![Guy Carpenter logo]

INSURTECH
Opportunities and Challenges
16 APRIL, 2019

John Thorpe

Karachi

MARSH & McLENNAN COMPANIES

Encyclopedia Britannica
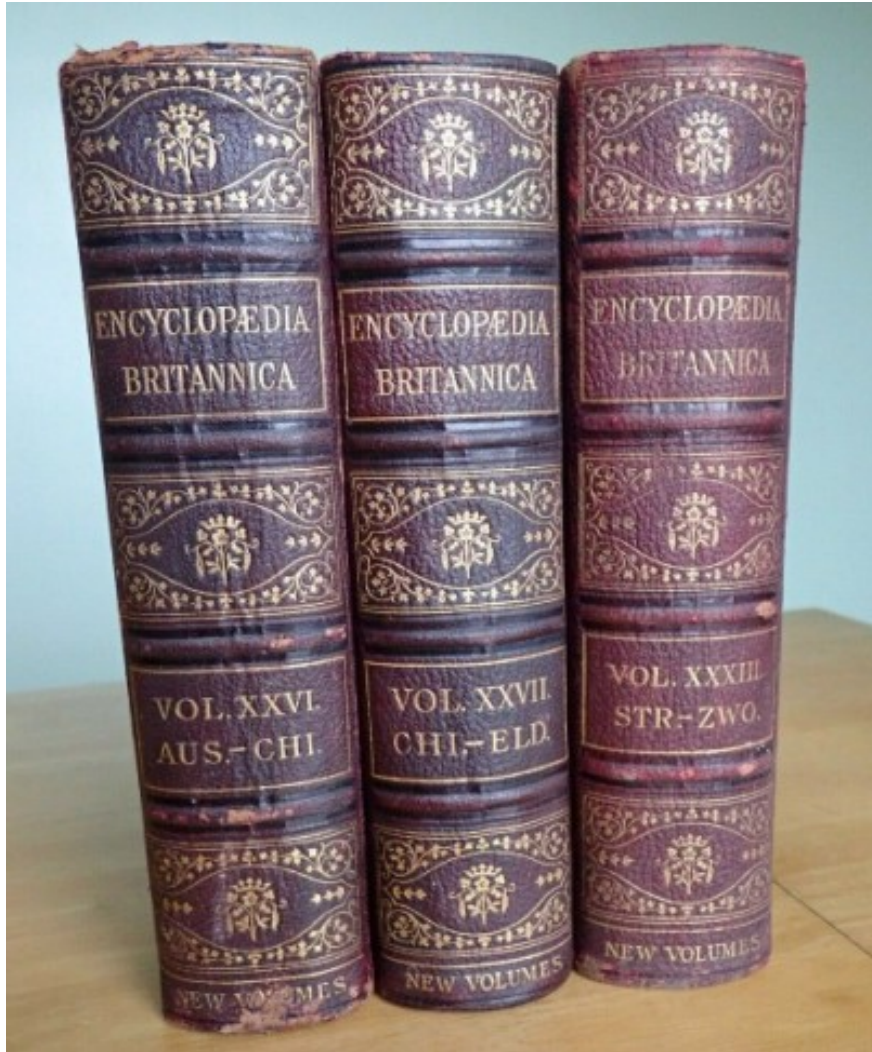
- First published 1768

- Ceased Publishing in 2010

- Updated 13 times in 250 years

WIKIPEDIA
The Free Encyclopedia

" Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge. That's what we're doing. **"**

Updated 21 times every minute

- Insure Tech or Insurance Tech are technologies and platforms that help optimise any of the principles for success or requirements of insurance

- Any company that provides insurance through the engagement of technology in a user centric way.

- Insurance is one of the oldest business and tends to favour deep pockets and long experience.

- The many pay for the losses of the few, people are lumped together to ensure overall profitability.

