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## FactoryTalk VantagePoint:

Manage Cost, Quality,  
Production, Assets and  
Resources More Effectively

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# FactoryTalk VantagePoint: Agenda

1. Customer Challenges

2. Enterprise Manufacturing Intelligence (EMI)

3. Customer Applications

4. Q&A

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## FactoryTalk VantagePoint:

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Part 1:  
Customer Challenges



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# Customer Challenges: Manufacturing....

**Manufacturing\*** is the use of [machines](#), [tools](#) and labor to make things for use or sale. The term may refer to a range of human activity, from [handicraft](#) to [high tech](#), but is most commonly applied to [industrial](#) production in which [raw materials](#) are transformed into [finished goods](#) on a large scale.

*Wikipedia*



\* Including all forms of energy (oil and gas, power) and water management (municipalities)

# Customer Challenges: Manufacturing Imperatives

## Global Climate Change

- Energy saving
- Waste reduction
- Regulatory compliance

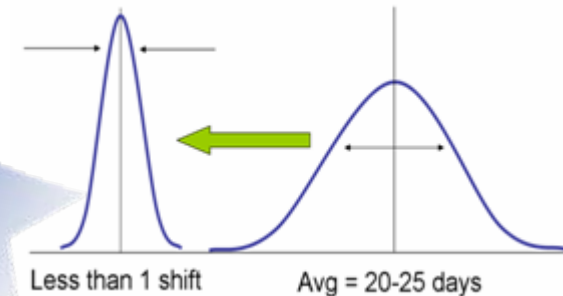


## Greater Agility

- Reduce product development and launch cycles
- Increase product variety

## Global Competition

- Cost reduction
- Increasing demand forecast error
- More dynamic supply networks



# Before we go any further...

## Questions to ask!

*Q. What data do you need to collect and present?*

*A. Well defined requirements will assist in selecting appropriate technology*

*Q. Why do you need to collect this data?*

*A. Identifies the business drivers*

*Q. Who is going to access this data & how does it need to be presented?*

*A. Identifies the 'customers' and reporting requirements*

*Q. What corrective actions will be taken using this data and what are the projected benefits of these actions?*

*A. Justifies cost and assists in identifying return-on-investment*

The manner in which information is accessed and presented is most important!

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Part 2:  
Introduction to Enterprise  
Manufacturing Intelligence



