

# Tech in the Insurance industry



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Chief Executive  
Global Futures and Foresight  
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# Agenda

12noon Introduction  
ELM and your role  
Tech changing insurance

3 Horizon  
First breakout: H3  
Feedback  
Second breakout: H2  
Feedback

2pm Wrap up and close



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- 35 Years in IT and IT services in global organisations.
  - In technical, sales, leadership, marketing and strategy roles.
- 25 year focus on insurance.
  - With ACORD for 8 years.
  - US PIA Innovation Board.
- 20 years in futures role.
  - 5 years leading Global Future Forum in Unisys.
  - 15 years as an entrepreneur, futurist and researcher.



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# Global Futures and Foresight

1. Foresight
2. Keynotes
3. Advisory




Awarded BEIS Future Framework contract for UK government futures work 2020-2023.

Helping organisation better prepare for the future

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# Clients include




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# Data Processing

"I have travelled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won't last out the year."

The editor in charge of business books for Prentice Hall, 1957.





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## ... and the telephone

"The 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us."

*Western Union internal memo, 1876.*





Over 1.5 billion telephone lines  
Over 7 billion mobiles

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## Innovation



**1810**

**48 Years**



**1858**

Ezra Warner of Waterbury, Connecticut patented the first can opener

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## Manager, Leader, Entrepreneur



Resources Manager Entrepreneur	Foresight Leader Entrepreneur	Vision Entrepreneur
Cycles Manager Leader	Behaviour Leader	Culture Entrepreneur Leader
Capability Manager	Communication Leader Manager	Values Entrepreneur Manager

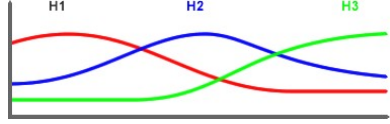
<http://elm.newworldiq.com>

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Today   Today   Tomorrow   Future   Future

Manager
Leader
Entrepreneur



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### Next Framework | Managers

	Manager Business Issues	Leader Individual Issues	Entrepreneur Group Issues
Entrepreneur Why?	Resources Manager Entrepreneur	Foresight Leader Entrepreneur	Vision Entrepreneur
Leader What?	Cycles Manager Leader	Behaviour Leader	Culture Entrepreneur Leader
Manager How?	Capability Manager	Communication Leader Manager	Values Entrepreneur Manager

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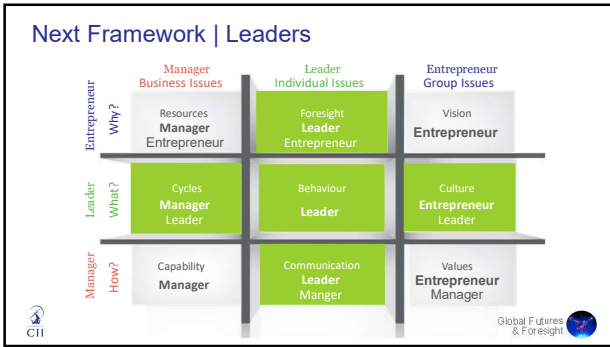
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### Next Framework | Entrepreneurs

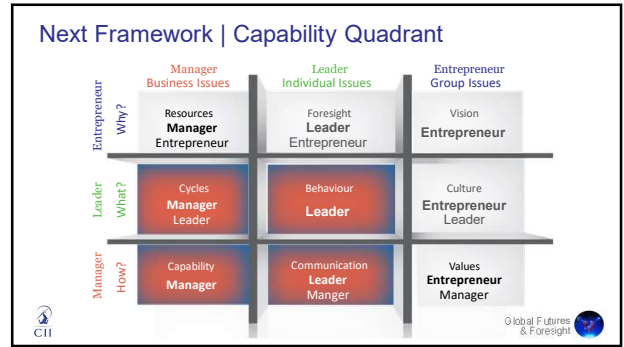
	Manager Business Issues	Leader Individual Issues	Entrepreneur Group Issues
Entrepreneur Why?	Resources Manager Entrepreneur	Foresight Leader Entrepreneur	Vision Entrepreneur
Leader What?	Cycles Manager Leader	Behaviour Leader	Culture Entrepreneur Leader
Manager How?	Capability Manager	Communication Leader Manager	Values Entrepreneur Manager

