

4th International SAP Metals and Mining Summit

Co-hosted with Metalloinvest

September 11-12, 2019 Moscow & Sary Oskol, Russia

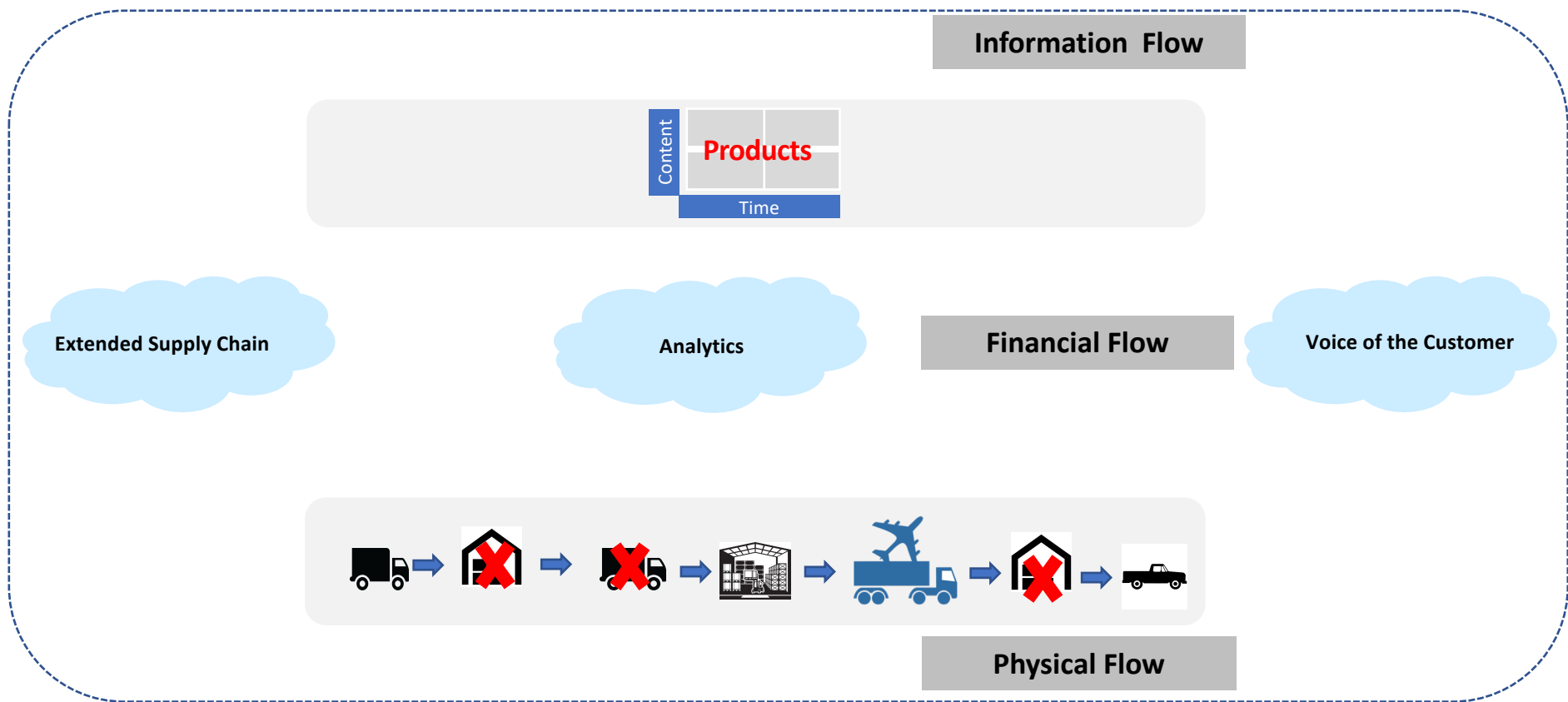
Transforming maintenance, repair and operations supply in asset intensive industries

