TDI TECHMAP21
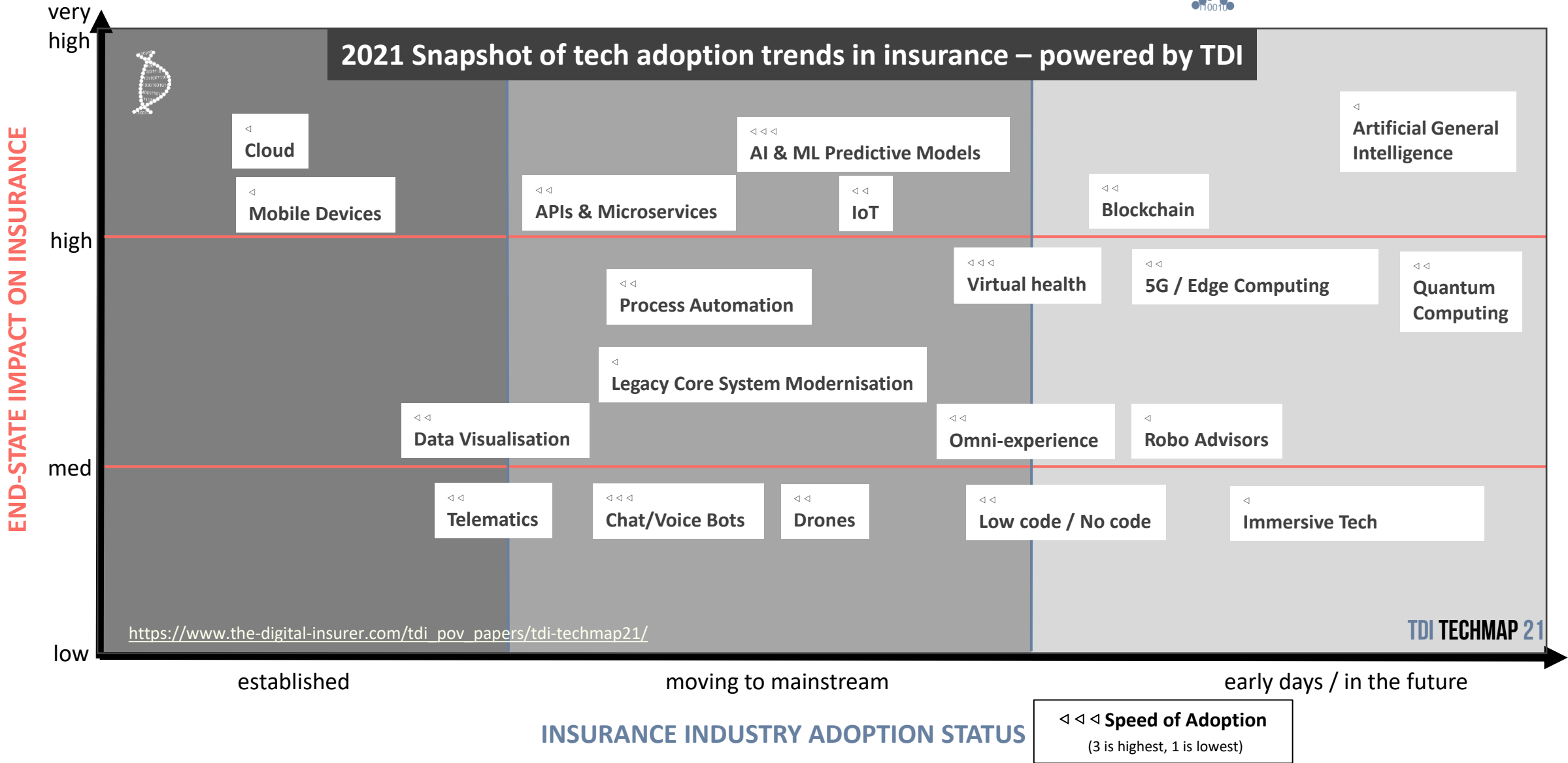
It's dynamic – click on the tech that interests you.
Download for your offline version

TDI ACADEMY
LEARNING FOR THE DIGITAL AGE

2021 Snapshot of tech adoption trends in insurance – powered by TDI

END-STATE IMPACT ON INSURANCE

very high

◁ **Cloud**

◁ **Mobile Devices**

◁◁◁ **AI & ML Predictive Models**

◁◁ **Artificial General Intelligence**

◁◁ **APIs & Microservices**

◁◁ **IoT**

◁◁ **Blockchain**

high

◁◁◁ **Virtual health**

◁◁ **5G / Edge Computing**

◁◁ **Quantum Computing**

◁◁ **Process Automation**

◁ **Legacy Core System Modernisation**

◁◁ **Data Visualisation**

◁◁ **Omni-experience**

◁ **Robo Advisors**

med

◁◁ **Telematics**

◁◁◁ **Chat/Voice Bots**

◁◁ **Drones**

◁◁ **Low code / No code**

◁ **Immersive Tech**

TDI **TECHMAP** 21

established   moving to mainstream   early days / in the future

INSURANCE INDUSTRY ADOPTION STATUS

◁◁◁ **Speed of Adoption**
(3 is highest, 1 is lowest)

TDI ACADEMY

5G / Edge Computing outlook in 2021

- Rollout start in 2021 in earnest
- Asia leading on rollout (China & South Korea)
- A step change in speed that will act as an amplified for many other Technologies

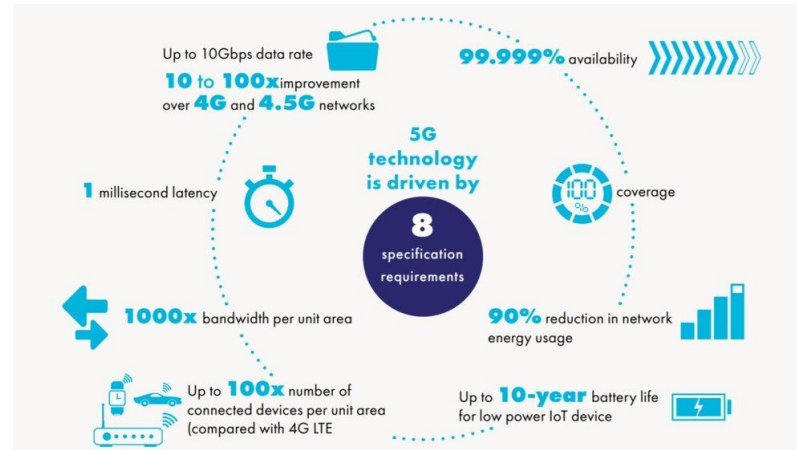**End State impact on insurance**
Medium to high

Adoption Status & Speed
Early days ◁ ◁

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TDI TECHMAP 21
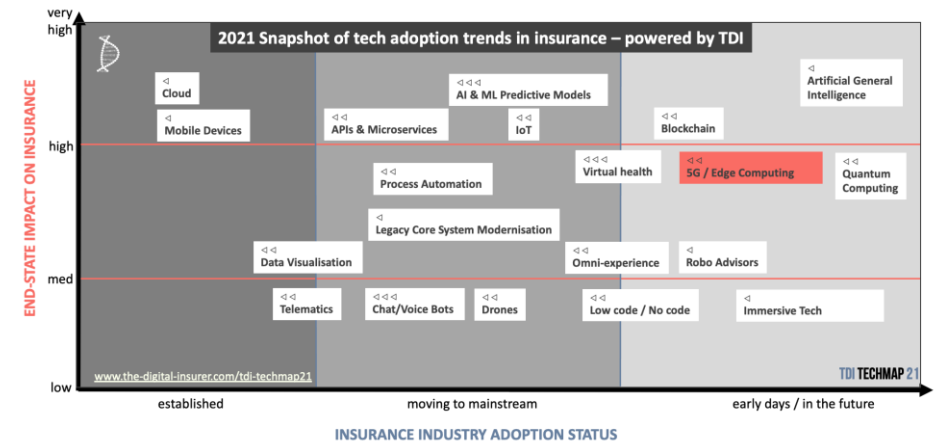
Strategic value to insurance

1. 5G enables IoT business models and real-time pricing
2. Smart homes, Connected cars, virtual health are enabled by 5G and edge computing
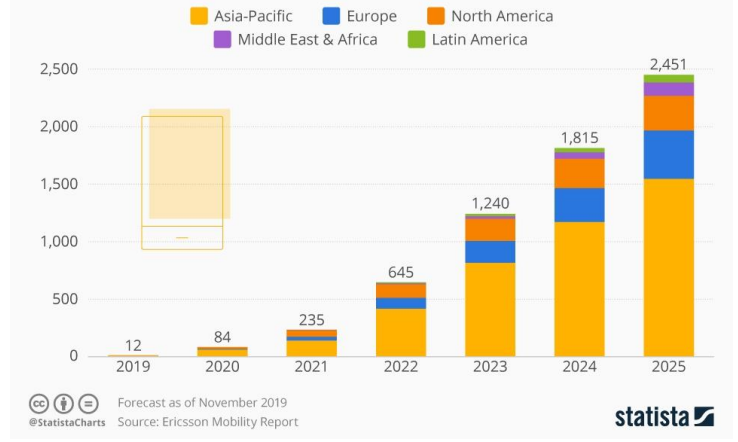3. Enabler of omni-communication at higher fidelity

Up to 10Gbps data rate
99.999% availability
10 to 100x improvement over 4G and 4.5G networks
5G technology is driven by
8 specification requirements
1 millisecond latency
coverage
1000x bandwidth per unit area
90% reduction in network energy usage
Up to 100x number of connected devices per unit area (compared with 4G LTE)
Up to 10-year battery life for low power IoT device

Source: Amt-lab – 5G Benefits & considerations

Recommended reading

- CB Insights: What is edge computing?
- Waterstreet: Impact of 5G on the insurance industry
- Insurance Times UK: 5G embracing the potential, appreciating the risks

Global 5G Adoption to Take Off in 2021
Forecast of 5G smartphone subscriptions by region (in millions)

