Industrial Internet →HYPE
– Yes but practical solutions, references and good guidelines already exist

Suomen Automaatio Seura – OPC & MES day 2014
Antti Wallenius

CGI

Experience the commitment®

What our clients and partners are saying

"We are honoured to recognise CGI as this year's winner of the 2014 Microsoft Intelligent Systems Partner of the Year award, and we applaud CGI's dedication to providing innovative solutions that drive results for our mutual customers."

Phil Sorgen, Corporate VP, Microsoft

"We wanted to go beyond the industry standard of preventative maintenance, to offer predictive and even pre-emptive maintenance, thereby guaranteeing a higher uptime percentage on our elevators,"

Andreas Schierenbeck, ThyssenKrupp Elevator CEO

"Our current IT providers cannot give us the Internet of things SaaS Model we need to industrialise our services and grow our global market opportunities"

Alastair Norman, Infrastructure Management, Telent Group

"CGI presented a very attractive value proposition with IBOR, and demonstrated significant advantages in contributing to a greener world."

Peter Kommers, Asset manager lighting and traffic systems, City of Utrecht, The Netherlands

CGI

What our clients are saying

"CGI has a dedicated department for traffic-related services. They are enthusiastic, genuinely interested in public transport, and very good at developing new ideas. In Finland, commuting is a major part of people's lives, and ecological thinking is very important to many of them."

Jari Honkonen, Project Manager, Helsinki Region Multi-Modal passenger Information System

"In the BICC, the top priority is to concentrate on the internal customers. Today, a structure changed by 180° as well as optimised processes in the department allow us to implement projects in parallel, without compromising punctuality or quality!"

Dominic Marx, Head of BICC, DB Schenker Rail

"The success of GO is explained by the fact that it was designed to bring together two views of the Airport Business: operational and management."

Rui Alves, COO, Oporto Airport

"Latest customer satisfaction ratings have clearly improved. Large dramatic crashes have decreased. Also, unnecessary idling of busses has been reduced, now that the system leaves a trace…"

Michael Andersson, Technical director, Helsingin Bussiliikenne

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CGI's Offerings

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CGI Offerings

IoT consulting – to help clients identify and pursue opportunities for realizing the full value of the Internet of Things

IoT business enablement – to develop end-to-end IoT services using a standard cloud-based platform for collecting data and development of applications based on modular building blocks

IoT business solutions – to provide innovative, off-the-shelf, end-to-end solutions in business areas such as smart cities, smart utilities, electric vehicle charging and journey planning

M2M connectivity platforms for telecom providers – to help telecom clients implement their own high-performance M2M platforms, drawing upon our experience in designing and building leading M2M platforms

Connect assets | **Build** as services | **Operate** as services

CGI

Clients benefit from CGI's value proposition

- Out of the box scalable services
- Repeatable and integrated services
- Growing eco-system offering new services out of the box
- Rapid development ability, low entry level prototyping functionality
- Pay per use models
- Global availability with standard internationalization
- Ability to realise a short time to market
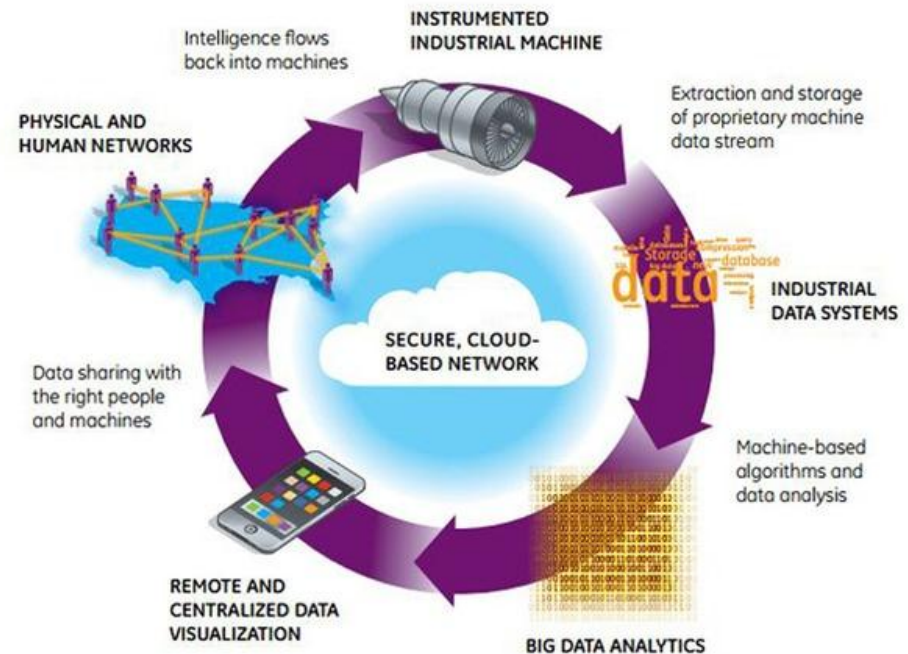
With our deep market knowledge and our platform we are empowering organisations to deliver strategic change through the "Internet of Things"

