

Building innovative solutions on the PI System

Pimsoft Sigmafine



OSIsoft EMEA Partner Meeting
London, October 16th, 2012

Agenda

- Company Profile
- The challenges
- Product overview – Sigmafine
- Applications and benefits
- Next Steps
- Conclusions

Company Profile

Pimsoft - Overview

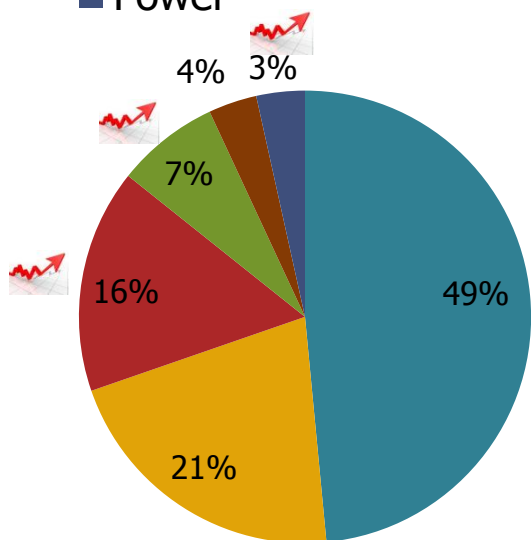
- Longstanding OSISOFT partner since 1996 and qualified as OSISOFT Sigmafine VAR
- Offering: software, industry specific solutions, consulting and project implementations
- Pimsoft acquired Sigmafine from OSISOFT end 2009
- Pimsoft Inc. has been created to manage the Sigmafine business with offices in Houston, Milan, and Turin
- Sigmafine team of experts and developers joined the new company

Company Profile

Pimsoft – Sigmafine adoption

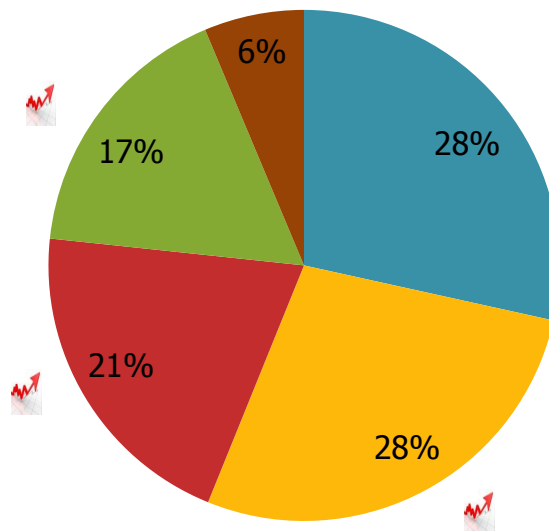
Industries

- Refining
- Chemicals
- Midstream & Upstream
- Metals & Mining
- Others
- Power



Territories

- North America
- Europe & Russia
- Asia & Pacific
- Latin America
- Middle East & Africa



Challenges

Data quality and consistency

- Data are companies' most strategic assets
- Data are by definition affected by errors (gross / systematic / random)
- Data quality has strong commercial and operational impacts



