



# **INSURTECH: A GUIDE FOR THE ACTUARIAL COMMUNITY**

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## INTRODUCTIONS AND BACKGROUND



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Underwriting Analytics  
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Chubb



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## InsurTech: A Guide for the Actuarial Community

### Authors

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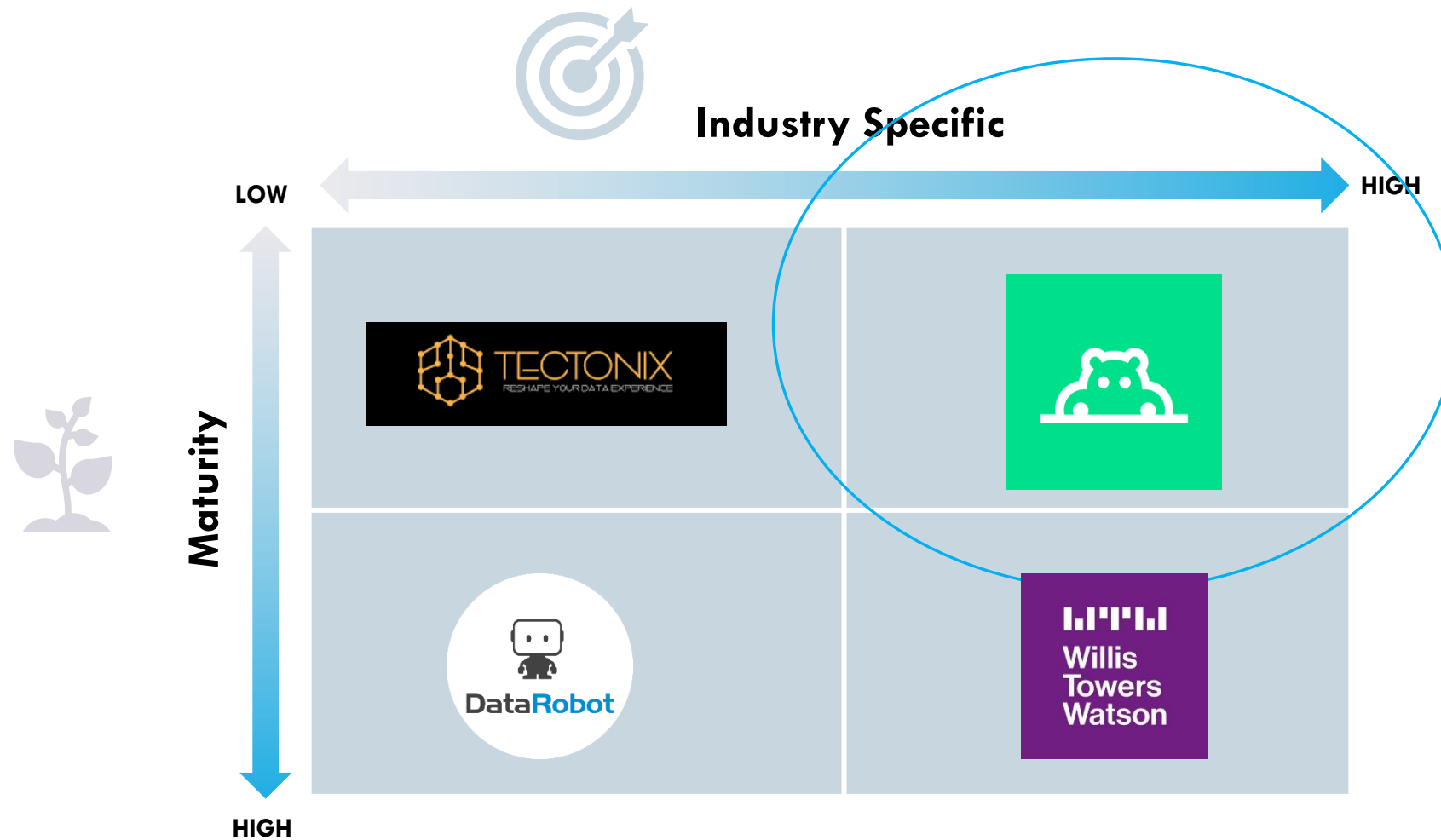
- Introductions and background
- The rise of InsurTech
- Opportunities within InsurTech
- The actuary's role in InsurTech
- Actuarial opportunities and challenges in InsurTech

## What is InsurTech?



There are many debates and confusions about the definition...

