CONDITIONING DATA FOR DIGITAL TRANSFORMATION

TM

SUMMIT 2018

Impact of Data Management on your Enterprise Bottomline

Dr. Suresh Agrawal, Founder & CEO

Offsite Management Systems LLC, Houston, TX, USA

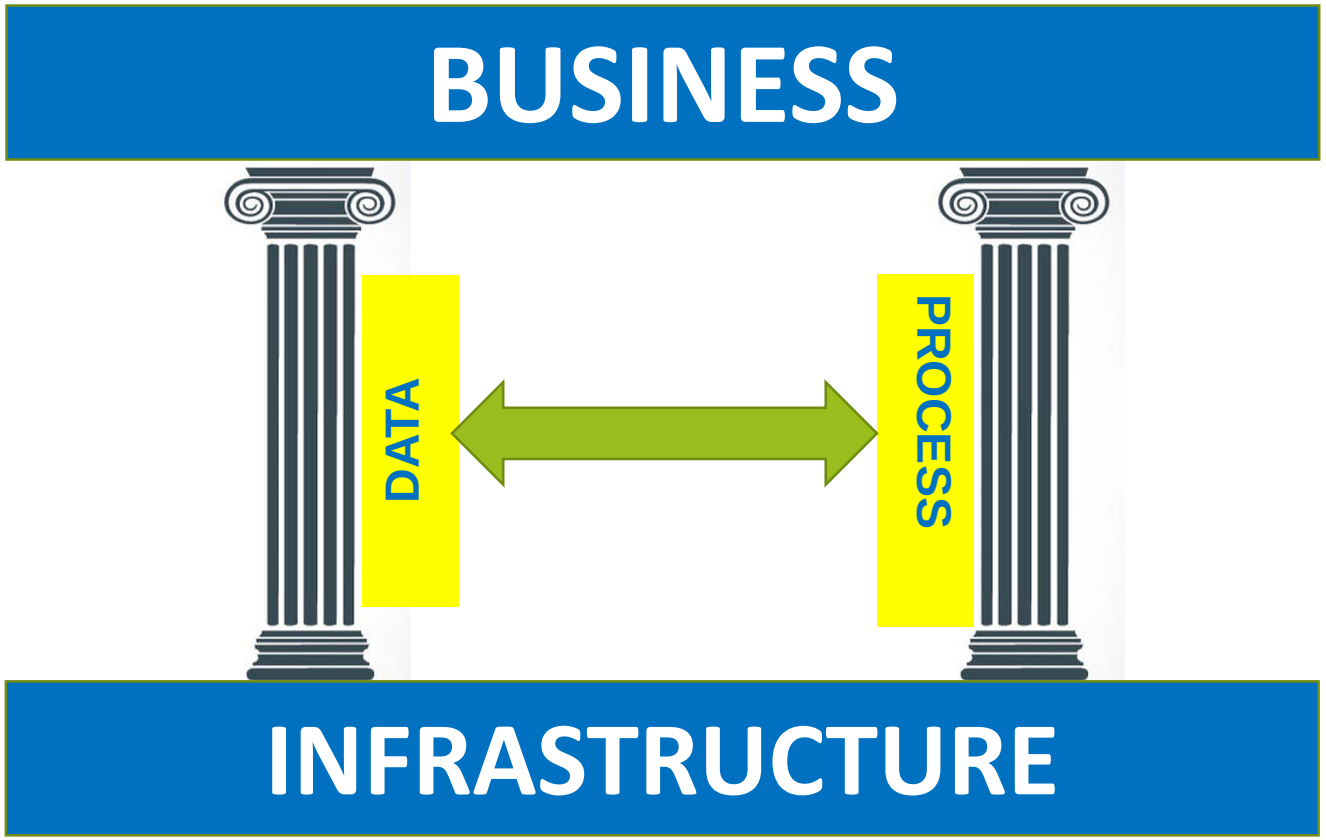
Houston Summit – 14:00 Session

PIMSOFT INNOVATIVE SOLUTIONS

Presentation Overview

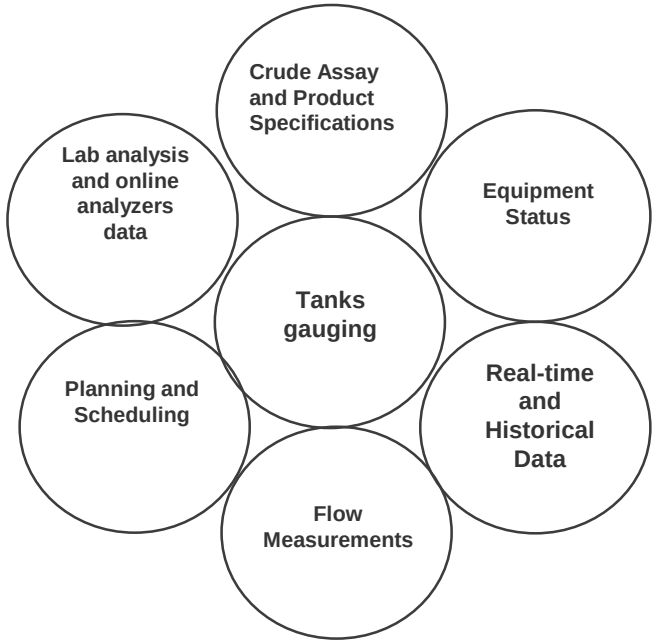
- Concept of data & business process collaboration
- Types of Data, Collection and Management
- Journey from Data Management to Digital Transformation
- Factors affecting the bottom-line
- Case Study – Downstream Oil Refining Industry
- Success Story