**High quality data provides the ability to
generate reliable business decisions.**

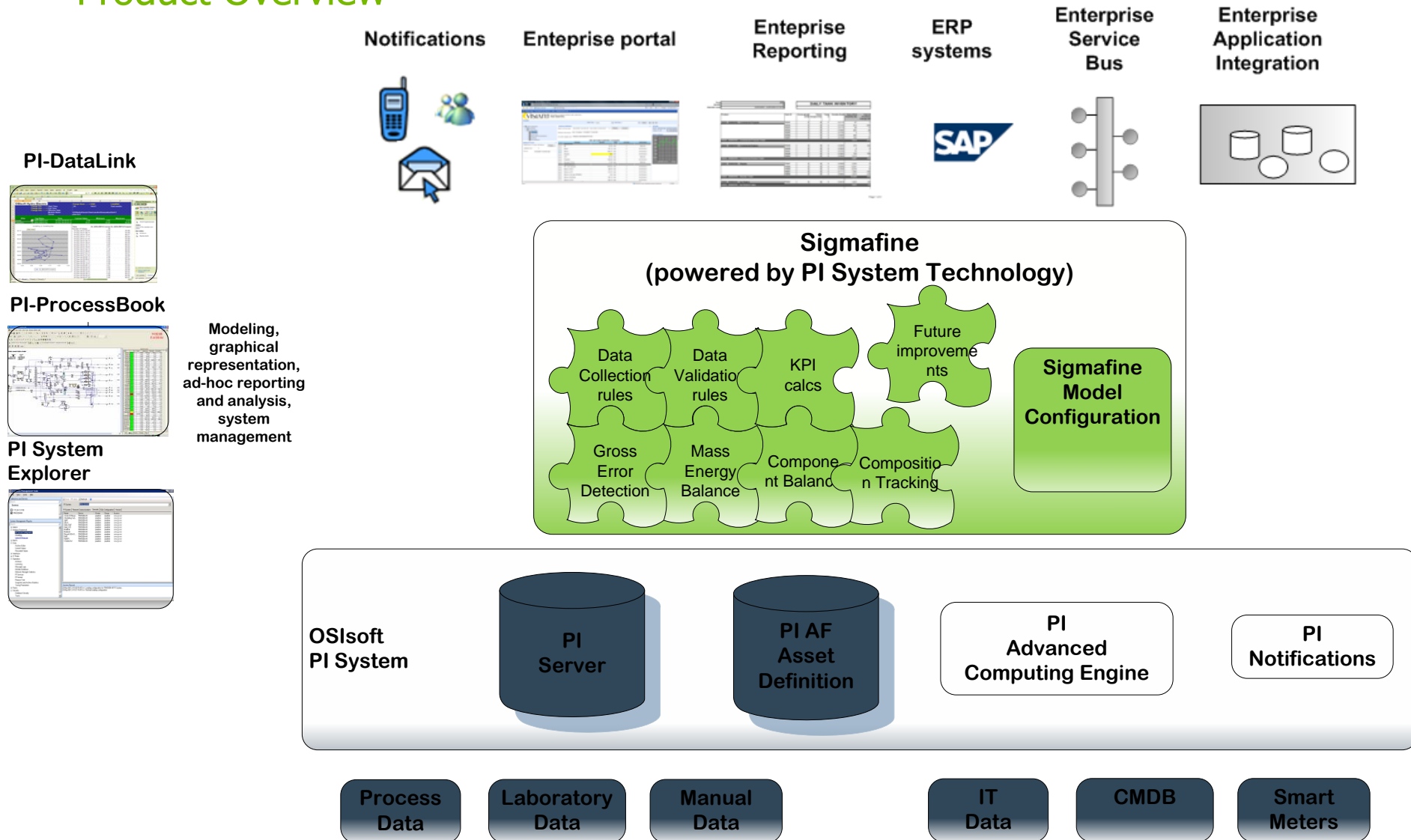
Sigmafine

Product Overview

- Sigmafine
 - Data validation and reconciliation platform
 - Improve consistency, quality and traceability of production data
 - Provide “one version of the truth” across all company levels
 - Enable well-informed business decisions
- Support several types of balances and analyses