# THE RISE OF INSURTECH



# THE RISE OF INSURTECH

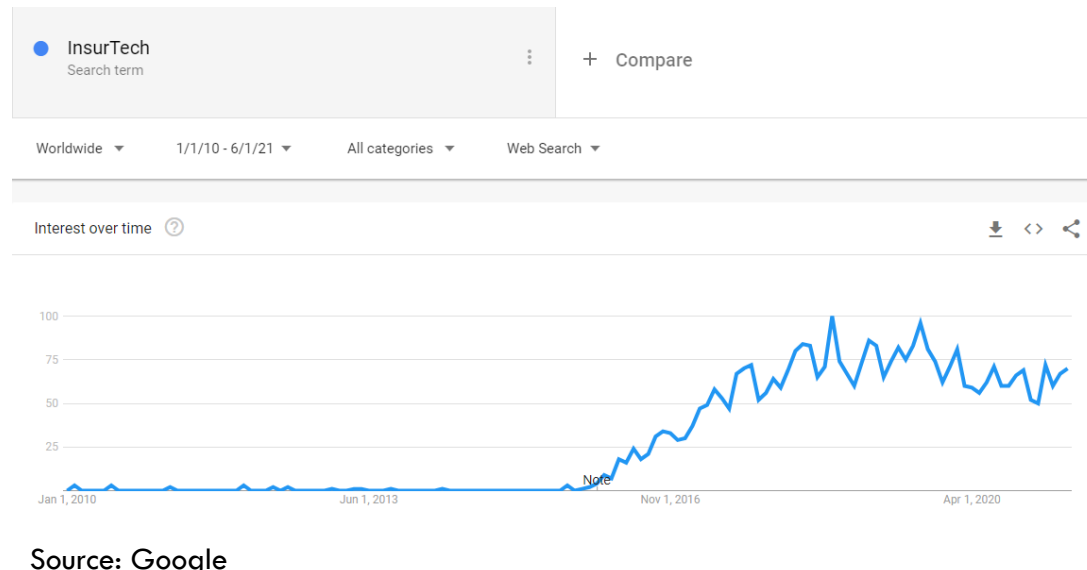


Web 1.0  
(1991-2004)

Insurance Data  
Analytics

Emergence of InsurTech (2010s)

**PROGRESSIVE**  
**esurance**

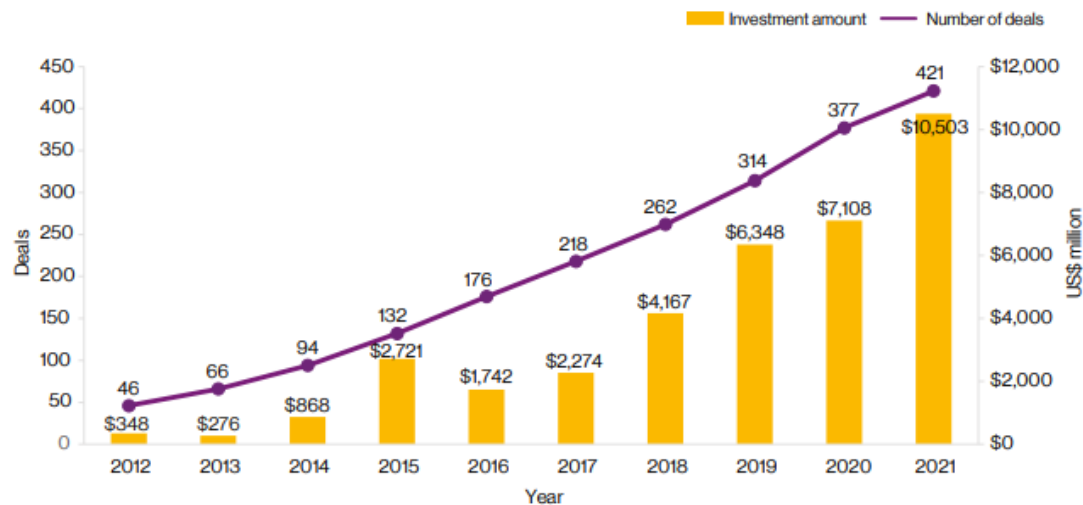


# THE RISE OF INSURTECH

What's causing the rapid growth in InsurTech?