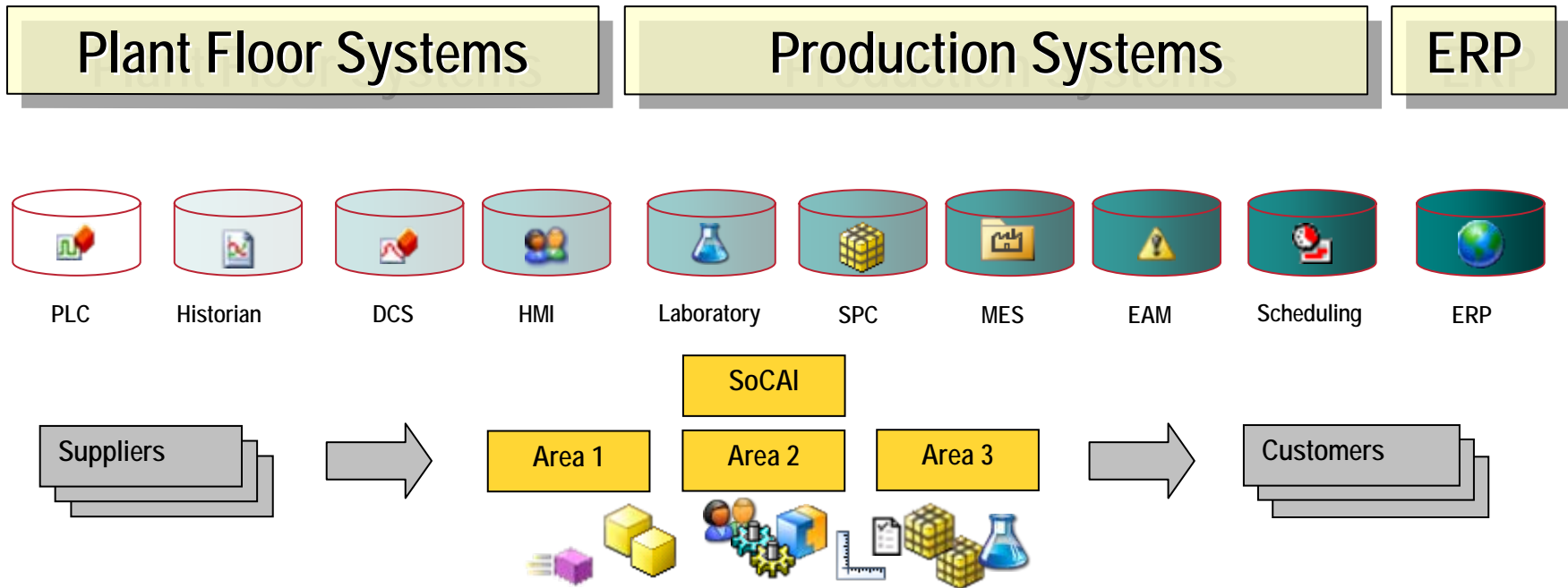
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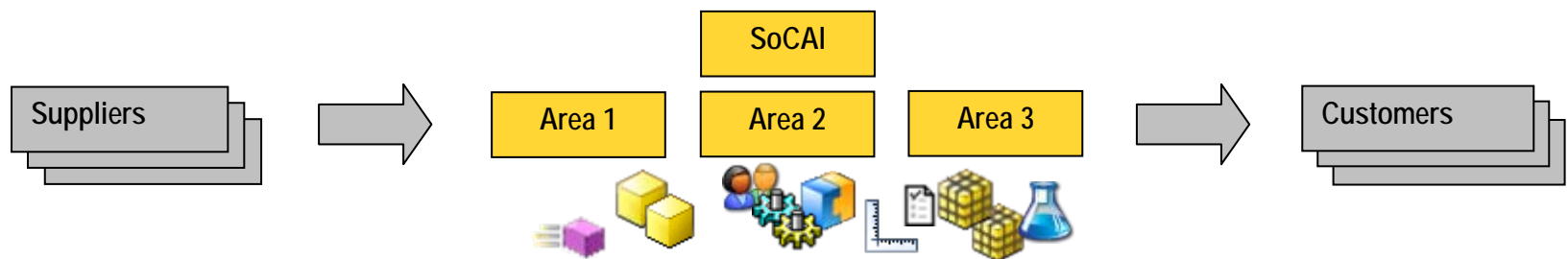
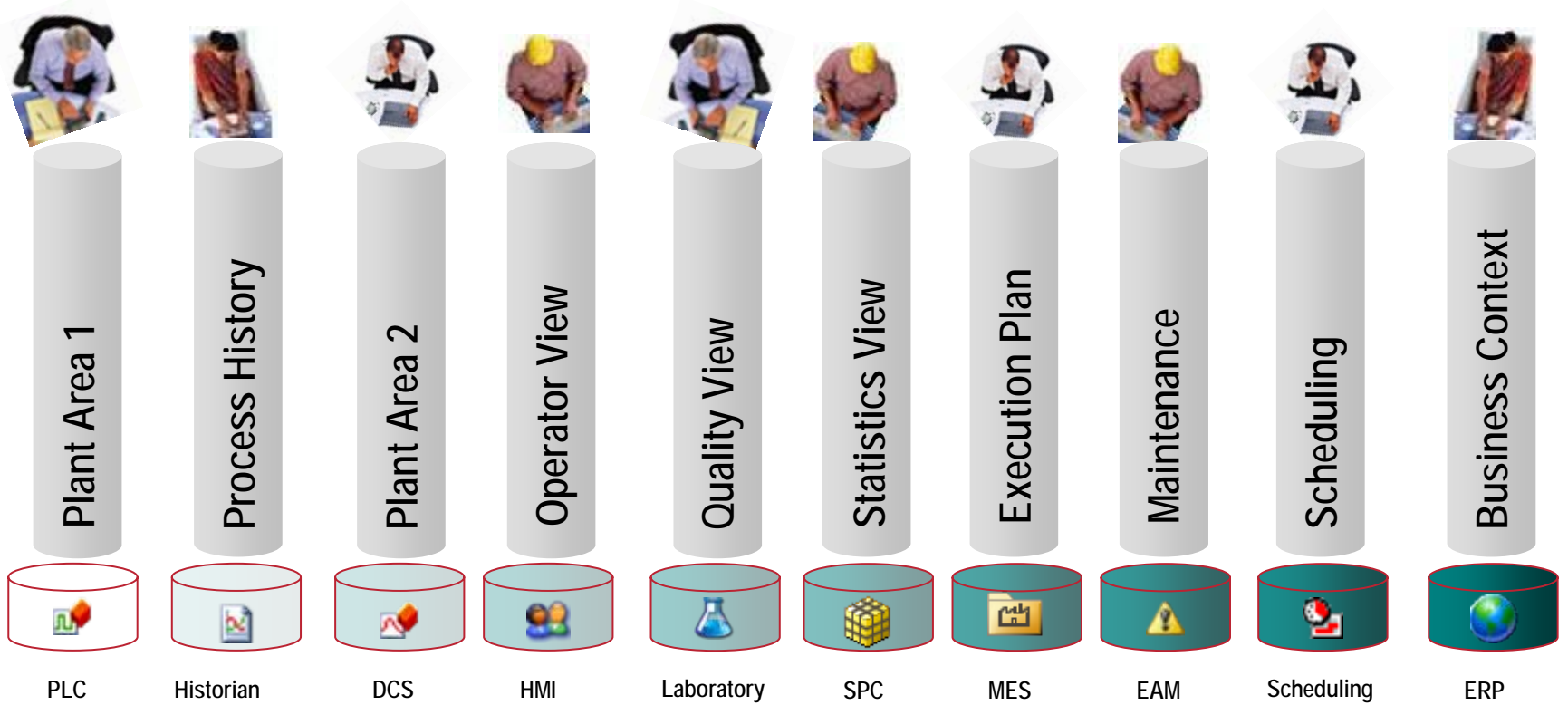
# Enterprise Manufacturing Intelligence (EMI): What FactoryTalk VantagePoint Does...

