



MAKING MRO SUPPLY CHAINS RELEVANT IN A DIGITAL ECONOMY

ROY HILL VIRTUAL WAREHOUSE

2017 SAP Metals & Mining Summit Moscow
Indrasen Naidoo – Roy Hill

LEAD • CARE • THINK • PERFORM

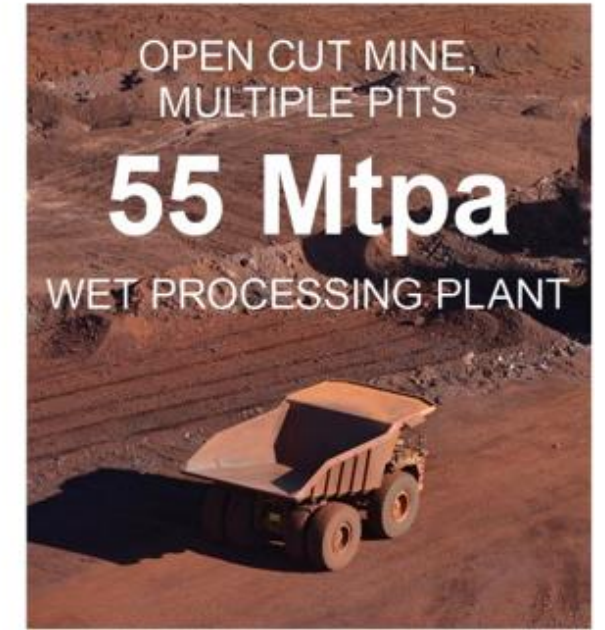
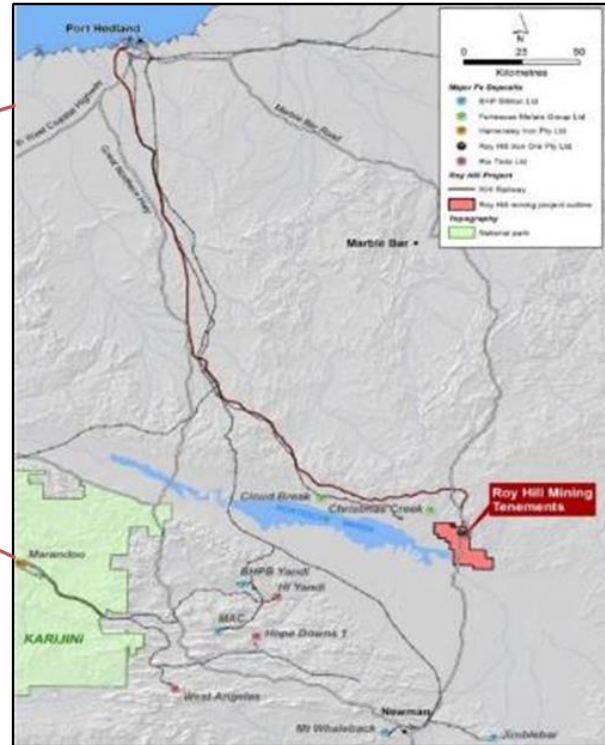
September 2017

Agenda



Topic	Time
About Roy Hill	11:45
Operating Model	
Traditional Purchase to Pay response to Supply	
Building a Supply System	12:00
Systems of Differentiation	
Roy Hill Virtual Warehouse	
Questions	12:10

Roy Hill Snapshot



Roy Hill approach to delivering results



*We focus on margin rather than tonnes, with our **operating model** designed to deliver **55MT p.a.** to our customers globally.*

**Apply
innovative, risk
– managed
decision
making**

**Embrace and
respect our Roy
Hill community**

**Apply Financial
prudence**

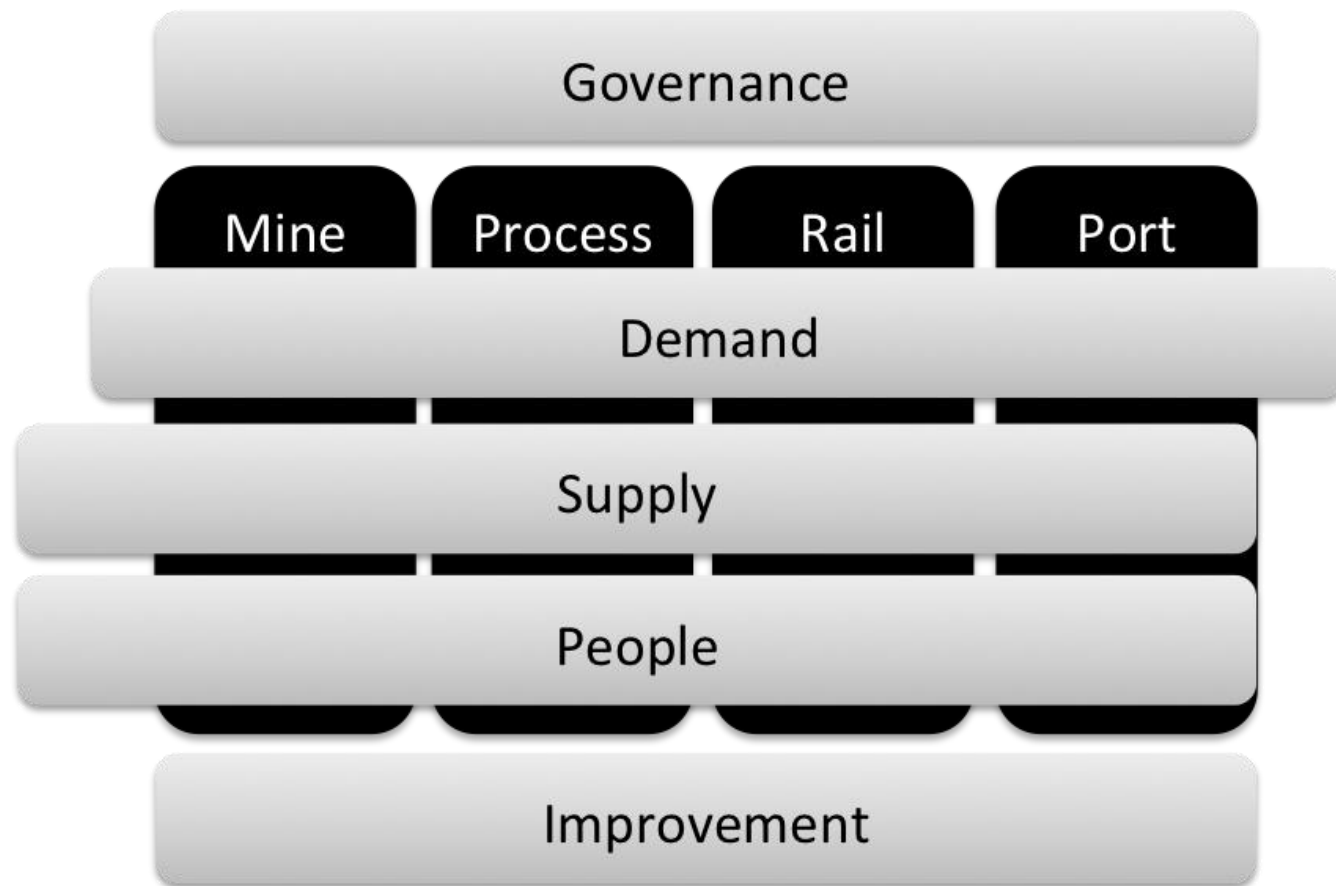
**Encourage a
business
improvement
culture**

