

# Evolution of Reinsurance Pricing in a Disrupted Environment

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# Our Agenda

- Overview
- Bob
- What Risk
- From Whom
- How

# Evolution and the Actuarial Model

- Aka Non-Stationarity
- New and evolving risk sources, methods of assessing and pricing and transferring
- Innovators and disruptors asking the actuaries for their opinions
- If the economy has evolved new forms of activity in the last three years, how can we say “I need ten+ years of loss history”
- We either need to adapt or risk irrelevance
- Because the business decisions and investments are being made as we speak, with or without us

# Three Waves of Insurtech (*Explorations* May 2018)

- Digital Modernization
  - CX, UX, Insurability, Efficiency, VOC
  - Seamlessness
- Automation and Augmentation
- Loss Elimination
  - We will discuss both today

<https://ar.casact.org/actuarial-threat-assessment-of-insurtech-and-digital-disruption/>

# Trucking XOL

## Yesterday = Submission

- Loss run
- Driver listing with MVR's
- Power units
- Miles driven
- # Containers
- Qualitative info like safety programs

## Today = Fleet Flow

- Telematics on Power units, drivers, routes driven
- Telematics on containers
- Telematics on drivers
- Supporting evidence for safety programs, including intervention and preventive technologies

## Workers Comp XOL



- Claims analytics e.g., Clara Analytics
  - AI-driven claim analytics
  - Expedite simple claims, monitor complex claims, prevent claim escalations
  - Reduced attorney involvement
  - Dashboard analytics, cloud deployed, secure
- Is that Berquist-Sherman?

# Workers Comp XOL

- Connected Workplace
  - Location including geo-fencing
  - Conditions
  - Impairment
  - Live video support
  - Complete motion and physics
- Full analytics dashboard
- Predictive AI for preventive measures

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# Connected Worker Solutions

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**Marine**

- DISCOVER
- PRODUCT FINDER
- SHIP DESIGN
- LNG
- SHIP INTELLIGENCE**
- SERVICES
- ABOUT MARINE
- CONTACTS AND SERVICE LOCATIONS
- CUSTOMER PRODUCT
- TRAINING
- NEWS

OVERVIEW

DISCOVER

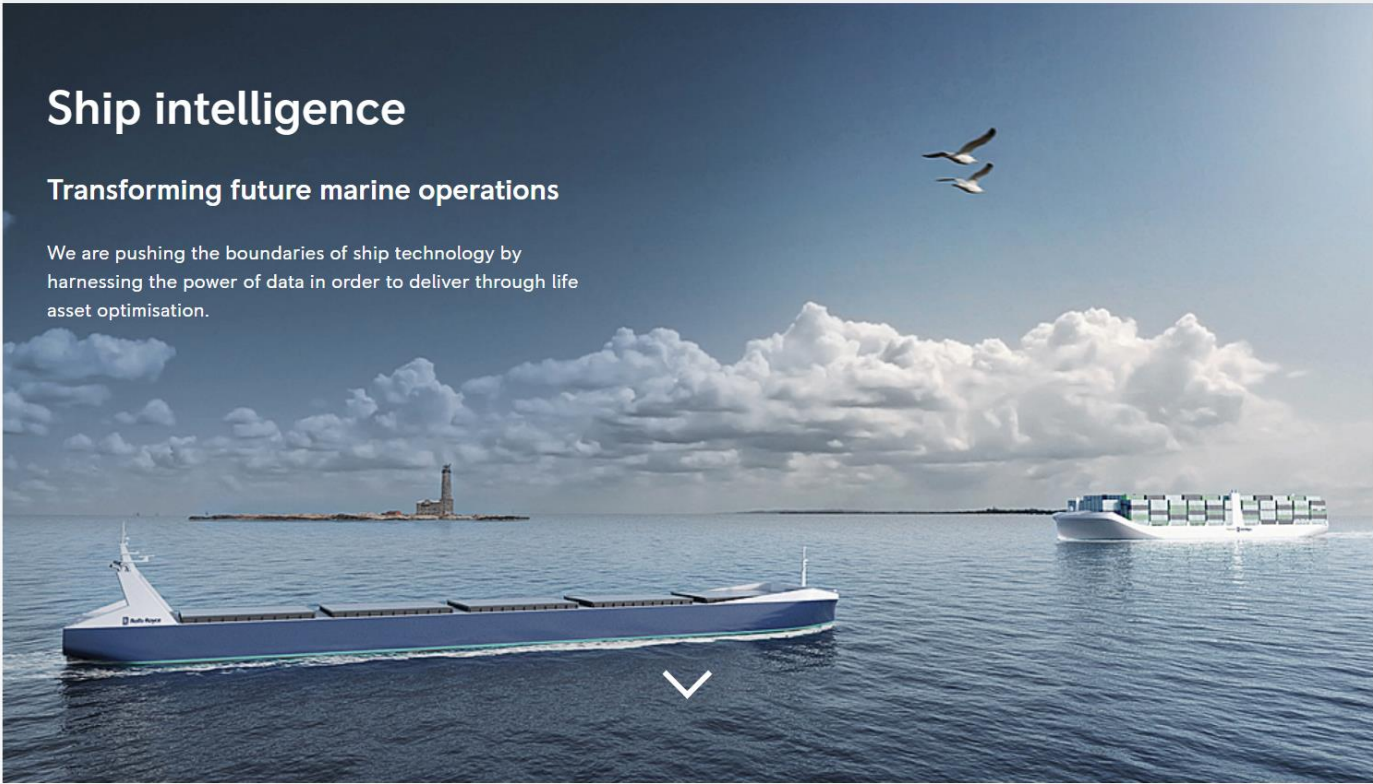
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TALK TO AN EXPERT