“FactoryTalk VantagePoint accesses information from disparate data sources, organizes it in a way that is meaningful to all levels in a company and provides tools for analysis and reporting of that data via the web to help people make good business decisions.”

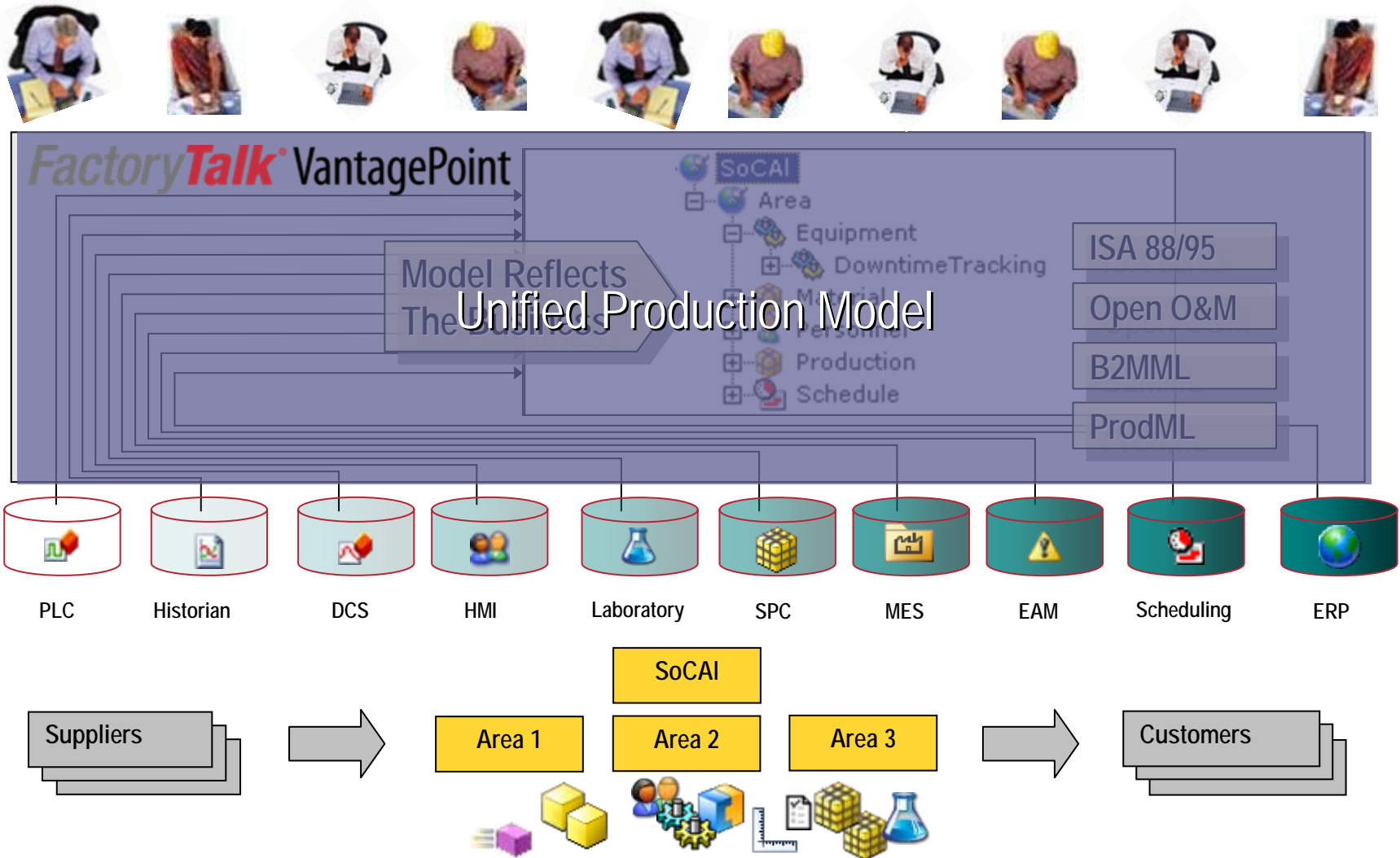
# Enterprise Manufacturing Intelligence (EMI): Manufacturing Data Sources