THE BEST RUN



Metalloinvest

Amazon



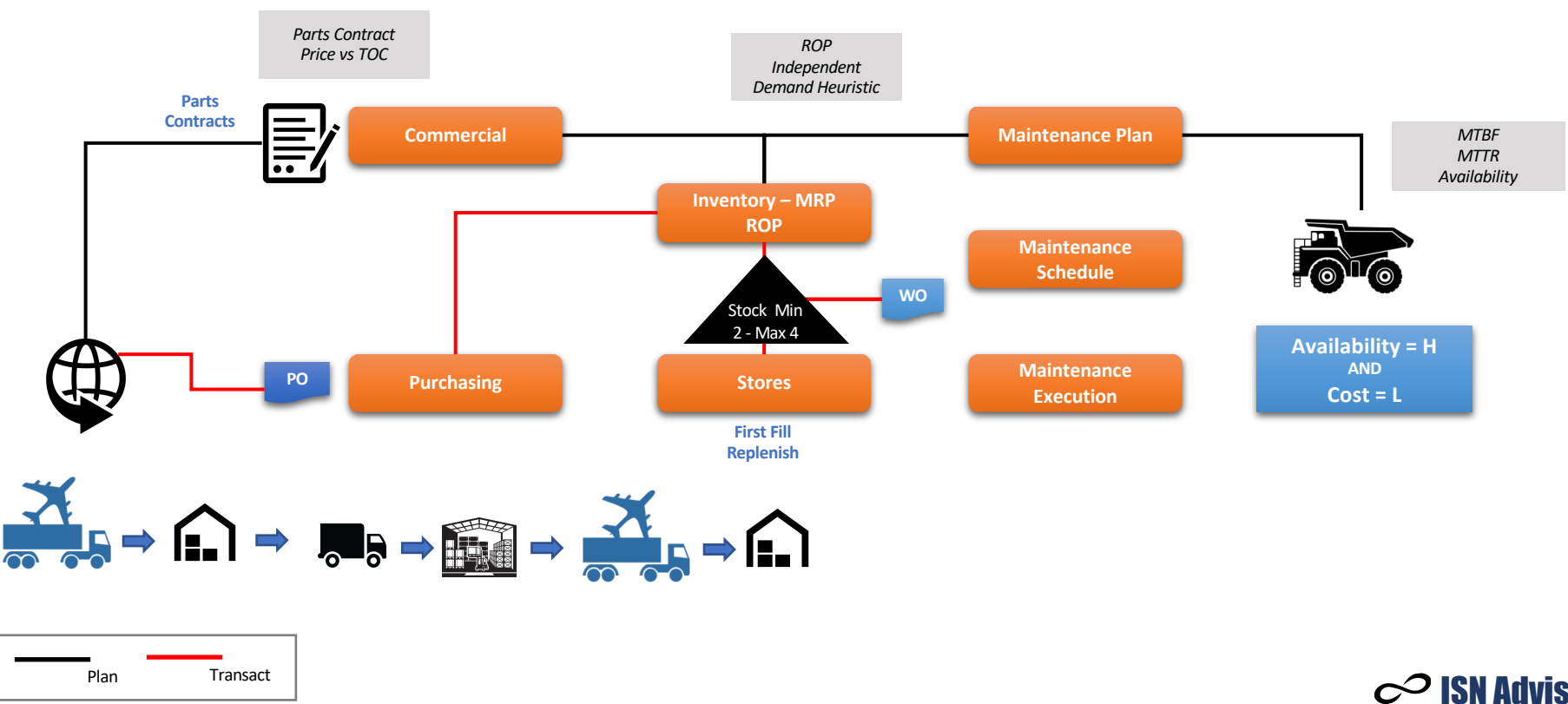
Agenda

- **Key concepts**
- **MRP Stock replenishment based approach**
- **Why transform – business case view?**
- **Blockers to transforming**
- **Industry 4.0 – the case for change!**
- **How to Transform?**
- **What to Transform to?**
- **Wrap up – Integral Model**

