

There's nothing normal coming



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With change comes risk



- Root causes of decline in public firms:
 - 60% strategic risks.
 - 30% operational risks.
 - 10% financial risks.

"the assumptions on which the organization has been built and is being run no longer fit reality."

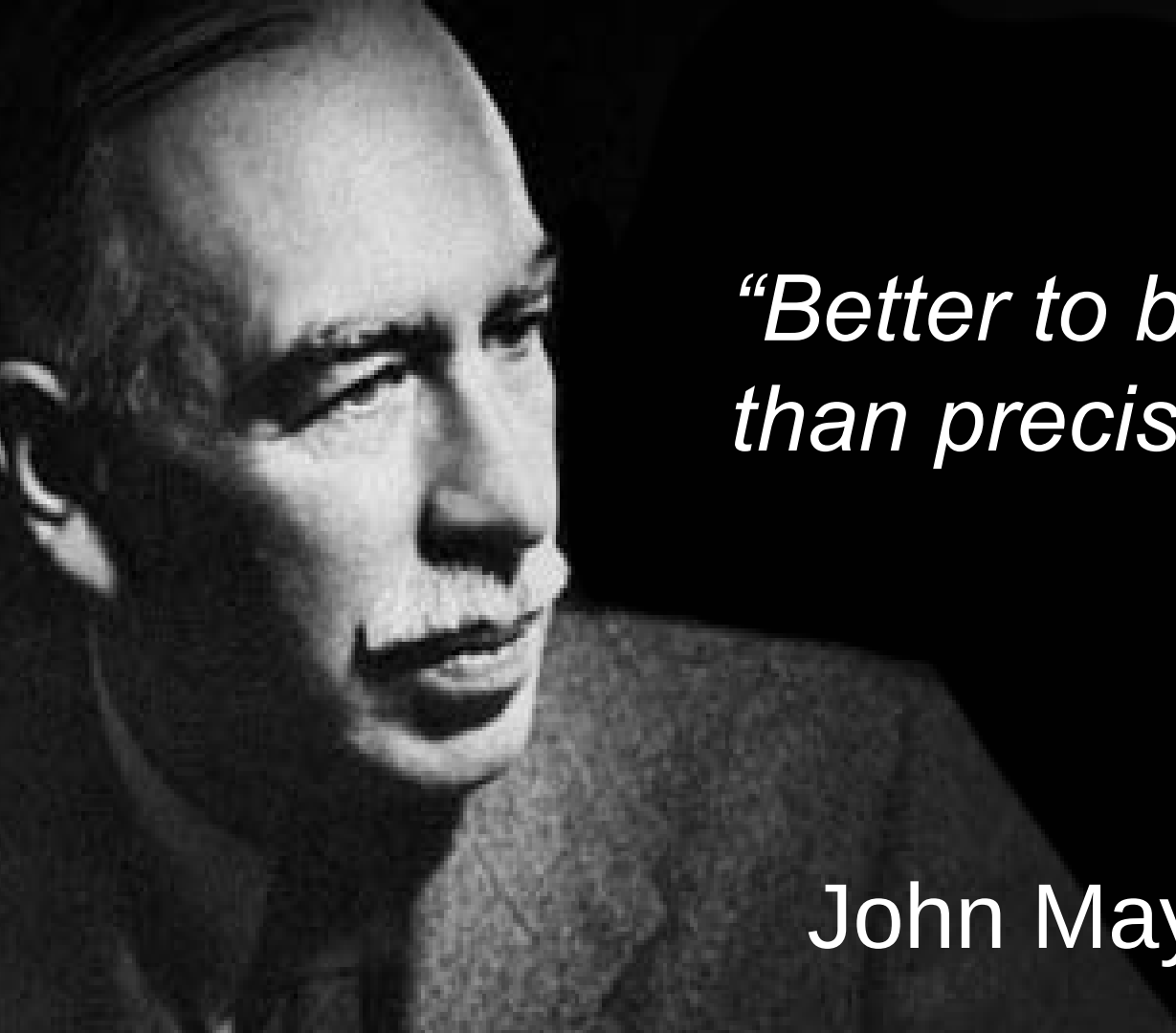
Peter Drucker

Rationale for foresight

Companies who are the most future prepared are 44% more likely to be outperformers in their markets.