# Ship intelligence

## Transforming future marine operations

We are pushing the boundaries of ship technology by harnessing the power of data in order to deliver through life asset optimisation.



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# What Risk?

# Parametric, Indices and Residual Risks



- Reinsurance is a bespoke suit
  - What's wrong with made to measure?
  - 80% of the quality for 25% of the price
- Parametric or Index Covers
  - We have had ILW's for decades
  - No settlement issues
  - Transparency
  - Tech-deployed, sold, managed, settled and paid
- Residual (Basis) Risk can be handled via traditional reinsurance

# Parametric: Examples

Products built by the Ethereum community



[View all products](#)



## Flight Delay Insurance

First decentralized insurance. Payouts are automatic and almost instant. Now fully licensed.

Licensed

[Join the community](#)



## Crypto Wallet Insurance

Protection against risk of theft and attacks of hackers on wallet smart contracts. Target coverage - up to \$1M.

Designed

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## Collateral Protection for Crypto-backed Loans

Policy pays up to 100% of the issued loan amount if value of collateral provided by the borrower (i.e. ETH, or tokenized car) drops by 90% or more.

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## Hurricane Protection

Designed for low-income individuals and small business owners. Instant payouts are triggered by wind speed registered by weather-stations within 30 mile radius from insured's permanent location.

Designed



## Crop Insurance

Select your crop and the location of your field. Automated payouts are triggered by drought or flood events reported by government agencies.

Prototyped



## Social Insurance

Affordable, accessible protection against risk of death or heavy illness of a community member. Immediate emergency payment which helps to get through critical times.

Prototyped

# Parametric: Examples

## Reinsurance News

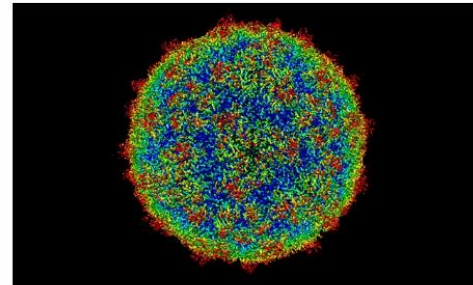
### Metabiota unveils Pathogen Sentiment Index & agreement with Munich Re, Marsh

⚡ 20th April 2018 - Author: [Luke Gallin](#)

Epidemic risk modeller Metabiota has announced details of its Pathogen Sentiment Index, a tool that enables the estimation of public fear and behavioural change as a result of infectious disease outbreaks, and which is to be used to develop epidemic insurance solutions through an exclusive agreement with reinsurer Munich Re and broker Marsh.