Data & Process – Pillars of the Enterprise



Marriage between Data & Process in the Downstream Refining Industry

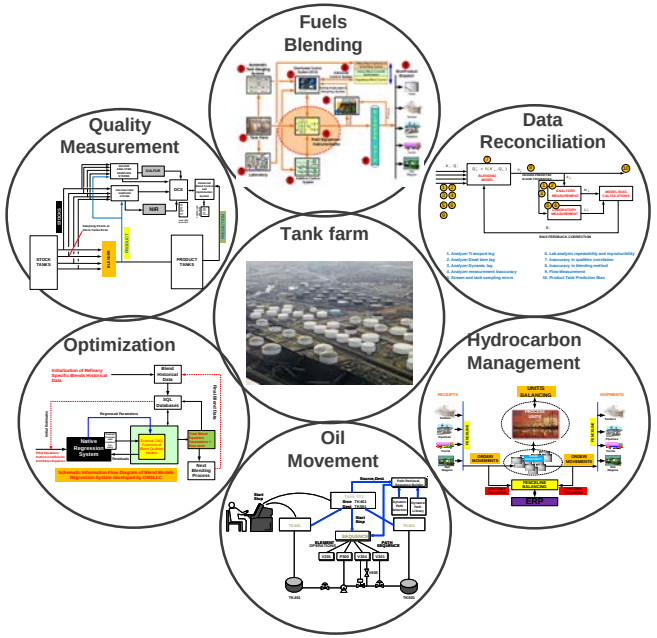
DATA



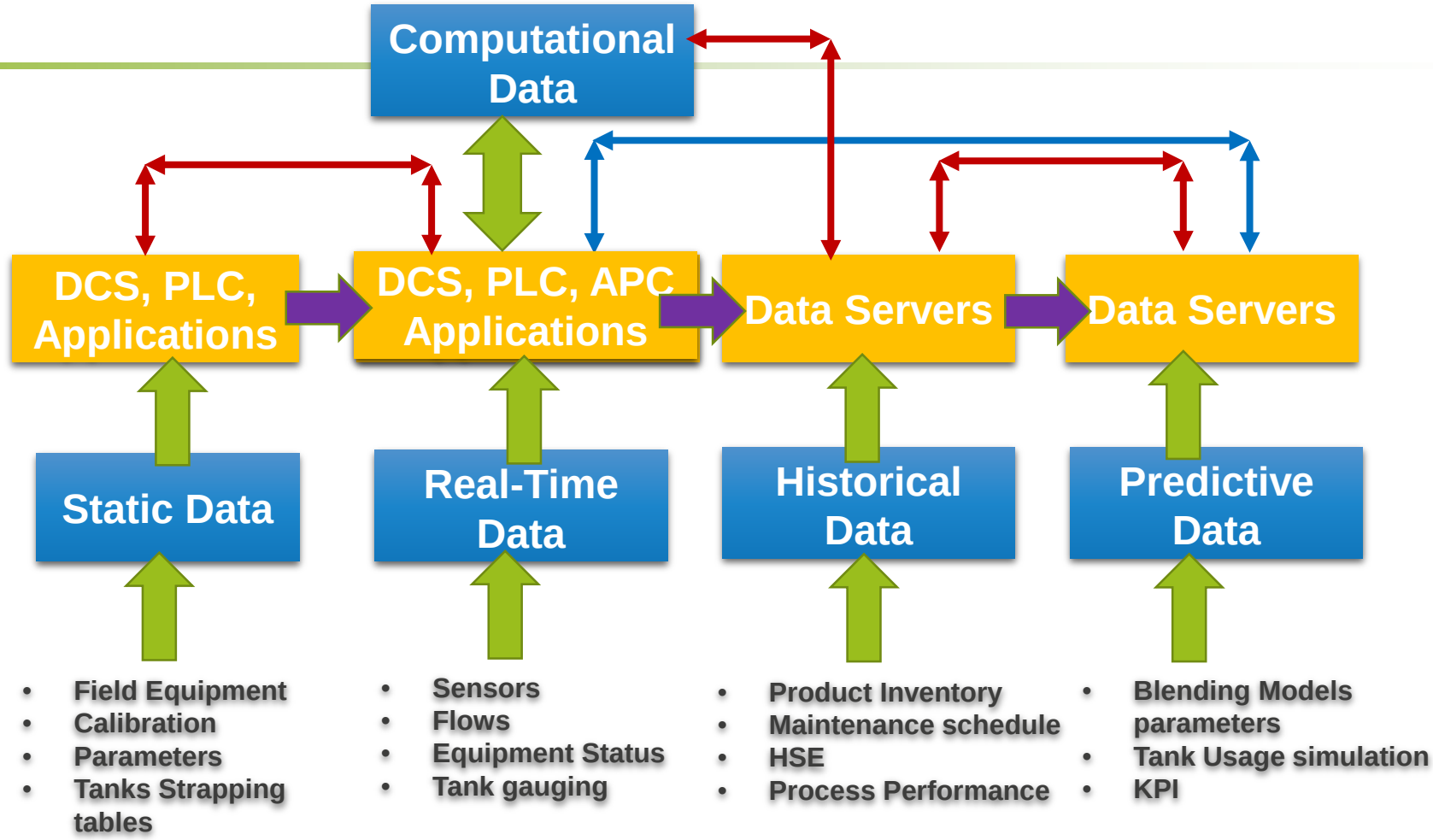
Process Governs Data

Data Controls Process

