Digital Transformation in Insurance

Trends and Impacts

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Agenda

Page

1	The Geneva Association at a glance	3
2	Digital transformation in business and society	5
3	Redefining the business of insurance	9
4	Challenges and opportunities	19
5	Key take-aways	24

The Geneva Association is a unique forum exclusively for ~80 CEOs of leading global (re)insurers – 14 members from Asia

Think Tank: Developing research papers with industry experts and academics

Insight  **Influence**

Research programmes

- Financial Stability and Regulation
- Extreme Events and Climate Risk
- Global Ageing
- Liability Regimes

Research topics

- Protection Gap
- Cyber

The **leading advocate** of insurance specific interests at the global level

Direct **interaction with central banks and international organisations** such as IAIS, FSB, World Bank, UN and OECD

BASIS

Academic work

e.g. Publishing two peer-reviewed academic journals

The Geneva Papers on Risk and Insurance – Issues and Practice

The Geneva Risk and Insurance Review

Source: GA

The Geneva Association (co-)hosts leading insurance networks and offers awards and grants for research excellence

1 **Annual General Assembly of CEO members**

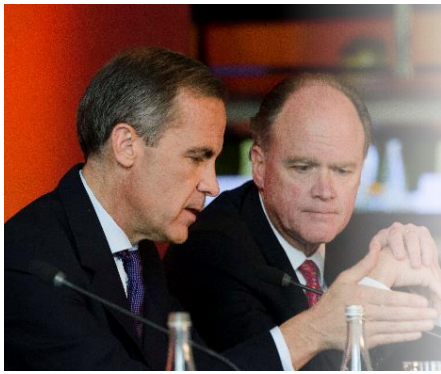
2 **Key meetings for CFOs, CROs, CIOs and Chief Economists**

3 **Academic Networks**, e.g.

- WRIEC – World Risk and Insurance Economics Congress
- EGRIE – European Group of Risk and Insurance Economists seminar
- EALE – Joint seminar of the European Association of Law and Economics (EALE) and The Geneva Association

4 **Awards and Research Grants**, e.g.

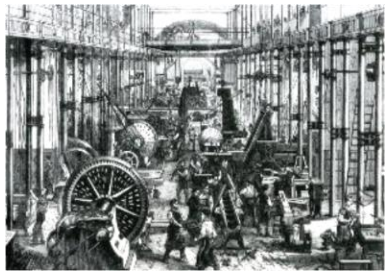
- Ernst-Meyer Prize for the best PhD thesis in insurance economics in insurance
- Shin Research Award, a joint GA/IIS award to promote applied research
- Research grants, 2016 on Cyber



Source: GA

Digitization as the latest milestone in economic history – New business models based on access to customers and data

1st Industrial Revolution



Introduction of **mechanical production plants** driven by water and steam power

- First mechanic loom 1784

2nd Industrial Revolution

Introduction **of labor division and mass production** and the use of electricity

- First assembly line 1870

3rd Industrial Revolution

Use of IT and electrical engineering for **automation**

- First programmable control in 1969

4th Industrial Revolution

Digitisation of **interaction** and increased application of **intelligent systems**

- Big Data, Google Brain and "Shadow Processing"
- New Business models: **Access to customers** and **Data**

Digital transformation

Source: Misc. (The GA, German Federation of Industry, University St. Gallen, etc.)

Five key technological forces can be considered the ‘fuel’ of the 4th Industrial Revolution

Technology …

- Connectivity
- Cloud
- Mobility
- Big Data
- Social

Source: Microsoft, The GA

On the other side the societal dimension: Five key aspects of changing behaviour

People …

- expect more
- trust their peers
- are informed
- have choices
- have a voice

Source: PwC, The GA

This makes the customer interface the core of the new business models and the key battle ground in competition

Focus: Client-centricity

Global platforms

Technology-driven (easy-to-use)

Almost no assets (decreasing correlation between Assets and Customer Valuation)