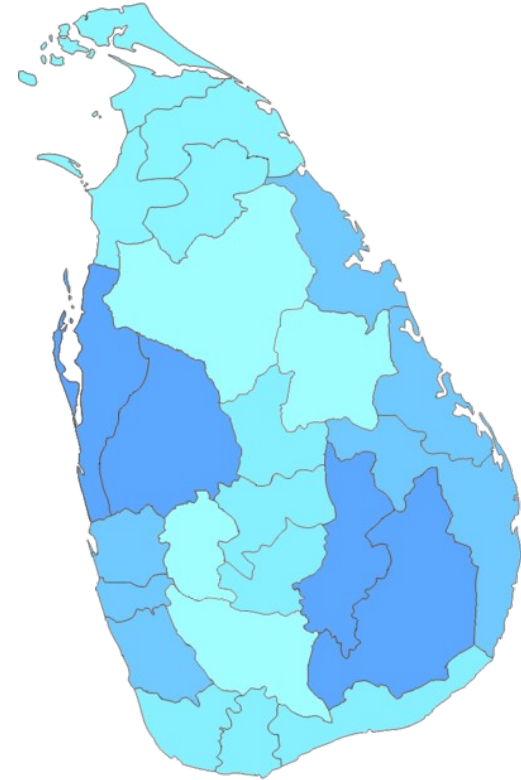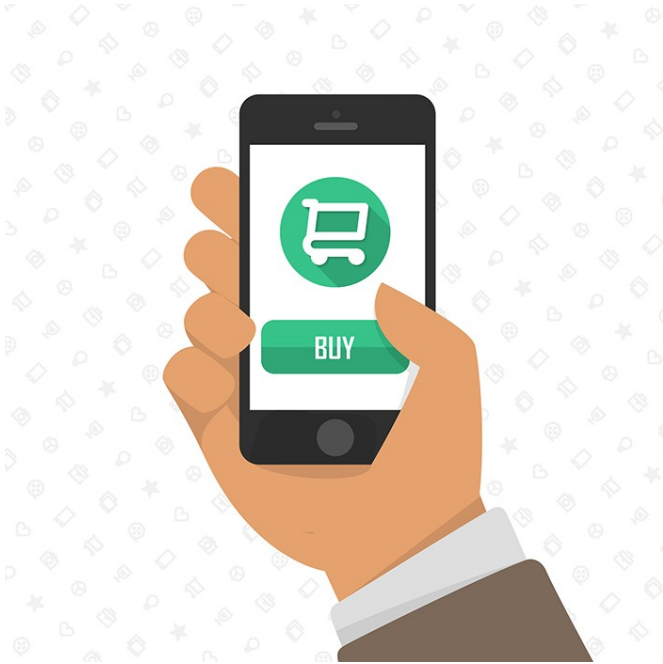- Some pay more than others based upon the basic data provided.

- 1985 Single product car insurance (63 employees)

- Policy sold over the phone and used computers

- Today they have 10 million customers (10,000 employees)
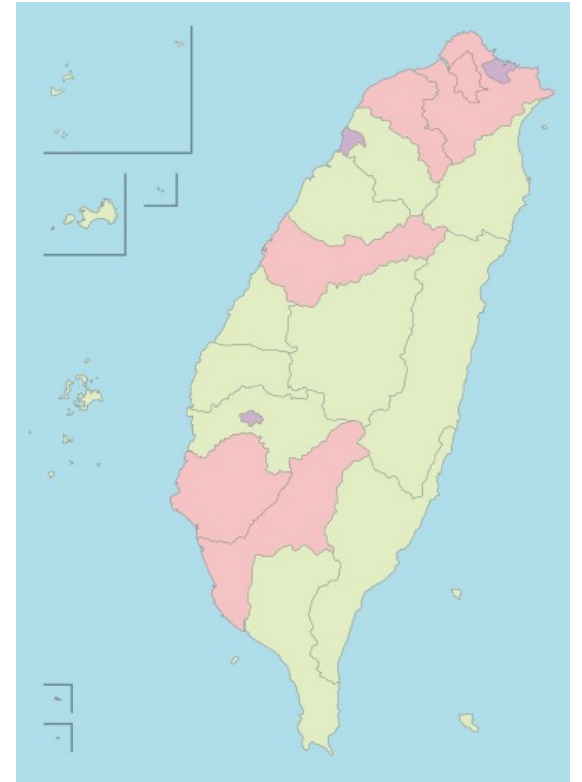
Background to Insurtech Insurers

- Young people are looking for modern alternatives to a 300 year old industry

- Only 36%of Millennials are positive about Insurance services compared to the average 52%

- 25% of people questioned said they would inflate an insurance claim as they didn't see their interest aligned .

- ☑ 86 years old
- ☑ Partially sighted
- ☑ Lives in London suburb
- ⊣ <u>Claim free for</u> 15 years.
- ⊣ Small 1.1 litre car
- ⊣ Drives 500 miles per year

Auto insurance

- uses a OMD II dongle

- pay per mile premium flat free + charge per mile

- target market? Drivers who drive 10,000 miles and a driving app.