Annual InsurTech startup funding volumes grew substantially since **2015**

## Annual InsurTech funding totals, 2012 – Q3 2021



Source: WTW Quarterly InsurTech Briefing Q3 2021

Major InsurTech incubators and accelerators are all created after **2014**

Name	Founded
Global Insurance Accelerator	2014
Silicon Valley Insurance Accelerator	2016
Plug and Play (added InsurTech track)	2016
FinTech Innovation Lab (added InsurTech track)	2017
Hartford InsurTech Hub	2018
OnRamp Insurance Accelerator	2018



# THE RISE OF INSURTECH

## What's causing the rapid growth in InsurTech?

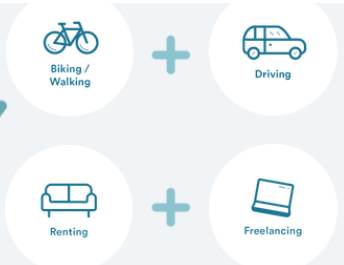
- Customer experience
- Customer-centric product
- Interconnected services

### Surround Insurance

Surround's starter pack covers every part of your life

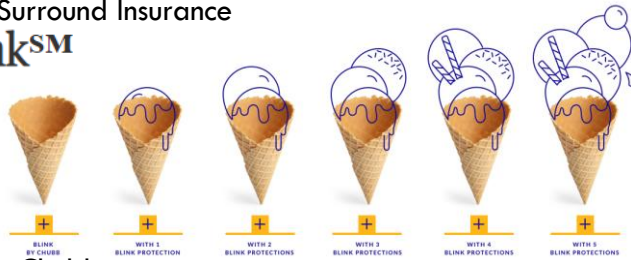
Download the full coverages packet to find out more