Independent third-party certification / peer feedback

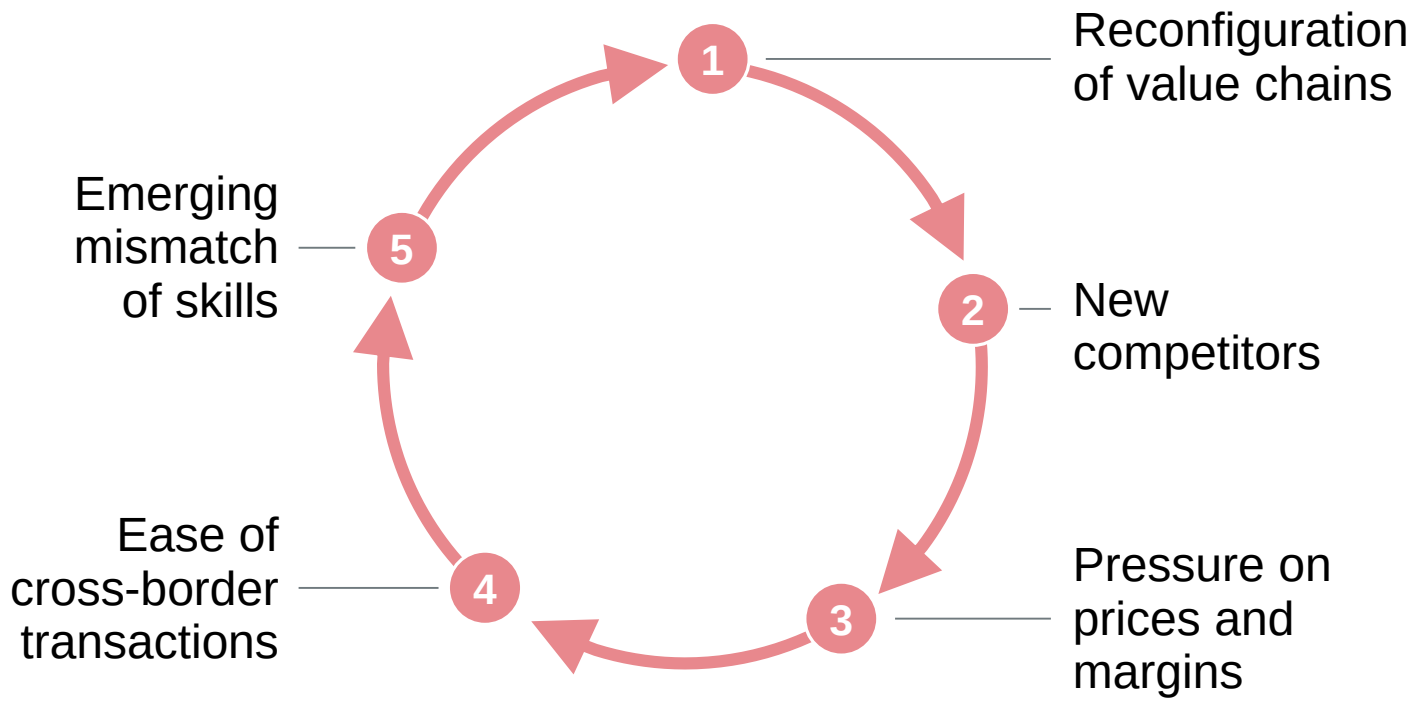
Digitised social capital

Sharing economy

Highly scalable / fast growth

Source: Wetpaint Digital Solutions, The GA

The overall framework: How digitisation redefines business



Source: The GA, McKinsey

New digital opportunities disaggregate and reconfigure the whole insurance value chain

Product development	Lead management	Sales management	Risk analysis	Underwriting policy & claims management
• **Digitisation of existing products**, e.g. modularisation of monolithic products • Development of **new digital products** and services • **Personalisation of products** based on combination of modules (impact of big data) • …	• **Social media** to drive brand defence • **Digital campaign**/ loyalty management • **Analytics** driven sales management and controlling • **Digital sales agent** management • …	• **Channel integration**/ multi-access • **Fast quote** • **Online offer** • **eLead conversion** and control • **Real-time support** by sales person/system • …	• **Risk analysis** • **Personalised products** • **Usage-based insurance** amounts (e.g. Telematics) • …	• **Digital claims handling** (incl. analytical, automated claims assessment) • Online/**self services**/personal insurance manager • **Fraud detection** • Availability of **digital payment** methods

Source: Roland Berger, The GA

Digitisation is paving the way for new (digital) competitors

Value chain

Product development → **Lead management** → **Sales management** → **Underwriting policy & claims management**

To protect their role as a dominating assessor of risk, insurers have to systematically build on their brand, to own their client access (or to be leader in collaborative agreement with "new players") and to be cost leader in insurance processes

New players with:
- Access to clients
- Strong capabilities in predictability
- Leverage across non-insurance products

New players with:
- Focus on bpo (business process outsourcing)
- Scale across multiple industries

Source: Roland Berger, The GA

In addition, data ubiquity rewrites the rules of competition compounded by the power of connectivity

Traditional data (internal)

- **Identifiers** (name, address, age, gender, family size, job, …)
- **Income and assets** (financial, real estate, …)
- **Relationship history with insurer** (products and price, touchpoints, claims, …)
- **Health status** (for health insurer)
- **Other group data** (banking data for bank insurers, assistance data, loyalty program, …)

New sources of data (internal and external)

"Internet of things" data

- Based on connected sensors (smart car/home/health)
- Obtained via
  - Usage Based Insurance products
  - Third party companies (car manu-facturers, utilities, telcos, …)
  - Specialized companies (nest, Lockitron, Octo, Fitbit, M2ocity, …)

