

# Codelco Digital Conference 2010

## Using Technology to Impact Mining Management: Measuring Plant Business Performance

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inven<sup>s</sup>ys  
Operations Management

# Agenda

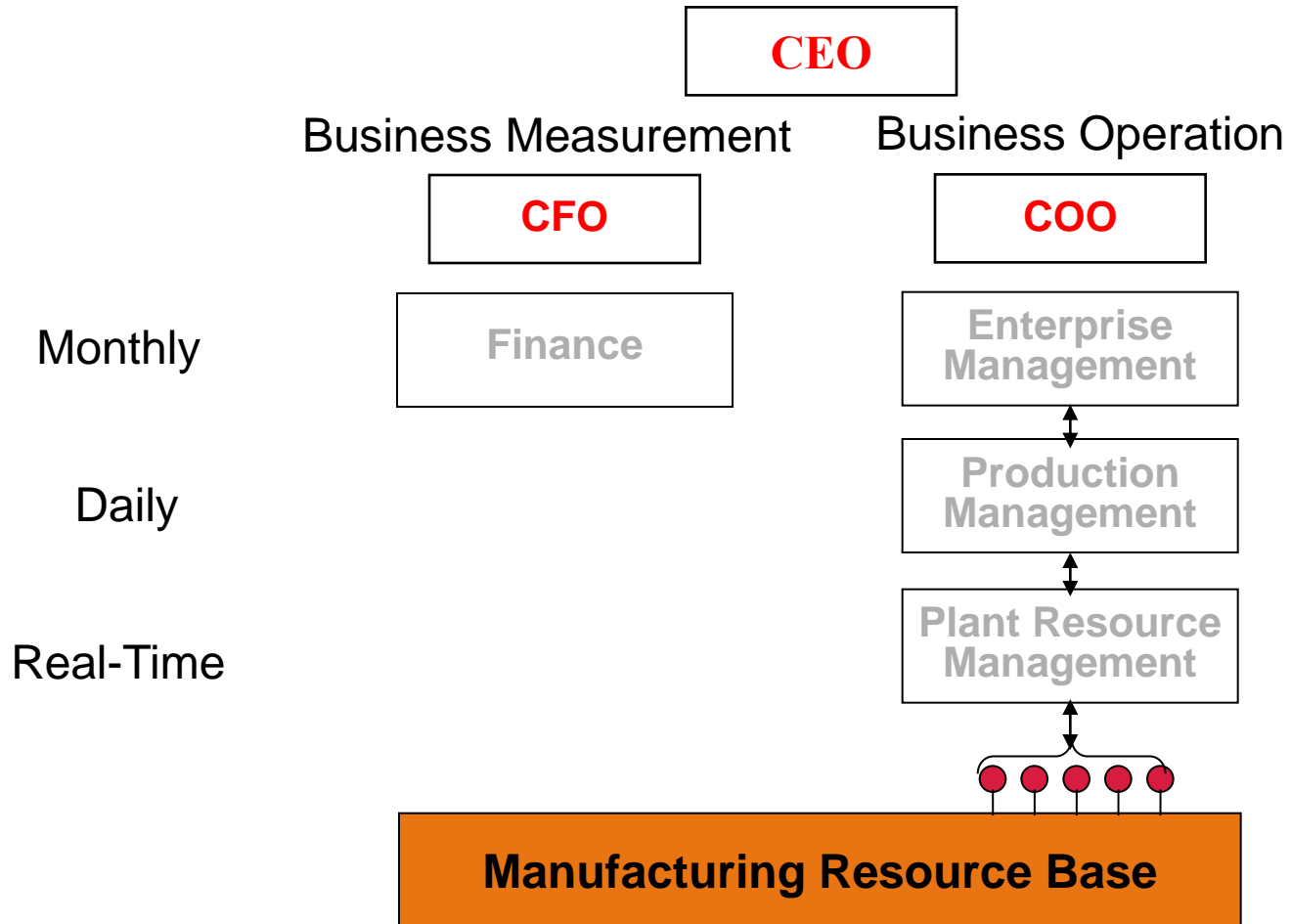
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1. Introduction
2. One of challenges
3. Strategic decomposition
4. Visualization
5. Case study