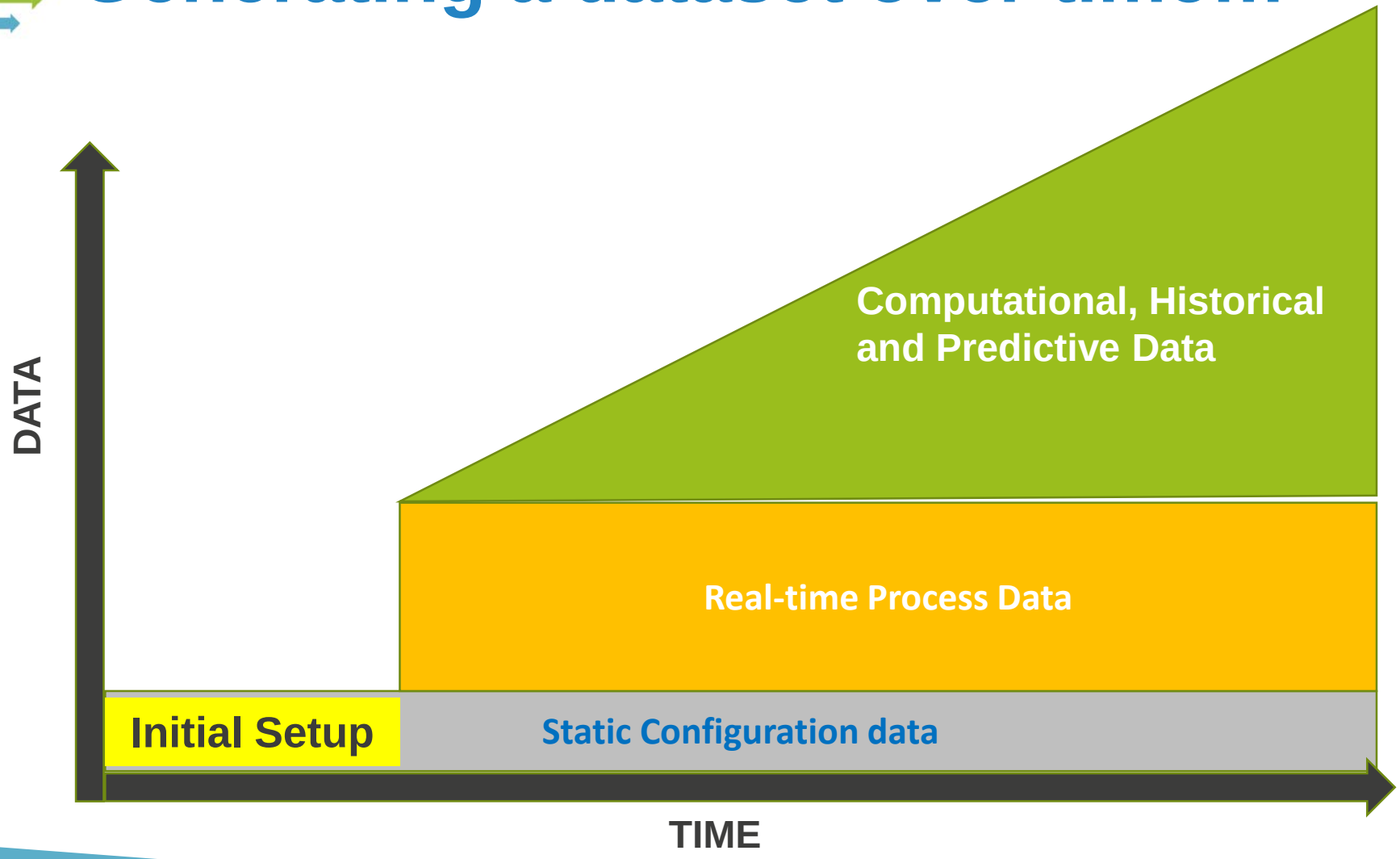
PROCESS



How is Data collected in the Process Industry



Generating a dataset over time…



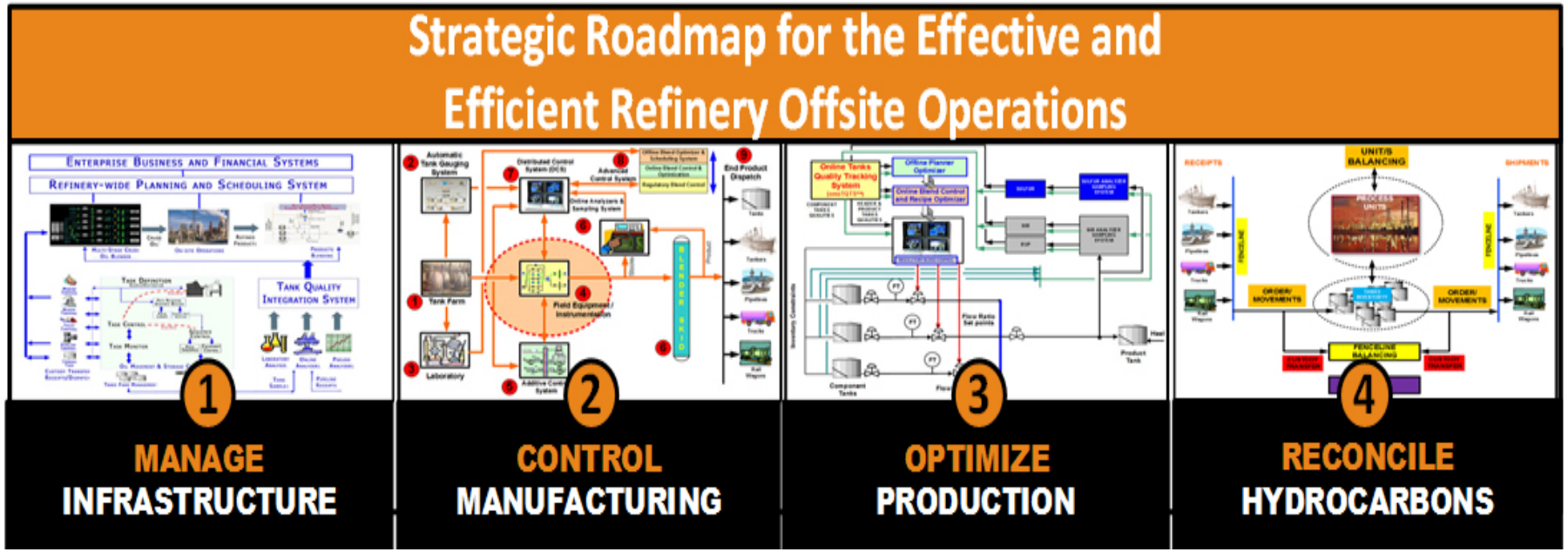
Management, Transformation & Analytics

Define, discover, collect, validate and manage databases

- Align, optimize people and processes
- Implement and manage business rules

- Visualize Data
- Track performance
- Reconcile
- Correct data collection

How Enterprise bottom-line is affected ?