From 300 multinational companies





*“Better to be roughly right
than precisely wrong.”*

John Maynard Keynes

Mega trends

1. Globalisation
2. Changes in work
3. Demographics & people
4. Energy and Transport
5. Technology
6. Consumption
7. Environment



Key trends



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Workplace

- Team working
- Job automation
- Job sharing
- Disintermediation
- New jobs
- New industries
- Alternative competition
- Career matrix v ladders
- Wearables & implantables
- Employee 2.0
- Diversity & Women in the workplace
- Mobile workpods
- Continuous learning
- Learning organisations
- Networked organisation
- Supplychain/Industry 4.0
- Platforms
- Agile cultures
- Failure-as-a-Service
- Faster/shorter business cycles
- Reports incl externalities
- Activist investors
- New industries
- Cause branding
- Mashup 2.0
- Open innovation
- Self disruption as norm
- Design thinking

Consumer

- Global middle class
- Automated actions
- Repair economy
- Digital identity
- Prosumers
- New forms of loyalty
- P2P economy
- On demand economy
- Dynamic pricing
- Makers
- Mass personalisation
- Ultra personalised media
- Virtual personal assistants
- Silver economy
- D2C models
- Service marketplaces (post app economy)
- Privacy
- Decline of trust

Global issues

- Fragile economic systems
- Leadership vacuums
- Complexity & volatility
- Easternisation
- Social instability
- Migration/immigration
- Universal Basic Income
- Cities > countries

Sustainability

- Circular economy
- Abundant energy
- Microgrids
- Materials revolution

Health & humanity

- Preventative health
- Brain uploading
- iHealth
- Regenerative medicine
- Bioeconomy
- Genetic engineering

A.I

- DACs
- Deep learning
- Swarm intelligence
- Machine learning
- Intelligent era

Data

- Data access
- Quantified knowledge
- Prescriptive and automated analytics
- Infrastructure as code
- Biological computing
- Quantum computing
- Data ownership networks

Tech

- Hyperloop & hypersonic
- Autonomous vehicles
- Edge
- Photonics
- Payments tech
- Cryptocurrency
- Blockchain
- Nanotech
- Smart buildings/cities
- Fog computing
- Drones
- Pulse computing
- XaaS
- Multi purpose networks
- Security models/ cyber
- Smart infrastructure
- Collective risk mgn't
- Immersive experiences
- 3D/4D printing
- Social media 4.0
- User interfaces / ZeroUI
- Mixed reality
- Hologram world
- Humanoid robots
- Volumetric displays
- Virtual retinal displays
- Haptics
- Digital ethics

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*“Any sufficiently
advanced technology
is indistinguishable
from magic.”*

Arthur C. Clark in 1964

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- [illegible]

5G



5G drives \$31 trillion in cumulative consumer revenue in the ICT industry by 2030. Ericsson

Internet of Everything



- 4,756 devices added/min.
 - 2025 - 152,000 a minute.
 - 150bn by 2027.
 - 25bn in 2021.
 - 14bn in 2019.
- 79zB of data by 2025.
- Revenue x3 \$465bn - \$1.5 tn.
- Internet of nano
 - Quantify everything.
 - Buildings, people, aircraft...



A hand is shown reaching upwards towards a collection of floating digital icons. The icons include a Twitter bird, a YouTube logo, a Facebook 'f', a smartphone, a laptop with a dollar sign, a RSS feed symbol, and a LinkedIn 'in'. The background is a light grey with a subtle pattern of small white squares. The text 'THE DIGITAL UNIVERSE' is prominently displayed in a large, bold, magenta font. Below the text, the words 'you tube' are written in a smaller, lowercase font.

THE DIGITAL UNIVERSE

500 yb

Speed and volume analysed
to multiply 30-fold by 2030.

