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A NEW ERA IN PRODUCT LIFECYCLE INNOVATION

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UNLEASHING THE HIDDEN FACTORY THROUGH DIGITAL PERFORMANCE MANAGEMENT

SPEAKER(s):

Jeffrey Miller
Director, Kalypso: A Rockwell Automation Business

Jordan Coffman
Director, Global IoT Sales, PTC

Clay Wilker
Director, Operations, Continuous Improvement – Northrop Grumman

Alyssa Roque
Engineering Project Manager – Fresenius Medical Care

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DIGITAL PERFORMANCE MANAGEMENT WITH KALYPSO

Jeffrey Miller
Director, Digital Performance Management - Kalypso

Jordan Coffman
Director, Global IoT Sales & Strategy - PTC

Clay Wilker
Director, Operations, Continuous Improvement – Northrop Grumman

Alyssa Roque
Engineering Project Manager – Fresenius Medica Care

Harnessing Quantifiable Data for Factory Performance Improvement

DPM connects data, actionable insight and closed-loop continuous improvement across enterprise hierarchies.

AGENDA

1

Approaches to **optimizing factory performance**

2

Measuring factory performance

3

The **role + value of DPM** explained

**DO DIGITAL WITH PURPOSE.
SOLVE BIG PROBLEMS.
BETTER HUMAN OUTCOMES.**

Harnessing Quantifiable Data for Factory Performance Improvement

Leading PTC Services Partner

Strategic Advisory I Implementation I Managed Services

15+ years delivering value with PTC

250+ clients across industries

400+ PTC global practitioners

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vuforia™ onshape ptc® flexplm®

PTC Partner Network Recognition

advanced global system integrator

windchill® thingworx® vuforia®

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HOW DO YOU MEASURE AND MANAGE FACTORY PERFORMANCE TODAY?

Methods and approaches:

- Metrics: OEE? OLE? OEEE?

- Sourcing: Manual? Automated?

- Reporting: Power BI? Other?

- Integrations: PLC / SCADA, MES/MOM, ERP

MATURE APPROACHES TO OPTIMIZING FACTORY PERFORMANCE

Methods and approaches:

- Deming
- TPS / Womack - Lean
- TPS Lean
- TQM
- Reengineering

- Theory of Constraints
- JIT
- Six Sigma
- Insight is the key

WHO IS ACCOUNTABLE FOR FACTORY PERFORMANCE IMPROVEMENT?

Organizations and Individuals

- Operations

- Total Productive Maintenance

- Continuous Improvement

- Quality Management

- Maintenance / Instrumentation & Controls

- Industrial Engineering

- Product / Process Engineering

DIGITAL PERFORMANCE MANAGEMENT

What does DPM do?

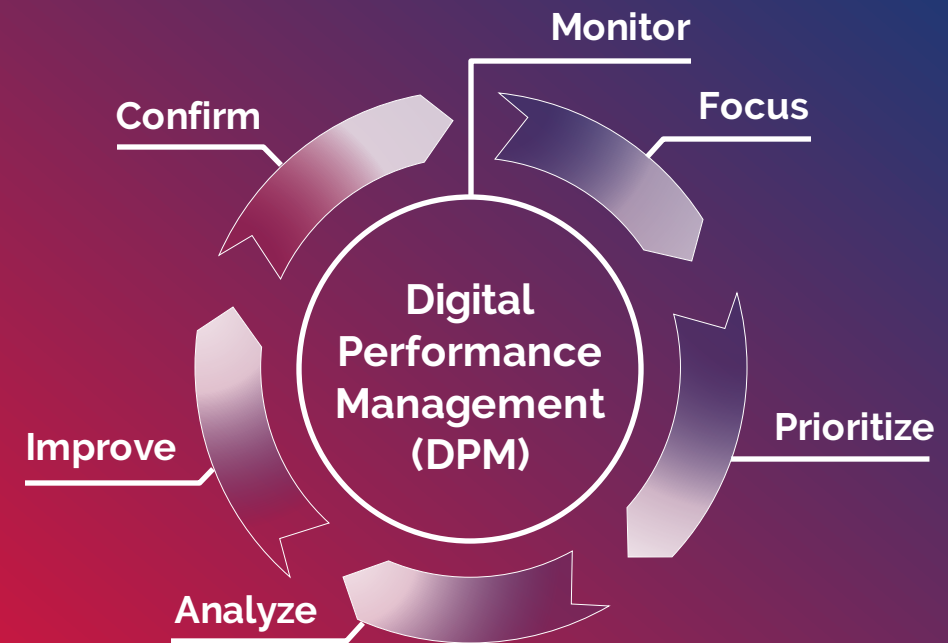- DPM exposes and returns hidden production hours to the factory

How does DPM do it?

