

Project Summary



Problem Statement:

The India IOT business unit is going to expand to 15000 devices shipped per day in the next 2 years. The future supply chain must be geared up to handle this volume while maintaining SLA and costs. The supply chain cost to serve should not be more than 7% of the total supply chain costs.

Business Case:

Limiting the supply chain cost to serve per device to 5%-7% of the device cost

Mission/Scope:

The goal of this project is to evaluate and design an optimum supply chain network, processes and IT infrastructure to run those processes. The network will include both inhouse and vendor ecosystems. This supply chain will allow the business unit the capability to better manage inventory and more accurately plan future activities while maintaining supply chain costs and SLA's

Customer goals:

Supply chain cost to serve per unit
Delivery in Full on Time
Order/Delivery Cycle Time
Stock Losses and Damages

Shadow demand and churn
Days on hand

Telecom Supply Chains Globally



Metric	Good Supply Chain	Great Supply Chain
Shipment Quantity ¹	5 Million kits per month	7 Million kits per month
Days on hand ²	6 Weeks	3 Weeks
Lead Time ³	6 Weeks	3 Weeks
Returns ⁴	10%	7%
Shadow Demand ⁵	15%	2%
Inventory costs ⁶	16%	12%
Total Supply chain costs As % of product cost ⁷	10%	7%

1 Ability to handle procurement/manufacture, storing, shipping of this quantity of kits

2 Average inventory quantity to cover so many days of future demand

3 Time taken from placing order to receiving into warehouse

4 % of total shipped devices that returned due to quality

5 Measured as a % of total demand, the no if times customer required a product but was not immediately available

6 Total inventory holding costs as a % of total inventory

7 Total costs of procurement to return as % of the product cost

Recommendation

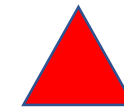
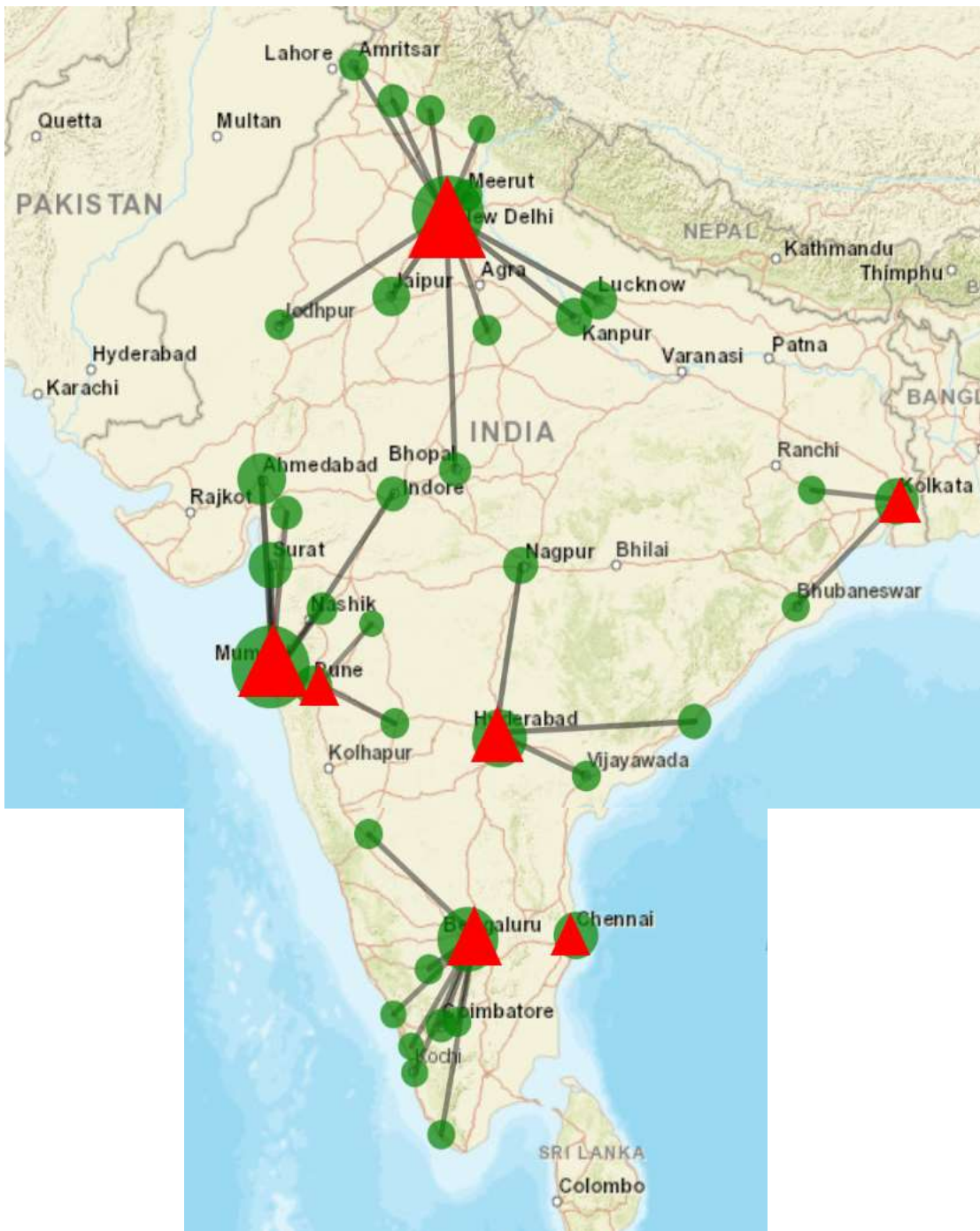
- Continue with current network.
- Consider direct shipments from Vendor in 2021 and 2022 to reduce utilization in Delhi warehouse
- Can consider additional covered space/outsourcing in Delhi warehouse in 2022
- Spoton services are cheaper than BlueDart
- Keep 1 month of cycle stock, 7 days safety stock
- Follow master carton packing, will significantly reduce costs. Try to make master carton as MOQ
- For lights use Full Truck Load shipments of trucks having capacity greater than 18 tones

