WHAT’S THIS WORLD LIKE?
Quantum technologies are integrated into society for public good. Healthcare is more advanced than ever, with quantum enhanced imaging for diagnostics.

Government funded projects use highly accurate quantum sensors to build houses in previously uninhabitable areas, helping to solve the housing shortage.

There’s a wave of security online, as quantum safe encryption is available to everyone. Universally hubs exist on the public area, encouraging and exciting mix of quantum specialists pioneering the second quantum revolution. Quantum is here to stabilise, but not revolutionise.

HOW DID WE GET THERE?
Political tensions subsided and governments focused on home issues. There were revenue pressures in public hospitals and a housing shortage. There was a demand for innovative technology to deal with these issues.

Universities were heavily funded by the government and knowledge exchange programmes were set up internationally. Quantum computing devices were found to have the ability to hack existing encryption, so it became necessary to establish international standardisation of quantum technologies. The government needed a top priority to implement quantum safe encryption into society to protect the privacy rights of the public.

SECTOR CONSEQUENCES
- Skilled and diverse workforce
- Incremental change
- Slow commercialisation research
- Emphasis on improving efficiency
- Investment for public good

WORLD CHARACTERISTICS
- Quantum safe encryption for everybody
- Standardised regulation
- Huge investment in all research

PERSONAL CONSEQUENCES
- More - Public
  - I am delighted the NHS has been provided with more quantum enhanced imagers for diagnostics. The time from drug development to market has been reduced by over half. The only issue is the shortage of skilled professionals.

- Mohammad - Junior Doctor
  - Government funding is driving the progression of my research. Innovation hubs are thriving with skilled and talented researchers working together from across the globe. It’s a really exciting time to be in research!

- Sophia - PA Consultant
  - I’m happy that government has been provided with more quantum enhanced imaging tools. I was able to save time and hassle with the help of my quantum enhanced imaging tool.

- Ali - Oil and Gas CEO
  - Our budget has been cut and national security hasn’t been prioritised. Work is slow for me at the moment. I think the government should invest more in defence.

- Ian - Defence
  - Decline of global political tensions stabilised global political tensions. New cancer drugs developed.

- Steve - Pharmaceutical
  - Government and funding is driving the progression of my research. New cancer drugs developed.

- Ian - University researcher
  - Government funding is driving the progression of my research. I’m excited about quantum technologies to deal with these issues. There were revenue pressures in public hospitals and a housing shortage.

2018
- Over £270 million government investment in research
- Over £1bn investment in medical imaging systems
- Military budgets decrease
- University research flourishing

2020
- Enhanced diagnostic imaging devices integrated into public hospitals and quantum encryption employed universally
- Increased public awareness of quantum technologies
- Prototypes of quantum enhanced imaging systems

2030
- Advanced sensors developed
- Date built in uninhabitable areas using quantum sensors
- Revolutionary cancer drugs developed with help of quantum simulation

2040
- Future prototype imaging systems
- Military budgets decrease
- Communications encryption employed universally
- Enhanced diagnostic imaging devices integrated into public hospitals and quantum enhanced imagers for diagnostics.
- New quantum enhanced imaging systems
- Government funded quantum key distribution available to everyone.
- Small private market for cyber security
- Quantum Key Distribution available to public for quantum sensor systems
- Blockchain secure against quantum hacking

CONSTRUCTION
- Quantum technologies are integrated into society for public good.
- Decline of global political tensions stabilised global political tensions.
**WHAT’S THIS WORLD LIKE?**

Quantum technologies are used for political power and advantage. The military is thriving, with the use of quantum sensors and imaging allowing soldiers to see around corners and in the dark. Quantum clocks and quantum navigation devices make military operations significantly smoother. There’s a sense of fear among the public for their online data and privacy. Unusually research is highly focused on quantum secure communications and sensor technology, legislation and protocol fragmented and country specific. Many industries have undergone a digital transformation to cope with the incoming security threat of quantum computers.

**HOW DID WE GET THERE?**

Global political tensions peaked. Hackers interfered with elections and online data was compromised. Governments heavily invested in quantum research in the style of the space race, with the good to develop quantum technologies fast. The free movement of labour stopped in the wake of Brexit. Global political tensions peaked. Hackers interfered with elections and online data was compromised. Governments heavily invested in quantum research in the style of the space race, with the good to develop quantum technologies fast. The free movement of labour stopped in the wake of Brexit.

**PERSONAL CONSEQUENCES**

- **Steve – Public**
  - MIracles need a global scale. Data and financial information being compromised with all the pressures mount. I’m worried about my online data and privacy.

- **Sophia – PA Consultant**
  - We see significant interest from defence and telecoms clients. There’s a sense of fear among the public for their online data and privacy. We have sourced many new oil reservoirs this year. Our oil output is much higher than in recent years. We have sourced many new oil reservoirs this year. Our oil output is much higher than in recent years.

- **Muhammad – Pharma CEO**
  - Cancer research plateaus, many industries have undergone a transformation to cope with the incoming security threat of quantum computers.

- **Oliver – Oil and Gas CEO**
  - Research into interesting, it is highly specific. It would be nice to explore some other quantum technologies.

- **Mia – Healthcare**
  - I have been doing a lot of research into quantum technologies. Although I think quantum computing is a public good, I have a sense of fear about the way in which quantum technologies are commercialised.

- **Musa – Military Officer**
  - My division have been working with interesting new gravity sensors and quantum secure communications. Although I find the research fascinating, it is highly specific. It would be nice to explore some other quantum technologies.

- **Aris – AI researcher**
  - I have been doing a lot of research into quantum technologies in the style of the space race, with the goal to develop quantum technologies first. Companies capitalised on this opportunity.

