IoT WoRKS
by HCL Technologies

DELIVERING MANUFACTURING EXCELLENCE THROUGH IoT

THE TRANSFORMATION AT THE GATES

A silent revolution is sweeping through a plethora of manufacturing industries around the world, changing processes and optimizing how businesses operate their key systems.

The Internet of Things (IoT) is without doubt - game-changing innovation at its finest - transforming organizations into leaner, more profitable enterprises ready to take on the challenges of tomorrow.

In fact, 35% of US manufacturers currently collect data using sensors to enhance manufacturing or operating processes, while 34% feel it is 'extremely critical' that modern manufacturers engineer IoT strategies into their operations.

US MANUFACTURERS

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Clearly then, the effective application of IoT solutions on current/legacy systems could engender a comprehensive overhaul - impacting every sphere of how your business runs itself.

Let's look at how manufacturing units are adopting IoT implementation and propelling large-scale improvements at the speed of light.

THE IMMEDIATE ADVANCEMENTS AND OPTIMIZATION FRAMEWORK

The potential for IoT to improve efficiency in production process and supply chain management in manufacturing is vast.
For instance, Del Papa, a Texas-based distributor of beer, water, and energy drinks, has adopted the IoT technology at its Texas City facility.

The application helped reduce energy costs and drive faster deliveries. The company can now monitor and action real-time changes to the heating, ventilation, and the air conditioning system remotely.

To begin with, IoT could be employed to increase productivity and reduce safety hazards at the workplace. Companies could now utilize a 360-degree view of the all-round operations blueprint; unified and accurate visibility for quicker decision-making and superior performance.

Information technology, sensor networks, computerized controls, and product management software are consistently being used to improve efficiency at the plant level.

Additionally, consistent connectivity with the Internet implies agility and automation - systems can now be monitored and controlled remotely. And what's more a linked and intersecting point of control would mean that multiple silos are now available for regular monitoring, driving a real-time approach to problem-solving, error-reduction and performance management.

THE WIDE-RANGING IMPACT OF IoT

If the above reasons aren't enough to intrigue you about the transformational capabilities of IoT, there are a wealth of arguments detailing why the application could have far-reaching effects on your organization as a whole:

EVOLVING CUSTOMER EXPECTATIONS: Consumers now demand personalized products and higher levels of service, prompting companies to look to compress business cycles.

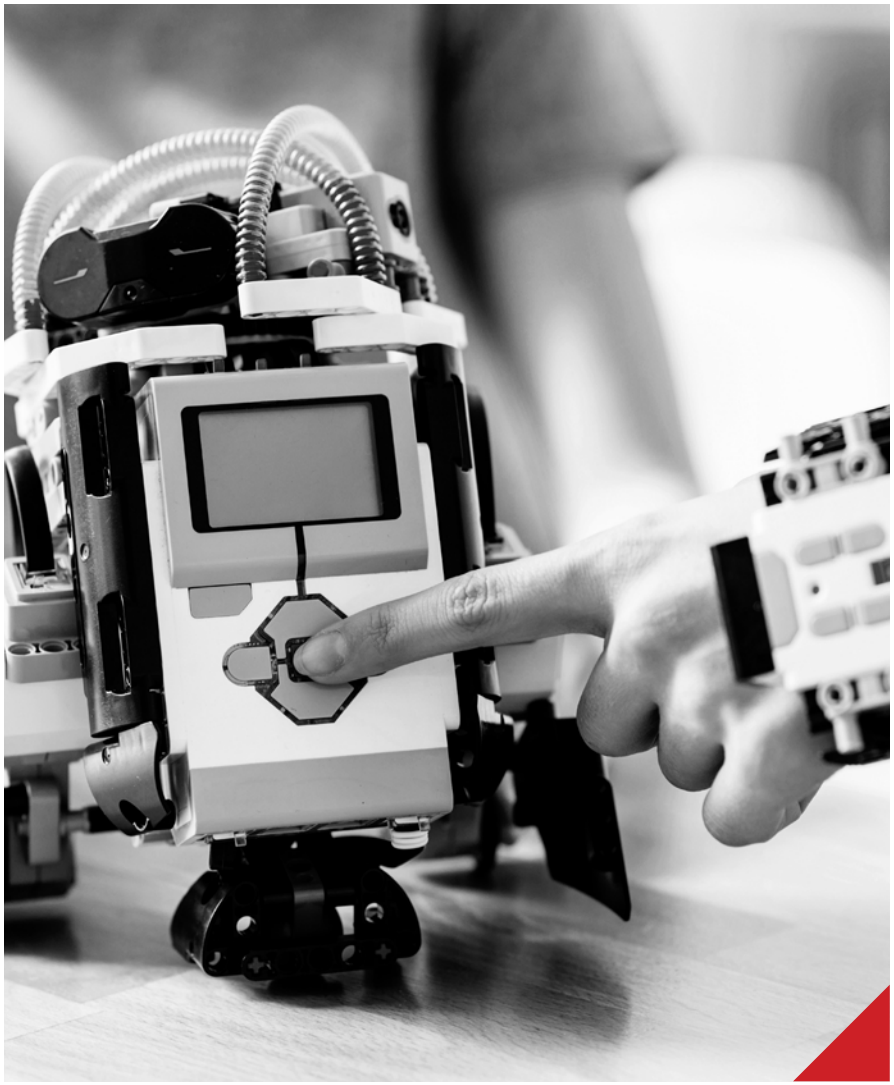
GROWING MARKET LANDSCAPES: Manufacturers must keep tweaking supply chain operations and product strategies to support the growth in emerging markets.

