IoT WoRKS *by HCL Technologies* | **DRIVING FUTURE WITH IOT POWERED UTILITIES**

THE COMING OF A NEW ORDER

The Internet of Things (IoT) is disrupting traditional business operations in the utilities industry, helping formulate systems that enable energy usage tracking, remote network installations management, and distribution automation.

In fact, amidst the vastly altered global energy and resources landscape, IoT applications can help organizations smoothen intersections between assets, products, and consumers.

The traditional business model must therefore give way to a modern and optimized framework, based on the transformative potential of IoT implementation.
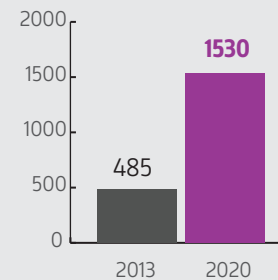
Global number of devices to grow from 485 million in 2013 to 1.53 billion in 2020

AN INDUSTRY IN TRANSITION

Energy utilities, eager to tap this transformative potential, are investing heavily in implementing IoT technologies in their daily operations. In China, for instance,

the annual spending on smart grids is likely to total $20 billion. Of this, $2 billion would be spent on smart meters alone.

This spending is part of the initiative to comprehensively overhaul outmoded processes and systems. Several countries, including those in Europe and North America, have grids and workforce devices that continue to rely on legacy assets. There is a pressing need for refurbishing of these grids and assets – failing which severe losses and dents on reputation are estimated.

Utility service providers are increasingly expected to deliver on sustainability targets, and push for rapid de-carbonization. Clearly, this heralds the widespread use of renewable energy generation. It also redefines focus on consumer involvement, energy efficient mechanisms, lowering of peak demands, and electrification of transport services with solutions such as electric cars.

Major players in the European Union, Asia Pacific, and North America are opting for 'widespread liberalization' to achieve reduced electricity prices and enhanced customer care services. Again this fundamentally poses a challenge - increased consumer churn-rates and the impetus to identify new revenue streams.

Additionally, operational efficiency and service innovation, necessary to remain competitive in the new market scenario, are driving utility service providers to re-imagine their IT infrastructure investments.

PRINCIPAL INNOVATION-DRIVERS

The three common IoT applications relevant for the industry are:

- **Maximizing processes with Smart grids:** Sensors on grids can improve utility performance and efficiency. By using the sensors in IoT solutions, the utilities industry can establish networks across whole geographic areas. These grids, which can be monitored in real time, will be able to adjust and share peak time loads. When these sensors are embedded with software, they can be used for advanced analytics and asset health determination. Massive incoming data volumes can help to refine approach - improving energy efficiency, customer experience, and overall services. Recent studies suggest that **revenues for smart grid sensors will grow 10 fold between 2014 and 2021.**

- **Accessing data with Smart meters:** With smart meters, more granular information can be recorded without any human intervention. These meters can provide real-time information on electricity, gas, and water consumption, to be later employed by utilities and consumers to ascertain usage patterns and access billing information based on time of use or network status. Smart meters are the 'most popular IoT device'.

The number of installed devices is expected to jump **from 400 million in 2014 to more than 925 million by 2020.**

- **Monitoring systems with Asset maintenance:** Companies can also utilize IoT sensor devices such as drones, embedded cameras, and robots to understand the condition of assets in real time. These devices can collect a variety of information, including temperature, pressure, and calibration, helping to ensure conduct preventive maintenance on assets.

INVESTING IN THE FUTURE

Both consumers and utility companies stand to garner significant gains from the use of smart meters, smart grids, and IoT-enabled appliances. IoT applications are today paving the way for improved asset performance, cost reduction, minimized supply chain risks, and are also helping extend greater control to internal employees and consumers.

To help navigate this complex and dynamic territory, HCL's IoT Works combines the best of both worlds – an in-depth knowledge of the industry and composite domain expertise. This would help stabilize the transition process, maintaining a proactive, sustainable and calculated pathway that rationalizes your change-management plans.

WATCH THE IoT WoRKS™ VIDEO

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