**Utilise
technology and
capability to
future proof our
business**

Operating Model



Adopted systems thinking to create an integrated operating model

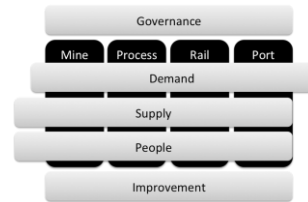


- A business can not be integrated if we operate in functional silos
- Operating Model with 5 systems leads to thinking holistically in systems rather than by functions
- Leadership accountability for each system

Future proof our business

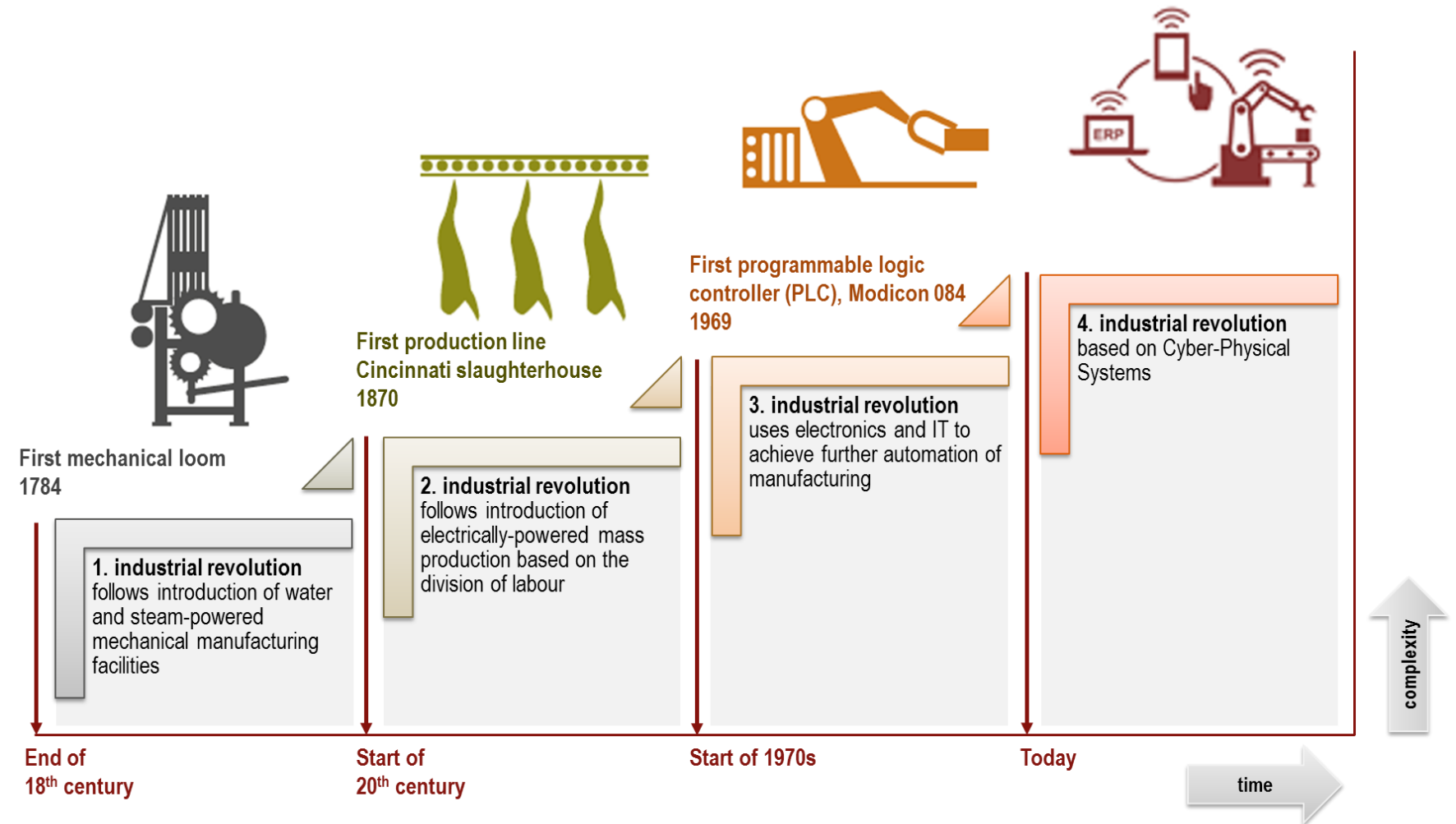


“... great hockey player plays where the puck is going to be.” *Wayne Gretzky*



The technologies sit in four clusters:

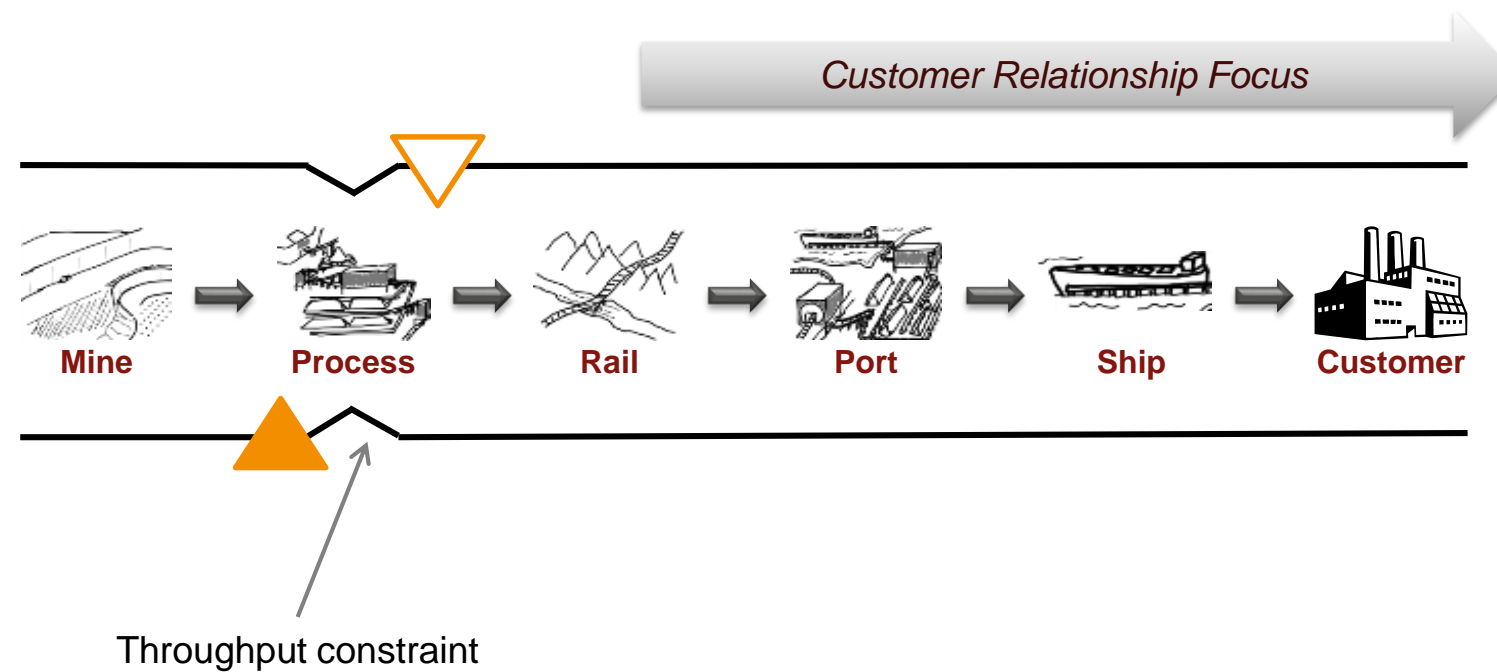
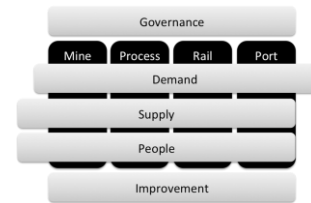
- data, computational power, and connectivity
- analytics and intelligence
- human-machine interaction
- digital-to-physical conversion



Product of Demand



Demand System = Operations Maximised



Outcome = 55 Mt p.a.

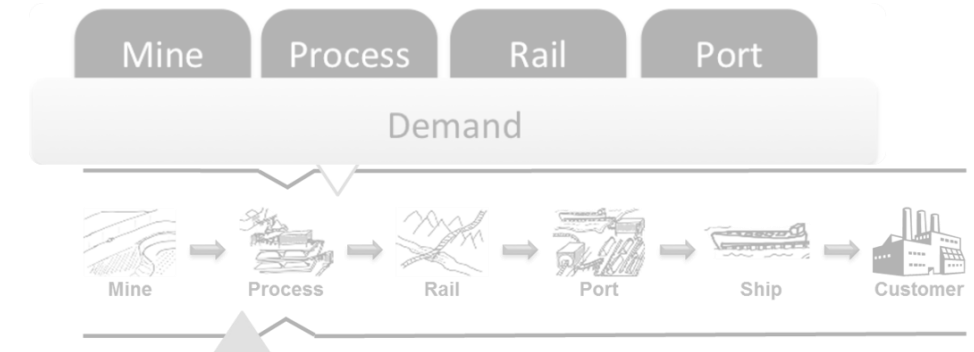
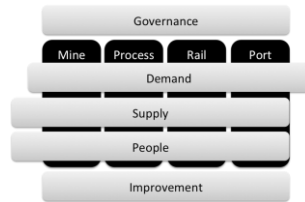
Product = Iron Ore

- Throughput
- Quality
- Inventory
- Cost
- Health Safety and Environment

Availability is optimised in line with Demand System



Supply System = Availability Maximised



Outcome = Availability

Product = Maintenance “Jobs”

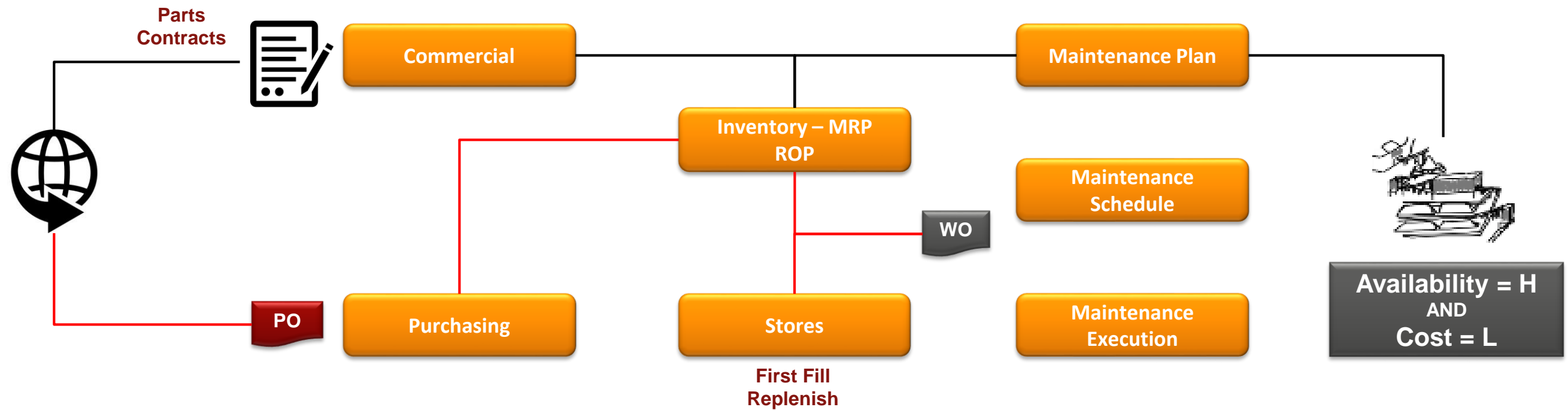
- Throughput
- Quality
- Inventory
- Cost
- Health Safety and Environment



