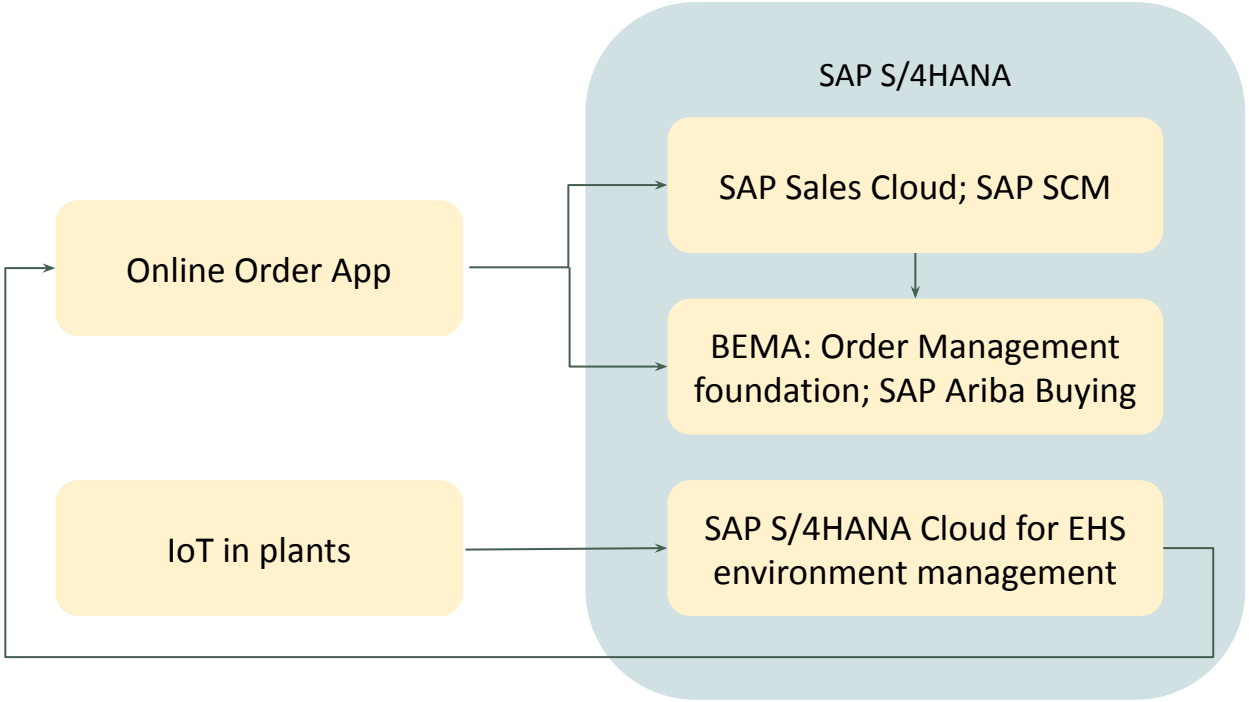
Design considerations from Design Thinking Exploration IV

	ECP's employees - BEMA	ECP's business customers - OOA
Test	● standard order ○ get correct order details in the system and task assignment ○ auto generate a procurement list for materials not in inventory ○ able to send requests to suppliers ○ able to send production requirements to the plants ○ filter and sort orders based on responsible employee, status, customer and order time	● standard order ○ show product specifications and environmental impact indices ○ able to place order and make down payment ○ show order status ○ make transactions for balance payable

Design considerations from Design Thinking Exploration V

	ECP's employees - BEMA	ECP's business customers - OOA
Test	● customized order ○ show customization requests in predefined categories e.g. color, materials ○ show suggested procurement options ○ show links to previous similar orders and orders from the same customer ○ able to contact customers and document key notes	● customized order ○ able to input customized requests ○ able to contact ECP to confirm on details

Solution diagram



Considerations/Assumptions

- IoT devices should be implemented on equipment to receive operational data as input for analytics
- keep solution at low cost and feasible for small team to implement
- evaluate security of cloud deployment compared to current on-premise implementation
- change IT infrastructure to support the shift to data-driven services
- 5 systems have been implemented on SAP S/4HANA, first benchmark and improve the SCM and Sales systems, then implement the Warehouse Management system and Payroll system

To-do before Realize phase

- conduct fit-to-standard workshop, identify extensions to build based on standard practices
- develop technical design implementation plan
- define deliverables
- configure development and test environment

Product backlog

to-do	efforts estimation	MoSCoW priorities
set up infrastructure on IBM Cloud	1 month	must have
build the apps	2 months	must have
transfer data to new systems	1 week	must have
write test scripts	1 week	must have
create end-user material, conduct training session if necessary	2 weeks	should have
establish API to integrate with existing SAP apps	1 week	must have

Thank you!