

A hand in a white glove is using a metal tool to work on a disassembled smartphone. The phone's internal components, including the battery, circuitry, and camera, are visible. The background is a light blue gradient.

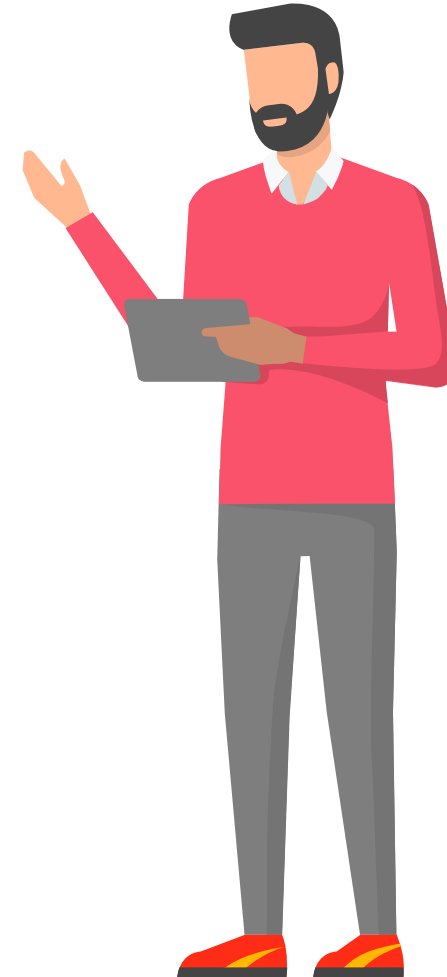
# Workforce of the Future

Presentation by **Mona Jolly, Jenna Jackson, and Steve Bochanski**  
November 25, 2019



# Agenda for today

- 
1. Megatrends & Insurance trends
  2. Planning for Future scenarios
  3. Automation & the Future of work
  4. Upskilling & preparing for modernization
  5. How actuaries can prepare
  6. Closing remarks
- 



# Your presenters



**Steve Bochanski, FSA, CERA, MAAA**

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Principal - Philadelphia, Pennsylvania

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- 21+ years of experience in Actuarial Sciences
- Specializes in Actuarial Modernization, comprising strategy & business case development and implementation of modernization programs
- Frequent speaker at Society of Actuaries meetings and other professional actuarial events, and has authored articles and thought-leadership pieces on a variety of topics
- Die-hard hockey fan, long distance runner, and bushcraft/survival skills enthusiast



**Mona Jolly**

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Director - New York, New York

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- 10 + years of Human Capital Consulting Experience
- Broad range of experience in change management, HR transformation, target operating model design for global firms
- Deep expertise in leading large scale change initiatives for enterprise-wide transformations, as well as overseeing efforts related to organizational culture, workforce and location strategy, and organizational effectiveness
- Enjoy college football, fine wines, and building things



**Jenna Jackson**

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Director - New York, New York

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- 8+ years of Human Capital Consulting Experience in Financial Services
- Extensive experience managing large scale transformations, specializing in workforce strategy, including strategic workforce planning and location strategy, change management, including training and communications, and organization design
- Also has experience in culture change, HR transformation, and talent management.
- Travel enthusiast, Barry's Bootcamp addict, and die-hard Braves fan!

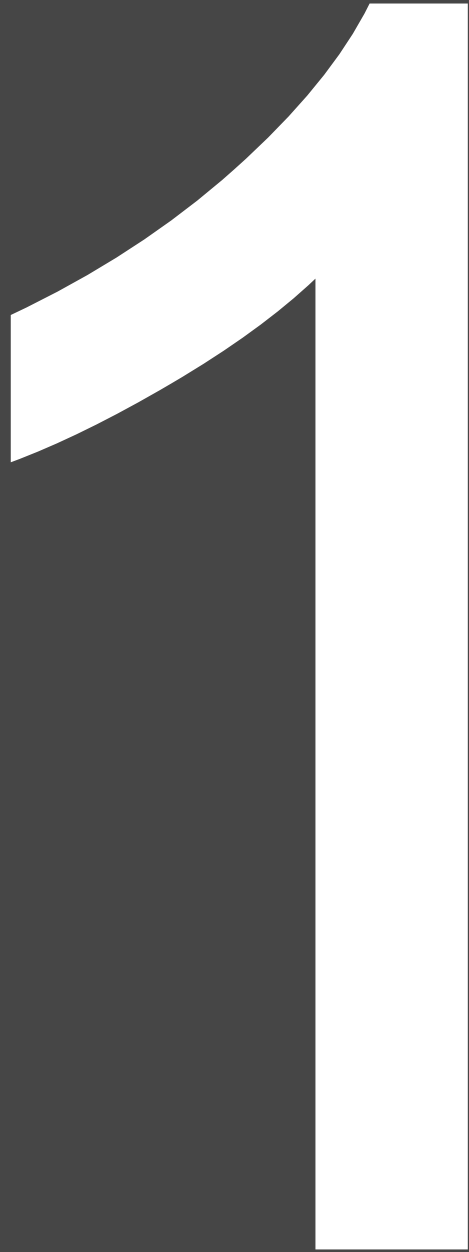
# Poll everywhere instructions



Throughout this presentation we have included interactive polls. To get set-up now, follow one of two options:

1. Open a separate browser, and go to **PollEv.com/asnywof**
2. Using your cell phone, text **ASNYWOF** to **22333**

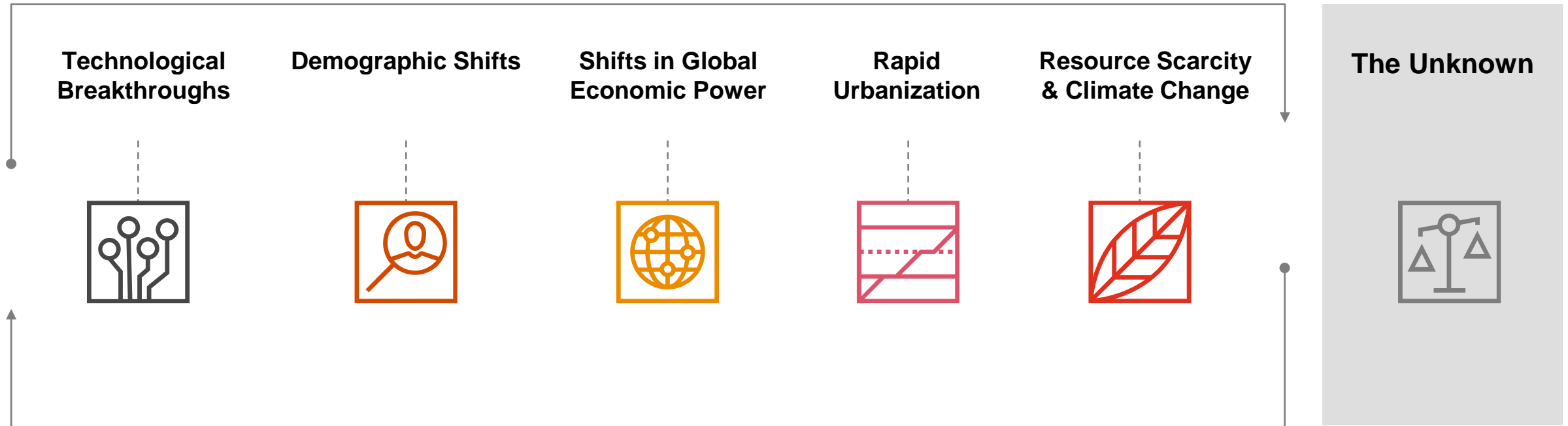
Further instructions will be provided once we get to the polling sections.



# Megatrends and Insurance trends

# Global megatrends

Megatrends are impacting today's workforce; these changes are constantly increasing at a rapid pace. The additional element of uncertainty makes addressing these changes difficult for companies to plan for.