Download

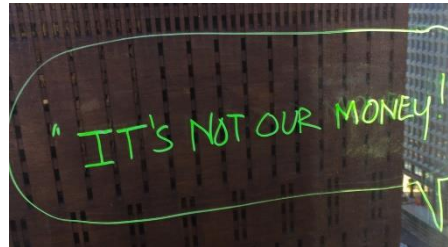


Source: Surround Insurance

### Blink<sup>SM</sup>



Source: Chubb

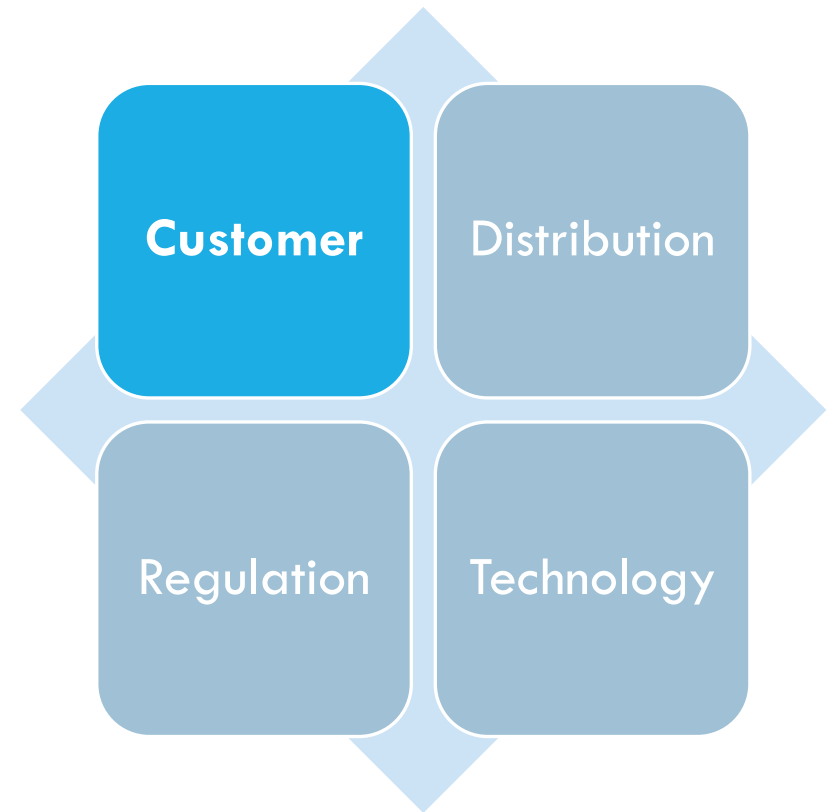


Source: Lemonade

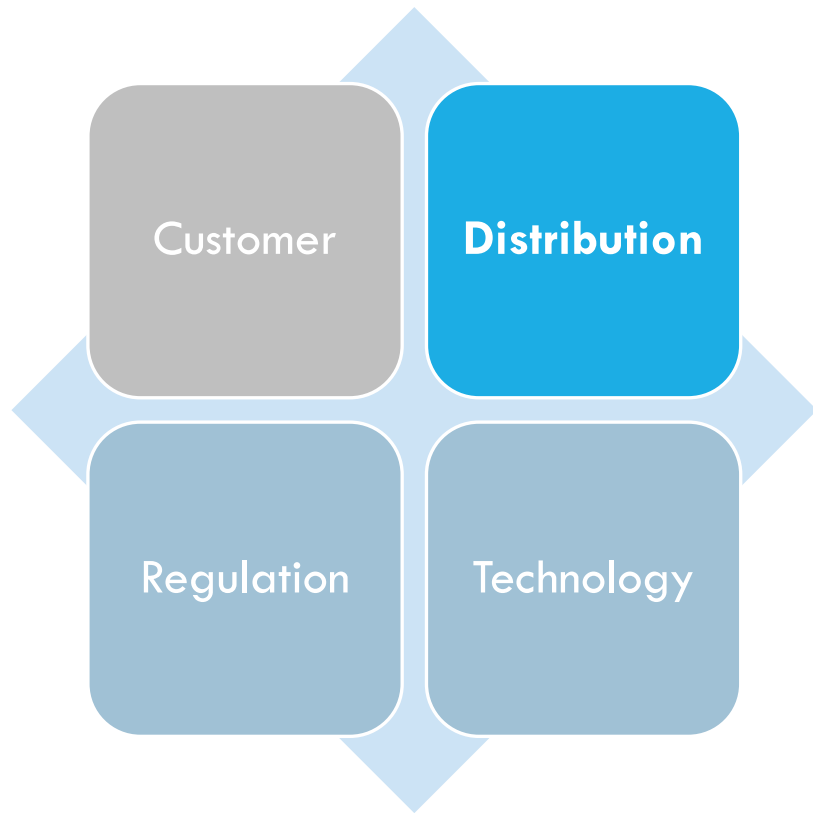
### Hippo Home Care can help care for your home

You can get free, professional guidance anytime you have a question or concern about your home. Simply call or email Hippo Home Care and a Home Pro will provide immediate recommendations, quick fixes and more.\*

Source: Hippo



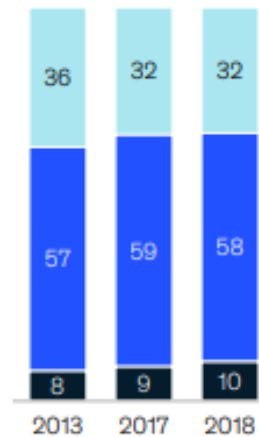
What's causing the rapid growth in InsurTech?



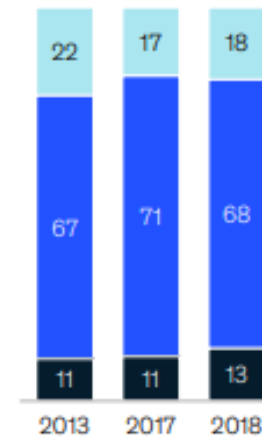
- Direct-to-consumer
- Digitalization

Premiums, %<sup>1</sup>

United States



Canada



■ Tied agents and branches ■ Brokers ■ Bancassurance ■ Direct and other

Source: McKinsey



**Bring AI-Powered Responsible Insurance Distribution to North America**

Source: PR Newswire

# THE RISE OF INSURTECH

What's causing the rapid growth in InsurTech?

