Real-Time Process Intelligence in Industrial Automation: Enhancing Efficiency and Productivity

RTPI is the concept of delivering operational intelligence about business production as it occurs. It involves collecting and analysing low-latency data to identify operational elements that are restricting the facility from reaching its output potential. The new knowledge delivered directly leads to production gains, supports improved decision making and facilitates predictive analysis.

Key Deliverables using Real-Time Process Intelligence

- **Determine What, Where, When -** Real-time monitoring links overall results to actual unwanted events and why they occurred. Team engagement increases when they can identify where to look.
- **Immediate Issue Rectification –** This instant recognition enables quick response minimising the impact on operations and ensuring smooth workflow.
- **Improved Efficiency and Output –** RTPI focuses on getting more out of the plant while it is running. Higher utilisation in both unused capacity and effective production time delivers higher efficiency. This efficiency gain directly translates into cost savings and improved profitability.
- **Identify Bottlenecks –** It is rarely the whole line that is holding up production, so the RTPI tools include identification of what bottlenecks are affecting output, under what circumstances the bottlenecks change their effect and how they are affecting the results.
- **Pre-emptive Resolution –** Advanced analytics provide alerts based on current operation. AI can identify changes in the process and coupled with algorithms learnt from normal operation, flag potential issues affecting production before they occur.
- **Decreased Costs –** A key strategy in RTPI is to lower the cost of resources, especially relative to the reduction of material waste and use of energy.
- **Data-Driven Decision Making -** Real-time data analytics provides valuable insights for decision-making. Organisations can base their decisions on real-time, accurate data, minimising guesswork and enhancing the overall decision-making process.
- **Continuous Training and Skill Development** - Ensures that the workforce learns about the process and maintains engagement in the overall production objectives. Operational personnel become more initiative-taking.

After implementing Real-Time Process Intelligence strategies, production meetings changed from global team questions like 'Where did we lose 5% of output on Tuesday" to specific directions to stakeholders "Please investigate why the line was running at 70% speed for 3 hours from 3:00 am on Tuesday. It appears to be a speed setting issue."

If you would like to be a company benefiting from RTPI, Triple i have experience in industrial processes and have developed clear strategies to deploy RTPI.

For more information visit our website at www.triplei.com.au/real-time-process-intelligence/.