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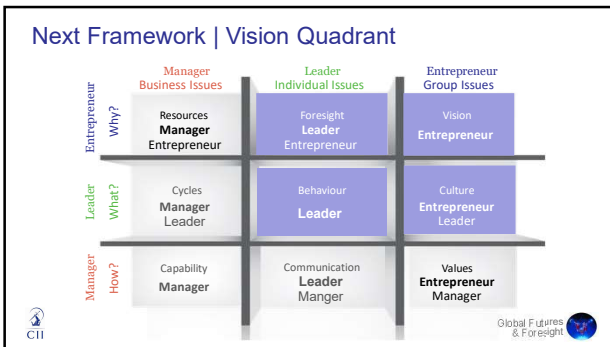
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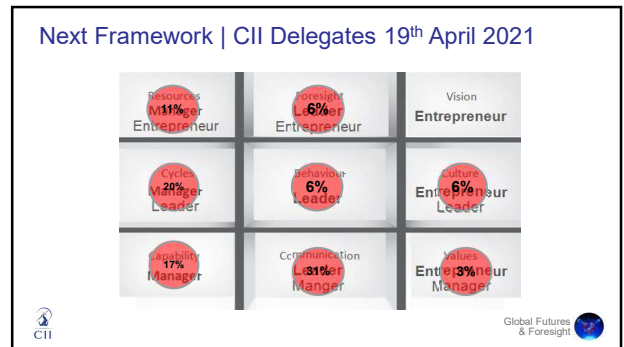
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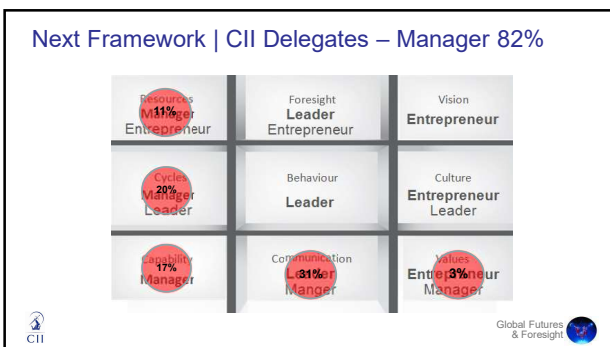
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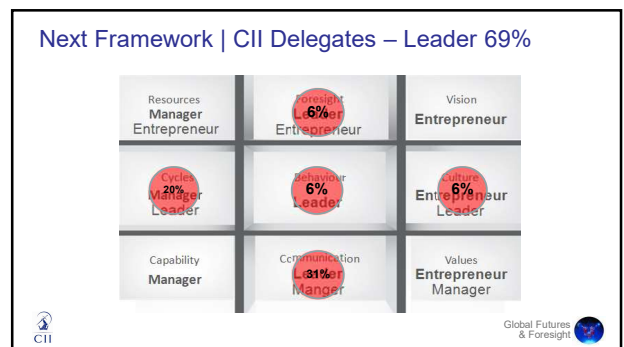
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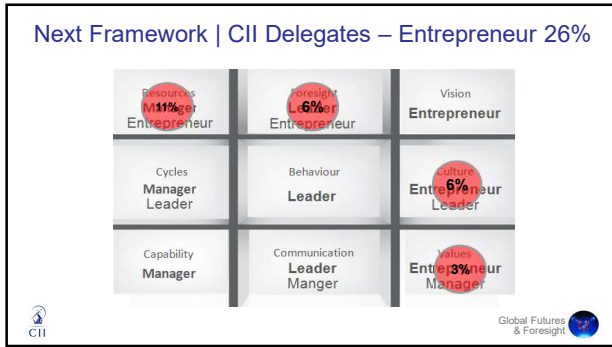
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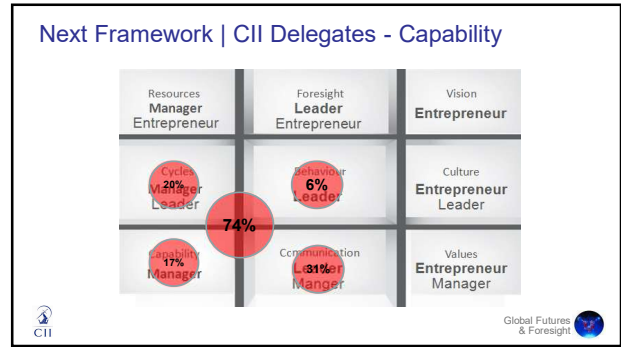
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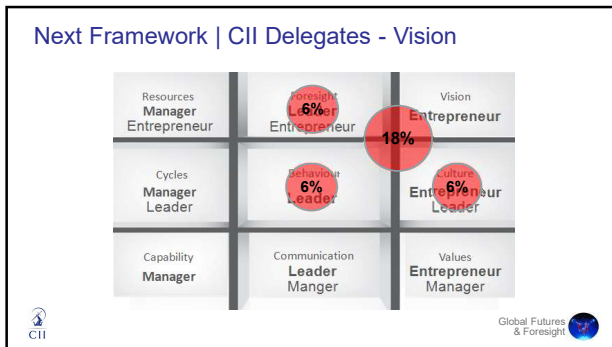
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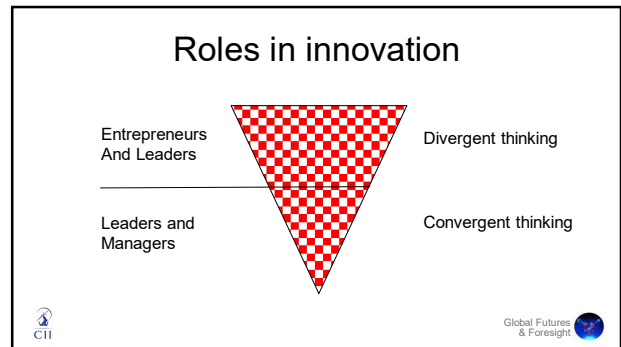
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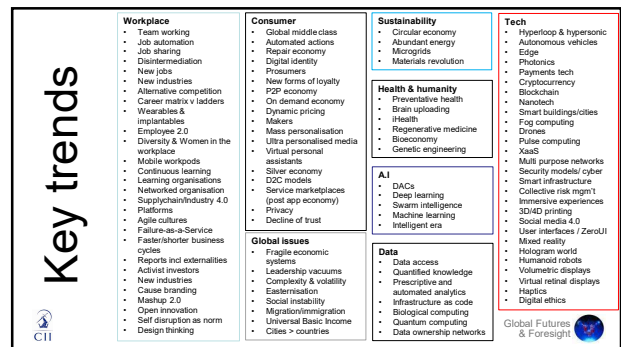
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## Andrew Kendrick

