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Future of Insurance 2020 and beyond

March 2017



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Agenda

Part I

*Insurance Banana
Skins 2015
The CSFI survey of
the risks facing
insurers*

1

Part II

*How InsurTech is
reshaping
Insurance?*

2

Part III

*Implication from
technology trends
on your IT risk
management*

3

Wrap-up

*Future of your
insurance business
strategy*

4

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Part I

Insurance Banana Skins 2015

The CSFI survey of the risks facing insurers

2 March 2017



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Agenda



***Insurance
Banana Skins***

1

***Insurance major
trend: 2020 and
beyond***

2

Insurance Banana Skins



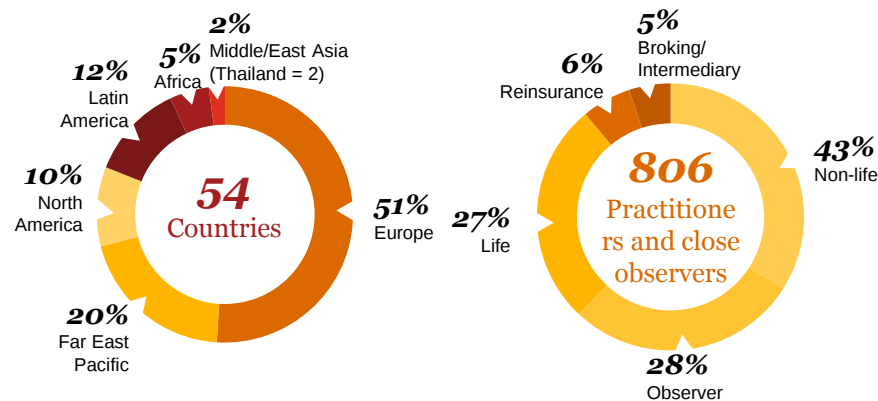
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About this survey

In the survey, respondents were asked to:

- describe their main concerns about the insurance sector over the next 2-3 years
- rate a list of potential “Banana Skins” or risks
- rate the preparedness of insurance institutions to handle the risks they saw

The breakdown of responses by type of respondent was



At a glance: climates of the survey

The tone of the response is more negative this year



Investment climate

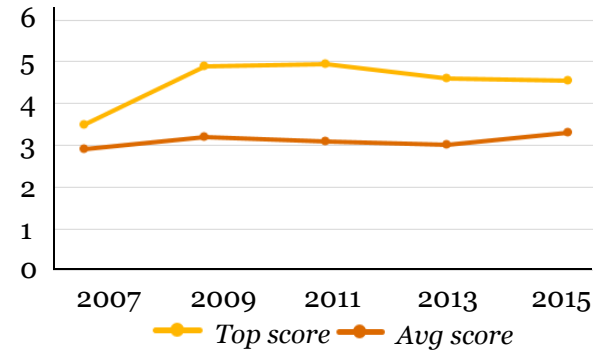


A heavy regulatory agenda



The pressures of deep structural and technological change

Insurance Banana Skins Index



The top scores were: 2007: Regulation

2009: Investment performance

2011: Regulation

2013: Regulation

2015: Regulation

Top three risks identified

Overall

1 *Regulation*
The vast volume of regulation add costs to companies and distract management

2 *Macroeconomic*
The current low interest rate environment is hurting the industry

3 *Cyber risk*
Major concern: data held in the 'cloud' could be breached, resulting in financial and reputational damage

Non-life

1 *Cyber risk*
Businesses are primarily concerned with underwriting risk, especially the growth of cyber risk

2 *Natural catastrophes*
Risk perceptions heavily influenced by disasters such as flooding in Thailand and earthquakes in NZ and Japan

3 *Regulation*
The vast volume of regulation add costs to companies and distract management

Declining risks



Quality of management

As a result of an improved governance at the board level and closer regulation of the sector, the concern over quality of management is easing.



Risk management

Risk management in particular has improved since 2013, and that 'questionable' business practices are less of a problem.



On the overall, the insurance industry see itself as better prepared to handle the problems it faces than it was at the time of the last survey in 2013.

Key risks for life and non-life businesses

Life

- ▶ No. 1 risk for Life insurers are **interest rates** and the **macro-economy**.
- ▶ Harder to generate competitive returns for policyholders and potentially higher capital charges for guaranteed products.

What should companies do?



Tight cost control is clearly crucial in being able to sustain margins



Develop a better understanding of the interdependencies between capital demands and asset yields.



Non-life

- ▶ No.1 risk for non-life, is **cyber risk**.
- ▶ Especially as more business move to online and mobile channel
- ▶ Sensitive policy holder information, if compromise would lead to loss of trust

What should companies do?



Evaluate data and system infrastructure



Involve more specialist in surveillance encryption and biometric verification



Look at how cyber security can be strengthened without undermining the digitally-enabled ease and accessibility customers now expect.



2015 Insurance Banana Skin ranking

Ranking*

- 1 Regulation (1)
- 2 Macro-economy (3)
- 3 Interest rates (-)
- 4 Cyber risk (-)
- 5 Investment performance (2)

- 6 Change management (15)
- 7 Guarantee products (6)

- 8 Distribution channels (11)
- 9 Natural catastrophes (5)
- 10 Quality of risk management (7)
- 11 Business practices (4)
- 12 Quality of management (8)
- 13 Market condition (-)
- 14 Long tail liabilities (9)
- 15 Human talent (19)
- 16 Political interference (10)
- 17 Product development (20)
- 18 Reputation (14)
- 19 Climate change (18)
- 20 Social change (-)
- 21 Corporate governance (17)
- 22 Capital availability (16)
- 23 Terrorism (27)
- 24 Pollution/contamination (26)
- 25 Complex instruments (23)

*2013 ranking in brackets

Who said what – risk priorities vary

Common concerns about regulation, economic trends and industry changes

01 Life Insurance

1. **Interest rates**
2. Macro-economy
3. Regulation
4. Guaranteed products
5. **Investment performance**
6. **Cyber risk**
7. **Distribution channels**
8. Change management
9. Business practices
10. **Political interference**

“The main concerns are linked to the economic environment”

03 Reinsurance

1. **Market conditions**
2. Regulation
3. **Cyber risk**
4. **Interest rates**
5. **Natural catastrophes**
6. Distribution channels
7. Guaranteed products
8. Investment performance
9. **Quality of risk management**
10. Macro-economy

“The main concern centres on the soft conditions created by excess capacity and “new” types of capital”

02 Non-life

1. **Cyber risk**
2. **Natural catastrophes**
3. **Regulation**
4. Change management
5. Macro-economy
6. Interest rates
7. **Distribution channels**
8. Quality of management
9. **Climate change**
10. Investment performance

“The main concerns are linked to underwriting risk”

Who said what – risk priorities vary (cont'd)

Common concerns about regulation, economic trends and industry changes

04 *Brokers/ intermediaries*

- 1. Change management**
- 2. Quality of management**
- 3. Distribution channels**
4. Quality of risk management
- 5. Cyber risk**
6. Regulation
7. Climate change
8. Macro-economy
9. Natural catastrophes
10. Investment performance

“The main concerns are linked to changes to the structure of the industry”

05 *Observers**

- 1. Regulation**
- 2. Interest rates**
3. Macro-economy
4. Guaranteed products
- 5. Investment performance**
6. Cyber risk
7. Change management
8. Distribution channels
9. Business practices
10. Natural catastrophes

“Regulation is at the top of observers’ concerns”

Who said what – risk priorities vary (cont'd)

06 Geography



North America and Bermuda

1. **Cyber risk**
2. Regulation
3. Interest rates
4. **Guaranteed products**
5. Macro-economy
6. Market conditions
7. Investment performance
8. Change management
9. Distribution channels
10. Natural catastrophes

Latin America

1. **Regulation**
2. Macro-economy
3. **Quality of risk management**
4. Investment performance
5. Natural catastrophes
6. Interest rates
7. **Capital availability**
8. **Business practices**
9. **Climate change**
10. **Political interference**

Europe

1. **Interest rates**
2. **Regulation**
3. **Guaranteed products**
4. Macro-economy
5. Cyber risk
6. **Investment performance**
7. Change management
8. Distribution channels
9. Natural catastrophes
10. Business practices

Far East/Pacific*

1. **Change management**
2. **Cyber risk**
3. **Distribution channels**
4. **Human talent**
5. Regulation
6. Interest rates
7. Natural catastrophes
8. Investment performance
9. **Macro-economy**
10. **Quality of risk management**

* Australia, China, Hong Kong, Japan, Malaysia, New Zealand, Singapore, South Korea, Taiwan, Vietnam

The power of technology

Technological change causes concerns in:



Cyber risk



Human talent



Change management



Product development



Distribution channels

New technology can be both a threat and an opportunity

- The traditional insurance industry will be slow to grasp the opportunity and will end up facing a threat.
- Digitisation, the internet and social media profoundly influences price and demand for insurance products, and the means customers use to interact with their insurance providers.

Technological change creates new type of risks such as:



data security



nanotechnology



driverless cars



New entrants or “disrupters” such as the big tech firms could edge out conventional insurers

Insurance major trend: 2020 and beyond



2

The Key STEEP drivers

Insurers and industry stakeholders need to keep pace with STEEP drivers.

They create long-term opportunities for insurers, but also increase competition, from within the industry and new entrants from outside

Key STEEP drivers are:

- | | |
|-------------------------------|---------------------------|
| 1 <i>Social</i> | 4 <i>Economic</i> |
| 2 <i>Technological</i> | 5 <i>Political</i> |
| 3 <i>Environmental</i> | |

Social: the power of connectivity

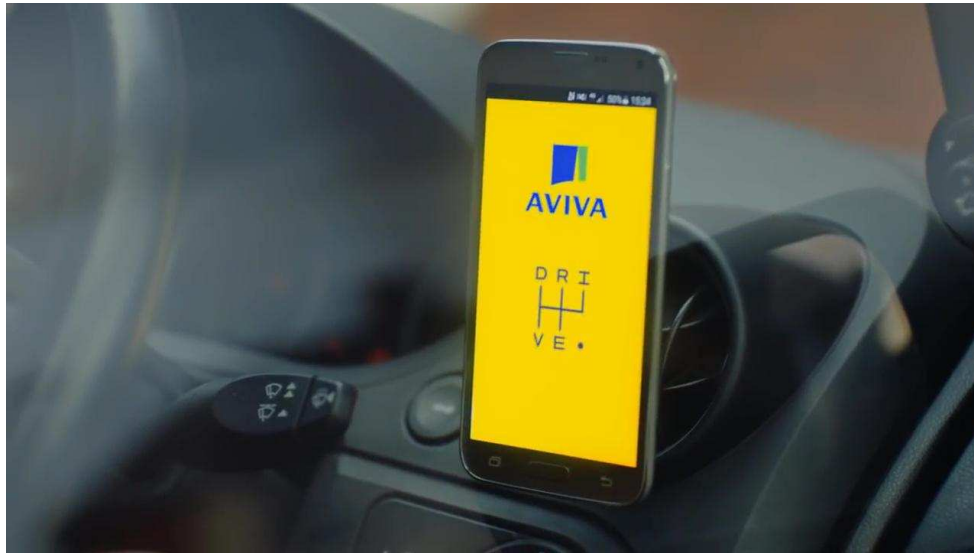


Photo source: TV Advert Songs, UK

[Aviva Drive app](#)



Meeting changing customer demands

- A more connected world urged insurers to use social platform as its go-to market strategy to:
 - Increase customer engagement
 - Provide insurance solutions that meet customers' specific needs

Technological: shaping the organisation around information advantage

The key competitive differentiator is shifting from generating insights to how quickly and effectively can be turned into action



70%
of insurance say that big data and/or analytics have changed the way they make decisions



30%
believe senior management lacks the necessary skills to make full use of the information

Based on our survey participants of our 2014 Data and Analytics Survey



Benefit of advanced analytics

- Allow quick analyses of data to support complex management decisions such as low-cost fund selection, portfolio diversification and tax planning
- Extend usage to help clients make their policy choices and manage finance affairs
- Allow insurer to design policy based on holistic, birth-to-death financial information, this may include:
 - Analyse of personal, social and behavioural data
 - Gauge immediate demands, risk preferences, the impact of life changes and longer-term goals



Reactive to preventive

The Internet of Things offers more real-time and predictive data, allowing insurer to move from reactive claim payer to **preventative risk advisor**

Technological: shaping the organisation around information advantage (cont'd)

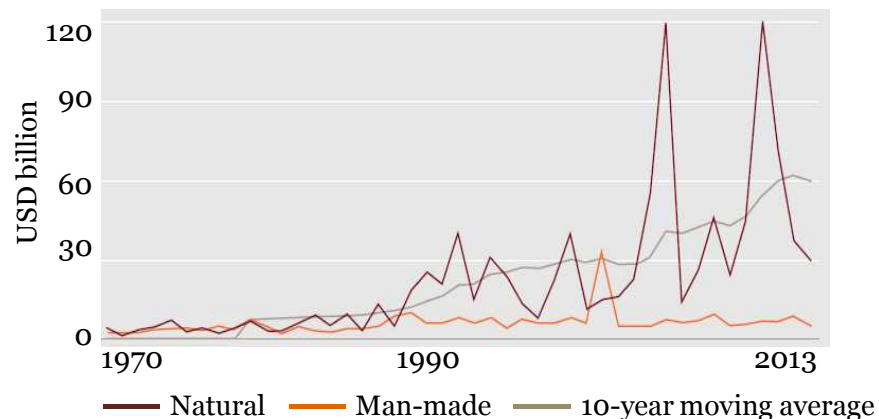


Japanese Insurance Firm Replaces Human Staff With Artificial Intelligence

Environmental: reshaping catastrophe risks and insured values

The world is facing an increasingly complex, uncertain and under-insured risk environment.