SAP



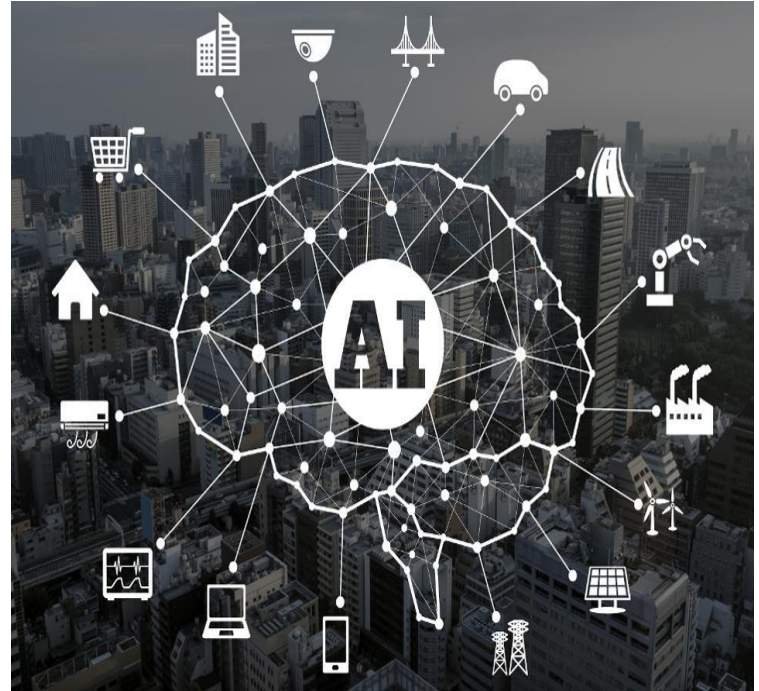


By 2025, 20% of data marked as
'critical' and 10% hypercritical.'



Artificial Intelligence

- Natural Language Processing/Chatbots
- Virtual Personal Assistants
- Machine Learning
- Robotic Process Automation
- Cognitive Computing
- Affective Computing
- Artificial Life
- Neural Networks / Deep Learning
- Swarm Intelligence



The Intelligent Age

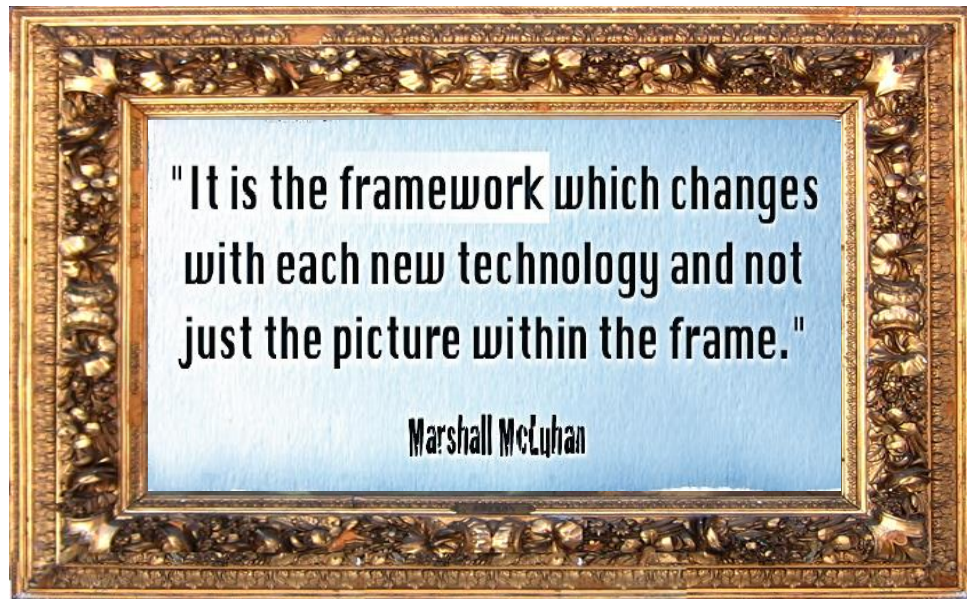


- AI doubles digital economy.
 - \$12.9tn now.
 - \$23tn in 2025. Huawei
- 58% will change business models within 5 years.
- 54% of execs say human-machine collaboration key.

'Everything invented in past 150 years will be reinvented using A.I within 15 years.'



First we do things differently
Then we do different things



Transformation

- Pharmaceutical
 - From pills to patient
- Medicine
 - From react to forecast
- Insurance
 - From payout to prevention
- Policing
 - From intelligence to prediction
- Retail
 - From engagement to immersion



Patient centric



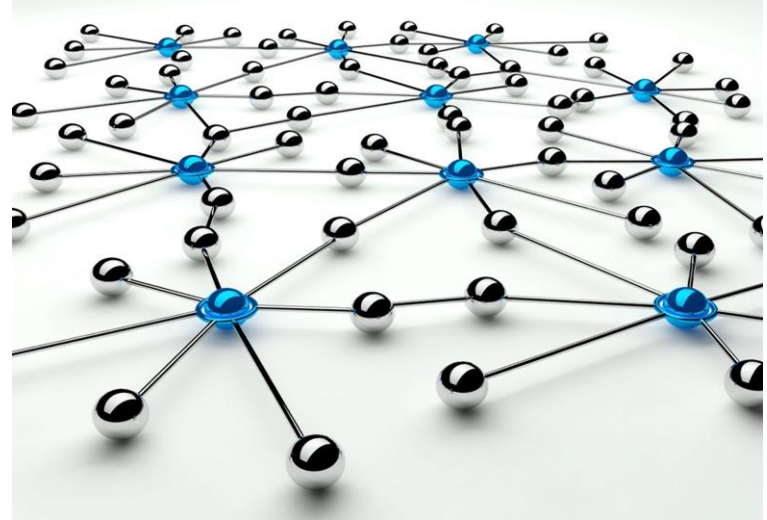
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Network of networks

- Orchestrate, facilitate or contribute.
 - People, sensors, and devices.
 - Company, supply chain, sub-contractors, markets, investors etc.
- Companies that leverage these could generate \$100tn in 10 years.