Traditional Purchase to Pay response to Supply



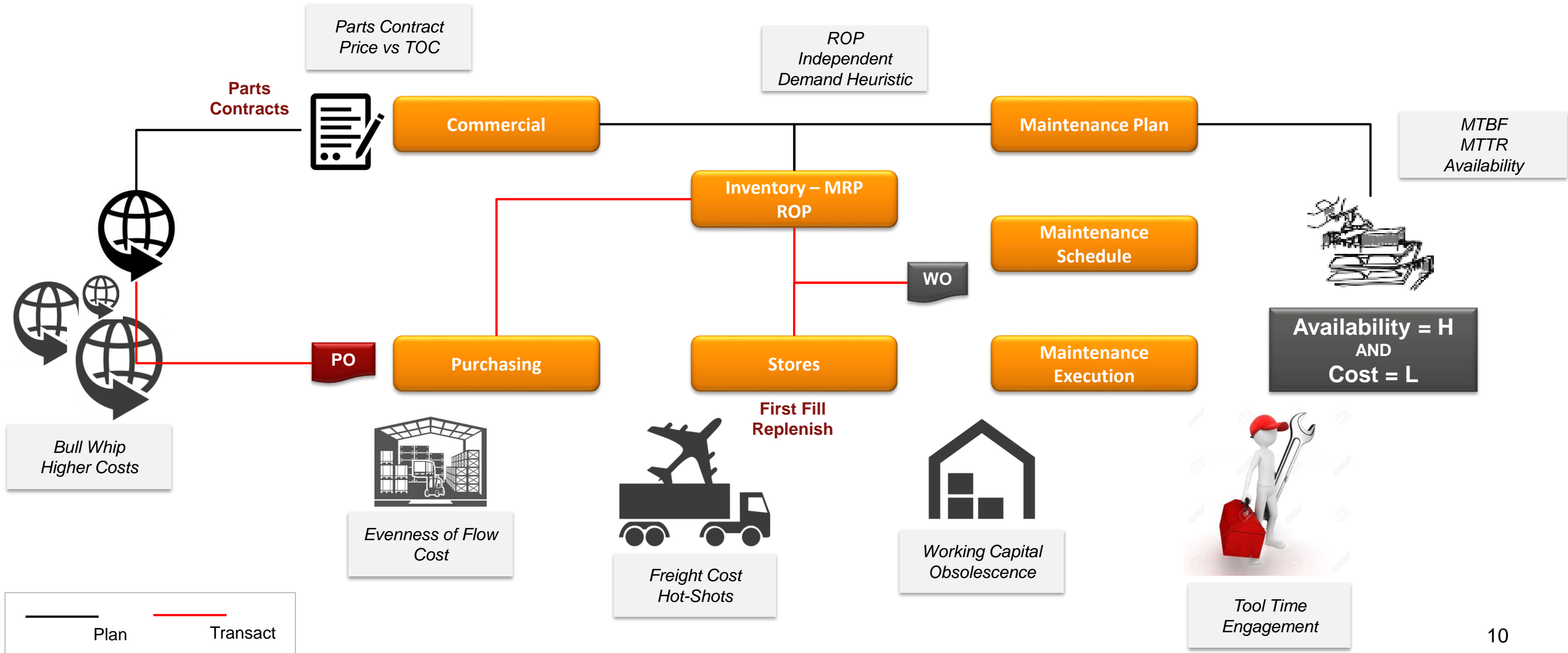
Living in the execution world with a system of record



If we do what others do ... we will have what others have



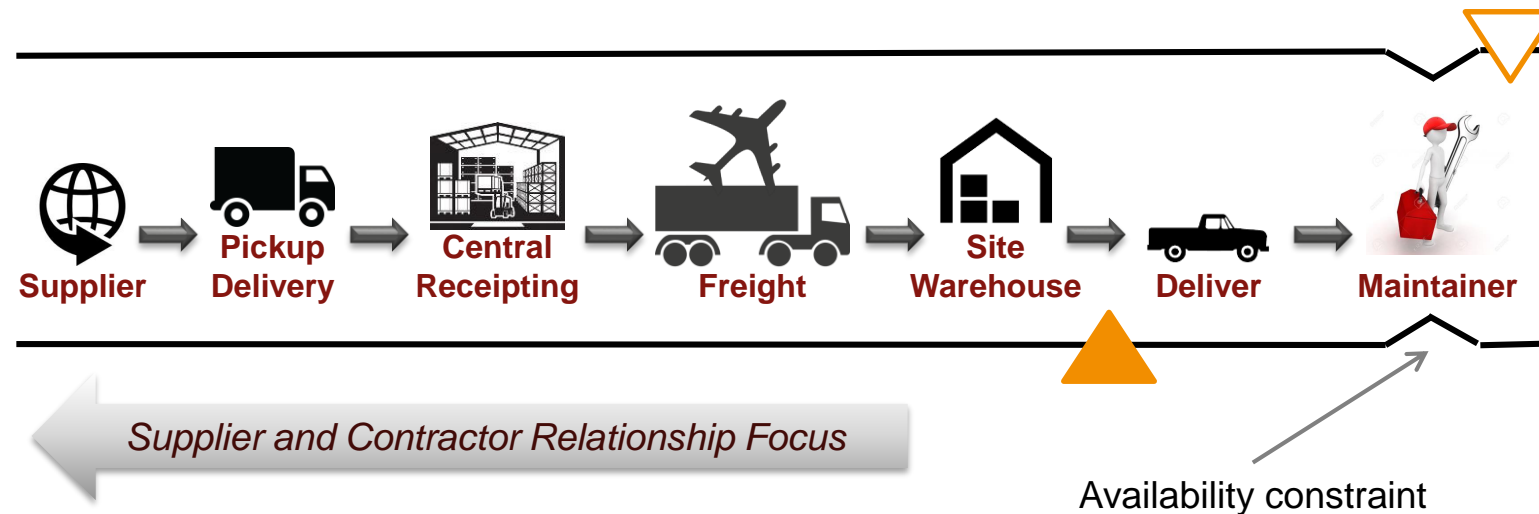
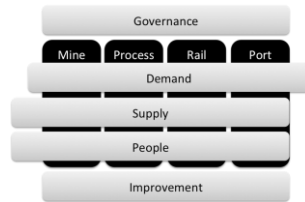
Silo approach with cost erosion and top line disconnect