Catastrophe losses



Environmental measures to mitigate risk

- International bodies (i.e. UN) and local authorities are working to promote disaster risk awareness and preparedness
- Heavier investment in green energy



Developments in risk modelling

- The CAT models, previously used only in disaster prone zone, became ineffective in capturing the total value at risk – as production and asset value increase
- The ability to integrate multiple analytic tools into one platform should increase planning capabilities



Challenges for evaluating and pricing risk

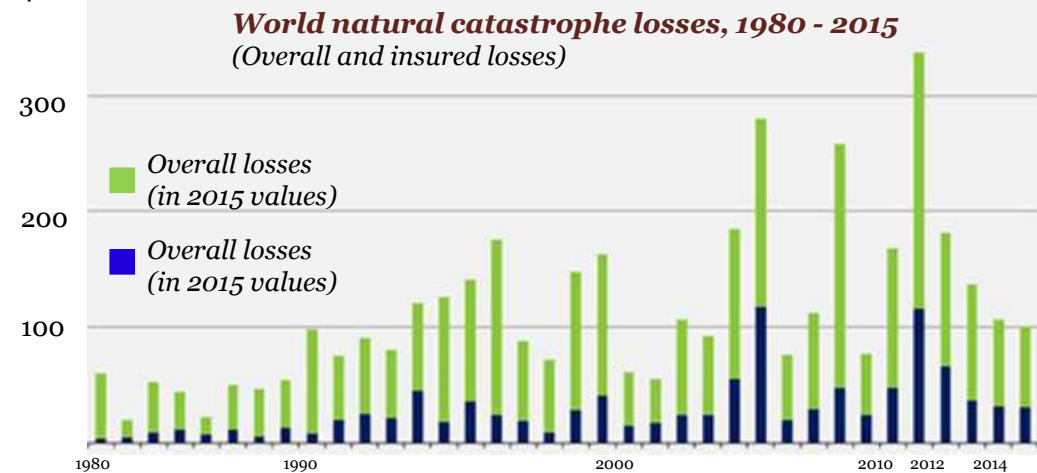
Company need to also take into account disruptions to asset/insured values resulting from:

- constraints on water
- land
- other previously under-evaluated risk factors

Environmental: catastrophe losses statistics

Costliest Natural Catastrophes Since 1980 (\$ millions)

Year	Event	Region	Insured loss US \$m (in original values)
2005	Hurricane Katrina	USA	60,500
2011	EQ, tsunami	Japan	40,000
2012	Hurricane Sandy	USA, Caribbean	29,500
2008	Hurricane Ike	USA, Caribbean	18,500
1992	Hurricane Andrew	USA	17,000
2011	EQ, Christchurch	New Zealand	16,500
2011	Floods	Thailand	16,000
1994	Earthquake Northridge	USA	15,300
2005	Hurricane Wilma	USA, Caribbean	12,500
2012	Drought	USA	12,000



Economic: adapting to a multipolar world

The economy is the second most pressing risk for the industry participants in Banana Skins



Struggling to sustain margins

- Economic conditions put a strain in customer's spending – including strain on life, annuities and pensions
- Higher capital charges for guaranteed products could further drive up costs and lower returns in many markets
- Financial policies such as quantitative easing will impact equity values, and contribute further uncertainty and risk.
- In particular for the P&C, low investment returns and a softening market
- The keys to sustaining margins may include:
 - Simple, low-cost, digitally distributed products for the mass market
 - Use of risk analytics to help offer guaranteed products



Struggling to sustain margins (cont'd)

- Strategic alliance to pursue new customers and increase revenue
 - More than 30% of insurance CEOs see alliances can help to strengthen innovation and gain access to new and emerging technologies
- Only 10% of insurance CEOs are looking to partner with start-ups



Alternative area of growth

Insurer need to consider their opportunities with:

- South America, Asia, Africa, and the Middle East (SAAAME)
 - Affordable and comprehensive products need to be made to customers who are unfamiliar with insurance
 - A partnership with local authorities and businesses will help gain an access to customer data
- Rural vs. urban areas
 - Purchases of insurance will increase due to the growth in city population
- Other underinsured areas

Economic: adapting to a multipolar world (cont'd)

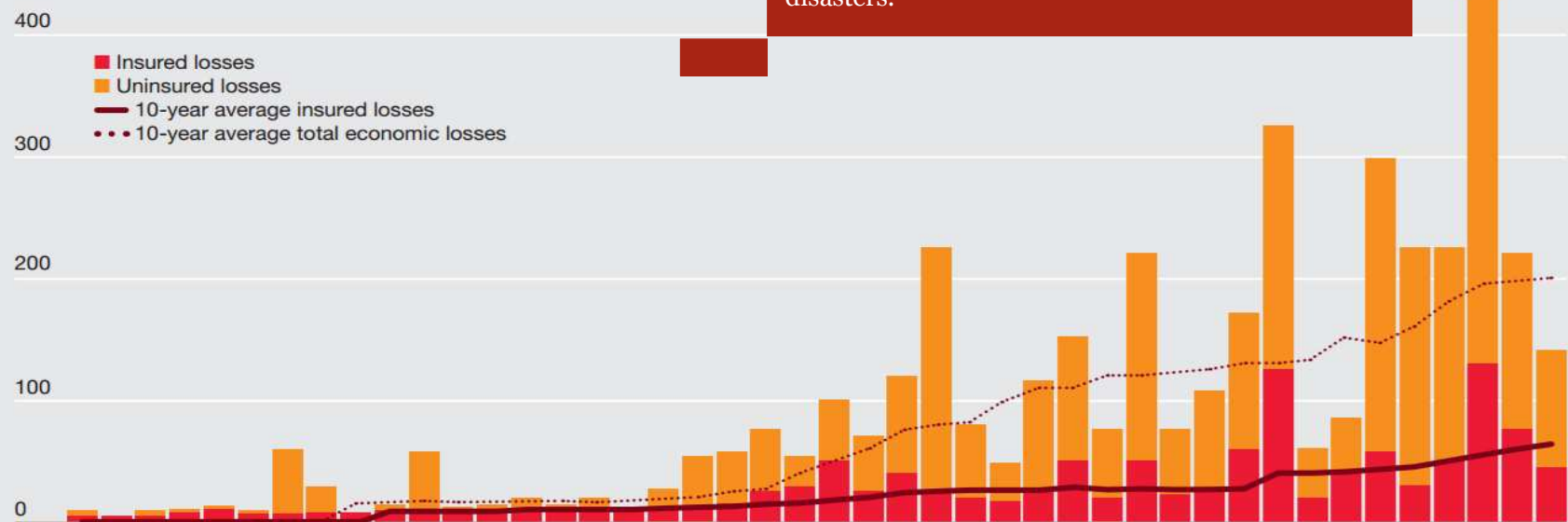


Tackling under-insurance

Tackling the under-insured

17 fast-growth markets had an annualised insurance deficit of \$168 billion, creating threats to sustained economic growth and the ability to recover from disasters.

In USD bn, at 2013 prices



Economic loss = insured + uninsured losses

Source: Swiss Re Sigma

Political: adapting to heightened instability

Government plays an increasing role in the insurance market. Closer alignment with government goals could give insurer advantages to how it operates, pursue opportunities and attract bight candidates



A partnership with the Government offers opportunity to co-develop effective retirement and health care solutions. However, this could also lead to greater state influence, media scrutiny and reputational risks.



Impact of regulation

Regulatory change creates huge operational disruption

- Insurers need to balance higher capital demands and the pressure to provide affordable retirement and healthcare policies. (Regulatory body: Office of Insurance Commission)
- The risks are heightened by tighter customer protection regulation and supervision in many countries. (Regulatory body: Office of The Consumer Protection Board)
- Financial crime regulation and anti-money laundry are more closely regulated. (Regulatory body: Anti-Money Laundering office)



Impact of regulation (cont'd)

What can companies do:

- Technology can help control the cost of compliance
- Through technology, insurer can enable regulators to oversee a more digitised insurance industry and keep pace with broadening scope



A more unstable world

- While globalisation bring about many opportunities, it could also create potential disputes among countries and corporation through:
 - Trade sanctions
 - State-directed cyber-attacks
- Insurers should seek to model threats and bring them to their overall risk evaluation.
- More growing role as risk advisors and mitigators

Political: how government's policy affects Thai insurers

Thailand 4.0 policy

The Thailand 4.0 policy will lead to the restructuring of the Thai economy. It will transform the country into a value-based economy and move toward an innovation-driven economy.

This will reshape how insurers do their business in term of Customer centric, underwriting and pricing process, claim management and distribution channels.



PromptPay

As part of Thailand 4.0, the future of payment is in the air with PromptPay. PromptPay is pushing forward a cashless society.

As PromptPay continues to grow and establishes itself, the Insurers' IT structure should grow correspondingly to make the digital funds transfer more secure and reliable.



ASEAN Economic Community (AEC)

One of AEC's key agenda is to liberalise the insurance sector.

Several Asean states have already "fully liberalised the cross-border supply of international maritime, aviation and transit insurance."



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Q&A

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Part II *How InsurTech is reshaping Insurance?*

March 2017



Agenda



*PwC InsureTech
Survey*

1

*InsureTech
Ecosystem*

2

*What should
insurers do?*

3

PwC InsureTech Survey

1

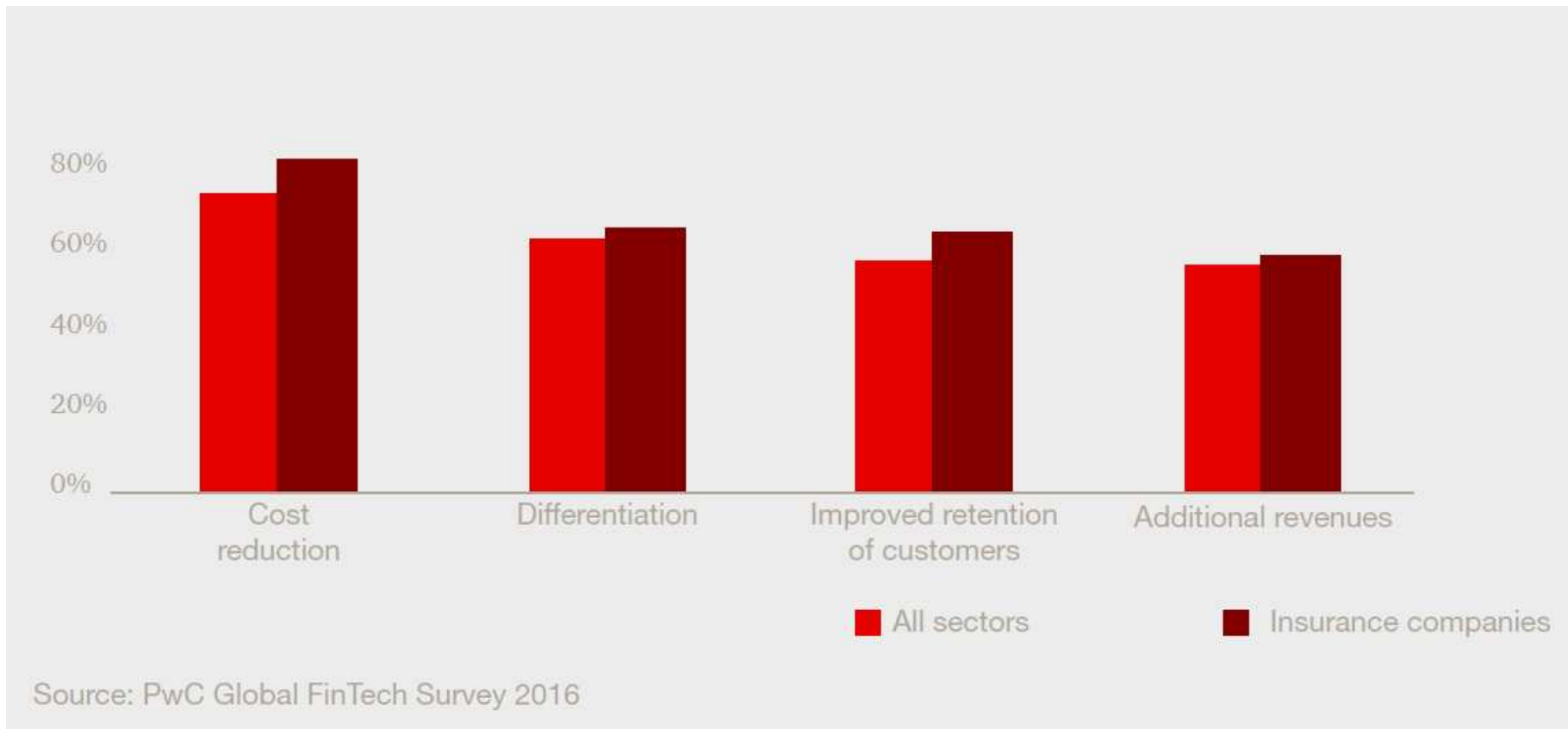
InsurTech: A golden opportunity for insurers to innovate