EFFECTIVENESS

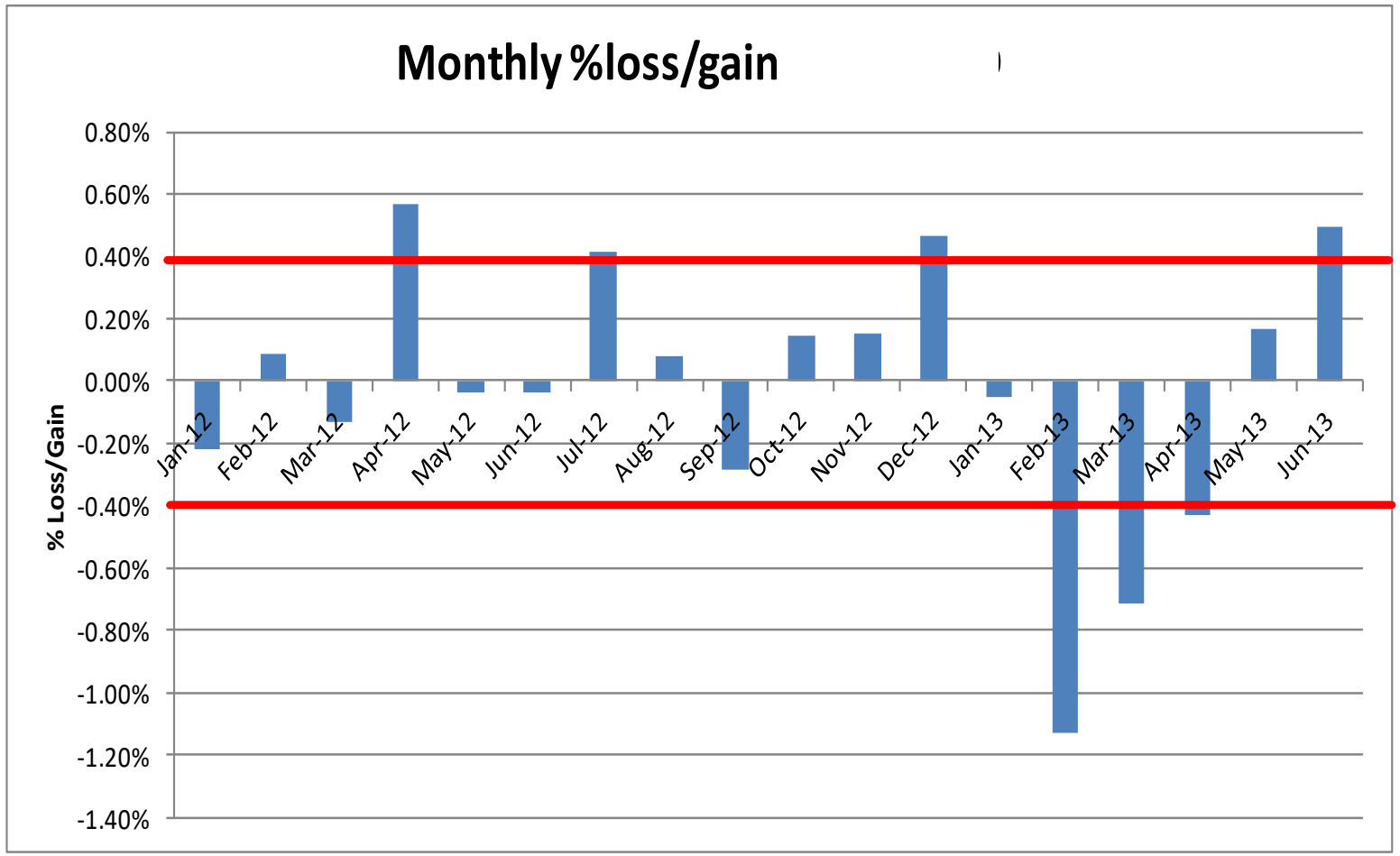
EFFICIENCY

PROFITABILITY

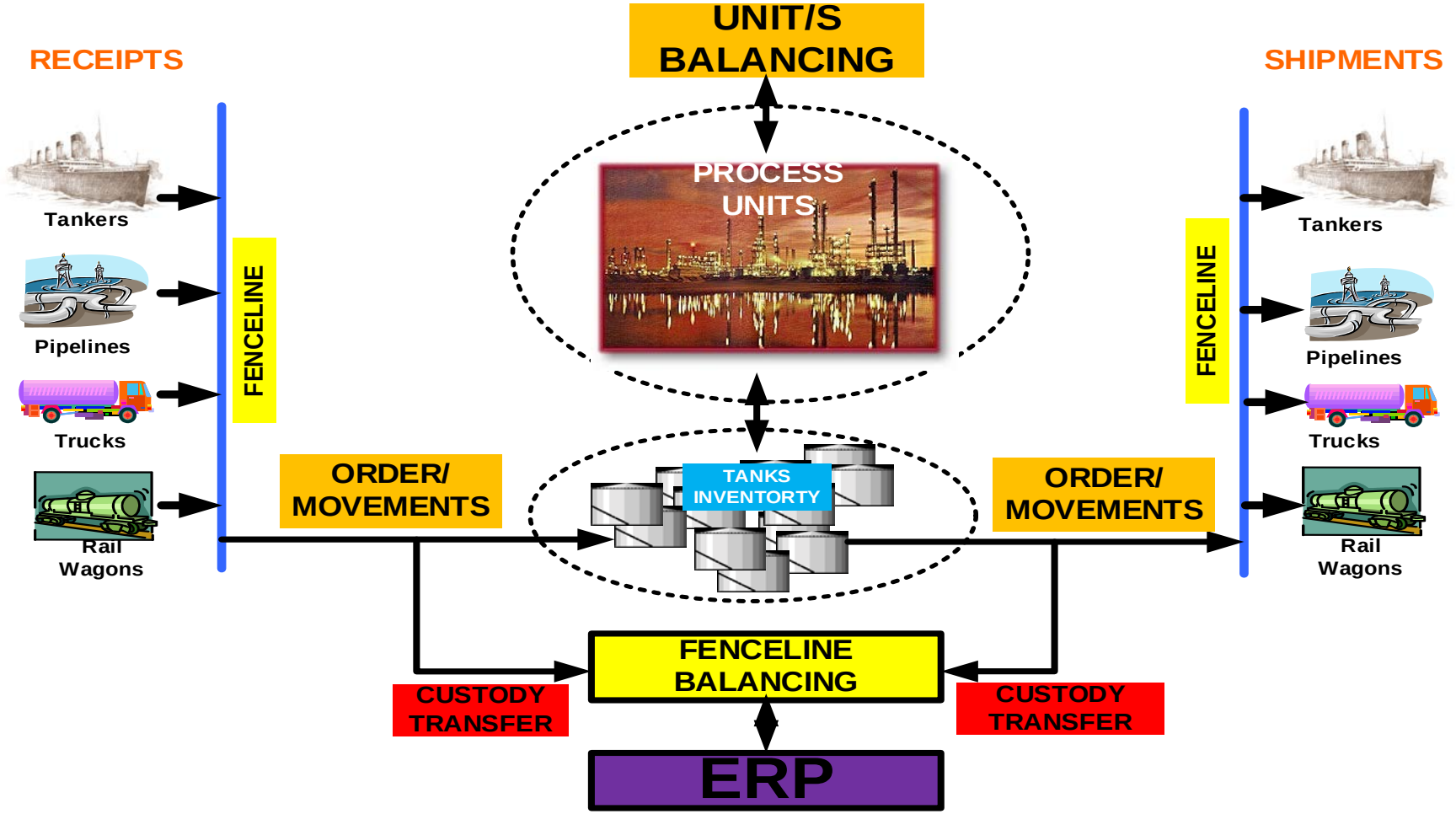
Case Study – Business Case

- 10 refineries with crude capacities ranging 150-450KB/day were averaging oil loss of **1.2-1.50% (industry average is 0.40-0.60%)** and at times even showing positive mass gains.
- The refineries had reasonable automation of infrastructure (ATG, Oil Movements, etc.), but **data management, digital transformation and data reconciliation** was at minimum or none level.
- **Potential benefits Recognized** - 25% reduction in the oil loss would benefit the each of refineries between **1 to 8.5 M$/Year** which would outweigh any soft or hard investment.

