

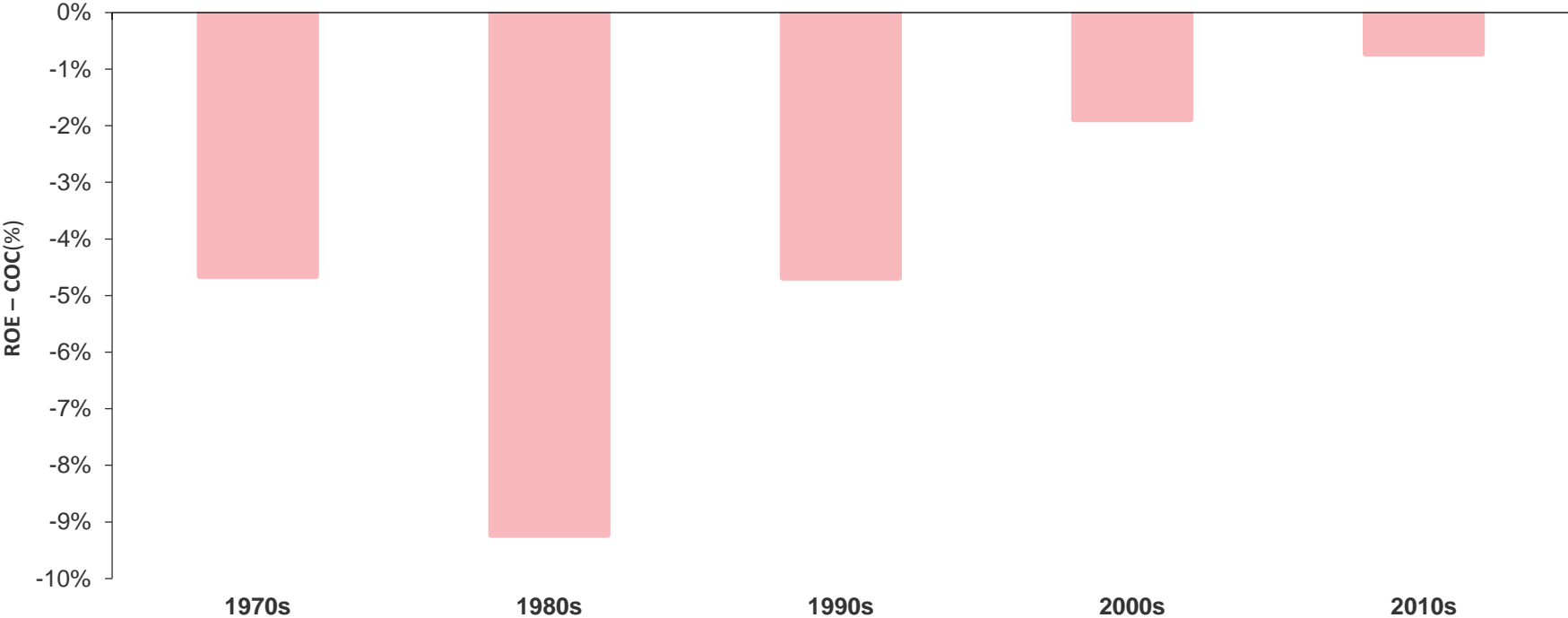
CAS 2020 KEYNOTE: ACTUARIES IN AN AGE OF AI

