



An Enterprise Collaborative Environment to Enable the Daily Operations Decision-Making Process, the Polimeri Europa case



AGENDA

- Polimeri/ENI
- The Business Needs
- The AS-IS Scenario
- The Solution Approach
- The feed-back
- Future steps





WHO WE ARE

Polimeri Europa is fully owned by Eni SpA

- Polimeri Europa ranks first in the Italian chemical industry in terms of turnover, volumes and number of employees, holding significant market shares in Europe.
- Polimeri Europa's business portfolio includes Basic Chemicals (olefins, aromatics and intermediates), Polyethylene, Elastomers and Styrenics.
- Polimeri Europa production sites are located in Italy, Belgium, France, Germany, Great Britain, Hungary and Portugal;
- The sales network covers all European countries, Russia and Egypt.
- Eni is also the owner of the AGIP business







Polimeri Europa

Company highlights 2007

Production:
5.5 million tons

Consolidated sales revenues: 6934 million euros

• Employees: 6640

Investments: 138 million euros

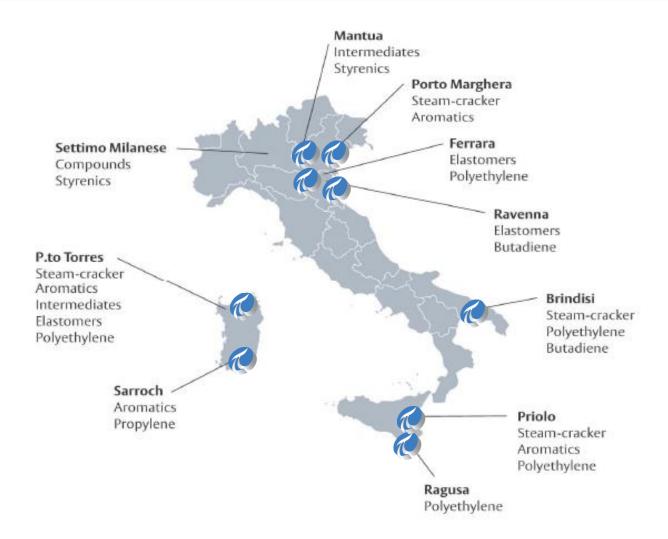
R&D expenditures: 48 million euros

HSE expenditures: 193 million euros





Plants in Italy





Plants in Europe







THE BUSINESS NEEDS

- Common environment for daily data review
- Make daily summaries available to Central Headquarter Operation Manager of all of the 17 production sites
- Bottom-up data review capabilities and top-down data searching support
- At each site operators validate data during night shift;
- Timely data availability to HQ (daily at 8:30AM)
- Tracking changes and managing read/write access privileges





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THE CHALLENGE

- Data storage topology and chronology are different through multiple sites
- Previous data distribution was specific to each site and based on paper or electronic-sheet historic layouts
- Data presentation requirements for the HQ should take into account a progressive roll-out and integrate easily with current emailed-in reports



THE REQUIREMENTS

- No local client setup
- Support any type of data source
- Support sites without data historian
- Flexible reporting options
- Simple management of user privileges
- Repository for layout templates
- Extensible for future projects
- Leveraging existing data storage infrastructure





THE CURRENT SCENARIO

- Production data available on:
 - PI systems installed on each major site
 - Custom local applications based on relational databases
- Additional information (data not measured or comments) has to be entered manually
- Presentation and Analysis infrastructure available at HQ:
 - Microsoft Sharepoint (RtWebParts)
 - PI AF
 - PI Server