Hydrocarbon Loss Management



What were the process areas of Focus ?



Problems Discovery phase revealed

- Poor Data Management and/or Integration
- There was no commonality between the databases from vendors
- Required multiple interface to transfer data between these databases
- Lack of data quality checks
- Lack of training to use data effectively and efficiently
- Operations were manually managed and later entered on paper
- Oil loss reconciliation took 2+ weeks and 3+ accountants to produce reports
- Lack of management interest and/or ignorance of potentially recognized benefits from reduction in losses

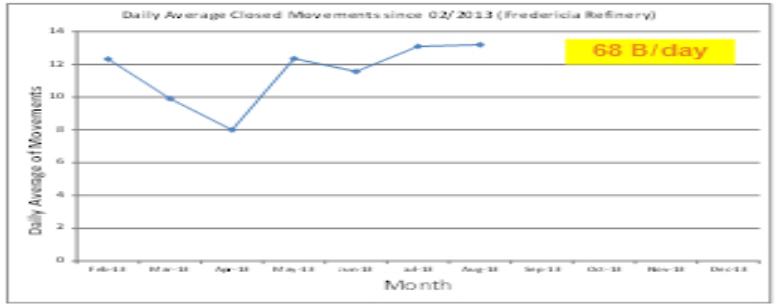
Solutions Recognized and Proposed

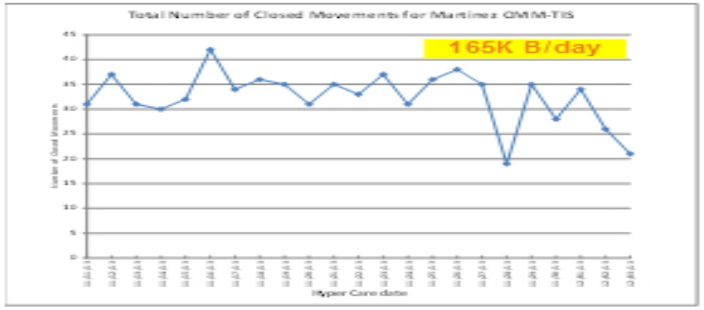
- **Investment commitment in**
  1. Tank Inventory Management System
  2. Oil Movement Management System (No Movement Control Automation, still some manual intervention required)
  3. Mass Reconciliation Software (**Sigmafine**)
- **Data Management and Digital Transformation**
  1. Integrate database from all sources
  2. Implement data quality checks in near-real time
  3. Develop business Rules and procedures
  4. Daily hydrocarbon management improved the quality of data
  5. People Training