Murli Buluswar

September 16, 2020

THE P&C SECTOR HAS NOT RETURNED ITS COST OF CAPITAL IN MOST YEARS

U.S. P&C sector Return on Equity net of Cost of Capital

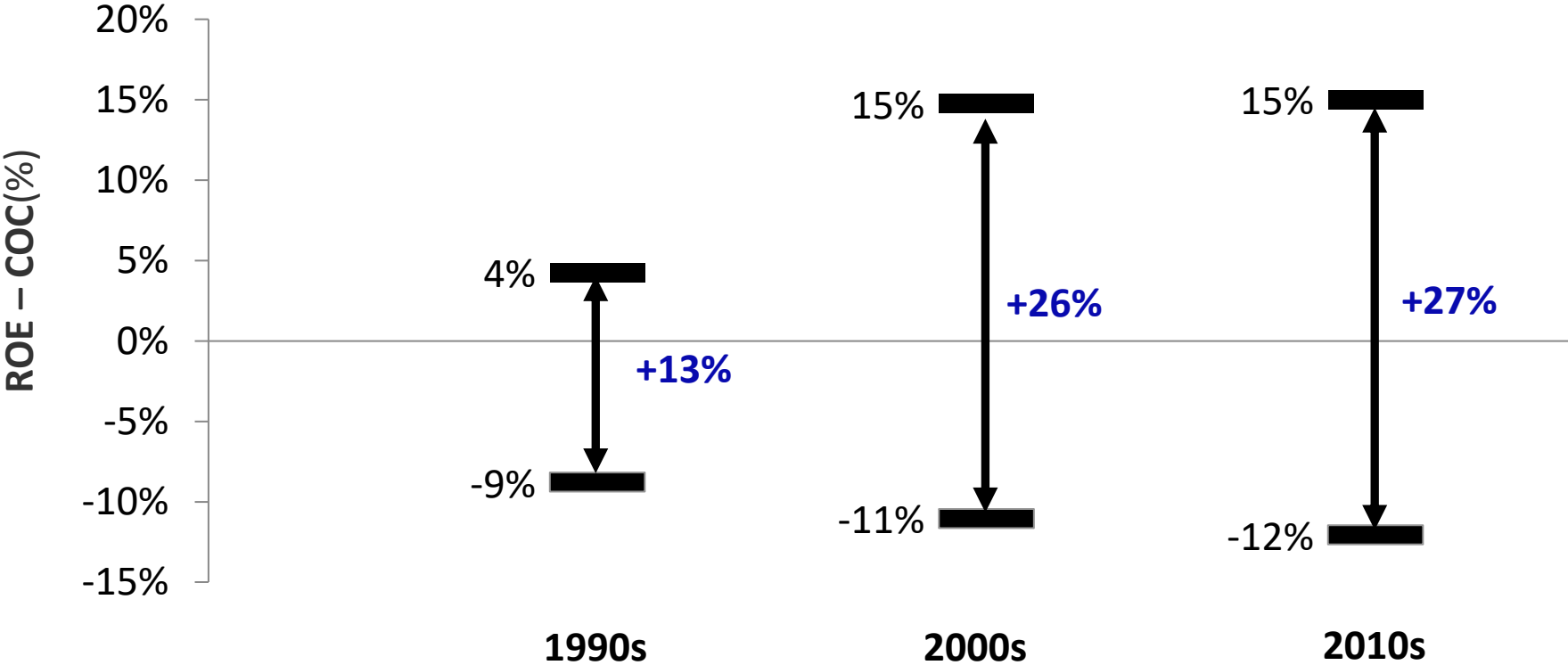


Note: Cost of capital based on 10-year Treasury plus equity risk premium (5.5%), beta (0.8), and 70% equity / 30% debt capital structure. PTOI adjusted using marginal corporate tax rate.

Source: AM Best, Federal Reserve Economic Database, Oliver Wyman analysis.

THE GAP BETWEEN TOP PERFORMERS AND BOTTOM PERFORMERS IS WIDE

P&C insurer performance top vs bottom decile, by decade
ROE-CoC, (1998-2018)



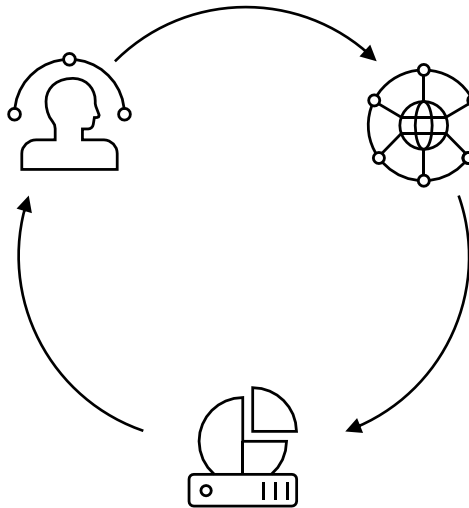
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THERE ARE THREE KEY DRIVERS OF THIS PERFORMANCE GAP

Customer-focus

- Hassle-free customer experience
- Targeted customer acquisition and retention
- Channel flexibility



Technology

- Modern vs. legacy systems
- Connected devices
