# **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

About Roy Hill

**Operating Model** 

Traditional Purchase to Pay response to Supply

Building a Supply System

Systems of Differentiation

Roy Hill Virtual Warehouse

Questions



#### Time

#### 11:45

#### 12:00

### 12:10

# **Roy Hill Snapshot**











**First shipment** EXPORTED 10 DECEMBER 2015







### **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.





#### 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



- data, computational power, and connectivity
- analytics and intelligence

Process Rail

- human-machine interaction
- digital-to-physical conversion









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## **Product of Demand**

### Demand System = Operations Maximised



#### Health Safety and Environment

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# Availability is optimised in line with Demand System

### Supply System = Availability Maximised



- Inventory
- Cost
- Health Safety and Environment



# **Traditional Purchase to Pay response to Supply**

Living in the execution world with a system of record









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# 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"



- Inventory
- Cost
- ٠



#### Health Safety and Environment

# **Differentiation Based on "Voice" of Asset**

### Design principles with Asset as a "Customer"



\* 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

	SAP S/4HANA MANUFACTURING	SAP S/4HANA SUPPLY CHAIN	SAP S/4HANA SOURCING & PROCUREMENT	SAP S/4HANA ASS MANAGEMENT
	<ul> <li>Manufacturing Integration and Intelligence</li> <li>Manufacturing Execution System</li> <li>Quality Issue Management</li> <li>Visual Enterprise</li> </ul>	<ul> <li>SAP Ariba SAP Fieldglass</li> <li>Supply Chain Control Tower</li> <li>Integrated Business Planning</li> <li>Customer &amp; Supplier Collaboration</li> <li>Extended Warehouse Management</li> <li>Transportation Management</li> <li>Advance Planning &amp; Optimization</li> </ul>	<ul> <li>Supplier Collaboration</li> <li>Business Network</li> </ul>	<ul> <li>Multi-Resource Scheduling</li> <li>Management of Change</li> <li>Predictive Maintenance and S</li> <li>Asset Intelligence Network</li> <li>Mobile Asset Management</li> </ul>
	Manufacturing planning & scheduling	<ul> <li>Manufacturing planning &amp; scheduling</li> <li>Extended Warehouse Management</li> <li>Advanced ATP and back order processing</li> </ul>		Environment, health, and saf     Work Clearance Managemen     Linear Asset Management
SAP Mining Functional Reference Model  Standard SAP solution  Partner Solution (Develop  Not covered by SAP  Samadra SAP solution  Partner Solution (Develop  Not covered by SAP  Samadra SAP solution  Partner Solution  Partner  Samadra SAP  Samadra	<ul> <li>MRP</li> <li>Production Planning</li> <li>Quality management and compliance</li> </ul>	<ul> <li>Inventory and basic warehouse management</li> <li>Material valuation</li> <li>Basic ATP</li> </ul>	<ul> <li>Supplier information and master data</li> <li>Operational procurement</li> <li>Invoice and payables management</li> <li>Operational sourcing and contract management</li> </ul>	Maintenance Management
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### **Design Workshop Solution Flow - Draft**





# **Extended supply for Enterprise Asset Maintenance (ExSC4EAM)**

# Adapting for an integrated Supply system

Program

? Future





Asset Strategy &











### Integrating demand and supply







# **Roy Hill Virtual Warehouse**

### 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**





Utilise technology and capability to future proof our business







# THANK YOU

CAL FRENCH