

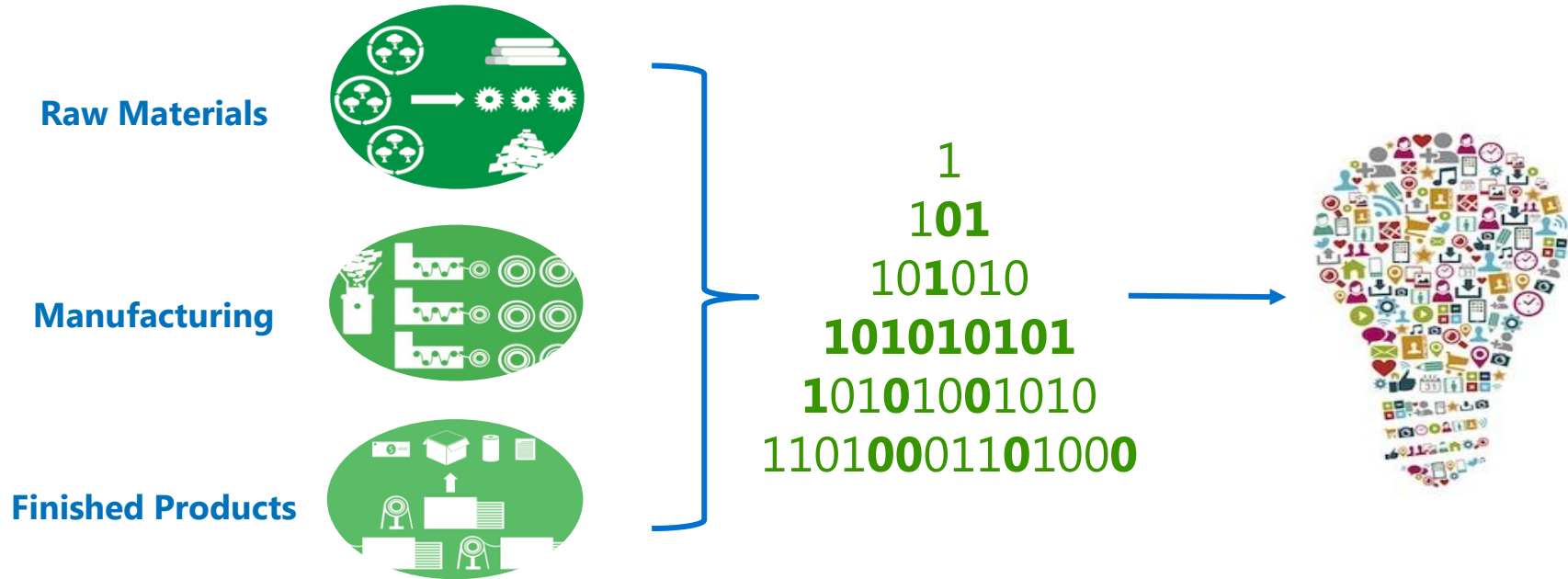
# Strategic Technologies for Competitive Advantage

Presented by **Leïla Chaouki-Juneau**

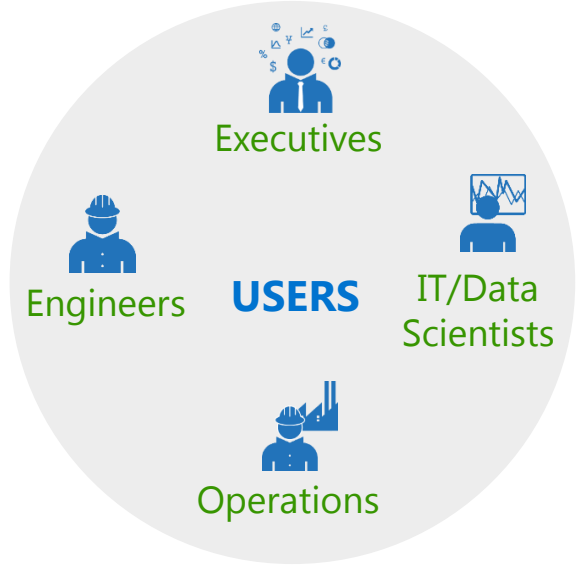


# Agenda

1. Why it is important to transform data into intelligence
2. How the modern PI System can address business challenges:
  - Process Productivity
  - Asset Health
  - Quality Control
  - Energy & Water Cost