By 2025, 30% of global GDP will be in ecosystems.



Circular economy models

43% of consumers expect businesses to be accountable for their environmental impact.



\$4.5tn generated by their use by 2030.



Drivers post pandemic

- Death of distance.
- Customer, patient centric
- Tech in everything, everywhere.
- Entering the intelligent age.
- New globalisation.
- New working & business models.
- New digital skills required.
- New customer attitudes.
- Sustainability



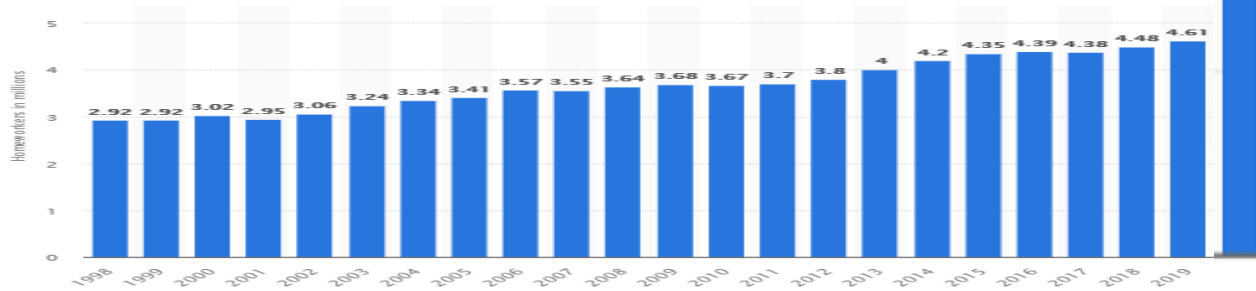
The big break post pandemic new normal

- Health Decentralised, digital, predictive, patient centric.
- IT & Comms XR, Edge, automation & AI, ambient, secure.
- Insurance From compensation to prevention, AI, digital.
- Law AI and automation, predicting issues, skills.
- Meetings & Events New business models, blended real/virtual.
- Pharmaceutical New competition, partners, methods & models.
- Real Estate Flexible structures, smart buildings, green.
- Retail Hybridisation, reimagined high street, predict.



Working from home in the UK

- 2000 - 3.02m
- 2015 - 4.35m
- 2020 - 16.2m (49%)
- 2022 - nn.nm

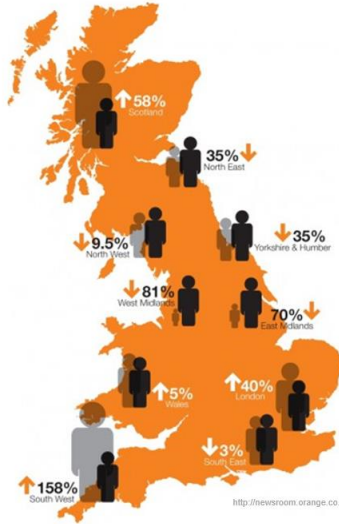


Because we could and had to



The Death of Distance

Where people would elect to live if universal connectivity gave them the power to choose.



MARS

Source: Orange, 2009
<http://newsroom.orange.co.uk/media/uploads/connectivity%20brochure.pdf>

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Future office 2020

'Technology...will have significant change on office space requirements. Offices will become meeting or collaboration spaces.'

Rainer Graf, Real Estate Manager
EMEA for Hewlett-Packard

- By 2020
 - 17% reduction in office space possible.
 - 1 in 3 people could work remotely.
- Global mobile workforce 1.3bn by 2015.