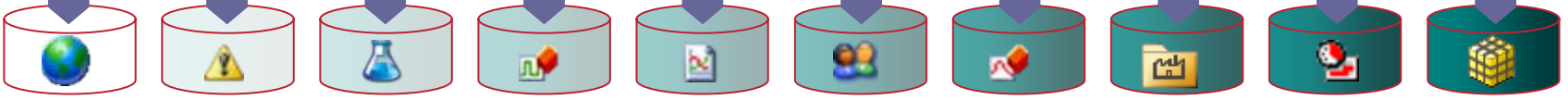
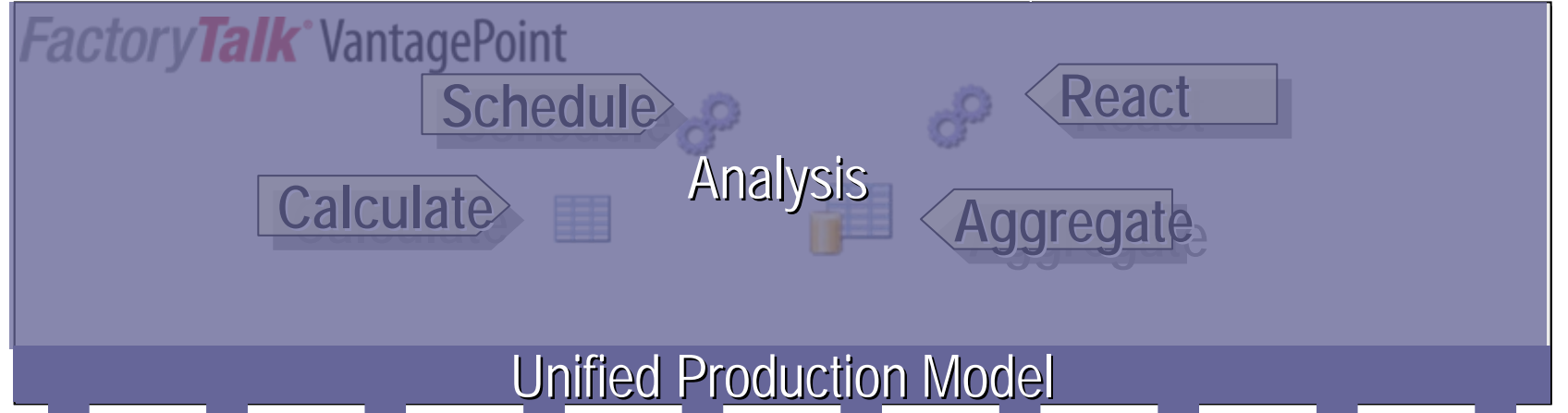
# Enterprise Manufacturing Intelligence (EMI): Silos of Information



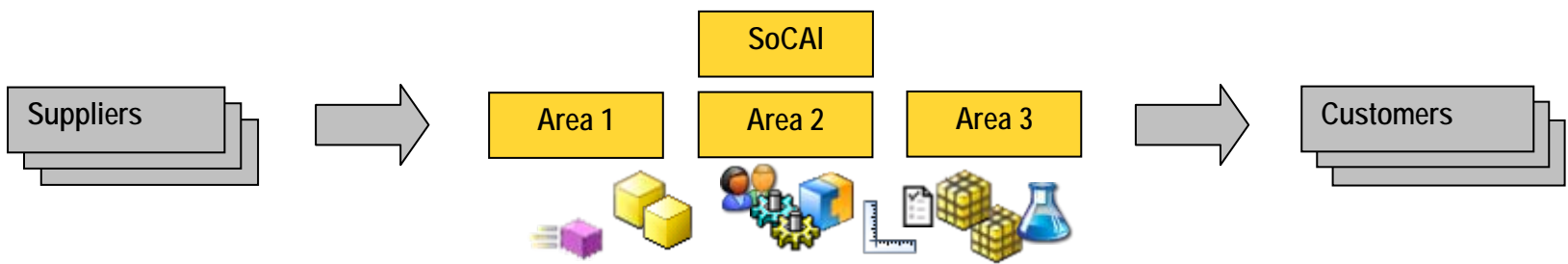
# Enterprise Manufacturing Intelligence (EMI): Unified Production Model