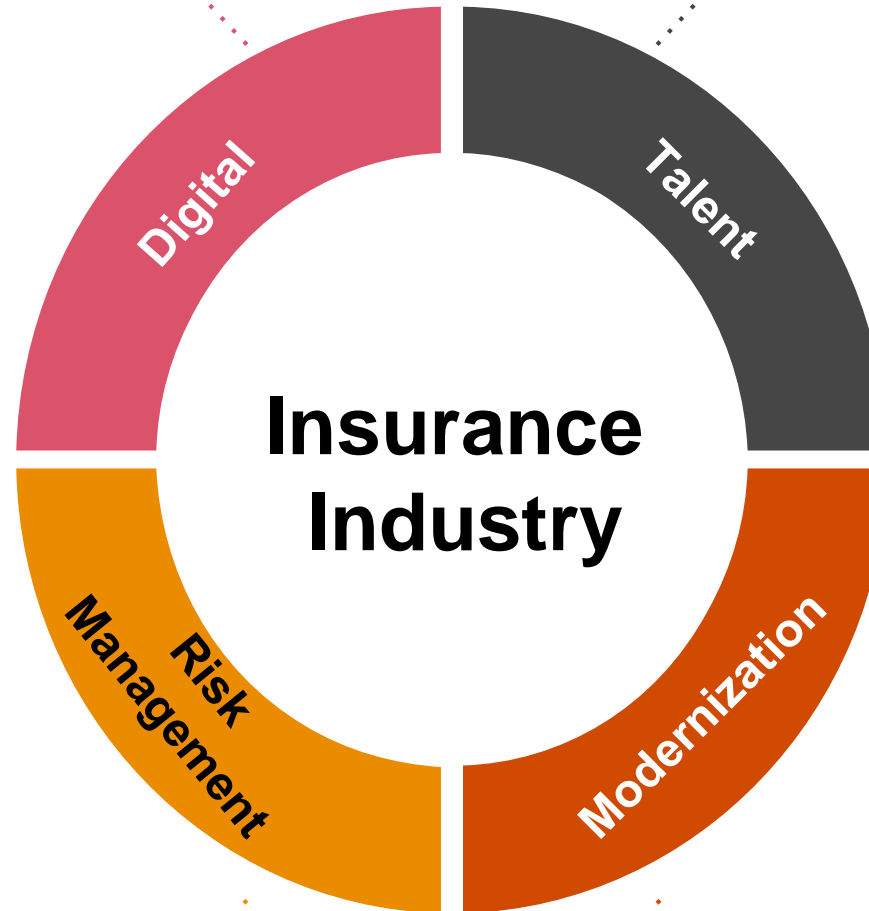
# Key changes impacting the insurance industry

## Digital

- Guidewire
- Salesforce
- Workday
- Broadening access to clients
- InsurTech

## Risk Management

- Updated regulatory and reporting requirements



## Talent

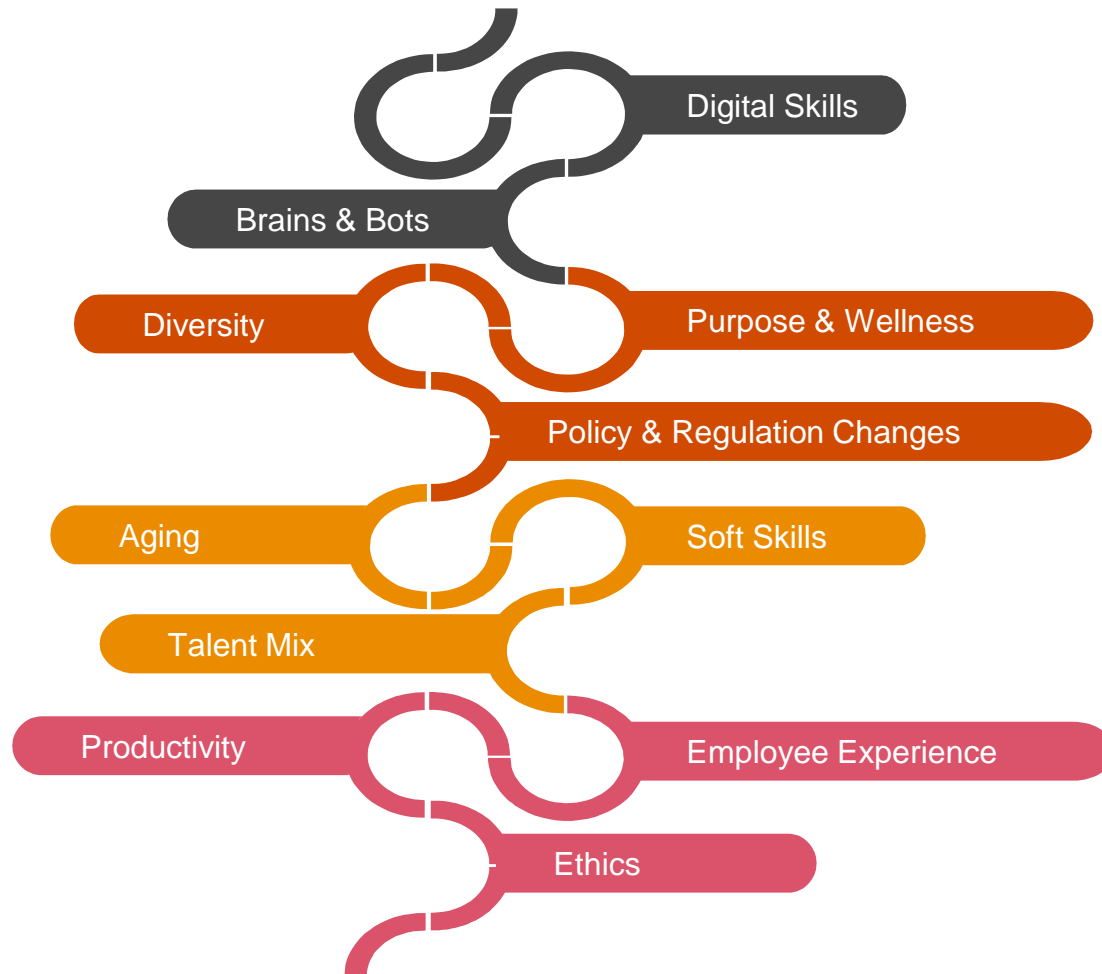
- “Retirement storm”
- Recruiting challenges

## Modernization

- Actuarial/Finance
- US GAAP & IFRS changes
- Operating model changes

# Impacts on the Workforce

The pace of change requires us to address emerging trends and issues today.



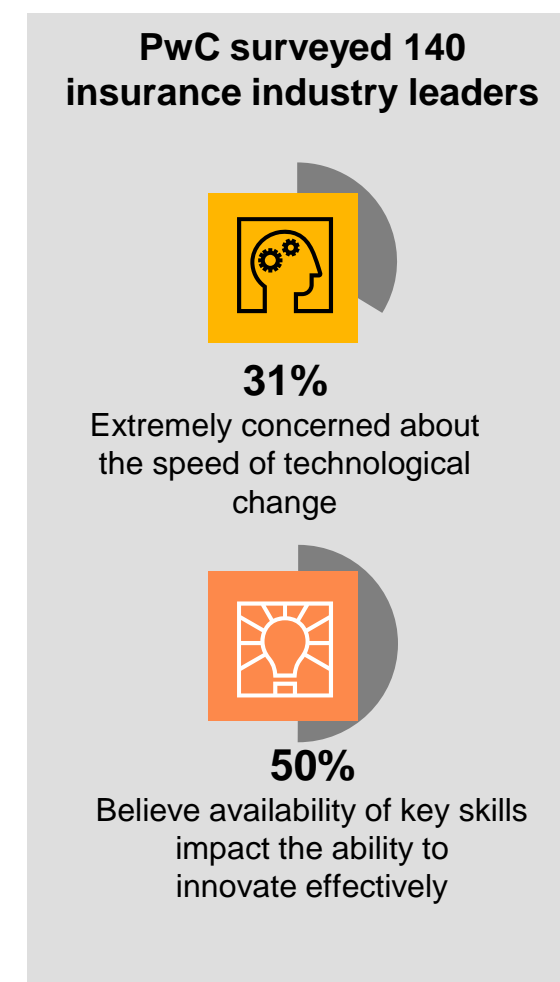
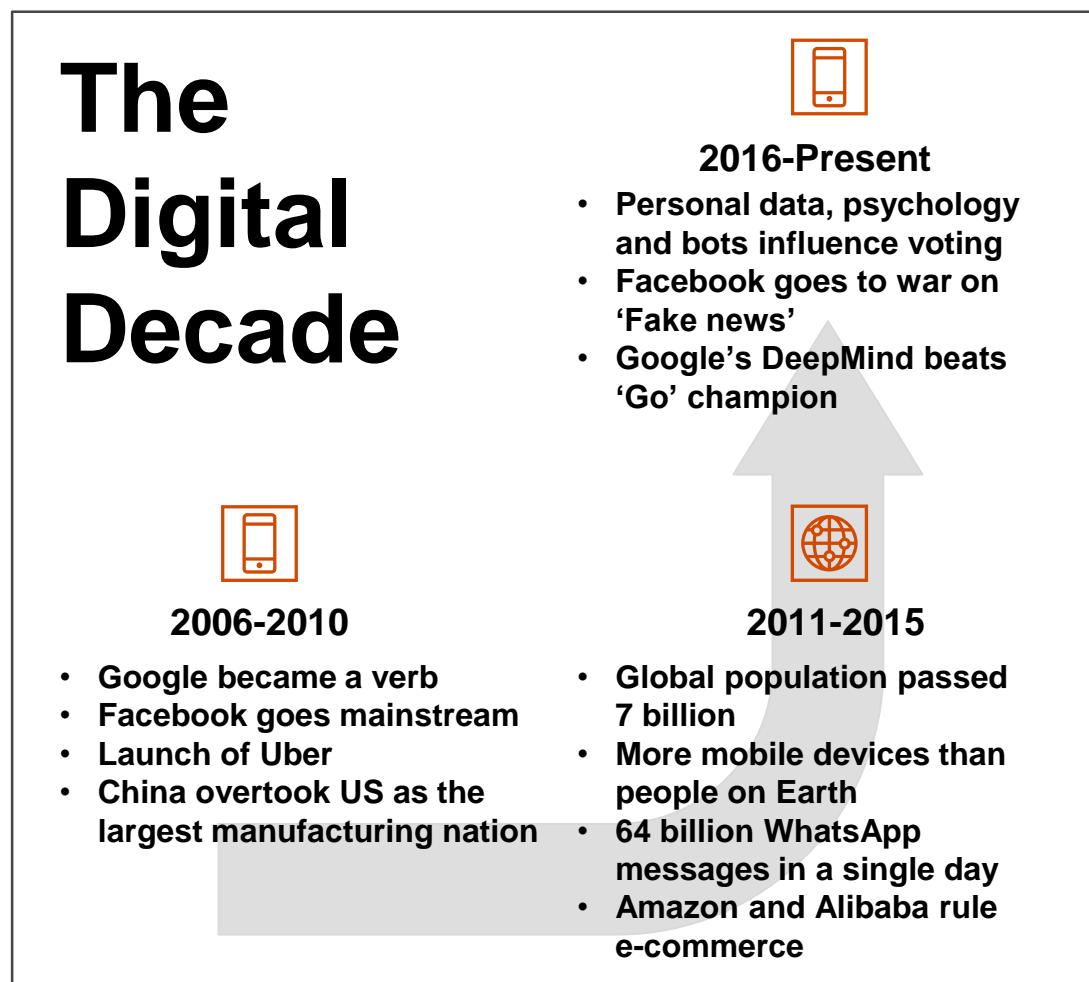