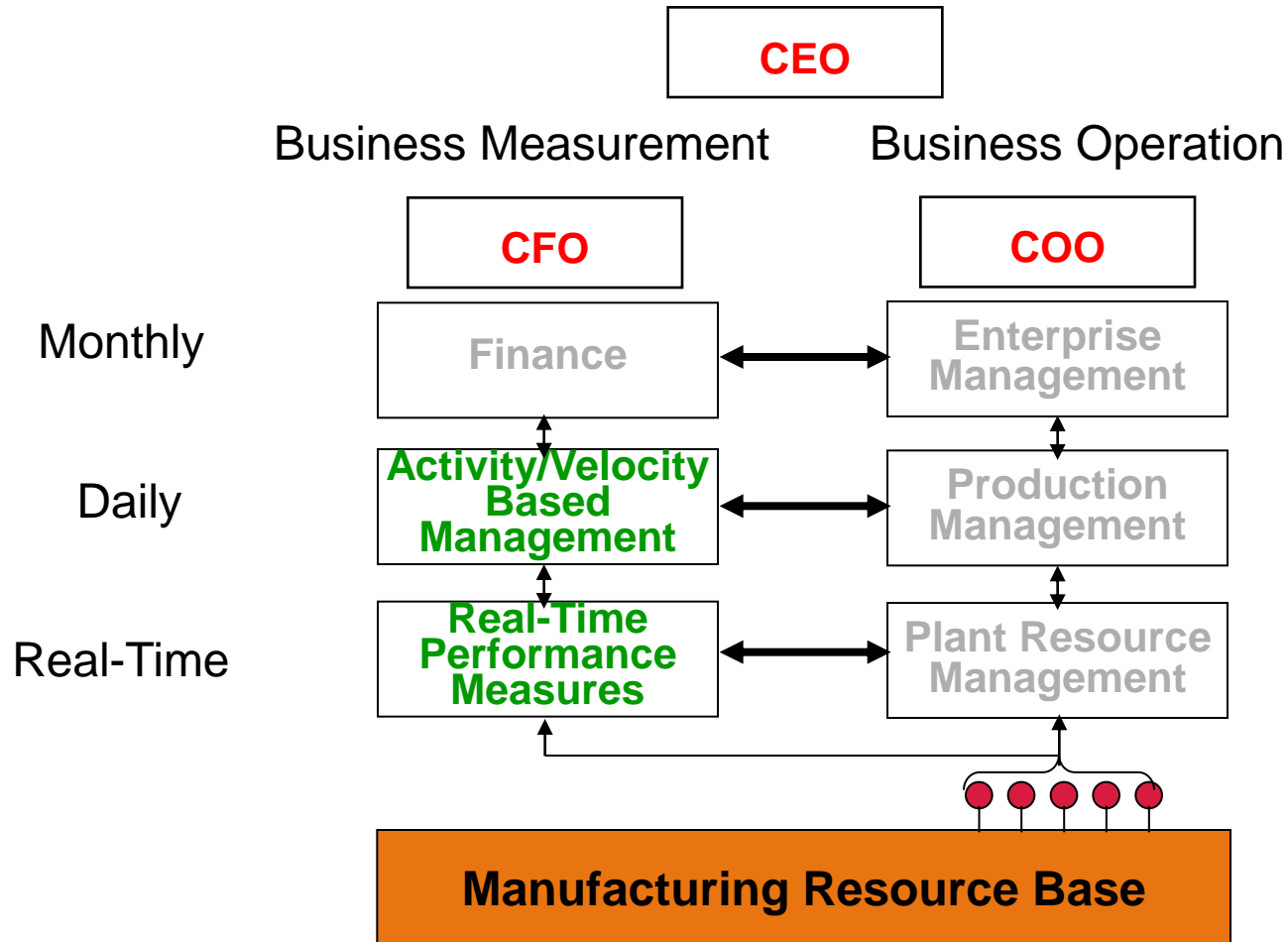
# One of Challenges

- Lack of Business Information to drive better decisions on the plant floor
  - Strategic
  - Real-time
  - Financial basis
  - Process unit basis
  - Integration with business systems