Providers data

Customer data gathered by companies within

- Specific industries (utilities, retailers, postal services, aggregators, ..)
- Cross industries
  - Google, Facebook, …
  - Axcion, LexisNexis, Leadplace, cross industry loyalty programs, …)

Public data

- Personal information (partially or totally) openly generated by customer on internet (e.g. on social media)
- Can be tracked with support of specialized firms (e.g. Fliptop, Social Intelligence, …)

Open data

Data gathered by

- Governmental bodies (cars registration, health spending)
- On the basis of market places built in collaboration with competitors (e.g. BCA/Sidexa)

Source: Roland Berger, The GA

Digital transparency and connectivity pressure prices and margins

Candidates products for the aggregator and direct channel	Perceived suitability
Car insurance	●
Travel insurance	●
Maid insurance	◕
Home insurance	◕
Personal accident	◕
Medical insurance	◑
Hospital cash	◑
Term Life	◑
Term life (with riders critical illness and total & permanent Disability)	◔
Investment-linked policy (ILP)	○
Whole life participating	○

Motor insurance most vulnerable, **investment-linked life insurance most immune** to pressures from aggregators

Aggregators have evolved from simple product comparison devices to sophisticated solution providers

First generation aggregator

Information and education → Individual comparison

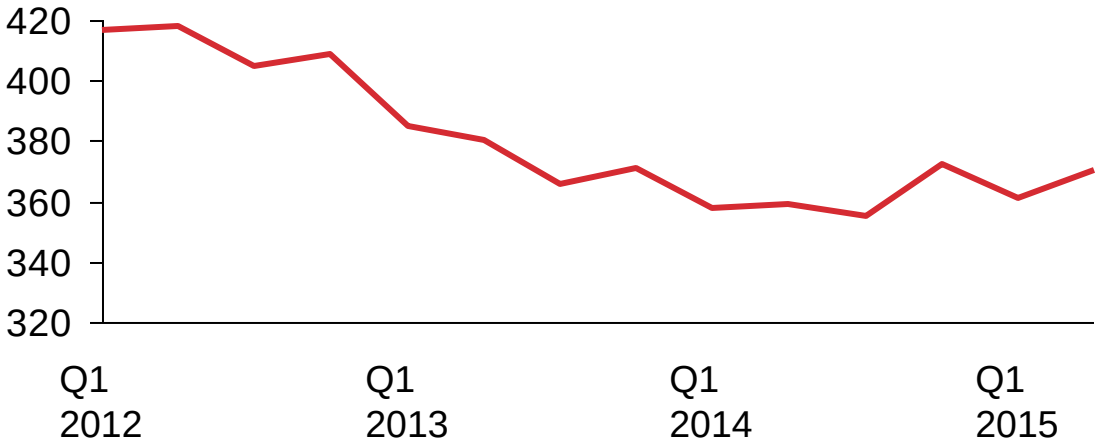
Second generation aggregator

Transaction → Rating and services → Hybrid distribution

Source: Synpulse

Example: UK motor rates

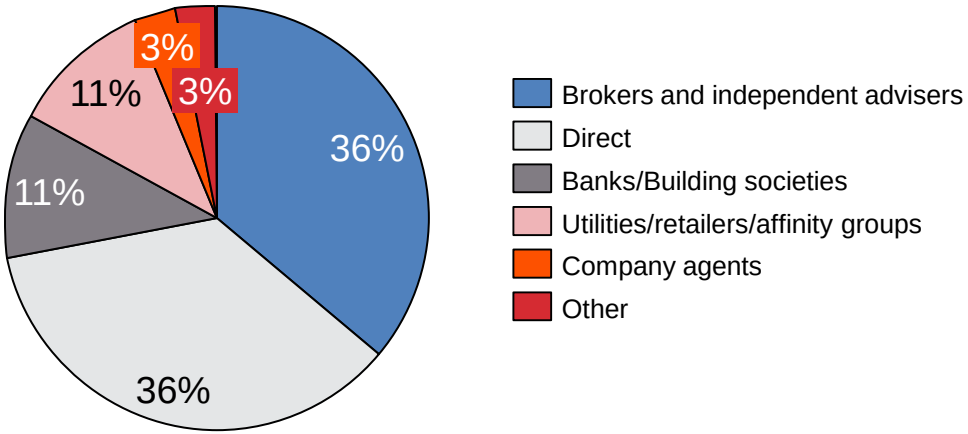
Average premium paid for private motor insurance [£]



Increased transparency through aggregators is one reason for the erosion of motor rates in the UK

36% of general personal lines business is transacted directly, primarily online, also through aggregators