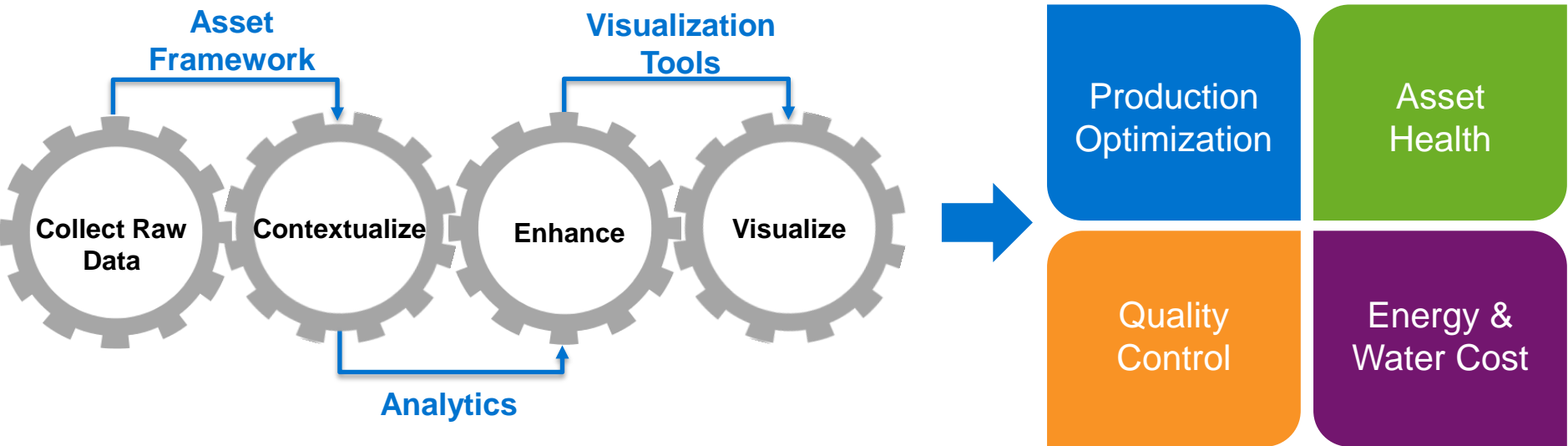


**Transform Data into Information and Intelligence**



**Faster**  
**Decision-Ready**  
**Data**







# Production Optimization

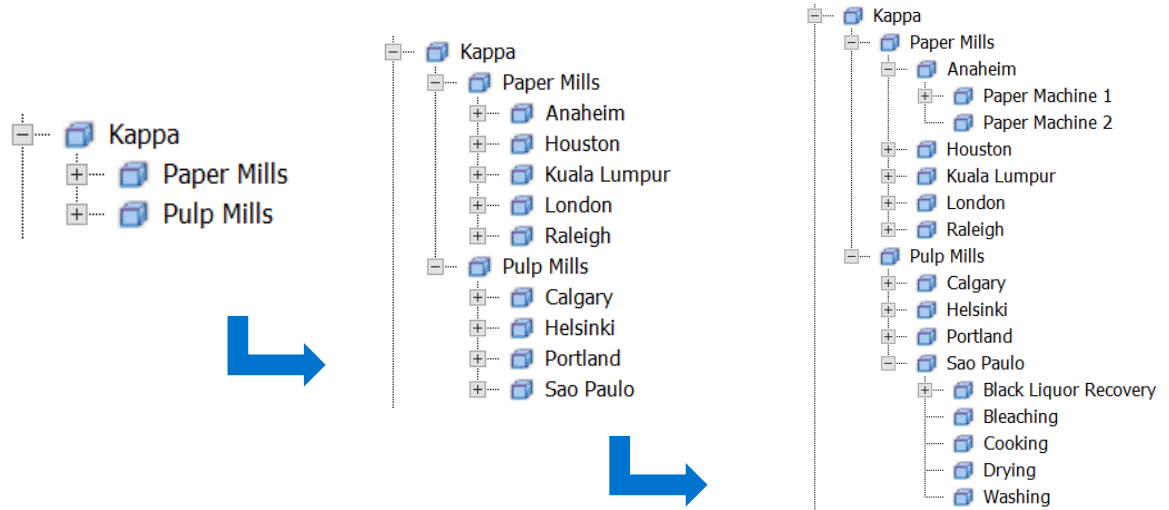
## Challenges

- ❌ Lack of information:  
Data silos and lack of integration through the value chain
- ❌ Small profit margins
- ❌ Loss of knowledge

What does it REALLY cost me to make a ton of pulp/paper?

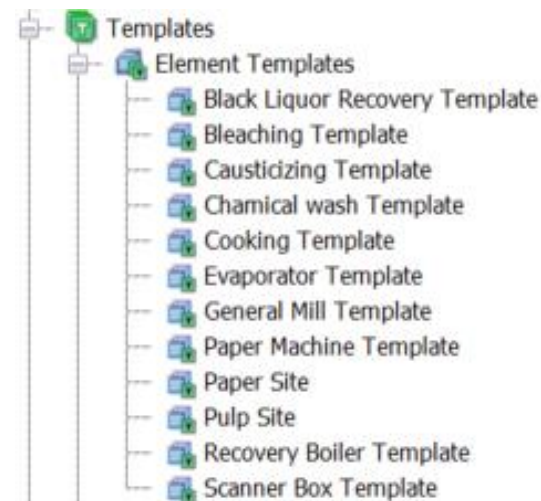
## Solutions

### PI Asset Framework organizes context and relationships



## Templates enable you to create Smart Objects for rapid roll-out and standardization

- **Faster** deployment
  - Standardize attributes and KPIs
- **Facilitate** asset management
  - Centrally push updates to all assets
- **Reuse** visualization screens
  - See consistent displays for similar assets



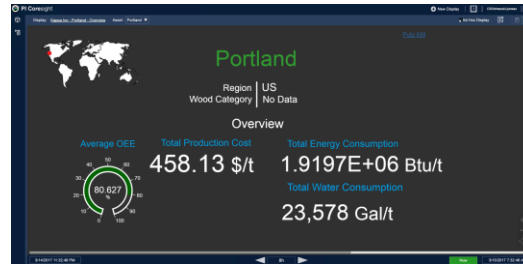


# One version of the truth, different points of view

## Operations Overview



## Mill Overview



## Enterprise Overview





# Kappa Inc. Dashboards





# Asset Health

# Challenges

- ✘ Asset intensive industry
- ✘ Aging assets
- ✘ Equipment not easy to replace
- ✘ Lack of insight

# Solutions

## Asset analytics turns data into KPIs:

- Overall Efficiency
- Equipment Availability

Paper Machine 1

General Child Elements Attributes Ports Analyses Notification Rules Version

Name: Availability Yesterday

Description:

Categories: Run2

Analysis Type:  Expression  Rollup  Event Frame Generat

Name	Expression	Value at Evaluatio	Value at Last Trigg	Output Attribut
Availability	$\text{Roundfrac}(\text{TimeEq}(\text{'Machine Availability'}, 'y', 't', \text{"Working"})/3600, 2)$			Machine Availa
Downtime	24-Availability			Machine Down
SheetBreaks	$\text{EventCount}(\text{'Machine Availability'}, 'y', 't')/2$			Map