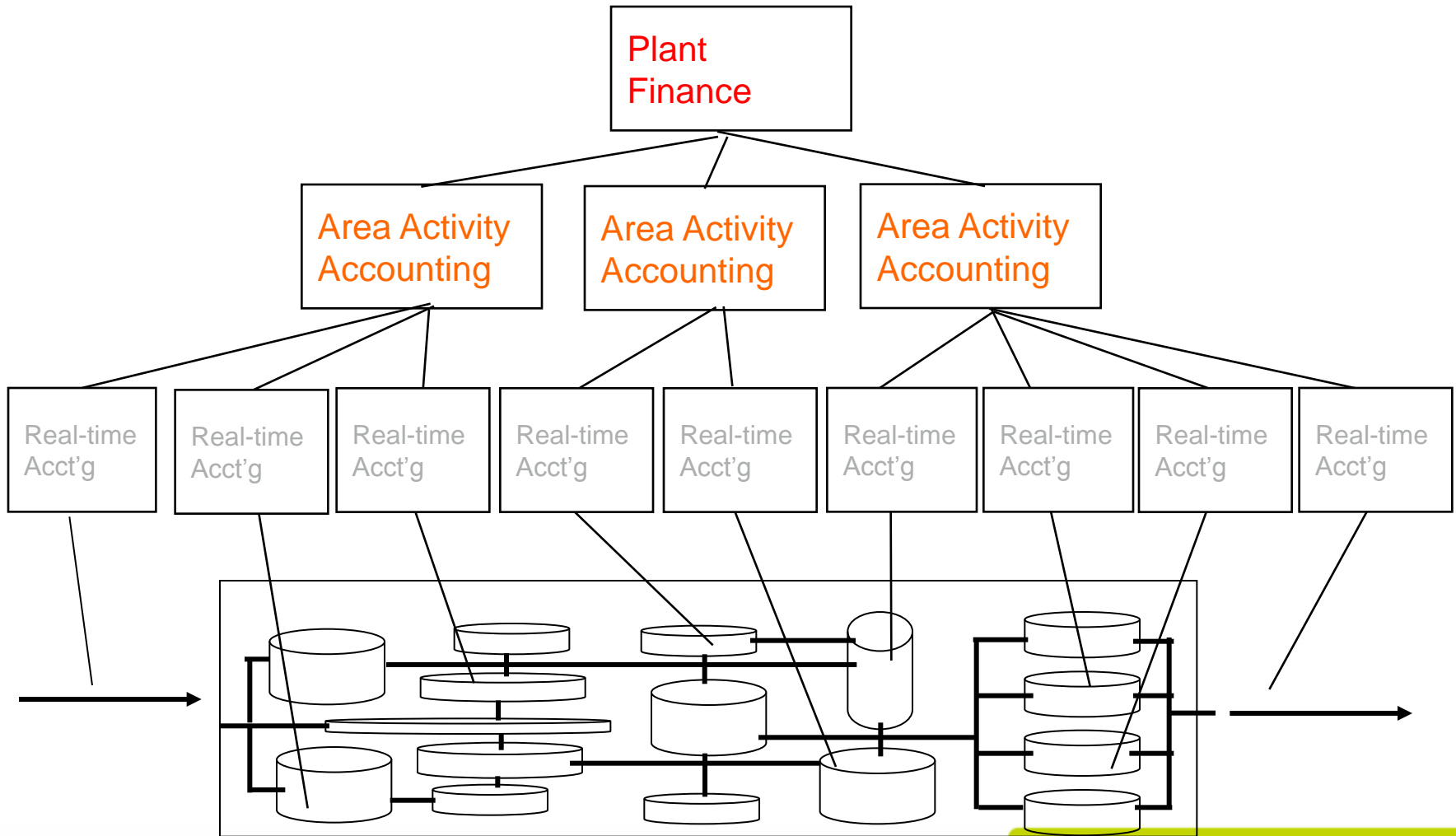
# Financial Perspective



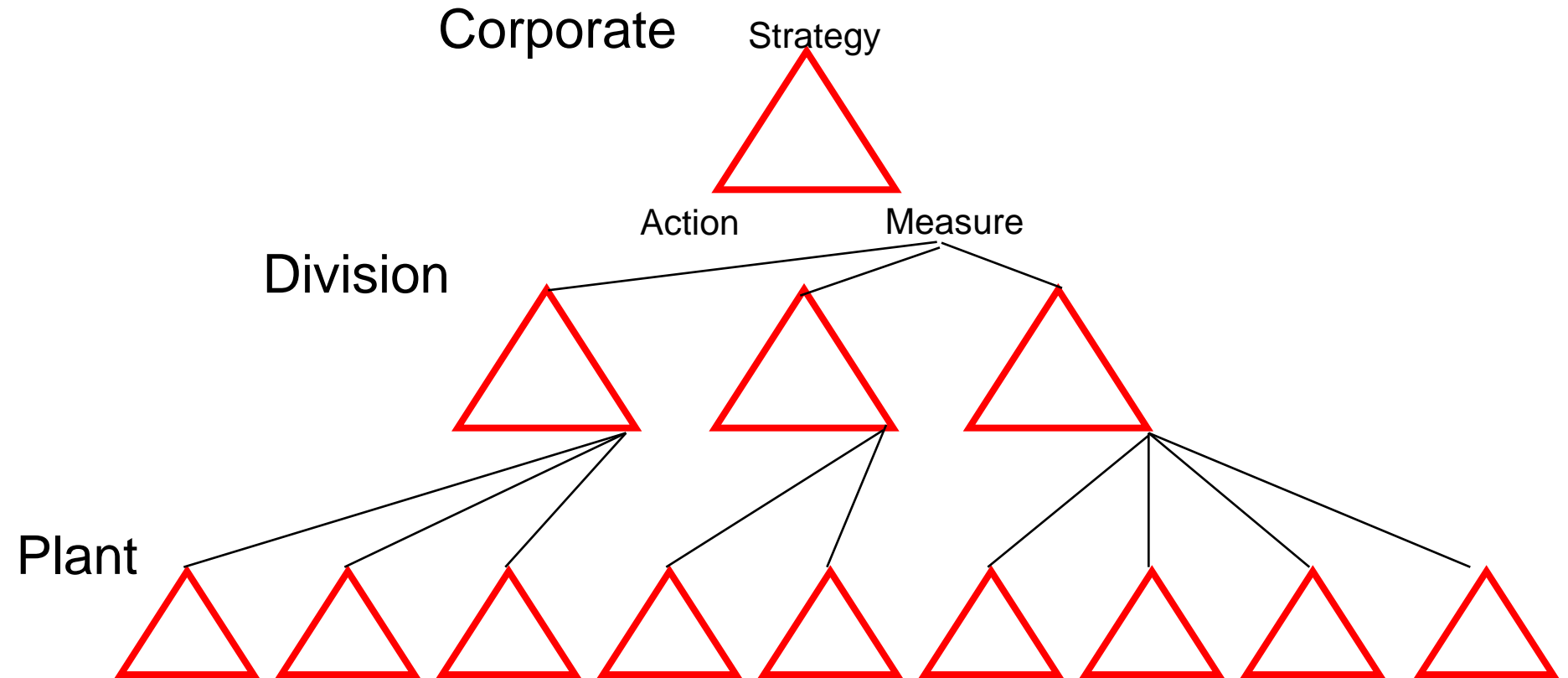
# Performance Management



# Accounting Decomposition



# Strategy Decomposition



# Performance visualization

Real-time  
EXECUTIVE  
performance portal

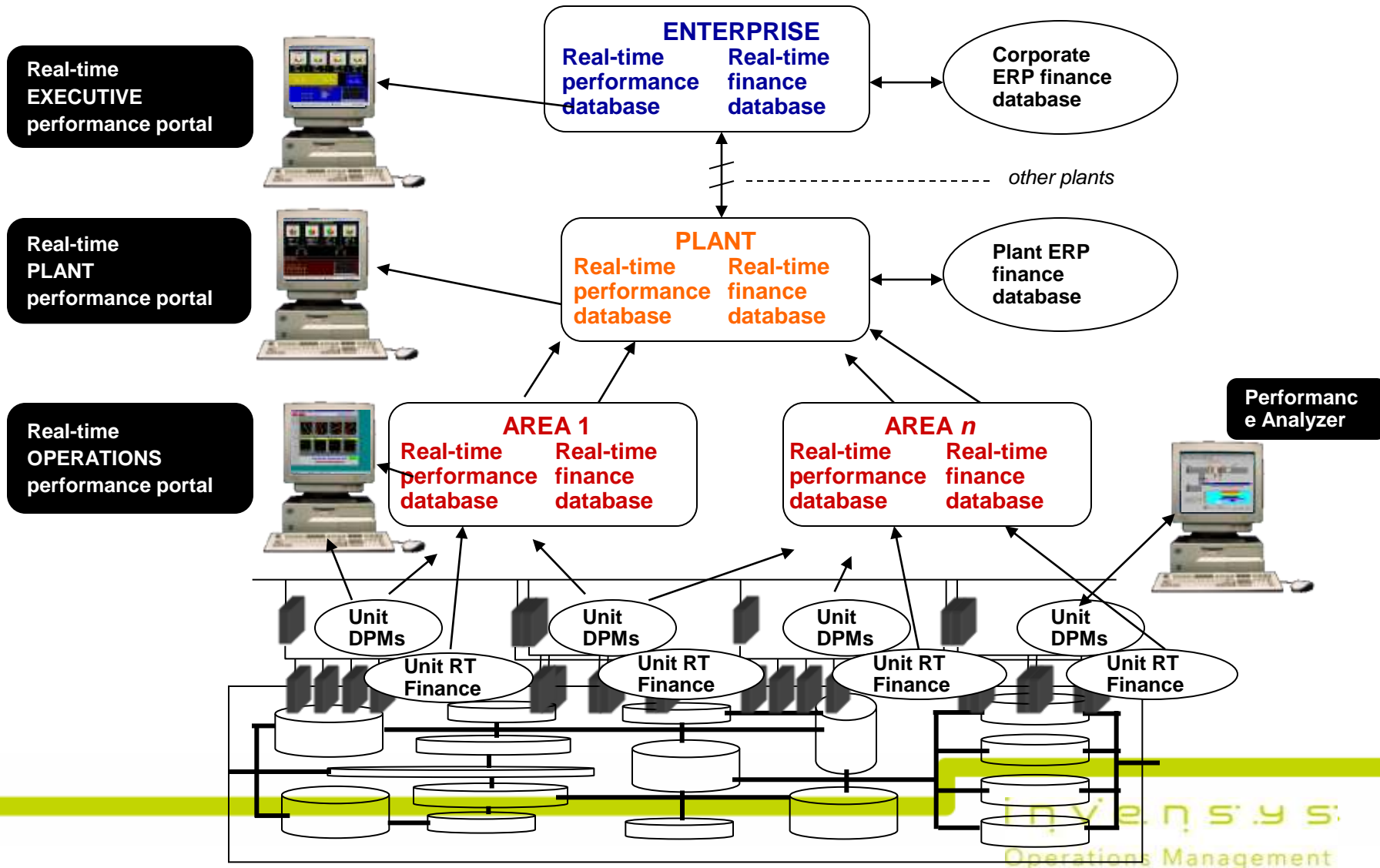
Real-time  
PLANT  
performance portal