- Digital front-ends

Data

- High velocity data and expanded data sources
- Advanced data science techniques
- Segmented knowledge of risk

CUSTOMER-FOCUSED INSURERS HAVE OUTPERFORMED PEERS

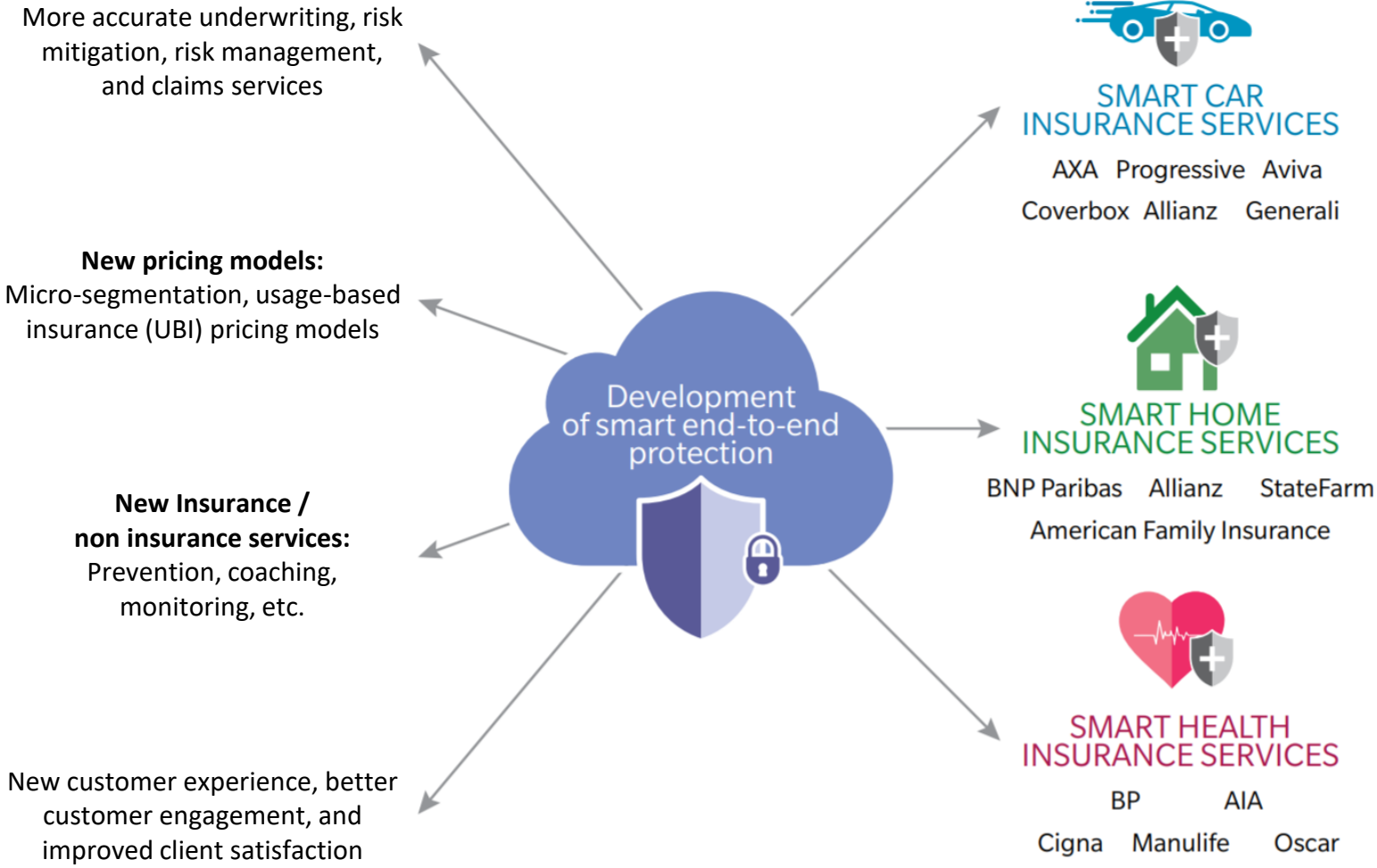
Homeowners insurance company	NPS®	# of reviews	NPS rating
USAA	77%	1,296	World class
Country Financial	58%	175	Excellent
Erie Insurance Group	58%	543	Excellent
Amica Mutual Insurance Company	54%	268	Excellent
AAA	45%	569	Good
The Hartford	44%	271	Good
Geico Insurance Company	41%	1,233	Good
State Farm Insurance	40%	4,482	Good
Liberty Mutual Insurance	38%	1,019	Good
Progressive Corporation	38%	936	Good
Safeco Insurance	37%	293	Good
Farmers Insurance Group	35%	1,064	Good
MetLife, Inc.	33%	336	Good
Travelers Companies, Inc.	32%	564	Good
Allstate Insurance	32%	3,397	Good
Farm Bureau Property & Casualty Insurance Company (FBPCIC)	29%	257	Good
Nationwide	29%	782	Good
American Family Insurance	28%	757	Good

