FactoryTalk Analytics Platform and MES integration with the PI System Infrastructure

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Rockwell Automation

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AGENDA

- WHY NOW, WHY ANALYTICS
- DEFINING ANALYTICS – BREATHED & SCOPE
- FACTORYTALK ANALYTICS PLATFORM OVERVIEW
- FACTORYTALK MES INTEGRATION W/ PI SYSTEM
- ANALYTICS DEMO

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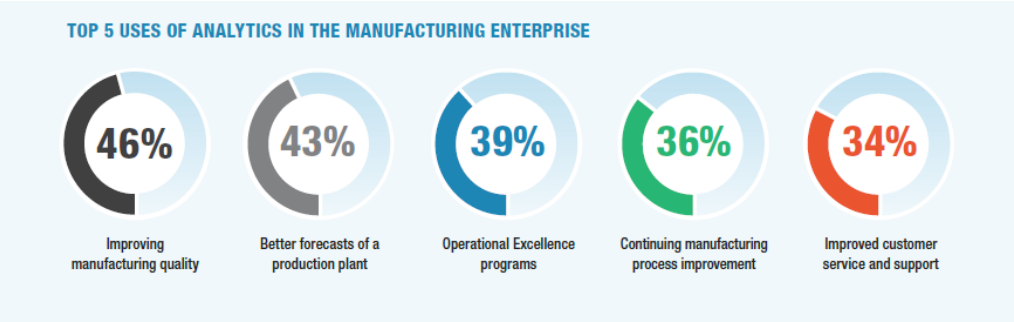
Digital Transformation is Revolutionizing Manufacturing

Rockwell Automation

Analytics Really Do Matter

- Analytics are driving Digital Transformation Initiatives
- Focused on Business Outcomes
- Using machine learning and other predictive tools
- Leveraging technology advances – IoT, Mobility
- Data Infrastructure is a critical first step



Sources: LNS Research, MESA

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FactoryTalk Analytics Platform Overview

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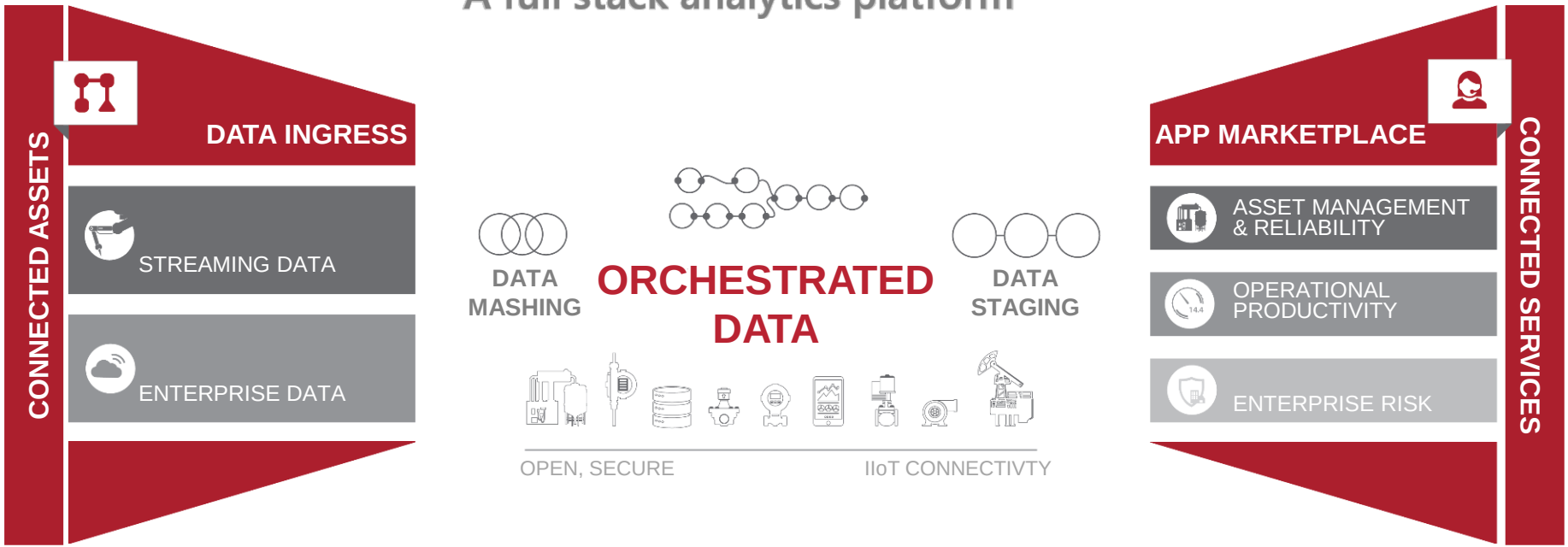
FactoryTalk® Analytics Platform