ACE Senior Vice President, Chubb Group, Regional President Europe

- Burning platform, tipping point.
  - Slow decline into irrelevance.
- Efficiency is key.
  - New players with lower cost structures.
  - Lots of M&A activity.
- Technology adopted at record speed.
  - Dozen disruptive technologies.
- Commitment to change.




Insurance Technology Congress  
London

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## With change comes risk




- Root causes of declines 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

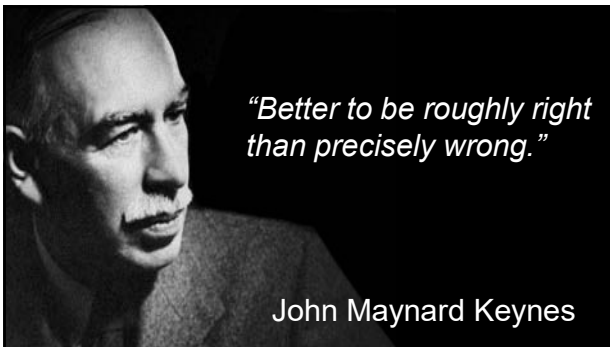
Digital models account for disappearance of over half of the *Fortune 500* since 2000.



Source: World Economic Forum, 2016  
Source: Society of Actuaries (2013); Enterprise Risk Management, Looking Forward



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"Better to be roughly right than precisely wrong."



John Maynard Keynes

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## POST-C\*VID RECOVERY IN THE UK



Inventions following 1929 include the helicopter, nylon, radar, jet engine, as well as sunscreen.


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Time to rethink the operating model beyond org structures & processes.


Successful insurers rethink workforce strategies, cost structures, physical presence, and culture for adaptability.

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## Insurable harder to value and protect

In 2018 tangibles accounted for 16% of the value of the S&P 500. Intangibles accounted for 84%.

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**RISK MANAGEMENT**

90% of execs grapple with volatility. Only 1/5 know how best to achieve agility & innovation.

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### Distribution a core issue

89% of insurance execs expect significantly more digitisation, most see further shift in channel mix.

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### Emerging competition

- In 2020-2022, carriers slow to respond to digital - or 'hyper-relevant' - competitors could suffer \$200bn market share erosion & miss \$177bn new growth activities

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Global non-life insurance industry's \$2tn capital won't last in a 'black swan' event i.e. cyberattack or another pandemic. The world is headed toward more systemic risk.

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### CUSTOMERS ARE CHANGING

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6 generations and more

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Only 16% of Millennials think insurance is even necessary.

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**GENERATION Z**

2027 – 30% in world Gen Z – 1.5bn adults

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6 in 10, globally, comfortable sharing personal details with their insurer for lower premiums.

39

**GENERATION Alpha**

Born after 2011 - 2.5m/wk

40

40% of consumers would buy a brand they'd never heard of if it was recommended by Siri, Alexa....

41

60% of insurance clients unsatisfied with providers and 50% consider turning to newer models.

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73% say insurers should understand their needs.  
Real time data is required.

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### Manage risk for me ...

- Providing real-time status of people, property, and equipment.

41% of insured abandon their carrier for a new one as the providers won't adjust services for their needs.

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### Personalisation

89% expect that by 2025 personalised insurance will be standard practice.

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### Consumer behaviour meets tech

24% of UK personal insurance market interrupted due to changing nature of risk & better data.

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### The mobile customer in context

- Where am I?
- What do I want?
- Who's around me?
- Where am I going?
- What would help me?
  - Where
  - What
  - Who

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Robbery 270 feet west 10 minutes ago

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By 2030, 'culture of ownership will have changed dramatically and people will simply not buy stuff the way they do today.' WEF

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UK insurance could gain £49.5bn boost due to changes in tech, macro-economic & behavioral patterns by 2030.

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Over 50% would buy personal cyberinsurance. \$3bn market by 2025.