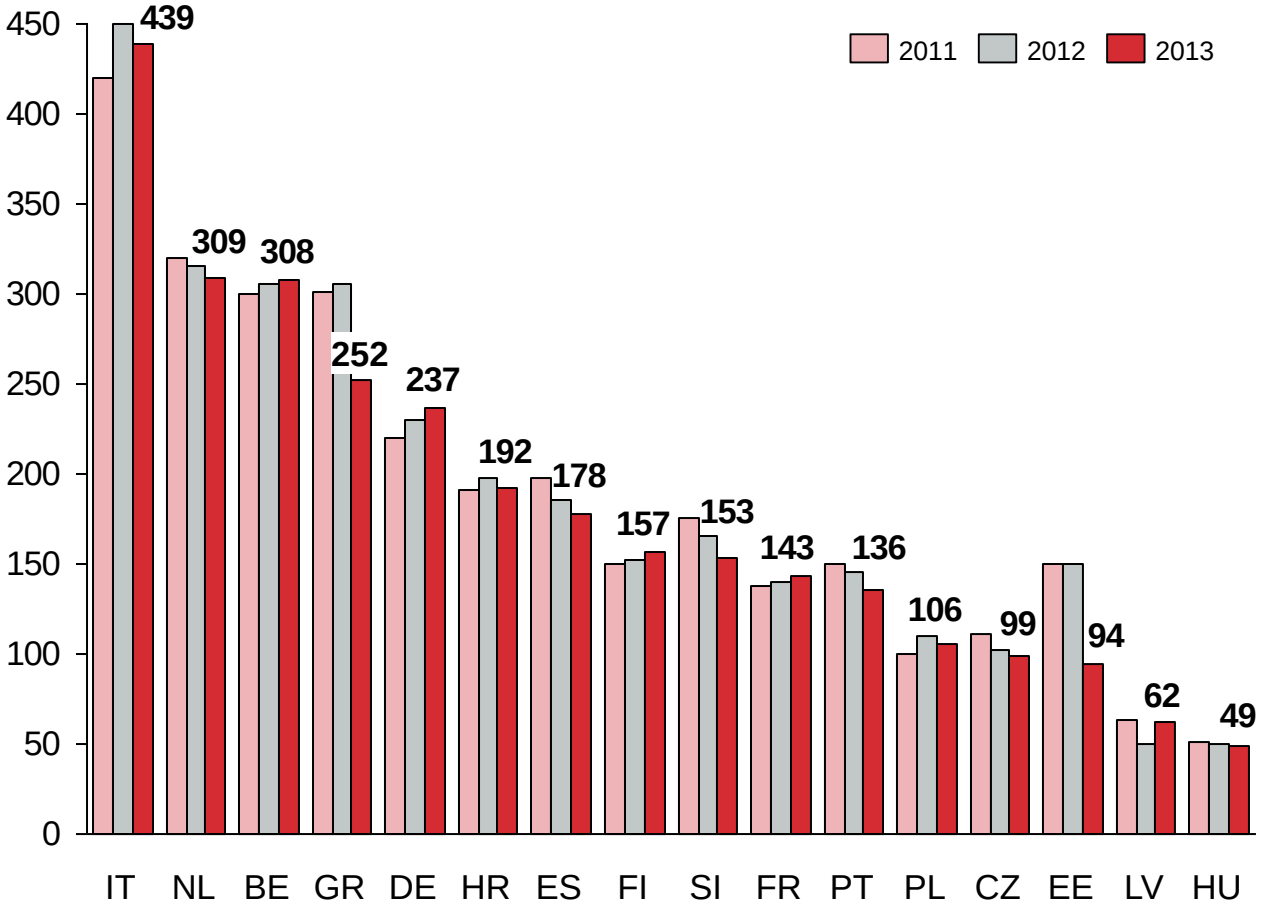
Distribution of personal lines, general insurance



Source: Association of British Insurers

Digital could also boost cross-border insurance business

Average mandatory third party motor liability premiums [EUR]



Example European Union: **Only 3% of insurance is transacted cross-border**

The **same policy holder** with a similar risk profile **can pay twice as much** for a similar policy depending on his place of residence.

Monthly premiums for a comparable non-investment 25-year term life insurance product ranged from €10 per month in Slovakia to £65 per month in the UK

Source: Association of British Insurers

Increasing mismatch of skills – Automation-induced job losses versus shortage of digital skills