CGI

Available for all sectors

Banking & insurance	Transport & infrastructure	Buildings & facilities
Future payment solutions	Connected vehicle solutions	Remote management

Energy & power	Retail & commerce	Health and social care
Smart metering Smart grid	Intelligent Supply chain	Mobile health "H2H"

Security & infrastructure	Industrial automation	Service delivery
Integrated management of assets	Manufacturing Execution	Efficient & effective service delivery

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CGI's Credentials

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CGI external recognition for IoT Systems

CGI won the 2014 Esri Honours Outstanding Partner Awards for their state-of-the-art solution, **SIGMA**

CGI and ProRail: Won the SAP-Microsoft Unite Partner Connection Innovation Award on June 4 2014

Electric vehicle charge point service E-laad: Won a Computerworld Award in 2010

CiMS was shortlisted as one of the finalists in the category 'Best Mobile Innovations for Utilities' for the Global Mobile Awards 2011

CGI's work with Telent: Won the Microsoft Partner of the Year Award for Intelligent System Service 2014

IBOR: Won the Dutch ICT Office Environment Award 2011

Market facing innovation with Hygieia: won the runner up at NASSCOM Innovation Awards 2012

Helsinki trip planner: Open Data Award in 2011 and rated second best public mobile service in 2012

CGI's NS app (Dutch National Railway): Won the 2013 Rotterdam Design Public Prize for their real-time seat information application that CGI helped produce

Renewable energy for EDP: Technology Innovation of the Year Award for Excellence in Renewable Energy 2011

Energy saving for VEAB: European Utility Award for Customer Excellence

EMO chosen from over 400 entries as a finalist in the Transport category for IET Innovation Awards 2011

CGI

In the media 2014

The Sunday Telegraph

RACONTEUR

BUSINESS   CULTURE   FINANCE   HEALTHCARE   LIFESTYLE   SUSTAINABILITY   TECHNOLOGY   INFOGRAPHICS

USING THE INTERNET OF THINGS

Many people broadly understand the concept of the internet of things and the premise of disparate devices talking to each other, yet they often struggle to see how this will immediately relate to their own business

Intelligent Enterprise
Making the Internet of Things a reality

1:47 / 2:17

Giving cities a lift with the Internet of Things

CGI

Newsroom

Media announcements

« Back to headlines

Volvo Car Group selects CGI for security services

Stockholm, Sweden, July 7, 2014 - CGI (NYSE: GIB) (TSX: GIB.A) has signed an agreement with Volvo for the delivery of authentication certificate services, that will provide each car with individual and securely accessed online services from Volvo Cars. The contract also includes related operation and support services.

The use of apps in cars is on the rise. Car owners today can access a variety of digital services from their cars, such as navigation, traffic and maintenance tools and information. Together, CGI and Volvo developed a certificate solution that enables secure online connections in Volvo cars using the same security technology used for Internet-based applications and authentication.

Every Volvo car will be provided with its own certificate (i.e., an electronic id document for authorization when connecting to online services). Each certificate will be installed when the car is manufactured, ensuring reliability and integration with Volvo's manufacturing systems, market service and cloud environment.

THE TIMES

ExpertInsight

How the IoT allows firms to create more innovative services

INDUSTRY VIEW

The internet of things (IoT) is an enabler for business. It can help data to be used across organisations and make businesses more efficient and productive. IoT services can provide a rich source of data for advanced analytics, big data applications and enhanced mobile solutions. Through this, businesses can really start to benefit from these technologies and see operational changes which help the organisation as a whole.

John Hicklin, principal telecommunications consultant at CGI, says: "IoT platforms enable you to release data from discrete applications, allowing the information to be used right across the organisation."

CGI believes these technologies can be utilised across multiple sectors. One of the examples is in the manufacturing sector, where CGI have recently completed a project with ThyssenKrupp Elevator, one of the world's leading elevator manufacturers, to use big data and trend analysis to reduce costs of operations and improve safety. It maintains more than 1.1 million elevators worldwide, including those at some of the world's most iconic buildings.

ThyssenKrupp wanted to gain a competitive edge by focusing on what matters most to their customers in buildings the world over: reliability. Drawing on the potential of the internet of things by connecting their elevators to the cloud, gathering data from their sensors and systems, and transforming that into valuable business intelligence, ThyssenKrupp is vastly improving operations and offering something their competitors do not: "We wanted to go beyond the industry standard of preventative maintenance, to offer predictive and even pre-emptive maintenance," says Andreas Schierenbeck, ThyssenKrupp Elevator CEO, "so we can guarantee a higher uptime percentage on our elevators."