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*"Any sufficiently advanced technology is indistinguishable from magic."*

Arthur C. Clark in 1964

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### Disruptive Technologies

- 5G comms
- IoT/Edge/IoN
- Data/Analytics
- Blockchain
- AI/Automation
- Pulse/Quantum
- AR/VR/XR
- 3D/4D fabrication
- Gene/Health
- New materials

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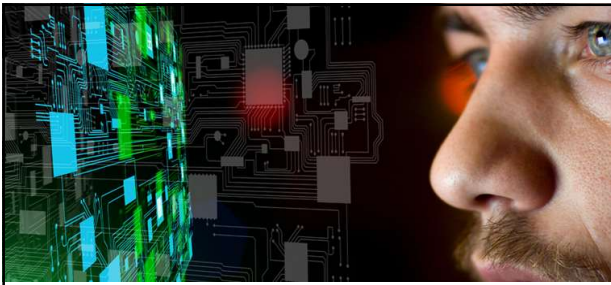
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### Tech will transform insurance

- 70% of insurers prioritise tech to transform;
  - How risk is assessed.
  - How yield optimisation is achieved
  - How product is distributed.
  - How to operate with a meaningful portion of their workforce at home.

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Insurers investment priorities: predictive analytics (70%), general AI (66%) automation (60%) & ML (56%) Global Futures & Foresight

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### Insurance catch-up

- 75% of IT spending in the insurance industry is on maintaining legacy systems.
- Yet, tech will still transform risk and insurance by 2030.

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By 2025, 80% of insurance custom development projects will involve no code/low code tech. Global Futures & Foresight

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### Opportunistic and Strategic

- Technology is not a strategy nor is it plug and play.
- The models must change.


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In 2020 it was said insurtech funding to 2025 could be more than prior 10 years combined. Global Futures & Foresight

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Insurtech platforms could see premiums exceed \$556bn in 2025 - \$250bn in 2020.

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### How the world differs differently

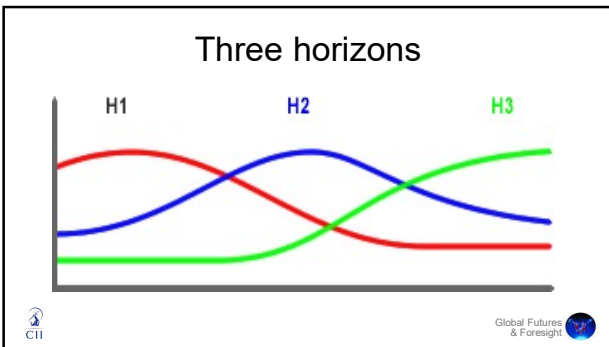
"It is the framework which changes with each new technology and not just the picture within the frame."

Marshall McLuhan




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### Horizon 1

#### Technologies maturing now

- Social and platforms
- 5G
- Internet of Things
- Wearables
- Big data and analytics
- Artificial Intelligence
- AR and VR
- Avatars
- 3D printing
- Blockchain
- Zero UI



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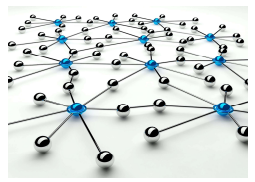
58% of insurance industry execs actively seeking to define and implement the right ecosystem.

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### Network of networks

- Orchestrate, facilitate or contribute.
  - People, sensors, and devices.
  - Company, supply chain, sub-contractors, markets, investors etc.
- \$60tn (+30%) in global GDP.
- Companies that leverage these could generate \$100tn in 10 years.




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## Defining your role

The five ecosystem roles:

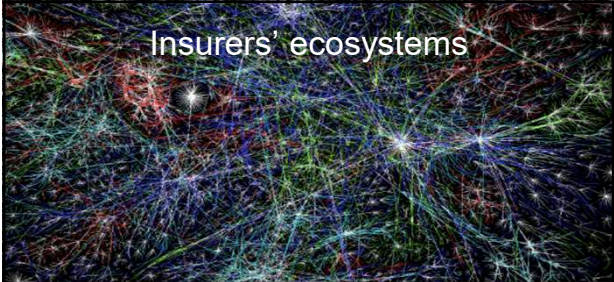
- Orchestrator(s)
- Core partner(s)
- Technology enabler
- Complementors
- Resellers



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## Insurers' ecosystems



Only 11% leverage an open architecture for collaboration and only 32% collaborate with the ecosystem for value-added services.

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## 5G



5G drives \$31tn in consumer revenue in ICT by 2030. Ericsson

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## 5G



COVID-19 accelerates digital investment & value creation.  
71% of firms plan to invest in 5G over the next 5 yrs.

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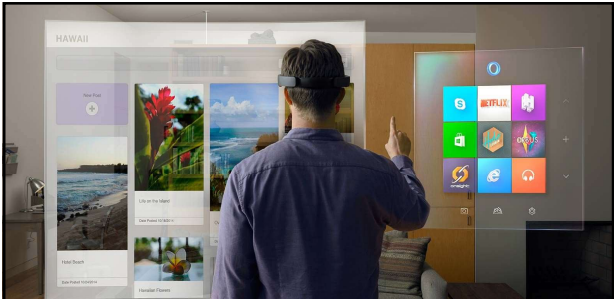
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AR & VR market value \$571 bn by 2025 - \$11bn in 2017

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70% of personal lines insurers think voice assistants will be the next big customer channel.