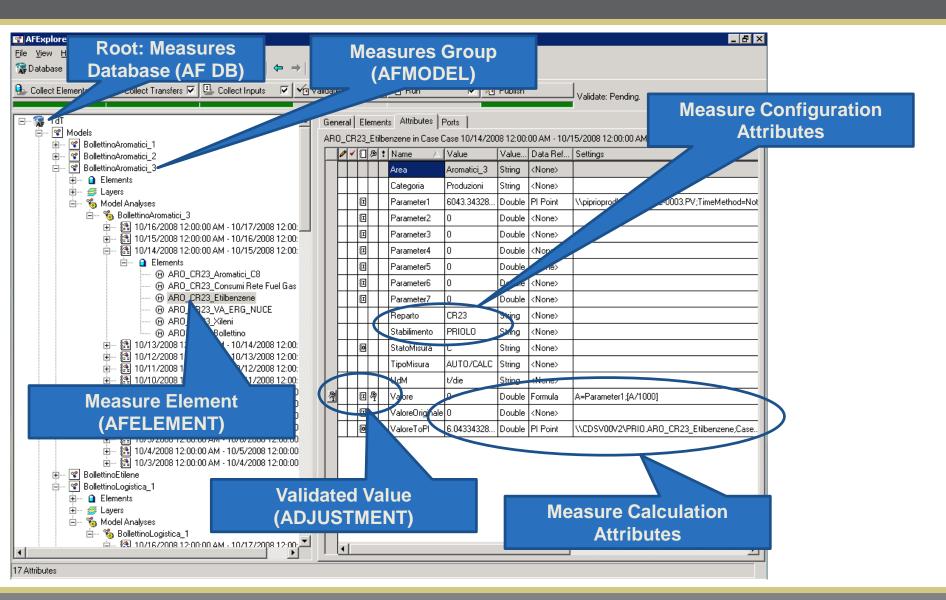


THE APPROACH

- Reusable Business Rules repository based on PI AF
 - Data retrieval templates (PI, relational DB, manual, any...)
 - Aggregation rule templates
 - Site templates
- Collaborative working environment based on Microsoft Sharepoint and PI-RtWebParts
 - Time range control
 - Trend and tabular data presentation capabilities



THE AF MODEL



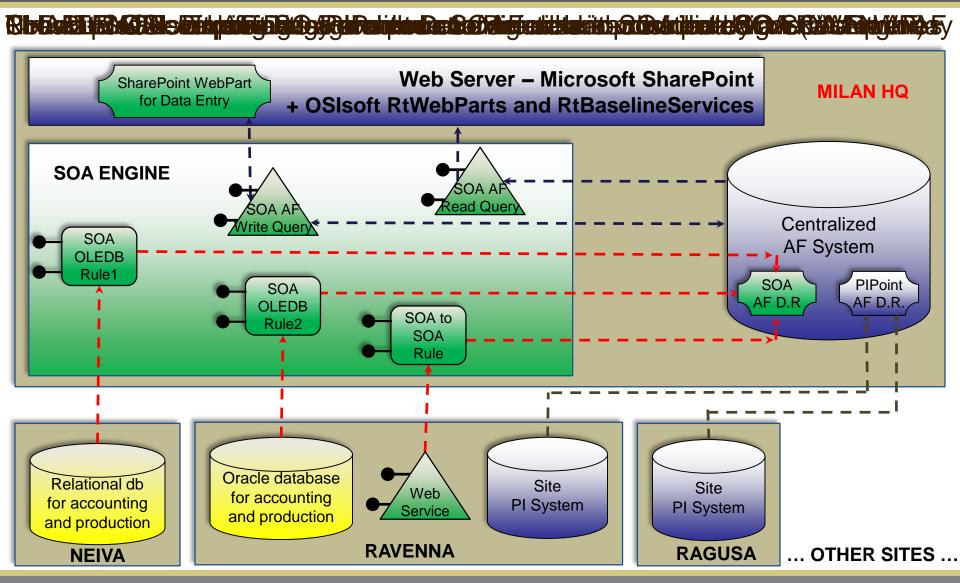


ONE STEP FURTHER

- SOA-based innovative contributions
 - Expose AF data and structure via web services to complement standard RtWebParts environment
 - Empower AF to reference efficiently large amount of non-PI data (mostly on relational databases) preserving existing local data repository to be used by the current daily yield account solutions
 - Enable Microsoft Sharepoint environment to provide manual data entry facilities integrated with standard RtWebParts reducing impact on future deployment of new IT workstations
 - Provide extensible AF-based reporting features with standard Microsoft tools
- Accessing Data on Demand
 - Rules stored not data
 - Immediate updated information available, when source change