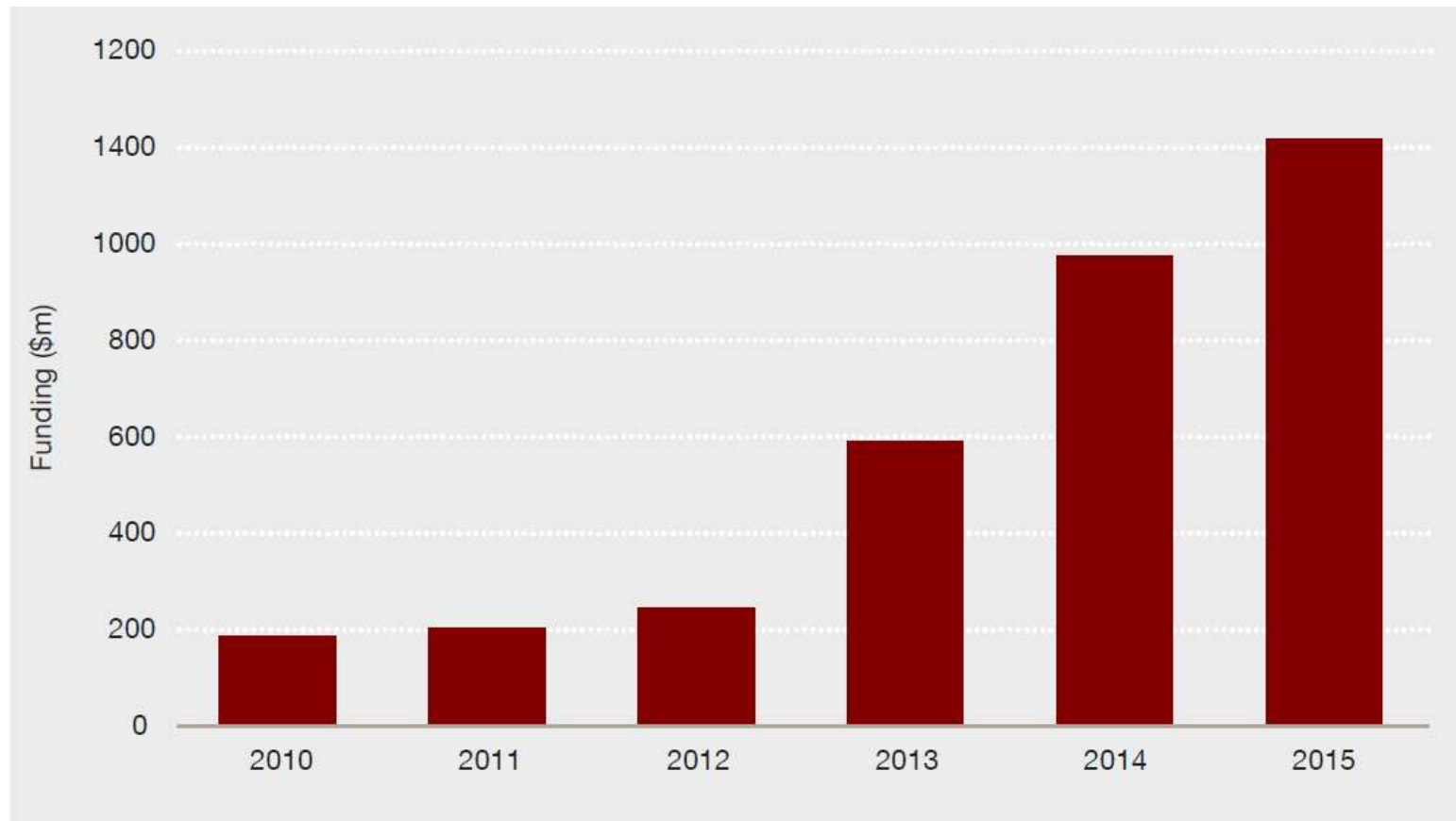
“Three of the biggest drivers of disruption include:

- ***Customer expectations***
- ***Pace of innovation***
- ***Startups”***

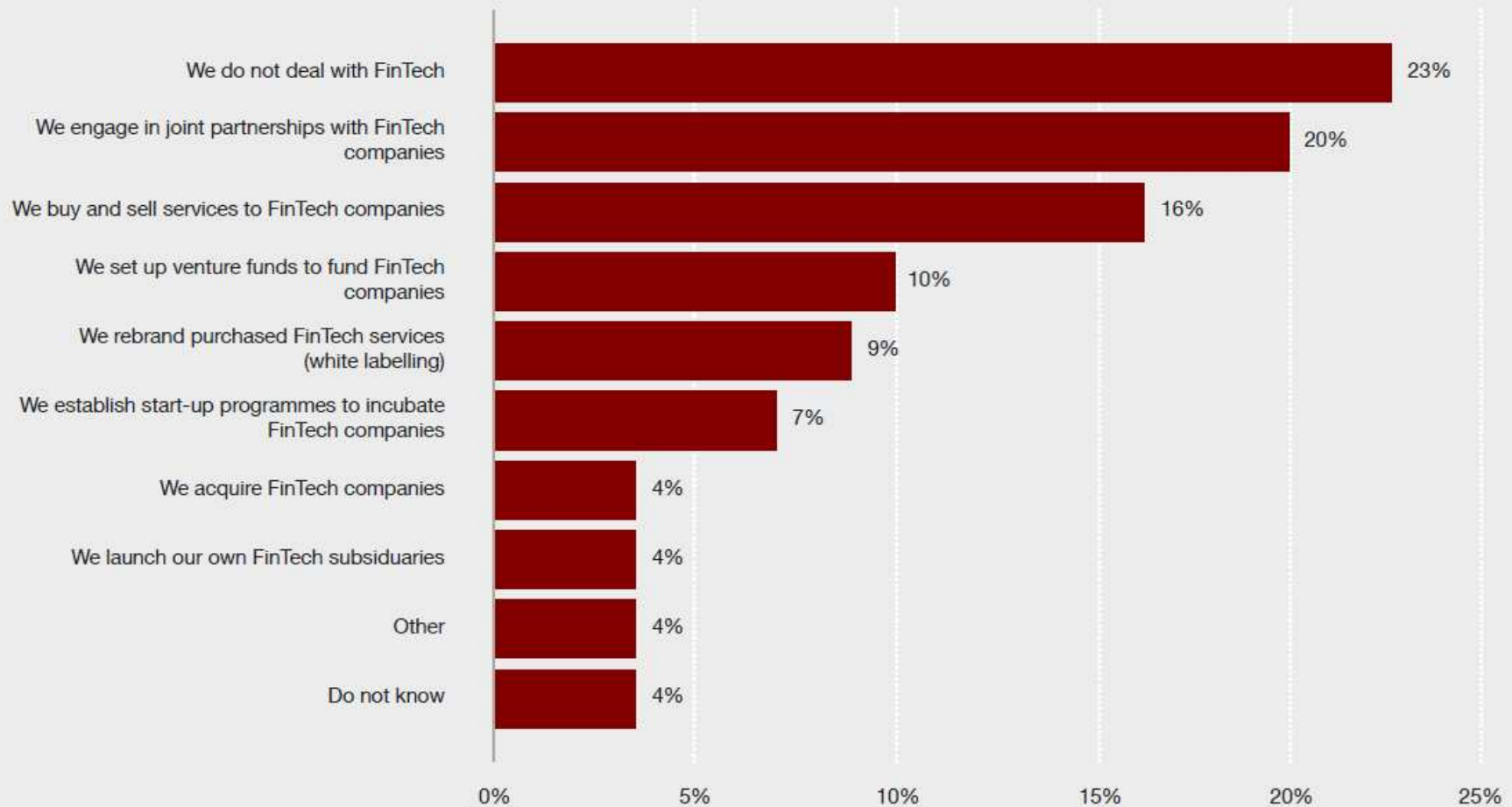
What are the opportunities related to the rise of FinTech within the financial services industry?



DeNovo InsurTech Companies Funding



How do insurers deal with FinTech?



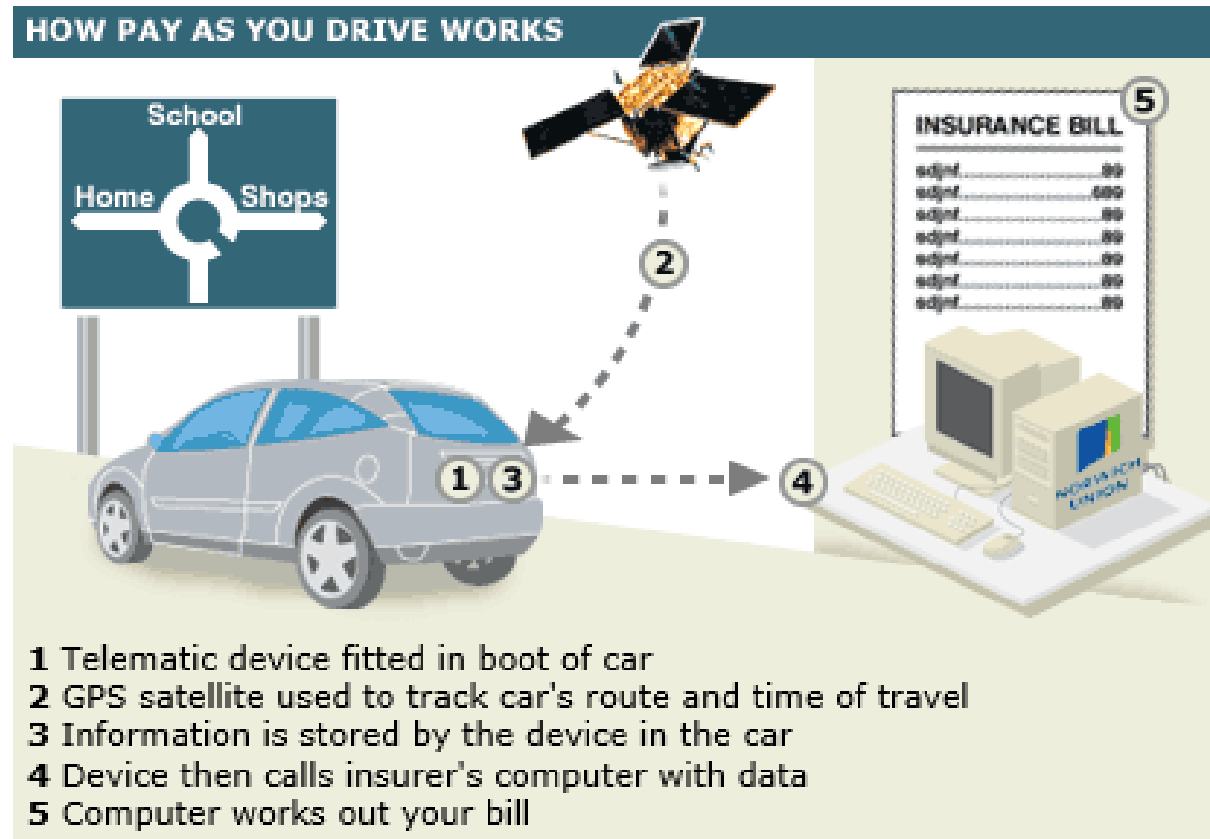
Source: 2016 PwC Global FinTech Survey

Industry Trends

1. Self-directed services
2. Usage-based insurance (pay-as-you-go)
3. Remote access and data capture
4. Connected/smart car
5. New models of holistic advice (robo-advice)
6. Granular risk and/or loss quantification
7. Shift from probabilistic to deterministic model
8. Connected health & medical advances
9. Ride-sharing solutions
10. Robotics and automation in core insurance
11. Blockchain

Usage-based insurance

Usage-based insurance (UBI) also known as **pay as you drive** (PAYD) and **pay how you drive** (PHYD) and **mile-based auto insurance** is a type of vehicle **insurance** whereby the costs are dependent upon type of vehicle used, measured against time, distance, behavior and place.



Source: BBC

Ride-sharing services



What is Blockchain?

Blockchain technology is attracting enormous attention from our clients and the wider market

*Blockchain is distinct from Bitcoin, which is one application of the technology. Bitcoin has been a proving ground for the underlying Blockchain technology. In a “trustless” environment since 2008 Bitcoin has proved Blockchain to be **secure and resilient and it has not been hacked***

Blockchain’s key features:



Distributed ledger creating a single shared view of transactions - every participant in the network has simultaneous access to a shared view of information



Peer-to-Peer Network with no centralised authority. Technology replaces the need for a third party to authorise transactions and manage updates



Trusted by use of consensus, verification is achieved by network participants confirming changes with one another in real-time

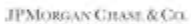


Smart contracts - the ability to run additional business logic means that shared agreement on the expected behaviour of a transaction can be embedded

“.....It’s important that we focus on Insurance for the digital age and Blockchain is one of the key pillars of that ” (Sylvain Theveniaud - Allianz)

Firm are investing

Firms are exploring new ways of working to develop new client services and to increase efficiency

	SETLCoin patent and Investment in Bitcoin Financial Services Start-Up Goldman Sachs has filed for a patent on a cryptocurrency SETLCoin intended to facilitate clearing and settlement of securities and other transactions. Led a \$50 million funding round for Bitcoin financial services start-up, Circle Internet Financial, which offers mobile payments
	John Hancock/ManuLife Announces Blockchain Technology Tests John Hancock has begun work on multiple blockchain proofs-of-concept designed to show how distributed ledger technology could reduce cost and inefficiency in back office operational processes. The processes explored include KYC and settlement use cases.
	Blockchain Research Lab in London UBS has opened a technology lab in London to explore how Blockchain technology can be used in financial services – the bank has publically demonstrated a smart-bond settling on a proof of concept blockchain application. They are exploring 5 other use cases including a mechanism by which UBS retail Clients could collect and spend loyalty points across multiple vendors
	Working with Everledger Announced in December 2015 that the company was exploring a number of promising blockchain use cases with Everledger the fintech firm that has developed a diamond tracking application
	Fund Management Cooperation Reports that 5 of the UK's largest Asset Managers are joining forces to determine how Blockchain can be used to drive down trading costs. The firms reportedly working on this are Schroders, Aberdeen Asset Management, Columbia Threadneedle, Aviva and Henderson Global Investors
	Working on Syndicated Loans application Has started trials to introduce Digital Asset's Blockchain technology to their syndicated loan business, the trial is aimed at addressing the settlement process where the underlying assets rely on complex manual processes involving multiple parties and there is the potential for settlement to take weeks
	Investing in target fintech firms Has invested in Blockstream's \$55 m funding round "We are convinced that blockchain technology has the ability to transform not only financial services but also other industries."