- Miles only not style.

- Decode check engine lights

- Manage how much you drive and even find your car !

- 60 seconds to get a quote.

- Typical online application is 4 minutes.

- On average 25% cheaper.

- Covering modern appliances.

- Specialise in home offices equipment breakdown covered

- Loss of use – put up in hotel + storage

- Founded 2012 in San Francisco

- Created an Insurance App for individual electrical items and can be toggled on and off using micro duration policies

- Photo of the item and or receipt backed up to the cloud. (Laptops , phones and camera)

- 2016 – Partnered with AXA in the UK and Suncorp in Australia .

- Recent investor is Sompo Japan having now raised USD 85 m of capital.

- Global values insured USD 10 bn with 100 million items covered .

Lemonade

- Founder Dan Schreiber .NY.

- Home owners' + renters' insurance

- Insurance based upon behavioural economic and technology

- Company uses artificial intelligence and chat-bots.

- Does not employ insurance brokers

- Social good is aspect of business model

- Retains a flat-free of 25% customers premium

- Claims and reinsurance 75%

- Machine learning for claims

Customer Application

Pulls data and cross references information on home + neighbourhood

In 2016 – Customer filed claim for stolen coat on App Chatbot "A.I. Jim" reviews claim, cross check with policy, runs 18 fraud algorithms
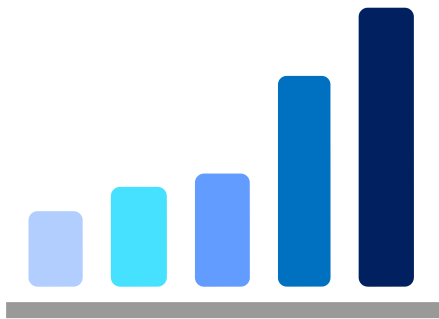
Paid claim in 3 seconds

GC Genesis

New suite of capabilities to put our clients on top of the wave of change
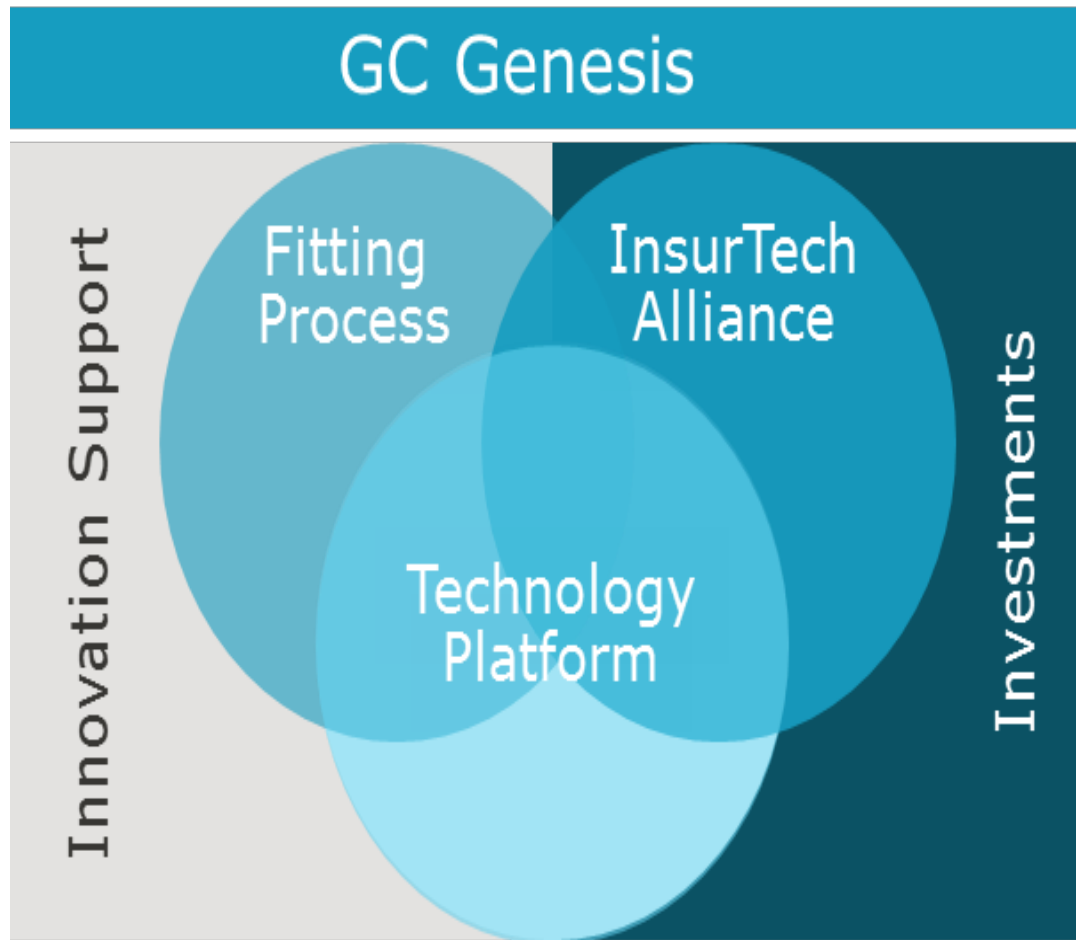
Pace of change is accelerating: data, analytics, technology (DAT)