KPI	IOT BU
Supply chain cost (% of product cost)	<5%
Inventory Holding Cost (% of inventory value)	12%
Manufacturing Lead time (Weeks)	12 Weeks
Days on Hand (Weeks)	3 Weeks
Shadow Demand (% of total demand)	2%
Field return rate (% of deployed product)	4%

KPI's for costs, inventory and SLA's

Backup

Supply chain flow and detailed working



Warehouse



Demand point

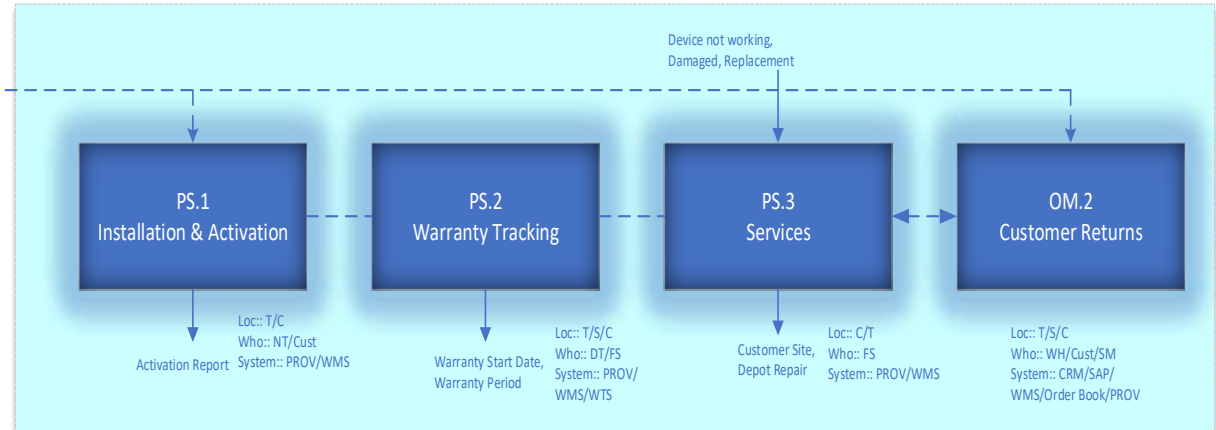
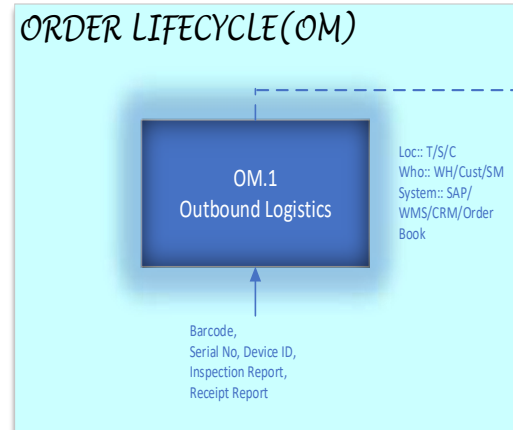
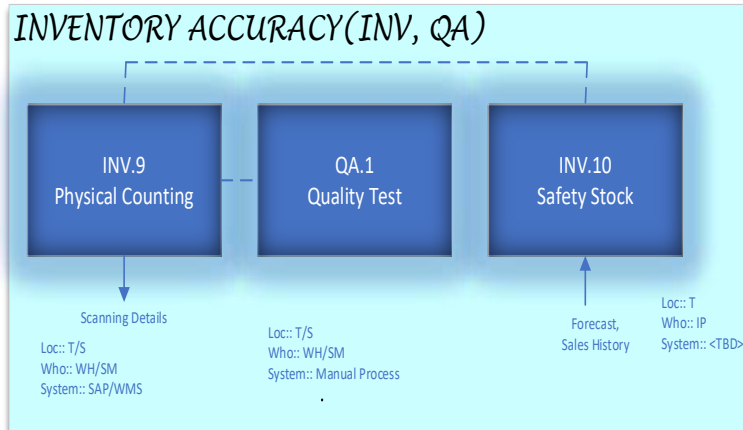
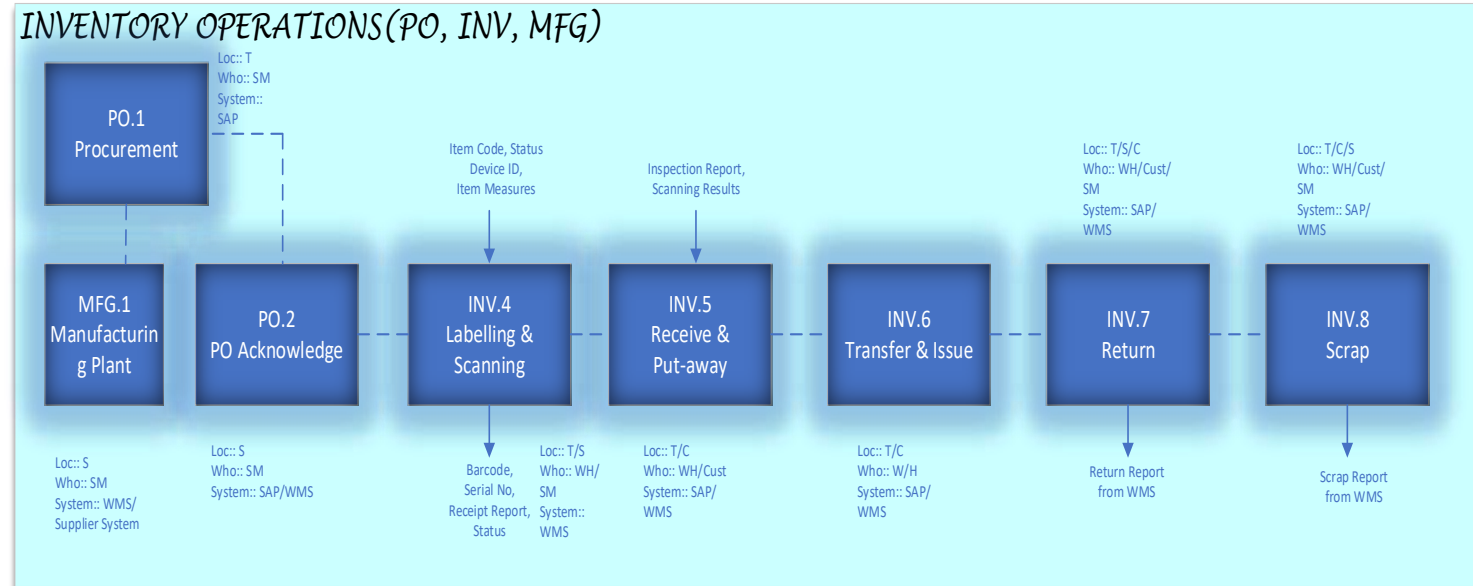
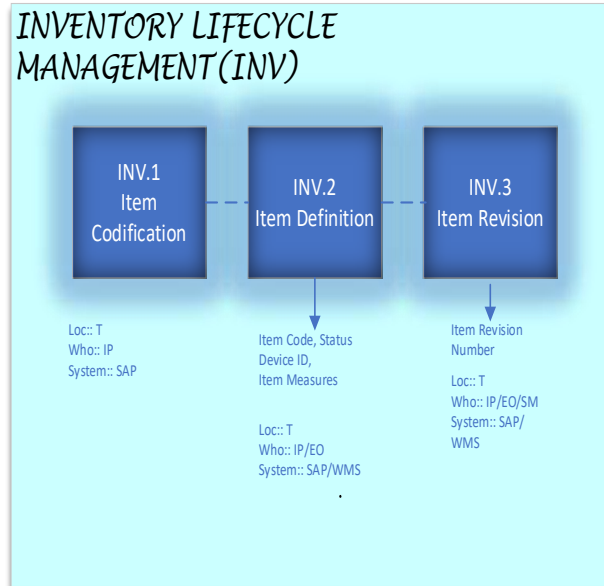