## Which trends do you think will impact your organization the most?

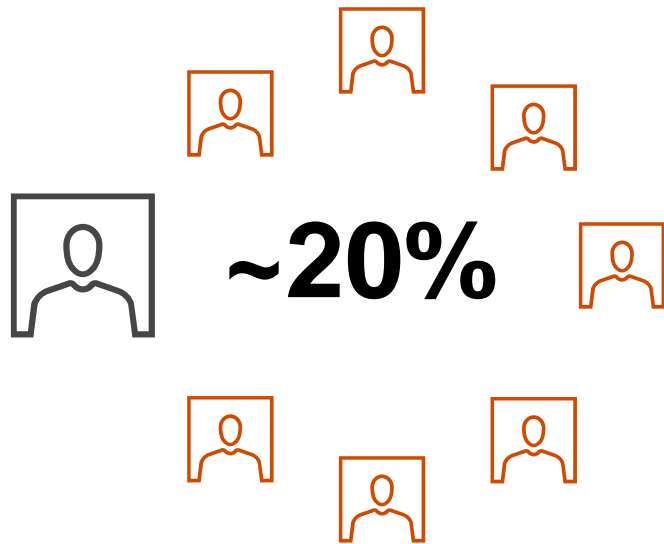


# Integrating your business into the digital decade



Source: [PwC's 22nd Annual Global CEO Survey](#)

# Preparing for the “retirement storm” - mixed messages



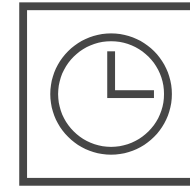
Employment of actuaries is projected to grow 20 percent from 2018 to 2028, much faster than average for all occupations.

Source: Bureau of Labor Statistics

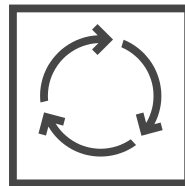
## Ongoing challenges...



Changing needs of younger and more technologically sophisticated workforce



Short-term younger workers staying only 12-18 months at jobs



Failure to effectively transfer knowledge from retiring staff



Uncompetitive salaries and constrained recruiting budgets

Source [Insurance hiring booms despite talent shortage,” Lyle Adriano, Insurance Business. May 10, 2018](#)

# Drivers of actuarial modernization

PwC queried US-based life and P&C chief actuaries about their actuarial modernization initiatives

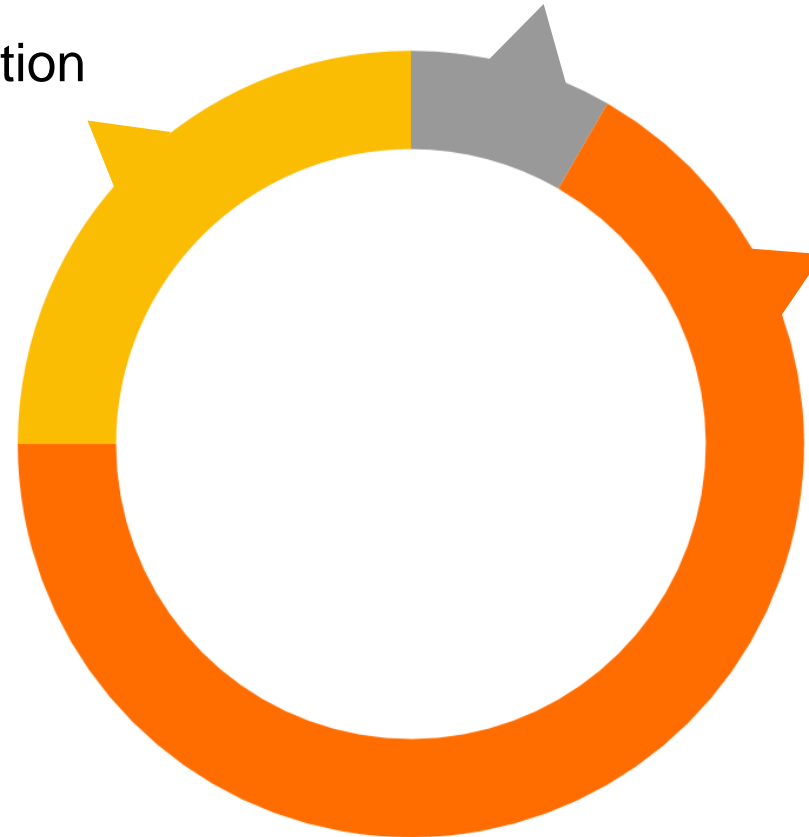
Responses received from 75 Life and 39 P&C companies with actuarial team sizes ranging from fewer than 50 FTEs to over 100 FTEs

**95% of companies have 2 or more drivers of modernization**

**> 20%** of companies have future plans to embark on modernization initiatives

**< 10%** of companies have previously implemented modernization initiatives

**80%** of companies are currently implementing modernization initiatives





## Has your company implemented modernization initiatives?

Yes, previously  
implemented

Currently  
implementing

No, but  
planning to  
implement

No plans to  
implement

# 2

Planning for Future scenarios

### 3 key things to remember:

The Future of Work is here already

It's not just about people or just about tech, but the intersection of both

Planning for multiple scenarios is key to being prepared for an uncertain future



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# What scenario are you prepared for?

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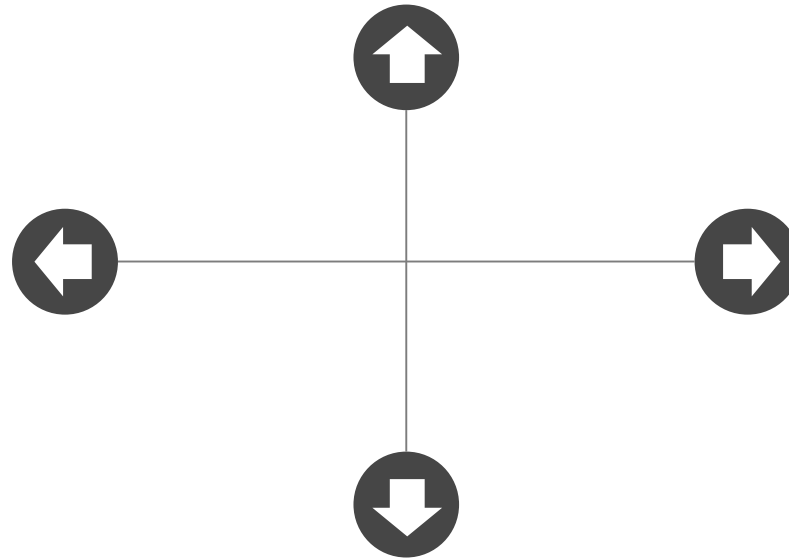
# Uncertainty – The human impact

## **Business fragmentation: Small is good.**

Large businesses lose their dominance as customers seek relevance and organizations find scale a burden rather than a benefit. Social bubbles and affinity groups take on a new importance. Many could not exist without digital platforms.

