

INTELLIGENT MANUFACTURING

Unifying refinery operations across processes and organizational boundaries

How would your downstream operations perform if connections between people, processes and technology functioned smoothly?

Many downstream organizations face process and technology challenges that produce significant operational inefficiencies. Among these challenges:

- Disconnected systems present barriers to effective decision making across the operation.
- Extensive time spent in data access and analysis result in productivity loss, missed opportunities and equipment concerns.
- Organizational siloing causes ineffective communication between stakeholders which in turn can produce suboptimal results.
- Lack of standardization of data and content sites across refineries lead to time and productivity losses.
- Lack of automated processes to support shift handovers cause more time leakage.

The intelligent manufacturing model combines process and technology to offer the opportunity to eliminate these and other challenges that negatively impact downstream operations. Integrated and streamlined workflows underpin the model, and a common view to refinery business enables shared understanding of forecasts, operating capabilities, issues and risks.

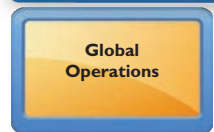


BENEFITS

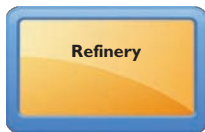
- Significant cost savings in system support, maintenance and resource effort
- Ease of access to key metrics, data from different sources, engineering and procedural content, and collaboration
- Tailored visibility and streamlined navigation through role-based views
- Enriched communications given shared views of operating parameters across shifts, teams, departments and the organization
- Enhanced transfer of good practices across refineries through collaboration capabilities
- Improved productivity of five to ten percent has been observed as a result of reduced time spent on data searches and manipulation.



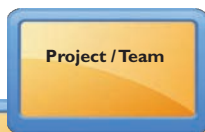
- Single online resource that integrates information across all functions and organizational levels
- Access to information is permission-based and tied to the user's role



- Executives
- Management



- Refinery Leadership
- Refinery Superintendent



- Operations
- Shift Supervisors
- Maintenance



Wipro applies role-based views, workflow functionality, back end systems integration, cross-refinery search, dashboards and support for shift handovers. For ongoing results, we bring background in sustainability techniques for coaching and reinforcing refinery best practice cross-pollination through subject matter expert communities.

Companies can redefine their own operations and envision bottom line improvements through hands-on interaction with Wipro's example integrated manufacturing portal. This interaction supports custom design of the right intelligent manufacturing approach to meet business goals.

For more information on Wipro's manufacturing team of practitioners, contact us. Wipro's seasoned team of manufacturing consulting and technology professionals offers global reach and deep domain expertise in helping downstream manufacturing businesses implement integrated, scalable and multi-faceted solutions. We bring new thinking, proven experience and insight to a company's intelligent manufacturing strategy.

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KEY SUCCESS FACTORS FOR INTELLIGENT MANUFACTURING

Integrate and deliver a shared operating portal

- Re-invent and enhance processes
- Involve end-user community from design through implementation
- Incorporate best practices for governance, decision-making and business ownership
- Establish continuous improvement to sustain and enhance ongoing results

Sustain a subject matter expert community

- Identify the right performance indicators and make them visible to those who can influence them
- Reinforce sustainability through an approach for harnessing and sharing knowledge
- Track effectiveness by monitoring business outcomes
- Capture, classify and share best practices, successes and lessons
- Apply blended concepts to reinforce employee engagement – coaching, training, promotion of the role of the expert, reinforcement through metrics