Asia-Pacific ■ Europe ■ North America
Middle East & Africa ■ Latin America

Year	Value
2019	12
2020	84
2021	235
2022	645
2023	1,240
2024	1,815
2025	2,451

Forecast as of November 2019
@StatistaCharts Source: Ericsson Mobility Report

statista

Source: Statista - Global 5G Adoption to Take Off in 2021

AI & Predictive models outlook in 2021

- Emphasis on execution . Companies with core tools and good data management will be able to move ahead
- Increasing focus on AI for sale, retention, cross-sell and up-sell
- Value of genuine 360 degree view of the customer becoming clearer
- Increasing need for real-time analysis for many areas including pricing, Underwriting and claims
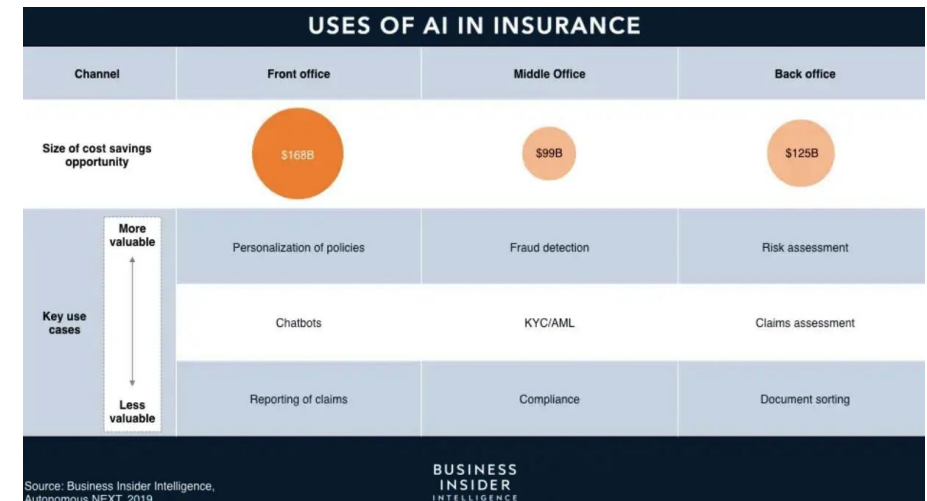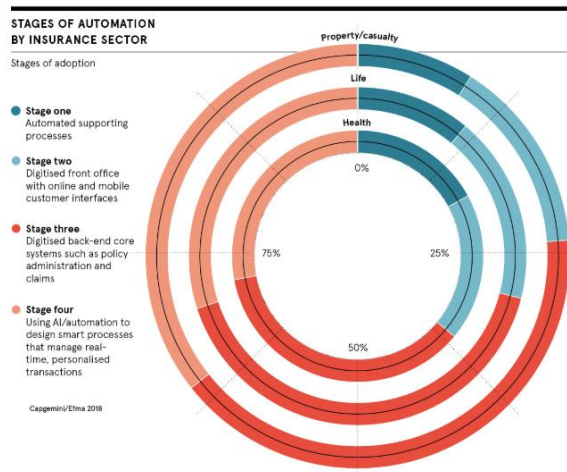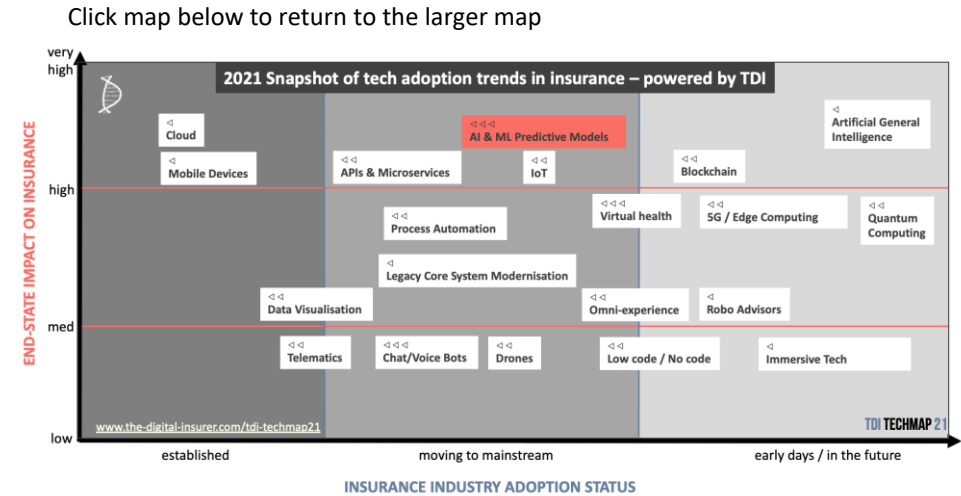- Can insurers make data modelling more inclusive?

Strategic value to insurance

1. Tools for operational improvement across the value chain
2. Operational cost reduction via automation
3. Decision support tools for insurance professionals
4. Insights to improve the business

Recommended reading

- Checkout the TDI Academy lessons: AI, Machine Learning & RPA or Predictive modelling
- Duck Creek: 11 Ways Predictive Analytics in Insurance Will Shape the Industry in 2021
- Willis Towers Watson: The financial rationale for predictive analytics

---

End State impact on insurance
High

Adoption Status & Speed
Moving to mainstream ◁◁◁

Click map below to return to the larger map

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STAGES OF AUTOMATION BY INSURANCE SECTOR

USES OF AI IN INSURANCE

Source: business insider intellgicence - - AI in insurance annual report

AGI outlook in 2021

- No consensus on whether AGI will be achievable
- But no doubt that AI is advancing at pace – and already proving to be highly disruptive
- Deep Mind is currently attracting a lot of attention but use cases remain specialised and commercial basis is not established
- AGI should be on insurers risk maps as one to watch in the years ahead
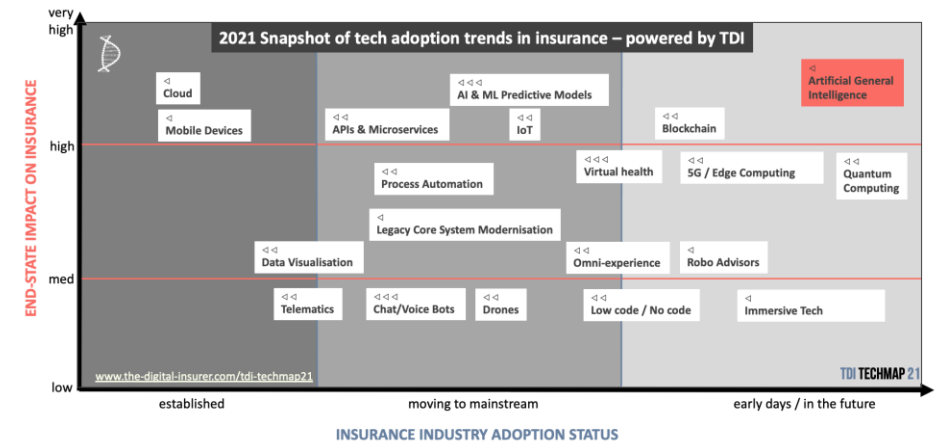
Strategic value to insurance

1. Will be a game changer – but as this point hard to define both timing and impact

Recommended reading

- Nature.com: Why general artificial intelligence will not be realized
- Business Insider: Elon Musk says he's terrified of AI taking over the world and most scared of Google's DeepMind AI project
- Nature: 'It will change everything': DeepMind's AI makes gigantic leap in solving protein structures

End State impact on insurance
High to very high

Adoption Status & Speed
Early days ◁

Click map below to return to the larger map

Source: Data Science Central - Google Deepmind: The Importance of Artificial Intelligence

TDI TECHMAP21 APIs & MICROSERVICES

APIs& Microservices outlook in 2021

- Continued march to mass adoption in the insurance industry
- Microservices move to the cloud and increasing focus on "observability" tools
- By 2022 90% of apps developed using microservices architecture
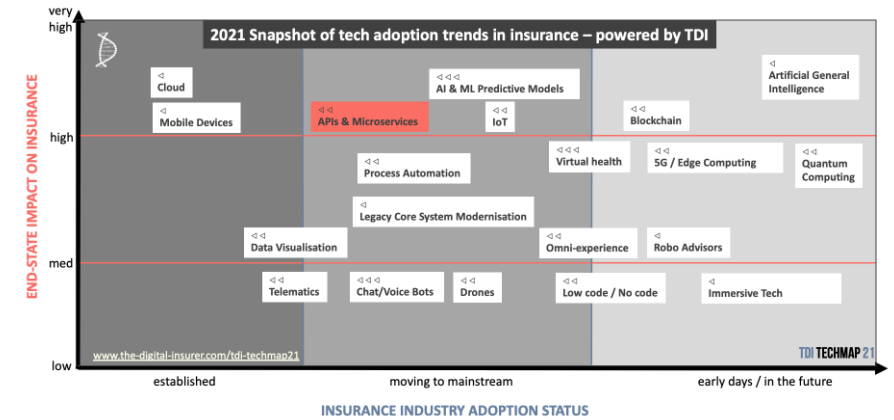- Advantages of open APIs become clearer

End State impact on insurance
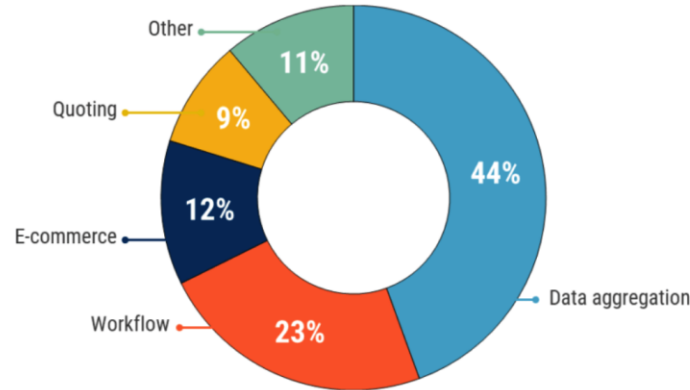**High**

Adoption Status & Speed
Moving to mainstream ◁ ◁

Click map below to return to the larger map

2021 Snapshot of tech adoption trends in insurance – powered by TDI

Strategic value to insurance

1. ease of development / speed to market
2. Participation in, and access to, ecosystems
3. Access to more data
4. Building new service offerings with partners
5. Better customer experience
6. Increased resilience by separation of business functionality

Recommended reading

- Checkout the TDI Academy lesson: APIs & Microservices
- TDI webinar: Infrastructure for global insurers
- The Newstack: microservices, APIs and innovation – the power of APIs
- IBM: Evolution of the API Economy
- Robosque: The journey to an open API standard

