

A business lens on quantum readiness



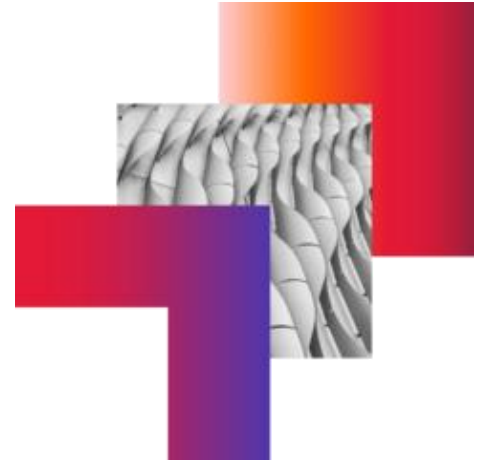
We provide system integration and cyber security expertise to help clients prepare for the benefits of emerging quantum technologies on their business software solutions

Quantum advances and quantum readiness

The advent of quantum computing is both a business risk and opportunity that needs to be addressed with a clear-eyed view through the hype. Businesses need the insights to understand what advantage quantum computing will provide and recognise when it has reached the necessary maturity to deliver. Plans are needed for the business change that will occur when quantum solutions are integrated with their existing software systems. We are ideally placed to work with businesses and quantum technology providers to help set out those plans.

Quantum computing exploits the unique way that information is represented and interacts as collections of quantum bits (Qubits). This enables mathematical computations with specific characteristics to be theoretically executed at a speed, as the problem space grows, which is beyond the capabilities of classical computers.

Quantum technologies and quantum computing will touch many parts of our lives. At the core of many software business systems there are algorithmic processes, some of which have the characteristics where quantum computing will yield a computational advantage over the current classical algorithms. Quantum computing techniques can accelerate and overcome some bottle necks present in traditional numerical algorithms, Monte Carlo simulations, optimisation problems and machine learning modelling, which may be applicable and ultimately provide a “quantum advantage” over current classical solutions when quantum computing reaches the necessary maturity.



Key benefits:

- **Protect** your organisation against threats from quantum decryption technology
- Establish and leverage partnerships to explore the quantum **advantage**
- **Define** how quantum should integrate into your organisation
- **Leverage** quantum now and in the future as the topic evolves and be ahead of the curve

How can we support quantum readiness

Our Emerging Technologies Practice enables clients to prepare and gain insights for bringing quantum solutions into the business, by providing:

- **Cyber Advisory Services:** we help organisations identify their exposure to post quantum threats and develop the plans needed to respond to the threats
- **Quantum Readiness Advisory Services:** we help organisations work with specialist quantum technology providers identifying use cases, quantum solutions, and understanding the software system transformations and impact of quantum solutions
- **Quantum Solution Design:** we combine our extensive industry expertise and insights from integrating complex and novel technologies with leading quantum technology partners to create plans for the challenges of bringing together the existing classical business software systems with novel quantum solutions
- **Quantum Solution Deployment:** we help organisations to decide when Quantum Technology has matured sufficiently to merit deployment into their business systems.

Why us?

Our Emerging Technologies Practice combines our global experience and local expertise to provide clients with:

- **A dedicated partner:** we bring unique end-to-end capabilities that underpin our long-term partnerships
- **Proven success:** we have an unrivalled track record of implementation success
- **Sector-specific insight:** we have deep specialisation in industry verticals and strong SME partnerships that ensures we bring insights significant to your field
- **The right solution:** our human-centred approach ensures we deliver solutions that meet our clients' unique business needs and operational requirements
- **Positioned for the future:** we are committed to investing in new and emerging technologies to ensure our clients can harness the power of technology.

Talk to us!

Whether you're looking for readiness support or just want to kick off your quantum discussion, you can count on our team to bring your project to reality. Let's get started. Contact us now to discuss what's possible at neville.richards@cgi.com.

Quantum computing was born from an intersection of three different fields: computer science, mathematics and physics.

About CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

For more information

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