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## 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

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## The intelligent era

- AI & tech bring \$3.9tn in global business value by 2022.
- AI doubles digital economy.
  - \$12.9tn now.
  - \$23tn in 2025. Huawei
- Human-machine collaboration is strategic.

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

Randy Dean, CBO at Launchpad.AI

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AI underwritten insurance premiums could exceed \$20bn by 2024 - \$1.3 bn in 2019.

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## Automation in insurance

- In China Ping An, already uses AI to recruit and train its 1.5 million agents, who are deemed 50% more efficient than their competition.

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## The automated customer

- Your AI driven selling engine.
- My AI driven buying engine

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**IoT**

IoT technology is 2-5 years from 'transformational' impact.  
Gartner, 2020

Changes what we do, not just how ...

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**Internet of Everything**

- 4,756 devices connected/min.
  - In 2025 - 152,000/min.
- Networked sensors:
  - 150bn by 2027.
  - 25bn in 2021.
  - 14.2bn in 2019.
- 79 ZB of data by 2025.
- Changing business models.
- Revenue x3 \$465bn - \$1.5 tn.

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**IoT**

With IoT, insurers can:

- Improve CX & move beyond just providing risk transfer services.
- Alter risk selection, pricing, claims mgmt, real-time risk mitigation.
- Bring new policyholder risk insight.

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**Internet of Nanoswarms**

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Edge processing: 276,000 accidents prevented in 2018.  
 In 2030, 2.5m accidents could be prevented.

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Big data is giving way to the notion of shared data.  
 Data exchanges allow 3rd parties to gain insight from it.



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## Data remakes insurance





- 75% say industry boundaries blur due to IoT/other platforms.
- IoT value - \$15tn by 2030.
  - Insurance value - 26%.
  - Manufacturing - 20%.
  - Banking/Securities - 14%.
- HSB Canada, 13bn sensors, predicting and warning of risk.

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**By 2023, 65% of the world could have personal data covered under modern privacy regulations.**



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## Data revolution

- By 2025:
  - 30% of data generated real-time.
  - 20% 'critical' to daily life.
  - 10% 'hypercritical.'
- 50% of data managed autonomously.



175zb by 2025 – 33zb in 2018

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## Wearables



**2018, 39% of British nervous or scared of sharing personal data with doctor. Now it's just 15%.**




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## Changing nature of data


- Until now, data recorded and interpreted the world.
- 2030 data defines relationship between things, people, places.
- Determines our experience. WPP
- By 2025 humans interact with data every 18 seconds. bc








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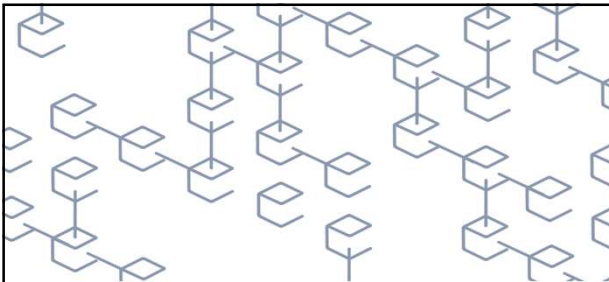
## Blockchain



**Blockchain could impact GDP by over \$1.76tn in next 10 years**


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Blockchain is a \$5-10bn cost-saving opportunity for reinsurers worldwide: PwC

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83% lose competitive advantage if they don't adopt blockchain - 77% in 2019, 68% in 2018.

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### 3D Printing

*The next trillion \$ industry*


- Airbus – 'Thor' and 1,000 parts of A350.
- First "printed homes" built.
- Commercial buildings built.
- Transform manufacturing, insurance, pharmacy distribution, logistics, retailing, food, surgery ...



Airbus - Thor

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In 2019, most parents said they'd be very comfortable allowing a 3D printed heart to be implanted in their child if needed

(US, 52%, UK 60%, Brazil 75%, China 94%)

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## Horizon 2 Technologies maturing within 10 years

- Holographics
- Automation
- Unmanned Autonomous Vehicles
- Cognitive computing
- Parallel Computing
- Instant language translation
- Haptic technology
- Humanoid Robots
- Vocal health diagnostics via 'devices'
- Next generation neuropharmacology



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## Unmanned Autonomous Vehicles



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Pilotless planes could save airlines \$35bn pa


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## Co-workers, customers, managers?