> 2,000 InsurTechs

> 50 new InsurTechs each month

Proliferation of DAT capabilities & skill gaps

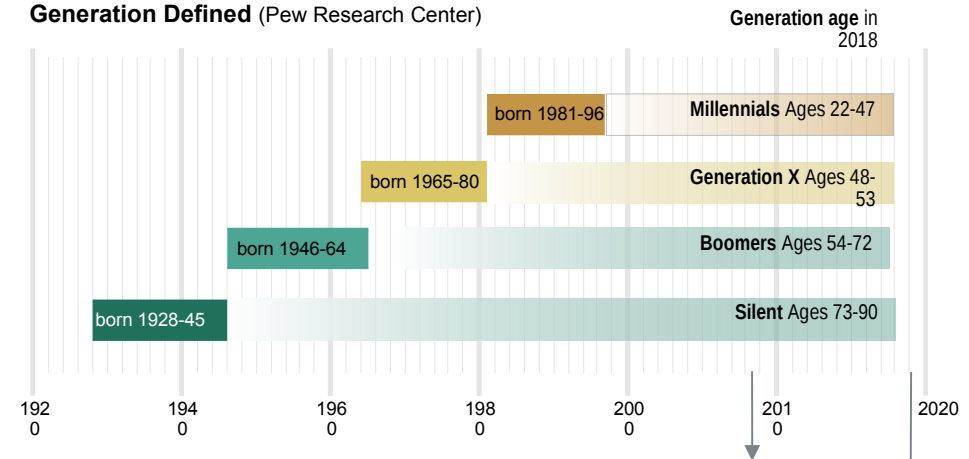# The Forces of change: data, analytics, and technology

A new generation of insurance buyers has yet to enter the work force, become home, auto & business owners, and influence the course of how business is transacted…

Client Interaction

e.g. HomePod Alexa

Generation Defined (Pew Research Center)

Generation age in 2018

born 1981-96	**Millennials** Ages 22-47
born 1965-80	**Generation X** Ages 48-53
born 1946-64	**Boomers** Ages 54-72
born 1928-45	**Silent** Ages 73-90

1920   1940   1960   1980   2000   2010   2020

June 2007

iPhone launch

2019 !

Digital natives or the iGeneration will triple their footprint in the workplace over the next 5 years.

iGeneration children who were 10 in 2007 are starting to enter the workforce now and will accelerate next year

Guy Carpenter Approach To InsurTech
GC is taking a comprehensive & deep approach to a broad and dynamic space

Mission

Create meaningful insights regarding InsurTech – through strategic partnerships – that enable carrier growth and profit objectives.

Advisory

1. **Fitting Process** – a focus on specific strategic goals, current capabilities and InsurTech most likely to accelerate strategic execution to form the broadest possible perspective.

2. **InsurTech Alliance** - the ability to take deep dives into specific capabilities and startups. Research & proofs-of-concept facilitated by technical experts. Leveraging a network of technical experts at the center of the change itself.