## **Collectivism: Fairness and equality dominates.**

The common good prevails over personal preference, e.g. collective responsibility for the environment, social good and “fairness” over individual interest.



## **Individualism: Where “me” first rules.**

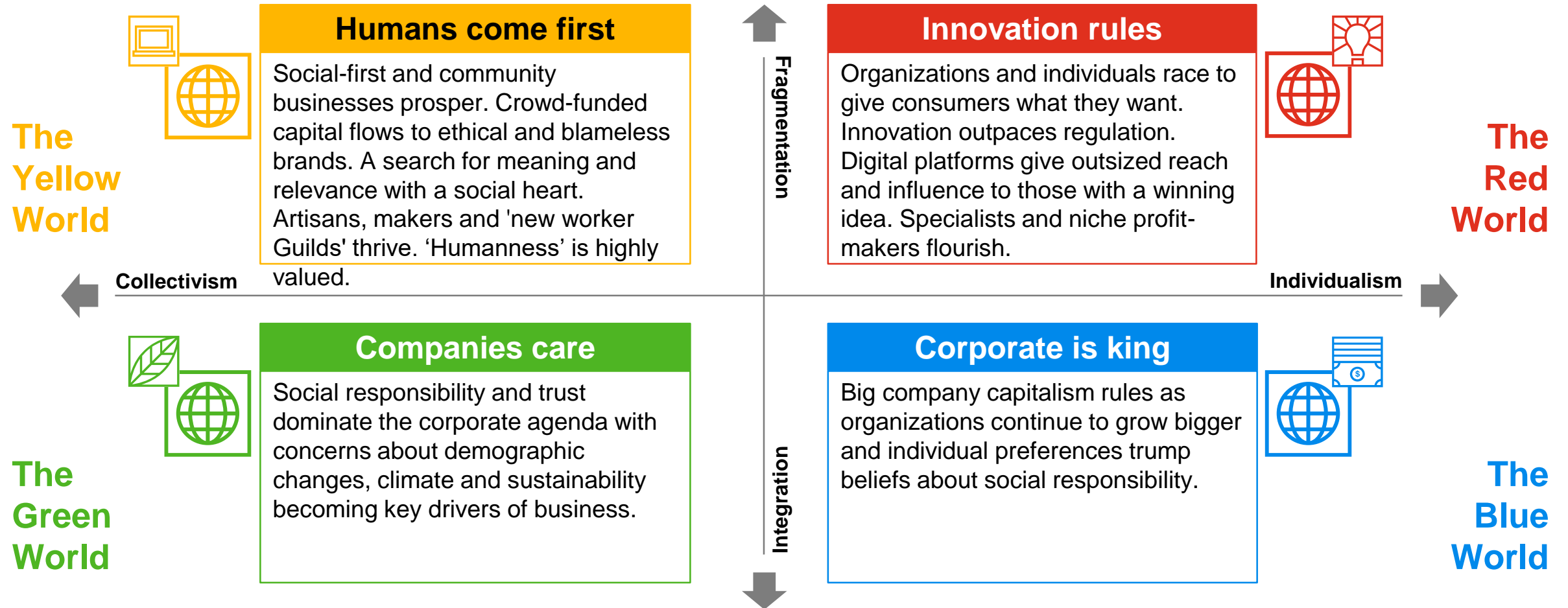
A focus on individual wants; a response to the infinite choices available to consumers.

## **Corporate integration: Big business rules all.**

Companies get bigger and more influential - the biggest have more influence than some nations. Brands span many business areas.

Source: [Workforce of Future](#): The competing forces shaping 2030

# 2030– Four worlds of work



Source: [Workforce of Future](#): The competing forces shaping 2030

# Bringing the Four Worlds to life

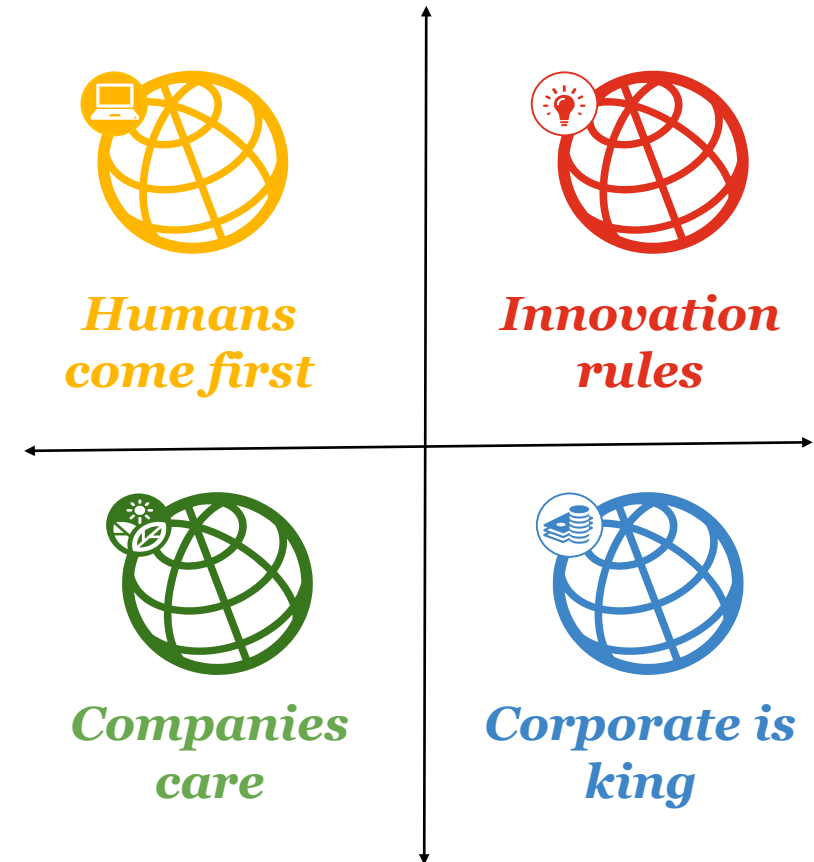
**Company:** AMC Insurance

**Headquarters:** Dubuque, IA

**Number of Employees:** 9,000

## Key Attributes:

- AMC is a national insurance firm that has been in business since the 1800s
- AMC has a core group of customers providing them with life insurance products, retirement and income solutions, as well as investment management services
- Most employees headquartered in Dubuque, with satellite offices in Chicago and Mexico
- Average tenure of employees is 25 years, trying to boost campus hiring
- Like many of its peers, AMC is used to operating in traditional ways but it has begun to introduce more digital tools to meet the needs and expectations of customers; it is also shifting its focus to higher touch services





## Which "world of work" do you think is most likely for your organization?

Yellow ("Humans  
come first")