Building a Supply System with Systems Thinking



Goal ... “production availability is optimised in line with Demand System Requirements



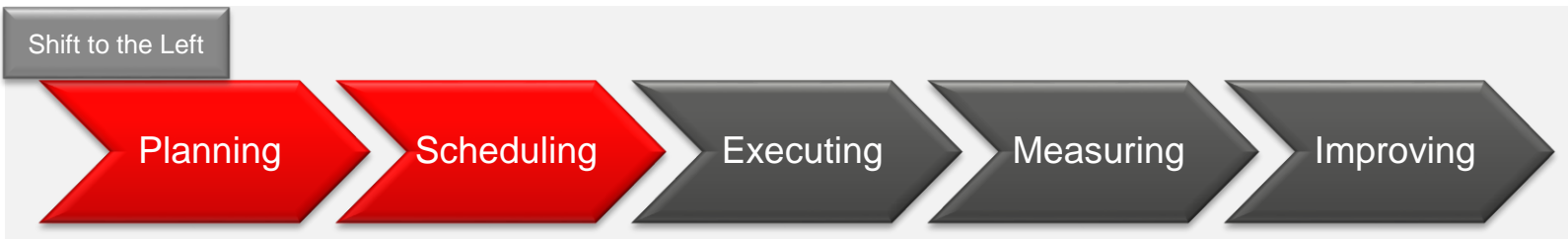
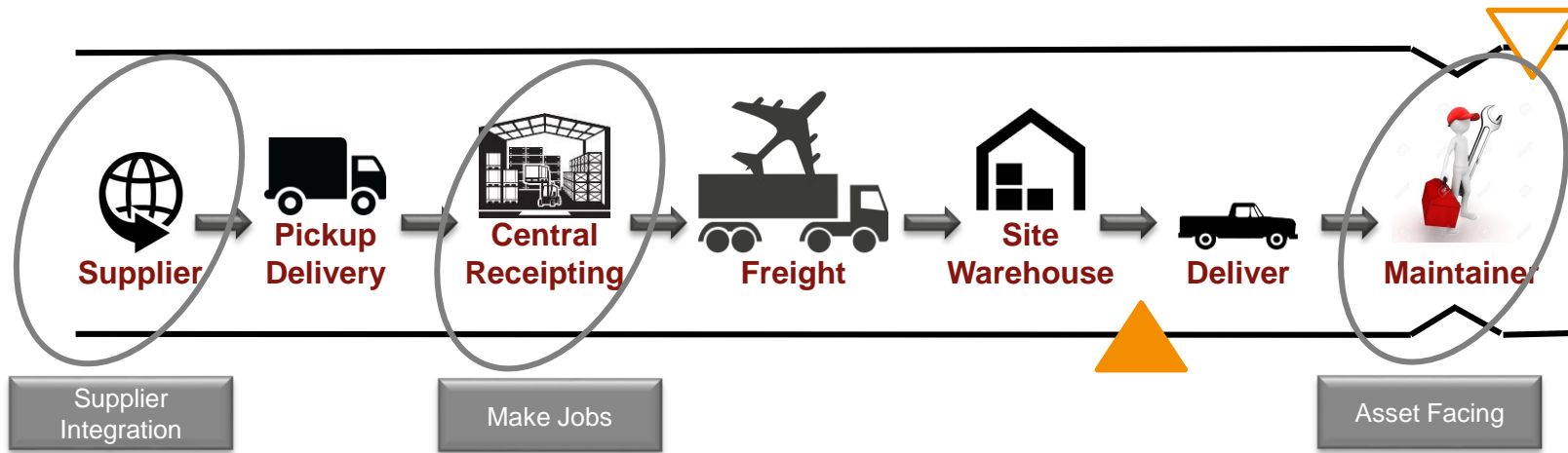
Outcome = Availability

Product = Maintenance “Jobs”

- Throughput
- Quality
- Inventory
- Cost
- Health Safety and Environment

Differentiation Based on “Voice” of Asset

Design principles with Asset as a “Customer”

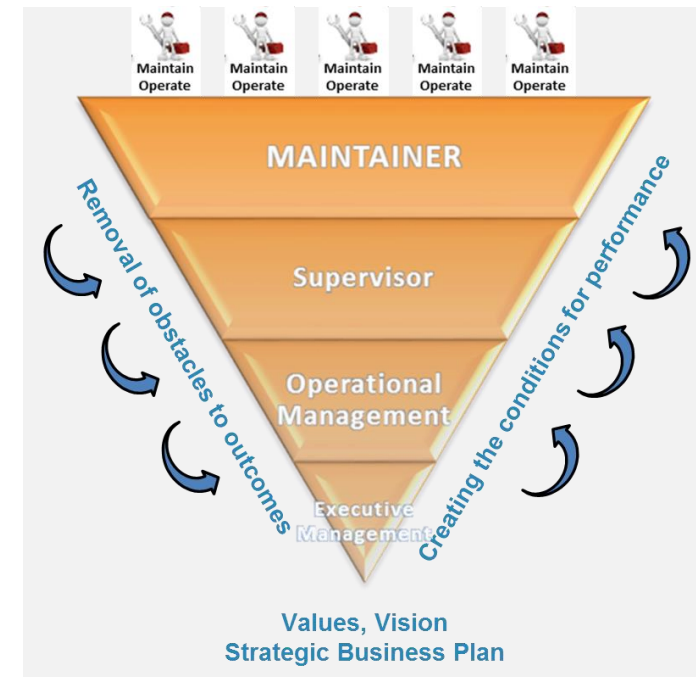


Flow

1st Law of manufacturing – “benefits directly related to speed of flow of information and materials.”