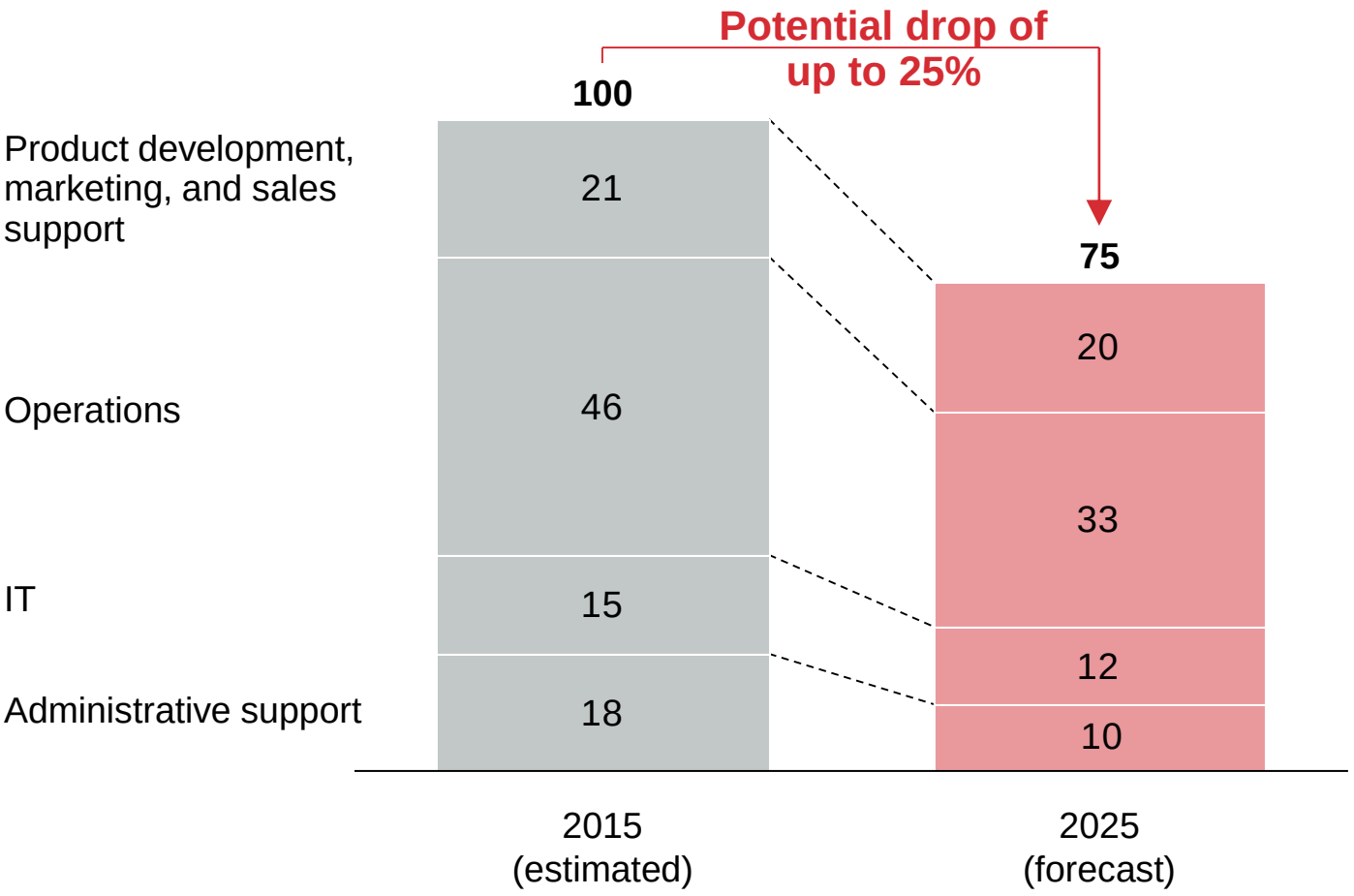
		Example Strongest increase	Strongest decrease
Product development, marketing and sales	**Product development**	Digital products, pricing	Standard product reporting
	Marketing	Digital marketing, campaign management and sponsoring	Standard product reporting
	Sales support	Channel management	Sales monitoring
Operations	**Policy issuance**	Business rules administration (e.g. for flagging claims for manual processing by an expert)	Regular operations (e.g. processing standard applications, handling simple policy/claims processes)
	Policy servicing		
	Claims management		
IT	**Application development and maintenance**	Advanced analytics, "fast speed" development (e.g. portals, apps)	Designing and building solutions for core systems
	Infrastructure		Infrastructure operations
Support functions	**Human resources**	Digital recruitment	Transactional HR processes
	Postage and logistics		Postage handling
	Facility management		
	Finance, tax, and planning		Standard reporting
	Other support functions		

Strong increase | Moderate increase | Strong decrease | Moderate decrease | Minor changes

Source: McKInsey (2016)

Net employment effect in the insurance industry expected to be negative

In % of all FTEs (forecast for Western Europe)



Product development/ sales and IT most **resilient**

Severe drops in employment **in operations** and admin support

Source: McKInsey (2016)

How to close the digital talent gap in insurance

Transform the employee experience

with new technologies. Recruitment apps, game-based assessment and selection tools, mobile platforms and analytics all play a role

Re-invent on-the-job learning

by offering customized training at the point of need. Online, virtual, mobile channels will be important. So will gamification and simulation training