Distribution of insurance APIs

- Data aggregation 44%
- Workflow 23%
- E-commerce 12%
- Quoting 9%
- Other 11%

Source: CB Insights - APIs driving next generation insurance
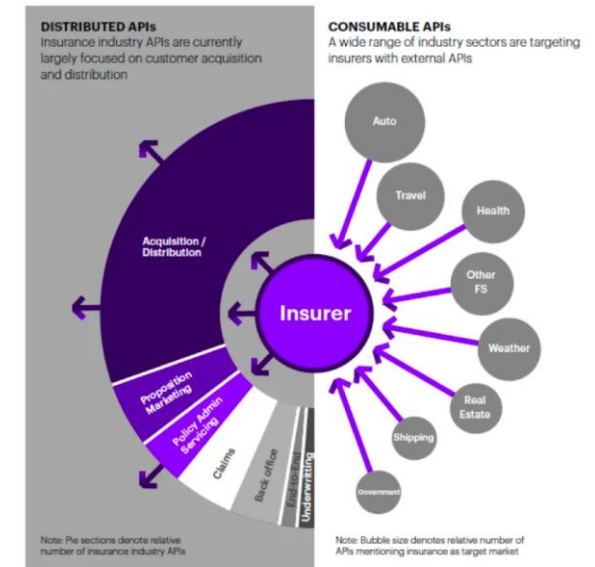
Source: Open Insurance- Insurance platform ecosystems are an open playing field

Click map below to return to the larger map

Blockchain outlook in 2021

- Increasing exploration through localised R&D pilots
- Increasing public awareness of successful insurance-specific use cases, particularly in non-traditional markets (eg under-served / micro) and consortium-led industry-wide initiatives (eg reinsurance)
- Rise of DeFi (Decentralised Finance) enthusiasm amongst crypto community, in particular enabled through Ethereum, likely to accelerate sector interest and exploration

End State impact on insurance
High to very high

Adoption Status & Speed
Early days ◁◁

2021 Snapshot of tech adoption trends in insurance – powered by TDI

Cloud
Mobile Devices
APIs & Microservices
AI & ML Predictive Models
IoT
Blockchain
Artificial General Intelligence
Process Automation
Virtual health
5G / Edge Computing
Quantum Computing
Legacy Core System Modernisation
Data Visualisation
Omni-experience
Robo Advisors
Telematics
Chat/Voice Bots
Drones
Low code / No code
Immersive Tech

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END-STATE IMPACT ON INSURANCE
INSURANCE INDUSTRY ADOPTION STATUS
established — moving to mainstream — early days / in the future

Strategic value to insurance

1. Raise consumer trust in industry e.g. automated claims payments
2. Reduce frictional costs and help remove unnecessary tasks e.g. manual verifications that policy conditions are met
3. Increase customer satisfaction through more efficiency servicing e.g. claims settlement via smart contracts
4. Generate new sources of revenue e.g. micro
5. Enabler of New Digital Business Models e.g.P2P, as well as multiple Value Chain Innovations e.g. Claims settlement

Recommended reading

- Checkout the TDI Academy lesson: Blockchain
- Amazon: Life after Google – Blockchain economy
- Wikipedia: Decentralised Finance

The Economist
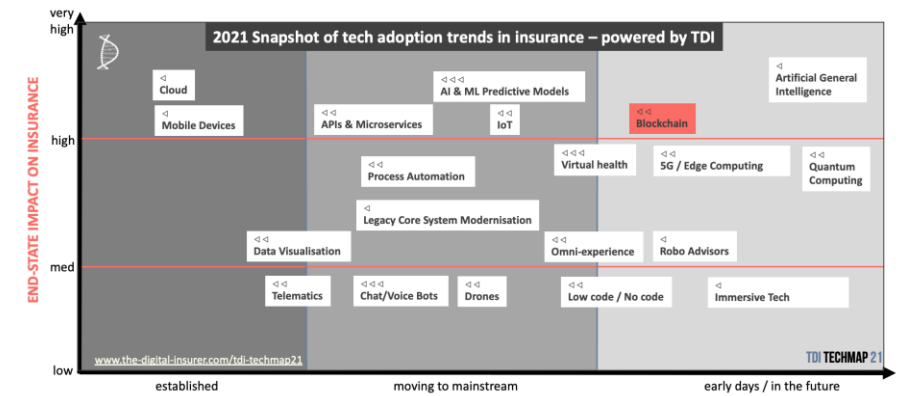
Our guide to America's best colleges
Turkey votes to the sound of bombs
Those ever-creative accountants
America takes the fight to IS
Coywolves: the new superpredator

OCTOBER 31ST–NOVEMBER 6TH 2015 Economist.com

The trust machine
How the technology behind bitcoin could change the world

Source: The Economist – Trust Machine

VC-backed Bitcoin and blockchain fintech investment activity

$3M (2011) $1M (2012) $80M (2013) $299M (2014) $474M (2015)

24+ Countries investing in blockchain

90+ Corporations have joined blockchain consortia

4+ R3 consortium members focused on exploring blockchain applications in Insurance
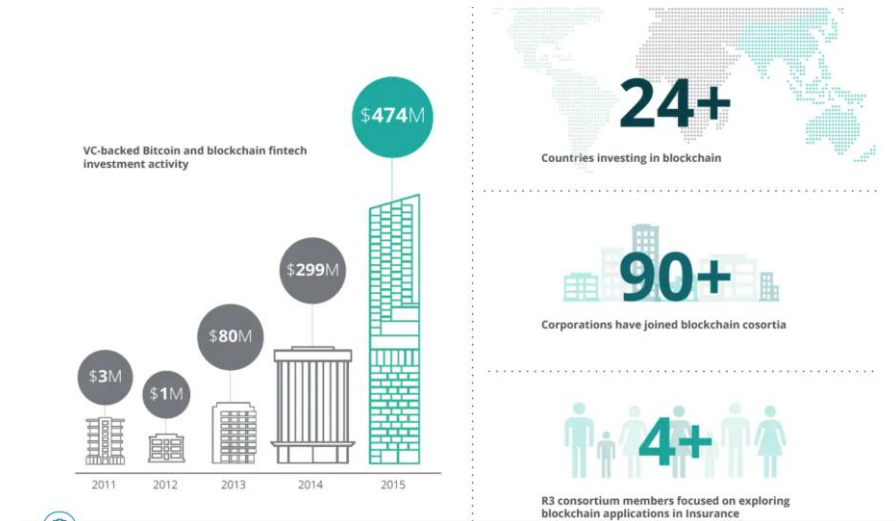
Source: Deloitte – Blockchain in insurance

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Chat/Voice bots outlook in 2021

- Increasing adoption and availability as insurers catch up with consumer demands
- Trends to increased personalisation (increased access to customer records go answer queries) and improvements in handover / escalation to customer services executives / sales reps
- Scope for improvement

End State impact on insurance
Medium

Adoption Status & Speed
Moving to mainstream ◁◁◁

Click map below to return to the larger map
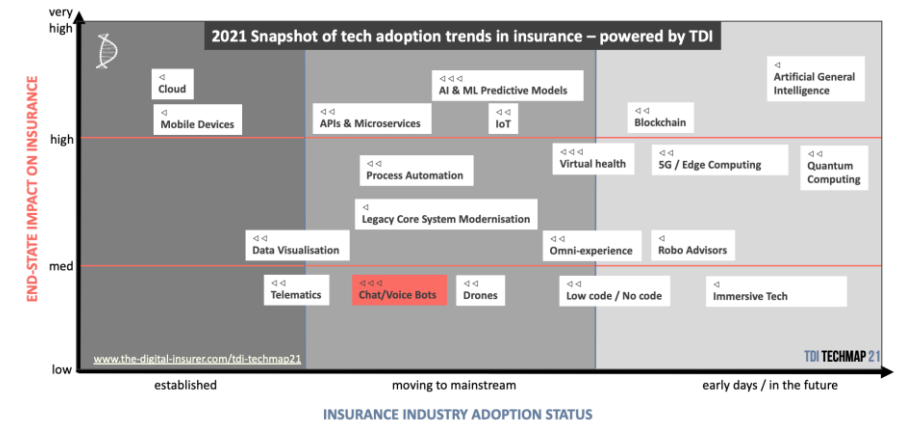
Strategic value to insurance

1. Better customer service at lower cost
2. A new interface for customer engagement
3. Creates data for business insight (AI assisted)
4. Gateway for voice enabled services

Source: Cognizent - The Future of Chatbots in Insurance
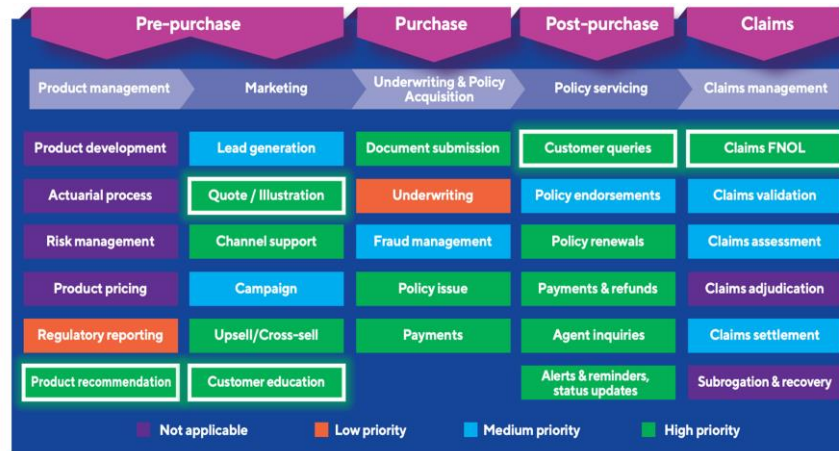
Recommended reading

- Checkout the TDI Academy lesson: Chat & Voice
- Insurancebusinessmag: How chatbots are revolutionizing the insurance customer's journey
- Artificial solutions: AI Chatbots in Insurance: Benefits, Use Cases and Key Features
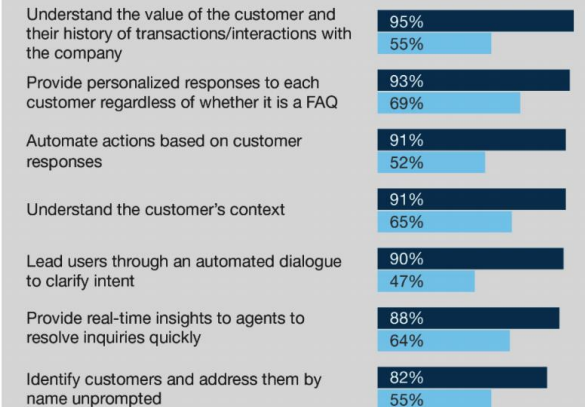
Source: Forrester / Ada- Personalisation Coversational chatbot