 - Mass
 - Energy
 - Volume
 - Component
 - Crude Composition Tracking
- Sigmafine capabilities are
 - Expandible plugging-in of new intelligence
 - Scalable (from single units to large process networks)
 - Reusable for different analysis
 - Compliant to international standards (e.g., API and ASTM)

Architecture

Product Overview



Example of a facility

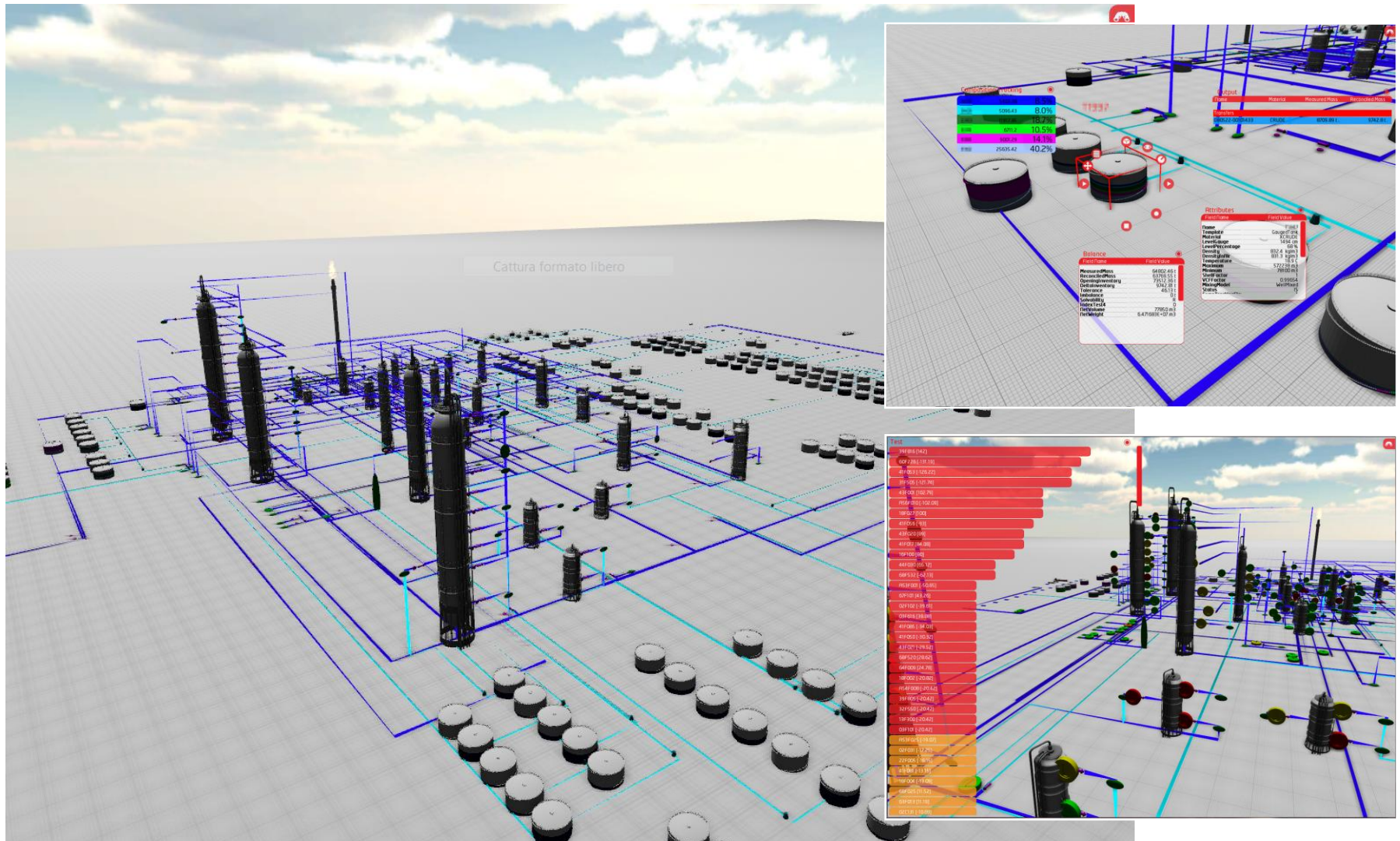
Sigmafine model in OSIsoft PI Asset Framework