"If you start to know how your escalator or elevator is working better, then this data can be fed back into the operation and enhance the customer experience by predictive and then proactive analytics as well as deliver operational efficiency. This can change how you can deal with your customers. It allows the manufacturer to have a closer relationship with their end users. When you start to free up the data, you do start to empower your staff."

CGI used Microsoft's Azure-based Intelligence Systems Service (ISS) platform which helps enterprises embrace the IoT by securely connecting, managing and capturing machine-generated data from a variety of sensors and devices.

Hicklin says: "By using ISS we were able to simplify deployment and open up the possibilities of new intelligence and insight from the data. Once you have the data you can move away from slow decision-making processes and you get information coming into your organisation in near real-time."

Any industry which has a reliance on a large numbers of devices, such as aviation, space and defence, manufacturing, retail, telco, healthcare or utilities, can use the IoT to make their business more efficient. IoT allows firms to create more innovative services that can impact clients. It enables operational efficiencies in organisations and can improve customer service and loyalty.

To find out more, call Carl Vaughan on +44 (0)7919 327028 or visit www.cgi-group.co.uk/solutions/internet-of-things

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Microsoft ISS Private Preview Video
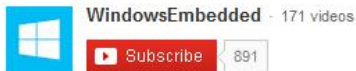
http://www.youtube.com/watch?v=NYpdNGI1hco
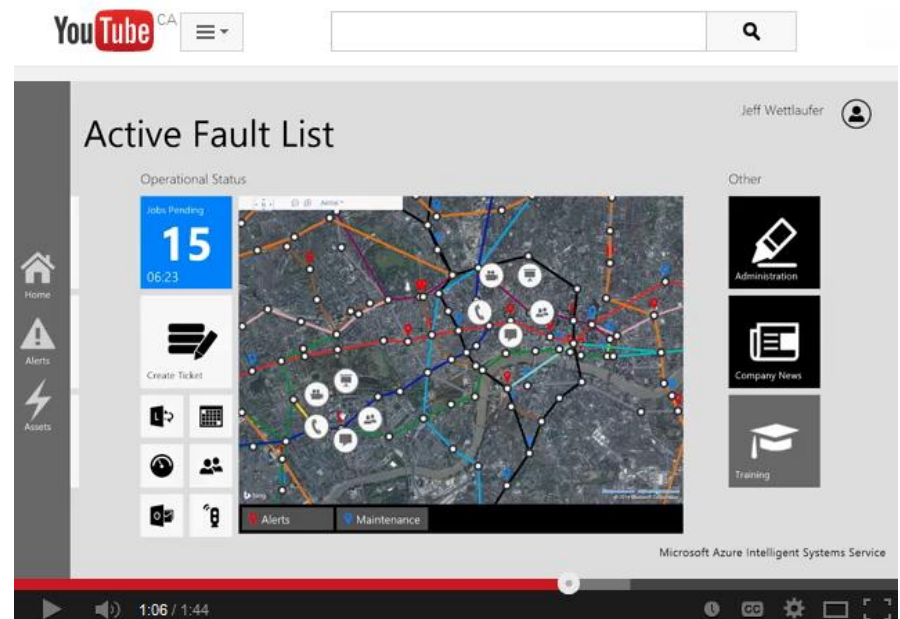
Video

IBOR

Smart cities with CGI's IBOR solution

CGI's integrated public space management (IBOR) solution helps increase safety and improve energy efficiency. Watch the video to learn more about how CGI is helping clients build smarter cities with this solution.

http://www.cgi.com/en/video/smart-cities-cgi-ibor-solution

PRORAIL and CGI develop the SIGMA system

https://www.youtube.com/watch?v=xPJMEII-IIE

Delivering value to clients

CGI worked closely with E-laad.nl and Alfen (who make charge points) to develop the end-to-end **Charge point Interactive Management System (CiMS)**. CiMS tracks the location, condition and status of each individual charge point. It manages payments quickly and securely and runs in the cloud. CiMS gave E-laad.nl a quick, easy way to make their vision of a national electric vehicle charge point network a reality.

CGI implemented a successful project for the **Dutch Ministry of Infrastructure and Environment**, managing highway lighting, using IBOR, CGI's complete service platform based on Microsoft Azure's Cloud technology that manages assets in public or private spaces.

A smartphone application, ultimately aimed at becoming a personal public transport 'satnav' for each passenger. This unique project, supported by Transport for Greater Manchester designed, developed and demonstrated a virtual travel planning assistant service for public transport passengers.