TDI TECHMAP21 CLOUD

Cloud outlook in 2021

- Established cloud services market with competitive pricing
- Continued innovation around "as-a-service" add-ons
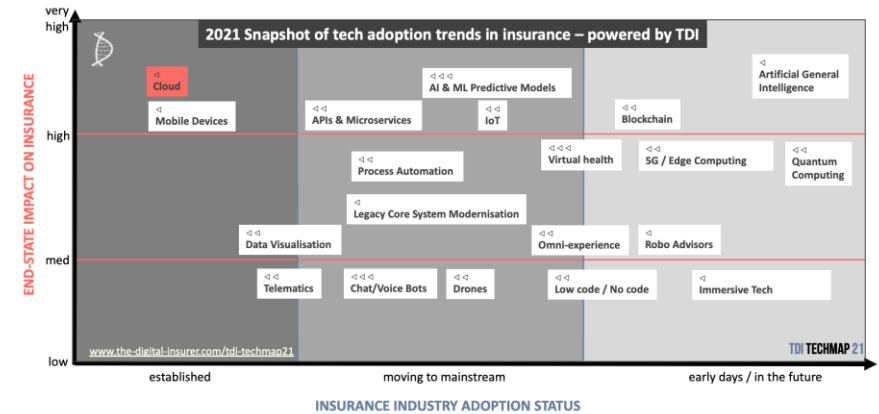- Increased focus on security will reemphasis value of cloud providers superior security offering
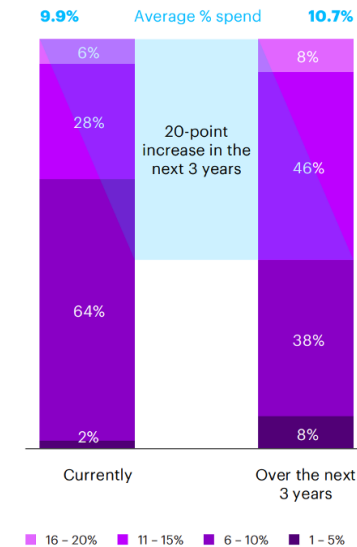
Strategic value to insurance

1. Crush cost
2. Become more agile & scalable
3. Access core tech such as AI and blockchain on "as a service" terms
4. Manage increasing quantity of data
5. Participate in ecosystems and on-demand insurance
6. Better security

Recommended reading

- Checkout the TDI Academy lesson: cloud crushes costs
- Accenture: Cloud Readiness Insurance Survey
- Google: Principles and best practices for data governance in the cloud

End State impact on insurance
High to very high

Adoption Status & Speed
Established ◁

Click map below to return to the larger map

Figure 1: Benefits of Cloud

Cost savings	58%
More visibility into and control of IT usage	48%
Free up internal resources	46%
Less systems and applications downtime (planned and unplanned)	44%
Ability to provision IT capacity faster	44%
Better security	42%
Ability to launch applications faster	40%
Greater agility	38%
Ability to scale up and down when needed (elasticity)	32%
Other	0%
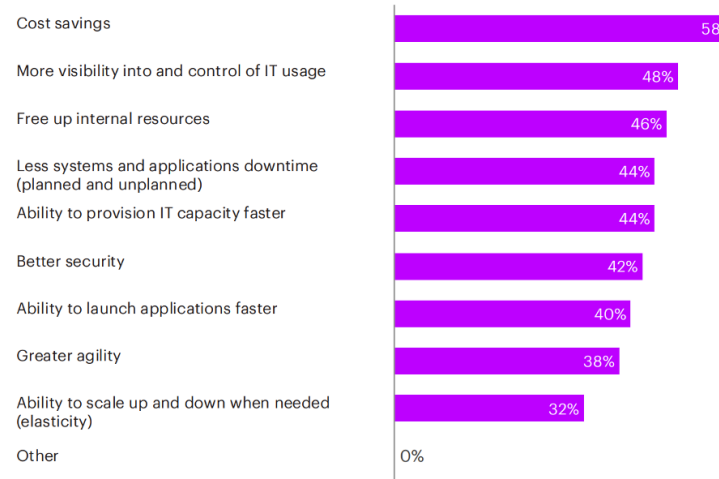
Source: Accenture Cloud Readiness Survey in Insurance, June 2019

Figure 2: Planned Cloud Expenditures

9.9%   Average % spend   10.7%

Currently: 6%, 28%, 64%, 2%
Over the next 3 years: 8%, 46%, 38%, 8%

20-point increase in the next 3 years

16 – 20%   11 – 15%   6 – 10%   1 – 5%

Source: Accenture Cloud Readiness Survey in Insurance, June 2019

Source: Accenture – Accenture - Cloud Readiness Insurance Survey

TDI TECHMAP21 DATA VISUALISATION

Click map below to return to the larger map

Data Visualisation outlook in 2021

- Going Social for customers with visualisation of personal data
- Multi-device visualisation – increasingly mobile
- Increased enterprise deployment and training of business users
- Rapid increase in real-time dashboards with embedded AI for decision support

Strategic value to insurance

1. Bring data to business users and customers in a consumable format
2. Generate more actionable insights from data
3. Bring more people into the world of data driven insights
4. Additional Benefits as a visual driver of a digital culture

Recommended reading

- Medium / Quosphere: 7 data visualisation trends
- Tableau: 10 best practices for building dashboards

End State impact on insurance
Medium

Adoption Status & Speed
**Established/
Moving to mainstream◁◁**

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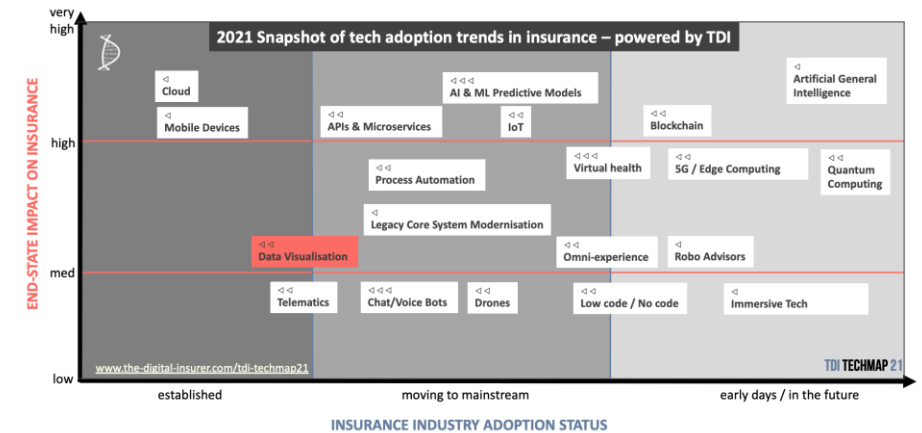
6 Best Practices in Data Visualization

1. Know Your Goal
2. Use Correct Data
3. Keep Visualization and Dashboard Simple
4. Keep Users Engaged
5. Empower your audience
6. Design Iteratively

Source: Predictive analytics today –
Top best practices in data visualisation

HR Dashboard-Attrition
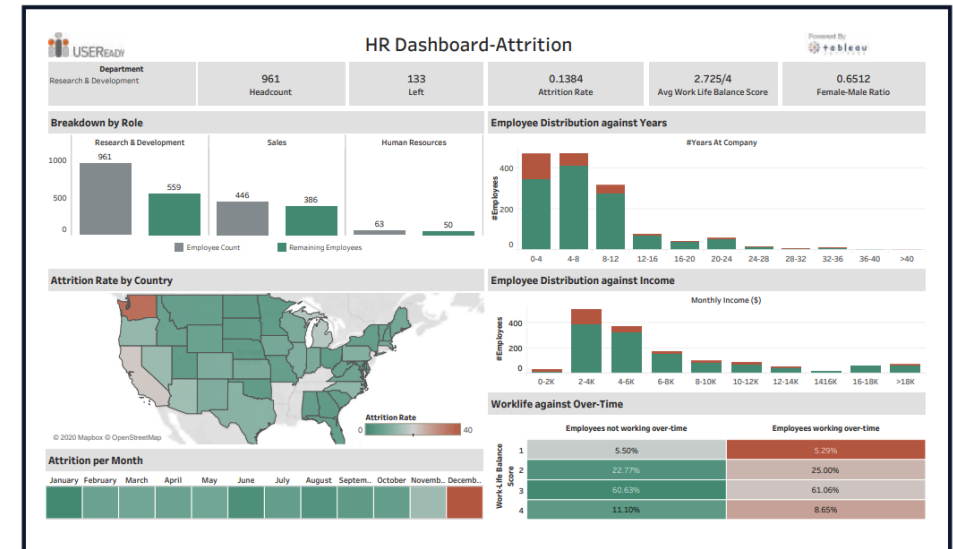
Source: Tableau – Top 5 insurance dashboards

TDI TECHMAP21 DRONES

Drones outlook in 2021

- Valuable but relatively limited uses in insurance
- Increasing maturity in drone technology drives increasing adoption. By insurers
- PwC estimate approx. US$7 billion market for drone technology in 2020 (2017 estimate)

Strategic value to insurance

1. Management of risks - New sources of data for underwriting and claims
2. Natural disaster management
3. Adjudication of claims – inspection and fraud management

Recommended reading

- Intellectsoft: Drones in Insurance: How the Technology Changed the Industry and What to Expect from it Soon
- Flyability: the commercial use of drones

End State impact on insurance
Low to medium

Adoption Status & Speed
Moving to mainstream ◁

2021 Snapshot of tech adoption trends in insurance – powered by TDI

END-STATE IMPACT ON INSURANCE

very high / high	Cloud	AI & ML Predictive Models	Artificial General Intelligence
	Mobile Devices	APIs & Microservices / IoT	Blockchain
		Virtual health	5G / Edge Computing	Quantum Computing
		Process Automation		
		Legacy Core System Modernisation		
med	Data Visualisation		Omni-experience	Robo Advisors
	Telematics	Chat/Voice Bots	Drones	Low code / No code	Immersive Tech
low	established	moving to mainstream	early days / in the future

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TDI TECHMAP 21

INSURANCE INDUSTRY ADOPTION STATUS

A 20-MINUTE DRONE FLIGHT
can take 350 images of a property and help find moisture trapped in roofs, produce 3D models and elevation maps, calculate flood risk, and more...

Source: Intellias - How to Use Drones for Insurance Inspections

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Potential applications span pre- and post-loss insurance value chain

Top takeaways

The insurance industry has been one of the earliest adopters of commercial drones.