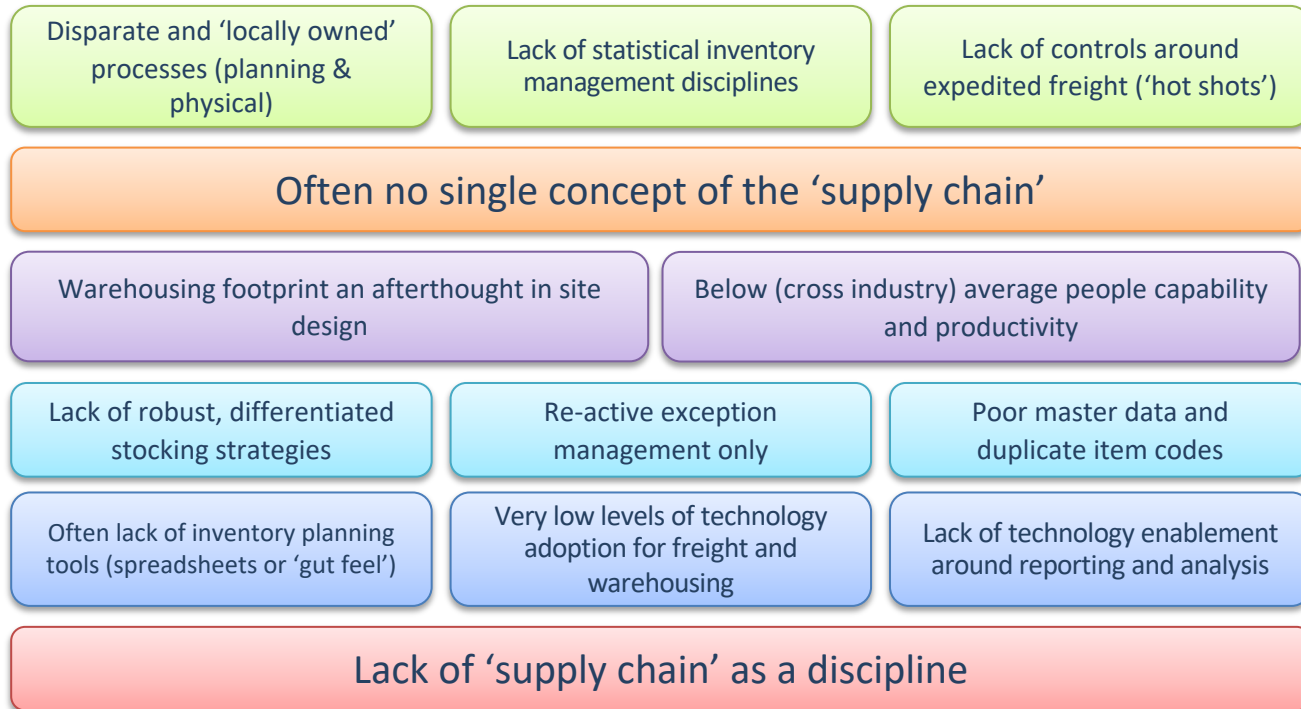
Key concepts

- **Systems Thinking with Supply Chain as a way of thinking in organisational design**
- **Integral Model**
- **Leadership maturity framework**
- **Adaptive Leadership**
- **Industry 4.0**

MRP stock replenishment based approach



MRO Supply Chains why transform?



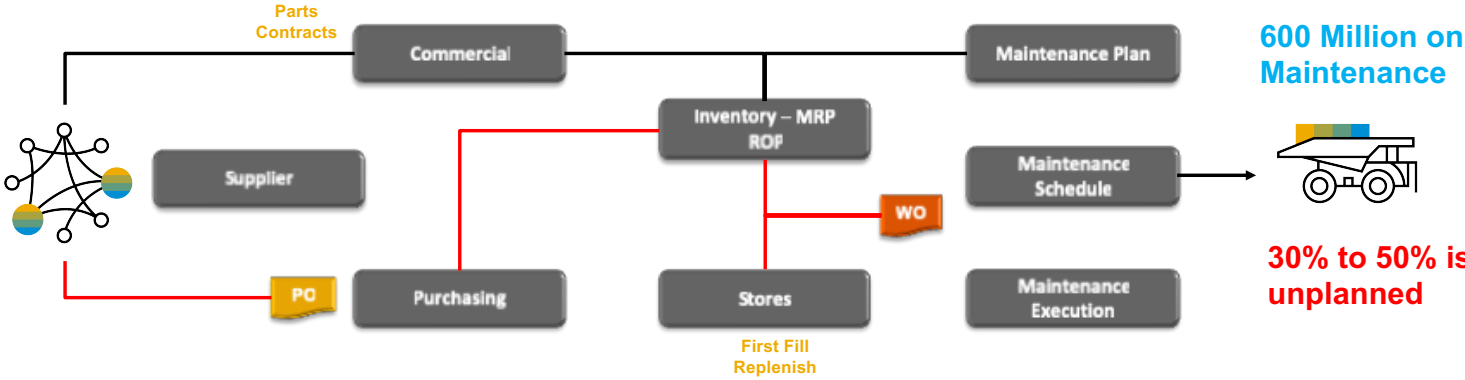
Portland Group , October 2014

MRO Supply Chains why transform?