All have ROE in excess of COC

Note: these same companies also have strong personal auto NPS scores

Source: Clearurance 2019

LEADING INSURERS HAVE EMBRACED **NEW TECHNOLOGIES**, INNOVATING THE EXPERIENCE



Source: ABI Research, Oliver Wyman analysis

THE WINNERS ARE ABLE TO ANALYZE THE **DATA** MADE AVAILABLE BY THESE TECHNOLOGIES TO ACHIEVE VALUE



Allstate analyses claims data collected from the QuickFoto App to improve customer service

- Covers claims for >70% of drivable cars
- Led to NPS improvement and significant FTE reduction
- +2% ROE above CoC since 2010

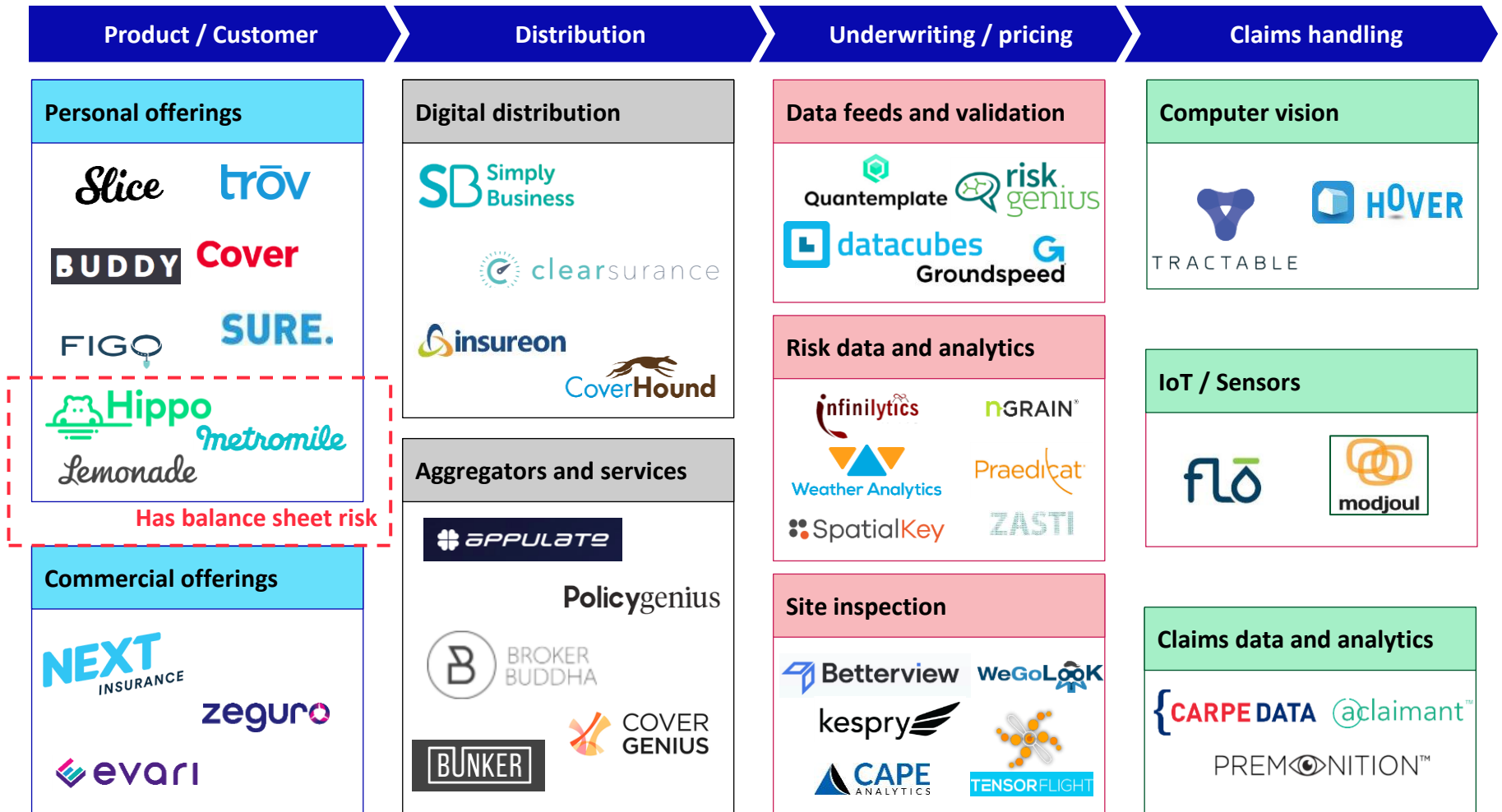


Progressive collects customer behavior data through its Snapshot UBI program to provide targeted offerings

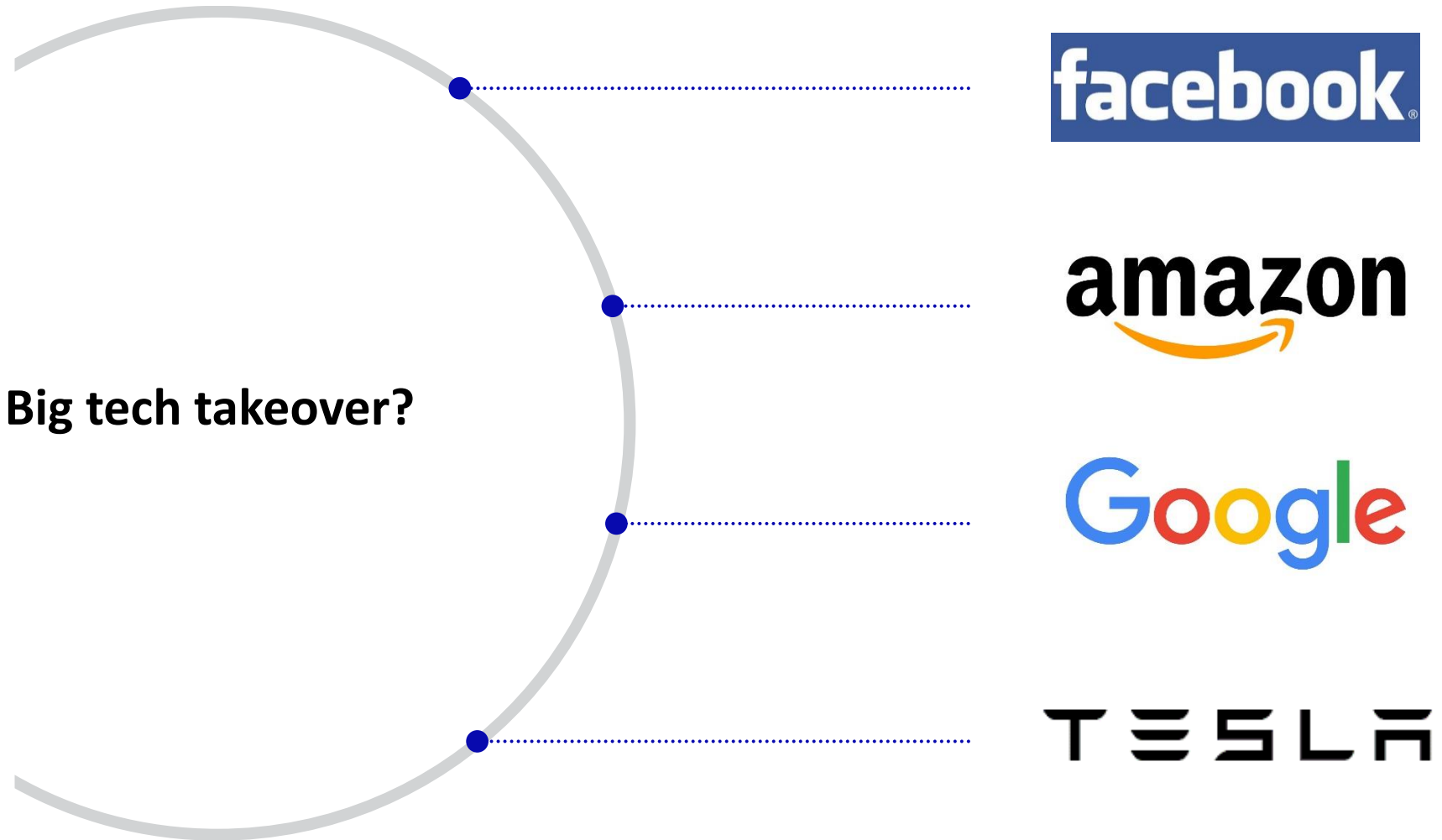
- Builds 360-view of customer through analytics
- Allows Progressive to provide very granular, highly personalized discounts to drivers
- +14% ROE above CoC since 2010