Over the past few years, drone deployment has been rapidly expanding and evolving, with applications across the insurance value chain.

Commercial drone use has the potential to help the insurance industry save billions of dollars annually[22] by improving core transaction processing, risk management, resource efficiency, fraud reduction, and employee safety.

To take advantage of the empowering data and cost-saving opportunities that drones provide, companies must tackle a number of regulatory, technology, and business risks and challenges.

Source: Deloitte- Insurance industry drone use is flying higher and farther

TDI ACADEMY

Immersive Tech outlook in 2021

- Use cases in insurance continue to emerge slowly
- 5G will enhance VR experience and accelerate adoption
- Small enterprise penetration Approx. 100-200,000 headset purchases by enterprises (not just insurance)
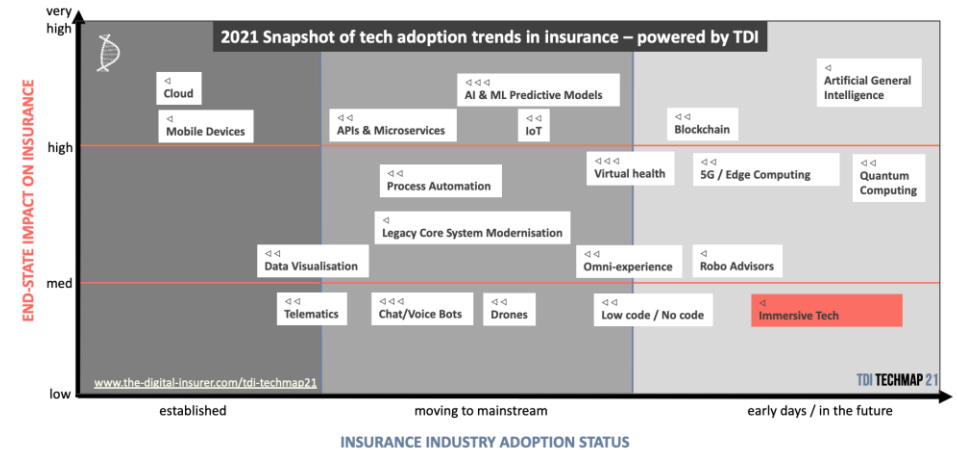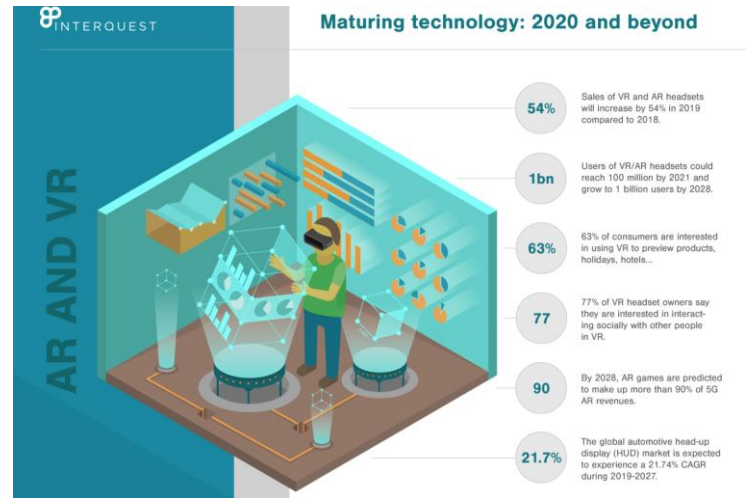
Strategic value to insurance

1. VR as a learning and simulation tool
2. VR for enhanced customer experience
3. AR for enhancing value chain innovations

Recommended reading

- Checkout the TDI Academy lesson: Immersive Technology
- Forbes: The Revolutionary Impact Of Immersive Technology On Education
- Insurance Journal: Strap on the Goggles. Employee Training Is Entering Virtual Reality.

End State impact on insurance
Medium

Adoption Status & Speed
Early days ◁

Click map below to return to the larger map

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TDI TECHMAP 21

Source: Interguest Group - Augmented reality (AR) and virtual reality (VR) predictions for 2020 and beyond

Source: You Tube./Video Gorillas - Global 5G Adoption to Take Off in 2021

TDI TECHMAP21 IoT

A outlook in 2021

- Long-term trends continue to drive adoption of IoT including increasing consumer adoption and proven capability as risk management tools
- Usage base insurance for auto forecast to grow from US$29 billion in 2019 to close to US$150 billion by 2027 (allied market research)
- Adult wearable penetration rate (use once a month) forecast to reach 25% by end of 2022 (up from 18.1% in 2017) – it is not exponential yet
- Smart Homes – steady increases in penetration expected – pending standardisation to increase adoption

Strategic value to insurance

1. Excellent Risk reduction tools
2. Change the nature of the product by changing the customer experience – engaging and retaining customers
3. Enabling real-time and on demand insurance – including pricing data
4. Universal - applications across nearly all business lines
5. A key enabler for ecosystem and platform models

Recommended reading

- Checkout the TDI Academy lesson: IoT
- IBM: The Internet of Things: New and better data for the insurance industry
- Gartner / Octo telematics : Digital transformation through connected insurance
- Insurance Nexus: Connected Insurance Report
- Forbes: 5 biggest smart home trends in 2020

End State impact on insurance
Low to medium

Adoption Status & Speed
Early days/
Moving to mainstream ◁◁

Click map below to return to the larger map

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INSURANCE INDUSTRY ADOPTION STATUS

Interaction Between the Three Components of the Internet of Things
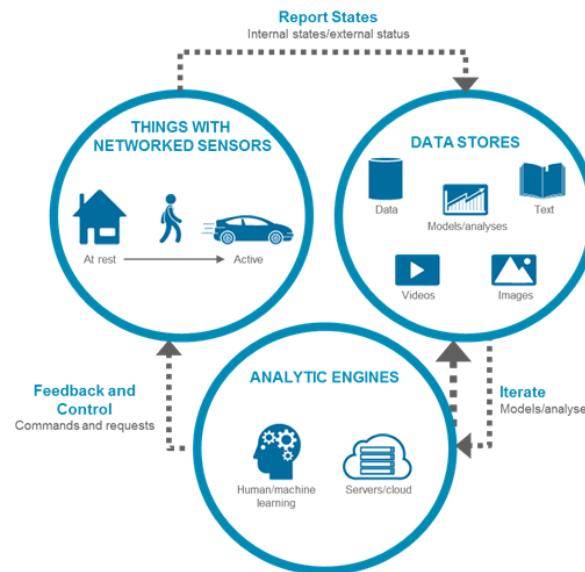
Source: The Security Ledger - IoT And Big Data To Create Insurance Industry Winners, Losers

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THE INTERNET OF THINGS
AN EXPLOSION OF CONNECTED POSSIBILITY

Source: The IoT magazine- IoT Digital Transformation in insurance

Click map below to return to the larger map
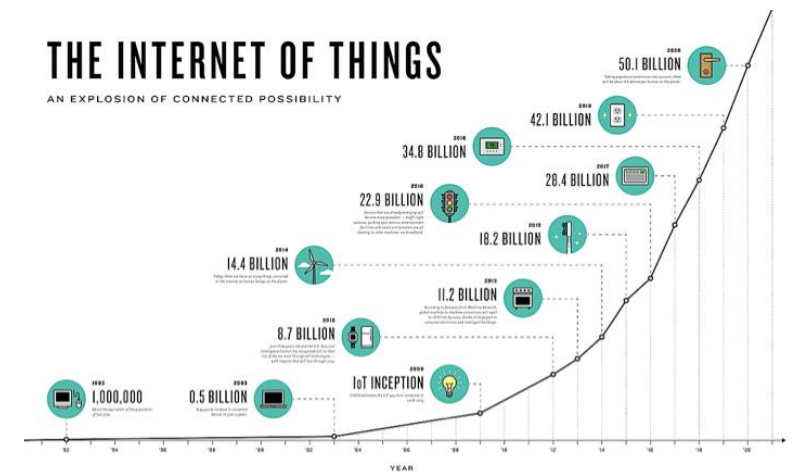
Legacy system replacement outlook in 2021

- Insurers preferring to 'work through' legacy for existing business models with bi-modal approach that upgrades core with API and Microservices and allows integration of new value chain innovations
- Modern platforms, using packaged solutions, being introduced for digital ecosystem and embedded insurance models
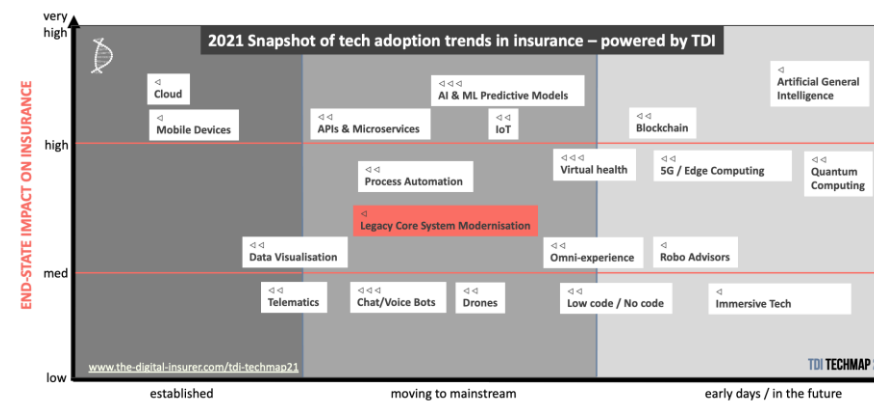
End State impact on insurance
Medium to high

Adoption Status & Speed
Moving to mainstream ◁

2021 Snapshot of tech adoption trends in insurance – powered by TDI

www.the-digital-insurer.com/tdi-techmap21

TDI TECHMAP 21

Strategic value to insurance

1. Increased operational productivity
2. Reduced IT costs
3. Increased revenue – new business lines and improved customer retention
4. Improved resilience – more agility to build new capabilities

New core systems can reduce overall costs.