- Anti-rebate law discussion
- New product filings related to InsurTech

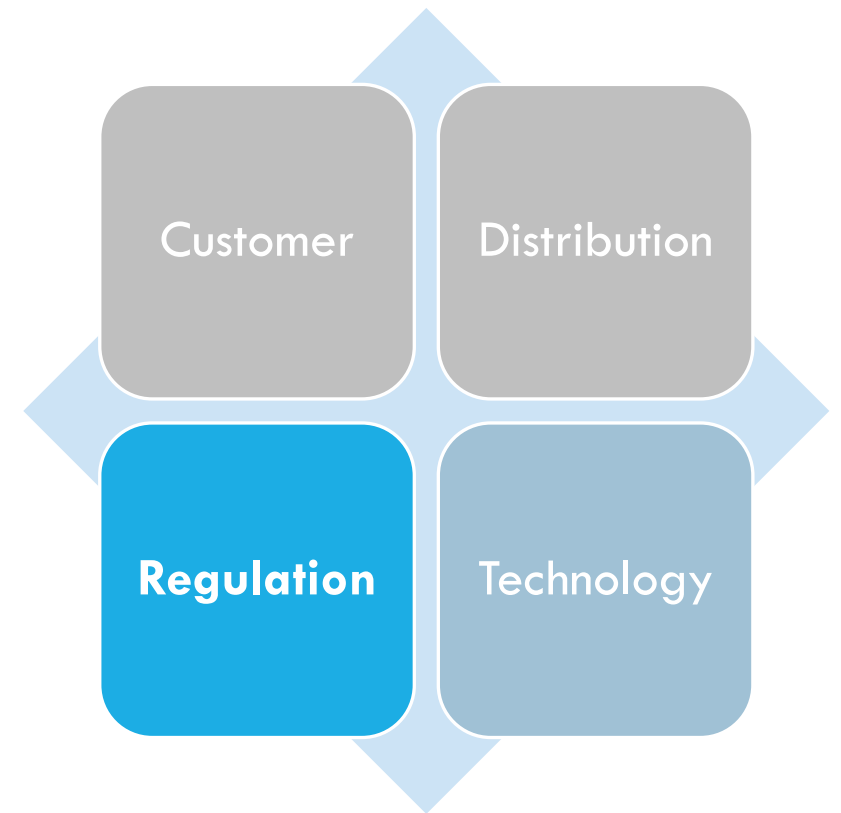


Source: Plug and Play

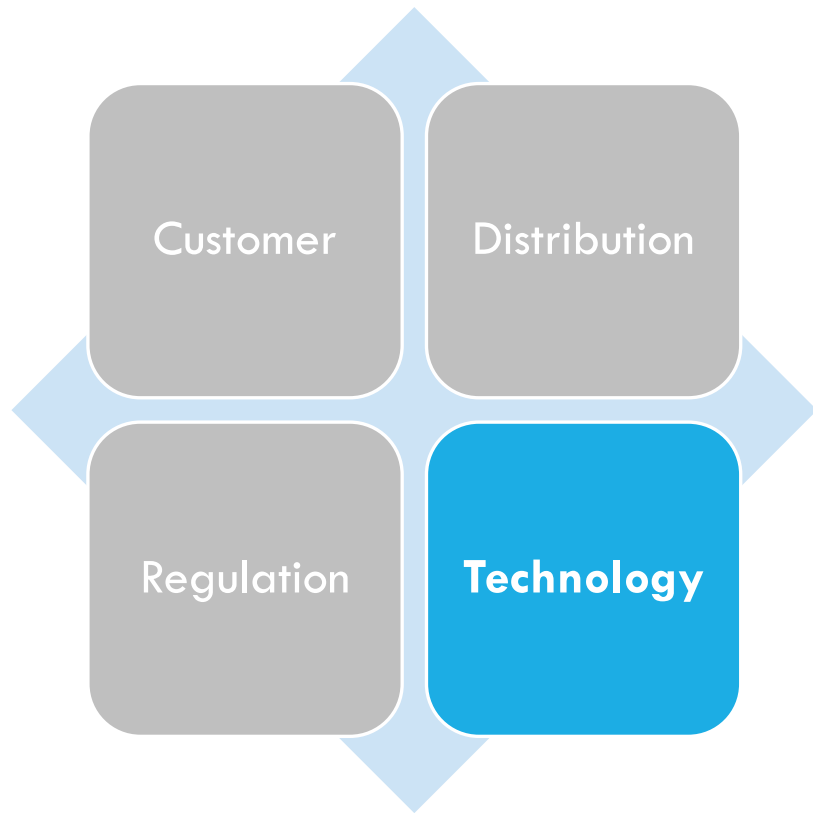


**Innovation and Technology  
(EX) Task Force**

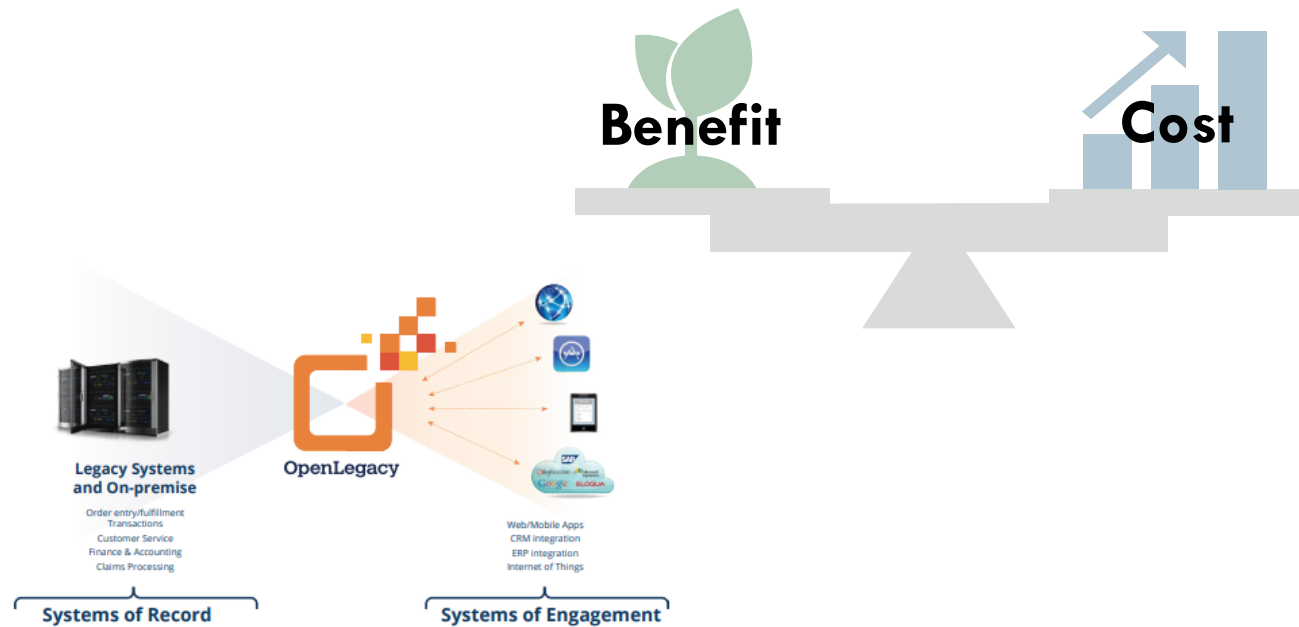
Source: NAIC



What's causing the rapid growth in InsurTech?