- **Ali – Oil and Gas CEO**
  - My business is finding it hard to keep pace with new trends. The rise of cyber terrorism and quantum hacking have forced companies to accelerate their digital transformation.

- **Muhammad – Pharma CEO**
  - We have been doing a lot of research into interesting, it is highly specific. It would be nice to explore some other quantum technologies.

**WORLD CHARACTERISTICS**

- **SECTOR CONSEQUENCES**
  - **Telecommunications**
    - Huge boom in telecommunications
  - **Defence**
    - Military arms race
  - **Construction**
    -量子化geography
  - **Finance**
    - Fast and highly efficient research
  - **Healthcare**
    - High market for secure communications
  - **Industry**
    - Skilled shortage
  - **Telecommunications**
    - Huge market for secure communications
  - **Defence**
    - Military arms race
  - **Construction**
    - Quantum use
  - **Finance**
    - Financial security systems undergo large scale transformation to protect against cyber attacks
  - **Telecommunications**
    - Quantum secure communications standard for new UK
  - **Healthcare**
    - Quantum imaging and quantum secure communications

- **PERSONAL CONSEQUENCES**
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THE NEW NORMAL WORLD
WORLD OF QUANTUM TECHNOLOGIES IN YOUR EVERYDAY LIFE

WHAT'S THIS WORLD LIKE?
Today’s consumer-centric world where quantum technology is a service. Quantum devices, such as GPS and quantum computer chips, are integrated into mobile devices and cars.
Quantum cloud computers are accessible to everyone, making computation quick and easy. Quantum technologies are completely replacing existing technologies. Millions of dollars and years, with high investment from private companies. Quantum computers enable the Internet of Things, artificial intelligence and machine learning to new heights. The new technologies enable and stabilise communities. The world can’t imagine life before quantum.

SECTOR CONSEQUENCES
- Consumer-driven market
- Corporations pool resources for mutual gain
- Rise of globalisation
- Fewer regulatory barriers
- Multiple quantum suppliers
- Mass market
- Fast and agile research
- Emphasis on quantum cloud computers
- Breakthrough technology
- $tralising
- Ion - Military Officer
- Lymph nodes
- Quantum technology as a service
- Quantum clouds used as a service for data analytics
- Quantum clouds available at consumer level
- Quantum clocks and optics used for quantum communications
- Quantum simulators used to accelerate research
- Quantum computer chips integrated into mobile devices
- Quantum computers available for non-specialist users
- Quantum computers elevate the Internet of Things, artificial intelligence and machine learning to new heights.
- Quantum computers were developed and computing was dramatically faster. Old computers become obsolete.

HOW DID WE GET THERE?
The rise of consumer-centric businesses. Consumers expected more choice and a higher performance level from their everyday devices.
5G was implemented and there was not enough data available to meet demand.
Fast, portable atomic clocks and optical entanglement were developed to provide more data.
Tech giants collaborated with each other and booked resources for mutual gain.
Start-ups partnered with the tech giants for incredibly fast and agile research.
Quantum computers were developed and computing was dramatically faster. Old computers became obsolete.

PERSONAL CONSEQUENCES
- Breakthrough technology
- More economic sense to pay for quantum technology
- Consumer for mass market
- Emphasis on quantum cloud computers
- Ion - Military Officer
- Fast and agile research
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WHAT'S THIS WORLD LIKE?
This is a world for big business. Quantum technology is highly developed but only accessible to those who can pay the price. This is an ownership world where companies purchase devices such as imagers and sensors at a high cost to give them an advantage over their competitors.

Large businesses have handed everything from their supply chain to their data analytics using quantum computers. One main quantum computer provider reigns supreme.

HOW DID WE GET THERE?
Tech giants were fiercely racing to be the first to claim quantum supremacy. The culture of hacking and security breaches drove the race for quantum secure communications. Quantum startups needed funding and resources, so they slowly became obsolete. One company made a significantly larger investment in quantum technology and it was imperative we got hold of the quantum sensors before other countries. The NHS is struggling to continue transitions and the best way to improve healthcare is through technology.

One provider monopolises the market
Cyber security attacks increase
Quantum technologies grow significant competitive advantage
Quantum supremacy achieved as an exclusive resource
New competition laws are enforced in response to the monopolised market
Cybersecurity drive the race for quantum secure communications

SECTOR CONSEQUENCES
Ownership of quantum devices
Big business-driven market
Fragmented research
Fast fragmented research

PERSONAL CONSEQUENCES
Breaking technology
Localisation
Empathy on computers

WORLD CHARACTERISTICS
CONSEQUENCES
SECTOR
HEALTHCARE
Private hospitals can afford the new quantum devices
Less investment in public healthcare

DEFENCE
Defence is an early adopter of sensor technology
Secure communications more fragmented, available to different markets at different times

TELECOMMUNICATIONS
Cybersecurity threat drives market
Exclusive access to companies
Not aimed at consumers

FINANCE
Quantum computers used for asset analytics
Disrupted and chaotic digital transitions

CONSTRUCTION
Large construction companies purchase sensor devices
Smaller construction companies struggle to compete

PHARMACEUTICALS
Quantum computers used to discover new drugs
Costly equipment burdens the market

Exclusivity
Ownership
Position

EXCLUSIVE ACCESS TO COMPANIES
Significant legal barriers prevent quantum research outside institutions
Prevent quantum research outside institutions

WHAT'S THE FUTURE?
This is a world where the corporate race for first quantum computer provider reigns supreme. New competition legislation and regulation to be implemented quantum technology into their business.

PERSONAL CONSEQUENCES
Wish there was more choice available to help drive...