Flow

Relative size denotes relative numbers



Supply Chain To Be Processes

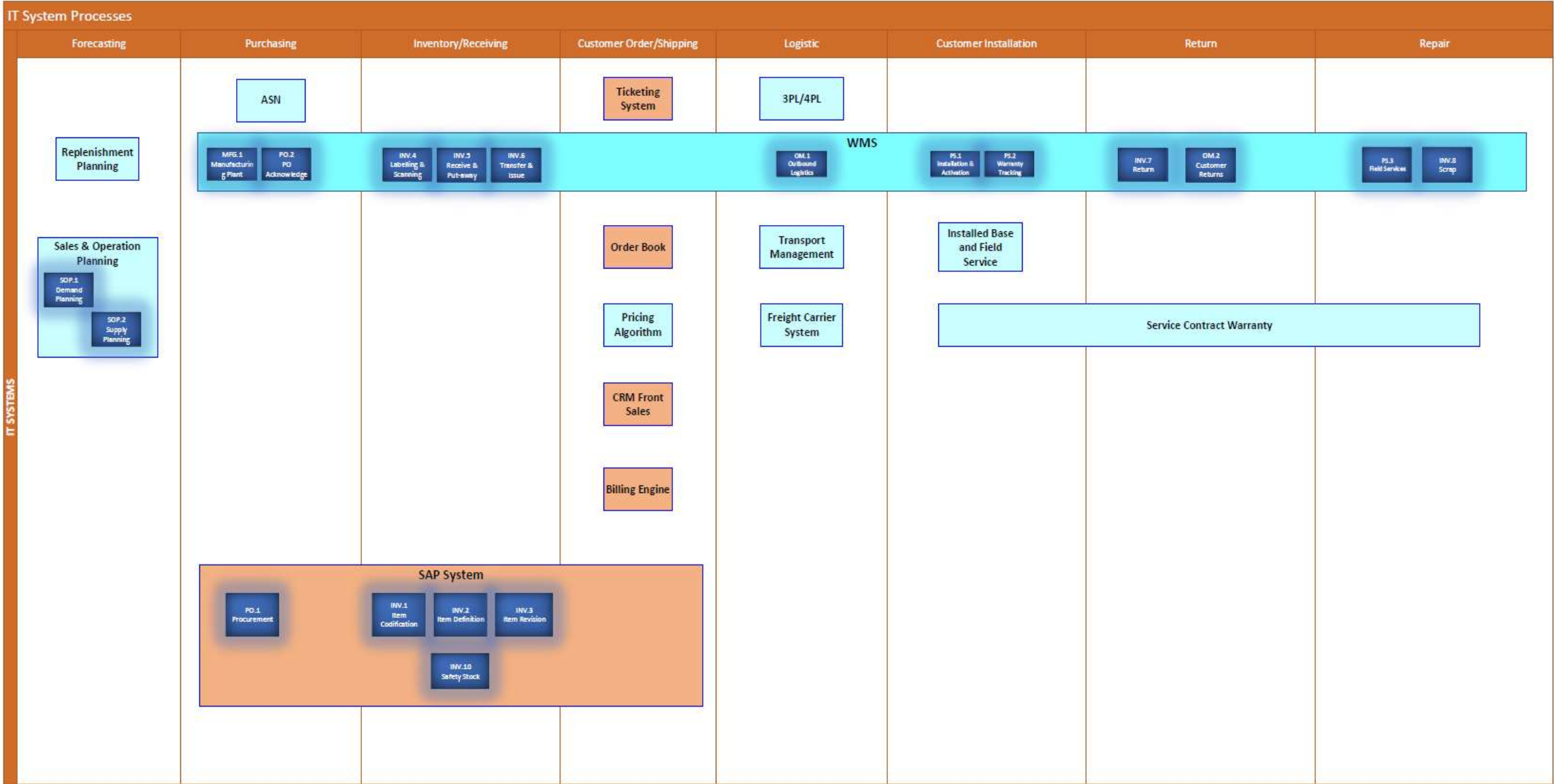


Proposed Systems Architecture

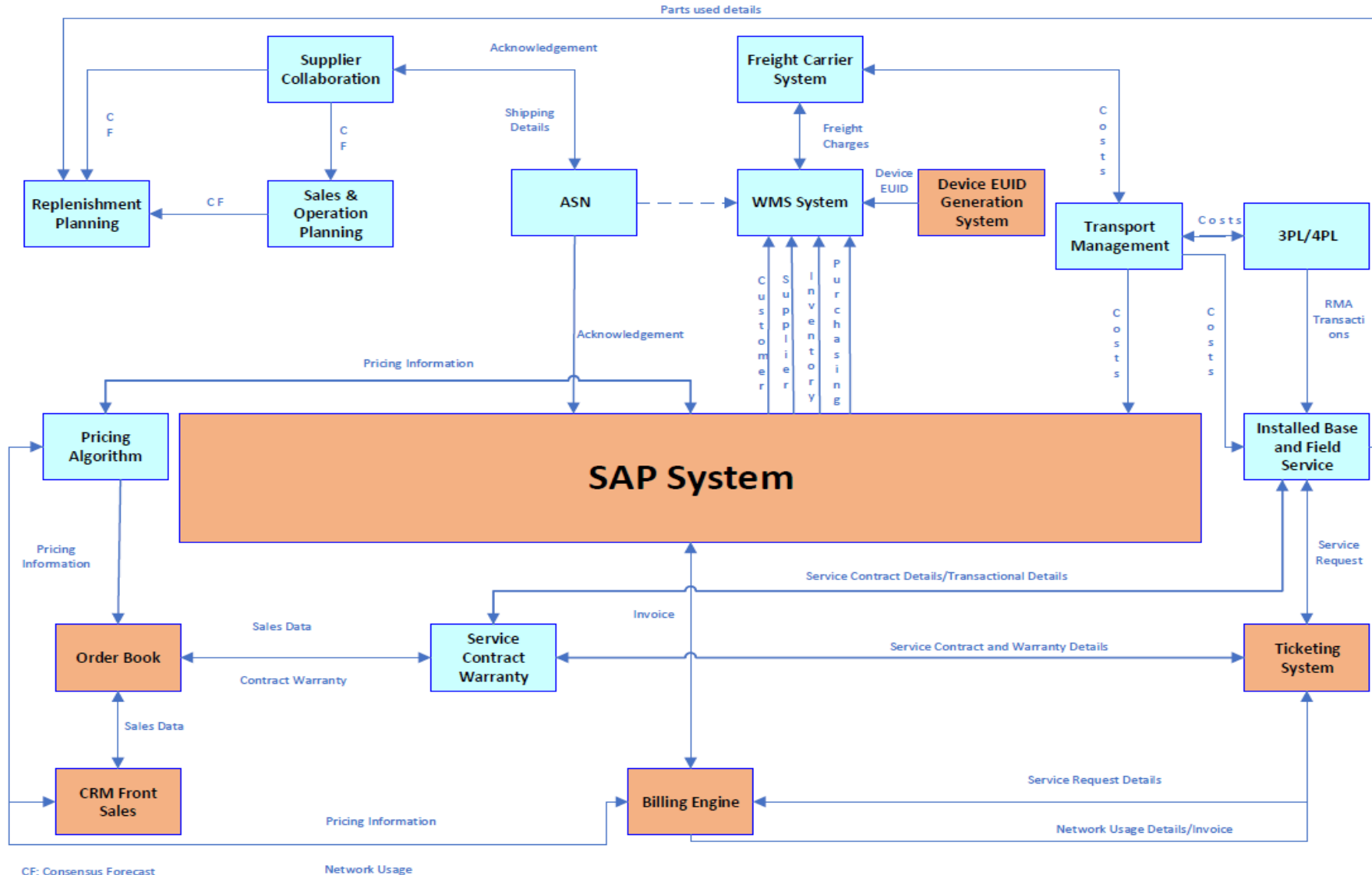


System Name	Description	Proposed time line
Sales & Operations Planning system	This system is required to manage demand and assist in monthly sales and operations planning meeting. A statistical sales forecasting system is not required, but a system in which future demand can be manually input by different stake holders. It should be a collaborative system with workflows so that sales, marketing, new product development, engineering, finance and management get their respective views.	Immediate. Proposed systems Anaplan
Replenishment Planning System	Once the demand is finalized in the S&OP system, the replenishment planning system should be able to generate the required purchase orders / delivery orders as per the lead times, supplier capacities and buffer stock requirements.	Immediate Proposed System: Use SAP configured for this functionality