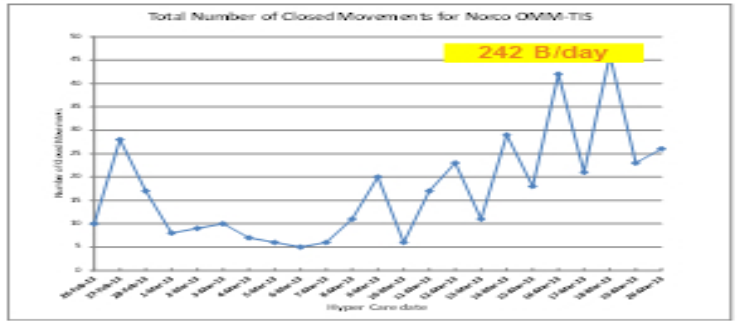
And then there is this Data Analytics…

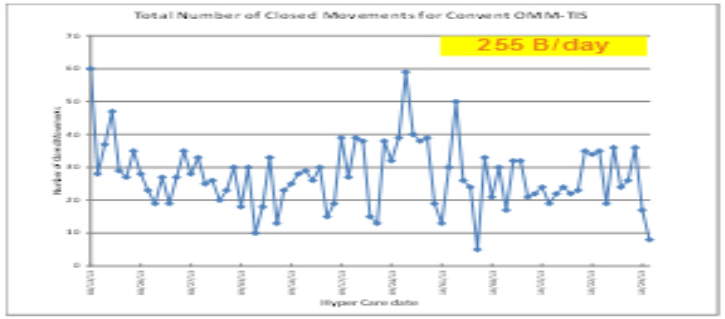
- **Data management has no use unless we can create a window into it**
  - Data Analytics
- **Data analytics should not be mere pretty Excel charts and/or tables**
  - Must give insight into business processes to help make decisions.
  - Data Analytics must be usable: condition for the purpose
- **Some Examples…**

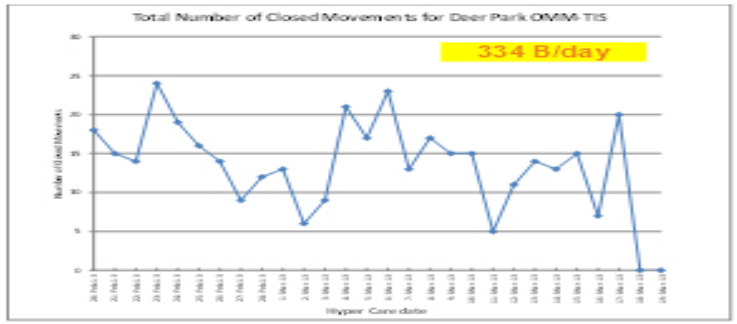
Oil Movement KPI across Refineries

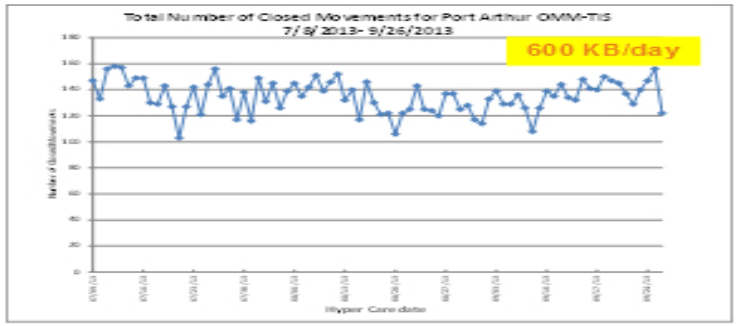












Final Success Story

- Integration of databases and commonality made data available in near real-time
- Oil loss was being reconciled on daily basis rather than on monthly basis almost near-real time by reconciliation tool (**Sigmafine**)
- New Business Rules and procedures were implemented for information flow, data quality checks and data reconciliation
- Significant reduction in oil loss was achieved
- Operators, engineers and accountants were given extensive training

Summary

- Refinery operations require and generates a huge amount data for their effective and efficient executions
- Sources of data varies from vendors, formats and openness for interface and integration for a coherent system
- Lack of effective and efficient data governance severely affect the process operations and enterprise bottom-line
- Data availability in real-time and historical archival is a must for business decision, analysis, analytics and dash board applications across the enterprise

Questions?

- Raise a hand
- Wait for the microphone
- State your name, title and company

PIMSOFT
INNOVATIVE SOLUTIONS

Presenter

- Dr. Suresh Agrawal
- Founder & CEO
- Offsite Management Systems LLC,
- s.agrawal@globaloms.com

thank you!

SUMMIT 2018

PIMSOFT INNOVATIVE SOLUTIONS