Real-time  
OPERATIONS  
performance portal

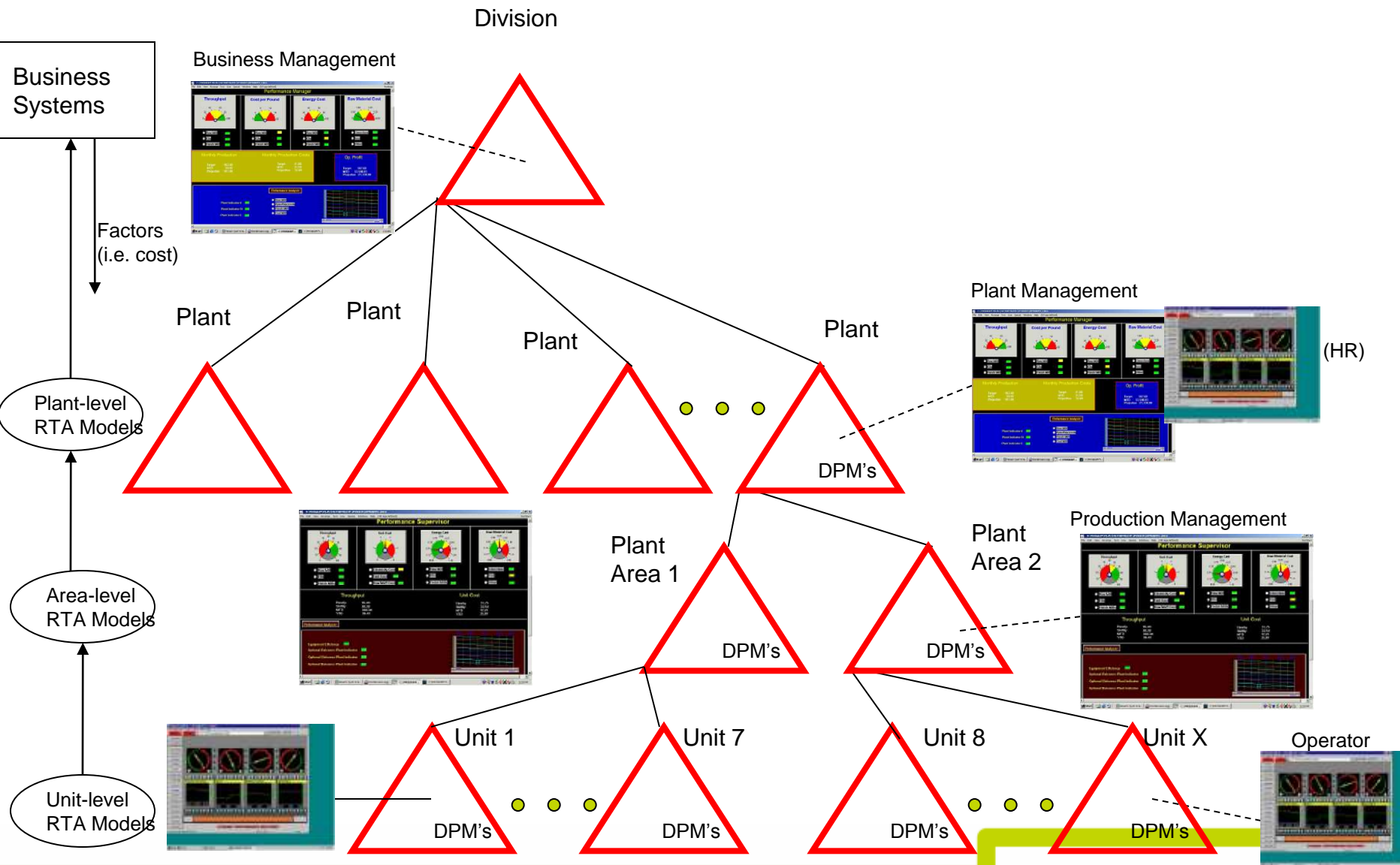




# Dynamic Performance Measurement Using Typical Automation Infrastructure



# Dynamic Performance Measurement



# Case Study

# Dynamic Performance Measurement

Sasol Infrachem

Business Management



Business Systems

Factors  
(i.e. cost)

