ABB drives the Internet of Things, Services and People

ABB has been well established as the driver of digitalization in power and automation for many years. Based on the foundations already laid – more than half of our products are software-based – we continue to advance digital industry through our concept of the Internet of Things, Services and People (IoTSP). Integrating people and services into a holistic view of the technological landscape of the future differentiates ABB from others in the industry. Digitalization is driving a fourth industrial revolution that is transforming many sectors of business more profoundly than at any time since the start of the industrial era. Key drivers are the increased availability of data, ubiquitous connectivity between and among machines and people, and the rapid growth in processing power.

As a leading global technology company in power and automation ABB's strength is deeply rooted in technological innovation. ABB is at the center of current developments in clean energy, smart grids, microgrids, robotics, industrial asset effectiveness and sustainable transport. ABB's IoTSP concept connects the Internet of Things (IoT) with advanced services to enhance collaboration of machines, people, and ultimately of plants and companies, driving competitive advantage for our customers. Exchanging data by utilizing the Internet as an open platform paves the way for a wide range of applications that optimize and improve the flexibility and productivity of industrial and power processes.

The key components of the IoTSP:

Things are devices equipped with sensors, computing power and software. These devices have been used for many years in ABB's automation and network control systems serving customers worldwide and, as such, were essential components of an 'Industrial IntRAnet.' New technologies such as mobile communication and cloud computing have helped the Industrial IntRAnet evolve into the Industrial IntERnet. "Industrie 4.0" and the "Industrial Internet Consortium" are initiatives ABB was involved in from early on. They contribute core elements of our understanding of the IoT concept, which we have expanded into the IoTSP (because the IoT is a means to an end).

Advanced services that make use of actionable information derived from the data gathered is a key differentiator for ABB.

Supporting customers – people – through advanced analytics so that they make the right decisions is a key ingredient for success across factory, company, and even country borders.

Driving the IoTSP strengthens ABB's position as a pioneering technology leader and supports our Next Level strategy of focusing on customer needs. The IoTSP creates opportunities to provide new advanced service models in collaboration with partners and customers, building on our already established services.

Examples of how ABB utilizes the IoTSP include:

- Monitoring more than 5,000 robots in service around the world from our center of competence in Bangalore, India, since 2006
- Monitoring Gearless Mill Drives in mines from a center of competence in Europe since 2011
- Transforming Boliden AB's Garpenberg mine in central Sweden into one of the world's most efficient and productive mines in 2015
- Route-optimization software solution for 140 vessels of the Maersk Line
- Monitoring more than 500 vessels globally through our Integrated Marine Operations Center
- Introducing in 2015 ABB's Yumi, the world's first collaborative robot capable of interacting with the environment, humans, other robots and machines
- Developing smart grid technologies
- Monitoring 20,000 substation transformers and breakers in the network of American Electric Power with an Asset Health Center to analyze asset health, recommend maintenance actions and prioritize replacements

ABB has the expertise, infrastructure and models to transform data into actionable information in order to help our customers interpret the information and drive optimization. Our strategy is to close the loop from the Internet of Things to the Internet of Services and People. Doing so promises a transformational increase in industrial productivity of 30 percent or more, which will help to solve the underlying causes of key challenges that are affecting the world today, mainly climate change and weak economic growth. Utilizing the IoTSP is enabling a successful paradigm shift that manages machines, services, and people — with the goal of improved productivity and sustainability to create a better world.

For further information:

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