- Legacy system
- Technology advancement



Source: OpenLegacy

## OPPORTUNITIES WITHIN INSURTECH

InsurTech can play a role in several areas along insurance value chain

19  
%

**Pricing and  
Underwriting**

45  
%

**Quote, Bind,  
Issue**

28  
%

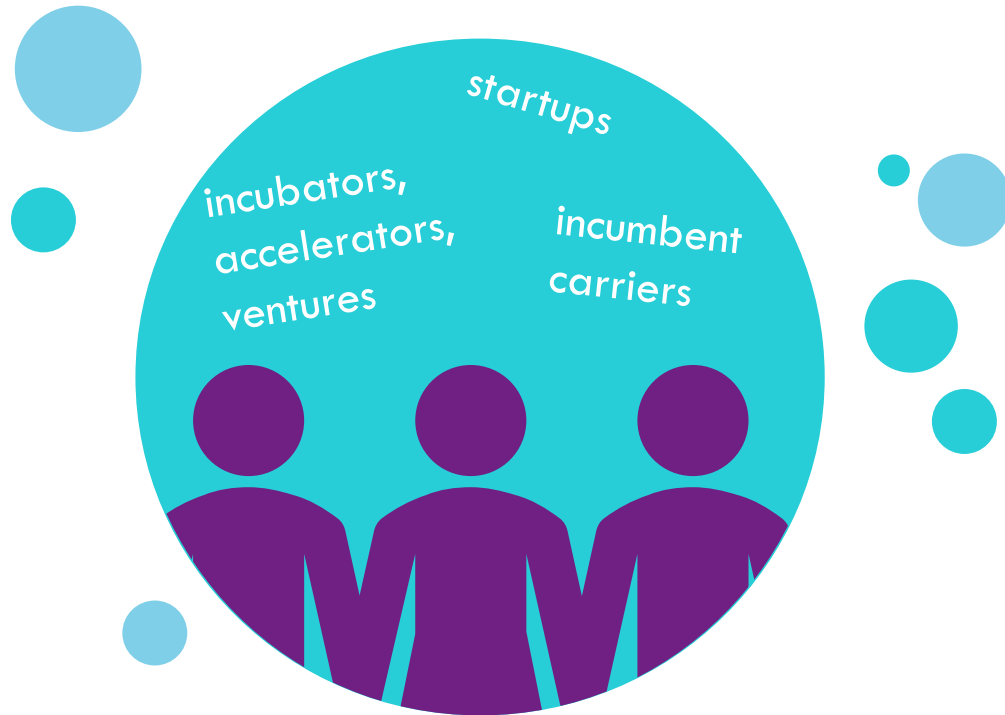
**Policy  
Administration  
and Central  
System**