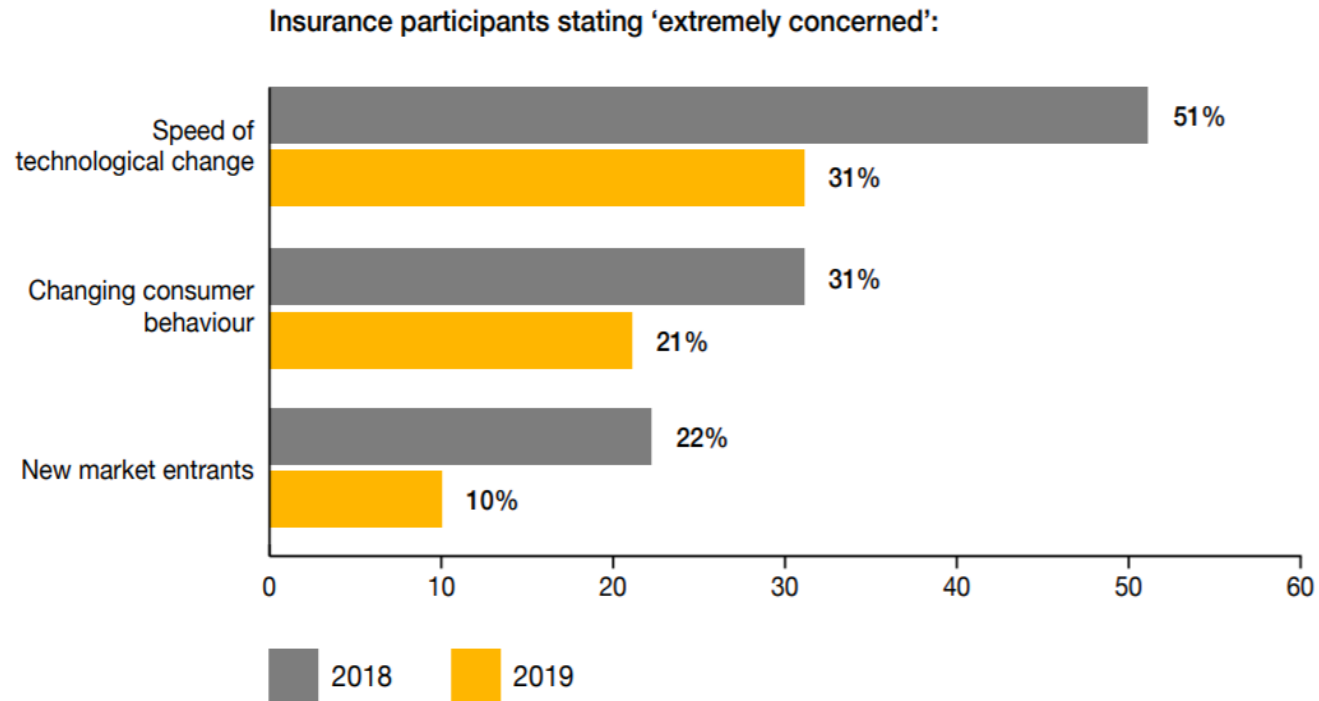
Green ("Companies  
care")

Red ("Innovation  
rules")

Blue ("Corporate is  
king")

# Where is the Insurance Industry?

Sentiment toward digital transformation is optimistic. CEOs are prioritizing efficiency; therefore, automation will help free up resources to develop future talent, organizational capabilities and customer offerings.

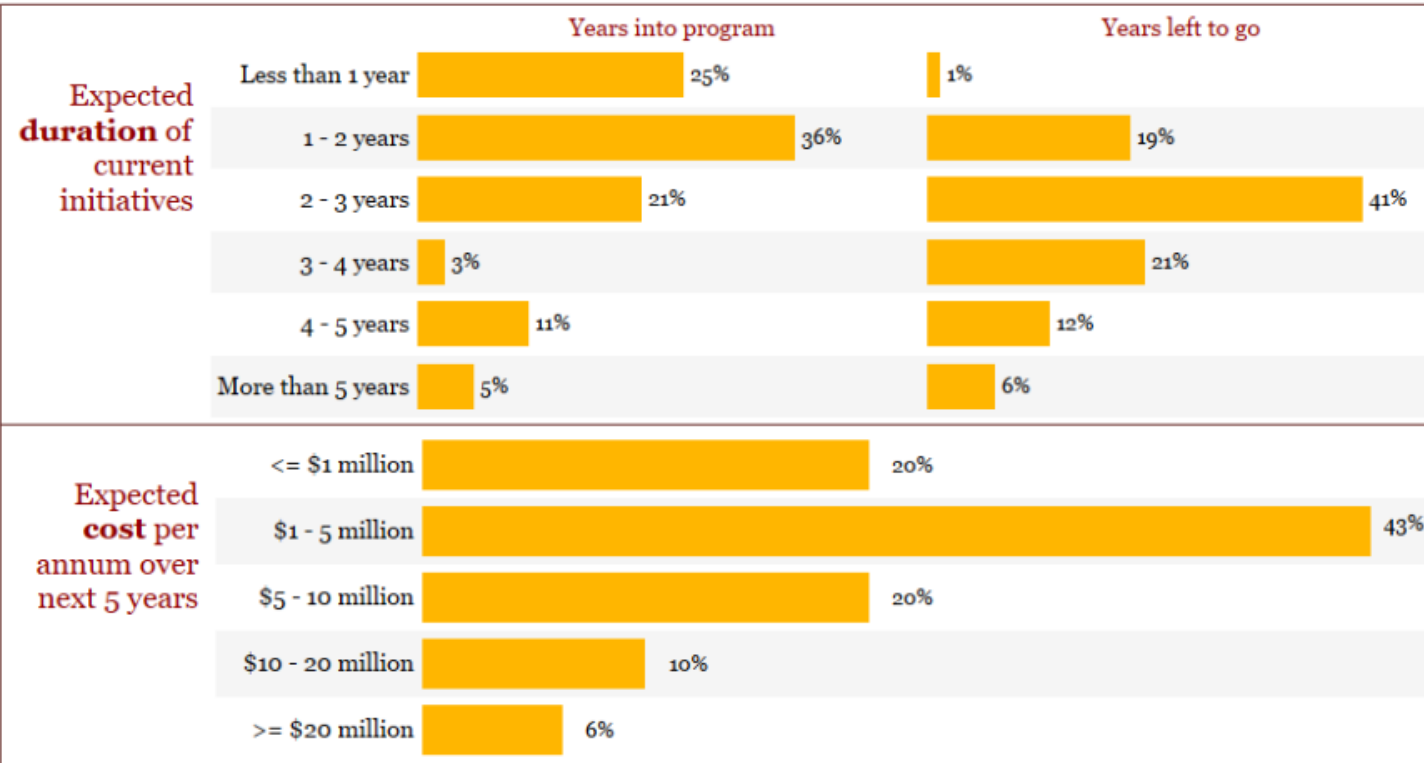
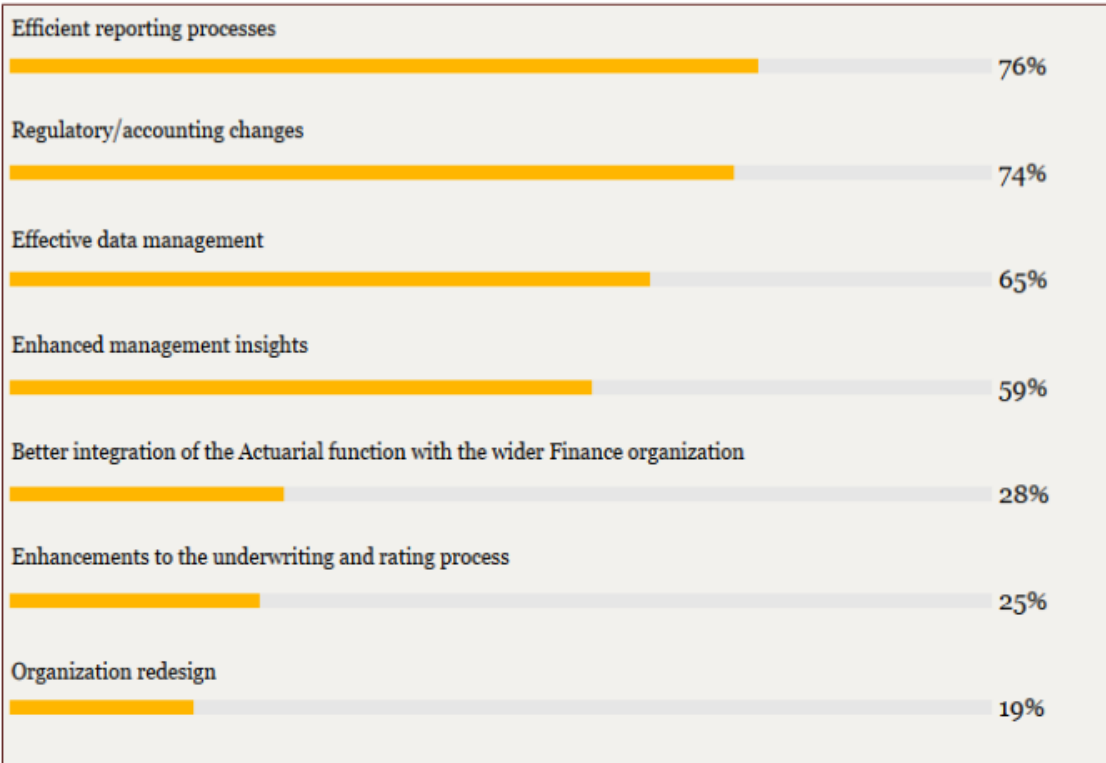


Source: PwC's 22nd Annual Global CEO Survey

**72%** of insurance CEOs are relying on organic growth to drive revenue.

**70%** of insurance CEOs are relying on operational efficiency to drive growth.

# What is the impetus for actuarial modernization initiatives?





**How do you feel about Modernization, given the drivers and the progress in this area?**

# 3

Automation & the Future  
of work



# Automation can transform your business



# Automation is a Broad Topic

What's the effect of automation on our people?