Rectisol

Plant-level  
RTA Models

Area-level  
RTA Models

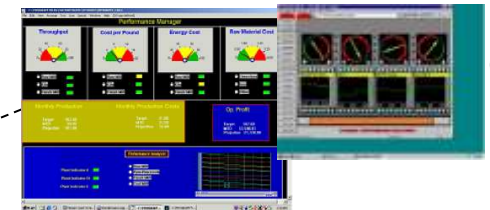
Unit-level  
RTA Models

Water  
And  
Waste

ATR

Steam  
Generation

Plant Management



(HR)

DPM's



Steam  
Station 1

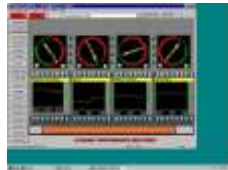
DPM's

DPM's

Production Management



Steam  
Station 2



Boiler 1

Boiler 7

Boiler 8

Boiler 17

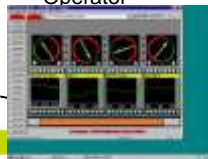
DPM's

DPM's

DPM's

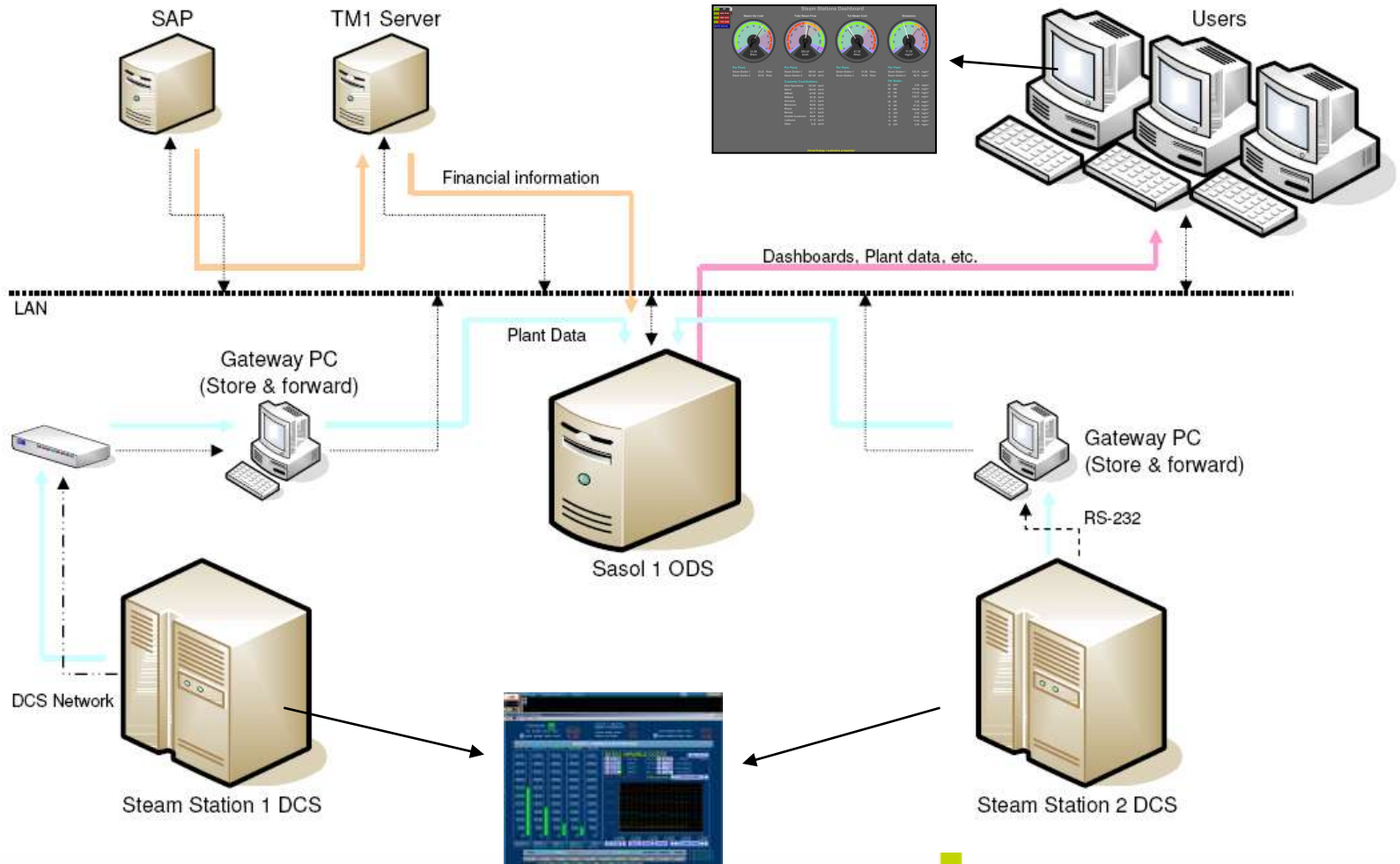
DPM's

Operator

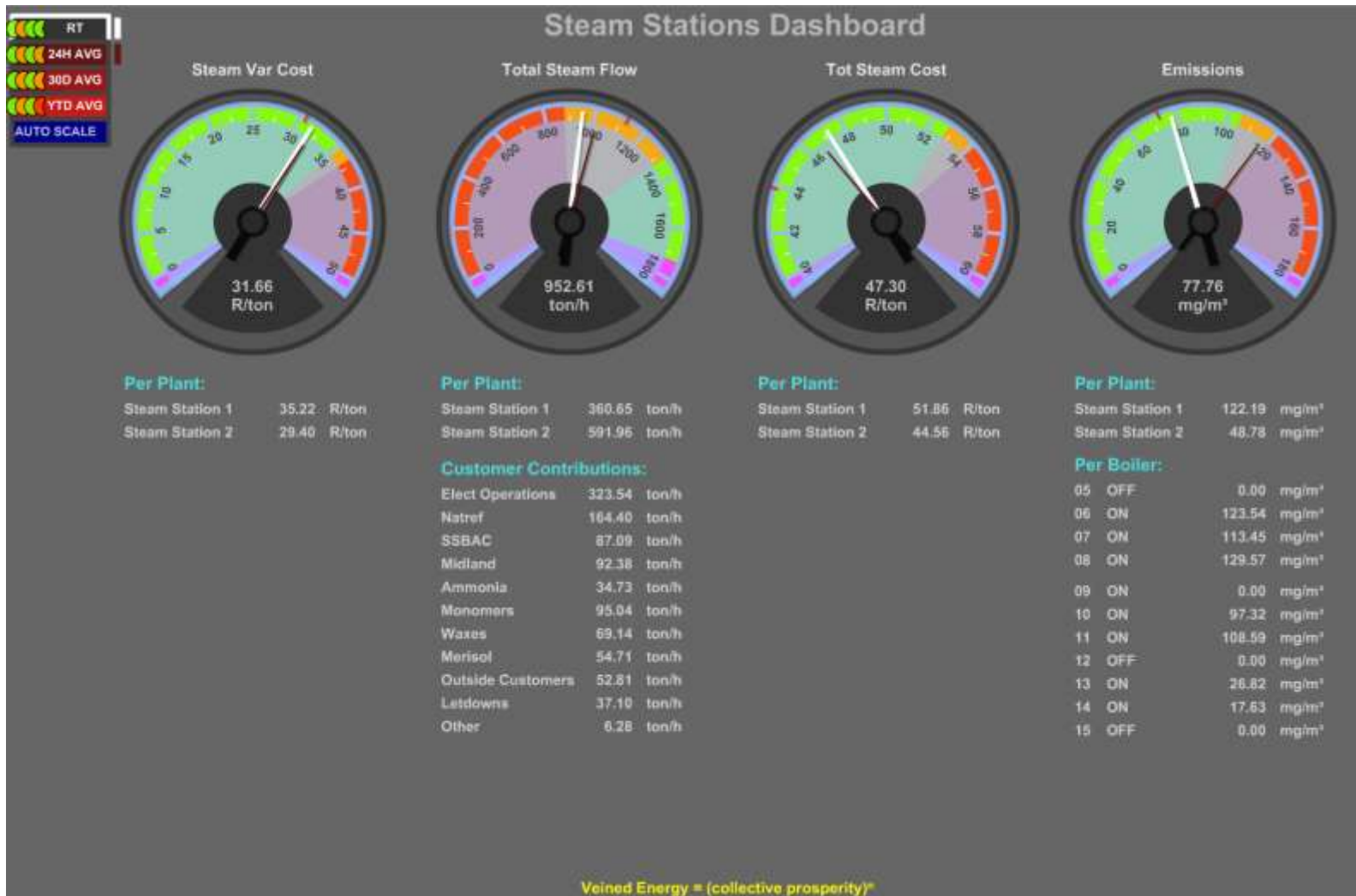


# DPM Solution for Sasol Infrachem

## DPM Information Flow (physical)

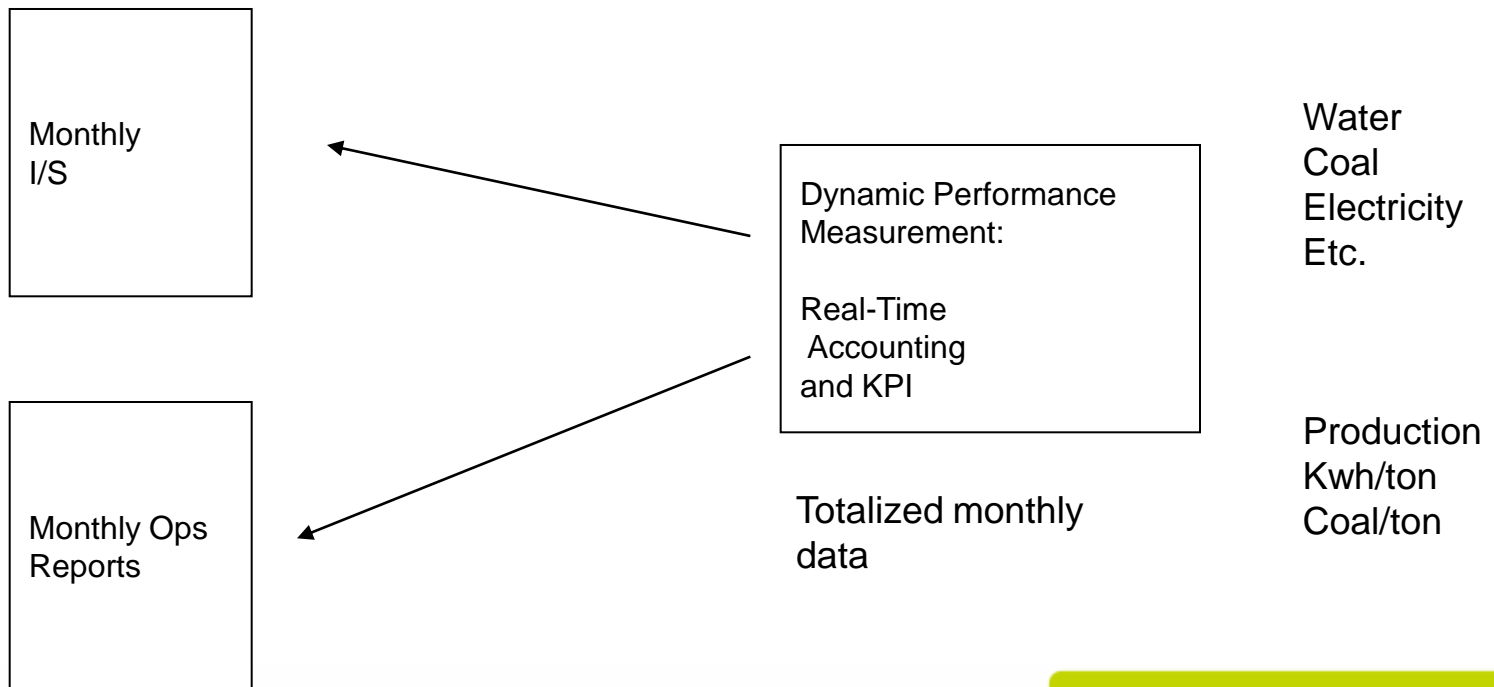