Robotic Process Automation

Automated Credit card account opening



Challenges

- The average time to action an item on the highest volume credit card account opening queue, when no customer interaction is required, is 4 hours
- Queue is operated by 5 offshore FTE
- Manual errors lead to downstream complaints

How RPA helped



- Automated their credit card account opening process for online applications where income verification is not required
- Designed and implemented a automated process which reduced operating costs and completion time

Results

Reduced offshore
FTE cost by
AU\$268k/year



97.9%

reduction in
processing time on
average process cycle



98%

of automated
transactions through
the process



*From **4 hours**
to **5 minutes***



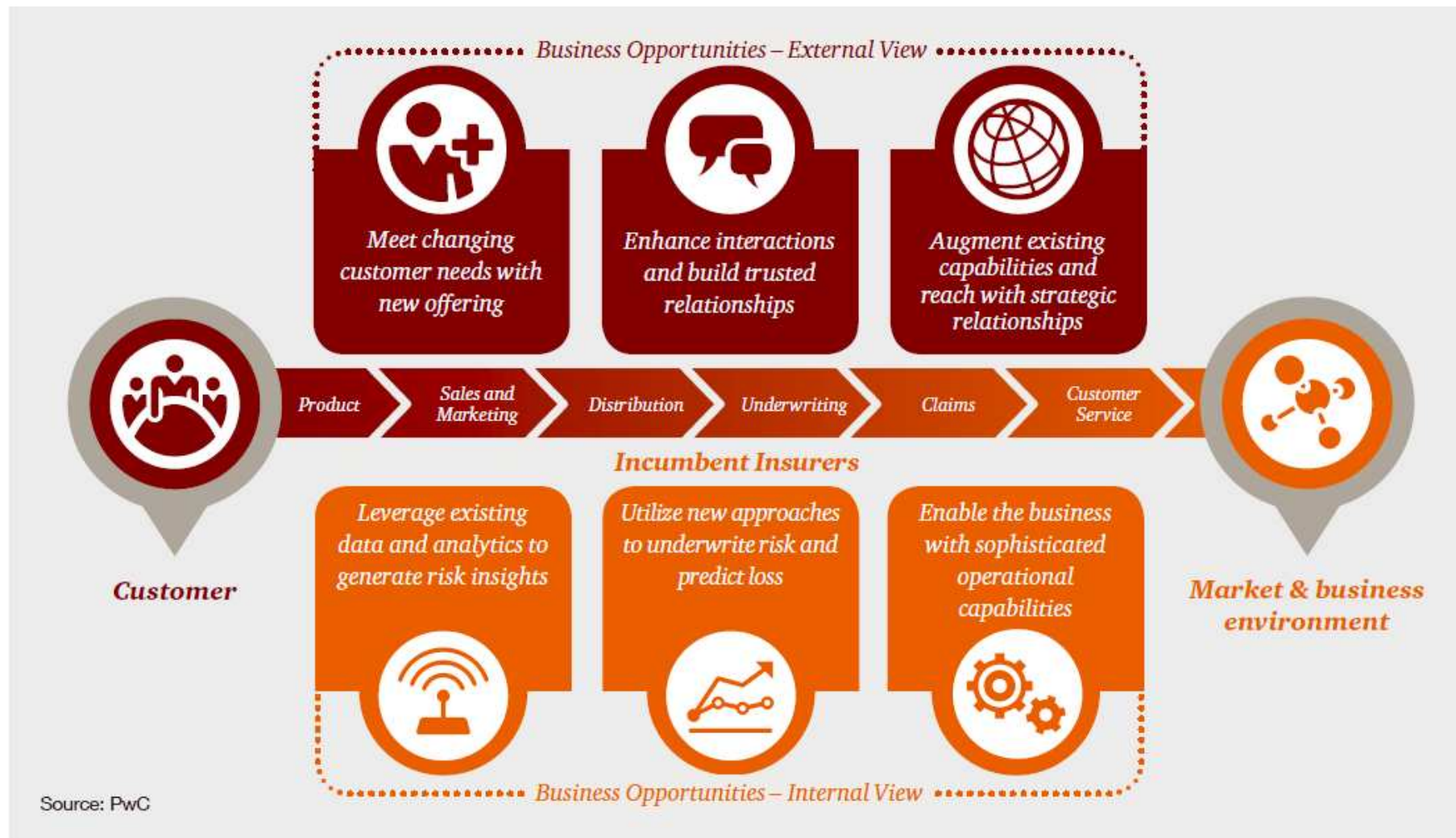
Automation Intelligence Technologies

Automation Intelligence						
	Business Process Management (BPM) & DIGITISATION	Desktop Automation	Robotic Process Automation (RPA)	Smart / Intelligent Process Automation	Digital / Virtual Assistants	Artificial Intelligence
Description	Workflow capability to integrate business processes across multiple systems	User or in-application triggered automation of desktop application based processes	Enterprise grade, front end system to system integration replicating the actions of a human user	RPA with the ability to learn (and once within quality thresholds, process) judgemental activities through observing human users processing requests	Cognitive agent that employs continual learning to process customer requests through simulated conversations	Use of a cognitive framework to develop insights through applying learning from multiple data sources
Applicability	Optimising judgmental processes that execute over multiple systems or are long running to ease processing for system users	Simple, structured data based processes that can be automated to augment the work done by the human user	Rule based repetitive processes based on structured data inputs <i>Note: Some RPA tools are getting better at processing unstructured data as well</i>	High transaction volume processes relying on unstructured data that may require some judgemental processing	Judgemental processes requiring interaction with the customer <i>Note: Chat Bots can also simulate a conversation, but lack the learning component</i>	Use of Artificial Intelligence is increasing in areas where a vast array of data processing is required to make decision while considering the overall context
Example Process	Face-to-Face/Phone Customer Onboarding	Data Capture in Judgemental Process	Accounts Payable	Claims Lifecycle	Customer Servicing	Predicting Risk Scenarios
Select Providers	  	 	  	 	  	 

InsureTech Ecosystem

2

Business Imperatives





Metromile – Pay Per Mile Insurance Offering



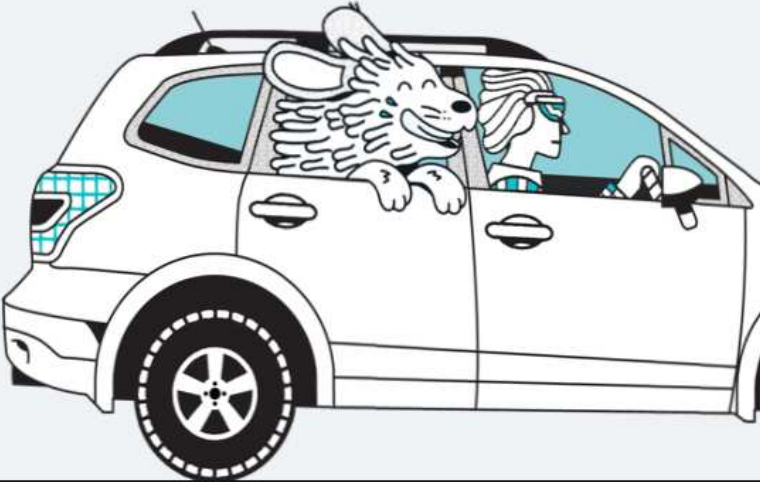
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Forbes

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TIMES

The
Economist

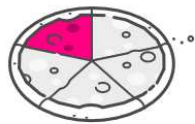
VentureBeat

TechCrunch

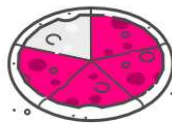
NEW YORK POST

How Lemonade Works

Lemonade reverses the traditional insurance model. We treat the premiums you pay as if it's your money, not ours. With Lemonade, everything becomes simple and transparent. We take a flat fee, pay claims super fast, and give back what's left to causes you care about.*



A transparent 20% fee to run everything



We pay claims super fast



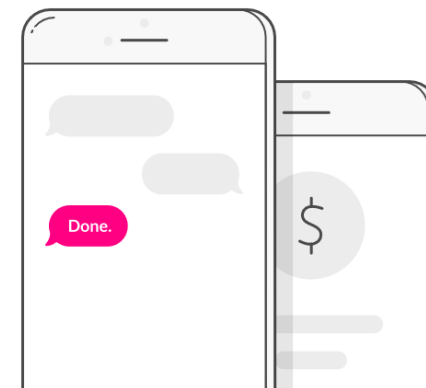
If there's money leftover, we give it back to causes

Instant Everything

Maya, our charming artificial intelligence bot will craft the perfect insurance for you. It couldn't be easier, or faster.

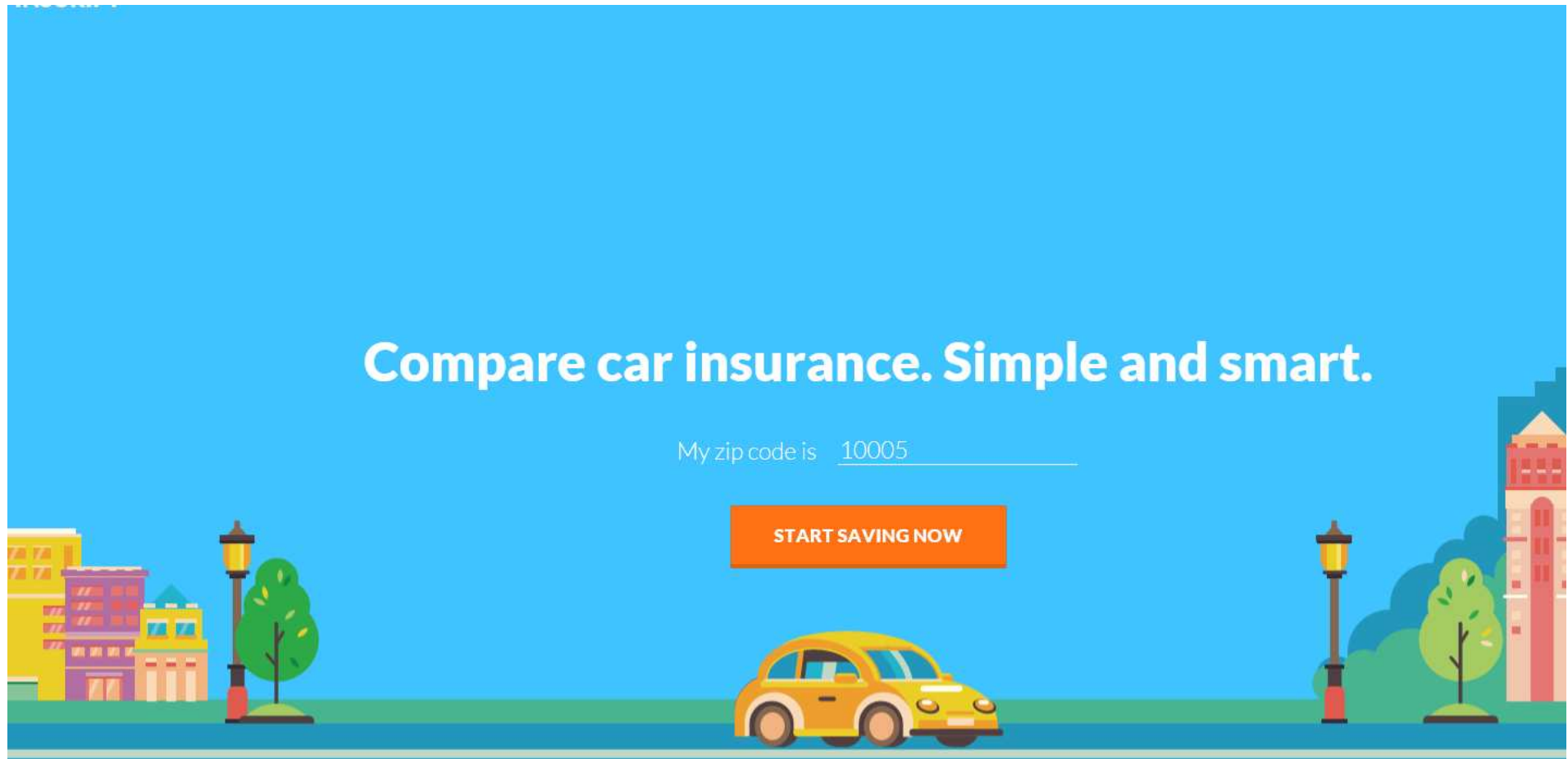
▶ See the Lemonade App in action

90 Seconds
To get insured

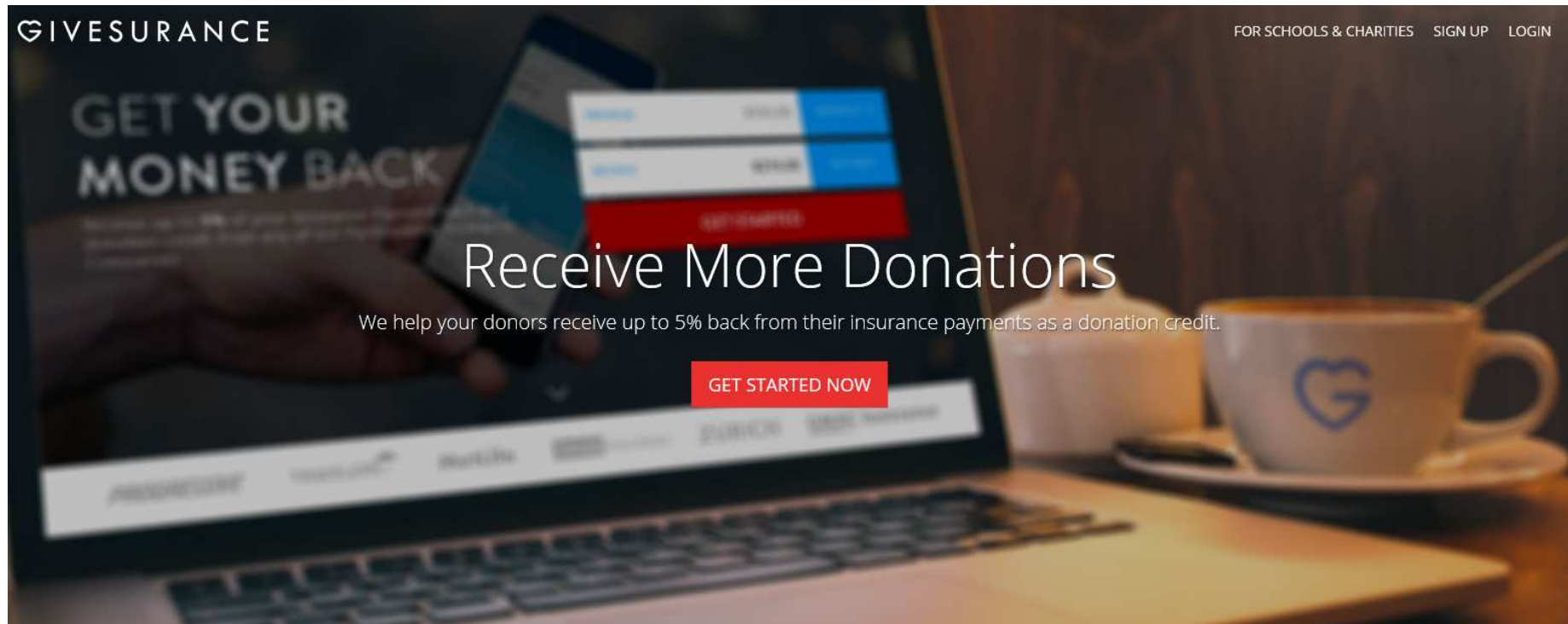


3 Minutes
To get paid

Insurify – The largest marketplace in the car insurance industry



Givesurance – Donate insurance premium to charity



Zenefit – B2B2C player

Zenefits created new channels to connect insurers, brokers, employers and employees

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THE PLATFORM

All your HR Apps in one place. All working together.