Value delivered	Value delivered	Value delivered

- The system works with any brand of charging point

- The system is compatible with each of the partners' own systems

- E-laad.nl has a network of more than 2,500 charging points in ca. 300 municipalities across the Netherlands.

- Achieved cost savings on (public) infrastructure and objects

- Reduction in CO2 levels

- Improvement in (public) security

- Providing multi modal journey planning to passengers in an accessible, user friendly way

- Enabling the public to make smarter transport choices based on "live" information

- Additional useful in-journey information including bus arriving at their stop

CGI

Delivering value to clients

After the successful implementation of a pilot project to install photo radars at 15 sites in a particular area, CGI now maintain this system with a Transport ministry. CGI uses communication and collaboration models and risk management to prioritize the project's critical activities. The aim and outcome of this project was around improving road safety.

CGI worked on the European Commission funded CVIS initiative and the Dutch Government SPITS program, developing in-car and infrastructure technologies that will transform how vehicles communicate with each other and the broader transport network.

With support of the police forces in the city of Groningen CGI developed ComproNet, an intelligent sensor-based engine that collects and analyses emergency information on social networks, such as Twitter, to enable quicker incident response using mobile devises and civil participation mechanisms.

Value delivered

- A full return on its investment during the pilot project
- After 6 months, red light offences had dropped by 83%
- 64,000 statements of offence were issued in the first 10 months

Value delivered

- Cooperative vehicles pilot
- Real-time response to traffic demands
- Effective management of traffic networks
- Achieve maximum utilization and efficiency

Value delivered

- Fast response to incidents in the city
- Enables civil participation
- Enables the police to solve crime faster
- Increases public safety

CGI

Delivering value to clients

SAT-LX is an advisory warning system for level crossings (developed as a proof of concept with the European Space Agency) that can be easily deployed to remote level crossing sites to provide road users timely information about approaching trains using satellite technology. This innovative solution is designed to improve safety at these remote locations, whilst minimising the costs that make investment in conventional systems difficult to justify.

CGI are managing delivery of the worlds largest Intelligent Transport System across Saudi Arabia, ATVAM (Automated Traffic Violations Administering and Monitoring). The program deploys over $1Bn of new law enforcement, traffic management and security systems across all 8 main cities and achieves a world first of integrating these three streams using bespoke software in the 11 new-build Command and Control Data centres.

ProRail aim to provide a safe, reliable, punctual and sustainable rail network. To perform this ProRail and CGI developed a state-of-the-art IT solution, named SIGMA, that enables employees to manage the condition of the rail lines and combine design and measurement-data of the railroad track in multiple dimensions on a geographical information system.

Value delivered	Value delivered	Value delivered

- Up-to-date, reliable information to level crossing users

- No reliance on trackside power or communications supply

- Low unit-cost, easily deployable and maintainable

- Built on proven technology

- Enables condition based remote monitoring

- Improved traffic safety, reduced fatalities, casualties and non-injury vehicle conflicts

- Enhanced capacity of existing road networks through improved traffic flow and dynamic re-routing

- Increased security through automated wanted vehicle tracking and automated security forces deployment

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- Effective management of the rail track

- Help improve punctuality of trains

- CGI were announced winners of the 2014 Esri Honours Outstanding Partner awards for this application named SIGMA

CGI

Delivering value to clients

ThyssenKrupp

Predictive maintenance can enable TKE to be proactive rather than reactive, which can help with resource planning, cost forecasting and scheduling of maintenance and downtime. This enables them to provide a more competitive offering to their end user customers

Helsingin Bussiliikenne Oy

A large amount of data and its smart analysis has resulted in smoother bus traffic, more satisfied passengers and benefits for the environment. To gather more accurate details to support Helsinki Busses operations, sensors and data collection equipment were installed in their busses. The solution has provided valuable details on routes and even drivers.

telent
service · commitment · value

Integration of **telent**'s platform onto a new environment, powered by Microsoft's Azure based ISS service simplified the IT structure enabled more sophisticated predictive modelling.. And the data is available in a central location to provide access to needed information on mobile apps, via a Web browser or through text alerts

Value delivered	Value delivered	Value delivered

- Potential for a truly global solution that can be rolled out to over 700K elevators

- Enabling engineers to be appropriately informed for resolutions

- Access to advance analytic tools

- Improved driver technique

- Smoother and environmentally friendly driving style

- Improved customer satisfaction

- Reports indicate double-digit percentage differences in fuel consumptions between drivers

- Enable migration of existing asset monitoring application to run in the cloud and replace on premise solution

- Access to advanced analytics to improve insights and decision making.

- Deliver a scalable solution

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CGI

Our commitment to you
We approach every engagement with one objective in mind: to help clients succeed

CGI

Experience the commitment®