The Fitting Process

1000's of startups - form a broad perspective

The InsurTech Alliance

Research

Validate

Test

Deploy
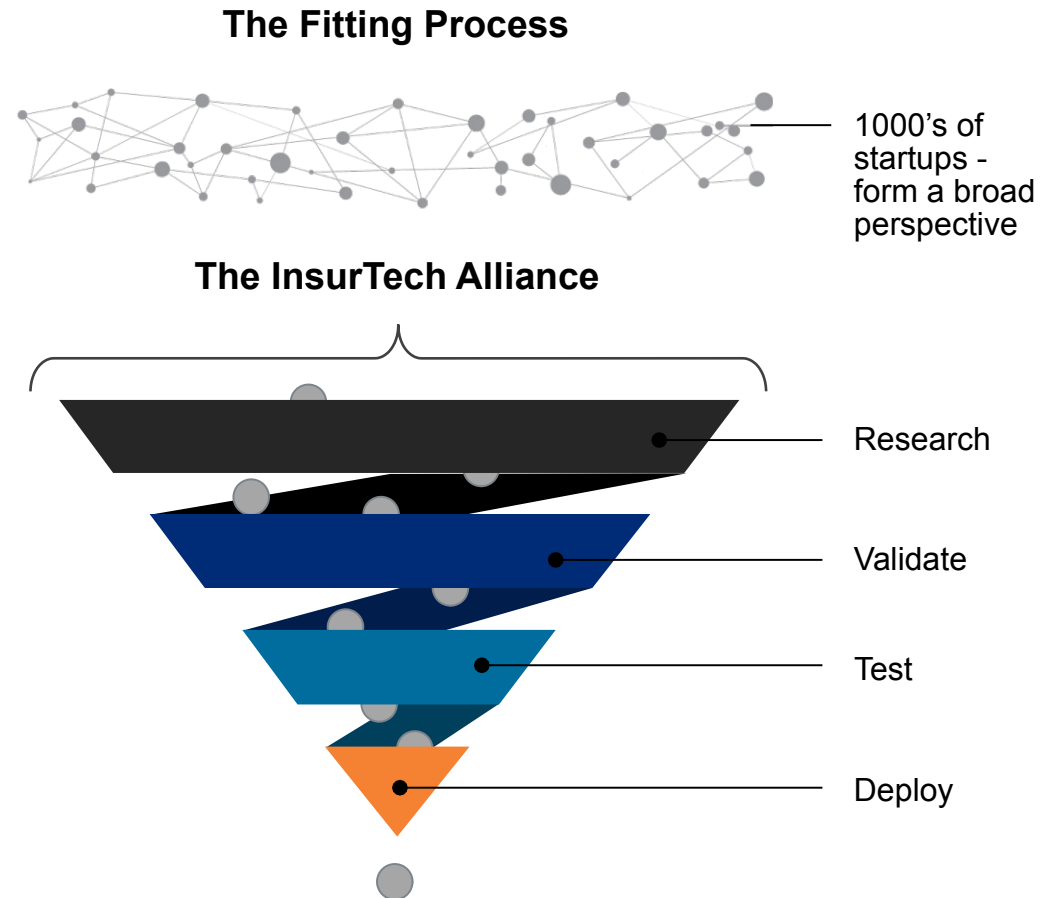
How do I find the right InsurTechs to benefit my company?
Build a broad perspective of InsurTech across the value chain with the Fitting Process
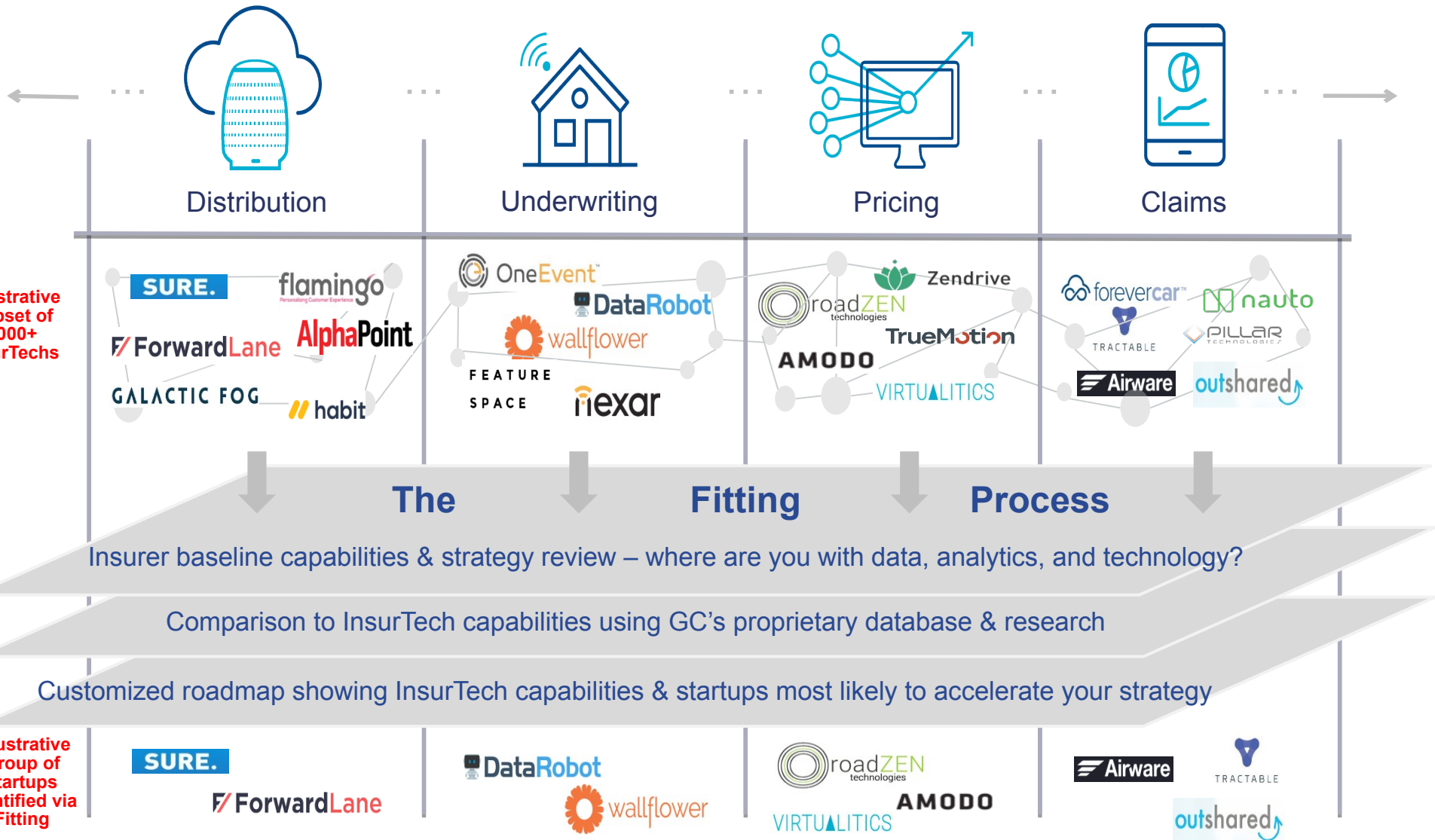
REINSURTECH