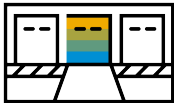
A typical customer

\$5 Billion revenue

1 hour of lost
production ~ \$570,000



250 Million in Inventory



Growing at 1% per month

15 to 20 Mil on Transportation



30% to 50% are hotshots

200 to 300 Maintainers



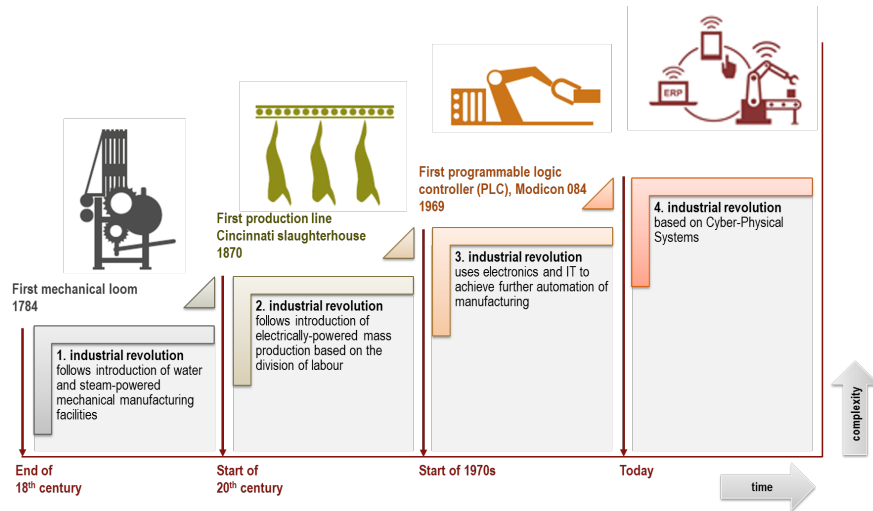
40% Tool time

Blockers to transformation

- **Functional thinking dominant - leadership capacity to embody systems leadership**
- **Organisation design amplifies functions over process**
- **Cost of silos “hidden”**
- **Inventory control compromise seen as a lesser evil to production loss**
- **Not priority – or just “too hard”**
- **Notwithstanding automation – Supplier relationship management maturity still evolving**

Why transform - case for change?

“I skate to where the puck is going to be, not where it has been.” Wayne Gretzky, All time NHL top scorer



Industry 4.0 Principles		Outcomes
1	Highly customized products AND mass production	<ul style="list-style-type: none"> Mass production economics for lot size of one Customer individualisation
2	High level of value chain interconnectedness AND high level of autonomy	<ul style="list-style-type: none"> Enabling new business models, processes and ways of working Company ecosystems in a networked extended supply chain
3	Detail complexity AND dynamic complexity	<ul style="list-style-type: none"> Improved decision making and lower variation Improved ability to optimise
4	Functional AND system business architecture	<ul style="list-style-type: none"> Leadership capability and capacity with horizontal and vertical development Information, physical and financial flow
5	Change AND transformation	<ul style="list-style-type: none"> Inside-out plus outside-in approaches Adaptive, technical and polarities distinguished

The technologies sit in four clusters:

Data, computational power, and connectivity; Analytics and intelligence; Human-machine interaction; Digital-to-physical conversion.

How to transform?

Key Challenges / success factors

- *the biggest single failure of leadership is to treat adaptive challenges like technical problems*
- *distinction between change and transformation*
- *capability and capacity - horizontal and vertical development*
- *Systems and functional thinking*
- *Sustainability in Ecosystem context*
- *Results based on whole of system performance*
- *Leveraging Industry 4.0*
- *Discovery versus telling – unknowns - psychological safety*
- *Language matters*
- *Leaders do the work first*

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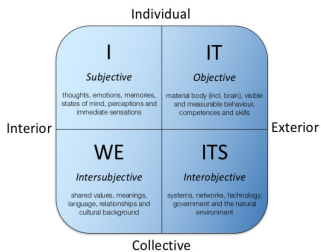
How to transform?