A full stack analytics platform



Edge
FactoryTalk® Analytics

DataFlowML
FactoryTalk® Analytics

DataView
FactoryTalk® Analytics

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Edge

FactoryTalk® Analytics

- Data from real-time sources. Find problems faster.
- Stores and forwards data. Nothing important gets lost due to latency.
- Enables closed loop feedback applications. Instant reaction.
- Provides advanced analytics in the “hardware stack”. Easier support.

DataFlowML

FactoryTalk® Analytics

- Combines different forms of data for Analytics. No more Excel or SQL.
- Data pipelines are built using leading AI and ML tools.
- Scalable from on-premise server to cloud based infrastructures.
- Handles big data and unstructured data such as text, imagery, audio, etc.

DataView

FactoryTalk® Analytics

- Self-service visual analysis tool. Anyone can use it with no pre-configuration of reports or dashboards.
- AI “learns” what you want to see and adjusts accordingly.
- Insightful Storyboards may be saved and shared.
- Runs on any form factor or device.

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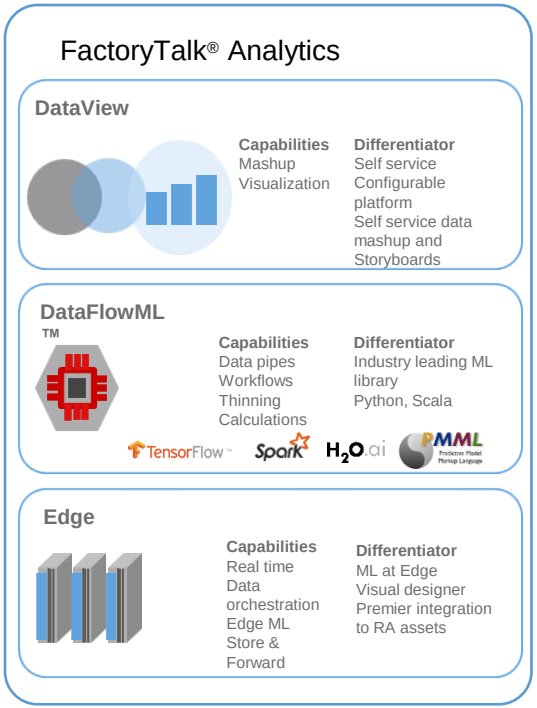
Why FactoryTalk® Analytics Platform?

- **Scalable Platform –** Multiple applications built on a common platform allows you to buy what you need now with the ability to scale later
- **Scalable Compute –** Execute as close to the source and consumer of the data as possible including close loop
- **Open and Secure –** Leverage your investment in technology and remain platform neutral
- **Improved Time to Value –** Minimize the need of IT expertise and data scientist for repeatable tasks and applications
- **Domain Expertise –** Manufacturing Outcome and Expertise
- **Multiple ML libraries** on a common platform



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MES (PharmaSuite) / PI System Integration