Simulated Earthquake Catalogue

Future earthquakes are **predicted** using the **statistical** analysis of **historical** and **instrumental** data.
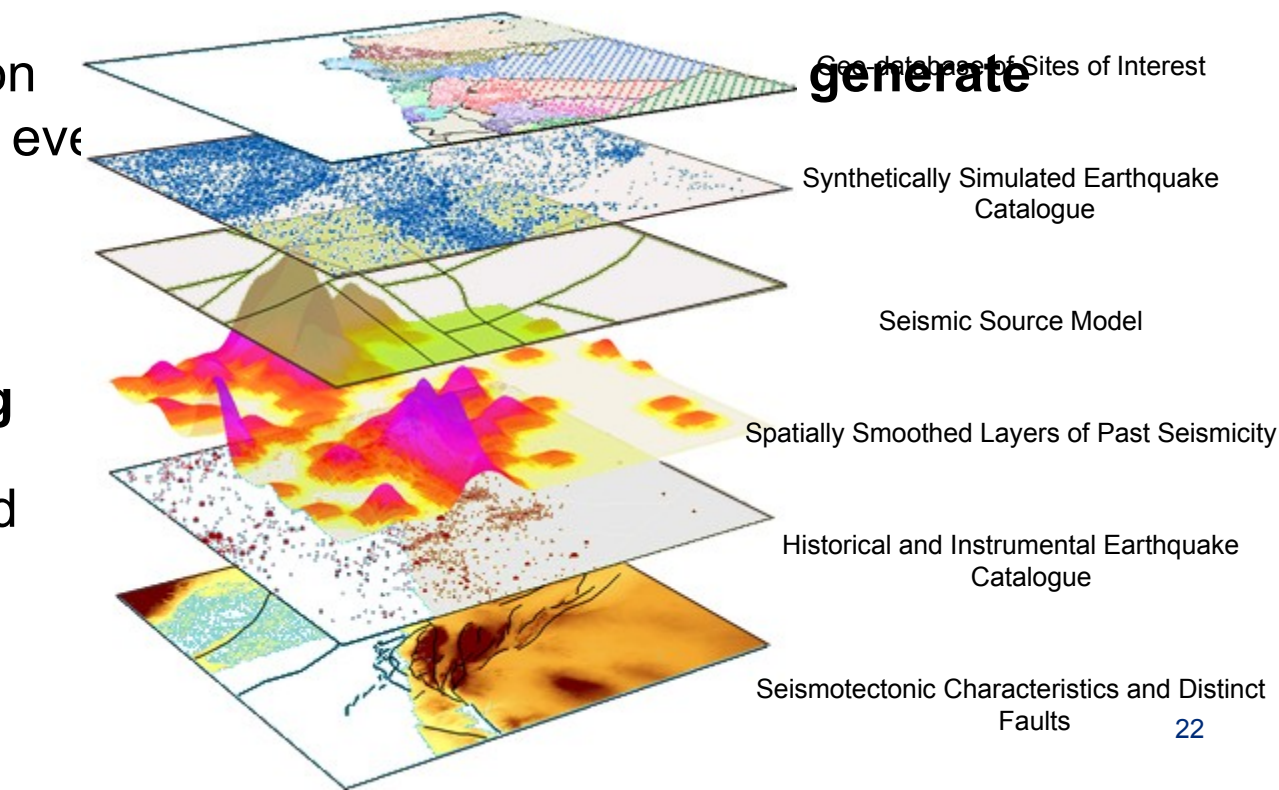
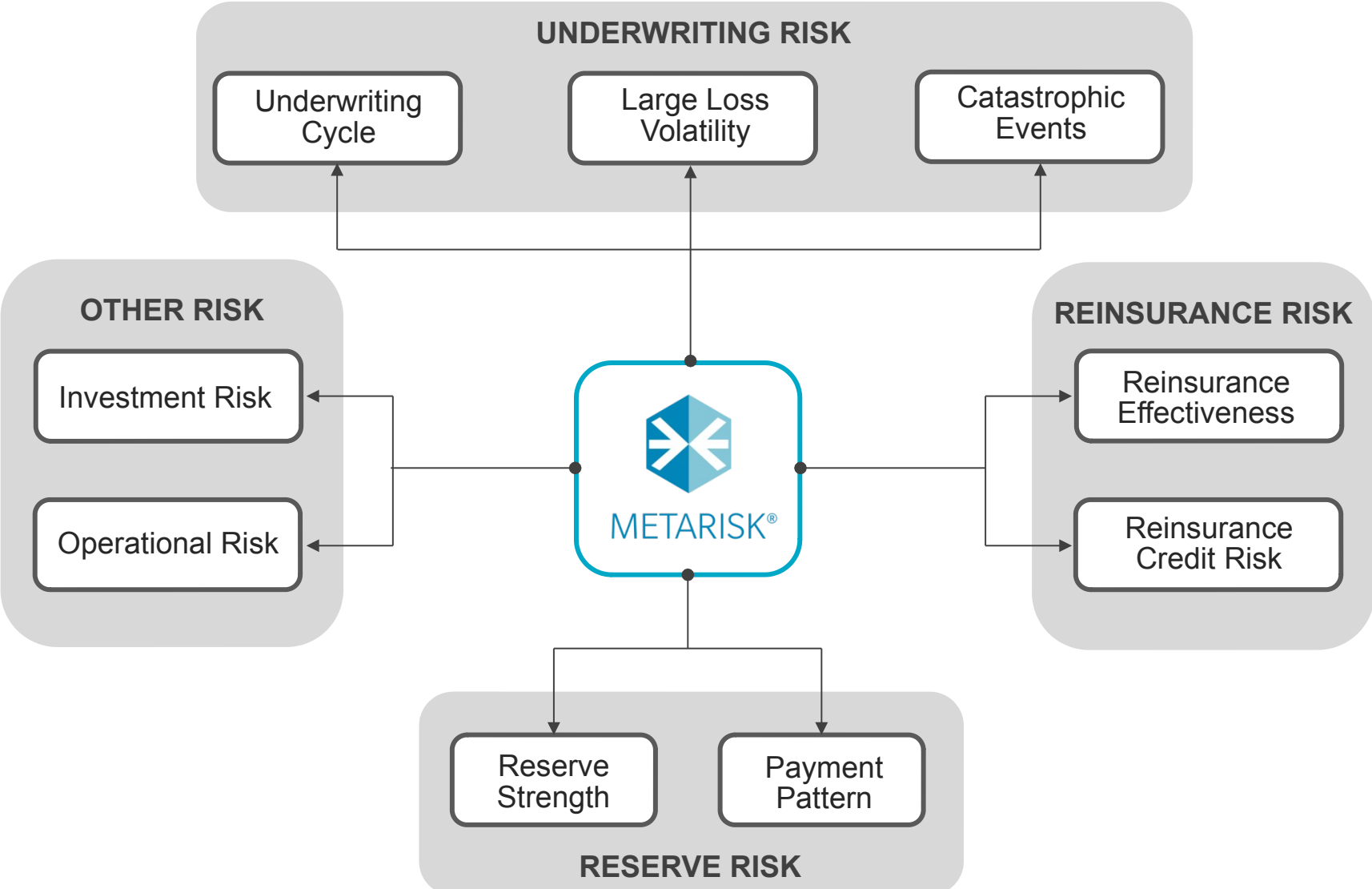Earthquake sources are modelled by area **source** zones.