Acroid 1      Shakira 2      Clooney 1

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### Horizon 3 Emerging technologies of 10yrs+

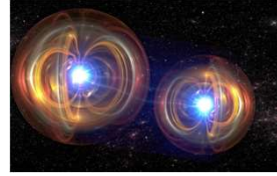
- Quantum computing
- Prescriptive analytics
- Smart dust
- Programmable material
- Neuroprosthetics
- Brain-to-computer interfaces
- Brain-to-brain interfaces
- Geoengineering
- Microscale 3D printing
- Anti ageing interventions



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### Quantum Internet



- High-fidelity quantum teleportation.
  - A network of data stored in qubits is shared over long distances through entanglement.
  - Transforms the fields of data storage, sensing, computing & comms.



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Posthumanism



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### BUSINESS IMPACT

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80% of top-performing firms say changing business models is essential to growth.



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### Business models

Post COVID, over 60% envisage more flexible, targeted products, closer policyholder engagement in environment of low rates.

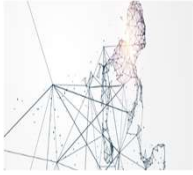
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## Digital insurance models

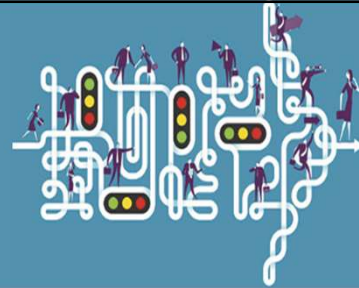
### Benefits

- Cost cutting: 10% in premium costs.
- 8% more accurate risk assessment.
- Better customer experience.
- Move from reactive to proactive decision-making.
- Fraud detection



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By 2030, the most productive insurers provide 5-10 products (50-100 products P&C insurers offer now): McKinsey

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## Embedded insurance

IoT + automation could compel FS to become '...embedded directly into the user activity itself as a native, not a separate, function.'



Embedded insurance: a \$3tn market opportunity, that could also help close the protection gap.

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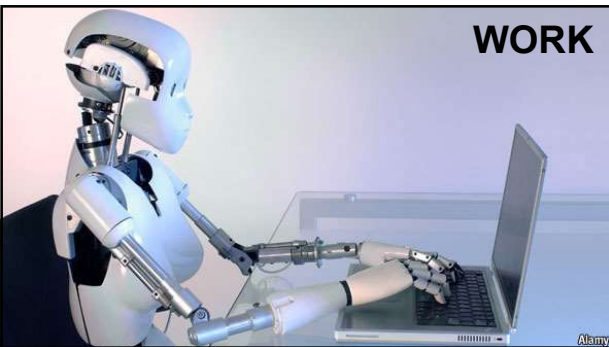


78% of insurers believe the COVID experience is accelerating their focus on ESG

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## WORK



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## Complexity



80% expect more cost and complexity by adding new tech - see automation and AI as an answer.

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By 2025, the time spent on current tasks at work by humans and machines will be equal.

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### Human-machine collaboration

79% of insurance execs believe human-machine collaboration critical to future innovation

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### Talent platforms

90% of leaders say digital talent platforms will be a key source of competitive advantage.

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AXA announced 3 bots able to save 18,000 work hours per year.

118

Insurance could lose 1 in 5 current jobs to automation within the 2019-2024 period

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### Leadership

57% believe by 2035, AI will make most business decisions.

By 2030, most companies use AI to support and accelerate decision-making.

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## Next big insurance jobs?

1. Personal Financial Advisors /Lifestyle' Consultant
2. Drone Operators (for insurance etc)
3. Chief Trust Officer
4. System Designers
5. Digital ID /privacy managers
6. FinTech experts
7. CX designers for AR/VR and beyond
8. P2P Guides
9. Personal data broker / Data bankers
10. Data Scientist
11. Storyteller (User Experience Designer)
12. Behavioural Psychologist
13. Algorithmic Risk Specialist
14. Community Advocacy Builder



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## New insurance skills

1. Complex problem solving
2. Critical thinking
3. Creativity
4. People management
5. Coordinating with others
6. Emotional intelligence
7. Judgement and decision making
8. Service orientation
9. Negotiation
10. Cognitive flexibility /ability to learn/unlearn at speed
11. Design skills
12. Data skills



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## Remote working



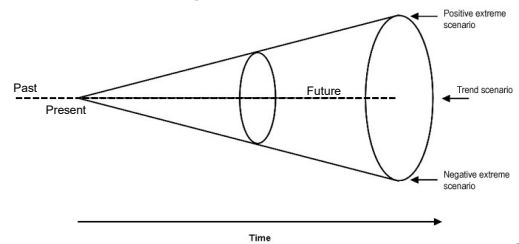
Remote working will rise to 300% of pre-COVID levels post 2021.



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## Looking at the future

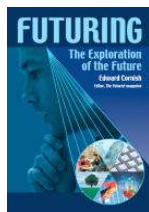


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## Futures Methods

- Brainstorming
- Gaming
- Historical Analysis
- Modelling
- Polling
- Scanning
- Trend Analysis
- Trend Monitoring
- Trend Projection



- 3 Horizon
- Scenarios
- Visioning
- Brainstorming
- Gaming
- Delphi
- Causal layer
- Backcasting
- Futures Wheel
- Inference Wheel



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## Can change culture



- 'The power of strategic foresight lies in its ability to alter minds and perspectives.'
  - We can create a foresight competency that can truly alter our organisational culture.'
- Y. Salvatico,  
A founder of the foresight division at Walt Disney.




