

Cyber Secure Systems Engineering

Cyber Security is part of everything we do and we have spent over 35 years creating secure solutions for our public sector and commercial clients. CGI has designed solutions for some of the world's toughest security systems in programmes like Galileo – Europe's satellite navigation system, the UK's Police National Database and Ministry of Defence's Medical Information Capability programme.

THE CHALLENGE

Organisations today face ongoing attempts by malicious individuals and organisations to gain unauthorised access to facilities, systems and data. It is vital that the right people have access to the right information over a trusted infrastructure with processes that are easy and efficient to manage, scale and grow.

The cost of recovering from a cyber attack can be huge – the disruption to business, regulatory fines, loss of valuable information such as product launch plans, intellectual property, brand or reputational damage.

We believe building security into systems at the earliest concept and design phases is the only effective way to secure the complex, integrated and interconnected solutions that organisations rely on to operate and grow.

Designing-in measures to counter cyber criminals will help to lower the cost of their attacks, both in terms of the potential damage and the scale of the response required.

OUR SECURE SYSTEMS ENGINEERING APPROACH

CGI has developed this approach based on over 35 years of experience in secure systems engineering. We offer an end-to-end security solution to our clients, addressing people, processes and systems via design, consulting and systems integration through to managed services provision.

We align our client's information security requirements to their business objectives, protecting information assets, ensuring regulatory compliance and supporting governance.

We design and build cost-effective and secure systems, to protect against internal and external threats, assessing system architecture and implementing controls to secure applications, data and infrastructure. We assess the increasingly advanced cyber threat, manage our client's threat and risk complexity as well as the technology and process complexity.

We comply with the system development life cycle best practices and adapt V-model and Rapid development approaches to ensure security from requirements to system testing.



A CYBER SECURITY PARTNER YOU CAN TRUST

- The best cyber security supplier in the UK with hundreds of experts
- We are developing a secure service enabling utility companies to access information on the energy usage of the 53 million smart meters which will be deployed in the UK from 2015
- We have ensured that the biggest and, most complex, single infrastructure project in Europe is security accredited for the UK's Ministry of Defence
- We have Europe's largest team of experts in space security working on major European space programmes
- Over hundred clients across the world are supported by CGI's cyber security managed services.
- For 27 years, we have operated a Commercial Evaluation Facility (CLEF) and we are the only UK supplier able to perform Common Criteria, CESG's Tailored Assurance Scheme (CTAS), Commercial Product Assurance (CPA) and Assured Services (CAS) evaluations
- One of the founding members of the CESG CHECK scheme which ensures our penetration testing is within UK government guidelines
- As a trusted partner to the Canadian Payments Association, we help ensure that more than \$170 billion in transactions a day are cleared through CPA systems safely and securely

We adopt risk assessment methodologies and augment this with best practice threat modelling methodologies. Threats, control objectives and security functional requirements are mapped onto system and functional requirements. We adopt a pattern-based approach to implementing security technologies that meet the security functional requirements, demonstrating at the design stage that we can appropriately model and mitigate all applicable threats. This approach ensures that we can manage our client's business risk discovering where the realisation of a threat will have a given business impact. Our secure designs include the appropriate level of security controls and crypto management.

We are securing very large, complex solutions such as Galileo – Europe's satellite navigation system, the Ministry of Defence's Medical Information Capability (DMICP) and Skynet 5 programmes, the UK's Police National Database (PND) and the secure service enabling utility companies to access information on the energy usage of the 53 million smart meters which will be deployed in the UK from 2015.

DMICP has 400,000 centralised records which are being used by over 2,500 concurrent users doing up to 20,000 consultations per day. The records are securely accessible in real time around the world, from medical centres in the UK, to ships at sea and battlefields overseas.

The PND has robust security procedures. Fixed computer terminals linked to the PND were placed in secure rooms approved by a Government inspector. Access to the terminals is through a combination of smartcards and passwords. Access to information is also role-based – users can only view the data they are pre-authorised to see. User activity is time stamped and recorded, as are search results. There is therefore a full audit trail of every inquiry made.

Our experts are respected in industry as thought leaders, for example, our approach to building secure systems was published in the Institute of Risk Management's *Cyber Risk: Resources for Practitioners* book.



WHY CGI?

As one of the world's most reputable systems integrators and managed service providers, we invest heavily in our cyber security capabilities. We are seen by industry and our clients as leaders in secure systems engineering, built on our decades of designing, developing and integrating complex systems to government security standards.

For 27 years we have operated a commercial evaluation facility and regularly test the products and services of over 25 global technology suppliers.

We offer the full range of support from consultancy, secure solutions to services such as Protective Monitoring and Advanced Threat Investigation.

We have been trusted by hundreds of clients to help them operate securely.

They can be agile, adopt new technologies and ways of working, develop a global supply chain and open new channels to their customers – whilst remaining confident that they are secure.

ABOUT CGI

With over 68,000 professionals in 40 countries, CGI fosters local accountability for client success while bringing global delivery capabilities to clients' front doors.

Founded in 1976, CGI applies a disciplined delivery approach that has achieved an industry-leading track record of on-time, on-budget projects.

CGI has a global team of cyber security experts, who work with governments and commercial clients, ensuring their business critical systems and services are effective and secure.

CGI is one of the few providers worldwide with three accredited security certification facilities - located in the UK, Canada and the U.S. Our ten Security Operations Centres continuously identify and deploy the best solutions to maintain a state-of-the-art infrastructure, handling over 74 million cyber events a day.

Our high-quality business consulting, systems integration and outsourcing services help clients leverage current investments while adopting new technology and business strategies that achieve top and bottom line results.

As a demonstration of our commitment, our average client satisfaction score for the past 10 years has measured consistently higher than 9 out of 10.

For more information about CGI, visit : www.cgi-group.co.uk/cybersecurity or email us at cybersecurity@cgi.com

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