Payroll

Fully-integrated payroll automatically updates itself as changes are made.



HR Management

Streamline hiring, onboarding, and employee records management



Benefits

Manage employee benefits quickly and easily online.



Compliance

Handle the complexities of ACA and HR compliance needs with confidence.



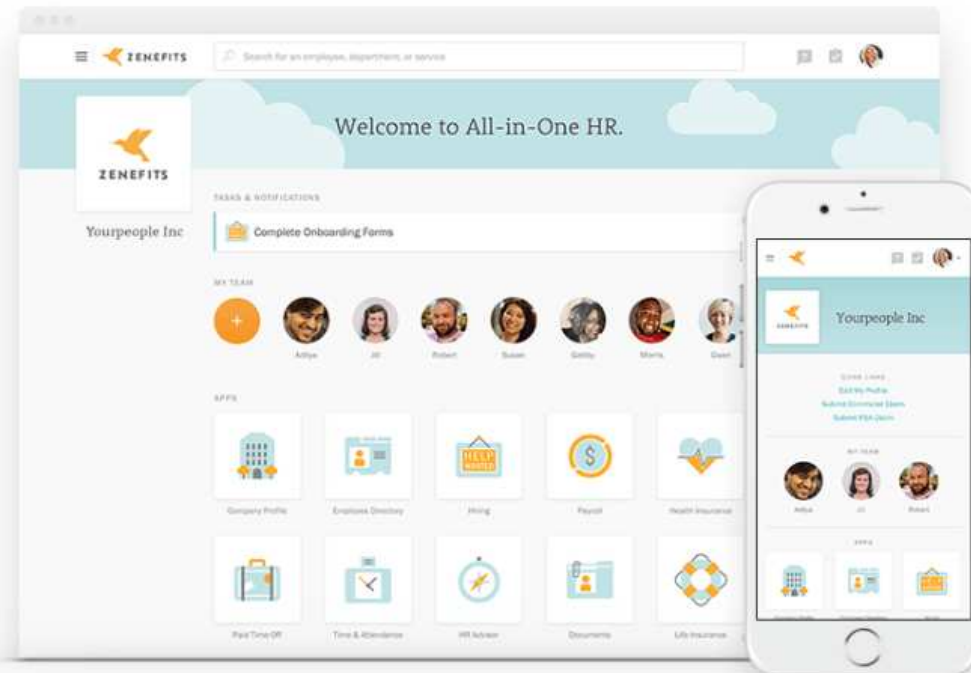
Time

Expedite time tracking and time off management.



Integrations

Add popular 3rd party apps to realize the full value of a connected workplace.



What should insurers do?

3

What should insurers do

- 1) Meet changing customer needs with new offerings
- 2) Enhance interaction and build trusted relationships
- 3) Augment existing capabilities and reach with strategic relationships
- 4) Leverage existing data and analytics to generate risk Insights
- 5) Utilize new approaches to underwriting risk and predicting loss
- 6) Enable the business with sophisticated operational capabilities

Q&A

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Part III

Implication from technology trends on your IT risk management

March 2017



Agenda



*Taking
customer
connection to
a new level*

1

Data analytics

2

Cyber resilience

3

Taking customer connection to a new level



1

The route to digital: where is it all heading

In the past, digital business meant e-commerce. But the landscape has changed; the rapid rise of media, smart devices, big data and cloud computing has opened up new avenues of potential



Social media



Smart devices, sensor
technology, wearable tech

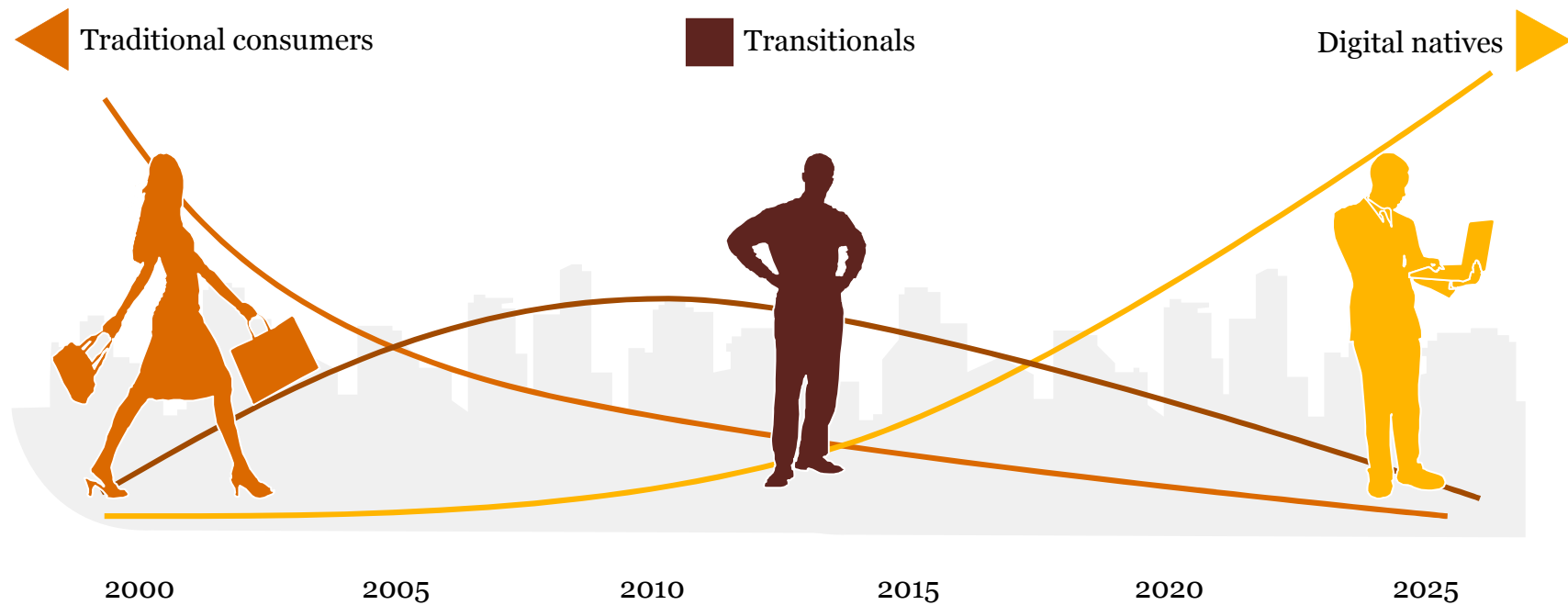


Big data and analytics



Cloud computing

By 2017 a new breed of customer will dominate – we call them Digital Natives

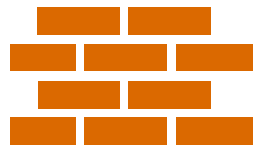


What does it mean for business?

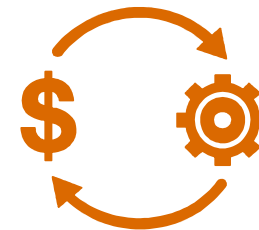
As a result, businesses have changed to deal with:



More transparency



Reduced barriers to interacting
with customers globally



Using new business models



Different threats and risks to
privacy and security



An economy based on outcomes,
not products and services



The rise of the trust economy

Digital holds the key to customer connection.



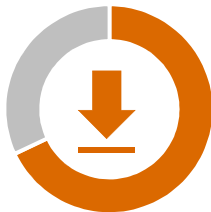
71%

of consumers surveyed used some form of digital research before buying insurance (e.g. price comparison or social media)



26%

of consumers surveyed bought their policies online (e.g. web or via a mobile device)



68%

of consumers surveyed would be willing to download and use an app from their insurance provider



67%

of consumers surveyed would be willing to have a sensor attached to their car or home, if it could result in a reduction in premiums



50%

of consumers surveyed would be prepared to provide their insurer with additional personal and life style information to enable them to seek the best deal for relevant services on their behalf

Adding value through digital

Three waves of change taking place:

1

Businesses have the right mix of digital channels to improve customers' e-commerce experience and successfully integrate their physical and digital operations

retail channel

e-commerce

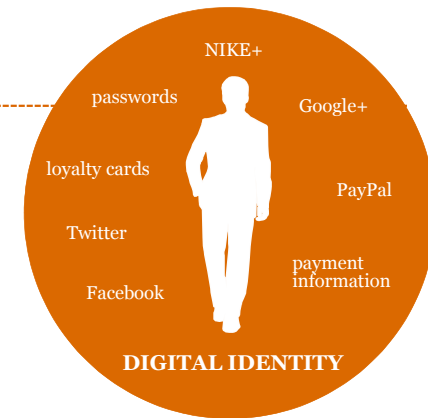


2

Businesses exploit information gained from how customers want to use their products and services to develop new propositions that help customers improve their lifestyle and increase their loyalty.

3

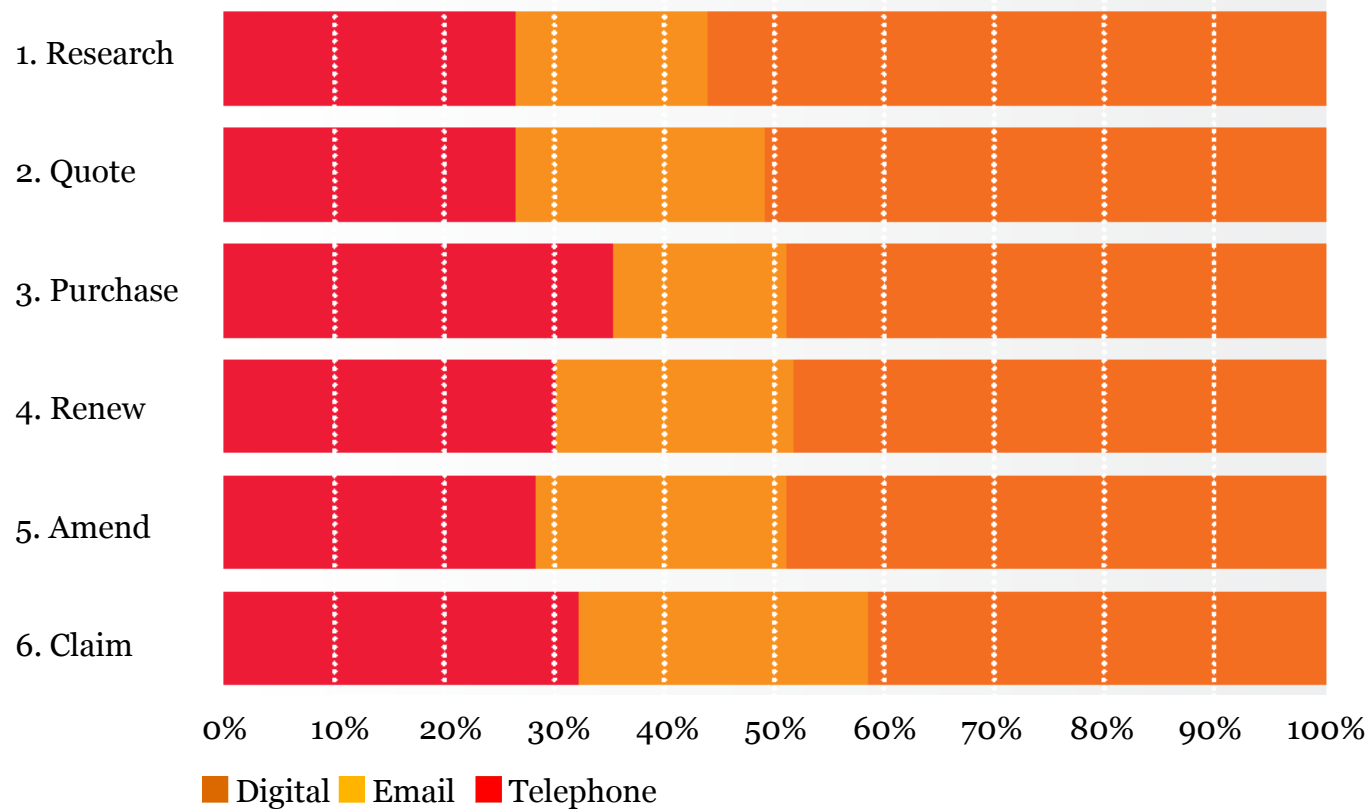
Customers' digital identity will become complex. The more they interact with business's products and services, the more insights they will gain about themselves. That then offers an opportunity for a 'digital identity manager' to work on their behalf to get the best deals



