Real-time Performance Management
The Next Frontier in Operational Excellence

Real-time Performance Management (RTPM) from Schneider Electric is both an approach as well as a technology offering as part of its broader solution for Integrated Operations Management in the Oil & Gas industry.
Defining Real-time Performance Management

To define RTPM, it helps to answer the following questions:

• What is performance management?
• What is the process of managing performance?
• What is the impact of time on the management process?

What is performance management?

Performance Management is a rich topic, with the term applied broadly to cover both process and enabling technologies. It involves a number of activities, from planning, target setting, work execution, results monitoring, to corrective action including re-planning, etc. What is relevant to our definition is the fact that Performance Management is largely a backwards-looking exercise (even in forecasting where past data is used to help predict the future).

What is the process of managing performance?

From an execution perspective, management of performance is a closed-loop process. In other words, the process of staying focused on a goal (target KPI) involves detection of any deviation from the goal, understanding the process context to assess various options, making a decision on the most appropriate corrective action (provided one has the authority to do so), and finally ensuring that the decision actually gets executed or acted upon.

The process loop is technology-agnostic as it can be entirely manual: detection is the result of human observation; the use of experience to understand the problem context; the capability and authority to make a decision; and carry out the action, etc.

What is the impact of time on the management process?

Small leaks, left unattended, lead to large losses over time. Thus, time becomes the critical element, for example, how long it takes the process to complete the loop. The longer the delay, the more one strays “off-course,” and conversely, the closer the process loop gets compressed to real time, the more likely that the added cost of the corrective action is minimized. Simply stated, the prefix “Real Time” refers to closing the gap in a systematic manner where one approaches closer and closer to zero latency between “knowing” and “acting” within the larger Performance Management framework.

Applying Real-time Performance Management in Operations

Enabling a true performance-driven enterprise requires more than developing a digital dashboard. The four key pillars of effective Real-time Performance Management work together as follows:

Aligning the hierarchy of metrics: Closing the contextual gap means that operators and shift supervisors must be able to understand the real-time financial impact and strategic alignment of decisions and issues. Conversely, upper management needs a direct line of sight into the leading indicators and how they are performing in real time at the execution level.
Developing near-real-time dashboards: Once the KPI hierarchy has been decomposed through to the operator level (including the financial view), it is embedded in the dashboard to ensure that at every level there is a real-time view of execution in an integrated, strategic context, combining operational and financial KPIs for all stakeholders.

Empowering operators: In order for corrective action to be executed in a timely manner, those closest to the front lines must be empowered to act in a way that is compliant with the defined operational procedures.

Creating a culture of accountability: In a culture of accountability, people at every level of the organization are personally committed to achieving key results set by the organization, and they never wait to be asked for a progress report or a follow-up plan. Instead, they report proactively and follow-up constantly, diligently measuring their own progress.

Integrity Operating Windows as part of Real-time Performance Management Solution

A key goal of operations management is to ensure plant safety while maintaining high economic efficiency. In a typical production facility, operations personnel deal with thousands of operating limits and operating parameters, making it impossible to effectively monitor them and take timely actions.

The downside is that critical operating situations can be missed, leading to potentially serious safety accidents and loss of productivity. Integrity Operating Windows (IOW) capability determines how KPI excursions are handled. Excursions are captured by the real-time monitoring engine, the associated workflow is triggered and the workflow engine executes the workflow steps. These could be instructions to automation systems (in case of a critical violation) or notifications and alerts to personnel associated with the KPI or asset who can then use the collaboration platform to resolve the issue. Using the process logging tool, a knowledge-base of excursions and actions taken can be built and referenced in the future.
Client Example: Empowerment with Real-time KPIs

A client in the energy industry facing cost pressure chose Schneider Electric to implement Real-time Performance Management at two of their plants. Real-time financial metrics (referred to as Dynamic Performance Measurements) were created to calculate costs and profits for each process unit and area. Real-time dashboards provided clear and simple feedback, enabling operators to think and act strategically, helping improve the business and build the knowledge and skill base of its operator pool.

As shown in Figure 2, the integrated view of operational and financial measures was so effective that by the end of the second month of deployment, operators consistently minimized the operating cost per unit (represented in yellow dots) compared to the large variability in the baseline month (represented in blue dots). This culture of accountability empowers front-line workers, arming them with the knowledge to make decisions that impact the company’s bottom line. This the promise and potential of Real-time Performance Management.

The Schneider Electric Advantage

Many dashboard providers can display operating information (mostly from the process historian). However, Real-time Performance Management is more than a digital dashboard. It requires structuring and linking KPIs, standardizing and embedding business processes, having a solid operations management software foundation, and a robust architecture that can facilitate data and application integration. Schneider Electric has the software tools, the domain expertise, the methodology and the consulting experience to help you along the Real-time Performance Management journey, resulting in less risk and faster time to value.

SUMMARY

Integrating financial metrics with operational metrics along the entire performance hierarchy provides real-time insight to the right people who are empowered to take the right action at the right time. This real-time sense-and-response capability enables companies to achieve:

- Improved Equipment Reliability
- Higher Asset Utilization
- Improved Operations Safety
- Lower Operating Costs

While effective in all industries, Real-time Performance Management delivers the largest benefits to heavy process industries like Refining and Chemicals.

TO LEARN MORE

For more information about Real-time Performance Management and our half-day workshops on Integrated Operations Management Systems, contact Omar.Halaseh@schneider-electric.com.