

Leveraging the power of IoT

7-8 minutes

'Industry 4.0' or the emergence of Internet of Things (IoT) has brought about dramatic changes in the way we live and how large enterprises function. Operators of large refineries and other manufacturing companies can now connect data from different systems for better analytics. They can save on energy consumption and ensure efficient functioning of a factory by monitoring through a click on a smartphone.

Honeywell Connected Plant (HCP) offers a suite of solutions to its customers that enables digitisation in the manufacturing industries. This transformative solution helps improve the efficiency and profitability of their operations. Sharing his perspective and insights on how this solutions suite helps enterprises save on energy and improve efficiencies, Ashish Gaikwad, Managing Director, Honeywell Automation India Ltd, says, "HCP technologies enable a

seamless integration of the entire value chain — from supply to the end consumer. The improved collaboration has empowered us to cater to market demands and needs.” A mid-sized refinery shutdown costs almost 5 per cent of the year’s production time due to unplanned downtime. It is possible to improve process reliability by 1 per cent, saving about \$25 million in overall productivity. That’s real return on investment.

Edited excerpts from the interaction:

How does the Honeywell Connected Plant suite fit into Indian conditions? What are its advantages?

India is on the cusp of two major revolutions — first, its transformation into a manufacturing hub and second, the digital transformation driven by the Government’s vision to digitise the economy to connect and empower the citizens of the country.

Honeywell supports this initiative with its ability to combine advanced software with physical products to provide value to customers across a wide variety of verticals. In the Internet of Things, we have the unique advantage of being on the ‘things’ side as much as on the ‘internet’ or software side. Thousands of Honeywell products in large industrial establishments give us the advantage of ready access to big data.

An example of how Honeywell can help the Indian market is the solution we have offered to the Reliance Jamnagar refinery. It faced the challenge of connecting different departments and operators across the enterprise for real-time analytics to increase efficacy in a very large operational set-up.... a Manufacturing Information Intelligence System helped improve enterprise connectivity, increase real-time analytics and, ultimately, the profitability of the refinery.

How are you deploying these technologies to mid-market segment enterprises?

Our strategy is to create a common infrastructure for all the businesses residing in one belt by providing the applications for safety, productivity, and reliability, so that the overall cost can be shared by the enterprises. This entire collaboration to provide a common technical support to a host of companies is based on our cloud-based solution — the Honeywell Sentience platform. It delivers robust and secure technology capabilities and allows collaboration with original equipment manufacturers in the implementation of cloud services. We have already partnered with close to 20 OEMs.

What has gone into the making of this technology solution and how

does it help a manufacturing entity?

The manufacturing industry is rapidly changing due to automation. Process safety, efficiency, reliability, productivity, and security continue to be the key drivers across sectors. As India strives to be a global manufacturing hub with best practices on a par with global standards, consistency in quality, while keeping prices competitive, could be a challenge.

However, at Honeywell, we recognise that there is an opportunity to help the manufacturing entities to be competitive without incurring additional material costs. We have been at the forefront to leverage the power of IoT to solve these challenges by consolidating data from multiple systems in the cloud. We apply higher-level analytics and leverage domain experts who are often physically not present at the customer site.

How does the IoT concept fit into the manufacturing system? Does it not disrupt the plant set-up, forcing people to think and work differently, and also making some jobs redundant?

We believe that positive disruption leads to transformation. IoT is the disruptive force of the 21st century which will shape product development trends over the next decade and beyond. These technologies help integrate all the processes, taking into

consideration the related factors such as collaboration, data management, data control, and data analytics.

Manufacturers can unlock additional value by integrating smart-edge devices, secure cloud-based infrastructure and operational process knowledge. We can run plants with software-based systems that employ big data analytics. These systems yield smarter plants that are capable of deep self-diagnosis and self-learning. We can sense operating anomalies days, weeks, and even months before they become problems. With automation emerging as a disruptive force, India will have an edge over other countries with its IT-savvy young population. This will open doors to a new era of gainful employment. In a manufacturing set-up, IIoT helps reduce manual processes; however, the worker remains a critical element. While work can now be managed remotely from a safe environment, it still takes a person to run the plant.

To fit into these new opportunities the workers will require different skill-sets – one among them is data visualisation. The workers will benefit from new control rooms using advanced technologies like touchscreen, integrated large displays, and better interfaces to make sense of the data being presented.

In the future a Connected Plant will play a big role in streamlining

functioning and bringing about savings on cost. What is Honeywell's experience in this space?

The strategy aims at simplifying business needs and improving performance by connecting the processes, assets and people. Manufacturers are looking to increase production from existing assets without the additional burden of new investment.

For instance, a big problem in a refinery is the unplanned downtime which might be due to an equipment failure or a human error. Such unplanned shutdown leads to waste of time and could affect production adversely in terms of cost. Such solutions help the oil and gas industry address these issues. Sensors installed in the plant can detect and send continuous signals and data even before the fault occurs and thereby helping manufacturers save cost and time.

Honeywell's Uniformance Asset Sentinel, an analytics platform for digital intelligence, continuously monitors the health of the equipment and processes, enabling industrial facilities to predict and prevent asset failures and poor operational performance.