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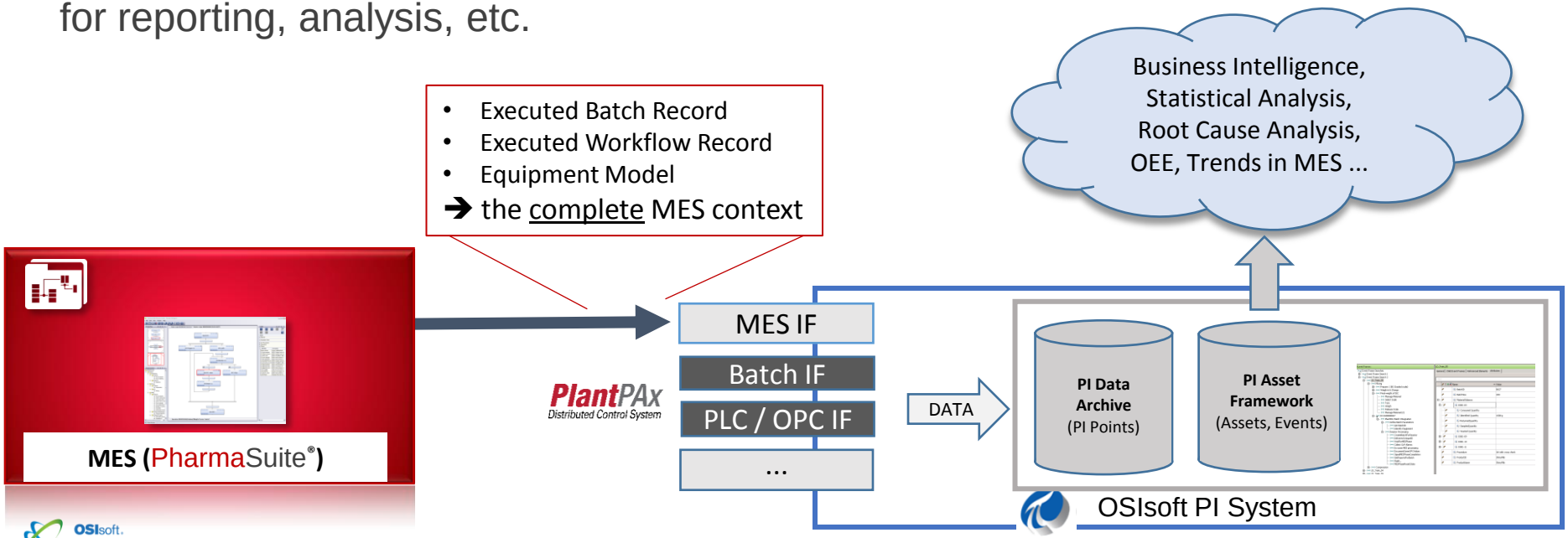
MES – OSIsoft PI System Integration

- **Objective:** Provide interface to PI System for exporting MES Equipment model to PI Asset Framework and MES Execution information to PI Event Frames
- **Customer Value:** "One version of the truth". MES and process data combined for reporting, analysis, etc.