In August last year, Metabiota announced the launch of its commercial risk modelling platform and preparedness index for epidemic risks, as well as the signing of a strategic agreement with reinsurance giant Munich Re.

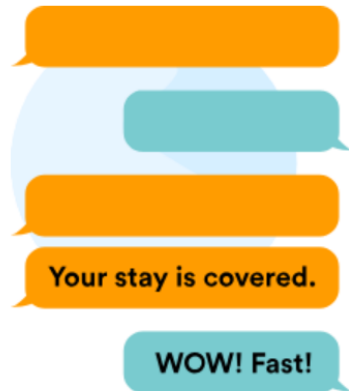
Now, the epidemic risk modeller has revealed details of its Pathogen Sentiment Index, which will be used as the basis for innovative epidemic insurance solutions to be developed and brought to the marketplace by Munich Re and insurance and reinsurance broker, Marsh, under an exclusive agreement with the pair.



# On-Demand and Gig

*Slice*

Support



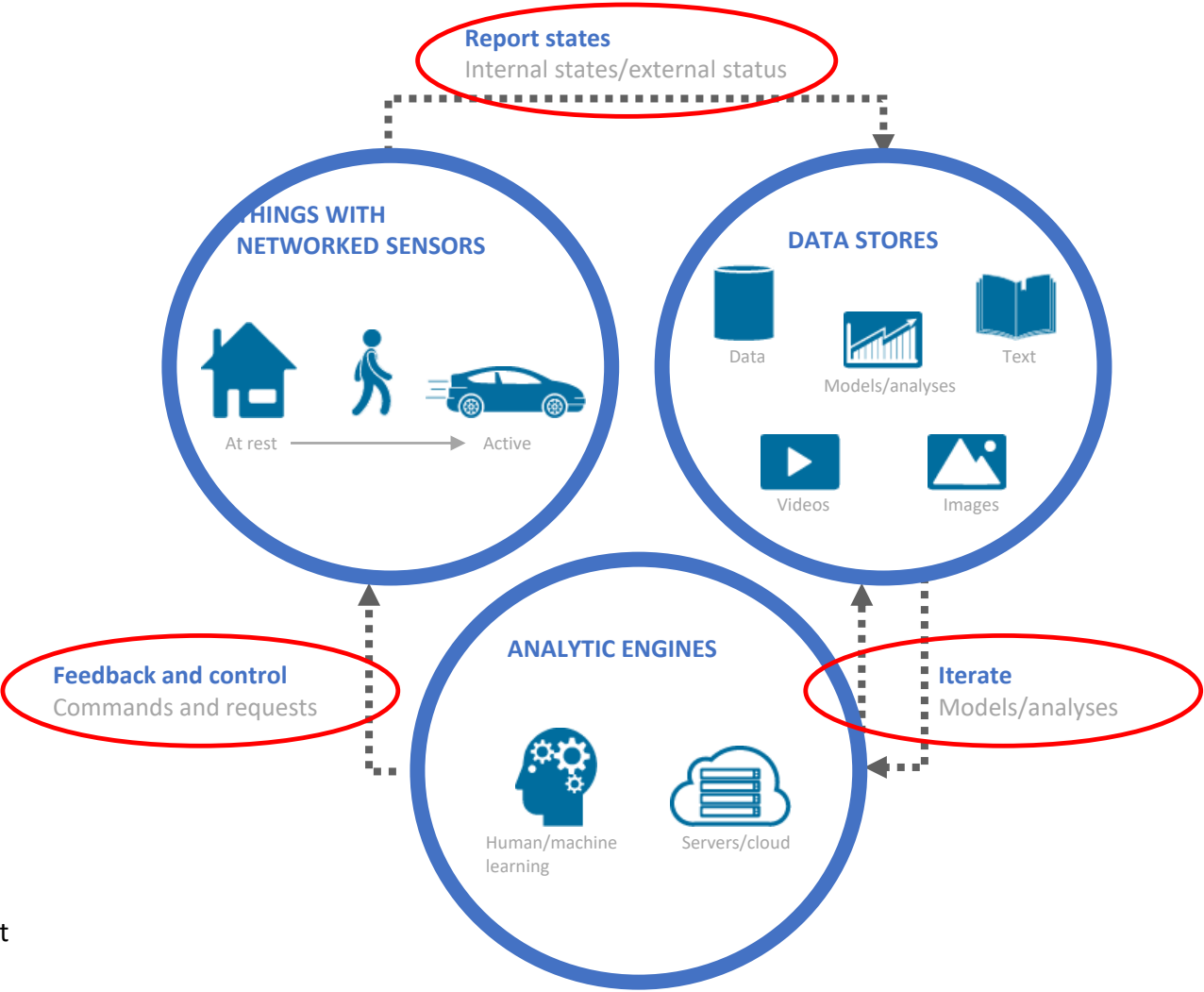
A NEW WAY

**Don't buy the whole pie. Just the Slice you want.**

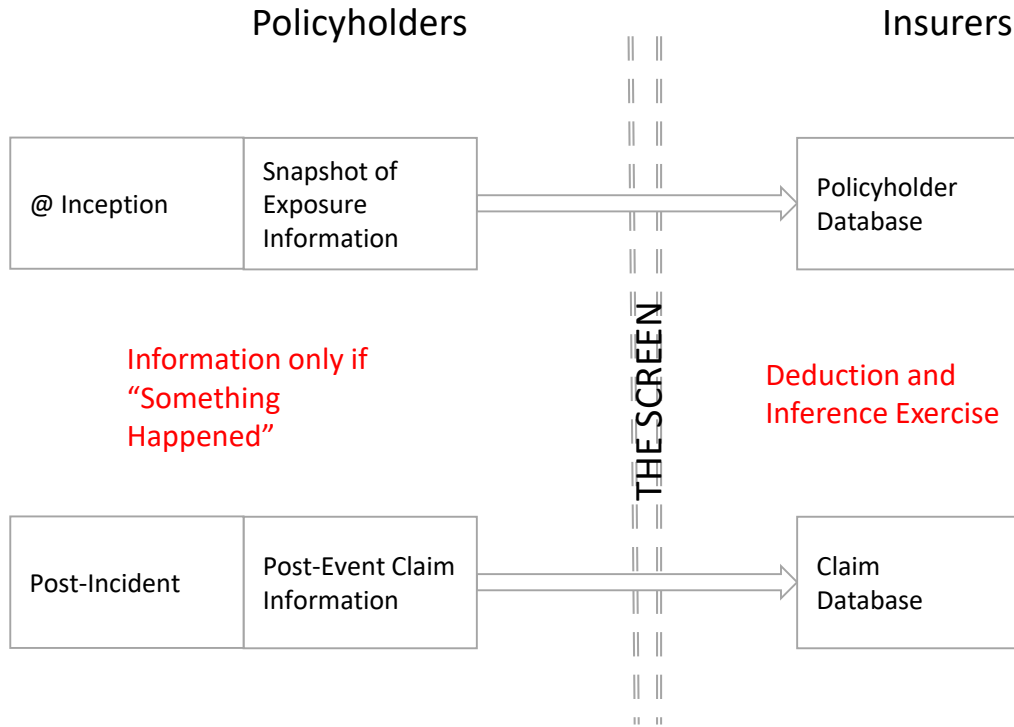
We're approaching insurance differently, changing the experience altogether.

Slice is a digital insurance company designed for you. **Instant protection, offered in affordable, bite-size chunks, when you need it.** On-demand. No hidden costs. Fast. Affordable. Fair. And made especially for you.