NEW PLAYERS ARE GAINING TRACTION

MOST INSURTECHS ARE NOT BALANCE SHEET FOCUSED



DATA-DRIVEN TECHNOLOGY GIANTS THREATEN TO DISRUPT INSURANCE, EVEN WITHOUT BALANCE SHEET RISK



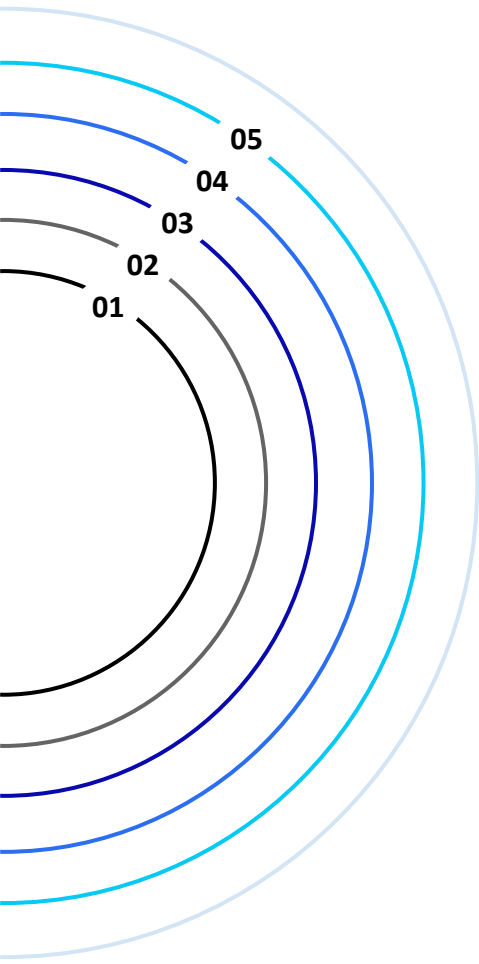
IN THIS NEW LANDSCAPE, OWNING THE CUSTOMER RELATIONSHIP WILL BE CRITICAL

WALMART CASE STUDY



- Insurers today focused on balance sheets and manufacturing **risk becoming commoditized**
- Disruptors will **change how value is created and shared** across the value chain
- Walmart's path to success was because of its unrelenting **squeeze on suppliers**
- Even large scale manufacturers such as P&G **yielded significant margin** to Walmart, which then passed those savings to the customer
- Walmart was the distributor, but with **access to the end customer**
- **Insurers face the same fate** if they cannot learn to create stronger, more direct relationships with the customer

WHAT DOES THIS MEAN FOR INSURERS GOING FORWARD?



- 01 Invest in proprietary data assets**
- 02 Embrace high-velocity, unstructured data for AI and ML insights**
- 03 Deploy the power of data across the entire business value chain**
- 04 Focus on understanding and engaging the customer**
- 05 Evolve from risk management to active risk prevention**