Median of select P&C players[1]

■ Legacy core[2] ■ Modernized core

GWP increase and retention — Premiums, indexed — +0.5–1.0%

Operations productivity — Policies per FTE, units — +42%

Differences in IT costs — IT costs per policy, € — −41%

Recommended reading

- McKinsey: Top ten myths of technology modernization in insurance
- Level: The Price of Tech Debt: Legacy Systems' Impact on Insurers
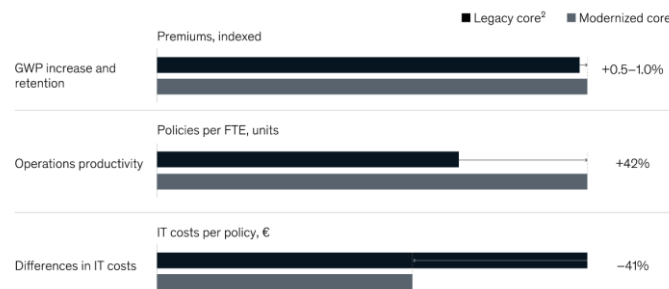
Source: McKinsey - IT modernization in insurance: Three paths to transformation

INSURANCE INDUSTRY ADOPTION STATUS

Core system modernization options
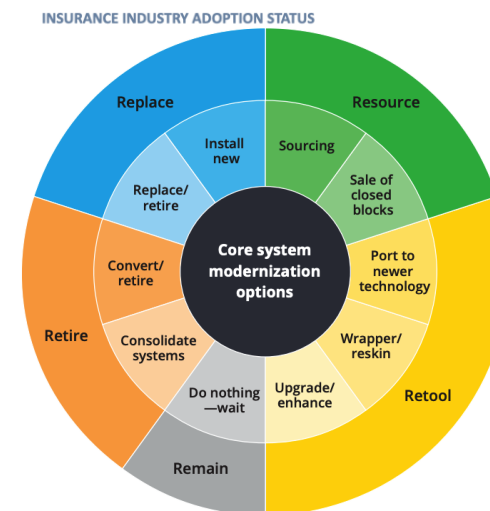
Source: Deloitte & LIMRA - Legacy systems modernisation

Low Code / No Code outlook in 2021

- Offerings evolving that avoid lock-in effect
- Continued progress for ease of integration via bundled APIs
- Established trend to democratising coding via low code / no code builds on established trend of democratising infrastructure via cloud

Strategic value to insurance

1. Potential to Lower cost of implementation and maintenance
2. Faster speed of deployment
3. Help to address legacy systems / technical debt
4. Address resource shortages of skilled coders
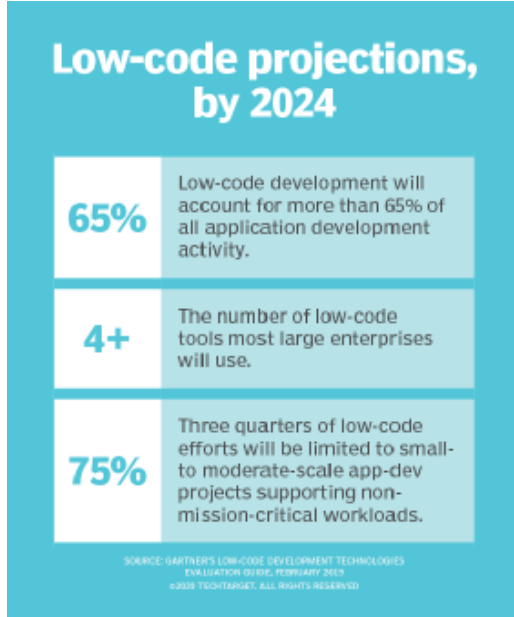
Recommended reading

- TDI Webinar: Digital Transformation
- Computer Weekly / Gartner: What to consider before adopting low-code development
- Insurtech world: No-Code platforms the beating heart of insurance innovation
- Insly: Why Your Insurance Business Should Be Ready for No-Code and Low-Code Platforms


End State impact on insurance

Medium

Adoption Status & Speed

Early days /
moving to mainstream ◁◁

Click map below to return to the larger map

2021 Snapshot of tech adoption trends in insurance – powered by TDI

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Low-code projections, by 2024

65% Low-code development will account for more than 65% of all application development activity.

4+ The number of low-code tools most large enterprises will use.

75% Three quarters of low-code efforts will be limited to small- to moderate-scale app-dev projects supporting non-mission-critical workloads.

SOURCE: GARTNER'S LOW-CODE DEVELOPMENT TECHNOLOGIES EVALUATION GUIDE, FEBRUARY 2019
©2020 TECHTARGET. ALL RIGHTS RESERVED

Source: Search IT Channel -
Vendors court no-code/low-code partners

- 66% Accelerate digital innovation/transformation
- 66% Increase responsiveness to the business
- 45% Reduce dependency on hard-to-hire technical skill
- 28% Escape legacy debt
- 22% Protect against technology churn
- 20% Enable citizen developers to improve internal processes
- 2% Other

Fig. 40: Reasons for Using Low-Code Platforms

Source: State of Application Development 2019/2020. OutSystems ©
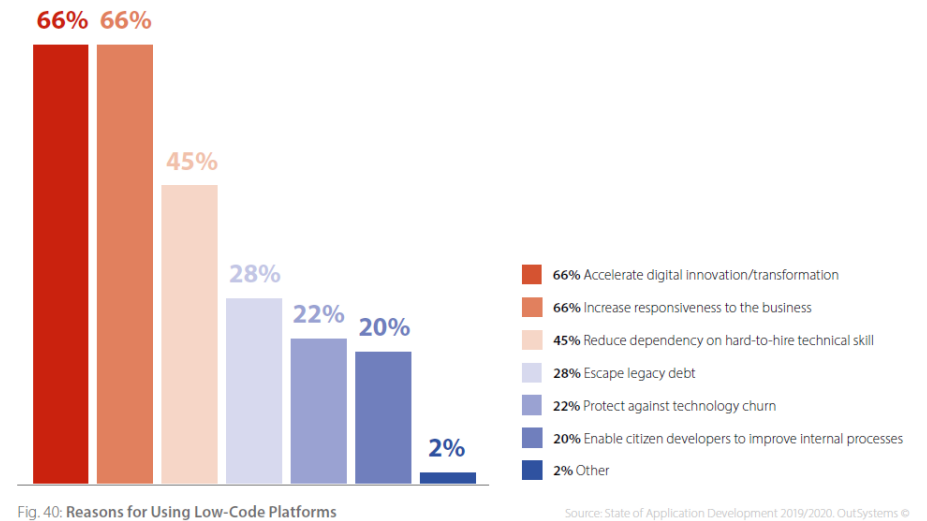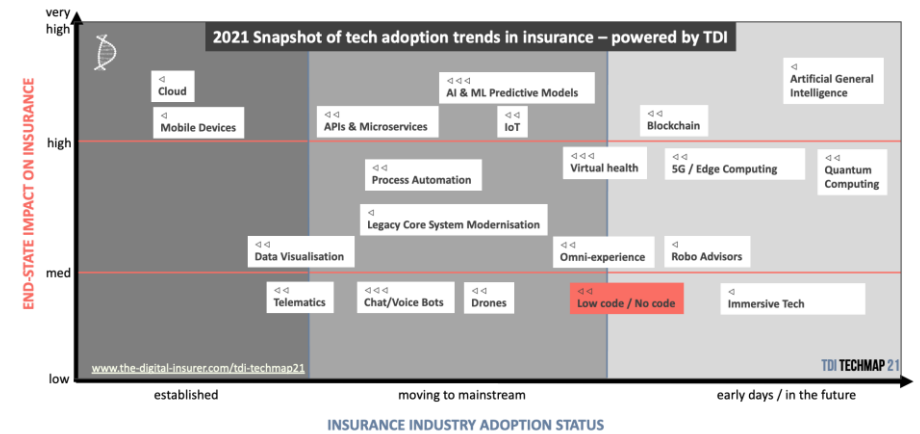
Source: The Newstack - Low-Code Platform Adoption Gets a Boost from Digital Transformation

Mobility device outlook in 2021

- Smartphone sales linked to rollout of 5G (covered separately) – maybe 50% of sales with 5G in 2021
- Covid driven: >70% rise in use of fintech apps in 2020 . Likely permanent change

Click map below to return to the larger map

End State impact on insurance
High to very high

Adoption Status & Speed
Established ◁

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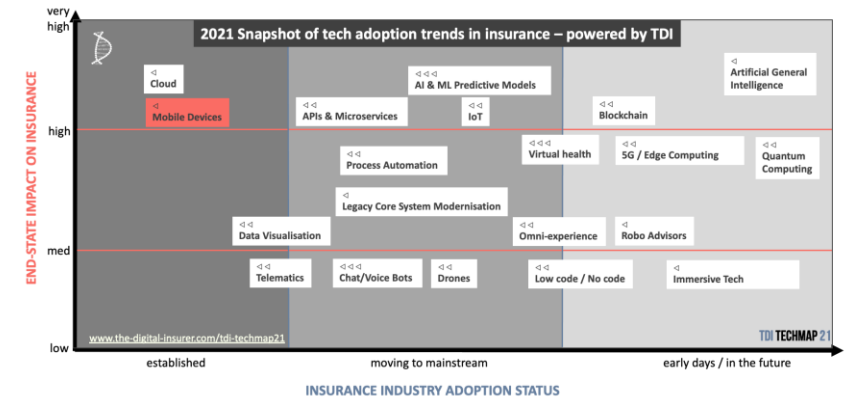
Strategic value to insurance

1. Mobile first as key design philosophy
2. Smartphone continue to drive changes in consumer behaviour
3. Access to smartphone capabilities allows additional of value added services
4. The natural interface for chat and voice services
5. Smartphone drives rapid development of ecosystems – new value propositions & distribution opportunities

Recommended reading

- Forbes: Tirias Research Predicts A Healthy But Cautious Outlook For Tech In 2021
- Mobileappdaily: Best Insurance Mobile Apps For Android & iOS [2021]
- Forbes: Coronavirus Drives 72% Rise In Use Of Fintech Apps

Source: EFMA– World insurance report 2020

TDI ACADEMY

Omni-experience outlook in 2021

- Accelerated consumer interest and demand for blended sales and servicing support across all industries
- Other industries will likely lead on what good looks like, and new sales and service models
- Increasing interest and investment from more forward-looking insurers
- Within insurance, potentially led by new digital-first insurers looking to enrich propositions having already established differentiated brands
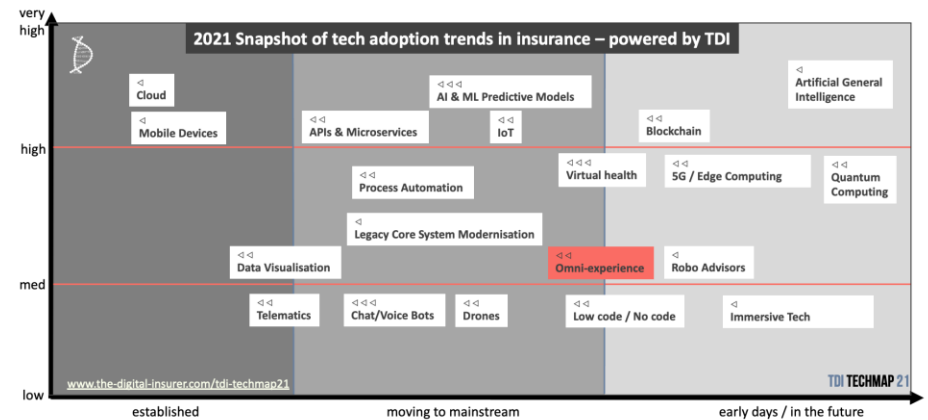
Strategic value to insurance