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### External wildcards



- Dramatic inflection events whose timing and severity is hard to predict.
- Pandemic, War, Meteor strike, antibiotic failure.

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### 3 Horizons



Horizon 3 2030  
Horizon 2 2024  
Horizon 1 Today

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### Three Horizons



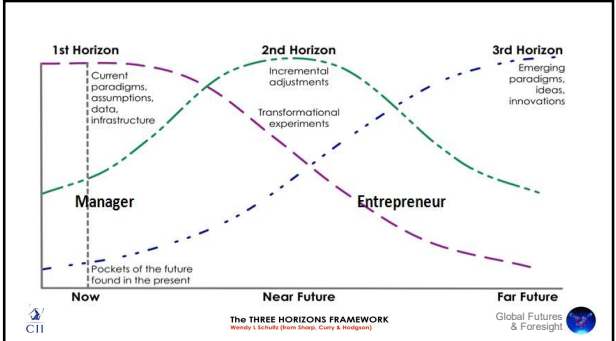
**Manager** Horizon 1 Core  
**Leader** Horizon 2 New  
**Entrepreneur** Horizon 3 Out there

Extend and defend    Build emerging businesses    Create viable options

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### The THREE HORIZONS FRAMEWORK



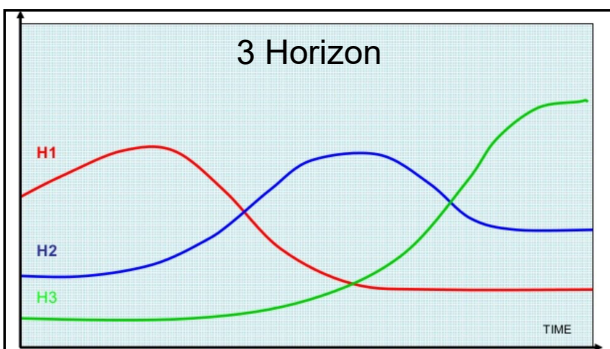
**1st Horizon**: Current paradigms, assumptions, data, infrastructure  
**2nd Horizon**: Incremental adjustments, Transformational experiments  
**3rd Horizon**: Emerging paradigms, Ideas, innovations

Manager    Entrepreneur

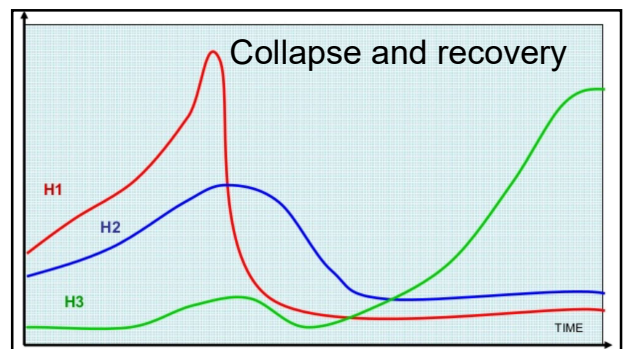
Now    Near Future    Far Future

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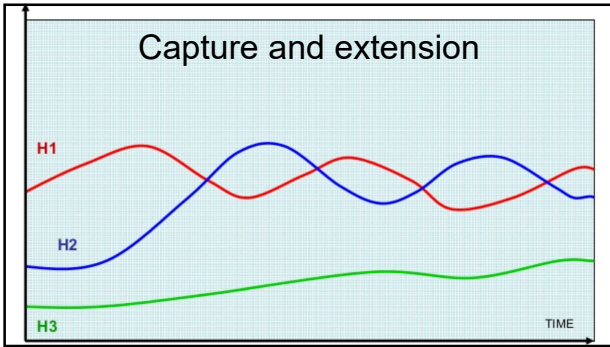


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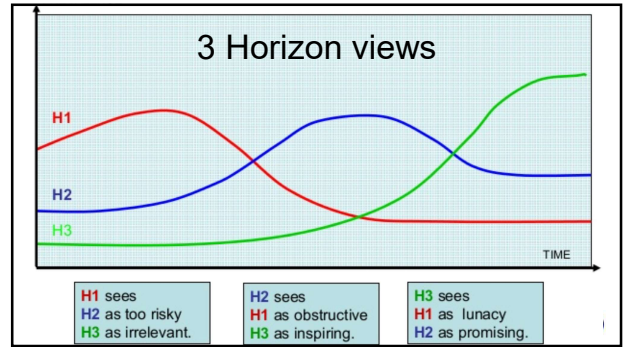