3 Flows - Information; Material; Financial

Caveat: Information and material must be relevant

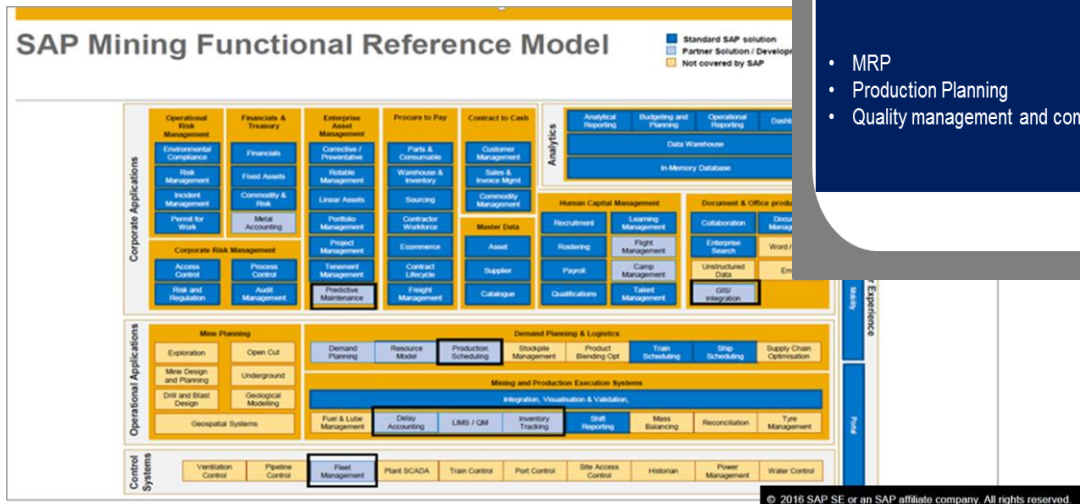
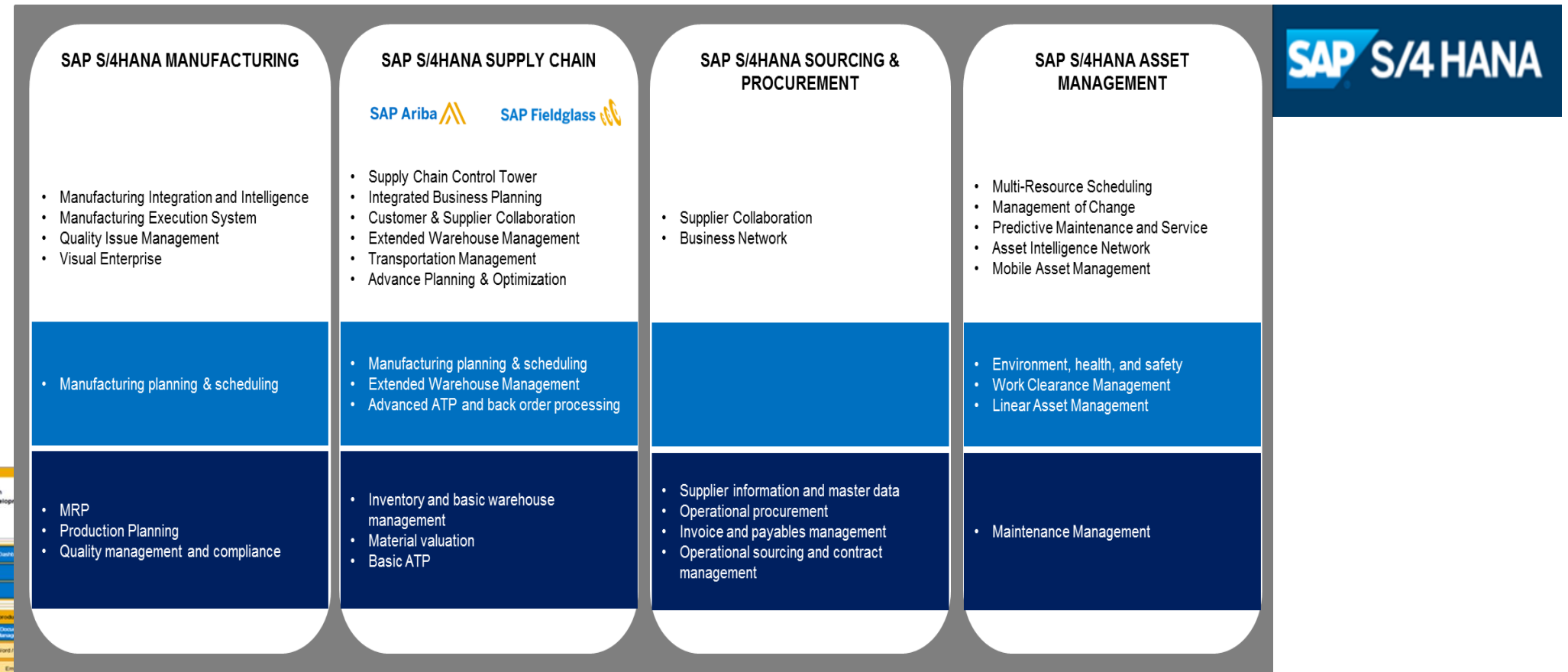


* George Plossl, Orlicky’s Material Requirements Planning, 2nd edition, McGraw-Hill, New York, N.Y., 1994, p.4