The screenshot displays the PI System Explorer interface for the database \\PIMS103-TO\\MyDB_01. The left pane shows a tree view of the 'Elements' folder, which includes 'CaseResults', 'Model1', 'Layers', 'SF_GlobalFactors', 'm_Slush', 'r_JuiceIN', 'r_Water', 's_Slush-out', 's_Juice-out1', 'm_Bottle', and 'm_Juice4Slush'. The right pane shows a detailed view of the 'Elements' folder, grouped by 'Template'. The 'Template: SF_GlobalFactorsTemplate' and 'Template: SF_LiquidMeterTemplate' are expanded, showing a list of elements with their descriptions. The 'Template: SF_ReceiptPointTemplate' and 'Template: SF_ShipmentPointTemplate' are also visible.

Name	Description
Template: SF_GlobalFactorsTemplate	
Template: SF_LiquidMeterTemplate	
m_Bottle	Juice from inve
m_Juice3	Juice from inve
m_Juice4Slush	Juice from inve
m_Slush	Juice from inve
Template: SF_ReceiptPointTemplate	
r_JuiceIN	Sigmafine Rec
r_Water	Sigmafine Rec
Template: SF_ShipmentPointTemplate	

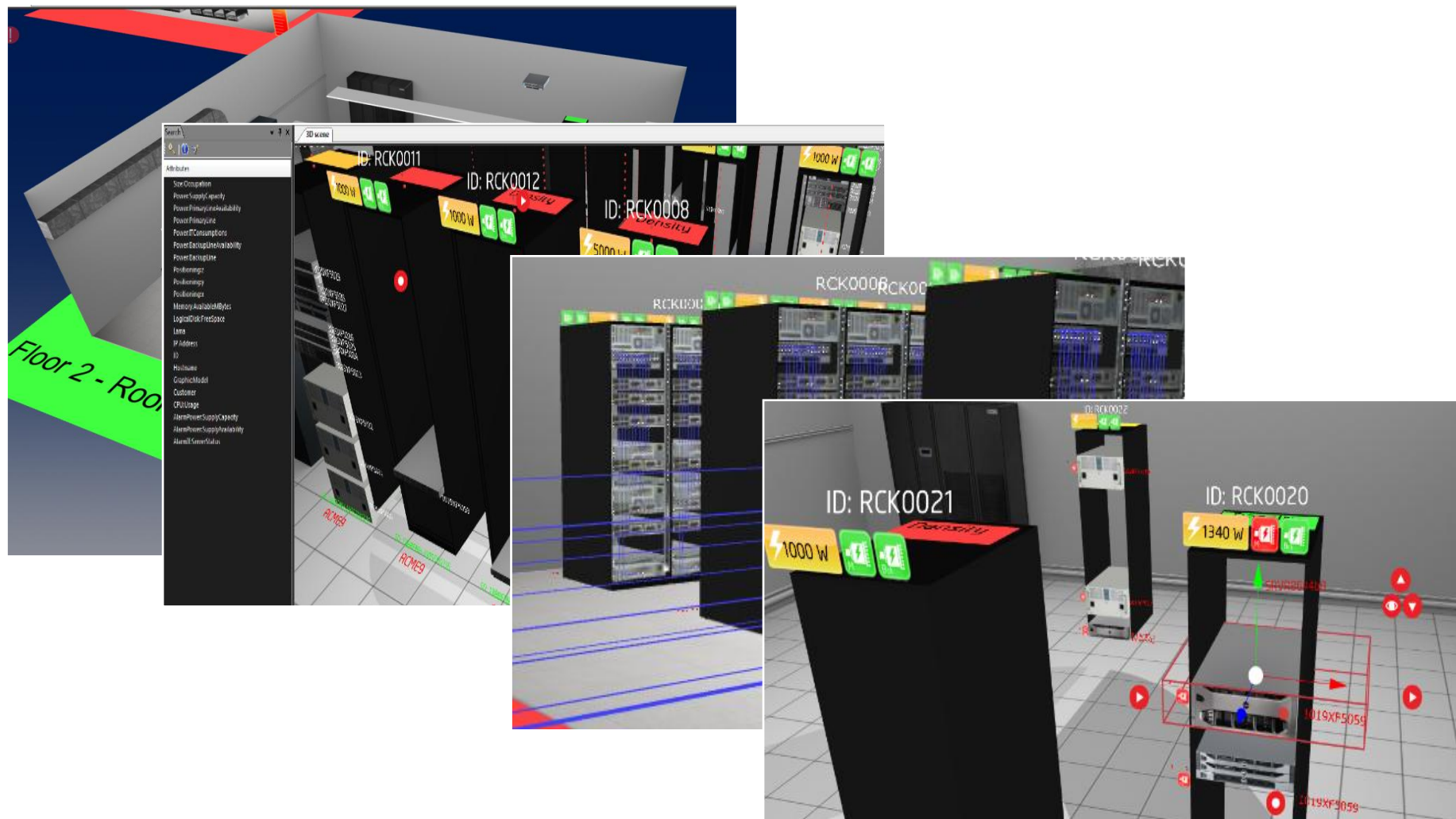
Example of a facility

Sigmafine model in Pimsoft 3D Data Navigator



Switching the context to Data Center

OSIsoft PI System and Pimsoft 3D Data Navigator for DCIM



Added-value solution on PI Infrastructure

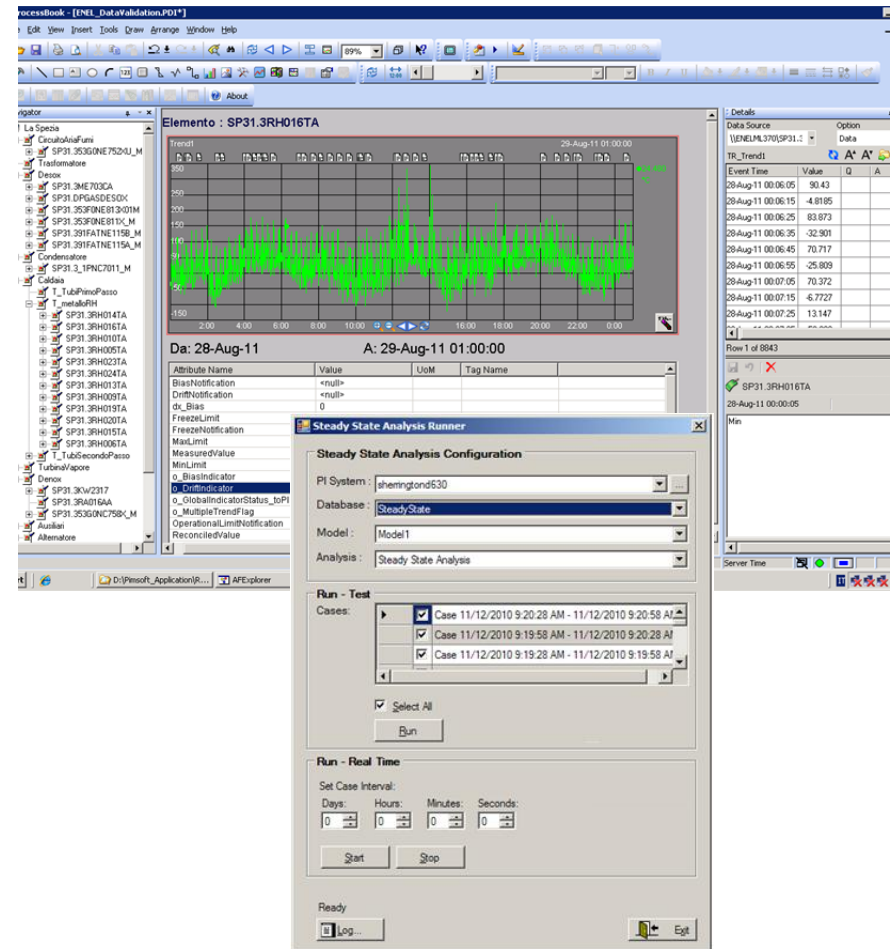
OSIsoft PI System and Sigmafine

- Based on OSIsoft PI System technology:
 - Extends rich benefits of OSIsoft PI Server
 - Leverage OSIsoft PI Asset Framework
 - Same administrative tools and management procedures
 - Native built-in integration with PI System (no interfaces needed)
 - Less applications islands
 - Easier system maintenance