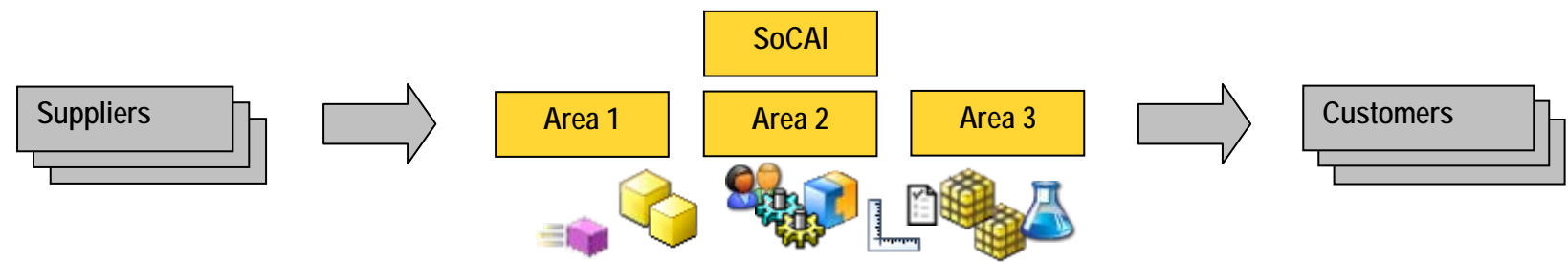
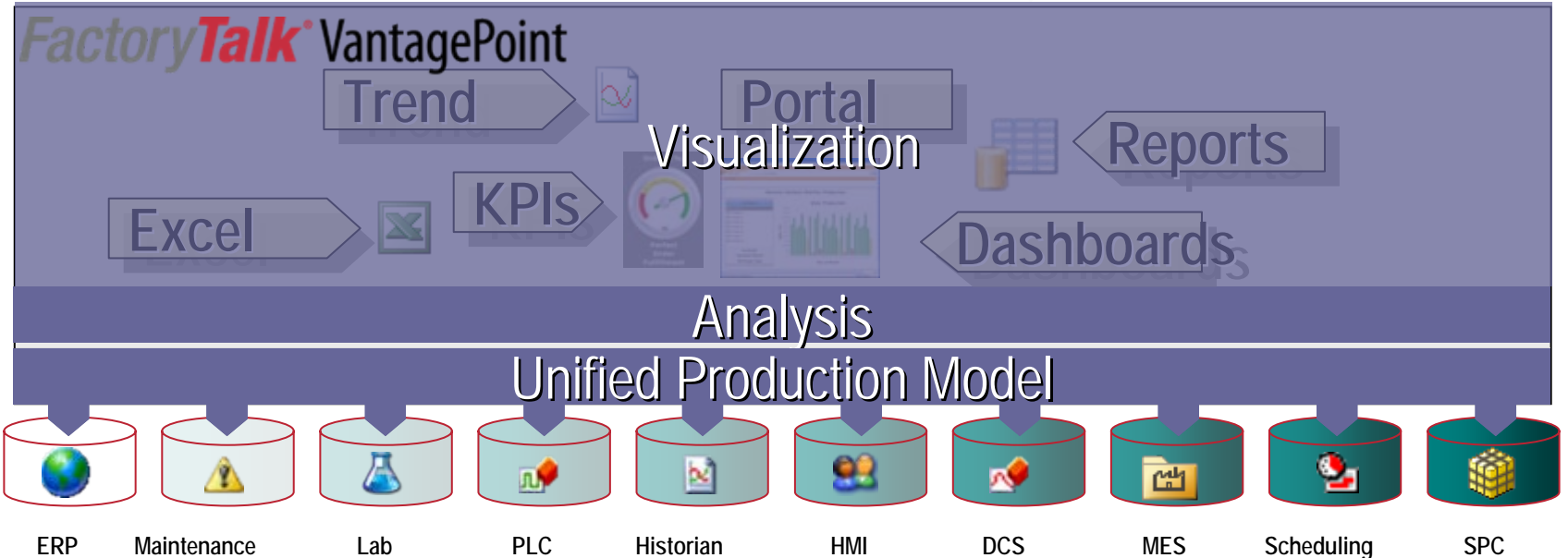
# Enterprise Manufacturing Intelligence (EMI): Analysis Services