What is the role of robotics, automation and bionic capabilities?



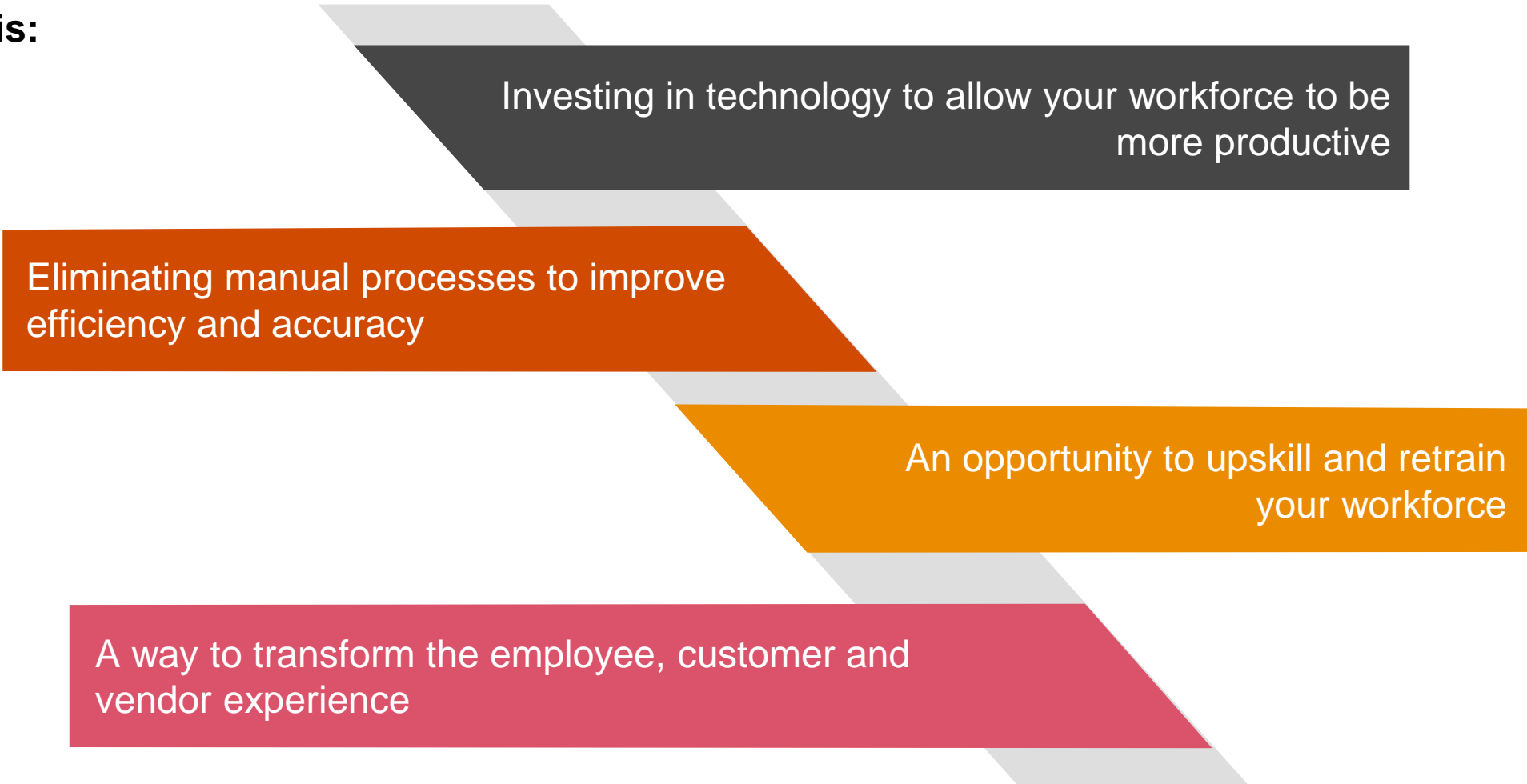
What broader capability development and digital upskilling do we undertake for our people?



# Understanding Automation and the Future of Work

The topic of Automation can often be uncomfortable for employees, but it has many benefits.

## Automation is:



Investing in technology to allow your workforce to be more productive

Eliminating manual processes to improve efficiency and accuracy

An opportunity to upskill and retrain your workforce

A way to transform the employee, customer and vendor experience

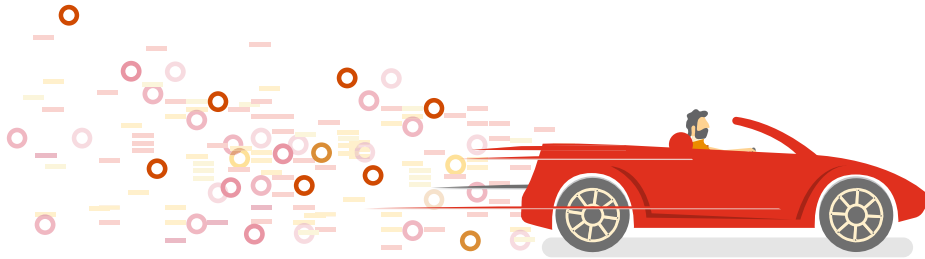
# Removing misconceptions about automation



Automation won't destroy jobs, it will create them.

Over the next decade, employment is projected to grow by over **160 million jobs**<sup>1</sup>

Slowing down the pace of automation may do more harm than good.



<sup>1</sup>Source: [Bureau of Labor Statistics](#) - Employment Projections



It not just an HR issue.

We can't protect jobs but we can protect people.

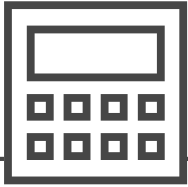


Delaying planning around the people impacts of automation investments could be a costly gamble.



# Actuarial work is being automated in 3 different waves

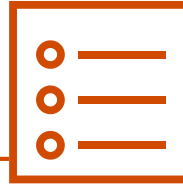
These overlapping waves have all begun developing, but will continue to mature over the next couple of decades.



## Algorithm Wave

Automation of simple computational tasks and analysis of structured data in areas like claims, policy pricing and experience studies

Current to early 2020's



## Augmentation Wave

Automation of repeatable tasks such as filling in forms, communicating and exchanging information through dynamic technological support, and statistical analysis of unstructured data. Use of emerging technologies to gather insurance data such as aerial drones wearable technologies