Leveraging OSIsoft products

OSIsoft PI Analytics and Sigmafine Power Industry Package

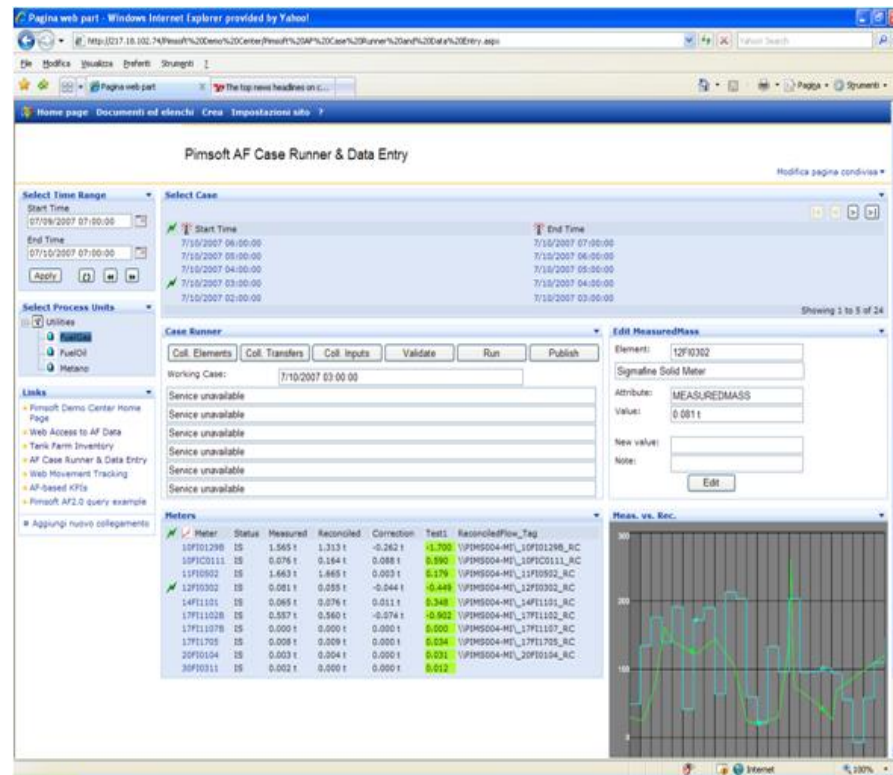
- Set of data references and analysis plug-ins configured into **OSIsoft PI Asset Framework**
- Set of custom views and displays implemented within **OSIsoft PI ProcessBook**
- Set of configurable notifications / warning deliveries implemented in **OSIsoft PI Notifications**
- On-line Data Validation and Reconciliation Engine provided by **Sigmafine**



Leveraging OSIsoft products

OSIsoft PI WebParts and Sigmafine

- Web-based configurable system for implemented via OSIsoft PI WebParts
- Specific extension for data entry and data validation functionality full integrated within Sigmafine.
- Completely configurable (no programming) in terms of presentation views, data tables, user access
- Single sign-on according to Microsoft Windows user access credentials
- No other database, applications, software, resources required