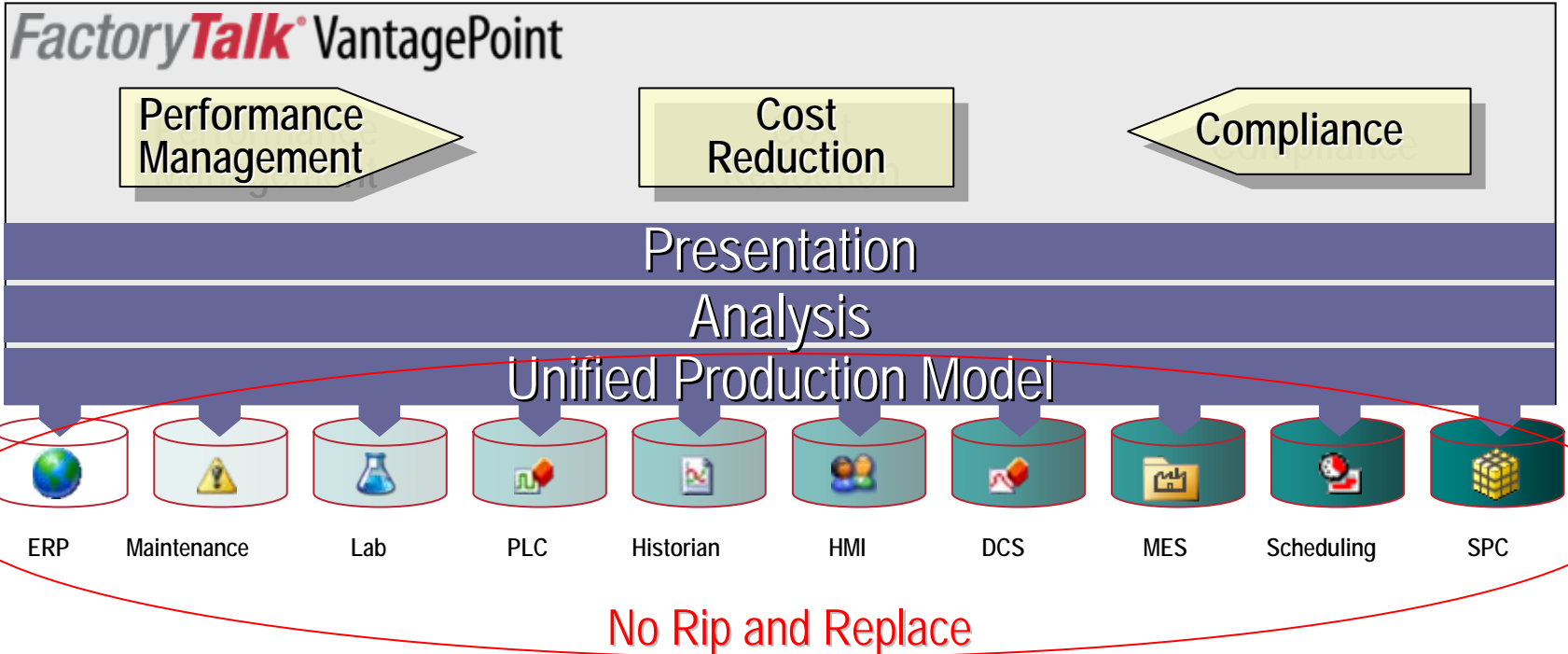
ERP    Maintenance    Lab    PLC    Historian    HMI    DCS    MES    Scheduling    SPC



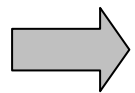
# Enterprise Manufacturing Intelligence (EMI): Presentation Services



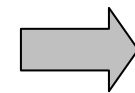
# Enterprise Manufacturing Intelligence (EMI): Addressing Imperatives with Existing Infrastructure