- DPM finds, analyzes and visualizes production time losses. Then, DPM identifies the root causes of the losses and prioritizes them for action by Continuous Improvement teams or Operations Management

What are DPM's Core Capabilities?

- Understand Hidden Production Issues

- Identify Root Causes of Production Inefficiencies

- Communicate Action Plans for Improvement

- Create Investment Accountability

DPM is the New Operating System for Close—Loop Continuous Improvement in Manufacturing

Monitor

Focus

Confirm

Digital Performance Management (DPM)

Prioritize

Improve

Analyze

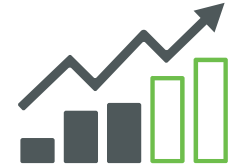# THE VALUE OF CLOSED-LOOP PROBLEM SOLVING FOR CONTINUOUS IMPROVEMENT

Understand Hidden Issues

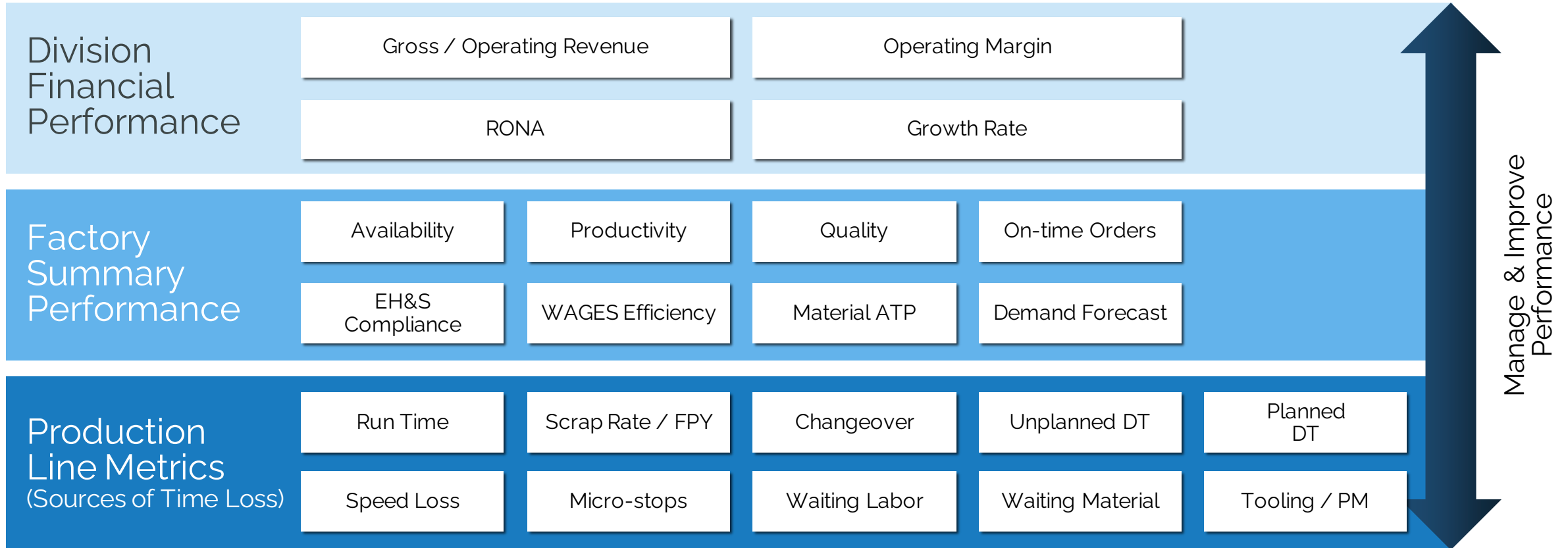**Identify Root Causes of Problems**

Communicate Action Plans

Create Investment Accountability

INTEGRATING EXECUTIVE REPORTING AND CONTINUOUS IMPROVEMENT

DPM connects data, actionable insight and closed-loop continuous improvement across enterprise hierarchies.

Division Financial Performance		
Gross / Operating Revenue	Operating Margin	
RONA	Growth Rate	

Factory Summary Performance				
Availability	Productivity	Quality	On-time Orders
EH&S Compliance	WAGES Efficiency	Material ATP	Demand Forecast

Production Line Metrics (Sources of Time Loss)				
Run Time	Scrap Rate / FPY	Changeover	Unplanned DT	Planned DT
Speed Loss	Micro-stops	Waiting Labor	Waiting Material	Tooling / PM

Manage & Improve Performance