Wave one: shaping a new customer experience

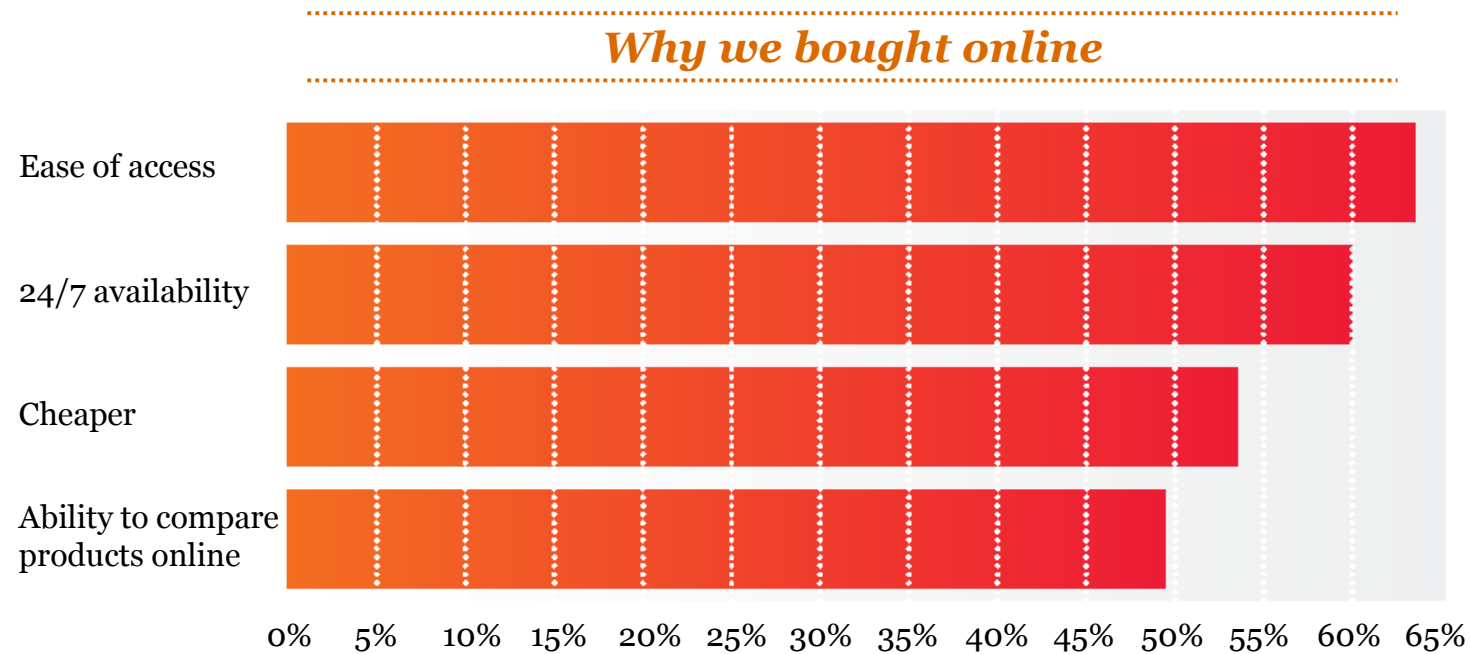
Preferred form of engagement

Which channel would you prefer to communicate or interact with your insurer?



Source: 9,281 consumers interviewed as part of PwC's digital insurance survey, 2014

Wave one: shaping a new customer experience (cont'd)

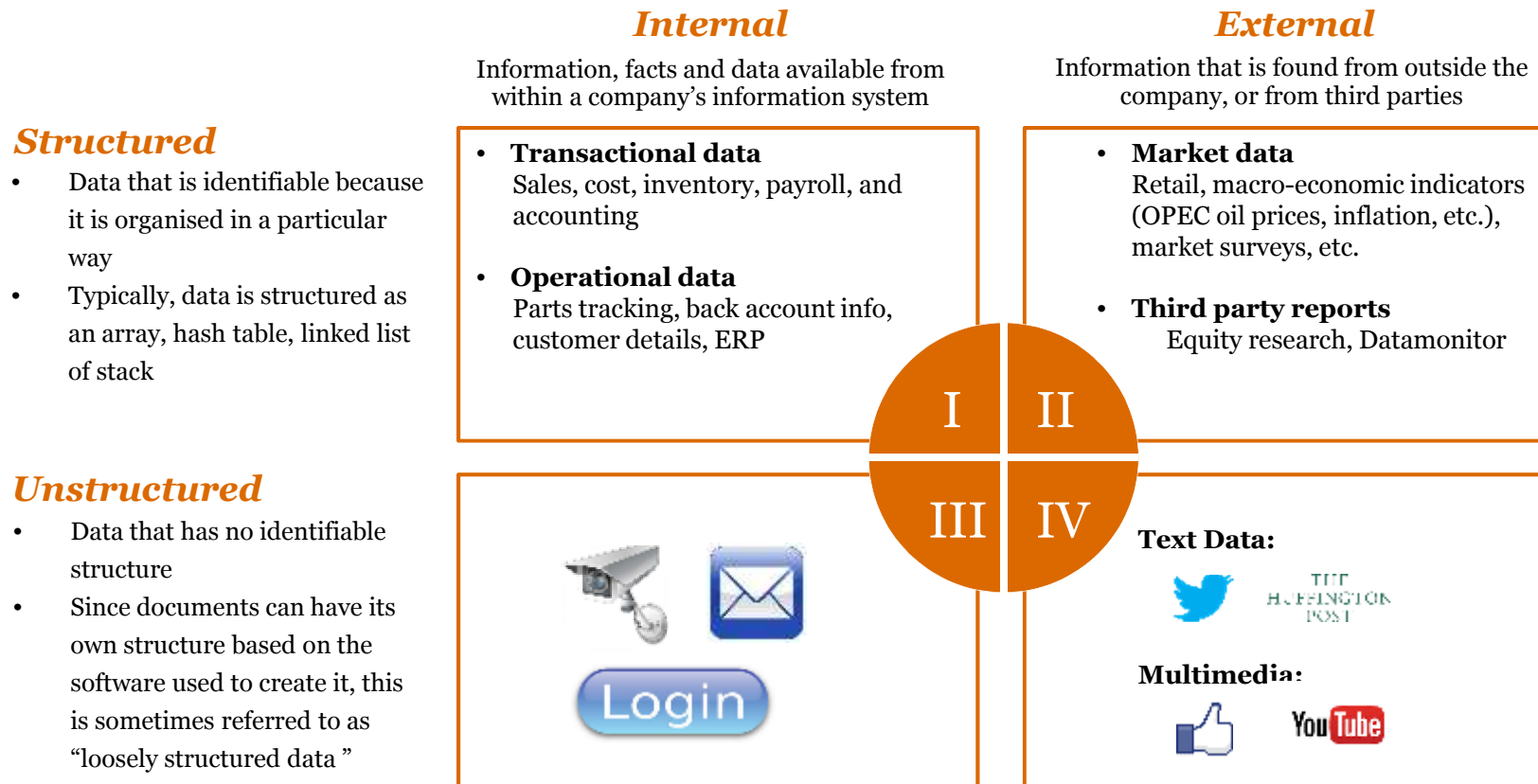


Source: Consumers who bought insurance online as part of PwC's digital insurance survey, 2014

Wave two: new and enhanced products

01 | Digital is doing more than just changing the customer experience. As a nonphysical product, insurers have the ability to change the product and service itself

02 | The next level of 'information advantage' is going to come from extracting risk and customer profiling data from the purchasing, GPS, social media and other digital trails people leave. A lot of this information is unstructured and new analytical techniques are emerging to get the insights from it.



Wave three: managing the digital identity

01

Widespread ***readiness to provide a broader range of behavioural data to their insurer in return for the potential value*** – and cost-saving – that sensor and data can provide.



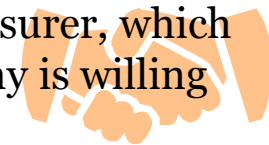
02

Some customers might go further by ***giving the insurer*** – or information company, which might be a better description for this evolving business model – ***access to all their personal data***.



03

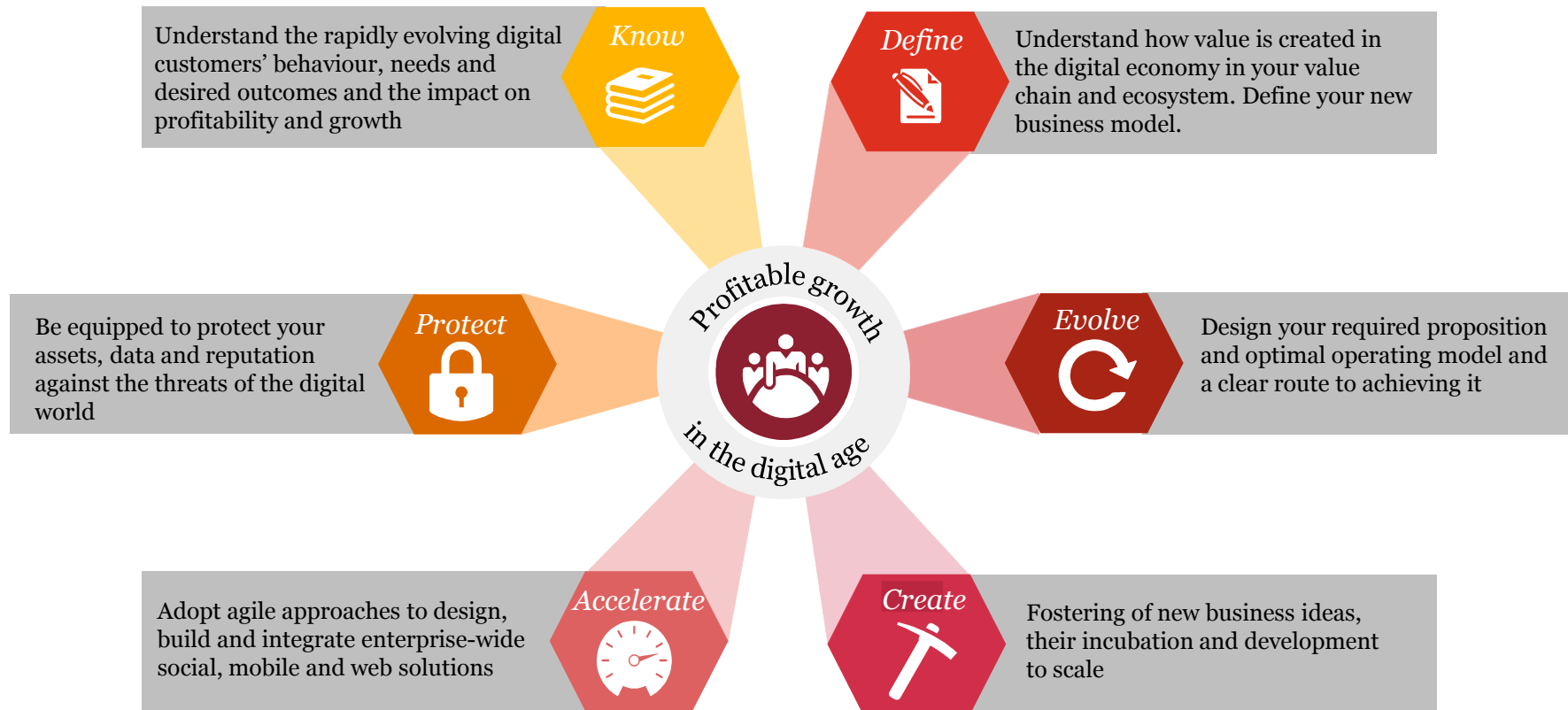
This would of course demand a ***high level of trust*** in the insurer, which can only be achieved if the customer believes that the company is willing to put the customer's interests before their own.



What's holding businesses back?



Prerequisites for success in the digital age



Data analytics



2

The data explosion

The amount of data in the digital universe is doubling every two years. Equivalent to approximately:

2013



131 DVDs per
person on the planet

2020



1,232 DVDs per
person on the planet

X 50

The enterprise's data
volume will grow 50
times each year between
2014 and 2020

85%

85% of this data is
coming from new data
sources

What is data analytics?



Video

Benefits of data analytics

01



*Operational
Efficiency*



*Enhanced customer
experience*

CEOs see greater operation efficiency (90%) and the enhanced customer experience (82%) as key benefits of leveraging data and analytics.

----- PwC 2015 CEO Survey

02



Productivity

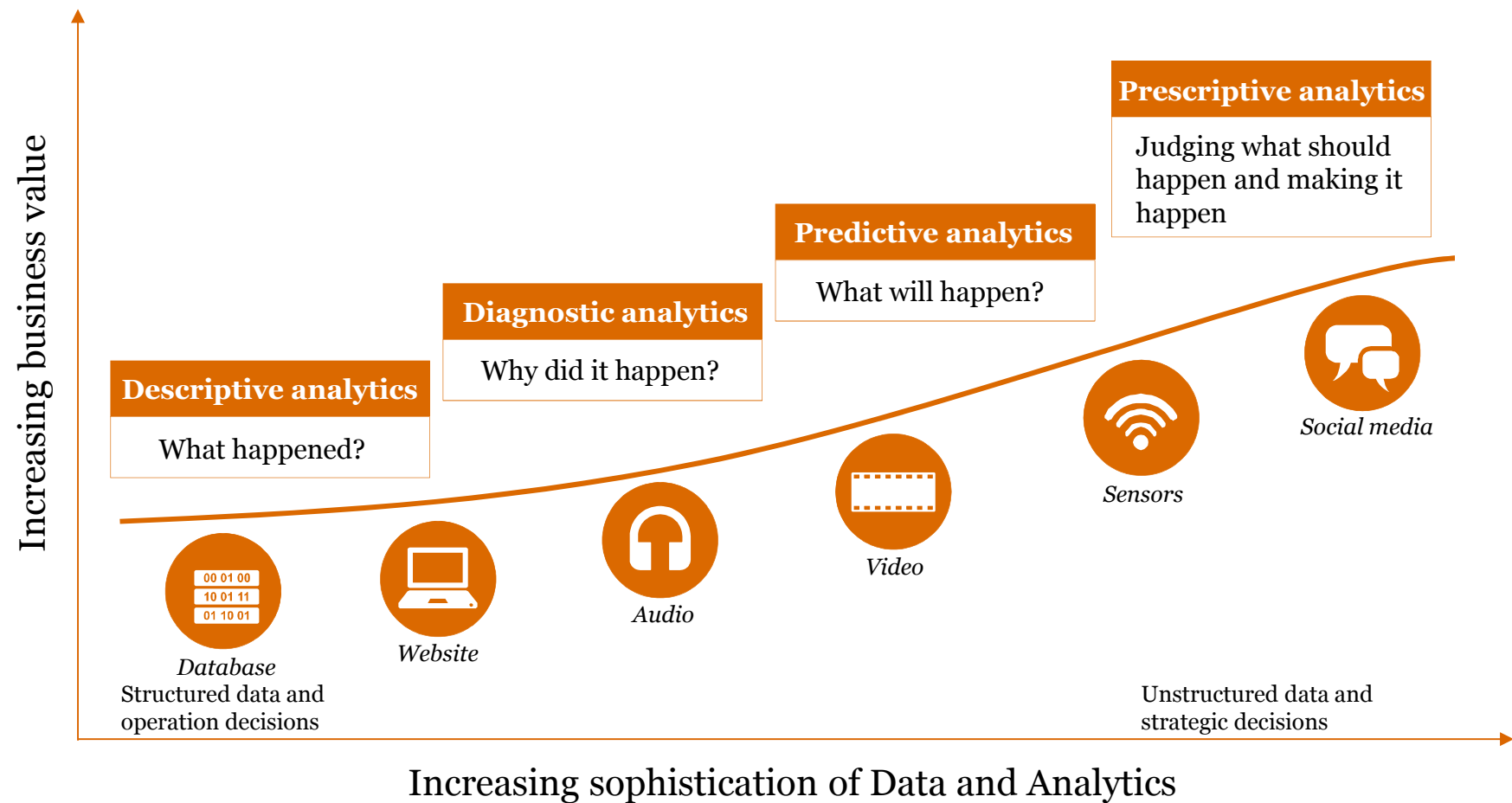


Profitability

Companies that characterise themselves as data-driven organisation are in the top third of their industry are 5% more productive and 6% more profitable than their competitors.