Suppliers



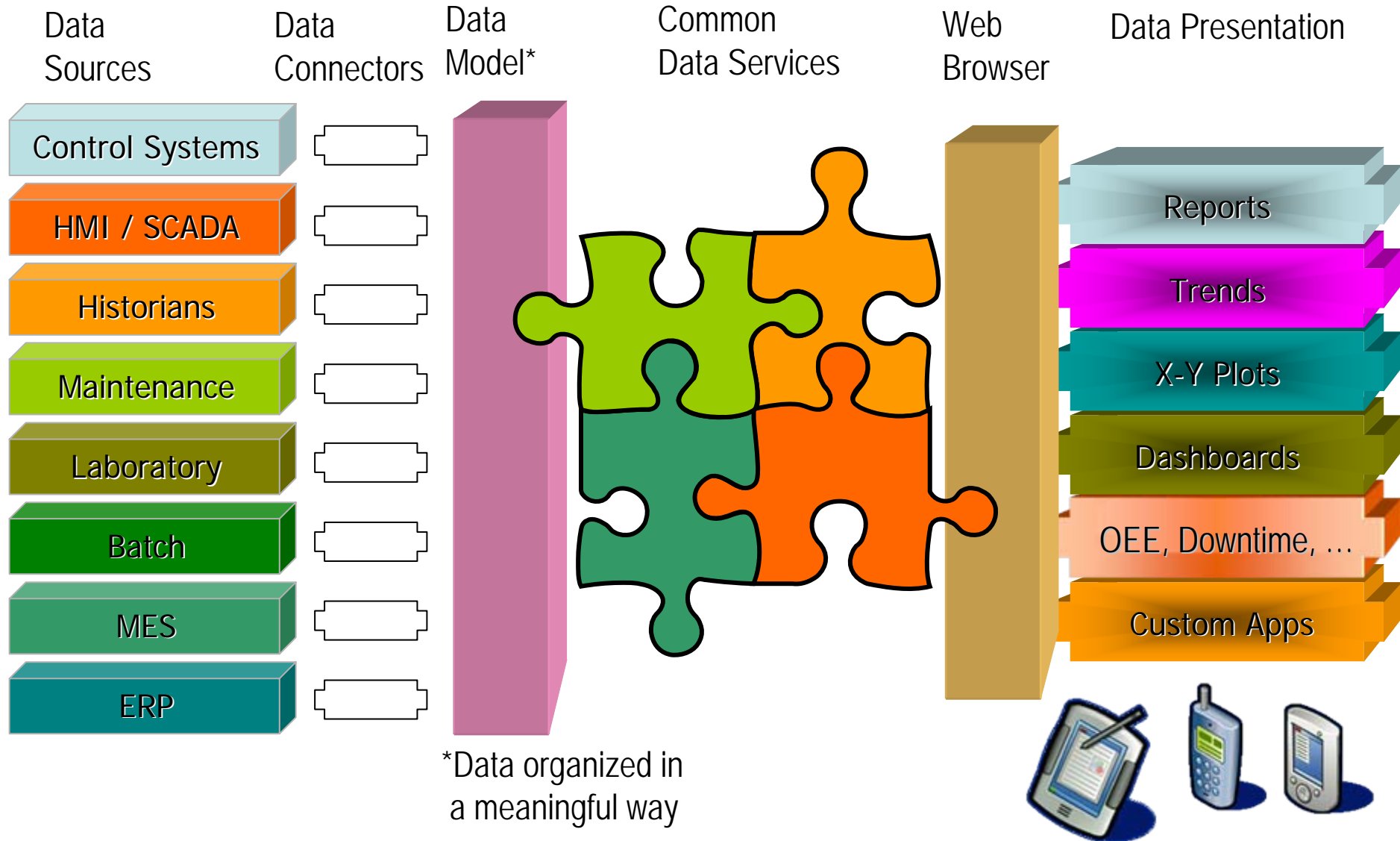
Area 1   Area 2   Area 3



Customers

# FactoryTalk VantagePoint Overview

## Architecture & Capabilities



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## FactoryTalk VantagePoint:

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Part 3:  
Demonstration &  
Customer Applications



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# Rockwell Software Info Mgmt. Capabilities:

## Ex. Automotive - *Serialization Reporting*

### Operations

- Assembles and tests discrete parts
- Parts are serialized
- Relevant data is captured during production and test

### Information Management Challenges

- Reporting needs are based on serial numbers - **not time**
- Easy access to testing information is critical for recalls
- Real-time reporting is important for identifying production/test trends
- Current reporting systems require technical know-how (SQL, etc.)

# Rockwell Software Info Mgmt. Capabilities:

## Ex. Life Science - *Accessing Disparate Data Sources*

### Research & Development

- Bench Equipment / Real-time Control Systems
- Human-Machine-Interface (HMI) Log Files
- LIMs Systems
- Historians
- Building Automation Systems

### Pilot Plants & Manufacturing

- Controllers
- Human-Machine-Interface (HMI) Log Files
- Batch Execution Engines
- Historians
- Quality Systems
- Business Systems
- Building Automation Systems

# Rockwell Software Info Mgmt. Capabilities: Ex. Water / Waste Water - *Compliance Reporting*

## Common Reporting Examples:

- (Water/WW) Flow Rate & Asset Utilization Summarization Reports – Daily, Monthly, Yearly of Flow rates by Station and runtimes of critical equipment.
- (Water) Monthly Operations Reports – Reports containing Turbidity and Chlorine information. Also contain, Temperatures, Flows, and Manual Samples.
- (Water) Residual Reports – Regulations require data capture at specified intervals (ex. 15 min) with storage for a minimum amount of time (ex. 3-5yrs)
- (WW/Industrial) Discharge Monitoring Report – Contents vary based on entity, lots of examples on the Internet

# Rockwell Software Info Mgmt. Capabilities:

## Ex. Diversified User - *Sustainability*

### Current Objectives:

- Collect and report key energy metrics which include steam and natural gas consumption for the purposes of reducing energy costs and supporting sustainable manufacturing
- Collect, calculate, and report BTUs per Unit (lb/kg) of finished product to benchmark and optimize energy utilization

### Comments:

- *"You can't improve what you don't measure"*
- If you are collecting this data today, is it easily accessible to your *"information workers"*?