# The Internet of Things (IoT)



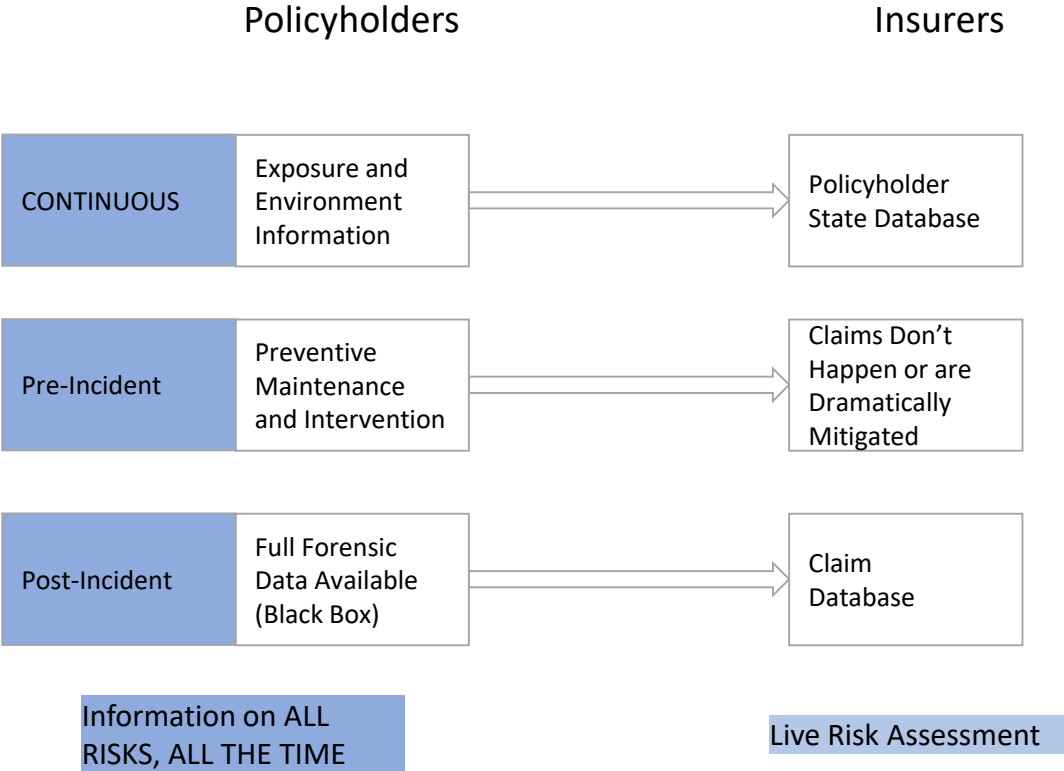
## From Effects Analysis Behind the Screen...



We only receive information on claimants – what about the “near-misses”?



# ...to Real-Time Data Flow and Preventive Analytics AKA No More Screen



From Whom?

# ACTUARY DIRECTORY SEARCH RESULT

[« Conduct a New Search](#)

Name	Title	Company	City	State
<a href="#">Mr. Loren J. Nickel, FCAS</a>	Treasury Director, Risk	Google	Mountain View	CA

## RISK MANAGEMENT

# RIMS names Google's Loren Nickel as Risk Manager of the Year

Rob Lenihan  
3/2/2017 1:57:00 PM

REPRINTS

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[Risk Management](#) [Technology](#)

The Risk & Insurance Management Society Inc. on Thursday named Loren Nickel, director of business risk and insurance at Google Inc., as the 2017 RIMS Risk Manager of the Year.



Benny Mertzy/Shutterstock.com

The award will be presented to Mr. Nickel at a ceremonial breakfast and panel discussion at RIMS' 2017 conference April 25 in Philadelphia, RIMS said in a statement.

Mr. Nickel joined Google in 2015 and is responsible for business risks that affects all Alphabet Inc. companies worldwide. With \$90 billion in annual revenue, 72,000 employees and a current market cap of \$579 billion, Alphabet Inc. is the parent company of Google and several other companies, according to the statement.