1. Increased consumer satisfaction and engagement
2. Improved cross-sell, up-sell and referrals
3. Enhanced customer data / value
4. Strengthened capabilities to participate with ecosystem partners
5. Better awareness of, and focus on, Customer Lifetime Value

Recommended reading

- Axell: Human touch in a digital world
- McKinsey: The multi-access (r)evolution in insurance sales

End State impact on insurance
Medium to high

Adoption Status & Speed
Early days /
moving to mainstream ◁ ◁

Click map below to return to the larger map

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TDI PoV: Agency alarm bells ringing as consumer adoption of digital accelerates beyond tipping point

INSURANCE INDUSTRY ADOPTION STATUS

The multi-channel customer is...
- Better informed
- More demanding
- Uses multiple customer touch points for both sales & services
- Will jump channels at any point – catch them if you can!

Source: The Digital Insurer - Advisor of the future in a digital world

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Process Automation outlook in 2021

- Buzzwords – Robotic Process Automation has morphed to Intelligent Process Automation or even "hyper automation"
- Focus on delivering value and moving beyond hype. Process automation will merge and blend with chatbots , UI and D&A initiatives .
- Insurers will need agile integration teams to take full advantage
- Intelligent Document processing will increase – helping manage structured and structured data at key part of the value chain e.g. claims and underwriting

Strategic value to insurance

1. Practical integration and automation tools that can work across multiple platforms
2. Quick and substantial return on investment
3. Bridging strategy to allow time for micros services and APIS to be take more of the load

Recommended reading

- Workfusion – Top uses cases for automation in insurance
- Forbes – predictions for RPA in 2021
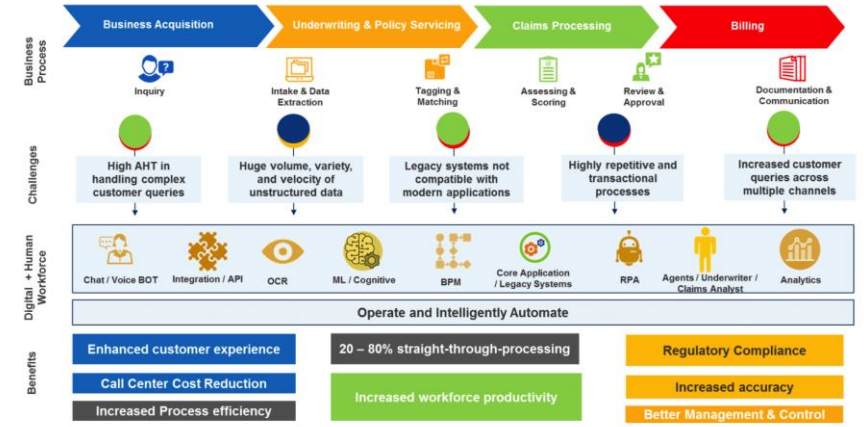- Cigen: Robotic Process Automation in Insurance: 5 Ways It Will Impact the Industry

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End State impact on insurance
Medium to high

Adoption Status & Speed
Moving to mainstream ◁◁◁

2021 Snapshot of tech adoption trends in insurance – powered by TDI

Source: Cap Gemini– using intelligent process automation for insurance
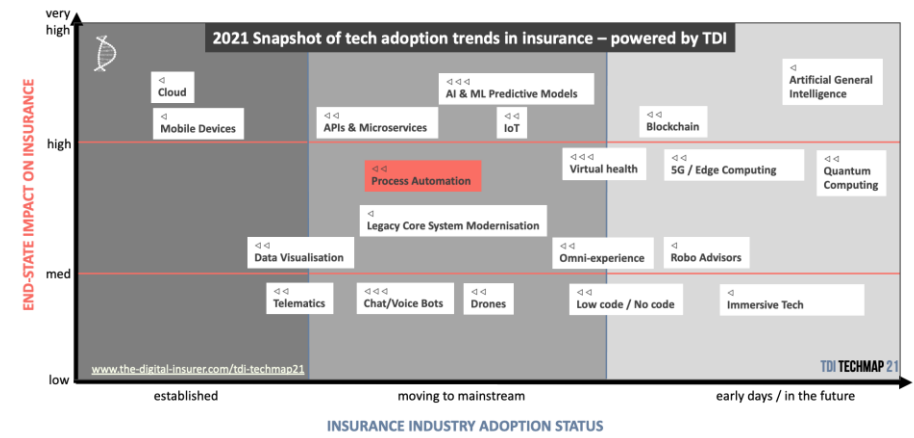
Intelligent Automation in Insurance

Source: Hexaware – intelligent process automation for insurance

TDI TECHMAP21 QUANTUM COMPUTING

Quantum Computing outlook in 2021

- VC money is pouring into quantum start-ups focused on the finance sector
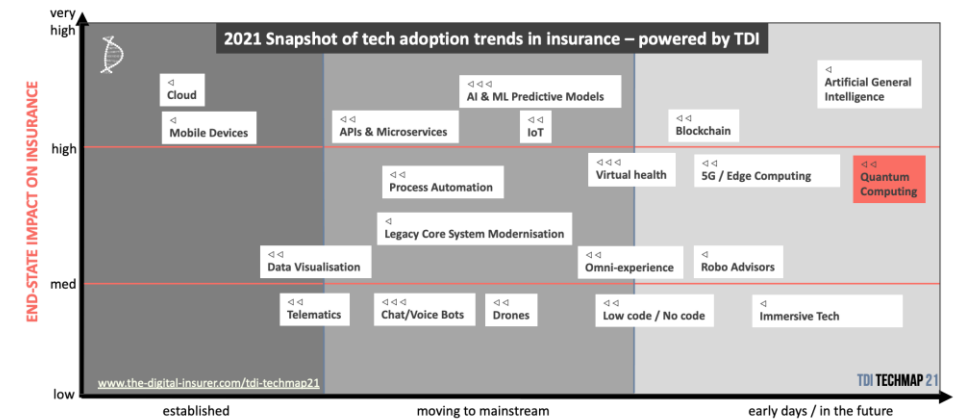- First commercialisation steps likely to be in asset management

Strategic value to insurance

1. Step change in forecasting and predictive capability leading to n opportunities in risk and asset management
2. Potential for improved cyber security

Recommended reading

- Coverager: Quantum computing and insurance primer
- IBM: Exploring quantum computing use cases for financial servi
- McKinsey: A game plan for quantum computing

End State impact on insurance
Medium to high

Adoption Status & Speed
Early days ◁ ◁

Click map below to return to the larger map

Source: IBM - Exploring quantum computing use cases for financial services

Source: BCG- Where Will Quantum Computers Create Value—and When?

TDI TECHMAP21 ROBO ADVISORS

Robo Advisors outlook in 2021

- Well established in fund/wealth management but slower penetration in mainstream insurance
- Expect to see rise in use of recommendation engines
- Omni-advisory models will become more popular with bi-directional innovation –human advisor models go digital whilst robo-only models introduce a human touch
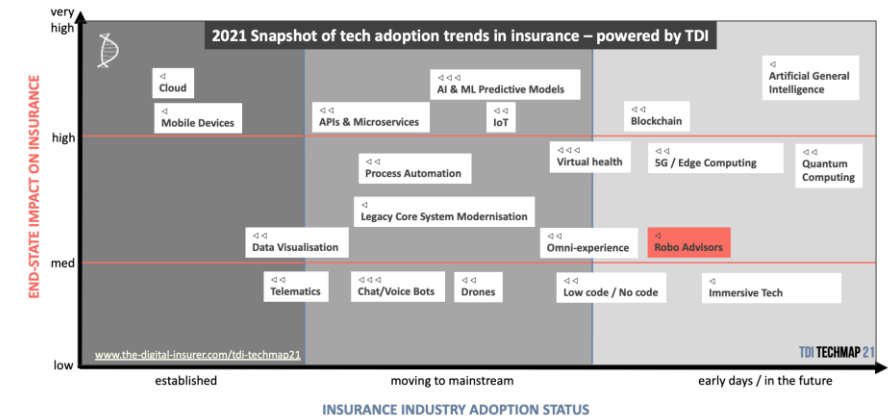
End State impact on insurance
Medium

Adoption Status & Speed
Early days ◁

Click map below to return to the larger map

Strategic value to insurance

1. Open new markets by reducing cost of providing advice
2. Increased consistency in advisory process
3. New tools that assist human insurance advisors

Recommended reading

- The Balance: What Are Robo Advisors?
- Medium : The Rise of Robo-Advice in Insurance Companies
- TDI PoV Whitepaper : The future of insurance advisors in a digital world
- Amelia whitepaper: A Next-Generation Digital Insurance Agent
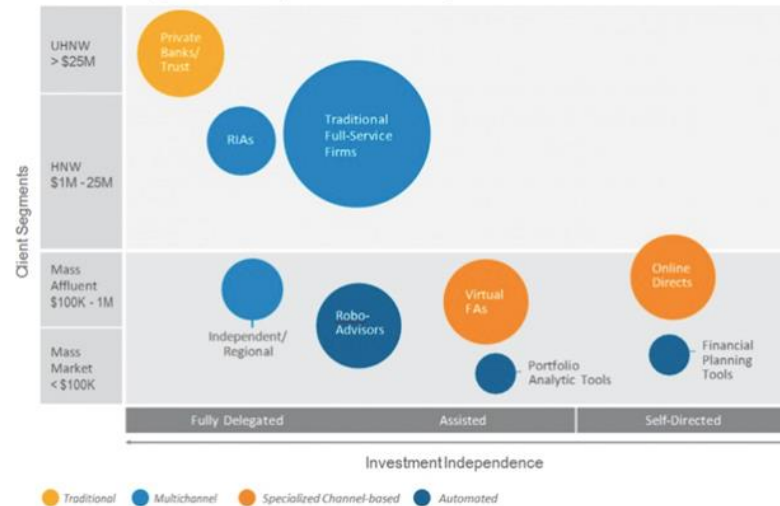
Source: Agenda Invest- Money in 20 Years: The Future of Robo-Advisors

Source: Insurance business Mag - Humans and robo-advisors can co-exist

TDI ACADEMY

Telematics outlook in 2021

- Commercial vehicle penetration to exceed 33%. By 2030 70% of light-duty vehicles will be connected to the internet (Statista)
- Assuming Work from Home continues post-Covid then demand for telematics insurance for personal cars likely to grow
- Increasing activity from car manufacturers e.g. Tesla leading to insurance as a service & within a broader proposition
- Increasingly about the data not the telematics device

Strategic value to insurance

1. Opportunity to embed into emerging auto ecosystems
2. Creates a natural path for insurance on autonomous vehicles
3. Historically telematics insurance has been seen as a cost reduction play – but value added service opportunities exist
4. Will insurers who have no telematics experience have a future in auto insurance?