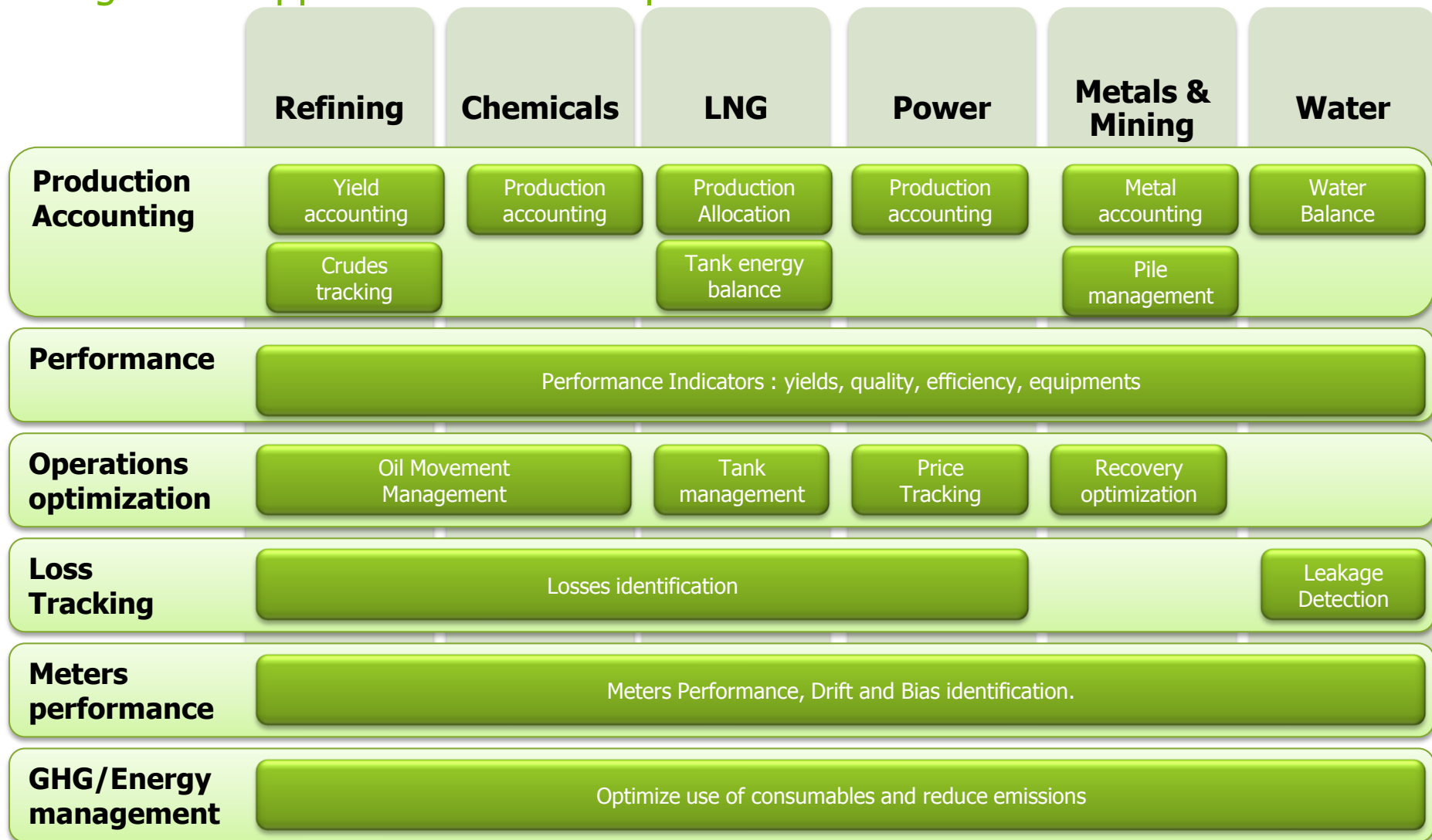


Benefits of Sigmafine

- Provide consistent balanced data to accounting systems in a timely manner
- Reduce time for site-wide balancing
- Improve plant yields
- Verify custody transfer
- Monitor plant performance
- Monitor and reduce plant losses
- Identify faulty measurements
- Prioritize and reduce meter maintenance