A different approach to transformation

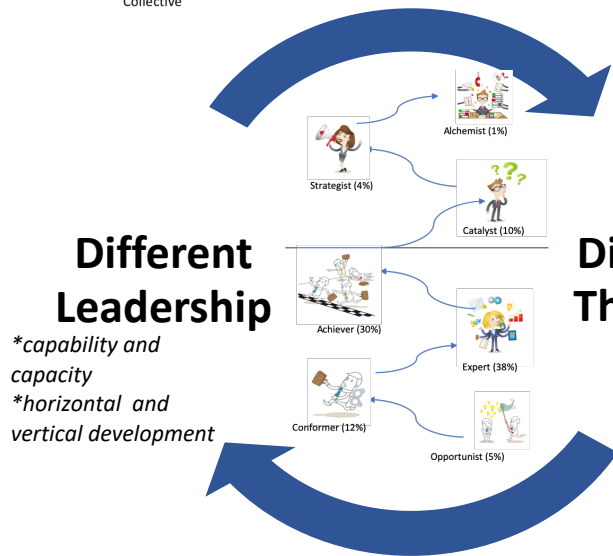
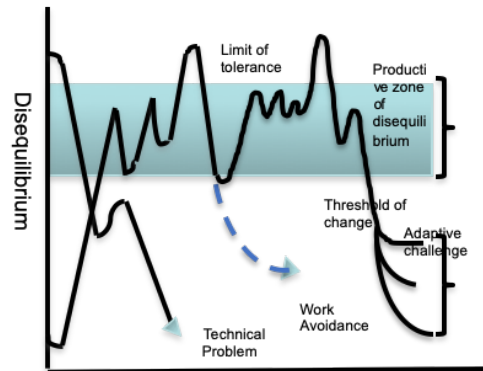
- Organisations are evolving their business to optimise the opportunities available in an Industry 4.0 / knowledge economy
- This primarily means creating more system oriented/ integrated operating environments
- Ensuring the transitions and transformations required are successful needs a new approach to change leadership
- Traditional change management focuses on where we are now, where we need to get to and planning how to get there. This assumes:
 - We know the answer to where we want to get to
 - We can for the most part predict and control the steps and the environment on the way there
- This change management approach is effective when the nature of the challenge is primarily TECHNICAL but insufficient when the challenge is ADAPTIVE

Any challenge where the value comes primarily from people doing things differently is an adaptive challenge.

Integral Transformation: Human Systems 1st



**The biggest single failure of leadership is to treat adaptive challenges like technical problems*



Different Thoughts

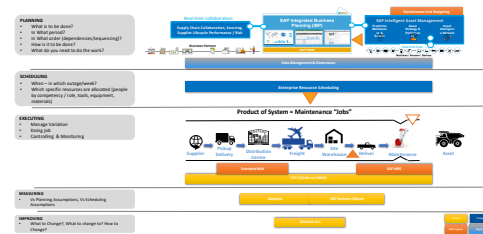
**Systems and functional thinking*
**Sustainability in Ecosystem context*