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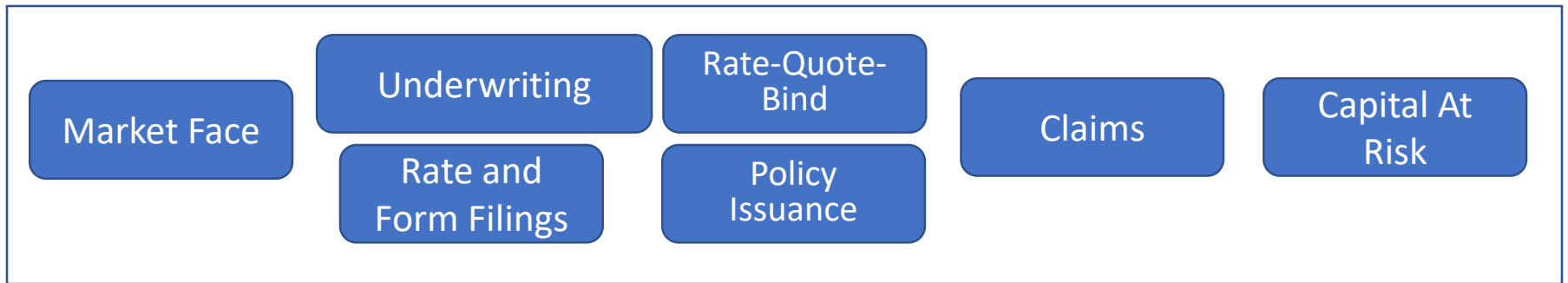
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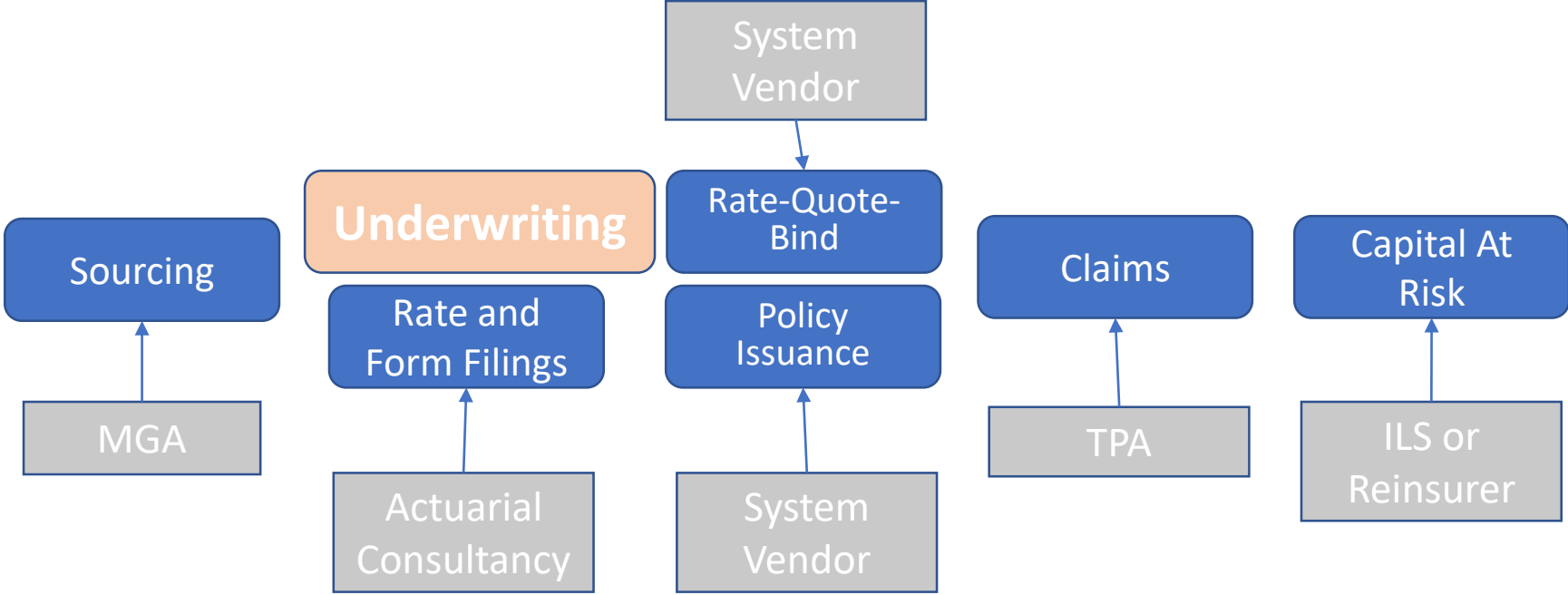
# Captives