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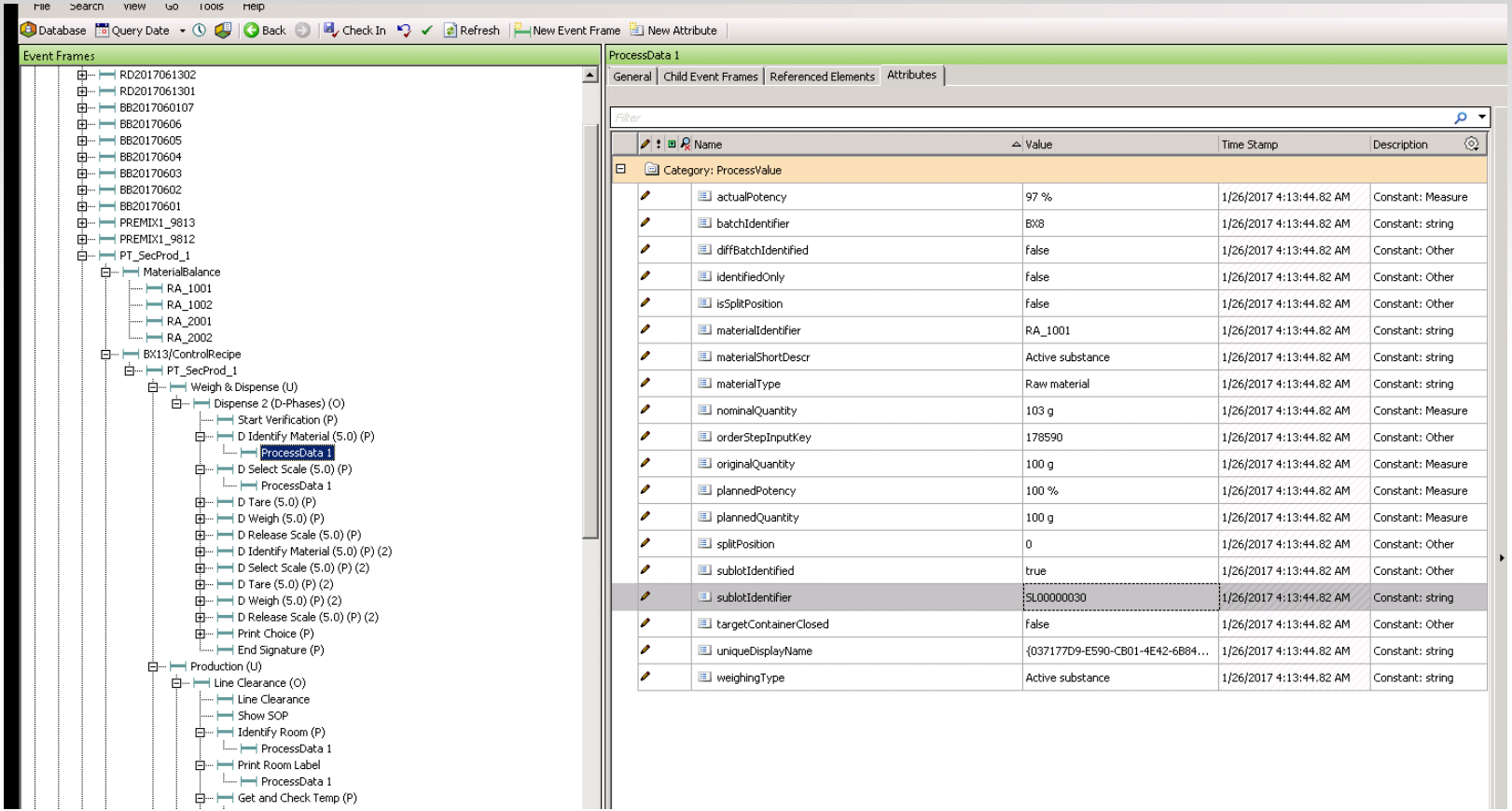
Equipment Model / PharmaSuite configuration



