WIPRO
*Applying Thought*

# Energy Utilities: Powering the Next Wave of IT-OT Integration

Leveraging ERP for exponential returns from OT investments

# Late to the ERP party

Energy and Utilities have traditionally been conservative in their approach to innovation and technology, especially when it comes to Business Solution Platforms. With one eye on safety, the industry has historically been risk averse and has had its arms tied by regulations. Secondly, planning processes in the industry span 15 to 20 years, making it tough for decision-makers to place their bets on technologies that will succeed in the long-term. The industry can't really be blamed for being slow when it comes to new technology adoption. But there are many favorable aspects that the industry can lean on to launch large-scale transformation projects. This transformation is becoming essential in the face of business changes and a world where consumers are tech-savvy.

Utilities have fallen behind other industries such as Retail, Consumer Goods, Banking and Manufacturing that have always needed to be on the cutting-edge of technology. These industries adopted ERP in the 80s. Today, ERP has become a rugged, reliable and valuable tool to generate efficiency, build data-based decision-making capabilities, support regulatory incentives and deliver outstanding customer service.

But the real good news is this: Utilities have always been at the forefront of connecting geographically dispersed assets and their operations. Even though the infrastructure is old-styled, reminiscent of the 1970s, the industry can lay claim to being early adopters of Supervisory Control And Data Acquisition (SCADA) or PLCs (Programmable Logic Controls) to stay on top of operations.

In other words, there is a dichotomy that must be addressed. While Utilities are making tremendous progress, adding advanced sensors and devices to their networks that drive smart grids and help them align with the growing imperatives of renewables, they are also beginning to realize that IT in the form of ERP will substantially multiply returns on OT technology investments.

Today, ERP has become a rugged, reliable and valuable tool to generate efficiency, support regulatory incentives and deliver outstanding customer service.
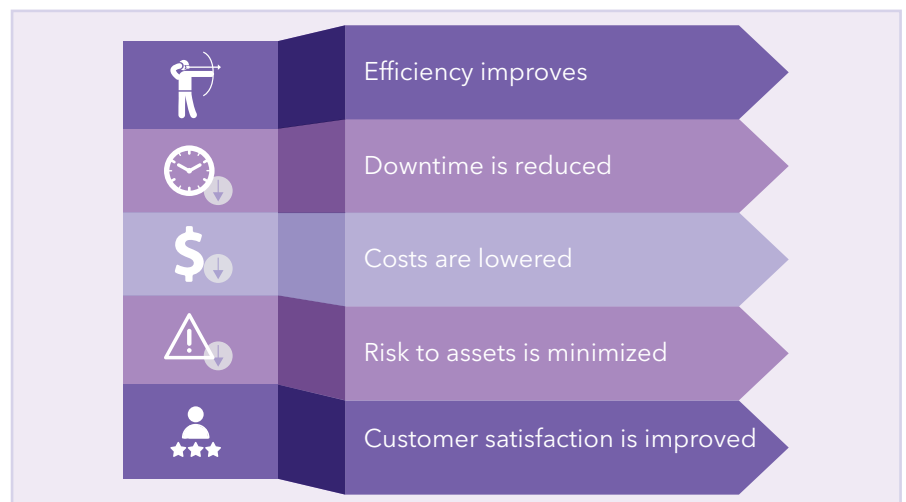
## Tapping into never-before opportunities

The IT-OT integration space is, therefore, gaining in importance. It presents never before opportunities within the industry. These include the critical ability to ensure predictive maintenance that lowers downtime and costs while simultaneously improves safety and customer satisfaction. Take the simple every day case of a faulty plant compressor that produces abnormal vibrations. OT will have noticed it and would have done a comparison with vibration patterns from scores of other compressors. It would have reached the conclusion that the compressor needs replacement. This is, doubtless, the right conclusion. But today's systems do not allow operations teams to quickly look up the action taken the last time a compressor failed, the spares were used for repairs, the materials are available in the inventory for current repairs, the lead time suppliers need, are the skills to repair the compressor available in-house or must be requisitioned from a supplier. All these mapped against how critical the compressor is to current operations and a forecast of near-future demand. To do this with unerring accuracy, IT-OT integration must become a reality.

While OT generates readings, IT provides an update on how best to manage it so that:

- Efficiency improves
- Downtime is reduced
- Costs are lowered
- Risk to assets is minimized
- Customer satisfaction is improved

## Shining a light on the road ahead

In the excitement of undertaking IT-OT integration, Utilities must keep two critical factors in focus: First, create a roadmap – identify use cases that ensure higher efficiency that guarantee the overall success of the IT-OT integration initiative; second, place inordinate stress on security – ERP systems entail opening enterprise systems to suppliers, support partners and business associates in order to ensure velocity of business. This could lead to security issues.

As far back as 2007, the US government demonstrated how hackers could bring down power plants by injecting a mere 21 lines of code into SCADA networks[1]. In early 2016, a Western Ukraine Power Company reported[2] that the power cut in December 2015 was caused by hackers sabotaging operations and management systems, impacting 80,000 consumers. As IT-OT convergence becomes everyday reality, cyber-attacks and risk from malware will increase at equal pace, turning security into a real challenge that Utility organizations must manage.

No discussion on IT-OT integration can be complete without a mention of the need for cultural change management. While identifying the right use cases determines ROI and managing security is a must, it is organizational culture which is the hidden enemy of IT-OT integration. The people who manage OT and those who manage IT come from very different backgrounds. Their work environments are dramatically different and their mind-sets very dissimilar. Ensuring they work together as a team is a challenge organizations fail to adequately recognize.

At the bottom of this is the real pressure of profitability. While operational costs continue to rise, regulations prevent Utilities from increasing energy prices to meet those costs. Margins are becoming thin. The only way to improve margins is to improve operational efficiency—and this is where IT-OT integration becomes an unavoidable imperative.

For more information, please write to **sap.practice@wipro.com.**

# References

[1] **Aurora Generator Test** : https://books.google.co.in/books?id=oh46MkwJIPgC&lpg=PA118&ots=qzXGFjt54Y&dq=Aurora%20Generator%20test%2021%20lines&pg=PA118#v=onepage&q=Aurora%20Generator%20test%2021%20lines&f=false

[2] **Hackers caused power cut in western Ukraine – US:** http://www.bbc.co.uk/news/technology-35297464

## About the Author

**Shripad Ghanekar** is the Head of Energy, Natural Resources & Utilities for SAP at Wipro. With over 18 years of experience in the field of SAP, Shripad has done functional consulting, programme management to leading industry business functions, essentially in the Energy and Utilities industries and within HR line of business.

## About Wipro

Wipro Ltd. (NYSE:WIT) is a leading information technology, consulting and business process services company that delivers solutions to enable its clients do business better. Wipro delivers winning business outcomes through its deep industry experience and a 360 degree view of "Business through Technology." By combining digital strategy, customer centric design, advanced analytics and product engineering approach, Wipro helps its clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, Wipro has a dedicated workforce of over 160,000, serving clients in 175+ cities across 6 continents. For more information, please visit **wipro.com** or write to us at **info@wipro.com**

**DO BUSINESS BETTER**

**DO BUSINESS BETTER**

CONSULTING | SYSTEM INTEGRATION | BUSINESS PROCESS SERVICES