INFRASTRUCTURE OVERVIEW

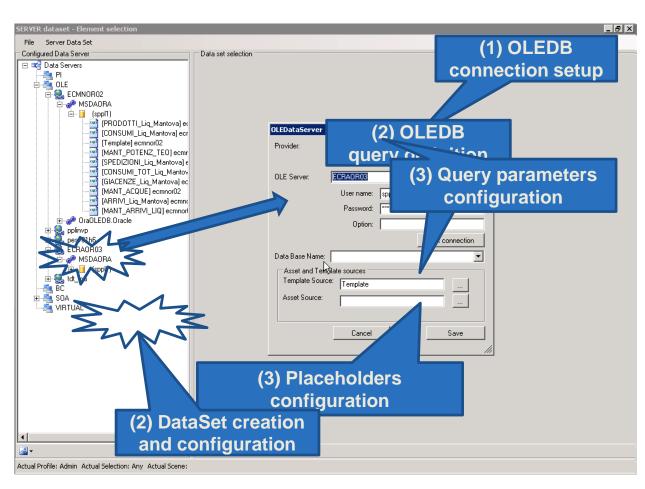






CONNECTING EXTERNAL SOURCES

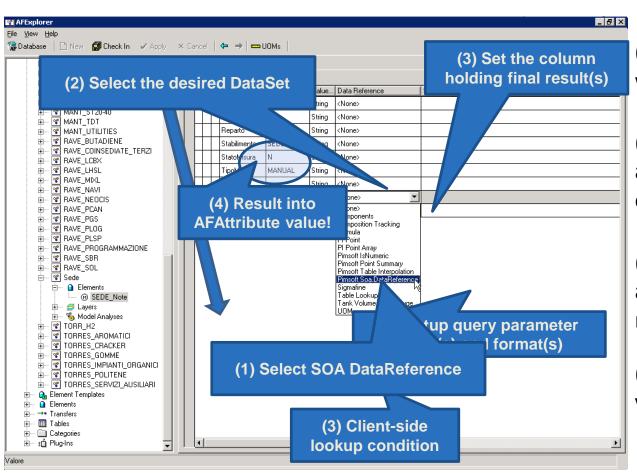
FIRST PHASE – Define provider and DataSet through "SOA Configurator"



- (1) Setup an OLEDB provider connection with logon credentials
- (2) Configure a DataSet based on an OLEDB query
- (3) Define OLEDB query placeholders and values
- (4) Test and preview the query results

MAPPING DATASET TO AF

SECOND PHASE – Consuming DataSet into AFAttributes through SOA D.R.



- (1) Configure AFAttribute with SOA AF DataReference
- (2) Select the desired DataSet and setup parameter dynamic evaluation rule
- (3) Setup lookup condition and the column holding the result(s)
- (4) Get result into AFAttribute value!



