



SIEMENS

# SIMATIC IT for the Chemical Industry

Increase responsiveness of manufacturing operations and ensure  
Integrity of the Data Flow across ERP, MES and Automation Systems

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## Answers to Market Demands

The Chemical market with its increasing demand of product diversification, raising prices of energy and raw materials, quality and environmental regulations issues and the trend towards globalization, place significant challenges upon manufacturers.



Chemical Manufacturers are forced to achieve the highest level of resilience in global operations, while at the same time maintaining cost efficiency, quality and speed if they want to compete in local markets. The application of integrated manufacturing strategies will help them to realize the responsiveness needed to face the market demands and trends.



## The SIMATIC IT Initiatives

Siemens propose four initiatives based on the standard SIMATIC IT product and libraries and which represent the manufacturing operations cornerstones for the chemical industry:

- The Vertical Integration bridges the gap between the ERP and the Batch systems
- The Product Formulation allows manufacturers to reach flexible product ideation and timely product industrialization

- The Inform & Visibility transforms plant floor data and business related information into KPIs and metrics to monitor and improve the manufacturing operations and to take informed decisions
- The Production Optimization & Operator Guidance to handles the whole production management and execution, keeps manufacturing processes aligned with supply chain activities, manage product quality issues and ensure operator guidance

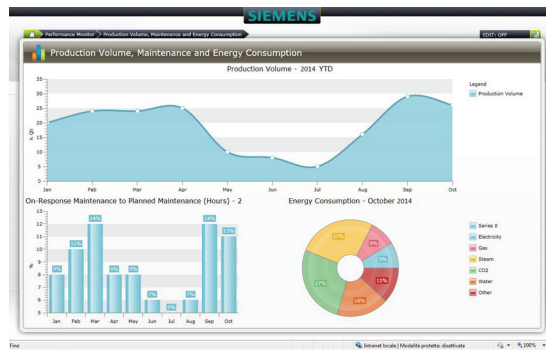
## What our Customers say:

"We wanted a system that was configurable, not a customized solution. The new system improves our degree of automation in operation. All settings are established through the MES, eliminating manual processes – and that means we make fewer mistakes than before. Another important aspect is traceability – that is greatly improved compared to what we had before."

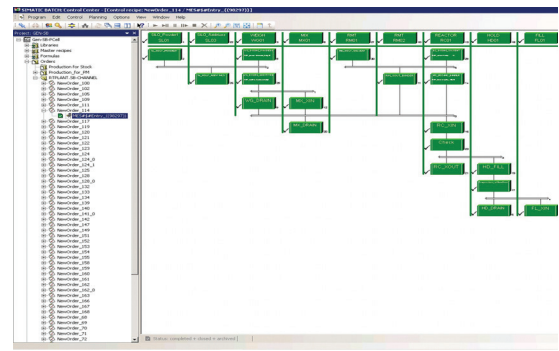
"The MES is the key element to guarantee the integration of all our components, ensuring optimal production efficiency."

*Danny Van Looveren, Process Control Systems Team Lead - Monsanto*

Smarter decisions, better products



The inform and visibility initiative - Manufacturing Intelligence dashboard



The vertical integration initiative - ERP and Simatic Batch connection

# Manufacturing Operations Cornerstones

## The issue

ERP and Batch systems are a standard in modern Chemical Industries. The Manufacturers often miss the link between ERP and the Batch/Control systems. This leads to a lack of business continuity and to a large margin of errors in data flow integrity (Data Integrity is the Key).

The chemical market constantly demands products with increased functionalities & performances. Globalization requires manufacturers to put on the market differentiated products taking into account local consumer preference and regulation. In the this scenario the product research and development become a key driver to be successful on the market (Product Ideation and Industrialization is the Key).

Managers need the right information at the right time to make quick and effective decisions. Plant and lines operator needs to access production related information with the right level of detail and real-time update (Data Visibility is the Key).

Manufacturers need agile supply chains, guarantee regulatory compliance throughout the entire product life cycle and synchronized production operations (A Wall-to-wall integrated manufacturing solution is the key).

## The Solution

SIMATIC IT offers different initiatives and solutions focused on customers key Manufacturing Operations needs.

The Vertical Integration Initiatives bridge the gap between the enterprise-level and the batch systems with the introduction of a MES layer and is addressed to those customer that want to ensure data integrity . The initiative is fully based on the standard SIMATIC IT Primary and Secondary Management bundles.

The Product Formulation initiative leverage on SIMATIC IT R&D Suite and allows to manage the company entire R&D process starting from the specification of a new project right up to the final product design and to a smoothly transfer of the recipe to the manufacturing area for product industrialization.

The inform and Visibility initiative leverage on SIMATIC IT Reporting Framework and Intelligence Suite and gives manufacturing operators and decision makers increased visibility into plant information and key business data through reports dashboards and scorecards.

The Production Optimization and Operator Guidance Initiative is a fully interactive wall-to-wall MES solution to manage the entire production process including logistics, Manufacturing Management, Quality Management, Line Monitoring , Asset Management and Manufacturing Intelligence.

## The Benefits

- Integrity of the data flow across ERP, MES and automation systems
- Business Continuity Plan (BCP)
- Efficient and streamlined R&D processes
- Faster and at lower cost new product development
- Shorter time-to-market
- Reduces cost of regulatory compliance
- Intellectual property protection
- Real-time production monitoring and total operations intelligence
- Reduced variability and regulatory compliance support optimal supply chain management
- Optimizes asset utilization and reduces downtime
- Wall To Wall Genealogy

## Find out more

[www.siemens.com/mom](http://www.siemens.com/mom)

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