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### Example Horizon 1

- Manual underwriting
- Traditional Claims Process
- Typically, annual cover
- Fixed risk and liability.
- Black-box style insurance
- Compensation
- Mixed/multi channel
- Expense management efforts
- Digital transformation / Legacy tech
- Remote work
- Cloud
- Data driven orgs /data privacy
- Cybersecurity
- Emerging/new products eg: Parametric insurance
- Consumer preference for customisation
- Open finance (?)
- Expanding distribution channels
- Automated underwriting
- Automation more generally
- Shift from tangible to intangible risk
- Ecosystem formation (?)
- Ageing talent / need for new talent

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### Identify your H3 trends and elect top 3

In the next 10 years

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### Three Horizons

The Present (H1) Journeys (H2) The Future (H3)

Global subsistence farming - Rockefeller Foundation

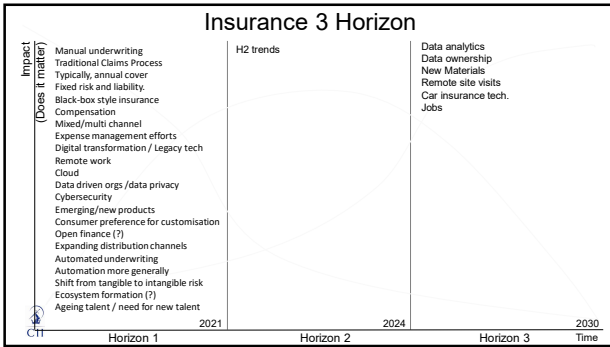
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### Your top 3 For horizon 3

# Feedback

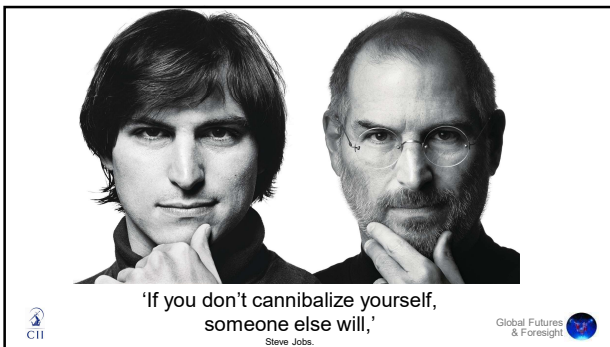
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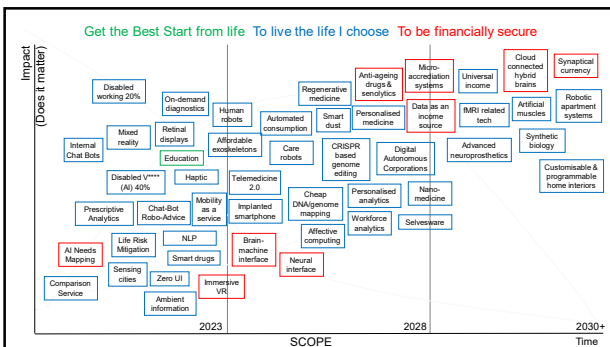
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### Taking a bite of itself

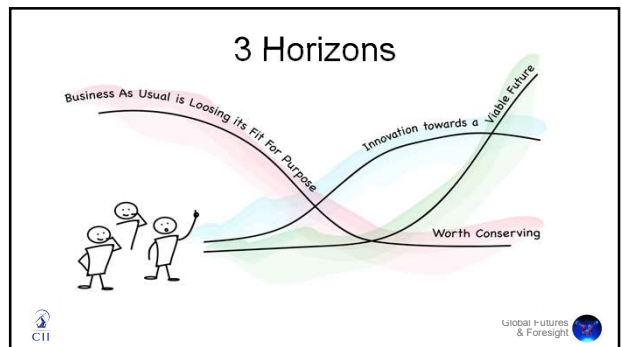
- In 2005, iPod Mini demand remained huge, the Nano was launched,
  - Effectively destroying the revenue stream of an existing product.
- While iPod sales were still going through the roof, Jobs launched the iPhone combining iPod, cell & net access into a single device.
- 3 years after the iPhone's launch, the iPad made its debut:
  - Despite the risk that it might one day cut into Mac desktop computer sales.

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Now think about how you might bridge the gap between H1 and H3.



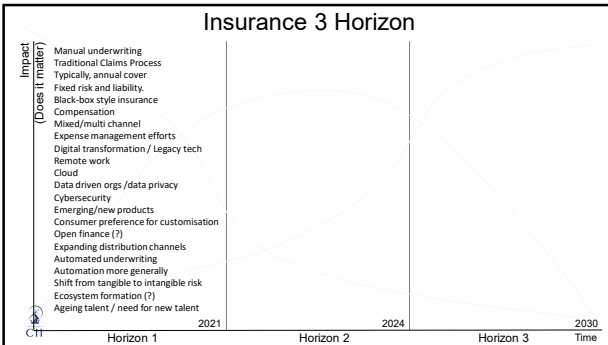
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Your top 3  
For horizon 2

Feedback

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### Insurance 3 Horizon



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### 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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Skate to where the puck will be



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Innovation happens

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



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# Imagine it

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

## Thank you



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