# DPM Solution for Sasol Infrachem

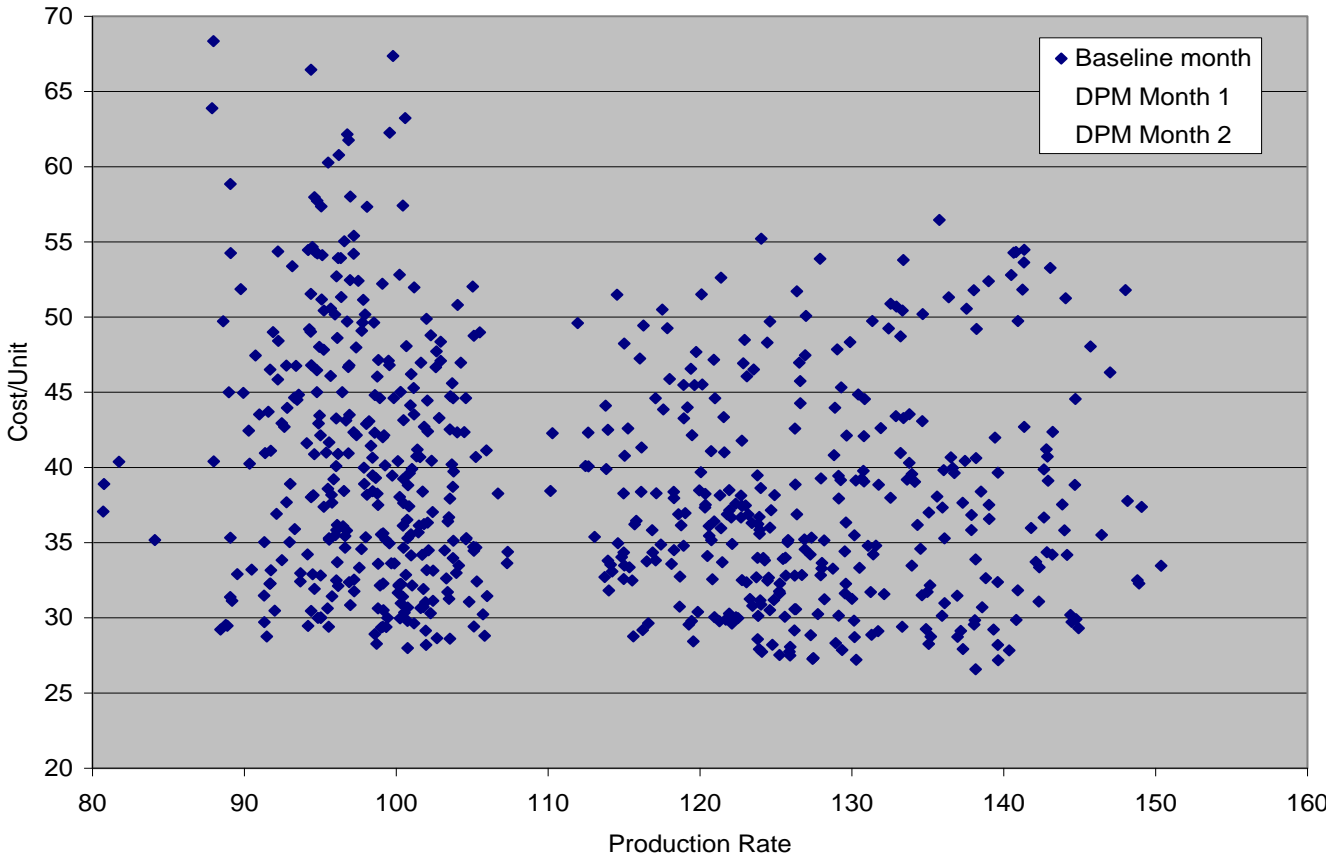


# Validation

- Variable Costs
- Operational Performance Metrics

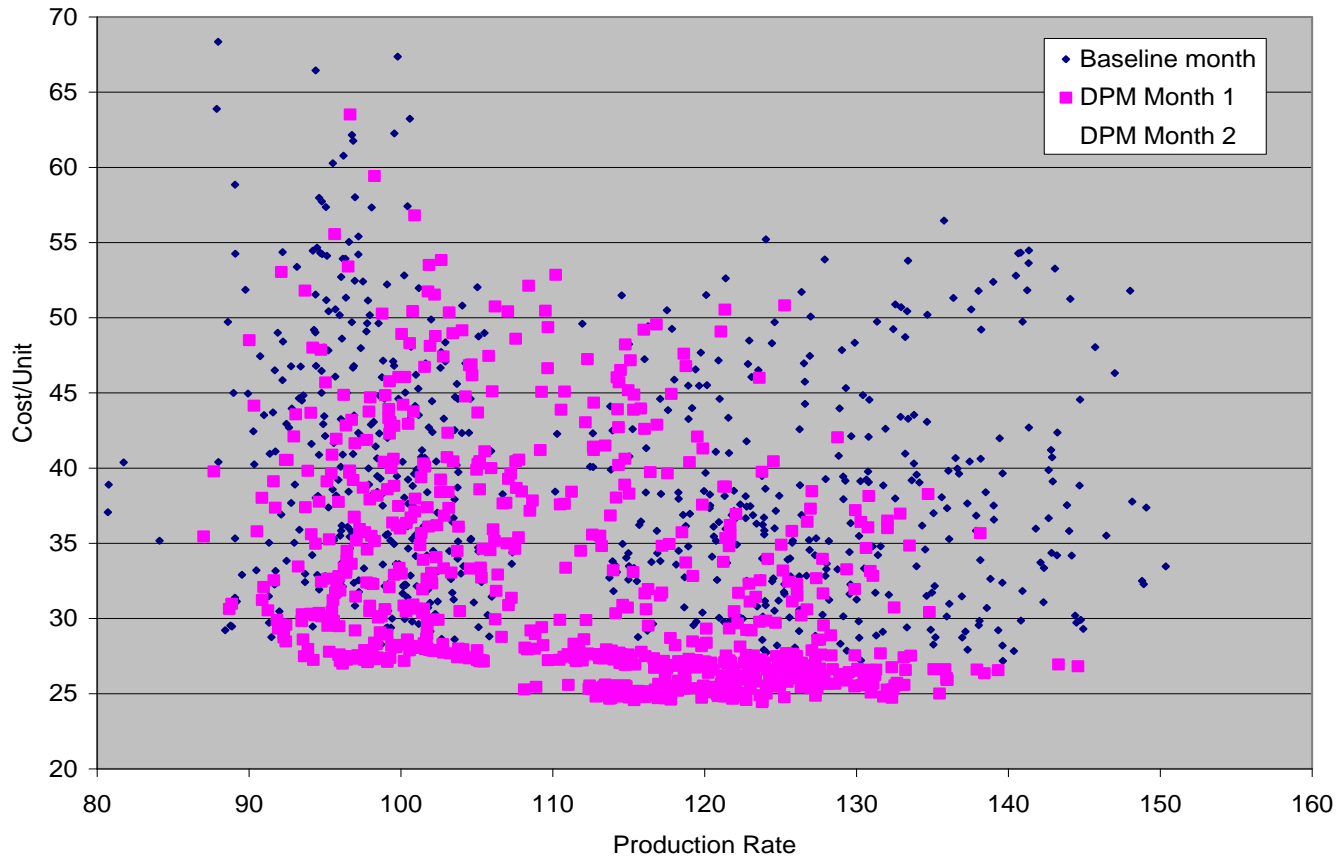


# Results (Baseline)

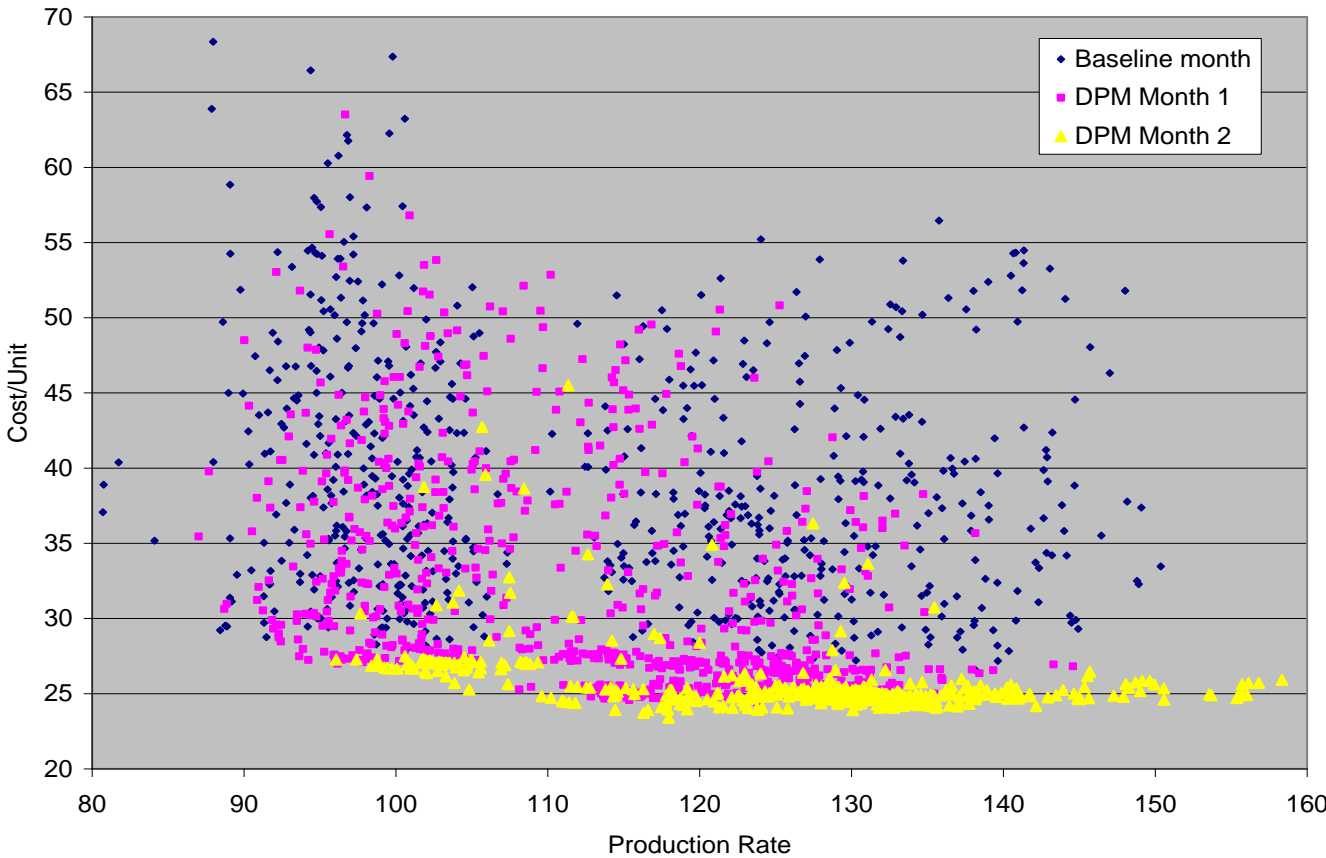




# Results 1<sup>st</sup> month



# Results 2<sup>nd</sup> month



# Challenges

- Change Management
- Dealing with and bringing together silos
- Automation and IT integration

# Value Expectations

- 4 to 5 % variable cost reduction
- Better alignment within operations to business
- Better coordination and interaction between functions
- Improved analytics with additional business information

Thank You!