8%

**Claims and  
Settlement**

# OPPORTUNITIES WITHIN INSURTECH

There are many players in the InsurTech space



ARTURO

MAP BATCH IMPORT

123 Main Street

Roof Confidence: [ ]  
Area [ ]  
Luminance [ ]  
Kind [ ]  
Roof extension [ ]  
Material Confidence: [ ]  
Subclassification [ ]  
Contains mixed materials [ ]  
Material types [ ]  
Tile [ ]  
Coverage 100%  
Area 357.15 m<sup>2</sup>  
Shape gable  
Confidence: 56%  
Hip 46%  
Gable 54%  
Flat 0%  
Beta: condition [ ]  
Complexity complex

ARTURO

Silicon Valley is not the only place...

While we generally hear about successful stories...



Between 2017-2019, approximately  
**184** funded InsurTech companies **closed**.

What does it mean with the inherent risk from entrepreneurship to actuaries?  
How should we position ourselves during this rapidly changing time?

- Introductions and background
- The rise of InsurTech
- Opportunities within InsurTech
- The actuary's role in InsurTech
- Actuarial opportunities and challenges in InsurTech



Developed questionnaire on  
actuaries in InsurTech



Interviewed 11 practitioners

Reported key findings and  
themes



# WHAT IS AN ACTUARY'S ROLE IN INSURTECH?

MCF productions

## Actuaries



What my friends think I do



What my mom thinks I do



What society thinks I do



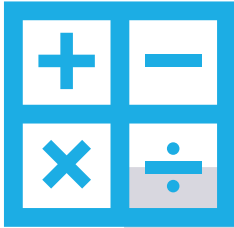
What other actuaries think I do



What I think I do

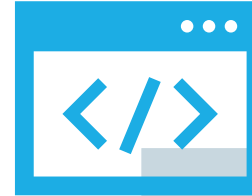


What I actually do



### Actuaries

- The bridge between InsurTech and the insurance industry
- Subject matter expertise
- Broad business expertise applicable to many roles
- Understanding and quantifying risks



### Non-Actuaries

- The potential to be the bridge between the InsurTech and the insurance industry
- Subject matter expertise
- Expertise limited to specific roles (e.g. reserving)
- Understanding and quantifying risks, when there is data