Supplier Collaboration & ASN system	The demand plan and the replenishment plan needs to be shared with the suppliers. This system will share data transparently both ways to manage the supplier schedules. The Advanced Shipment Notification (ASN) will allow device serial number generation and linking of the serial numbers to the UID.	Immediate Proposed System: Custom web based portal.
Pricing Optimization	With time the costs will change – for the product as well as the operations costs. The total supply chain costs may need to be analyzed before finalizing the prices with both suppliers and customers.	Immediate Go for cloud based periodic utilization. Proposed system: Supply Chain Cube
Warehouse Management System	This is the most important system that would be able to track each and every serial number discretely over a period of many years. Both forward and reverse logistics should be tracked seamlessly	Immediate
Freight & Transport Management System	Once device volumes grow in terms of installed as well as shipped, a system would be required to help in the most optimized transport management.	After 1 year
Installed Base Management	This system tracks the life cycle of the device at customer location. Though different versions are available in the form of provisioning systems etc., the system should track all the supply chain related dates	Immediate
Field Service and Warranty system	With each device requiring tracking of warranty and the service history, this system will used to record the service contract details, generate the field service requests, monitor the service activities, costs and parts.	Immediate

Proposed Systems Architecture

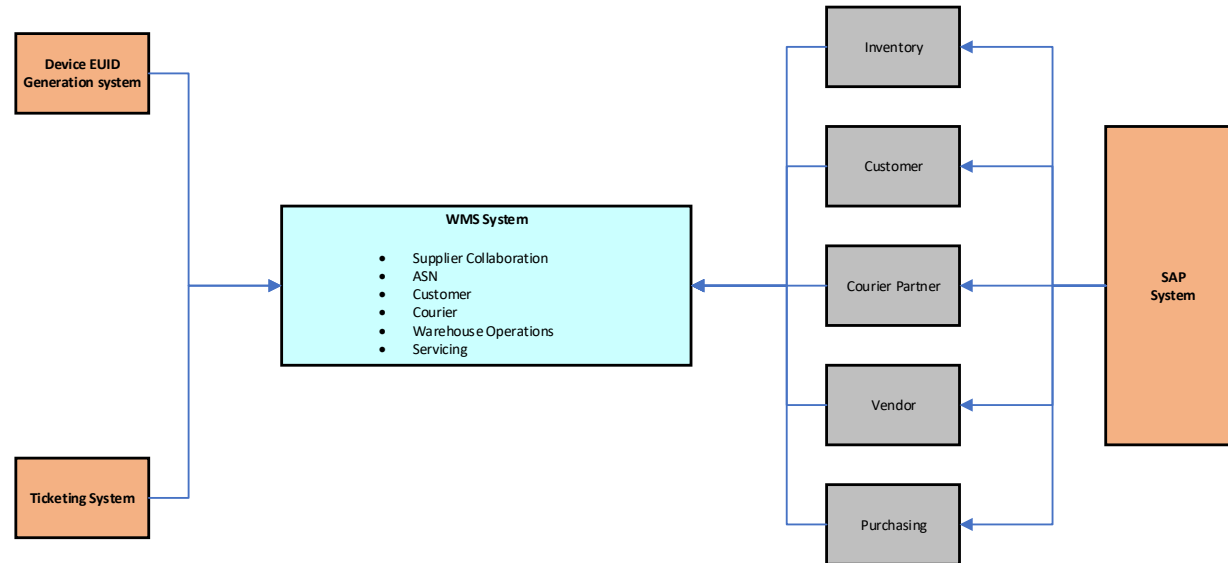


Proposed Systems Architecture



Integrated Track & Trace

WMS Integration with Other System



Thank

you