## Condition Based Maintenance using the PI System

### Importance of maintenance strategy





# Quality Control

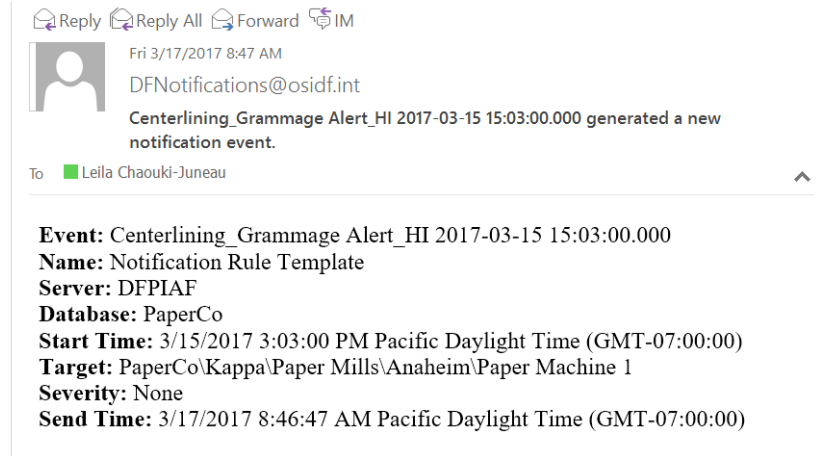
## Challenges

- ✘ Competitive market
- ✘ Lack of real-time data slow reactivity
- ✘ Comply to customer's specifications
- ✘ Consistency

## Solutions

### Event Frames + Notifications to track any grammage deviance

- Track in real-time
- Instant notification if deviation
- Increase reactivity



### Quality report on centerlining grammage by grade produced



# Kappa Inc Report







# Water & Energy Cost

## Challenges

- ✘ Energy and water consumption can represent 40% of total production cost
- ✘ Steam and power at the heart of operations
- ✘ Price of energy variable

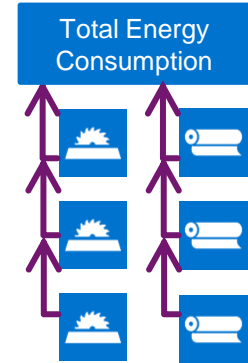
## Solutions

### Asset Analytics

- **Calculations** to compute water and energy consumption through out the mill
- **ROLLUP capabilities** to aggregate the water and energy consumption at site and enterprise levels

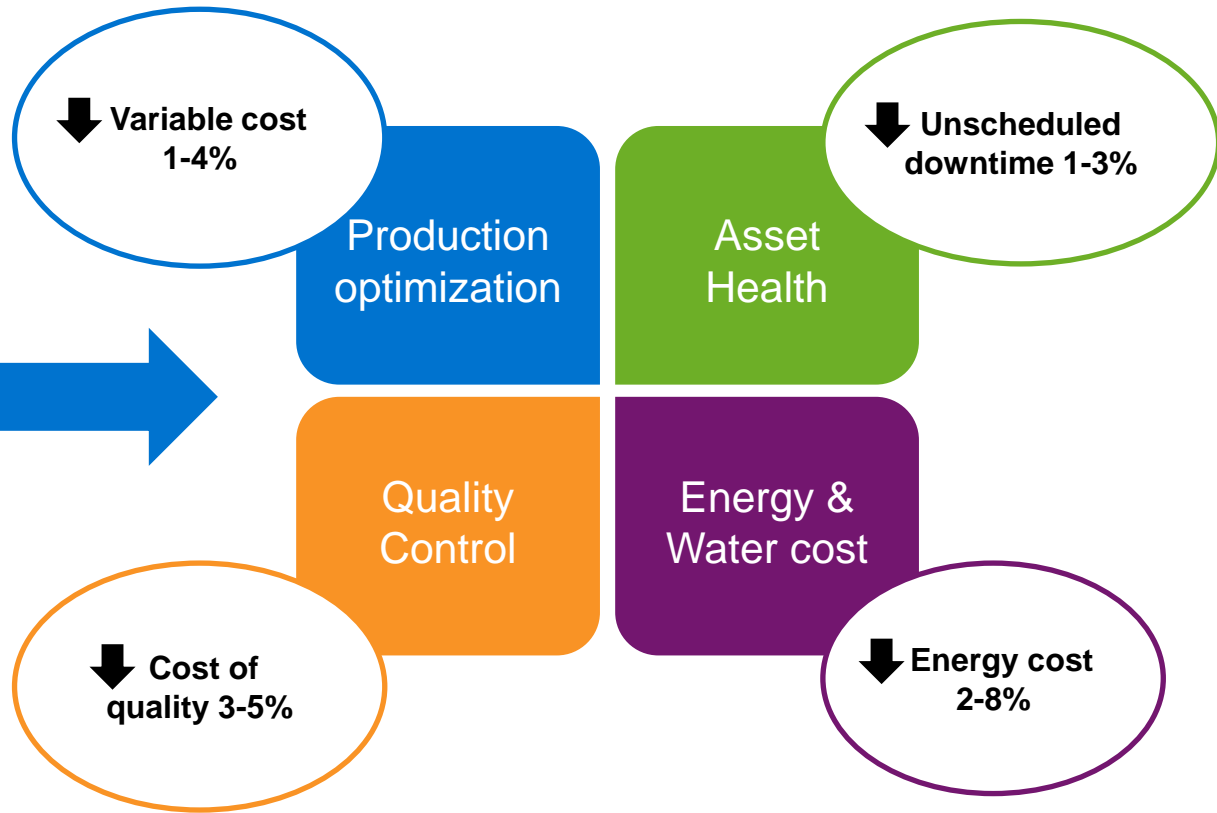
**Compare in real-time** the steam production vs the steam consumption