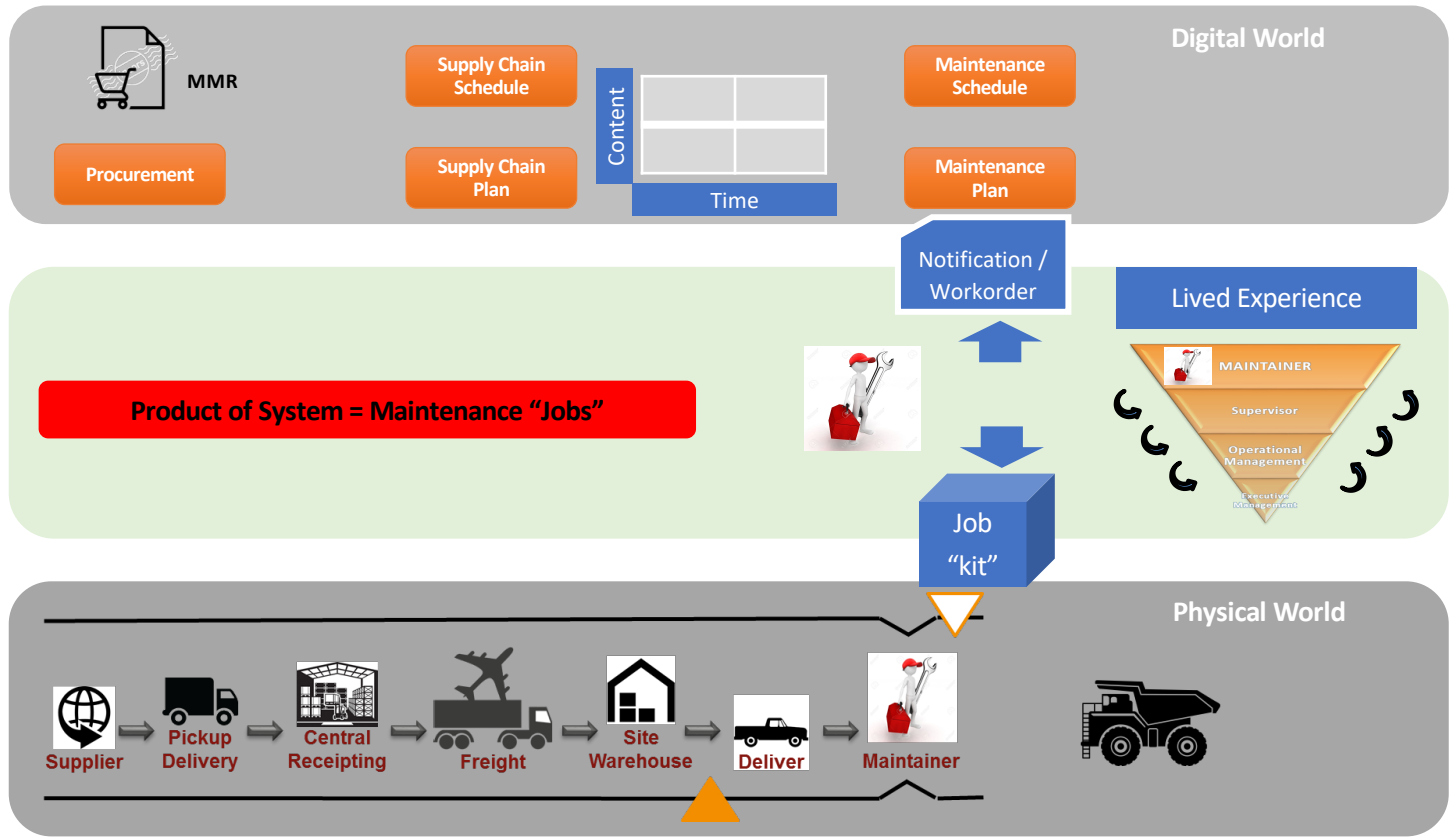
Different Actions



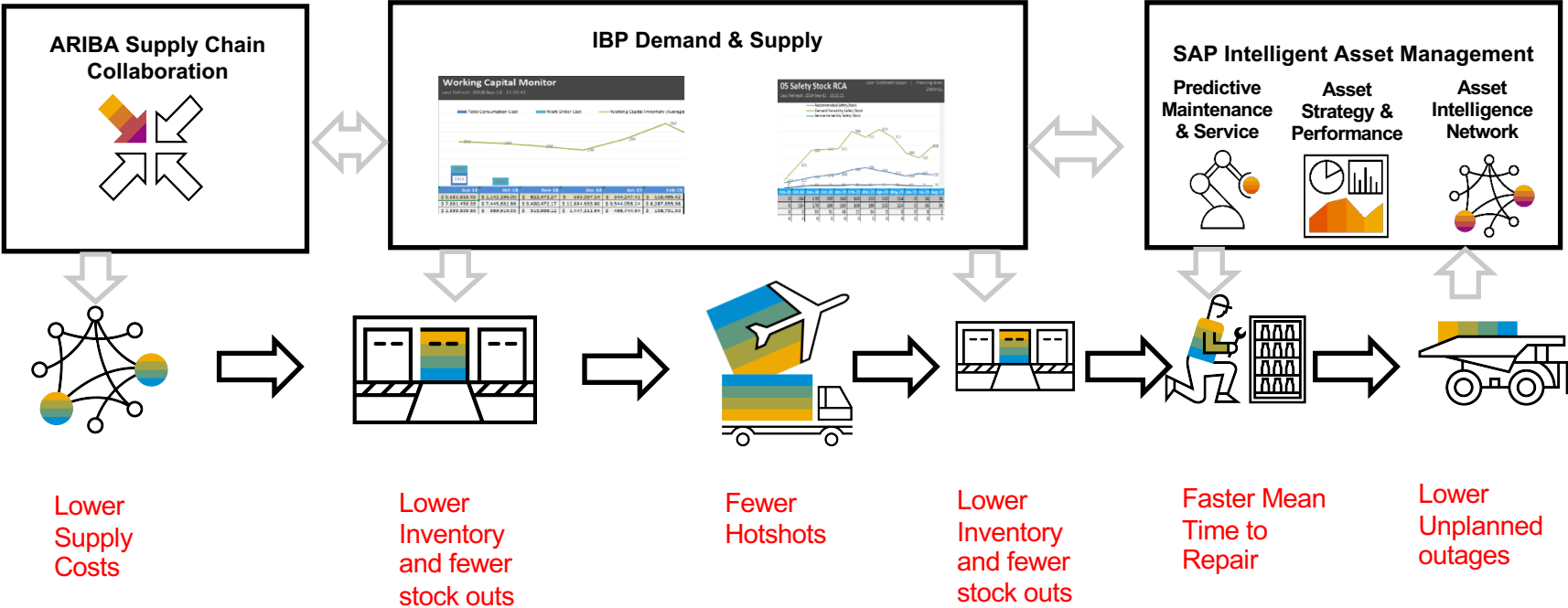
Different Results



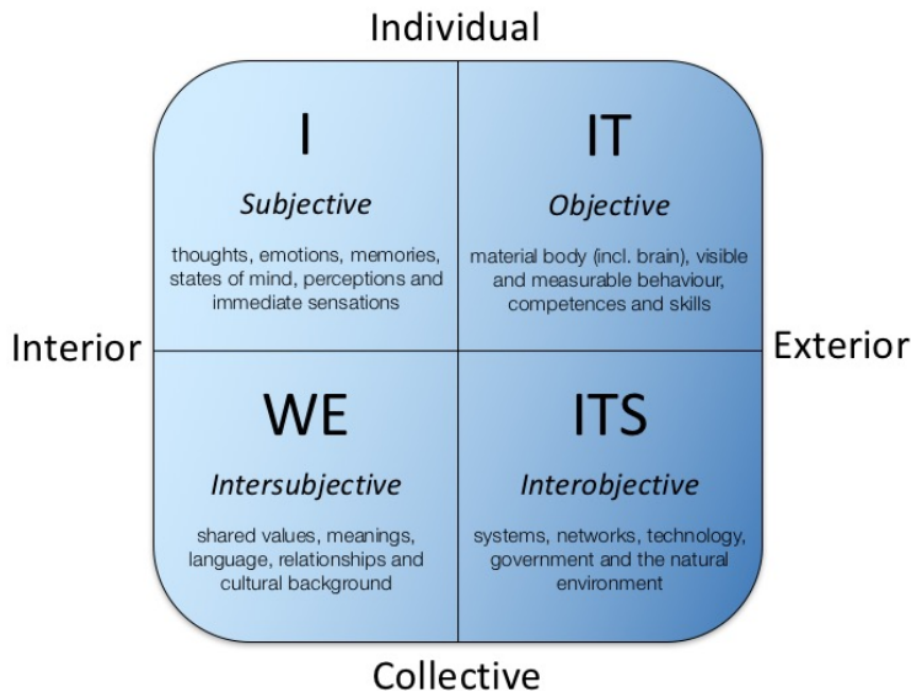
What to Transform to?



Technology: SAP Intelligent Supply Chain for Assets



Wrap Up - Integral Model



Human Systems First

- Leaders do the work first and visible felt leadership
- Collaboration requires capacity
- Challenge limiting frames and beliefs create new frames
- Process architecture
- Technology roadmap aligned to organisational maturity and with future proof intent

Journey of discovery and adaptation



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