CBRE

Connect, collaborate, innovate

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2009

Real Estate

2013



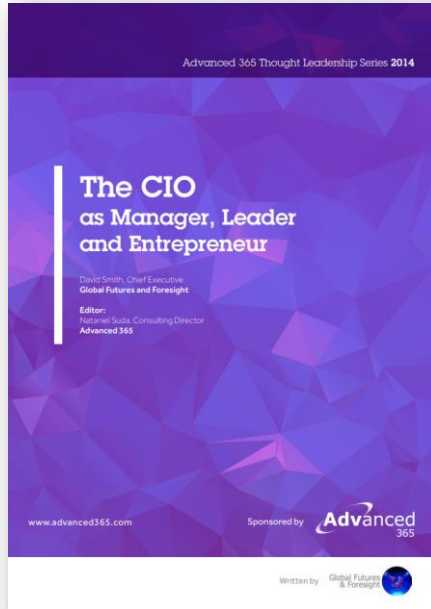
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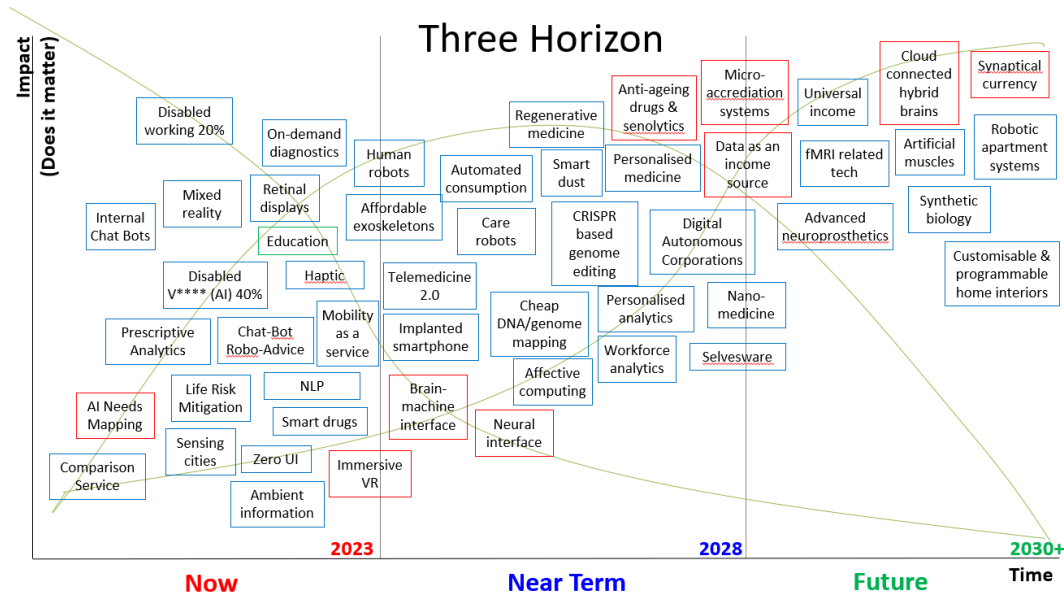


Jobs of Tomorrow	Skills of Tomorrow
Black Swan Risk Manager	Critical thinking and analysis
Digital Ethicist /Chief Trust Officer	Complex problem solving
Extended Reality Designer	Analytical thinking and innovation
Conversational Interface Designer	Active learning and learning strategies
Behavioural Psychologist	Creativity, originality and initiative
Social Intelligence Engineer	Leadership and social influence
System Designer	Technology use, monitoring and control
Re-Creationists	Technology design and programming
Human-Machine Manager	Resilience, stress tolerance and flexibility
Actualized Life Programmer	Reasoning, problem-solving and ideation
Knowledge Broker	Emotional intelligence
Data Banker	Troubleshooting and user experience
Head of Partnerships/Collaborations	Service orientation
Digital Transformation Specialists	Systems analysis and evaluation
IoT Specialists	Persuasion and negotiation
Platformed C-suite (Execs-as-a-Service)	Working with, in & alongside automated systems

Informing and implementing strategy



The message for IT leaders is clear: become business advisers and partners rather than technical operators.



The CIO should be a genuine business partner, acting as a consultant to the lines of business. This will require a practical grasp of new-wave technologies, such as intelligent automation, and a sensitivity to the weak signals emerging over the technology horizon.

Connect your entrepreneurs

- Give permission
- Give attention
- Resource
- Encourage
- Collaborate X-silo
- Externalise
- Honour innovation
- Honour diversity



<http://elm.newworldiq.com>



Innovation happens

Risk of doing nothing
greater than the risk of
doing something.



Imagine it

If you want to get ahead – you need to look ahead

Thank you



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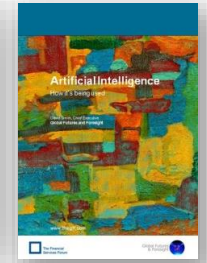
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