**Import data from tables** and track in the PI System the Price of energy

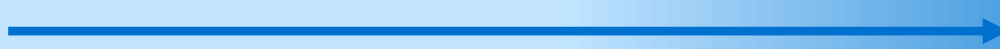




# Conclusion



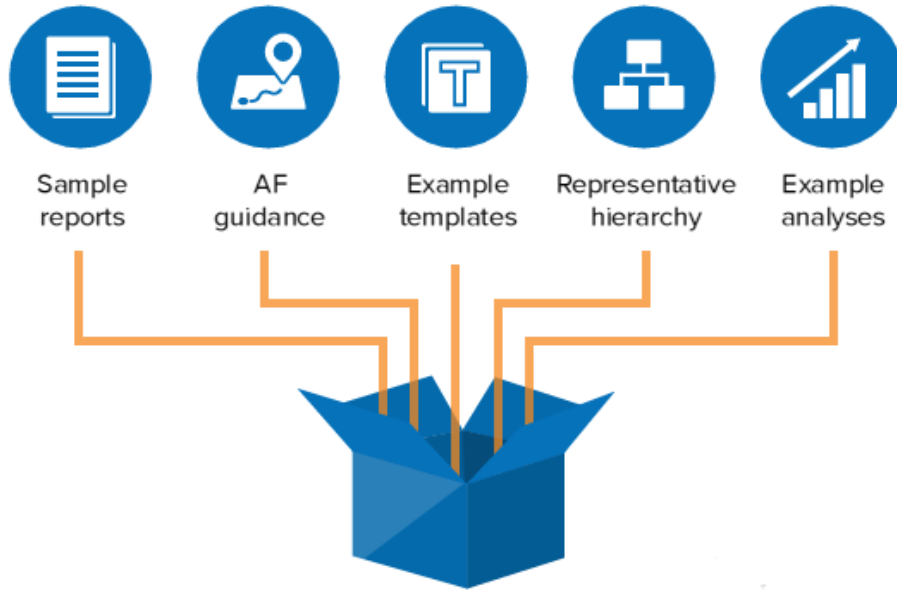
Historian



Infrastructure

# Asset Based PI Example Kits

- *Explore how business initiatives take shape.*



<https://pisquare.osisoft.com/community/all-things-pi/af-library>

- Learning tool & starting point
- Install on your AF Server with or without demo data
- Available to everyone in the **AF Community Library** on PI Square
- Applicable to P&P: Condition Maintenance
- **Best Practices for Implementing PI AF – Customer Testimonials & PI Coresight 2017**

# Contact Information

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State your **name & company**

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谢谢

Danke

Merci

Gracias

**Thank You**

ありがとう

Спасибо

Obrigado