Current to late 2020's

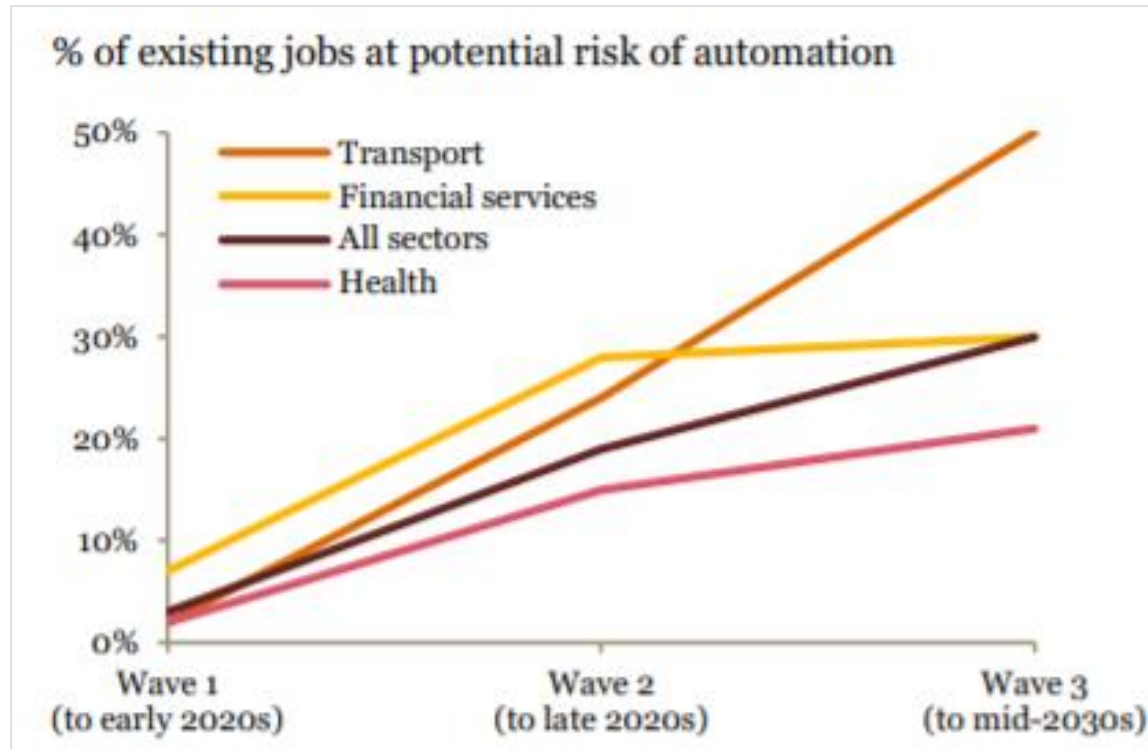


## Autonomy Wave

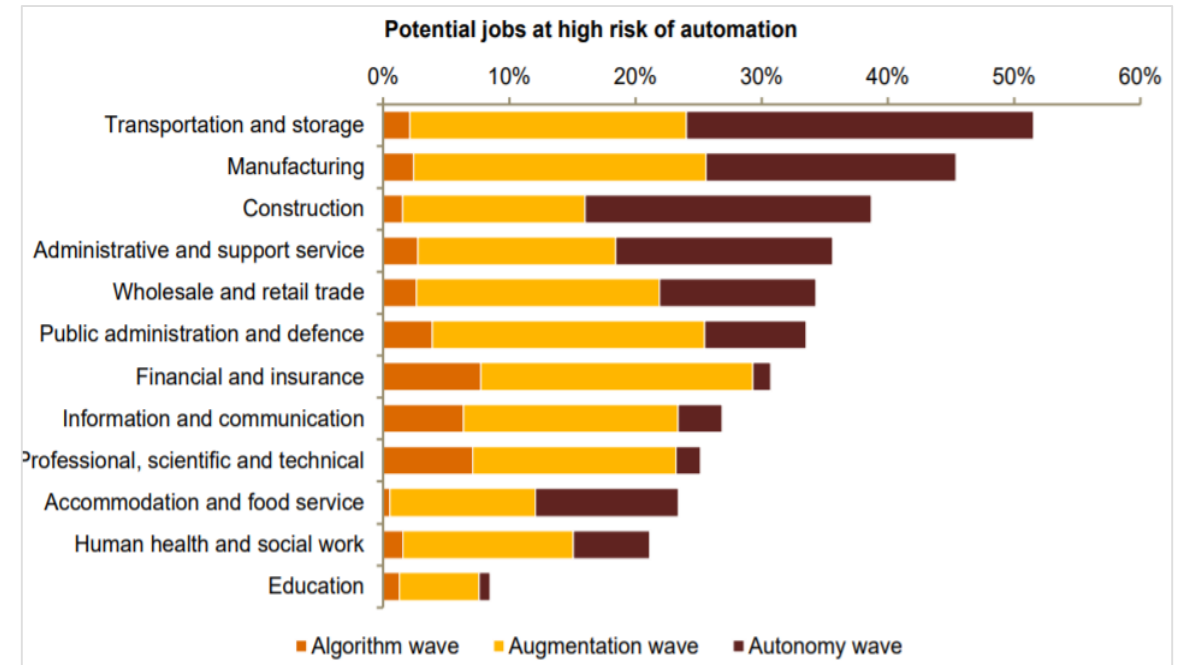
Automation of judgement based analyses such as assumption selection based on experience study output, or reinsurance purchase/risk management decisions. Use of Intelligent Process Automation technology.

Current to 2030's

# Every industry can see jobs at risk of automation – either today or in twenty years



Source: PwC estimates based on OECD PIAAC data (median values for 29 countries)



Source: PIAAC data, PwC analysis

# Which jobs are most impacted?.

Jobs are changing, but not always eliminated



### Disrupted

- Brokers
- Claims
- Finance
- Operations
- Procurement
- Technology
- Underwriting
- Actuary



### High Demand

- Analytics
- Cyber
- Innovation
- Marketing
- Risk
- Vendor Management
- Actuary



### New/Emerging

- Ethics
- Productivity
- Stakeholder Relations
- Wellness
- Actuary























































**In what ways do you think your role has been/will be impacted by automation?**





# Applying RPA to actuarial processes


| Function                | Task                                      | Suitability   | Complexity  | Value   |
|-------------------------|---|---|---|---|
| Pricing                 | Competitive Analysis                      |    |    |    |
|                         | Product Design                            |    |    |    |
|                         | Product Pricing                           |    |    |    |
|                         | Customer Illustrations                    |    |    |    |
| Experience Studies      | Experience Studies                        |    |    |    |
| Assumption Setting      | Assumption Setting                        |    |    |    |
| Valuation               | New Product Implementation                |    |    |    |
|                         | Production Runs                           |    |    |    |
|                         | Analysis of Change, P&L Attribution       |    |    |    |
|                         |   |   |   |   |
| Modeling and Projection | Economic Scenario Generation              |    |    |    |
|                         | Model Development                         |    |    |    |
|                         | Standard Scenarios' Projections           |    |    |    |
|                         | Sensitivity Testing and Scenario Analysis |  |  |  |
|                         | Capital Requirements                      |  |  |  |
| ALM                     | Asset Liability Analysis                  |  |  |  |
|                         | Hedging Strategy                          |  |  |  |

 Excellent

 Good

 Satisfactory

 Poor

 Very poor

# 4

Upskilling & preparing  
for modernization

# Upskilling for a digital world



So I think what we really mean about upskilling

# Workers are worried, and willing to upskill

**80%**

of CEOs are worried about the future availability of key skills

PwC's 21<sup>st</sup> CEO Survey of 1,293 CEOs in 85 countries

Disconnect

**74%**

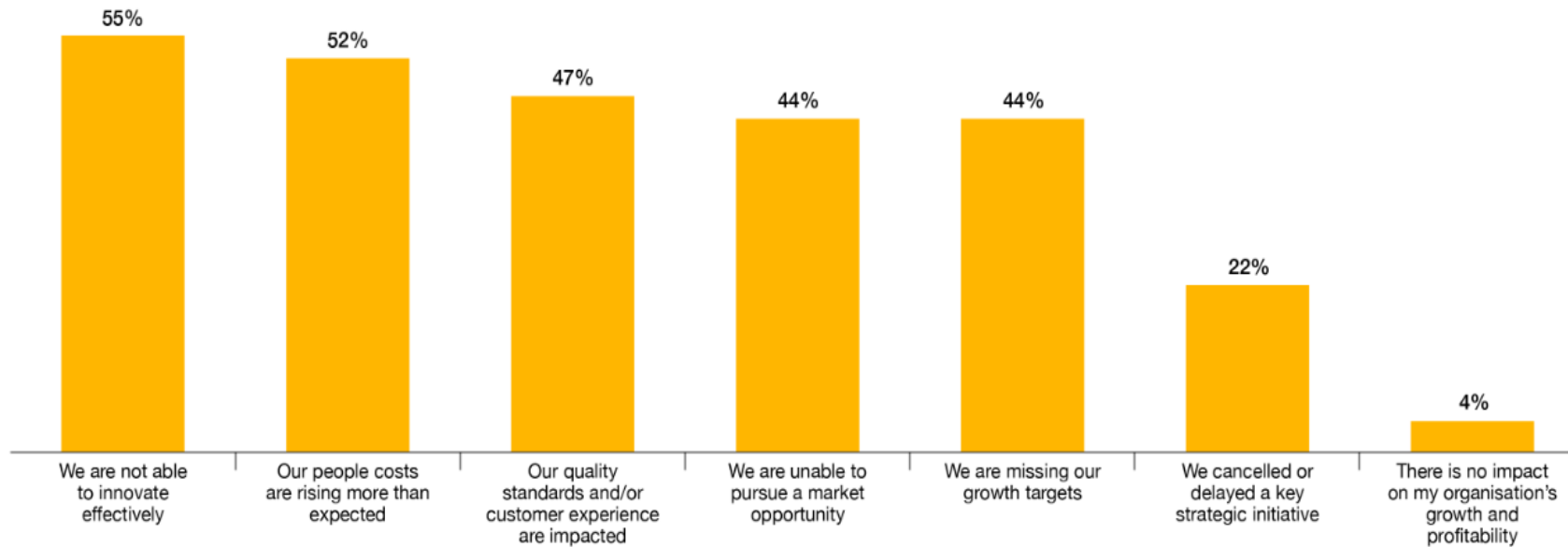
of the workforce is ready to learn new skills or completely retrain to remain employable

PwC 2017 survey of 10,029 members of the **general population** based in China, Germany, India, the UK and US

# How the lack of skills impacts business performance

## QUESTION

What impact is 'availability of key skills' having on your organization's growth prospects?  
(Asked of those respondents 'extremely concerned' about availability of key skills.)