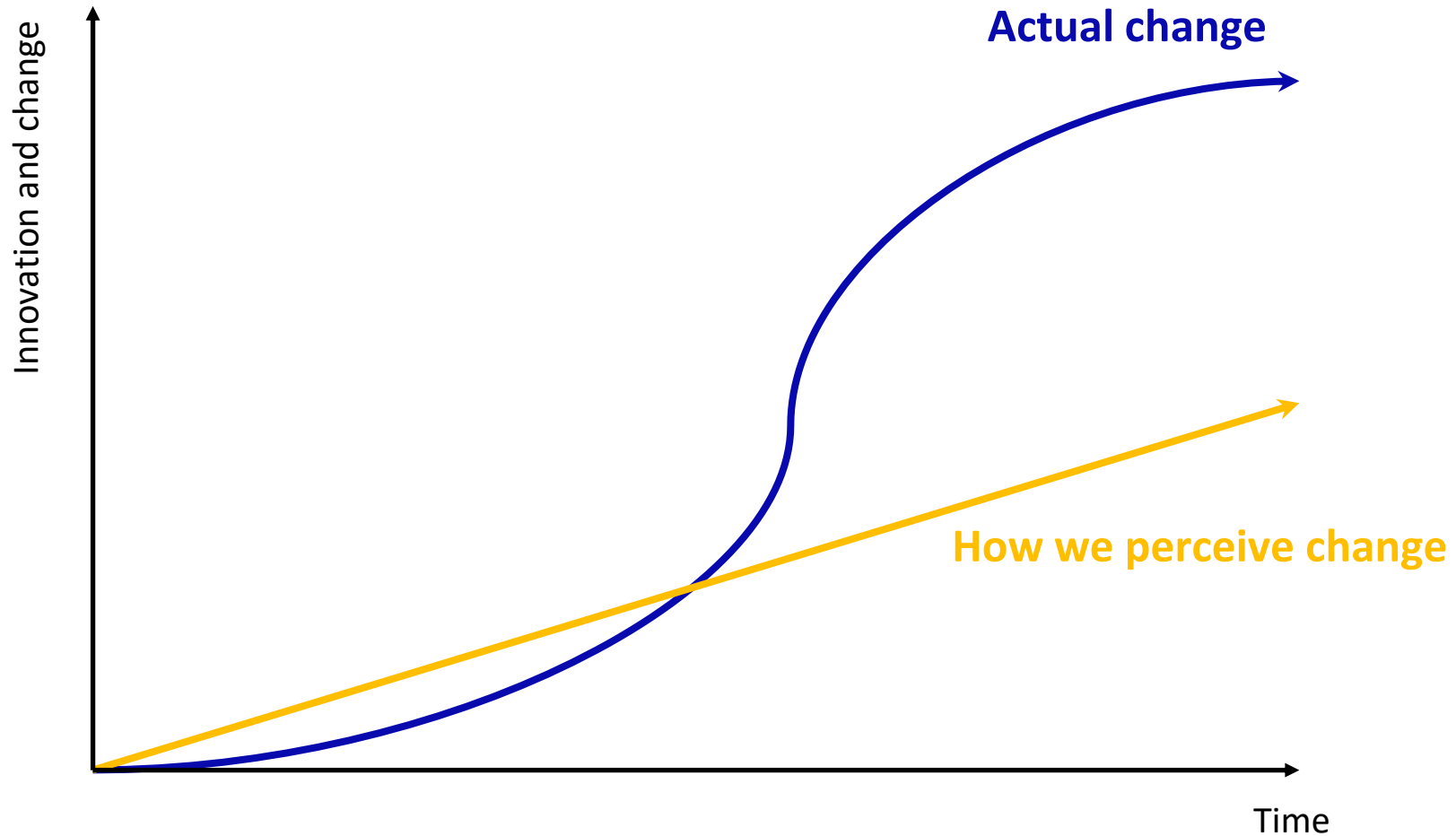


When the rate of change on the outside exceeds the rate of change on the inside, the end is near.