THE LOOK-AND-FEEL — Corporate Homepage

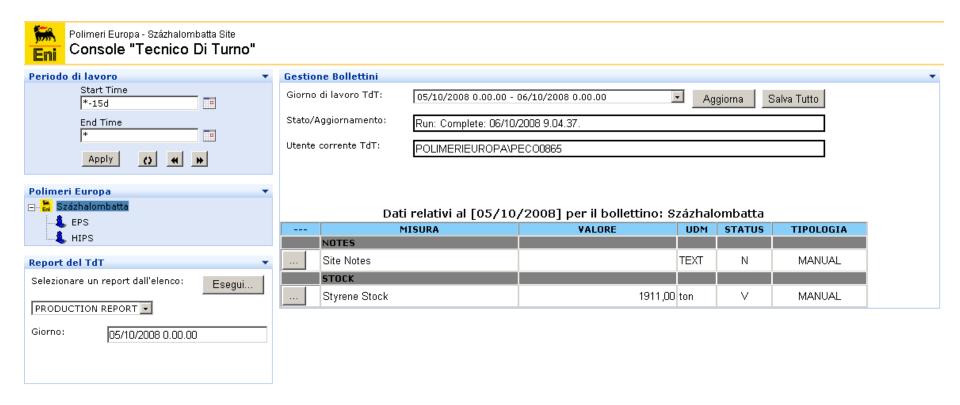






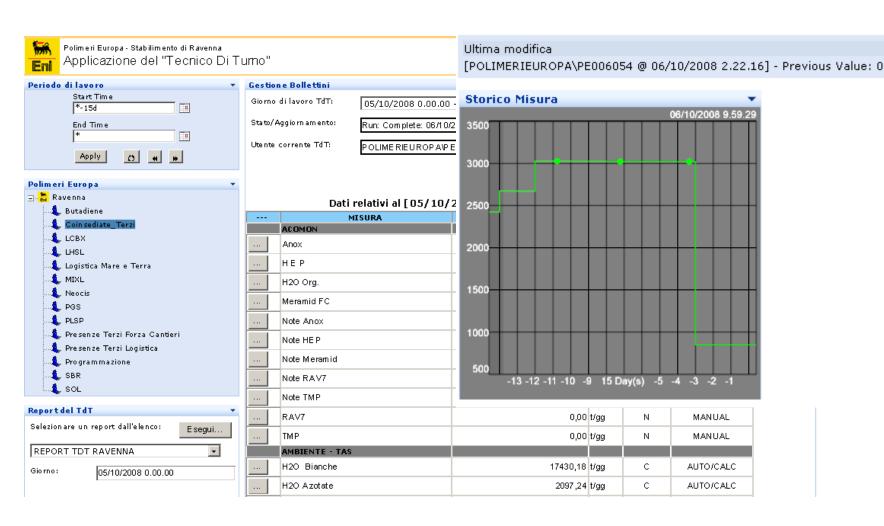


THE LOOK-AND-FEEL – Site Access





THE LOOK-AND-FEEL — Collaboration



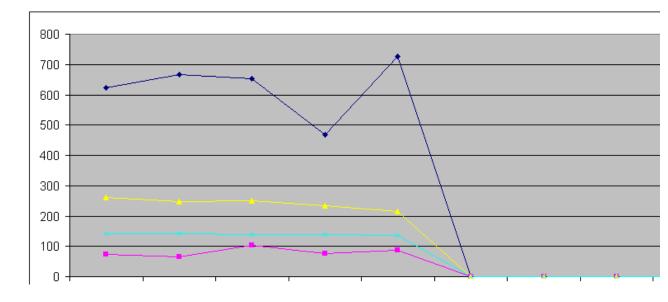


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THE LOOK-AND-FEEL - Reporting



MENSILE ACQUE							October	2008
ACQUE	01/10/2008	02/10/2008	03/10/2008	04/10/2008	05/10/2008	06/10/2008	07/10/2008	08/10/2008
[Tn/die]								
H2O Bianche	622	667	654	469	726	0	0	0
H2O Azotate	72	65	103	77	87	0	0	0
H2O Organiche FRC1	262	248	251	234	216	0	0	0
H2O Organiche FRC3	140	141	140	138	136	0	0	0
Totale	1097	1122	1147	918	1166	0	0	0





THE PROJECT PLAN

- Successive Phases Approach
- First Step Integrate PI only sites
- Second Step Integrate no-PI sites (support for manual data entry)
- Third Step Integrated site-specific relational data
- 10 out of 17 sites implemented today
- Site rollout average
 - Deploy 2 weeks
 - Commissioning 3 / 4 weeks



THE TOPOLOGY

- Europe language barriers
- 7 nations thru-out Europe







THE USER FEED-BACK

More than 200 daily users!

- HQ:
 - Users get more and more interested.
 - Single consistent reference for Enterprise decisions.
 - Collaborative environment fuels organization capability.

Sites:

- Collaborative environment empowers producers.
- Used to cover information gaps at sites.
- Useful reference in driving daily activities.
- Efficient manual data-entry.





THE IT BENEFITS

"Quick-Win" Solution.

 Reusable rules support fast deployment and future initiative.

Centralized secure, manageable and extensible architecture.

Thin client based.



Future steps

- Complete implementation plan within the year end
- Move to next versions
 - AF 2.0
 - MOSS 2007
 - PI-DataLink for MOSS
 - PI-Notifications
- Infrastructure
 - Virtual Servers





SUMMARY OBSERVATIONS

- Collaborative Environment is a winning approach
- Configurable Business Rules are enabling for today fast changing organizations
- Expand Production data availability crossing applications limits to reach organization boundaries