A synthetic earthquake catalogue is generated by **Monte Carlo** simulation on the **probabilistic** function eve **generate** 50,000 year.

The **corresponding** event-to-year **mapping** is supplied with the model.

Geo-database of Sites of Interest

Synthetically Simulated Earthquake Catalogue

Seismic Source Model

Spatially Smoothed Layers of Past Seismicity

Historical and Instrumental Earthquake Catalogue

Seismotectonic Characteristics and Distinct Faults

MetaRisk is a Stochastic Economic Capital Model (ECM)

UNDERWRITING RISK

Underwriting Cycle

Large Loss Volatility

Catastrophic Events

OTHER RISK

Investment Risk

Operational Risk

REINSURANCE RISK

Reinsurance Effectiveness

Reinsurance Credit Risk

METARISK®

RESERVE RISK

Reserve Strength

Payment Pattern

GC 4D: DETERMINE Solutions

3

Corporate Objectives		Metrics assessed	Objective	Weights
Reduce cost of reinsurance	**Price**	Net Cost of Reinsurance	Min	10%
		Ceded Premium	Min	10%
Retain profitable business Minimize profit ceded to reinsurers	**Profitability**	Net Underwriting Profit Margin	Max	15%
		1-in-10 Year Net Underwriting Profit	Max	15%
		Probability of Net Underwriting Profit	Max	15%
Stable dividend payments to shareholders	**Volatility**	Variability of Net Underwriting Result (σ of U/W Result)	Min	10%
Reduce potential loss of capital	**Capital**	1-in-250 Net Underwriting Loss	Min	10%
		Return on capital employed	Max	15%

Amazon set to shake-up UK insurance

Internet-sales giant Amazon has started recruiting insurance professionals in London as it attempts to cause widespread disruption to markets throughout Europe.

Amazon to disrupt insurance markets ©iStock

That is according to new research from data and analytics company GlobalData, which says Amazon has targeted the British, German, French, Italian and Spanish markets.

It is thought that the delivery service provider wants to capitalise on its reputation for good customer service – something the insurance industry is often accused of being **one of the worst for**.
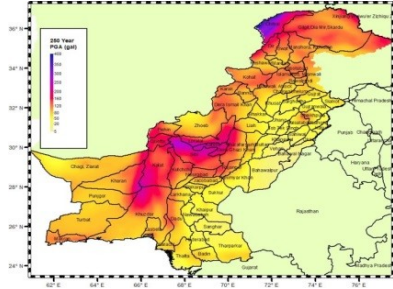
Pakistan Catastrophe Modelling Process

1. Client Data Received and reviewed

- Values by Location
- Coverage Splits
- Construction
- Occupancy

4. Results Explained to client

CRS Losses are around 25% lower than current favoured catastrophe model

3. Results Analysed by Cat Modeller

2. Data run through all available cat models

CatRisk SOLUTIONS

Mohammad Zolfaghari Cat Risk Solutions

Benefits of the Model

- 11k hazard cells compared with 40 in another EQ vendor Model
- Disaggregation of Aggregate TIV
- Brand new model using latest state of the art information

Nicola Castree- Vice President Catastrophe Modelling

Return Period	AEP	OEP
500	25 m	24 m
250	**17m**	**16 m**
200	14 m	13m
100	8m	7 m
50	3 m	2m
25	1 0m	1m
AAL	**400m**	
Modelled TIV	2,500,000m	

GUY CARPENTER