



SAP
Innovation
Awards 2019



SAP Innovation Awards 2019 Entry Pitch Deck

Intelligent Shipping powered by SAP Leonardo

Capgemini

THE BEST RUN



Intelligent Shipping powered by SAP Leonardo



Capgemini

“Quote”

Combining the power of SAP S/4HANA (Digital ERP) and Digital Containers data based on IoT in SAP Cloud Platform, optimize Shipment creation and tracking processes with Intelligent Shipping solution built by Capgemini.

- Krishnan Rajamani

Challenge

In Consumer product segment, Supply chain planners process huge number of deliveries manually and assign them to various containers based on their availability and conditions of carriage keeping delivery expectations of customer. Lack of real time visibility of the container location and status would often result in Containers loaded ‘under capacity’ or deliveries getting late beyond customer expectations without any ETA.

Solution

Intelligent Shipping comes up with UI5 based application that invokes a python algorithm which automatically allocates the open deliveries from SAP S/4HANA to available containers based on IoT data in SAP Cloud platform and also a Dashboard based on SAP Analytics Cloud for real time tracking of containers/shipments for tracking the exceptions/delays and KPIs.

Outcome

- ✓ Capacity Utilization of containers are maximised,
- ✓ Customer delivery expectations are met and
- ✓ High Revenue Deliveries are Prioritized.

Improved Capacity Utilization
of Container Fleet

Meeting Ontime delivery
expectations

Maximizing Value by
Prioritization of high revenue
deliveries



Business Challenge & Objectives

Supply chain execution at consumer products industry undergoes variety of challenges.

- Customer expects to receive real time updates on all stages of delivery and want traceability in the end to end supply chain.
- Customer wants everything 'fresh', that puts further pressure on the supply chain lead times.
- The preferences of customer are becoming very unique which results into product differentiation. Hence the number of SKUs, Sales documents and deliveries increases significantly.
- Supply chain organizations are striving hard to optimize cost in these challenging conditions to keep their margins high.

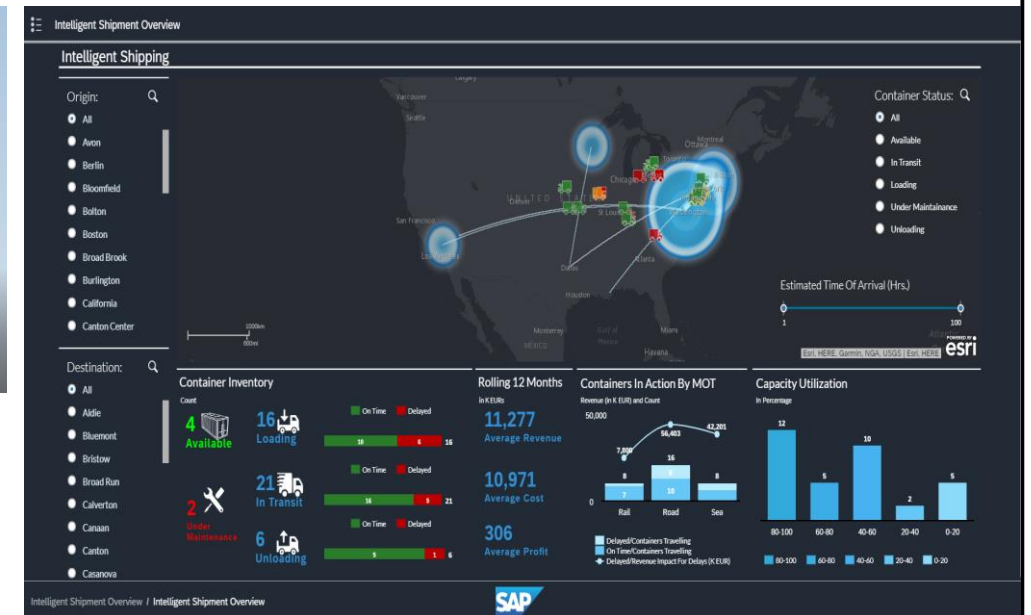
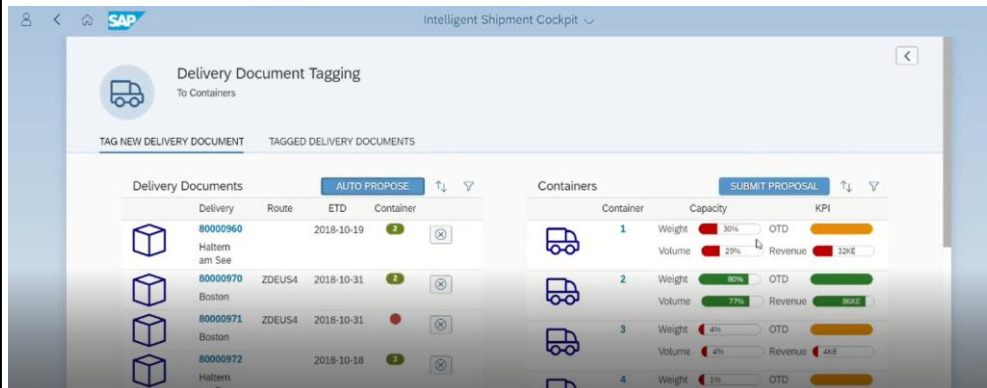
Supply chain organizations are striving hard to achieve efficiencies in supply chain execution and the key objectives are

- Automated processing of high volume of delivery documents and converting them into shipments with better capacity utilization for each shipment
- Handling customer expectations in terms of on time delivery and real time tracking of the status of delivery
- Improving Revenue per unit volume of container capacity



Project / Use Case Details

Intelligent Shipping comes up with UI5 based application that integrates delivery documents from SAP S/4HANA and containers availability from SAP Cloud platform based on IoT data on one page and intelligently allocates the deliveries to container based on optimization algorithms written in Python Script integrated into SAP Cloud platform.