Jack Welch

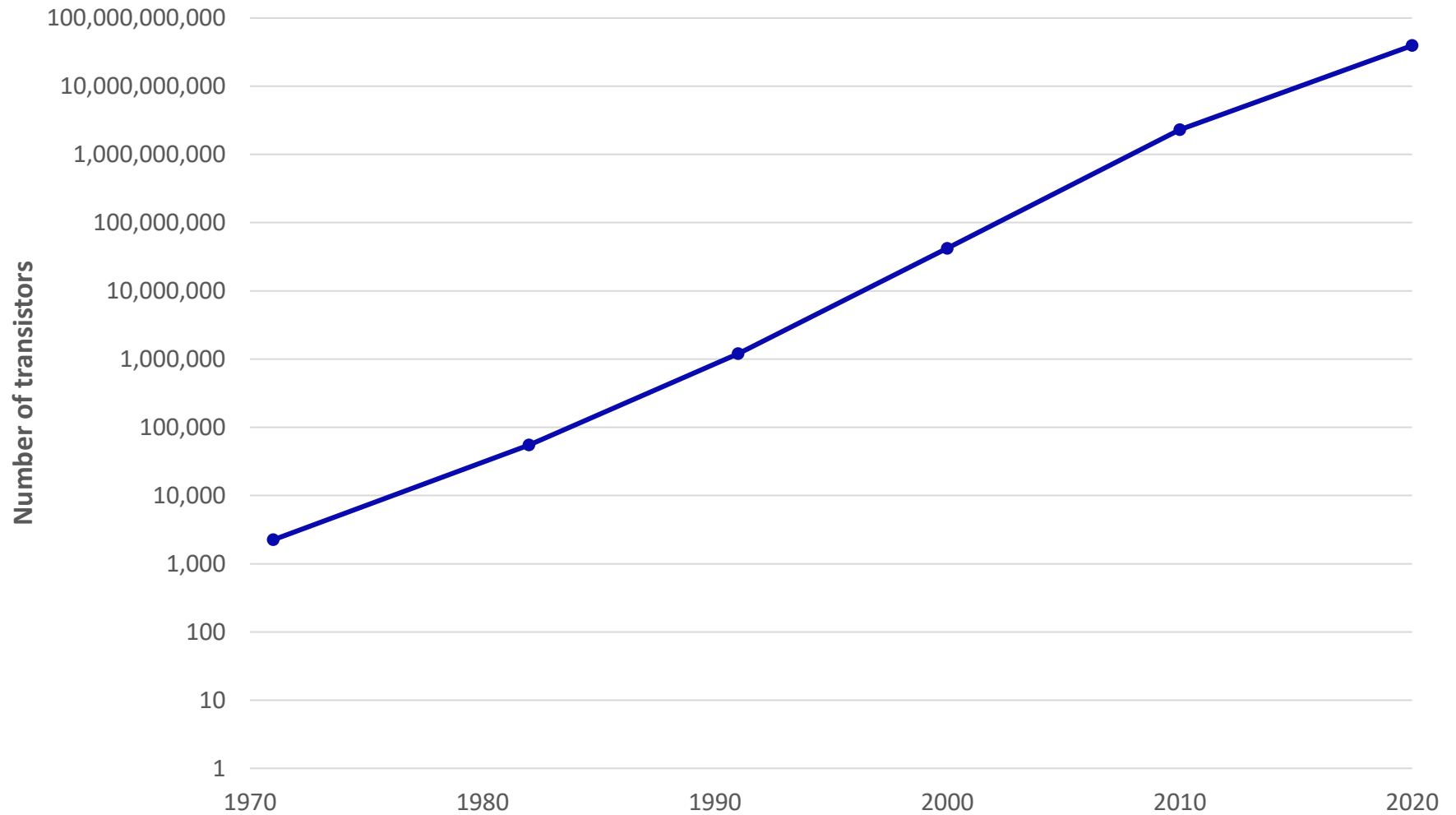


WE TEND TO OVERESTIMATE THE DISRUPTION FROM INNOVATION IN THE SHORT RUN AND UNDERESTIMATE THE EFFECT IN THE LONG RUN



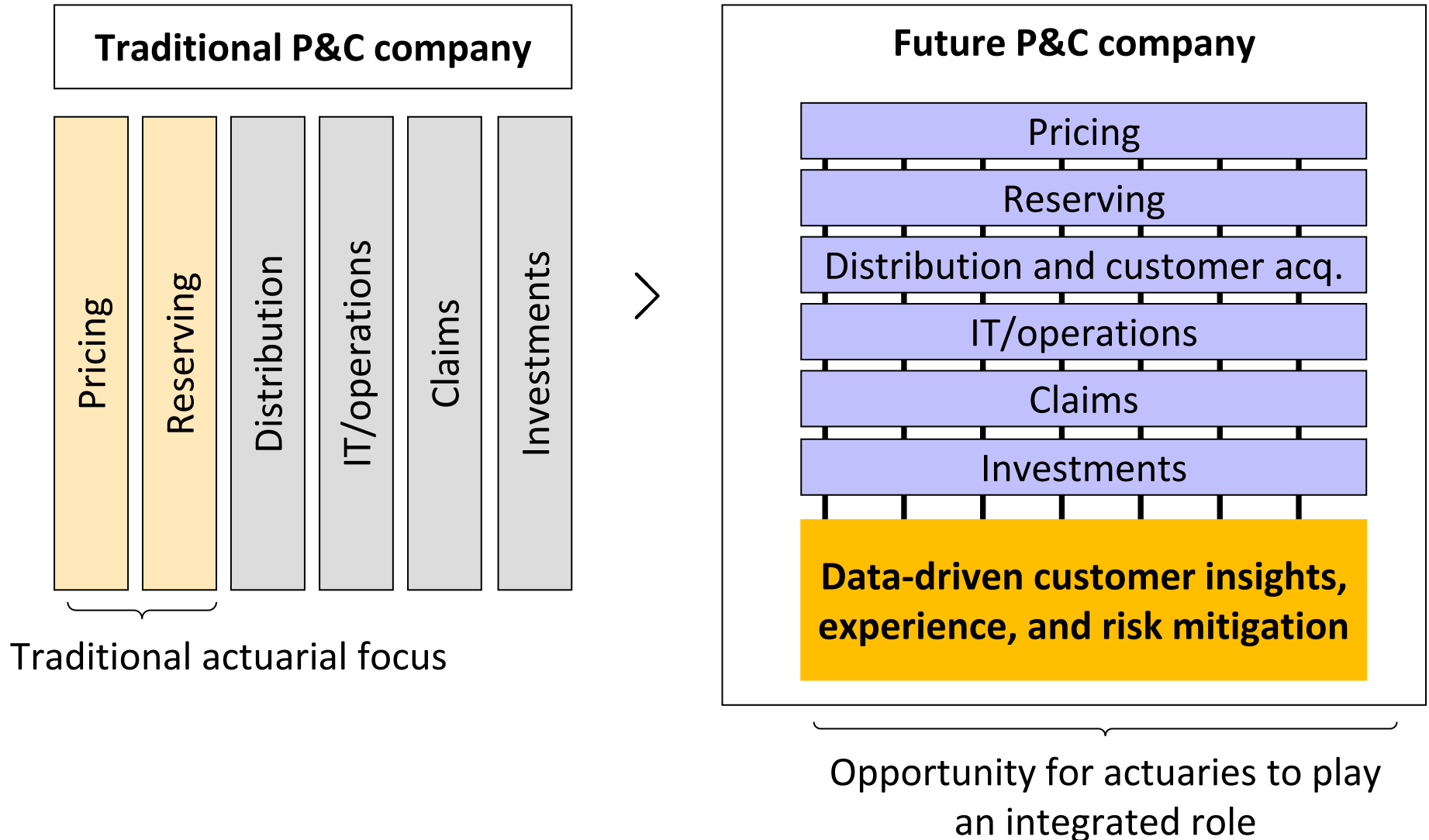
TECHNOLOGY PROGRESS IS CONTINUING TO ACCELERATE

MOORE'S LAW – LOG SCALE

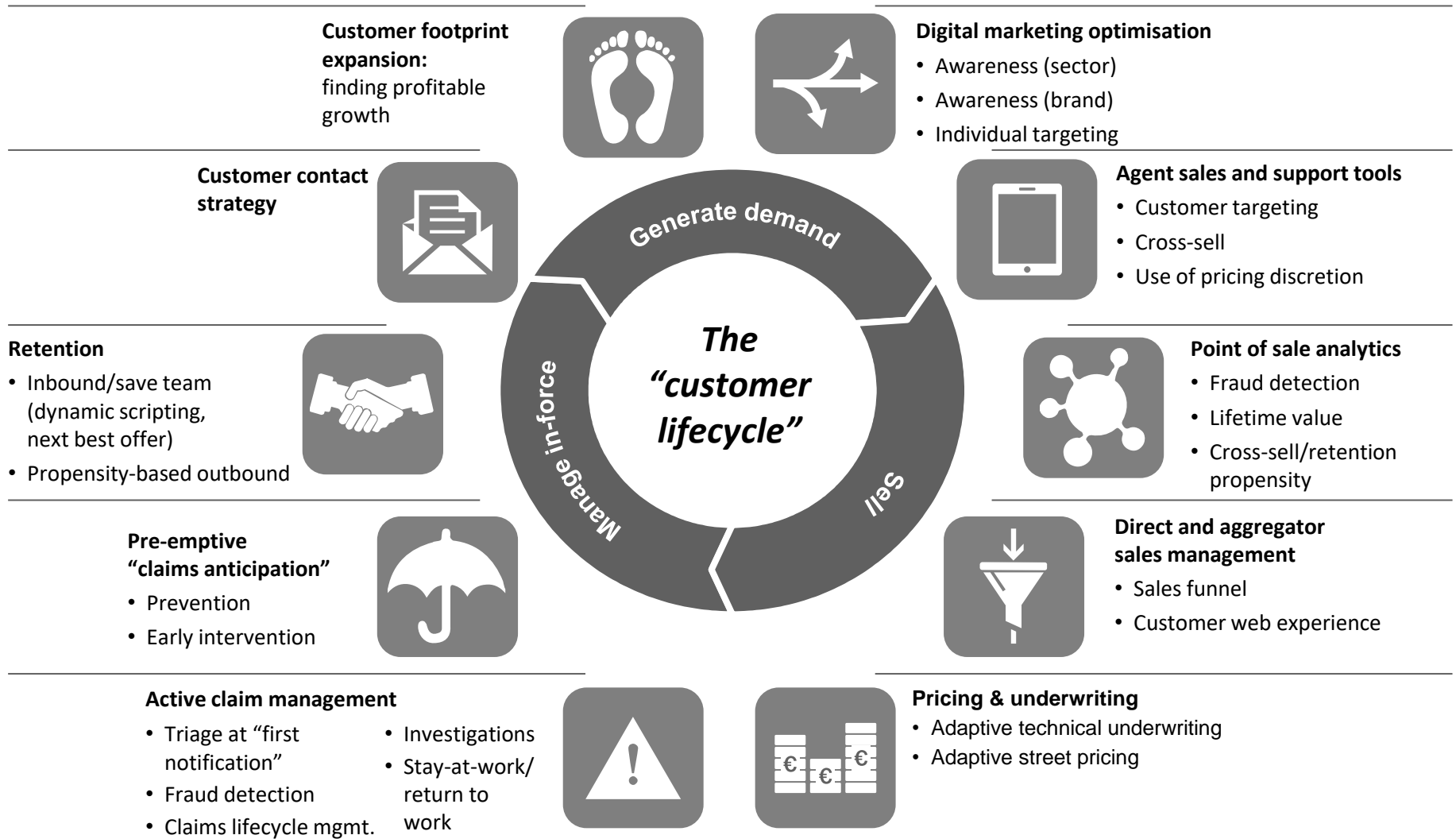


**WHAT ARE THE IMPLICATIONS FOR
THE ACTUARIAL PROFESSION?**

THE TRADITIONAL SILOED BUSINESS MODEL IS OUTDATED



THE FUTURE P&C MODEL WILL BE FOCUSED ON THE CUSTOMER—ALL FUNCTIONS WILL BE TIGHTLY INTEGRATED AND DRIVEN BY DEEP DATA ANALYTICS



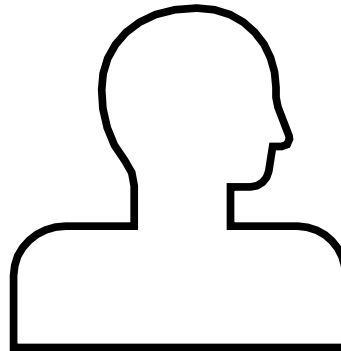
TOMORROW'S ACTUARY COULD EMBRACE A WIDER ROLE

Complement balance sheet focus with **dynamic, surgical risk predictions**

Harness analytical powers to drive **efficient and delightful customer engagement**

Integrate customer insights with risk insights **across customer life cycle**

Act as the **ultimate purveyor** of data decisions



The future actuary

Influence risk (not just predict risk)