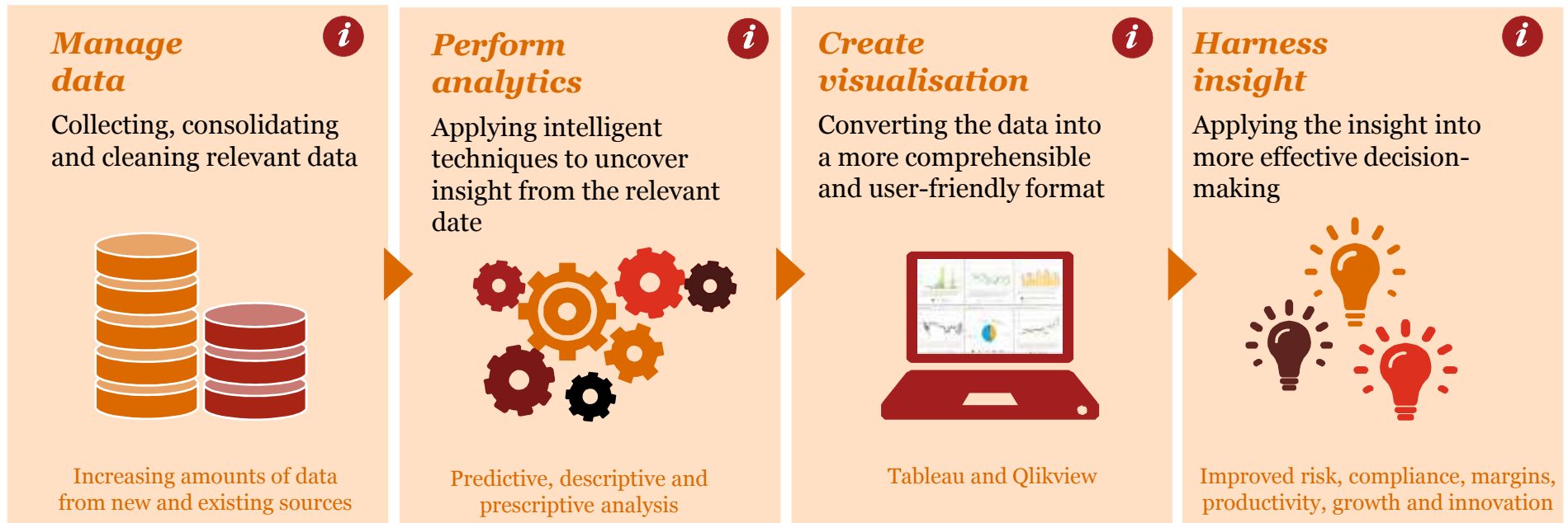
----- Harvard Business Review

The new frontier of data analytics



Effective data analytics

The real power of data lies in creating actionable insight, and applying this insight to transform the organisation. We believe that effective data and analytics comprises four key components.



Example of data analytics in insurance industry

BI Claims reports

Insurance group in Middle East

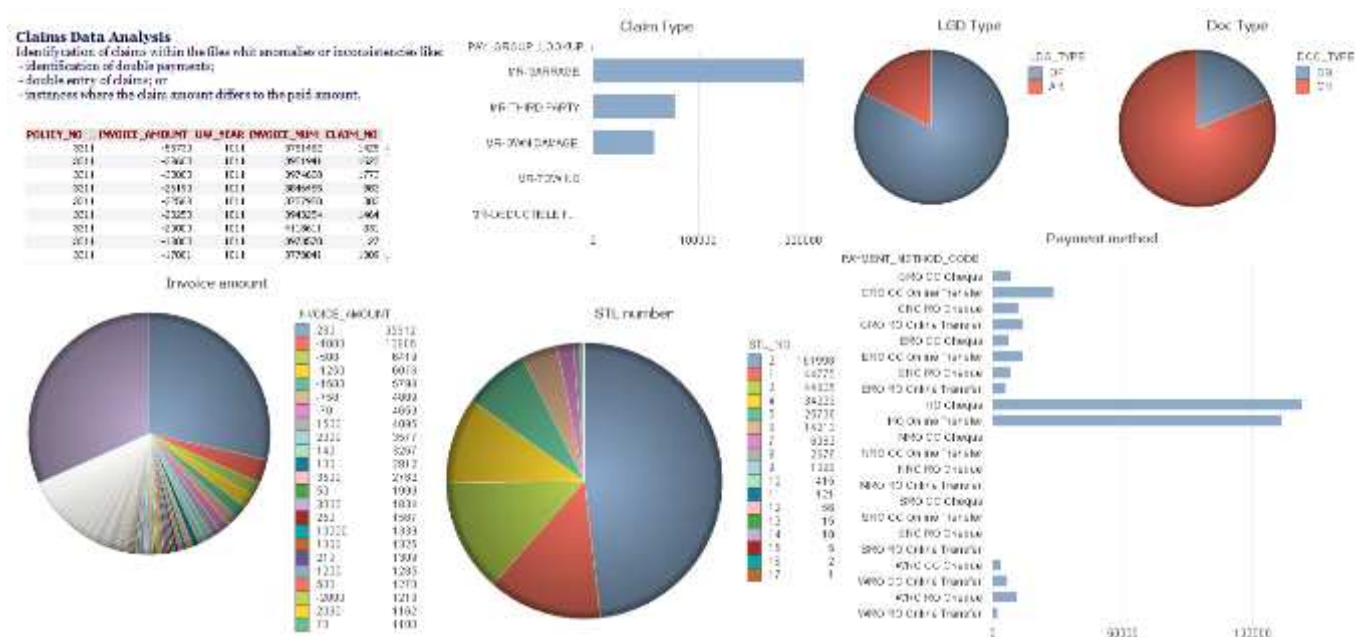
Business issue

An insurance company sought a review of their motor and medical claims processes to identify whether any major issues exist that may be contributing to the large growth experienced in claims volumes.

The company wanted claims data being accurately entered and paid by their systems rather than analysing the efficiency of the claims process flow practice currently adopted.

Solution

The insurance company used data analytics to identify instances within the client's claims process where comparable anomalies are identifiable, for example identification of double payments, double entry of claims or instances where the claim amount differs to the paid amount. Additionally, the company gain claims process insights and a benchmarking analysis against its peers.



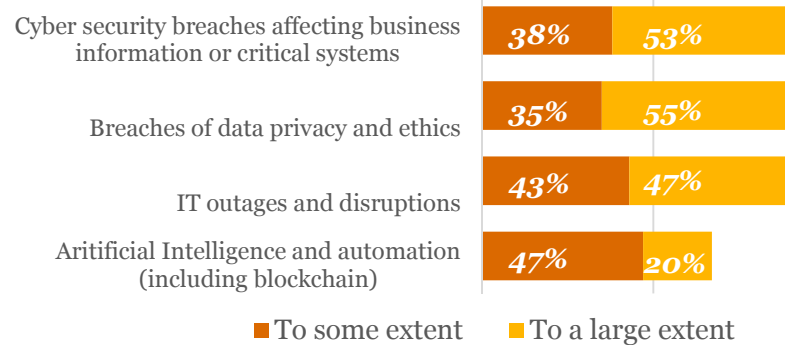
Business benefits

The insurance company was able to benefit from a report outlining of findings and recommendations for closing any identified gaps and detailing findings and exceptions. Additionally, the company can perform benchmarking analysis against their peers, a list of recommendations on the claims process compared against best practices, and insights about how the claims process is working on other organisations.

Data privacy

CEOs worry about a variety of digital risks and their impact on trust

Q: To what extent do you think the following areas will impact negatively on stakeholder trust levels in your industry in the next five years

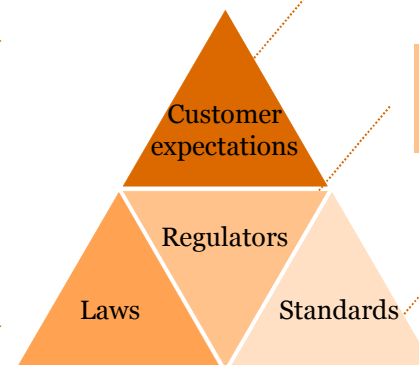


84%

of people say breaches of data privacy and ethics causes them to lose trust in companies

Finding the right balance between protecting data and using it to grow the business is critical today

The outside forces influencing your privacy strategy (by degree of change)



Customer expectations change rapidly and are becoming more influential

Regulator activity accelerating in industries that lack privacy laws

Laws and standards are currently the strongest influencers

Cyber resilience



3

What we hear from you



Number 1 risk: Non-life insurers taking part in the latest Banana Skins survey ranked cyber risk as the biggest risk facing their businesses



Cyber crime costs the global economy more than \$400 billion a year and the costs will continue to grow.

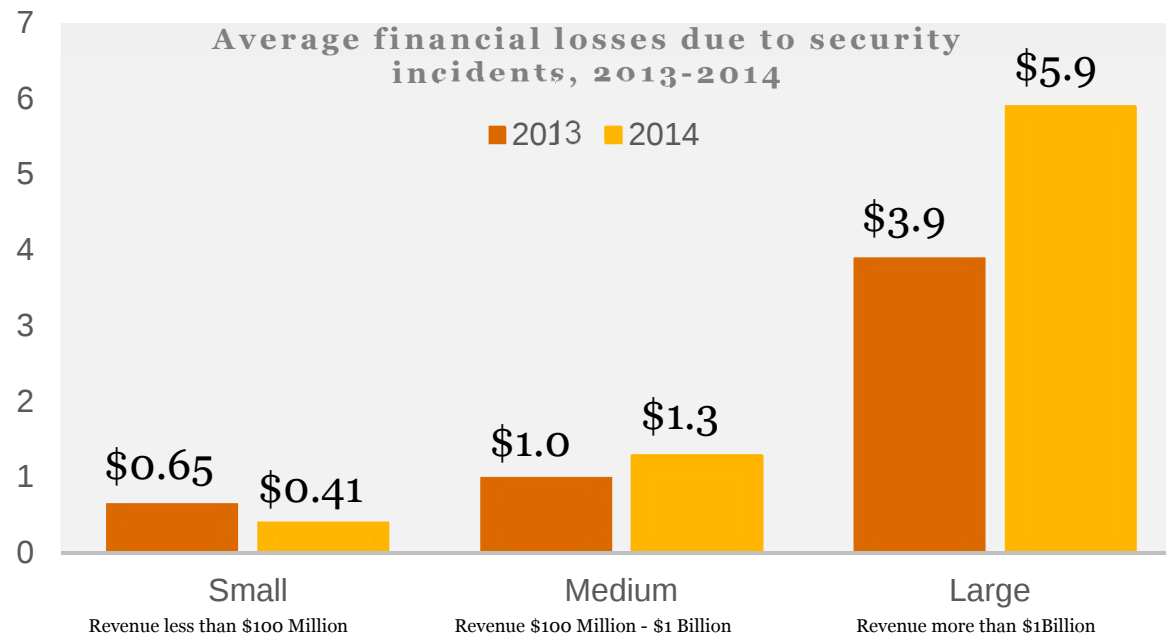
Cyber vulnerabilities: a risk like no other