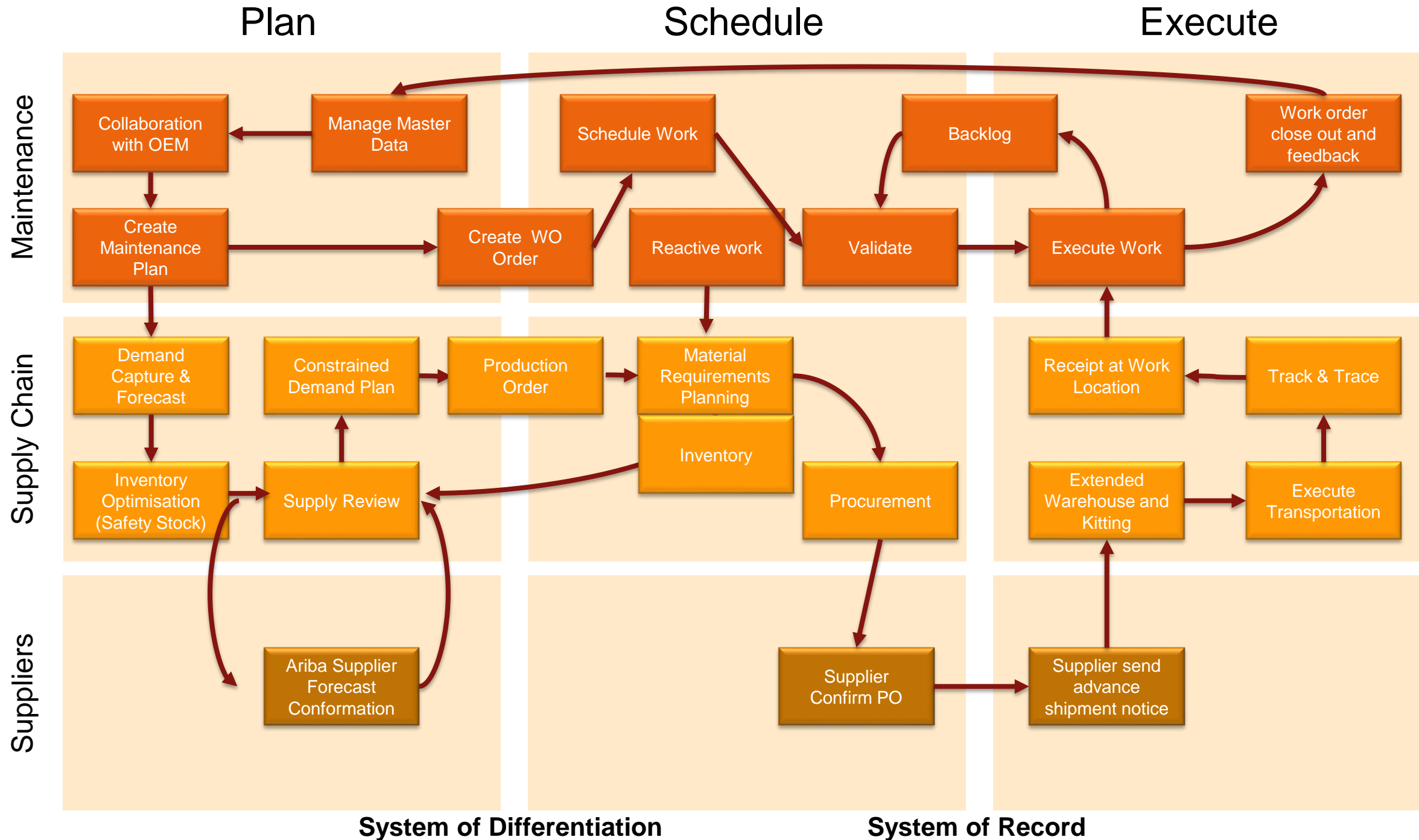
Enabling technologies



Embracing the digital economy with cross industry practices



Design Workshop Solution Flow - Draft



Extended supply for Enterprise Asset Maintenance (ExSC4EAM)



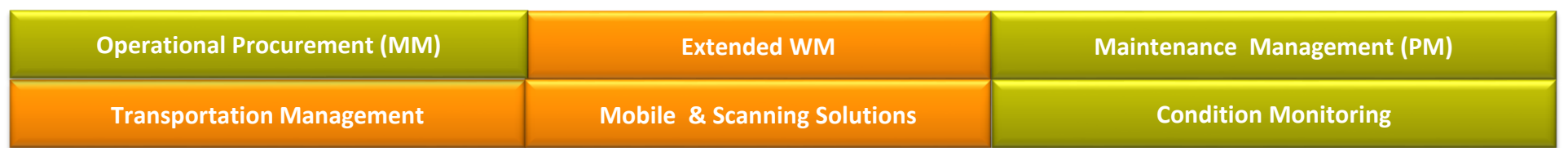
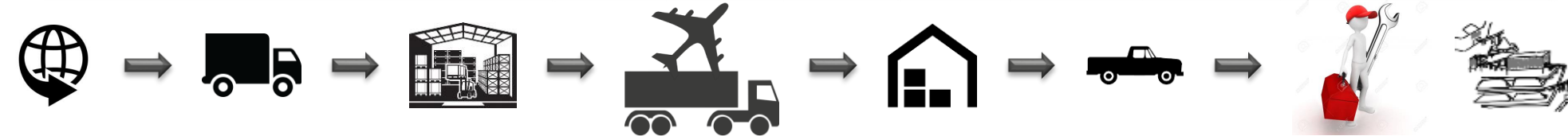
Adapting for an integrated Supply system