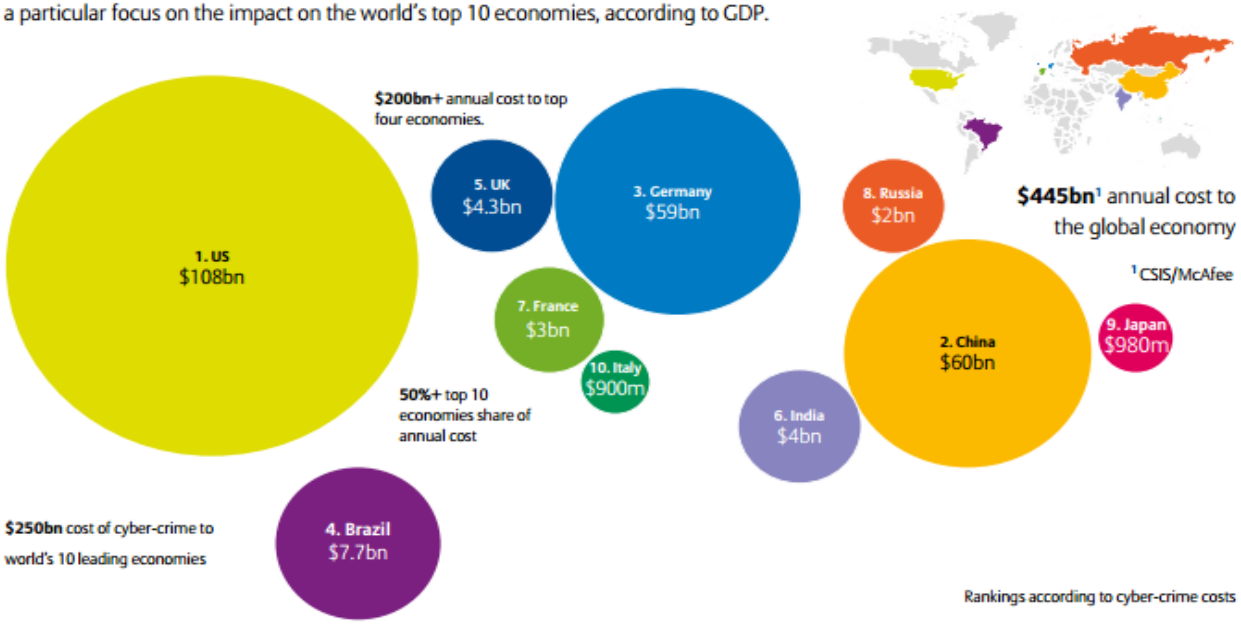
Rethink talent acquisition and retention strategies

Innovative collaborations, certification programs, internships and apprenticeships will reshape the talent pool

Source: Accenture

The down side of digitisation: i.e. threats by cyber crime costs US$ 500 billion p.a.

This **AGCS** atlas examines the estimated total cost to the global economy from cyber-crime per year, with a particular focus on the impact on the world's top 10 economies, according to GDP.



Country Ranking by GDP[1]		Cyber-crime as a % of GDP[2]	Estimated cost[3]	Country Ranking by GDP[1]		Cyber-crime as a % of GDP[2]	Estimated cost[3]
1 US	$16.8trn	.64%	$108bn	6 UK	$2.7trn	.16%	$4.3bn
2 China	$9.5trn	.63%	$60bn	7 Brazil	$2.4trn	.32%	$7.7bn
3 Japan	$4.9trn	.02%	$980m	8 Russia	$2.1trn	.10%	$2bn
4 Germany	$3.7trn	1.60%	$59bn	9 Italy	$2.1trn	.04%	$900m
5 France	$2.8trn	.11%	$3bn	10 India	$1.9trn	.21%	$4bn

Sources: [1]World Bank (2013) [2]Net Losses: Estimating the Global Cost of Cyber-Crime, CSIS/McAfee [3]Allianz Global Corporate & Specialty

Annual cost of cyber crime equals

0.6% of world GDP *OR*

the value of the **entire Japanese insurance market** (in terms of premium volume) *OR*

twice the capital base **of** the global **reinsurance industry**

Source: AGCS

Another down side of digitisation: Societal resistance originates

Critics

- Privacy Groups
- Culture pessimists
- Anti-capitalists

They condemn the digitisation of everyday life and they avoid the digital interaction as a sign of protest. For this matter they accept to be excluded.

- Access to economic everyday life
- Freedom, Protest

Opportunists

- Consumers (mostly young, all social classes)

React impulsive; either online or offline. Not particularly interested in the digitisation discussion but in simple solutions.

- Availability at any time
- Reduced complexity
- Speed

Need-Oriented

- Sustainable Thinkers
- Romantics

The needs of this group are partly superiorly satisfied when offline. They don't reject the digital interaction, but choose "off-time" consciously.