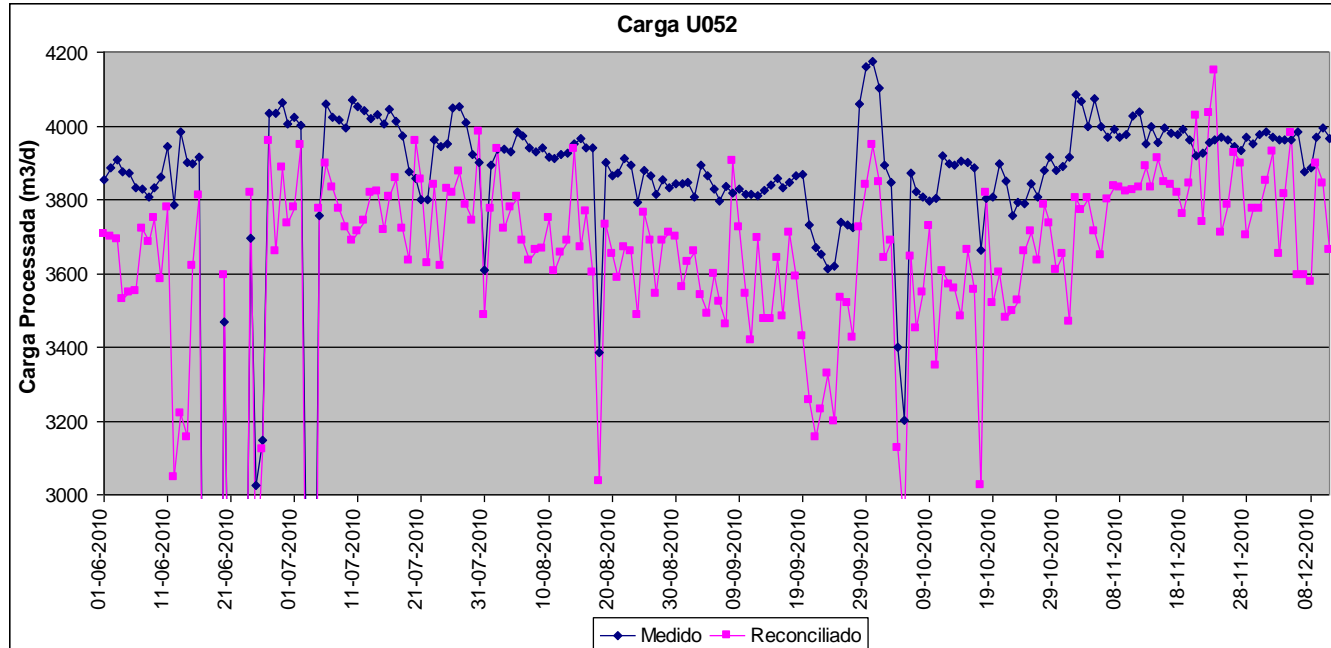
Sigmafine industries

Sigmafine applications value map



Business Case 1 - Identify faulty measurements

Analysis of nominal feed of Coke Unit - U052



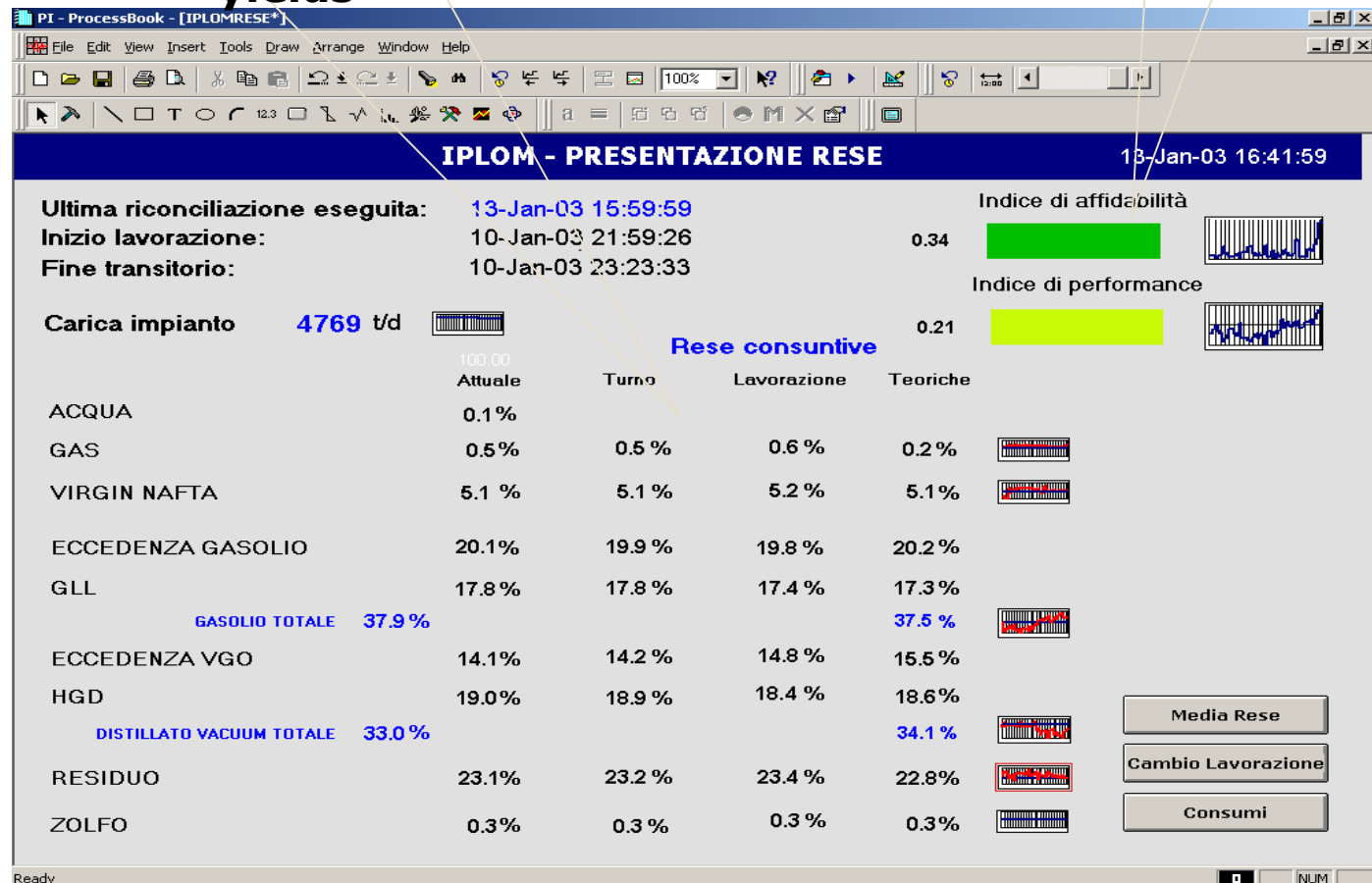
- After the testing, flow meter values showed that the Coker unit was processing a volume smaller than the programmed value.
- Daily loss in processed capacity was around 220 m³, while an increase in monthly profits of US\$ 990,000.00 was achieved.