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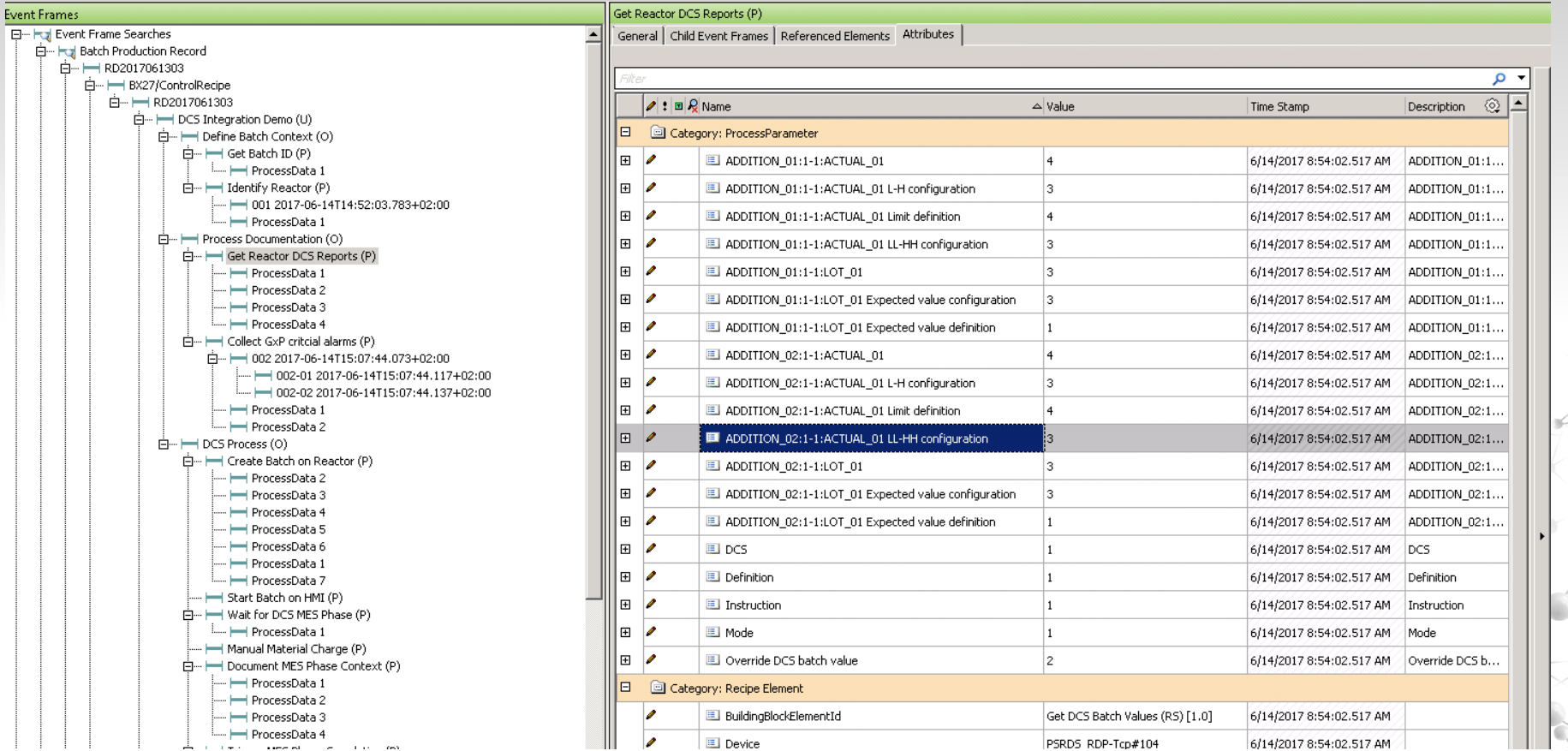
Equipment Model / PharmaSuite configuration



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DEMO

FactoryTalk Analytics DataView

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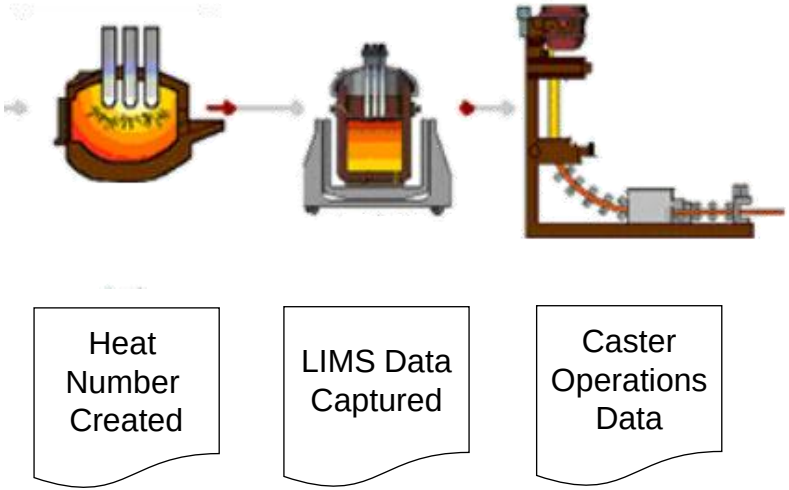
Analytics DataView Demo

- Example: Caster Operations
  - Find operational insights by analyzing data from disparate data sources



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