- Personnel interaction
- Haptic experience

Overwhelmed

- Illiterates
- Losers of Digitisation
- Vulnerable people

Challenged by digital interaction. They hardly find their way in the quickly changing world. They wish back "the good old times".

- Support
- Help
- Personnel Interaction
- Simplicity

Who

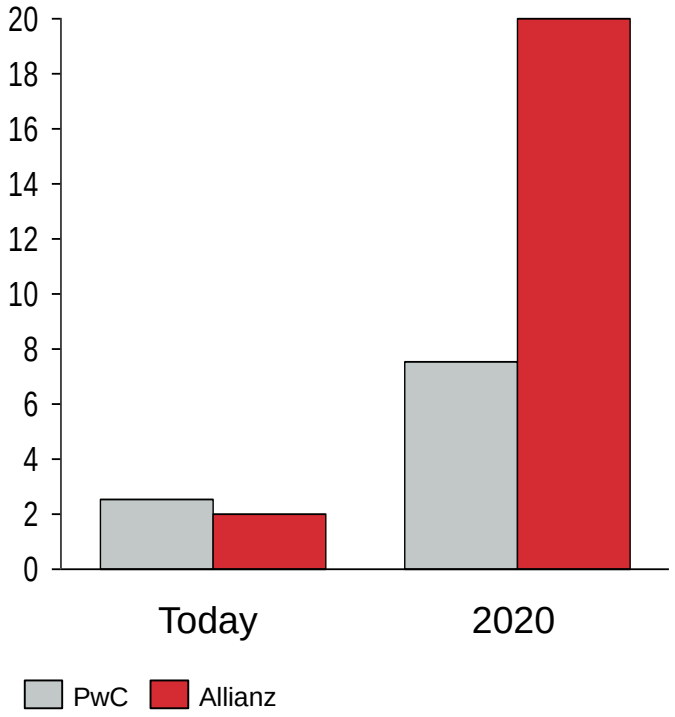
Description

Values

Source: Institut for insurance, University of St. Gallen

On the other side cyber insurance premiums could grow to US$ 20 billion by 2020

Estimated current and projected future size of the cyber insurance market [USD bn]



Source: The GA

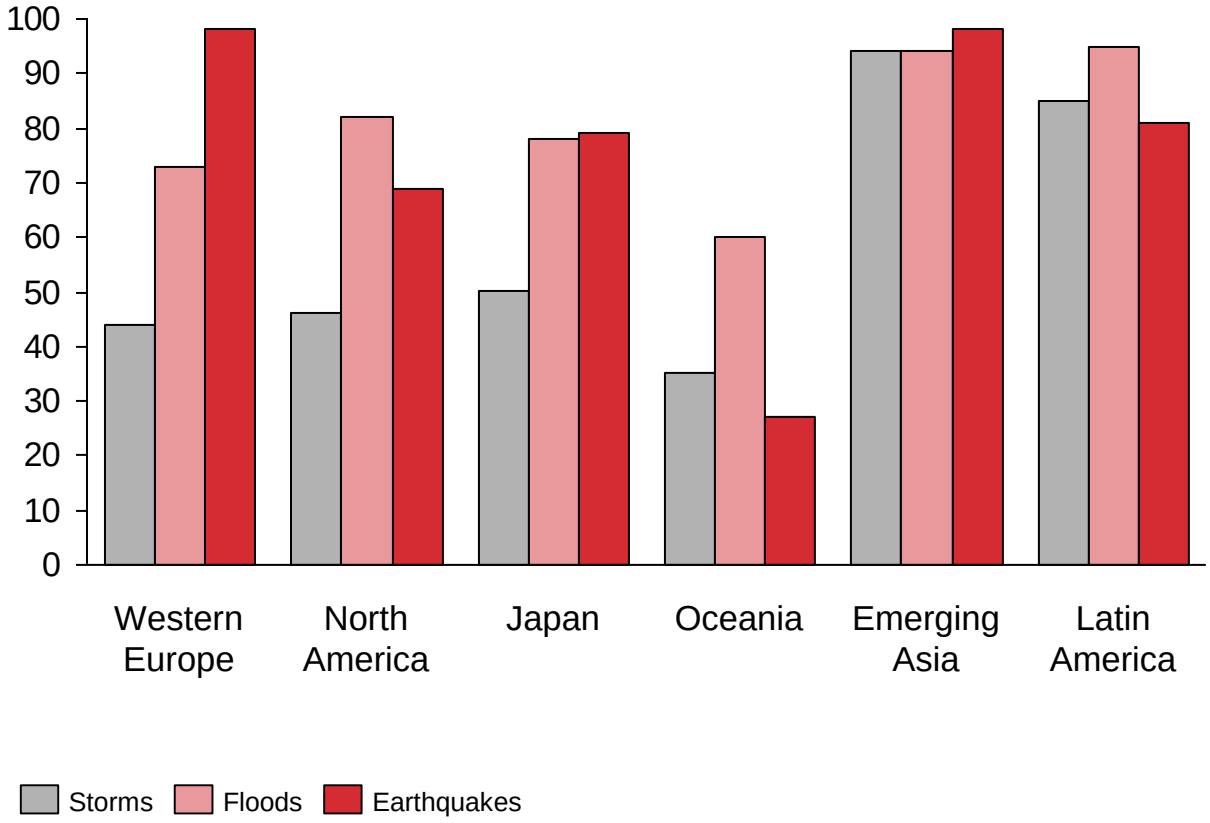
Cyber insurance is a major business opportunity – if obstacles to insurability can be overcome …