Business Case 2 - Monitoring Refinery Performance

Validation of KPIs

current/shift/running plan
reconciled vs. theoretical
yields

Running
Plan KPIs



Business Case 3- Process Accounting

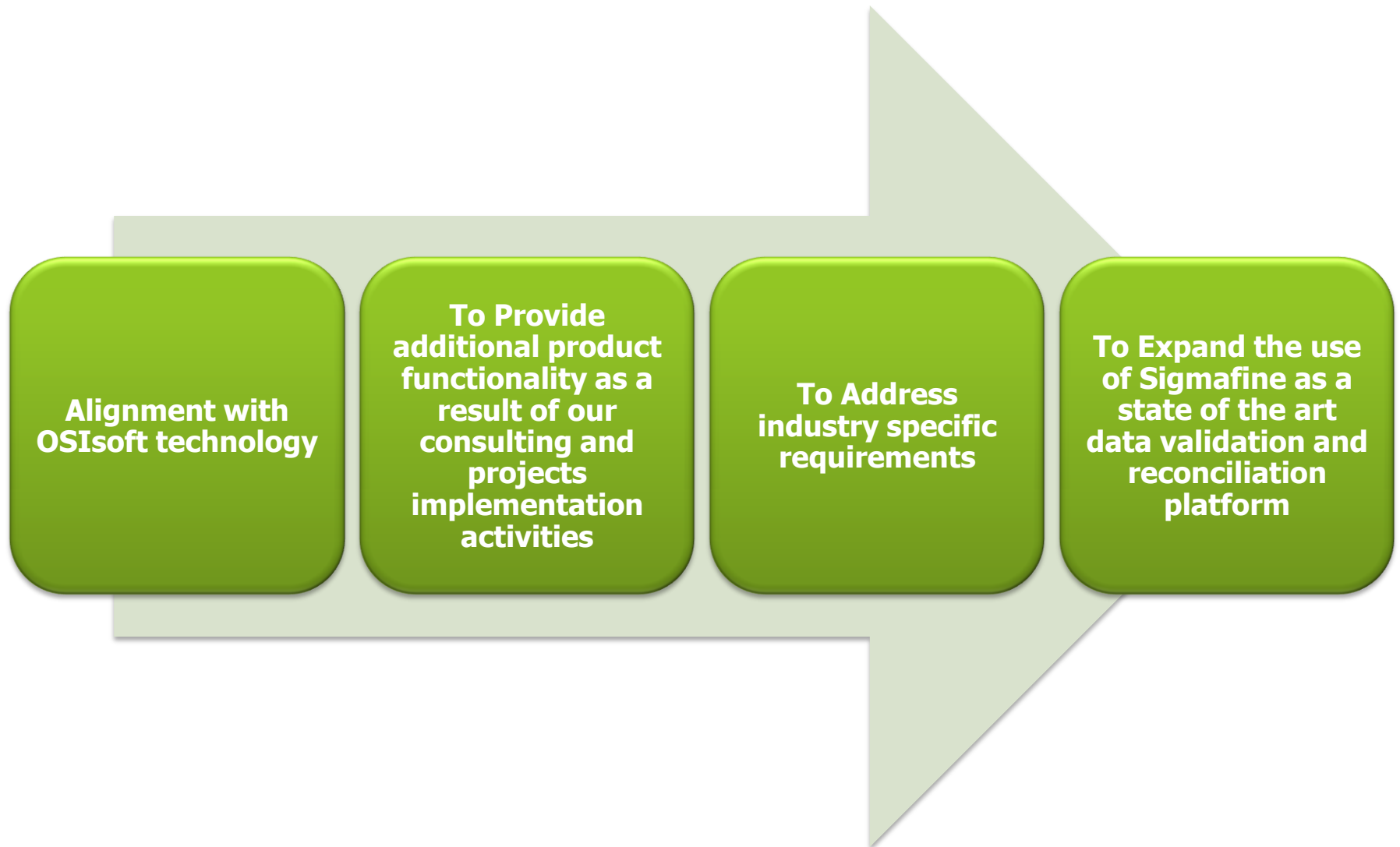
Project tangible achievements

- Improved accuracy of measurement systems that resulted in ARPECHIM refinery savings ~ **4 Mio. Euros from three months of operation** only.
-
- This is coming from **decreasing of the actual F&L reported to the crude input by ~ 0.6 %**
-
- The percentage of manual inputs in the new Data Reconciliation System **decreased by 80%** compared to the old system.
- We are in the position to **provide Reconciled production data faster**



Future plans

Roadmap Direction



Conclusions

- Use Sigmafine to....
 - ...leverage the powerful OSIsoft PI System infrastructure...
 - ...extend OSIsoft PI System functionalities...
 - ...bring new added-value solutions to customers...
 - ...and generate new business opportunities!

Thank you.
Questions?

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