LAYERED VALUE CHAINS: Companies are parts of and manage complex, dynamic, and overlapping value chains in their quest for new opportunities across the world.

EMERGING TRANSPARENCY REQUIREMENTS: Companies can action greater transparency and traceability to strengthen their ability to fulfill product quality and safeguard their reputation.

CUTTING-EDGE DIGITALIZATION: Operational technology and information technology, which includes the IoT, are necessary for manufacturing companies to deliver their products and stay abreast of state-of-the-art operational enhancements.

ADVANCED INSIGHTS AND ANALYSIS: Companies are looking for improved insights as they analyze greater volumes and variety of data.



THE STORIES OF SUCCESS - ARCHITECTING WINNING IoT MECHANISMS

Manufacturing units that embraced IoT applications have witnessed improvements in their productivity and performance.

For instance, **King's Hawaiian, an American food and beverages company, could upgrade to an additional 180,000 pounds (double its earlier amount) of bread each day after it installed connected technologies.** The company installed 11 connected devices at its new factory, linked with a software that allowed the employees of King's Hawaiian to access past and real-time data.

Over 10,000 sensors keep track of the conditions and machine operating data in real time at a General Electric battery plant.

These help maintain a steady vigil on production processes and make adjustments in real time and mapping battery performance to particular batches.

THE ROAD AHEAD - ENABLING SERVICE EXCELLENCE WITH PREDICTIVE ANALYTICS

IoT applications generate massive volumes of data – helping to map future production trends and discern proactive solution sets based on event probability, timing, resource availability, and location.

'Predictive maintenance' helps reduce costs, minimize downtimes, and increase productivity. It ensures that challenges historically associated with predictive analytics are eradicated, propelling quality and error-recognition. Using predictive analytics, truck fleet operators, for instance, can detect when a mechanical failure is likely to occur with the help of sensors in vehicles.

Tracking and tracing options using sensors can also enhance a company's logistics operations. This is further accentuated by the ubiquity of mobile phone networks and tracking technologies such as the global positioning system (GPS).

Organizations can now receive continuous location information, make route changes, monitor the quality of goods, and optimize costs.

IoT with its transformative potential is here to stay. Progressive manufacturing organizations must therefore rise to the occasion and adapt themselves to this rising tide. The future then for enlightened leadership would be to assess their IoT-readiness, enable tech-upgradations and embrace the revolution at hand.

WATCH THE IoT WoRKS™ VIDEO

To request for a complementary IoT Works™ roadmap workshop - Write to us at iotworks@hcl.com