1. *Both frequent and severe*

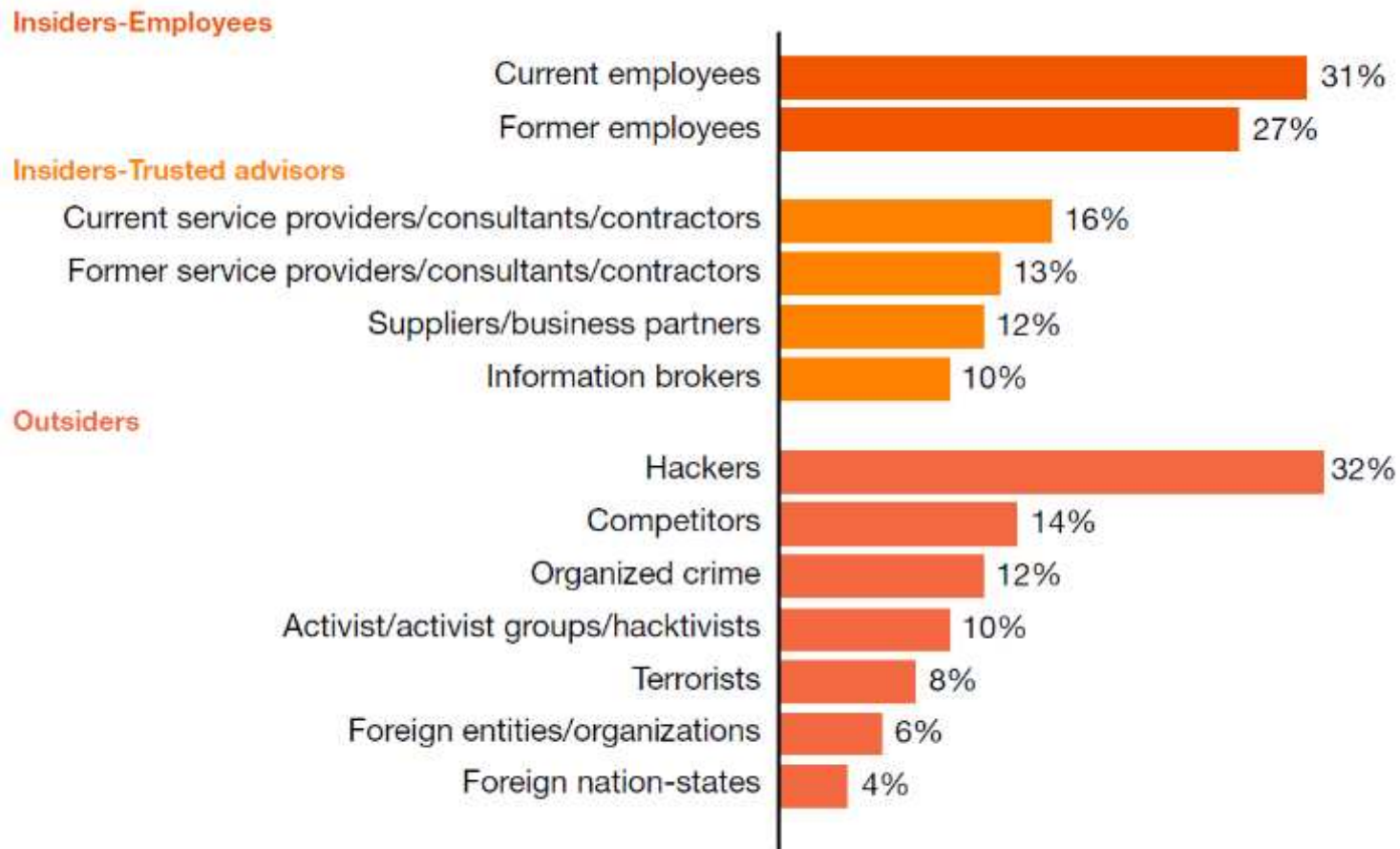
As figure 1 indicates, cyber risks score highly on both impact and likelihood

2. *Loss contagion is hard to contain*

3. *Risks are difficult to detect, evaluate and price*

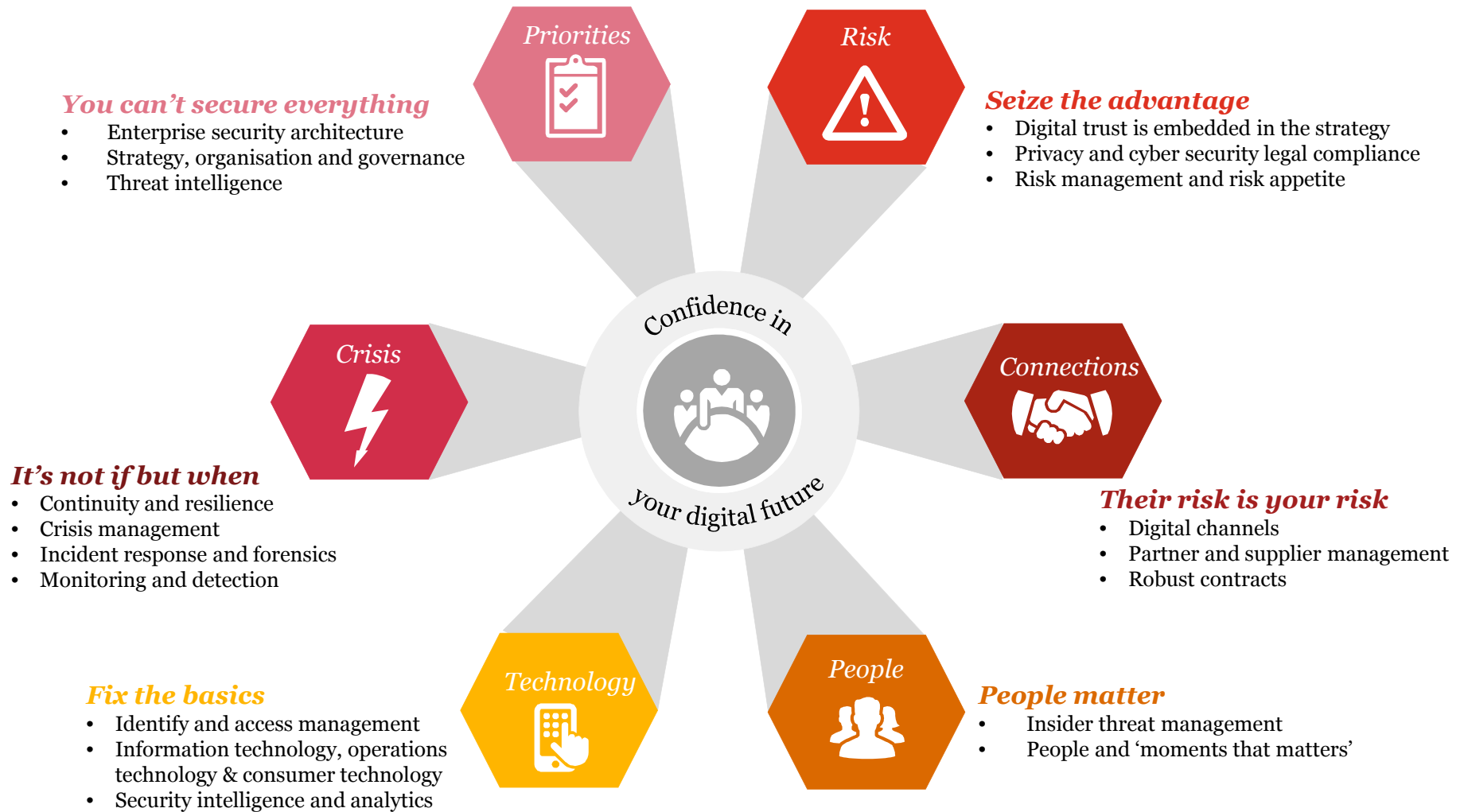


Estimated likely source of incidents



Source: PwC Global State of Information Security Survey 2015

Future priorities: what are your priorities?



Putting cybersecurity into perspective

Cybersecurity encompasses all **people, processes, technologies and relationships** involved in protecting assets shared throughout the ecosystem.

Cybersecurity today is a rapidly evolving challenge of advanced **skill, strategy and technology**. As a result, the security models of the past decade are no longer sufficient.

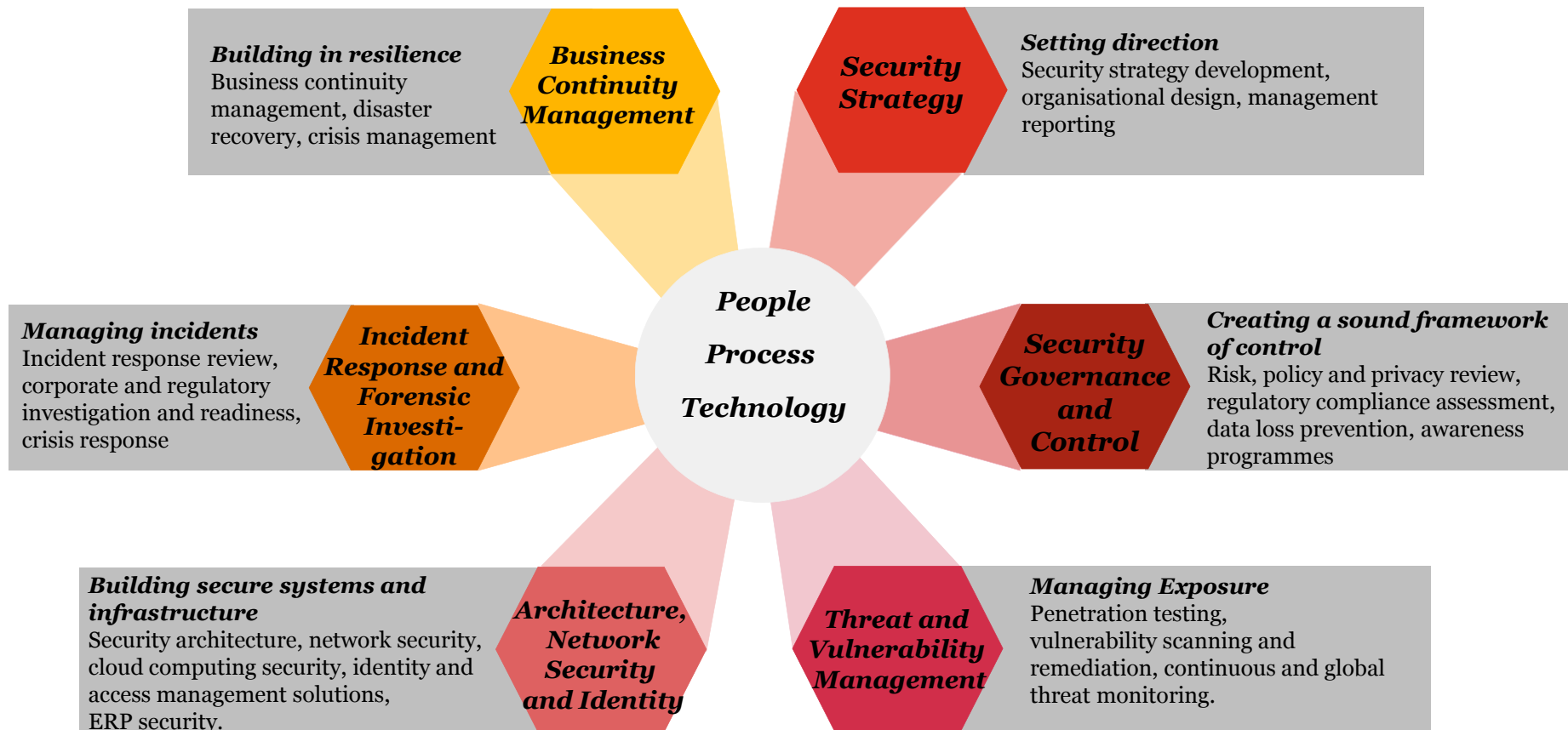


Cybersecurity issues should not be addressed in isolation; the **changing threat landscape** should be a part of an enterprise risk strategy.



*Organisations may face threats from **new adversaries**: nation states, organised crime, hackers, insiders and even terrorists.*

Information security and risk control



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Wrap-up Future of your insurance business strategy

March 2017



pwc

Scenario

Property and casualty in 2025: all-round prevention and protection



The insurance coverage will be comprehensive, from detecting potential faults at home, adjusting transport requirements automatically, to helping customers sort out their problems

Life, annuities and pension in 2025: fit for the future



Lifestyle, health and financial coverage will be designed to make it easier to stay healthy, manage finances and plan for the future

Commercial insurance in 2025: advanced risk detection averts cyber-attack



The cyber protection forms part of a comprehensive 'business as usual' risk management package, which automatically anticipates and responds to any problems in supply, customer service and reputational integrity

Implication for the future of you business

Property and casualty personal lines

- Automated underwriting and competition from aggregators and new entrants will lower prices and accelerate commoditisation of core business lines
- New opportunities: new information-based models
- An access to customers' data enables insurers to tailor services for each customer
- Stronger role for agents in helping people in understand and manage complex protection needs
- Partnerships with travel companies and motor manufacturers in a form of bundle services
- New ecosystem of information and assets will create more opportunities
- ADAS technology is predicted to reduce annual auto losses in a developed market, but risks and claims profile will be more complex, as driver use self-driving and ADAS driving interchangeably
- Revenue models will shift from premiums to premiums plus subscription

Commercial lines

- Growth opportunities in cyber risk and supply chain risk
- Broader risk prevention and mitigation discussions with both agents and policyholders
- Alternative risk transfer: moving beyond catastrophe into cyber and supply chain risk
- Advanced analytics could help to mitigate the frequency of accidents, business interruption and other losses
- Rising losses demands a growing need for co-ordinated risk management solutions

Life, annuities and pensions

- Life coverage will shift from life benefits to well-being and quality of life
- Advanced analytics will enhance the precision, customisation and flexibility of financial planning and risk protection
- Sensor technology will increase integration between insurers and health care providers
- Life coverage will shift to shorter term contracts

Insurance leaders foresee disruptions than others: a change in strategy will bring competitive edge

Customer revolution



A more fragmented market
with higher expectations for
customer-centric services

Digitalisation



Better accessibility,
customisation and
adaptation

Information advantage



Adopting a flexible, data-led
iterative approach to achieve
customer-centricity and
revenue growth

Two-speed growth



Fast-paced changes in
technology in times of low
economic growth

Disruption and innovation



Innovation will speed up a new
business model creation and a shift
to online and mobile platform at a
faster pace than ever before

Q&A

PwC insurance services

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PwC Thailand and Our global network

PwC has had a presence in Thailand for more than 56 years, and there are over 1,600 people in our Bangkok-based office. Our client base includes the largest Thai and multinational companies, as well as government institutions. Our close interaction with both economic and state bodies allows us to keep up with the fast changing business environment. We believe that sound governance and transparency form the bedrock of leadership, and we are committed to serving with integrity and good sense. At PwC, we measure our success by yours.

Thank you

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