The solution also consists of real time Digital Board room using SAP Analytics Cloud with near real time connection to a unified HANA data set on the SAP Cloud Platform which in turn also sources data from S/4 HANA.



Benefits and Outcomes

Business / Social

Reduction of cost per container by means of better capacity utilization and improving revenue per container by prioritizing high revenue shipments.

Improved customer satisfaction by on time delivery and real time visibility on shipment status.

IT

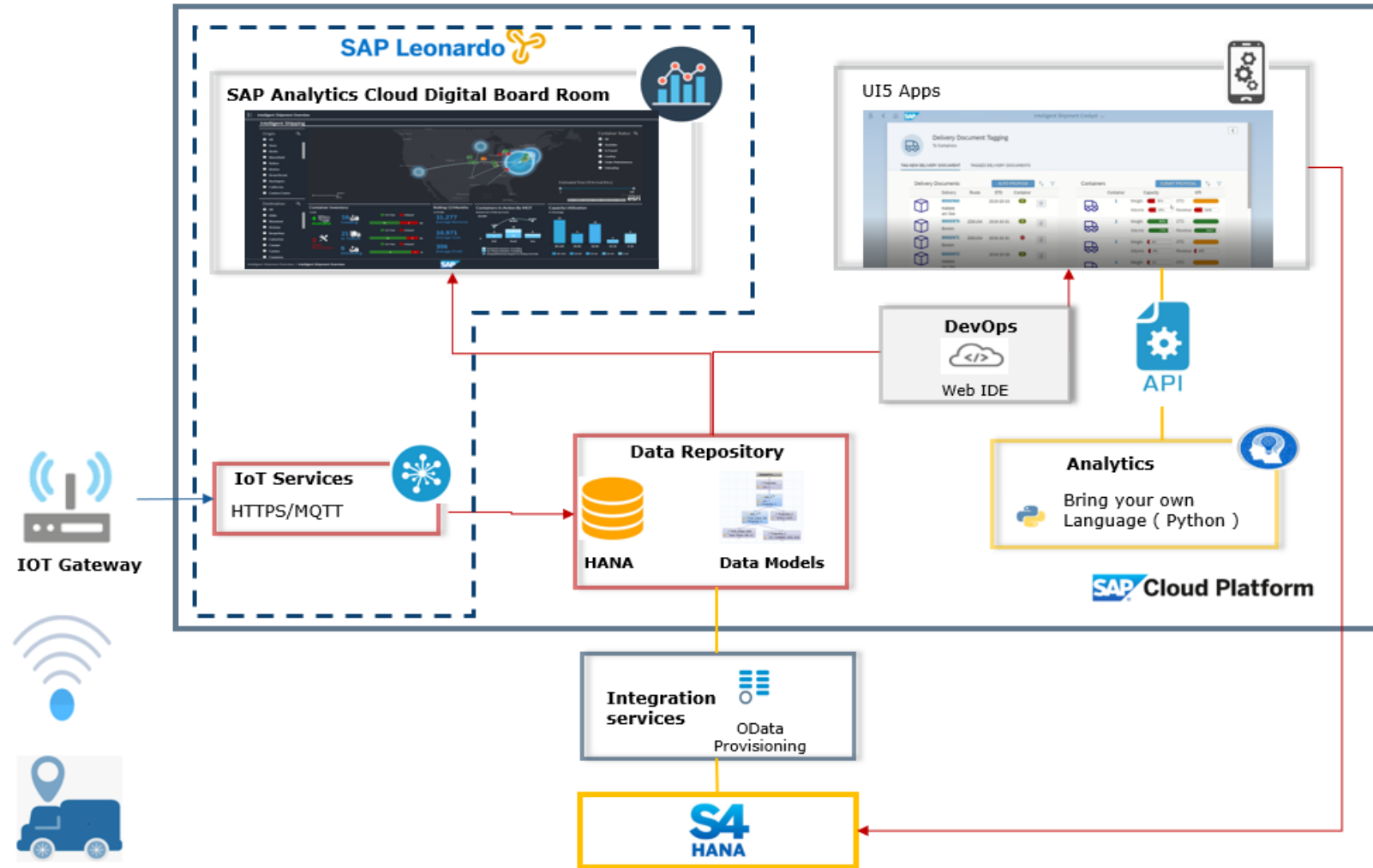
Less dependency on IT, as business has override functionality over the optimization algorithm for any manual adjustments.

Human Empowerment

Automation of shipment creation reduces manual efforts on supply chain planners and give rise to opportunity of centralizing the supply chain planning organization.



Architecture





Deployment

Date of Deployment or POC: 31.01.2019

Number of live users: It is a working prototype

SAP Technologies Used:

SAP S/4 HANA	Test
SAP Analytics Cloud	Test
SAP Cloud platform	Test
SAP Leonardo IoT services	Test

Server Processor:

Linux Distribution:



Emerging Technologies and Use Cases

The following Emerging Technologies and use-cases are part of the project and describe the contribution

	Technology or Use Case	Yes/No	Contribution to Project
1.	Machine Learning / Artificial Intelligence	Yes	Python Script for Optimization Algorithm
2.	IoT	Yes	Real time positioning of containers
3.	3D printing		
4.	Blockchain		
5.	API Economy / Integrate the Intelligent Enterprise		
6.	Cloud Native / Event Based Architectures		
7.	Extending the digital core with SAP CP / ABAP in SAP CP		
8.	SAP Leonardo Application (extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)	Yes	Expansion of shipment creation process