



The Internet of Things, Services and People: the future that is coming our way!

ABB is taking part in the broad debate about the impact that new technologies enabled by connectivity can have on our lives and on the way we do business. The company is contributing with innovations and concrete applications, demonstrating how this increasingly connected world can bring benefits to business. We met Mario Corsi, CEO of ABB SpA.

It all started with “the object”... that part of a system that simply and diligently carries out its work. Then the object became smart and developed the ability to collect information and data about its status and to send this data wirelessly. Finally, the smart object became part of a totally connected environment thanks to the internet and began to send data and interact with it and with the operators that manage the production process and its operations. Thus the Internet of Things, Services and People was born. But is this (already) the happy ending of this story or should we expect more?

We spoke to Mario Corsi, CEO of ABB SpA, who deals extensively with the subject of the Internet of Things in industry and the benefits that it can bring to businesses and society.

Mr. Corsi, there is talk of a fourth industrial revolution under way. What factors are leading to this momentous change in our approach to doing business?

We are witnessing an evolution that affects many aspects of our lives. First of all, we are seeing the cross-contamination of information technology innovations that have an impact on our factories. The convergence between these innovations and the production system is also facilitated by a significant reduction in the cost of sensors and devices for data collection, as well as by the increased processing power of modern computers and by the development of software that is increasingly efficient at analysing data and transforming it into information. The fourth industrial revolution will change the way we work and manage the assets in our factories. It will create new business opportunities, thanks to the Internet of Things, which will enable the reduction of plant management costs, the improvement of energy efficiency and the creation of new services. For many companies, this will entail a truly radical change to their business model.

Why does ABB go beyond the concept of the Internet of Things, which everyone is discussing, and expand it to encompass Services and People?

Our vision is to integrate the entire value chain that can be generated through this approach, putting the needs of our customers first. The Internet of Things refers to the set of “objects” (i.e. production assets) that generate and send data to servers (which can be cloud-based) for back-up, reporting, diagnostics and benchmarking. The Internet of Services on the other hand concerns the central and remote service units which, through constant 24/7 monitoring, provide analysis to optimize the plant and anticipate possible maintenance requirements. The Internet of People guarantees the availability of real-time information to the people who manage processes and services – anywhere, anytime. And



we believe that even in the digital age, humans, with their skills, expertise and professionalism, will continue to play the most important role.

What are the benefits of this interconnectedness?

There are benefits at a number of different levels. The first benefit directly relates to factory management. For example, it will lead to reduced energy consumption, increased production efficiency and reduced maintenance costs.

The second level will bring intelligence and connectivity directly inside the product, which will allow information relating to “production history” to be obtained, enabling traceability (which is extremely important in areas such as the food & beverage and pharmaceutical industries), along with information relating to the disposal of certain components that have reached the end of their lives or relating to the way that the end consumer will use the product.

If you then consider the impact that this product intelligence will have on the world of services, thanks to the enormous amount of available data, you realize how much further the horizon could still expand.

What challenges are companies facing? Is our industrial system ready to deal with them?

It is clear that companies must first understand the extent of this change and develop strategies to incorporate it into their processes, products and services. However, there are some difficulties that need to be solved at a national level: I am thinking about the definition of open standards for an architectural framework that effectively allows the integration and interoperability of systems. And about regulatory issues related to cyber security and data privacy. Also, we cannot fail to consider the skills that will be required of developers to create new models of computing and data analysis and of operators to carry out work in “smart” factories. All these aspects require attention, strategies, planning and investment, as well as the collaboration of institutions and private entities in order to efficiently direct their efforts. We are actively participating in this process and we are ready to offer our experience both as suppliers of systems and services and as a manufacturing company that is experimenting with and applying the Internet of Things, Services and People in our own factories. It is clear that proactive support from Industry Associations as well as a policy of incentives from the government are essential requirements to achieve this new paradigm, including when it comes to small and medium businesses, which represent a substantial portion of Italian industry.

Going back to ABB, which has always offered advanced automation solutions to process and manufacturing industries – how are you changing your offer?

Our experience in advanced automation and the vast size of our installed base are certainly an advantageous starting point. For a long time, for example, we have created remote control solutions for plants and off-shore platforms and supplied remote services for thousands of robots from a centralized service center, for both the utility and the marine industry. We will continue to work in this direction with our research and development teams.



In the marine sector, we would like to point to one of the success stories that has made us pioneers and key players in the Integrated Operations Center in Billingstad in Norway, from which ABB technicians can connect to any vessel navigating anywhere in the world if it is equipped with ABB technology. Thanks to sensors and software, ship owners and ABB engineers can access via satellite data related to on-board equipment and its performance, assess its condition and anticipate required future servicing, reducing inefficiency, disruptions and the high cost of shipyard maintenance. Access to equipment-related data enables ABB technicians to proactively report to ship owners any critical issues before they are even observed by the crew. To date, there are more than 500 ships connected to ABB's operations centre in Norway.

Let me mention a solution, presented at Hanover, that was entirely developed in Italy! Ekip SmartVision, a solution applied to our open Emax2 circuit-breakers that is able to control, manage and optimize loads and energy costs, increasing plant reliability with an increase in energy efficiency of up to 30%. Ekip SmartVision combines the connectivity and detection capability of Emax2 to a cloud platform that provides accurate information for advanced management services, remote monitoring and energy diagnostics. Energy consumption and cost trends are continually monitored and analysed, making the development of effective management strategies easier and faster. This solution, which is ideal for small and medium-sized companies and for commercial buildings, will be on the market by the end of 2016.

We conclude by returning to the original question. Should we expect even more?

We must continue to take advantage of all the technological innovations that surround us, aware that that there will continue to be increased, irreversible contamination between the sectors in which they are applied. It will take place at an exponential rate that has never been experienced before!