… such as a lack of

- Standardised and consistent format of exposure information
- Sufficiently granular exposure aggregates
- Accumulation scenarios per exposure scenario
- Clarity concerning ambiguous insurance covers

Another business opportunity: Addressing huge ‘bricks-and-mortar’ protection gaps with new technological approaches

Uninsured natural catastrophe losses in % of total losses, 1975-2014



Source: Swiss Re

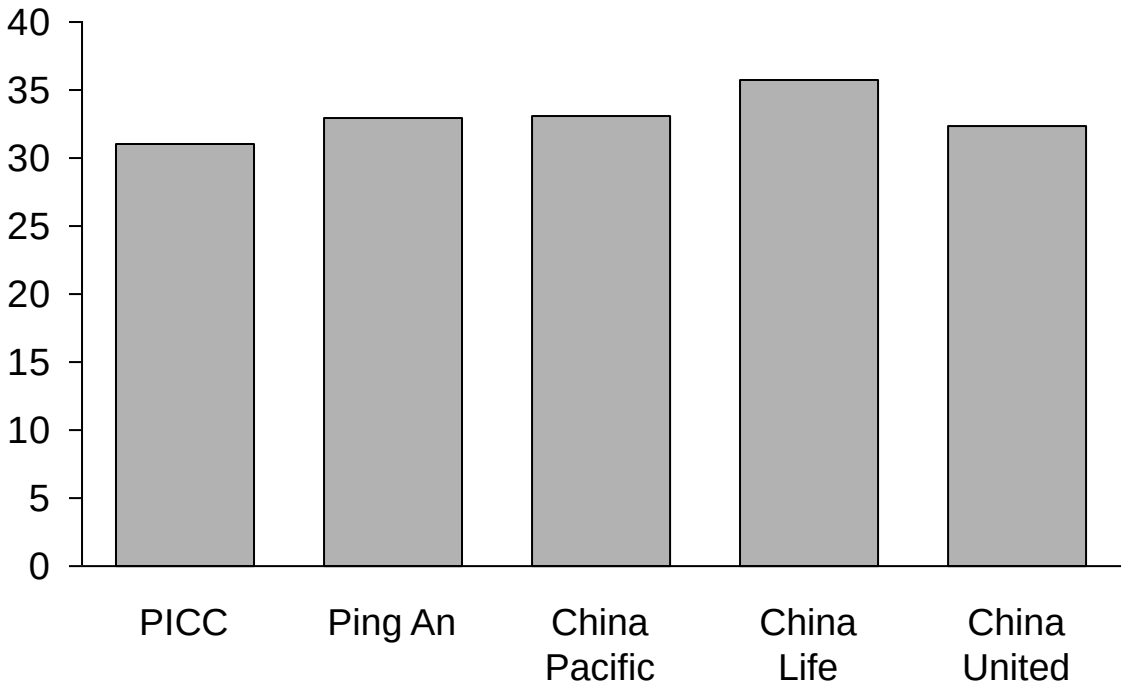
In some Asian markets **catastrophe insurance** is of marginal relevance, across all major perils

Why is insurance shunned even if affordability keeps improving?

Which role could play digitisation to close this protection gap?

Last but not least: One third of premiums absorbed by cost globally – Digitisation as an enabler to reduce these costs

Example: China's top 5 non-life insurers Acquisition and administrative expense ratio 2014, in %



One third of premium income is eaten away by **expenses for acquiring and administering** the business – similar picture globally

Reason: Huge level of **transaction cost** in the insurance industry

Digitisation will play a role to **significantly reduce these costs**

Source: Aon

Digitisation is reshaping the business model of the insurance industry

Digitisation influences broadly our **business and private life** (“Every business will be a “digital” business in the future”)

Digitisation **reshapes** the way insurers underwrite, distribute, administer and settle; the **whole value chain** is potentially impacted

Digitisation is about **client-centricity**

Technology is dramatically improving and **big data** will become smart data

New competitors will come up with disruptive models

Digitisation offers **opportunities**, e.g. in **Cyber**, to narrow **protection gaps** and to cut **transaction cost**

Coming to grips with these issues will ensure the industry’s **long-term relevance**

Source: The GA

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