- Thank you Loren Nickel
  - Part of why he won the prize was his aggregate risk cover
- Risk Manager 2025 = CAS Member
- Retained risk experts
- Beyond loss picks and feasibility studies to TRUE ERM
- When they decide to transfer, be the flexible platform

# Vertically Integrated Insurer



# Modular Composite Virtual Insurer



# Boost Insurance

boost|insurance

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## INSURTECH DEVELOPMENT PLATFORM

The Boost Insurtech Platform™ powers insurance startups and product innovators. Our general agency structure with dedicated **paper and capacity**, a forward-thinking approach to **insurance product development**, and our API-driven **technology** systems provide all the necessary pieces for insurance ideas to become reality.

THE BOOST PLATFORM >

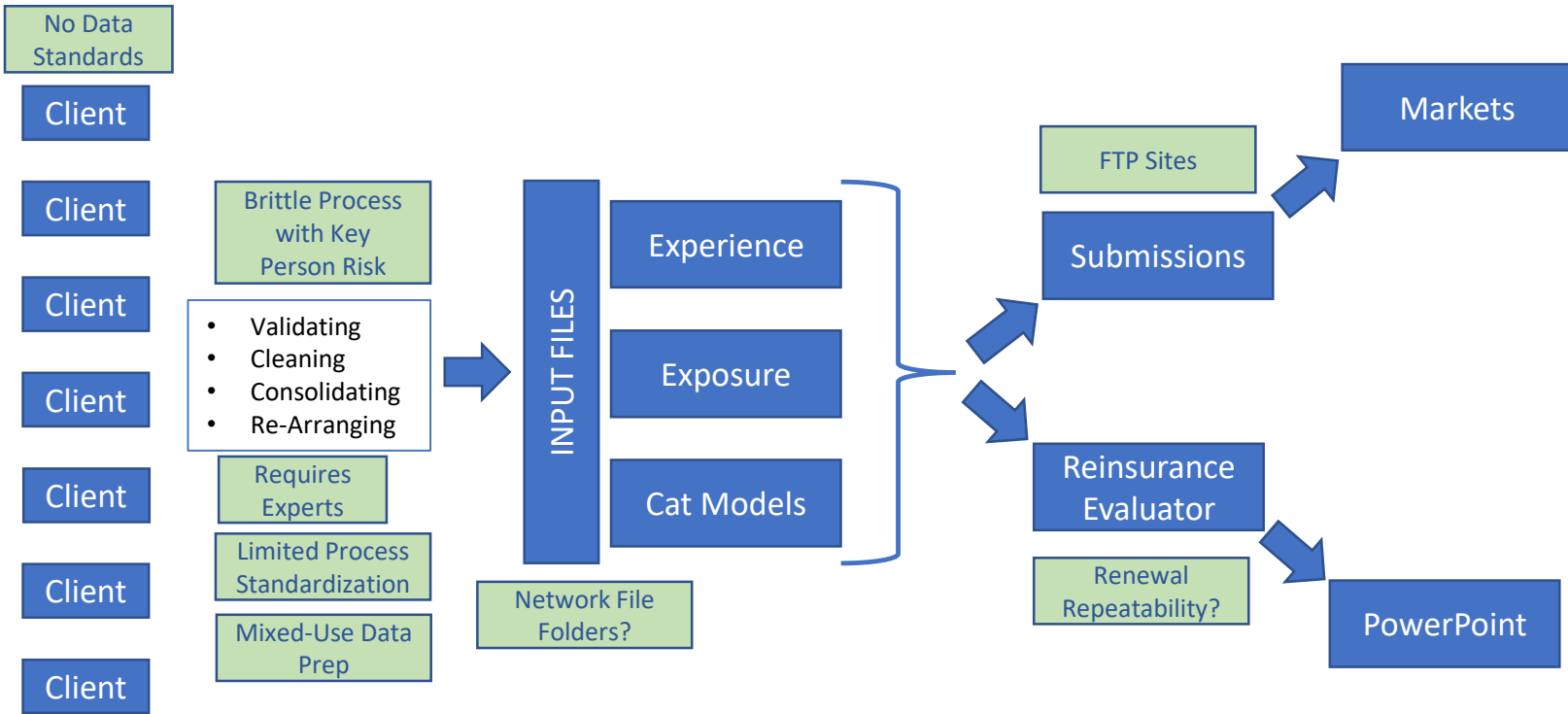
<https://www.boostinsurance.io/>

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How?



# Data @ Reinsurance Brokers

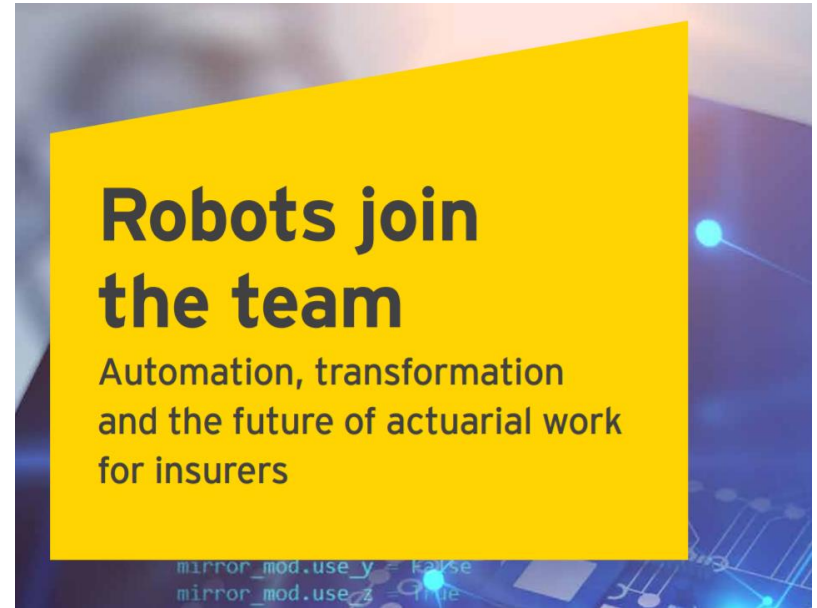


# Data Prep to the Rescue

- Cloud-based global platform
- Secure
- Accessible
- Supplemented by Machine Learning
- Simplistic application of Robotic Process Automation

# Robotic Process Automation EY Report

- Data preparation: extraction, reconciliation and formatting
- Reserving analysis, including rules-based selection
- Standard report preparation
- Pricing and rate monitoring
- Rate filing and rating quotes
- Experience monitoring and trend analysis
- Financial Planning and Analysis support — preparation and calculation of scenarios
- Data visualizations



[http://www.ey.com/Publication/vwLUAssets/EY-robots-join-the-team/\\$FILE/EY-robots-join-the-team.pdf](http://www.ey.com/Publication/vwLUAssets/EY-robots-join-the-team/$FILE/EY-robots-join-the-team.pdf)

# Scoring

- AKA pricing via underwriting
- Ranking
- Culling
- Easy plug in for an advanced engine
- Avoids rate regulation
- E.g., cyber, trucking

# Dashboards

- Human decision making under uncertainty
- Signal v Noise
- Combining qualitative and quantitative
- Human synthesizing series of complementary signals
- Skill that accretes



## New Solutions for Disruptive Times