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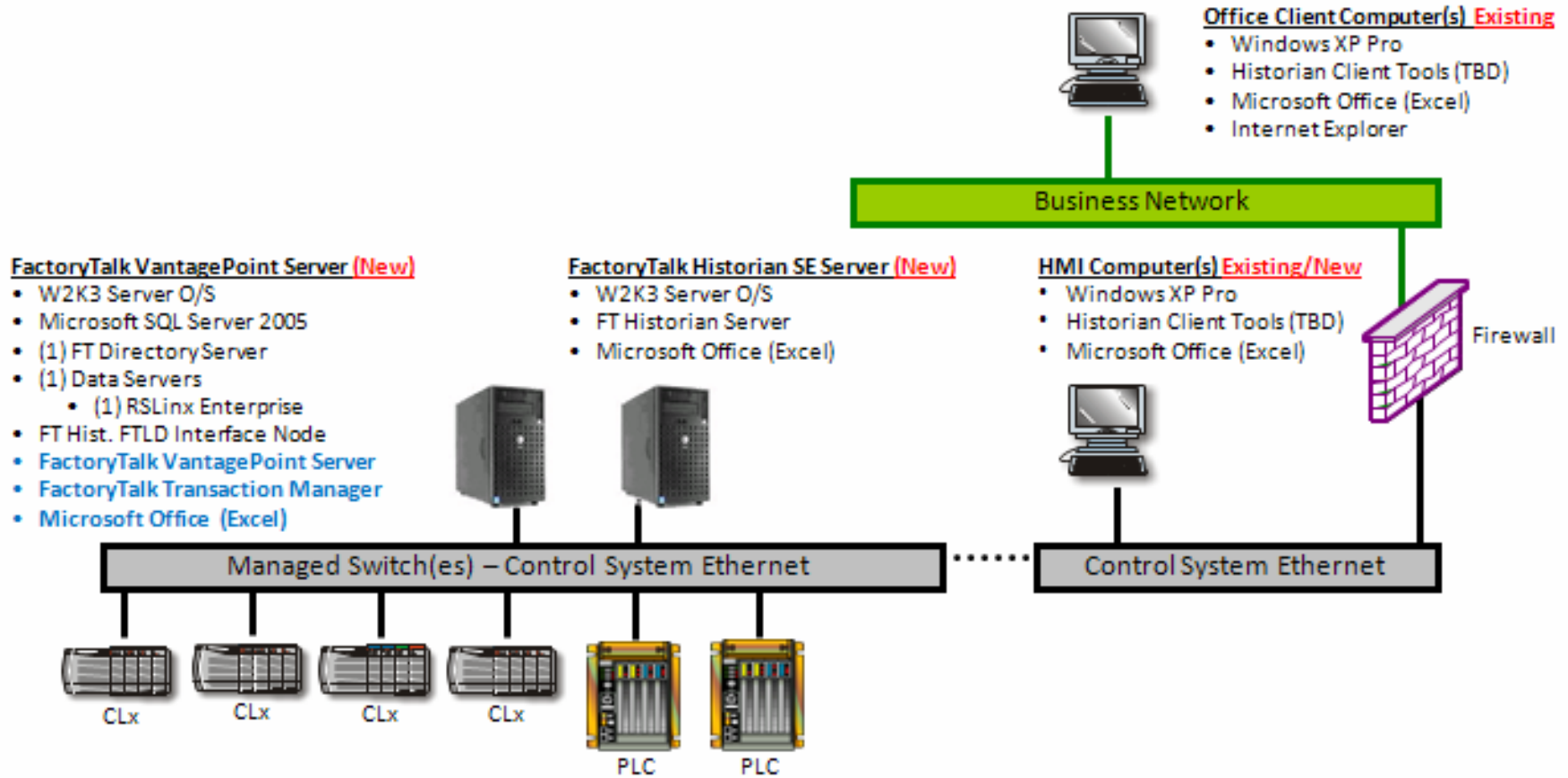
Section 4:  
Summary, Question & Answer



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# Rockwell Software Info Mgmt. Capabilities: Conceptual Architecture



## Comments:

- Rockwell Software has lots of different technology, requirements will identify the right pieces!
- Our licensing models are scalable – allowing you to start with a limited scope and grow over time.

# Enterprise Manufacturing Intelligence (EMI): FactoryTalk VantagePoint Versions

FactoryTalk VantagePoint talks to:

- Real-time data sources
- Historian data sources

FactoryTalk VantagePoint EMI talks to:

- Real-time data sources
- Historian data sources
- Database data sources & Business Systems

Other differences exist but these are the major differentiators...

Check out the Rockwell Automation Discover Portal for more information:

[http://discover.rockwellautomation.com/IS\\_EN\\_Intelligence\\_Manufacturing\\_Intelligence.aspx](http://discover.rockwellautomation.com/IS_EN_Intelligence_Manufacturing_Intelligence.aspx)

# Enterprise Manufacturing Intelligence (EMI): Summary & Closing Thoughts

1. The ability to connect disparate data sources such as
  - Relational Database Management Systems (Microsoft SQL Server, Oracle, etc.)
  - Process Historians (Time-series data)
  - Real-time Control Systems (Programmable Logic Controllers and Distributed Control Systems)
2. Modeling to use terms recognized by multiple stakeholders (non technical)
  - Abstract the underlying data sources
  - Maintain integrity of reports if underlying systems were to be changed (ex. replaced due to forced obsolescence)
3. Reporting using easy-to-use/intuitive interfaces that make content accessible via web browser
  - Excel for building reports
  - Trend and XY Plotter for trending time-series data
  - Dashboard builder for displaying KPIs
  - Extensible platform for building custom applications

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Thank you for  
participating!

Questions?



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