Recommended reading

- Intelligent mobility experience: how telematics is transforming car insurance
- Financial Times-video: Is telematics the future of car insurance?
- The Conversation: why Tesla is selling insurance and what it means for drivers
- Vitality Drive: Consumer behaviour modification and rewards programme
- Accenture-podcast: – what self-driving cars mean for insurance

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End State impact on insurance
Low to medium

Adoption Status & Speed
Moving to mainstream / Established ◁◁

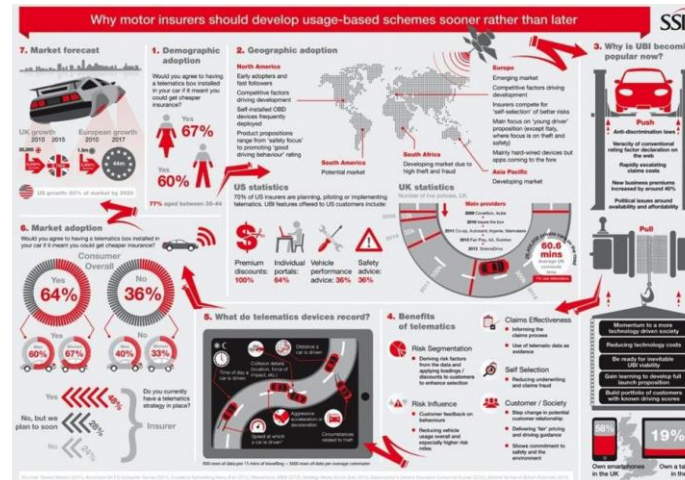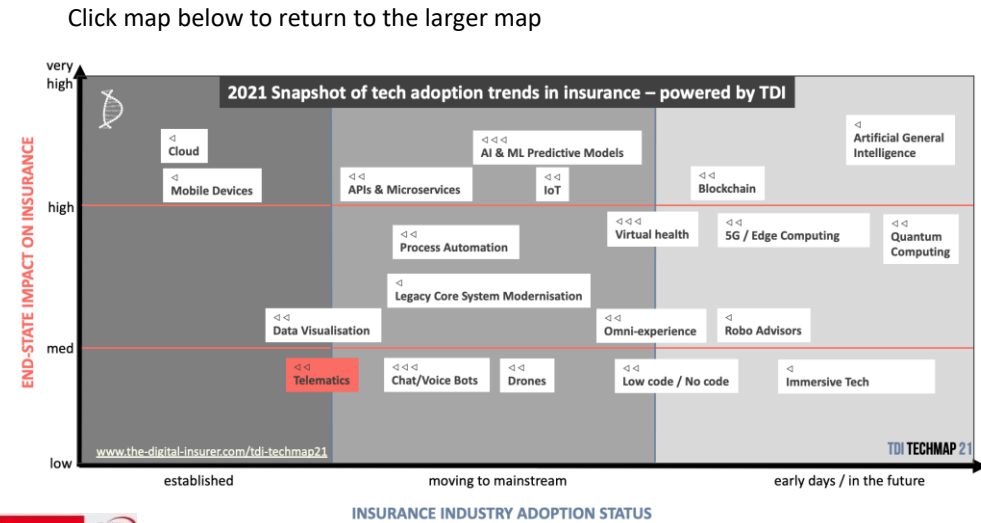Click map below to return to the larger map

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www.the-digital-insurer.com/tdi-techmap21

Source: Pinterest / GPS business news – Infographic on case for insurers to adopt telematics

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COVID-19 Will Continue to Impact the Insurance Industry in 2021[1]

Topic	Total	Gen Z	Millennial	Gen X	Baby Boomer
Percentage of drivers that use their vehicle less than pre-COVID-19 or do not use it anymore*	72%	65%	72%	73%	75%
Percentage of respondents that plan to make changes to their vehicle ownership/use in 2021	35%	44%	38%	36%	27%
Percentage of drivers that would allow their insurance carrier to collect real-time information about their mileage and driving habits if it led to lower premiums*	61%	60%	68%	59%	58%
Percentage of respondents that would choose to work at home in 2021	37%	30%	31%	38%	45%

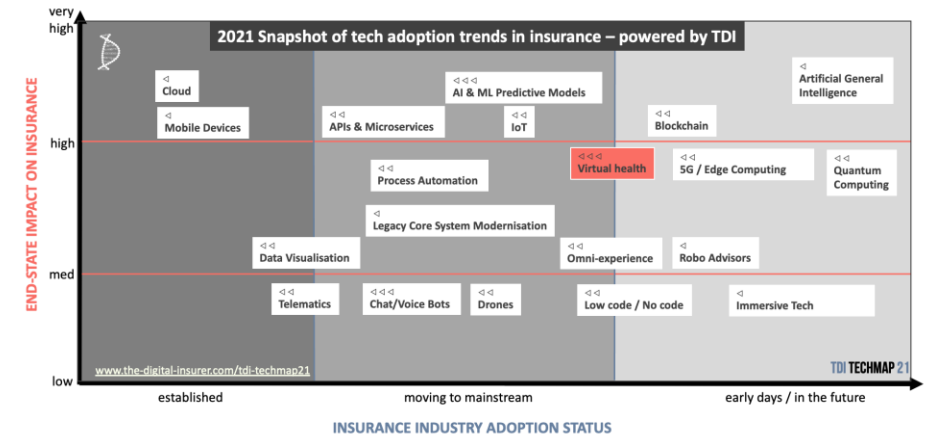Source: Globalnewswire/ TransUnion – covid impact on car insurance

TDI ACADEMY

Tele/Virtual Consultation outlook in 2021

- Obvious boost from impact of covid-19.
- Market of US$90 billion forecast by 2026 (Global newswire)
- Trend to more interactive & integrated solutions
- Digital therapeutics and telemedicine – both to grow strongly
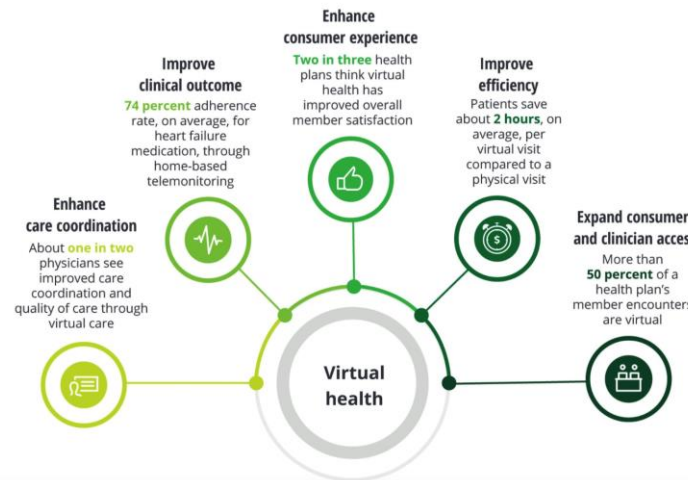
Strategic value to insurance

1. Reduced Cost of consultation
2. Increased customer convenience
3. More control over downstream treatment costs
4. Solutions to help improve outcome for chronic and other diseases
5. Potential for step change in health outcomes

Recommended reading

- McKinsey: Telehealth - A quarter-trillion-dollar post-COVID-19 reality?
- McKinsey: The promise of digital therapeutics
- Oliver Wyman: Digital partnerships for health insurance
- Global newswire: Global Telemedicine Virtual Healthcare Market Report 2020

End State impact on insurance
High

Adoption Status & Speed
Early days /
moving to mainstream ◁◁◁

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TDI TECHMAP 21

Virtual health can drive value across five key areas[1]

Improve clinical outcome
74 percent adherence rate, on average, for heart failure medication, through home-based telemonitoring

Enhance consumer experience
Two in three health plans think virtual health has improved overall member satisfaction

Improve efficiency
Patients save about **2 hours**, on average, per virtual visit compared to a physical visit

Enhance care coordination
About **one in two** physicians see improved care coordination and quality of care through virtual care

Expand consumer and clinician access
More than **50 percent** of a health plan's member encounters are virtual

Virtual health

Source: Deloitte - The future of virtual health

Virtual health applications can be segmented across three core categories.

Category	Subcategory	Definition
Telehealth	Synchronous (telemedicine)	Live, two-way audiovisual interaction between patients and providers (eg, video conference visits)
		Live, two-way interaction between providers and providers (eg, video conference review of pharmacy prescriptions)
	Asynchronous (store and forward)	Provider-to-provider transmission of recorded health history (eg, sending a lab test, X-ray, MRI, to a specialist to request a clinical opinion)
		Provider-to-patient transmission of patient information (eg, a provider emailing/ texting a patient to check on them in post-visit follow-up, a patient sharing photos of a skin rash for review and diagnosis)
	Remote patient monitoring	Collection of electronic personal health/medical data which is transmitted for review by a remote provider
Digital therapeutics	Replacement therapies	Evidenced-based therapeutic interventions which leverage software to prevent, manage, or treat a medical condition, in lieu of conventional treatments (eg, pharmaceuticals)
	Treatment optimization	Optimizes medication, extending the value of pharmaceutical treatments (eg, improving medication adherence, monitoring side effects of medication)
Care navigation	Patient self-directed care	Patients accessing their own information (eg, website with secure, 24-hour access to personal health information)
	E-triage	Tools that provide support in searching for and scheduling appropriate care based on symptoms/conditions as well as price and quality of providers

Source: McKinsey:- Virtual health: A look at the next frontier of care delivery