

# STAYING AHEAD OF THE TIMES IN THE AGE OF IOT

In this article, we explore CGI's outlook on the Internet of Things (IoT), by talking to Ralph Bisschops and Martijn Frints. What makes the company stand out from the rest in this dynamic competitive field?



Ralph Bisschops (left) and Martijn Frints (right) at the newly opened Spark Innovation Center

## Unlocking IoT for utilities

The Internet of Things is seeping into the utilities sector, helping consumers take control of their energy behavior, and companies—to offer effective services, meet energy demands, and cut operational costs. The growing overlap between IoT and utilities also leads to an emergence of new business models, but it is the most agile companies who will benefit from this trend and drive innovation. One of these companies is CGI. The Canadian-based company has been working with utilities for more than 30 years and has been integrating IoT applications well before the term became so well-known. It is particularly strong in offering smart metering data services, worldwide, as well as in The Netherlands.

Martijn Frints, Senior Business Consultant at CGI, says: "Our main customers are grid operators, who are looking into possible ways to increase the grid capacity and meet the evolving electricity demands. Of course, one solution is to put more copper into the ground, but it is a scenario we do not want in The Netherlands. An alternative is to put more intelligence into the existing grid."

Recently, CGI has contributed to the case of smart meters in The Netherlands, by freeing a grid operator from the burden of a single telecom provider. Frints explains: "Normally you are locked-in with a particular telecom provider for the time a smart meter operates, which is around ten to fifteen years. Switching has always been a problem, because, unlike in a mobile phone, changing the SIM card in the meter requires at least one on-site technician." Cumbersome aspects of changing the provider deprive grid operators of their leverage against the price volatility. Luckily, last year's updated telecom legislation has enabled grid operators to sign a contract with a provider on the wholesale telecom market and become an operator of their own smart meter SIM card. Furthermore, if the grid operator is unhappy with the price or the service, he can switch between providers without switching the card. The central solution to reroute the signal was implemented by CGI.

Frints: "The consumer doesn't have to stay at home, the grid operator doesn't have to send technicians to all the houses—we can do everything for them." This is an example of enabling greater flexibility in the energy sector. Most

importantly, the power was given to the grid operators, who can now vote with their feet if unsatisfied.

Also, 2013 became a notable year for CGI, when the company signed a £75 mln deal with the British Smart DCC that holds the license to manage communication between smart meters and main actors in the country's energy sector, e.g. energy suppliers and network operators. According to the deal, CGI became responsible for developing the solution that would link 53 million smart gas and electricity meters to the utilities in the UK.

This contract builds on CGI's experience in delivering smart metering data services based on its Instant Energy solution. Frints: "We developed 'Instant Energy', which is in essence an IoT platform, to collect the data from the smart meters of eight different British utilities and to distribute it to the companies that need to know the metering values." This service will enable the utilities to access information on the energy usage to provide more accurate bills.

In addition, consumers will benefit from the tariffs that suit their lifestyle best and enable them to better understand their energy use patterns.

## Leading in IoT platforms for Smart Cities

One important aspect that IoT can do for the industry in general is eliminate the "stovepipe solutions", says Ralph Bisschops, CGI's Product Manager in the areas of IoT, M2M and asset management. These are the services that do not share their functionality with other products, although it is possible. This is about to change—products which used to be implemented independently are merging. Bisschops says: "Our problem lies in creating many different solutions for different problems, instead of creating one solution to solve them all."

He gives an example: "We have a solution for charging the EVs and a solution for operating street lights. Uniting them in one platform would enable us to switch the lights at the particular EV charging spot when the car is there to charge. When self-driving cars arrive, we can connect them to the same platform as well." The idea is to use information from many systems simultaneously and to tap into their enhanced functionality. To do this, we need IoT platforms.

## CGI's Spark Innovation Center in Rotterdam



CGI works with dedicated partners in hopes to strengthen the proposition and to enable the end-to-end IoT service delivery. Resulting from these partnerships are enhanced quality and security, something that CGI is well known for. For instance, IBOR is CGI's independent and scalable IoT solution for the remote management of objects in the public space, e.g. street lights, bridges, and traffic installations. IBOR was built as a cloud solution running on Microsoft Azure. The municipality of Utrecht was the first to test IBOR on the local street lights, which allowed cutting the energy costs by 27%.

The Ministry of Infrastructure and the Environment implemented IBOR to operate lights on the highways A50 and A1 and then decided to use it for 7,500 light spots in the Eastern Netherlands.

Another example is the Charge Point Interactive Management System (CiMS) for Electric Vehicles, which won several ICT awards and was nominated for Global Mobile Awards. CiMS is used by multiple customers across Europe.

"The IoT-platforms can enable you to have all kinds of devices connected. We are looking into working together with different parties and combine the communication technologies for optimal results," says Bisschops.

## Putting the customer in control

IoT is giving way to a reinforced flow of information. Bisschops says: "We are getting a 'big data lake.' Its possibilities are enormous." We might not be capable of analyzing absolutely all of the data collected—but we will, eventually. "The value of the data will increase as you collect it. Start collecting it, and then think of what you can do with it. We are providing our customers with integrated solutions, as well as with the ability to conduct data analysis. This

Bisschops comments: "One of the things we noticed about IoT is that companies tend to move from buying the solution to using it in the cloud. It makes the life of a customer a lot easier, and I think we are quite well-positioned to be a player in this area. Many of our IoT solutions are offered in a form of Software as a Service."

Of course, there is also the issue of privacy and data ownership, currently one of the most heated topics across the industry. Bisschops admits that not all the companies are comfortable with transmitting their sensitive data into the cloud. Meanwhile, information security is strongly on CGI's agenda. The emphasis is on protecting not only the data that's being transferred, but also the assets connected to the Internet, and the platforms themselves. Both Bisschops and Frints admit that, security-wise, CGI's products and services are strongly positioned, thanks to the continuous involvement of security experts.

To sum it up, it should be said that one of CGI's strongest points is the fact that its experts possess not only the very detailed knowledge of how ICT works but also understand how to implement it best, across a variety of sectors.

allows them to react to market changes quickly. This is the true power the IoT is going to bring—being able to build a solution for tomorrow's problems, and fight off the competitors entering your market," continues Bisschops.

Here, Frints adds: "There's a big degree of uncertainty regarding how the energy sector will develop. What we do know for sure is that our energy consumption needs to get more 'smart.' We also know that we need to collect all possible data and combine it for the customers in a way that would enable them to make the right decision."

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