Planning



Scheduling



Executing



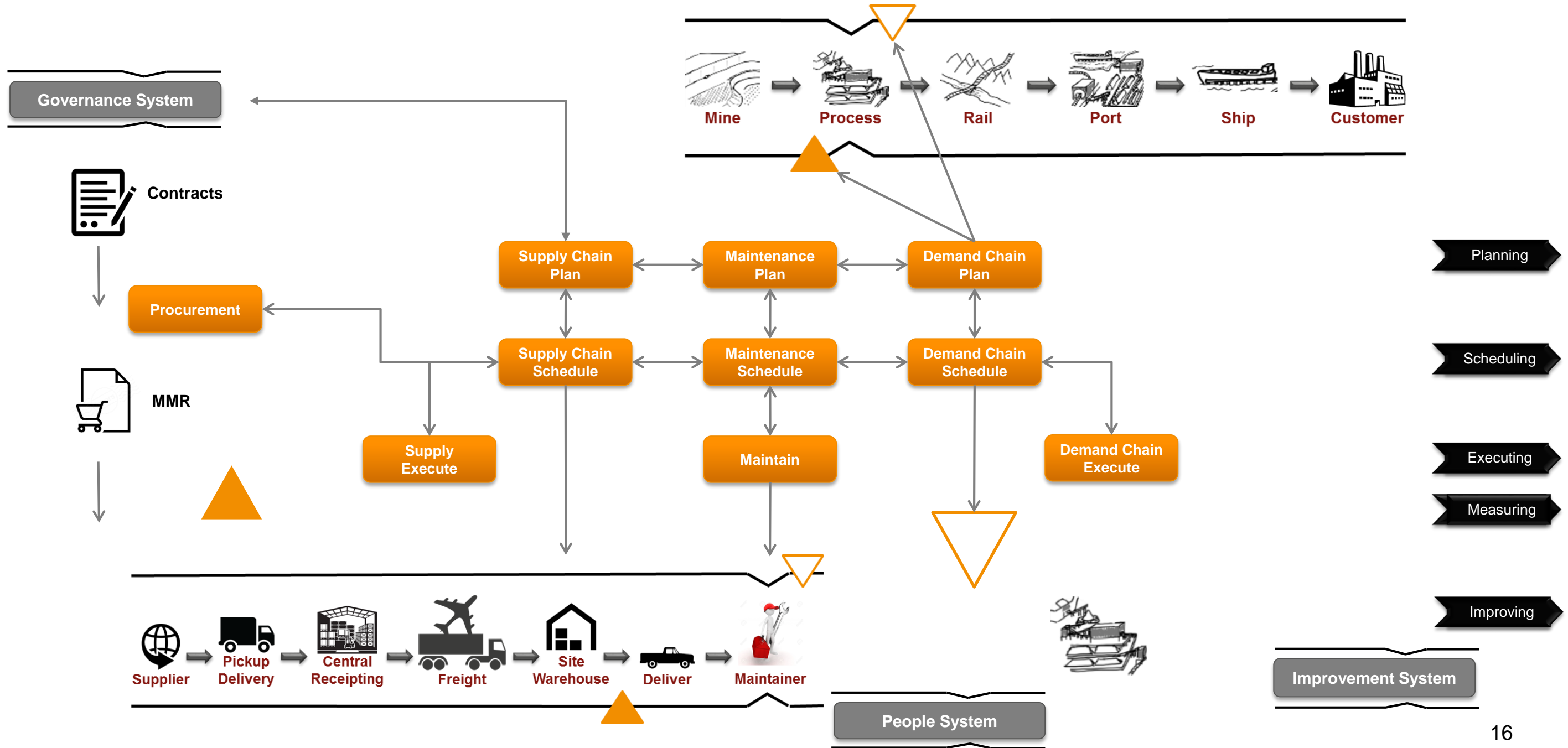
Measuring

Improving

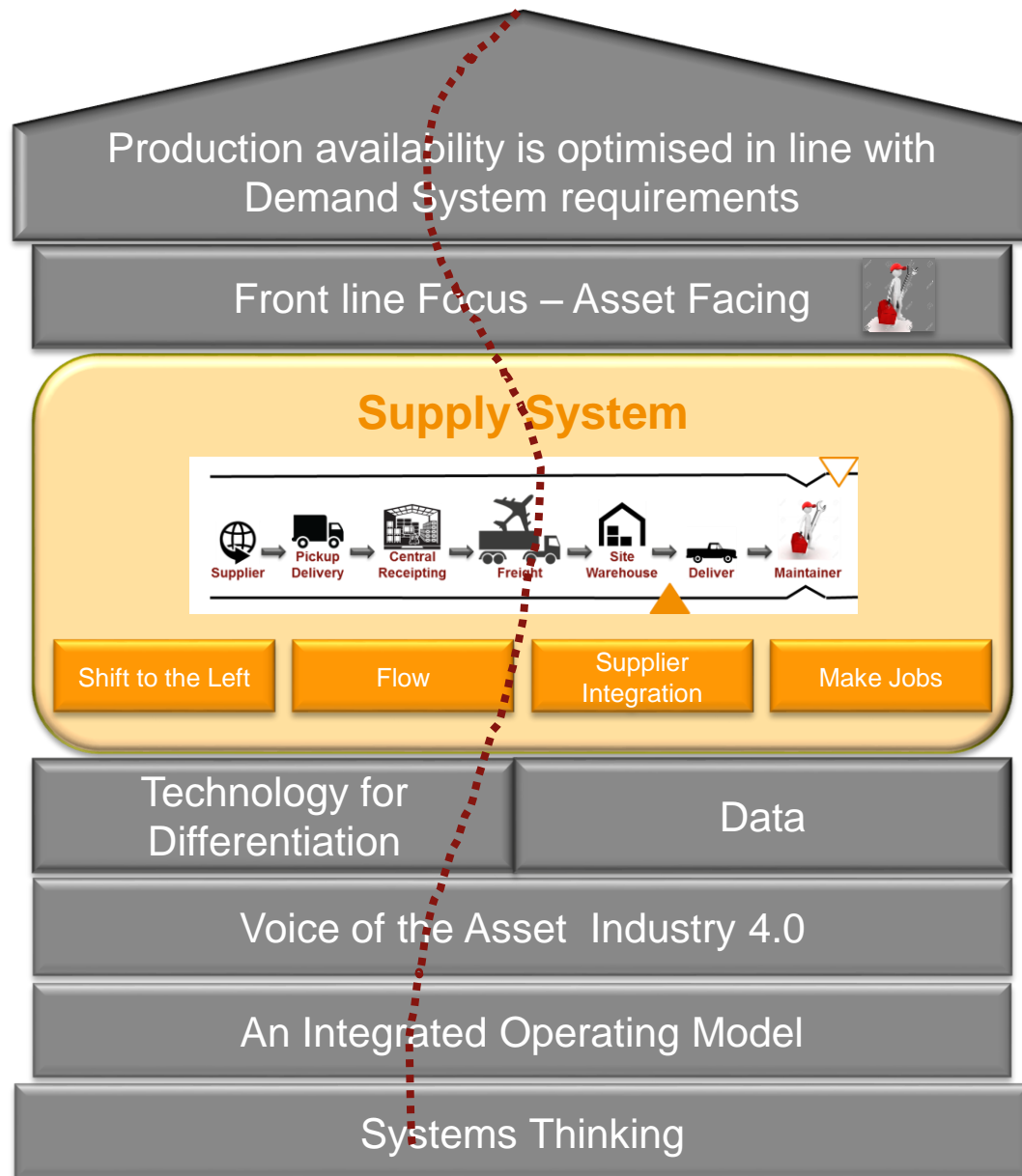
Legend:

- Current (Green)
- SSO Program (Orange)
- ? Future (Blue)

Integrating demand and supply



A digital ecosystem to support the Asset as a “Customer”



Business Outcome

We focus on margin rather than tonnes, with our operating model designed to deliver 55MT p.a. to our customers globally.

- Equipment Reliability is optimised &
- Production critical equipment availability is maximised &
- Consumables and Services are available when required &
- Operating Costs are minimised

- Apply innovative, risk – managed decision making
- Embrace and respect our Roy Hill community
- Apply Financial prudence
- Encourage a business improvement culture
- Utilise technology and capability to future proof our business



???



THANK YOU