

# Alcimed

## Pioneers or followers, the industry players will all turn to the IloT

*The connected objects are more and more part of our daily lives: computers, mobile phones, but also watches, clothing and countless sensors for the home or the car. These technologies are changing the functioning of our society and our way of life. Originally associated to the consumer sphere, the Internet of Things (IoT) is more and more interesting for industrials.*

**Alcimed, a consulting firm in innovation and new markets development, comes back on the rise of the IloT - Industrial Internet of Things - essential building block of the "Industry 4.0".**

Paris, February 11th 2016 - Launched by General Electric (GE), the notion of IloT or industrial internet refers to the improvement of communication between people and industrial products (machinery, tools, but also vehicles, aircrafts, buildings...) to develop new services with a high added-value. The value chain of the IloT globally comprises three sets: the connected sensors and connected objects; the cloud infrastructure enabling the collection of the data, its transfer and its treatment; and finally the data analysis tools and services arising.

"The Internet of Things is still in its infancy in the industry, but its field of intervention is huge and its effects will affect almost half of the global economy. Just as the arrival of the Internet has significantly improved productivity, IloT, alongside robotics or 3D printing, may lead to major changes such as those from the previous industrial revolutions", says Arthur Torrin, Alcimed Consultant within the BU Energy, Environment and Mobility.

### The companies will have to focus their decision models towards the data.

By capturing and processing a large number of new data, IloT can improve the performance of machines and industrial processes, and minimize costs; thanks to new services such as the wireless management of machine (on computers or touch screens), predictive maintenance, virtual reality (to guide operators in their posts) or digitizing process.

### Important challenges of the IloT

**Security.** It will be necessary to secure the data that is passing through these ultra-connected ecosystems. This characteristic is shared by every players of the Internet of things even if the industries are particularly affected due to the confidential and critical aspect of their data. Moreover, with the development of the wireless management of machines, new forms of cyber-crime may appear against which industrials are not prepared yet.

**Standardization.** Today there is a real lack of language and universal protocol, which results in a lack of interoperability between systems. However, the added-value of the IloT will be completely released only if the standards allow interchangeability of systems and protocols. Consortia have been formed in order to establish all these standards and the best practices useful to the industry as the "Industrial Internet Consortium" founded by AT & T, Cisco, GE, Intel and IBM.

**Durability.** The digital technologies are quickly becoming obsolete while industrial cycles are usually long. A lack of interoperability would result in costly and complex replacements and it will be crucial that manufacturers take into account the specificities of these technologies, from the beginning.

As examples, the oil companies or water treatment companies can equip their pumps with sensors to predict failures and therefore minimize the loss of production and maintenance costs. The construction machinery manufacturer Caterpillar has meanwhile equipped its machines and engines with sensors to help users anticipate problems and manage their fleet more effectively. The IloT will benefit all industries and in particular the manufacturing industries whose productivity gains are estimated at nearly 30%.

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These innovations will change the basis of competition in the industry and new companies will emerge, such as Amazon and Google with the advent of internet. Indeed, players of the digital world are now able to compete with industrial equipment suppliers thanks to a new offer developed on their data and their treatment.

Just like GE, the companies which will react quickly and take risks by participating in the creation of industry standards and the development of concepts of the connected factory, will be the big winners. By investing more than \$ 1 billion and employing hundreds of developers, GE has put the odds on his side to develop its own software platform, Predix<sup>1</sup>. This platform was first used in aerospace where GE has capitalized on its expertise in the design of aircraft engines to develop predictive maintenance systems and to optimize the fleet of airline companies (by analyzing nearly 340 TB of million flights data). This cloud platform is now also used in many fields of activity, including health, chemistry or energy production.

"The manufacturers which do not quickly adopt these new solutions on their sites - often by lack of understanding of the potential implications - will take the risk to fall further behind in terms of innovation. However, either pioneers or followers, all industry players will finally take the turn of the IIoT", concludes Ronan Lucas, manager at Alcimed.

## **ABOUT ALCIMED**

ALCIMED ([www.alcimed.com](http://www.alcimed.com)) is a consulting firm in innovation and development of new markets, specializing in life sciences (healthcare, biotech, food), chemicals, materials and energy as well as in the aeronautics, space, defense, and public Policy. ALCIMED relies on a team of 180 employees, distributed by sector and able to take on extremely varied missions from marketing & sales issues (market research, targeting new needs, positioning a new product ...) to strategic issues (development strategy, research & evaluation of acquisition targets, organization of an activity, design / evaluation / deployment of public policies ...). The company is headquartered in Paris, and is present in Lyon and Toulouse as well as Germany, Belgium, Switzerland, England and the United States.

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<sup>1</sup> <http://www.fastcompany.com/3031272/can-jeff-immelt-really-make-the-world-1-better>