

**TOP
5
CONSIDERATIONS**
for CIOs

Implementing quantum computing in a digital transformation

Accelerated Problem-Solving

Quantum's leap

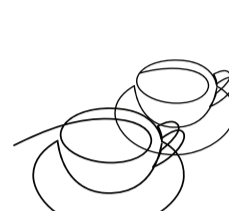
solves problems with speed

While classicals lag

and just concede

Quantum algorithms can solve complex problems much faster than classical computers, providing quicker insights. Invest in quantum computing research to explore algorithms that can address specific business challenges.

Bottom line: Significantly speed up problem-solving for tasks that are currently computationally prohibitive. Google's quantum computer, Sycamore, solved a problem in 200 seconds that would have taken the most advanced supercomputers about 10,000 years.



Enhanced Data Security

With quantum's spell,

encryption's tough as a shell

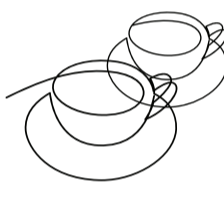
Unbreakable secrets

that no-one can tell

Quantum computing has the potential to revolutionise cryptography by creating unbreakable encryption methods.

Bottom line: Explore quantum-resistant cryptography solutions to safeguard sensitive data against future quantum threats to provide a high level of data security by developing encryption that can withstand quantum attacks.

The National Institute of Standards and Technology is working on post-quantum cryptography standards to prepare for quantum-based security solutions.



Optimised Logistics and Operations

For optimised routes

without the hoot

Quantum computing's

the new age loot

Quantum algorithms can optimise complex logistics and operational problems, leading to more efficient processes.

Bottom line: Apply quantum computing to solve logistical challenges such as supply chain optimisation and route planning to improve efficiency by solving optimisation problems that are currently intractable with classical computing methods.

Volkswagen uses quantum computing to optimise traffic flow and parking solutions in urban environments.



After 30+ years of experience...

“ Just as the dawn of electricity transformed our world, the rise of quantum computing heralds a new era of discovery that will redefine the limits of human innovation. ”

”

Advanced Drug Discovery

Quantum's flair

for molecular care

Speeds drug discovery

beyond compare

Quantum computing can accelerate drug discovery by simulating molecular interactions at unprecedented speeds. Partner with quantum computing firms to leverage their technology for drug discovery and development.

Bottom line: Reduce time and cost of drug discovery by accurately simulating complex molecular structures. The startup Rigetti Computing is working with pharmaceutical companies to explore quantum computing applications in drug discovery. Early days, big promises.



Innovative Research and Development

Quantum's spark

lights up the dark

Turning research frontiers

into a ground-breaking arc

Quantum computing opens new possibilities for research in fields such as materials science, physics, and artificial intelligence.

Bottom line: Invest in quantum research to drive innovation in emerging fields and develop cutting-edge solutions by providing a competitive edge by enabling breakthroughs in research and development that were previously unattainable.

IBM's Qiskit platform supports various research projects exploring quantum algorithms for diverse scientific applications, from understanding fundamental physics to developing new materials.



Like to delve into, dissect or draw on my experience over a coffee —let's set up a time...