ACTUARIES TODAY HAVE SKILLS THAT ARE ESSENTIAL TO INSURANCE OPERATIONS...

Skillset of an actuary today

- Deep insurance industry expertise
- Financial acumen
- Understanding of regulatory landscape
- Strong foundation in actuarial training
- Balance sheet and risk-focused

... BUT DO NOT CONSISTENTLY HAVE SKILLS NEEDED FOR THE FUTURE

Skillset of an actuary today

- Deep insurance industry expertise
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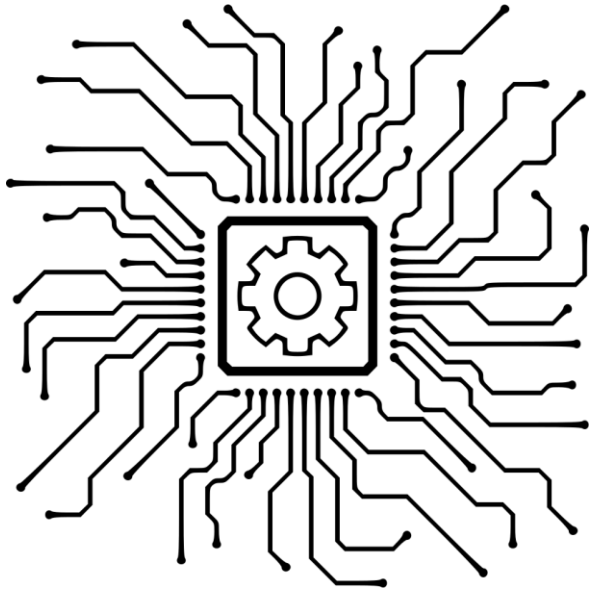


Skills needed in tomorrow's actuary

- Coding fluency
- Command of latest data science techniques
- Works with unstructured datasets
- Stronger communication and conceptual thinking skills
- Focus on customer value, in addition to capital and risk
- Asking deeper, forward-looking, out-side-the-box questions
- Connecting insights from other industry sectors

THE WAY FORWARD

IMPERATIVE TO REFRAME ROLE IN A BROADER AND DEEPER CONTEXT



ADAPT AND GROW RELEVANCE IN A FAST-PACED, CHANGING WORLD