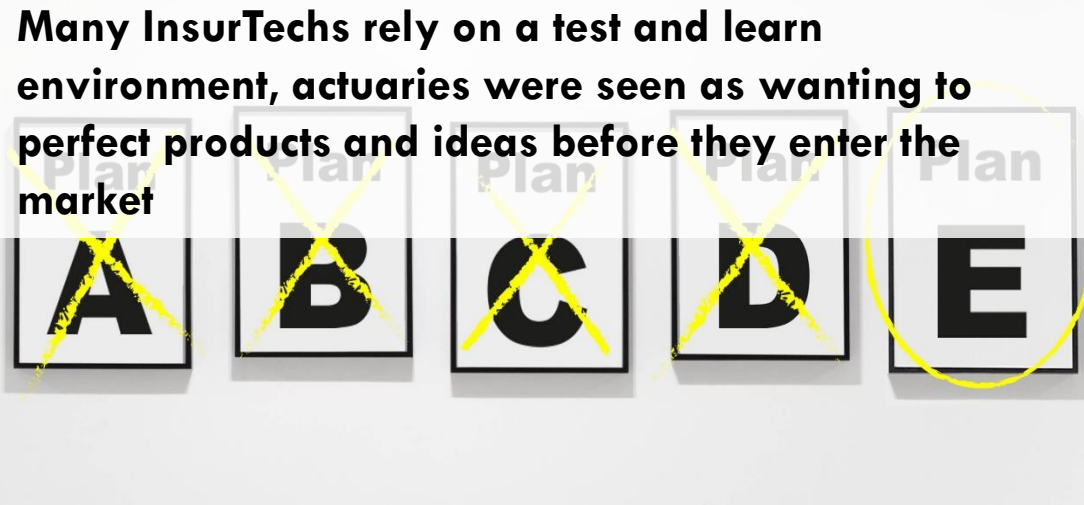
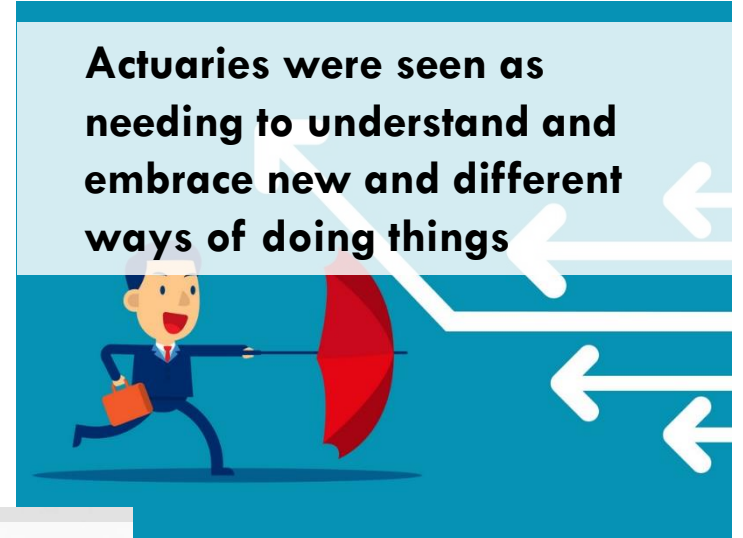
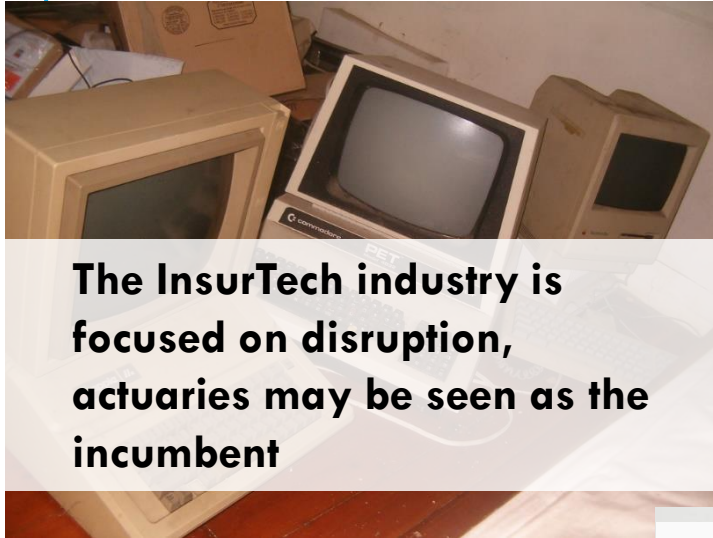
Strengths

- Guide/perform technical work with a broader perspective
- Can add value to decisions across the company
- Reputation as subject matter experts
- Professionalism and ethics

- Communication
- Exploring and quantifying new risks where limited or no data exists
- General resistances to new ideas or concepts

Challenges

## THE CULTURE CLASH



## ACTUARIES VS. DATA SCIENTIST



**Actuary**



**Data Scientist**

- The actuarial value is helping interpret results and turn data into business solutions
- Non-actuaries saw actuaries as a limited technical resource, not expected to be data scientist but competing for technical focused roles
- Actuaries believe that we need to understand, not compete with data scientist, and bring companies a broader perspective on their work.

**These lines may be more blurred in the P&C world**

InsurTech does not just include start-ups, many incumbent carriers have their own innovation labs



### Pro

- No venture capital funding
- Immediate first customer
- Product and industry experience and insights
- More time and funding to explore ideas



### Con

- Slower product ideation and testing compared to true startups
- Limited broader market interaction
- Conservatism of incumbent insurance company
- Limited diversity of thought



- Market actuarial skill set and value within the InsurTech space
- Become partners in finding InsurTech solutions
- Find ways to be comfortable with assessing risks with limited or no data
- Understand the technical aspects of data science and IT enough to interpret applications of InsurTech offerings
- Reach outside of the actuarial space to train actuaries
- Train actuaries on new technology and methods, not just the older or now established methods

**It is up to actuaries to leverage their strengths while being adaptable to create opportunities in the InsurTech world.**



QUESTIONS?