Source: PwC, 22nd Annual Global CEO Survey  
Base: Global=473

**PwC**

Source: PwC 2017 survey of 10,029 members of the general population based in China, Germany, India, the UK and US



# Closing the skills gap

Globally, the solution to closing the skill gaps is **'significant retraining and upskilling'** as the best answer to closing the skills gap. North America's CEOs and CHRO's believe part of closing the gap is with **'establishing a strong pipeline direct from education.'**

31%

US CEOs believe that significant retraining or upskilling will help them to bridge the existing skills gap in their organization



31%

Another section of the US CEOs feels that establishing a strong pipeline direct from education



19%

US CEOs believe that hiring from outside the industry is going to solve the problem of lack of relevant skills



“

Business leaders can't protect outmoded jobs, but they are responsible for the people who hold those jobs.

**Talent Trends 2019: upskilling for a digital world**

Part of PwC's global annual CEO Survey



# How are our actuarial societies responding?

## Society of Actuary (SOA)

- SOA addition of required **Predictive Analytics exam** (for all streams), covering:
  - Predictive Analytics problems and tools
    - Use of Rstudio and implementation of basic R packages and commands
  - Data visualization
  - Data types and exploration
  - Data issues and resolution
  - Generalized linear models
  - Decision trees
  - Cluster and Principal Component analysis
  - Communication of predictive analysis results

### Other Upskilling Opportunities:

- General knowledge around applicable technologies
- Machine Learning
- Robotic Process Automation

## Casualty Actuarial Society (CAS)

- CAS Institute (subsidiary of CAS) offers a new certification on Predictive Analytics for insurance industry analytics professionals - **Certified Specialist in Predictive Analytics (CSPA)**, covering:
  - Property & Casualty insurance fundamentals
  - Primary concepts for analysis and modeling of P&C data and risks
  - Data concepts and visualization
  - Predictive modeling methods and techniques
  - Applied case study project
- CAS Meetings covering emerging topics in the industry (e.g. InsurTech, IoT, emerging products)

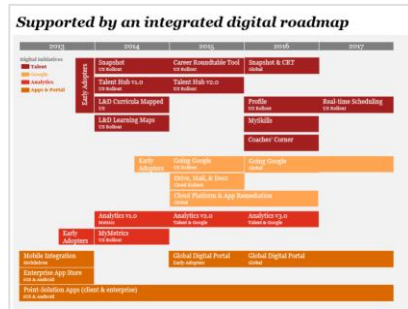
### Other Upskilling Opportunities:

- General knowledge around applicable technologies and impacts on the actuarial role
- Incorporation of emerging skills/topic areas in CAS curriculum



# Upskilling case study – Our PwC Journey

We are on our own multi-year workforce of the future transformation to deliver a differentiated and digitally enabled experience; we have seen a number of benefits in our attraction, development and retention of talent.



**2012**

- Defined the business case and multi-year digital roadmap
- Aligned leaders around the vision

**2**

**2013 - 2014**

- Launched renewed talent brand: 'The PwC Professional' based on refined digital competencies
- Revised mobility programs



**3**

**2014**

- Developed a culture of real time feedback supported by digital coaching and Performance Management tools

**4**

**2016**

- Launched new values globally
- Launched "Project Ignite" – shifting our global talent to 1 HR system on Workday



**5**

**2017**

- Developed and launched Digital Fitness Assessment app to US employees and leadership team to build digital capabilities
- 'Build' phase of Workday and begin business stakeholder engagement



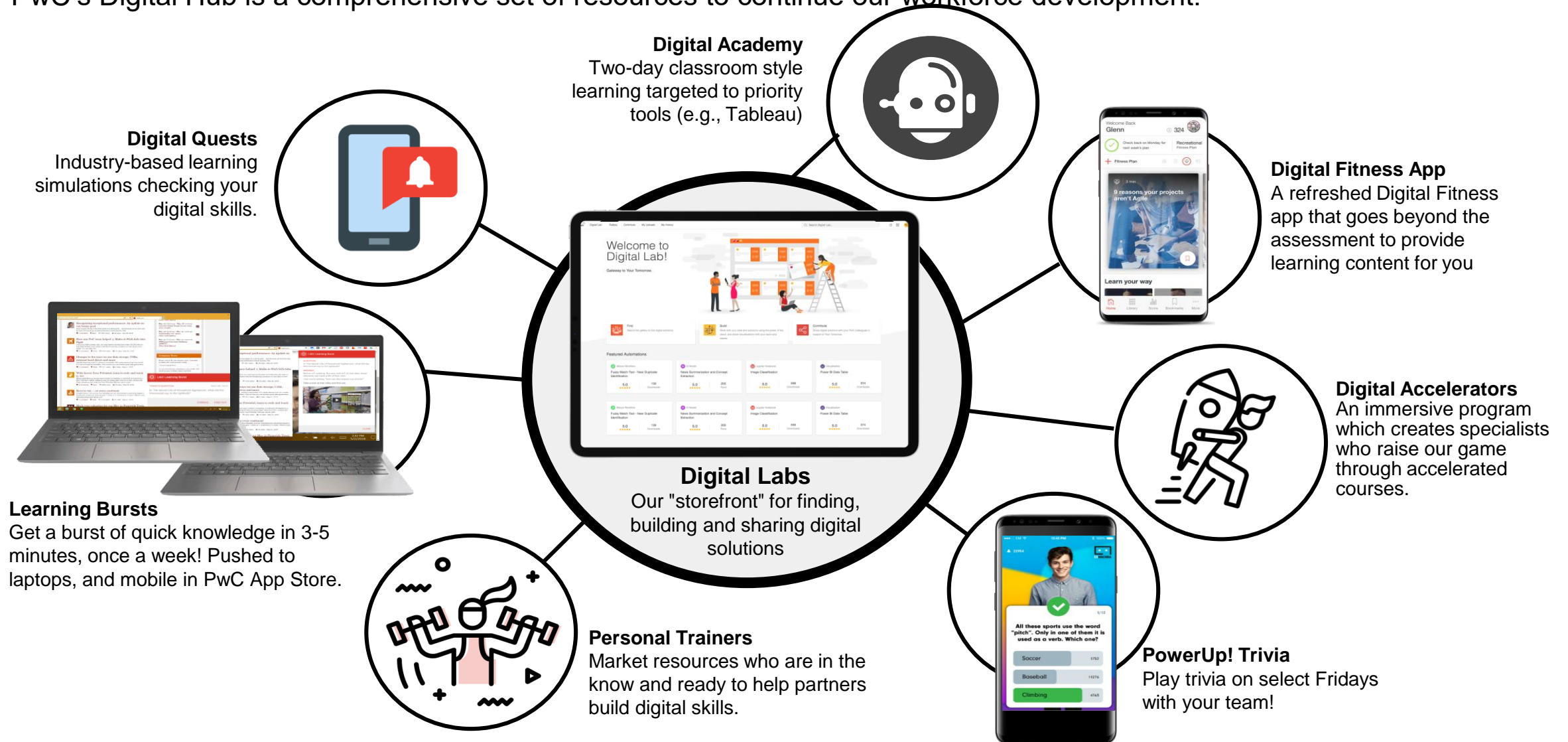
**6**

**2018 - Present**

- Launched Your Tomorrow Program to enhance our digital capabilities and to drive innovation on the ground (e.g., digital accelerators)







# PwC's Digital Hub

PwC's Digital Hub is a comprehensive set of resources to continue our workforce development.



# Six foundational steps to prepare

There are six foundational steps to get your financial institution ready for digital workforce transformation:

-  **Determine digital workforce goals** – Explicitly articulate the business benefits you expect to achieve through your digital upskilling investments.
-  **Tell a powerful story about the value of digital upskilling** – The narrative about the purpose and efforts of your transformation is critical to its success.
-  **Choose a focused launch point** – Select a limited segment of the workforce to pilot digital upskilling initiatives, as it allows for the dynamic revision of the digital workforce strategy over time.
-  **Connect the program with the rest of the organization** – The digital upskilling program should not exist in a silo, it is critical to connect the effort across the organization.
-  **Prepare for headwinds** – Launching a successful program can prove challenging and obstacles will inevitably arise, look in advance at the potential concerns people may have.
-  **Measure your progress and drive towards sustainable results** – The digital workforce strategy must extend far beyond learning and development techniques alone, and influence culture and ways of working



# 5

How can actuaries prepare?



## How prepared do you think your organization is to embed automation in the business and address the impacts on the workforce?



# Breaking down the “Actuary of the Future” challenge

There are unique challenges to the actuarial profession from the trends we’re seeing in the broader workforce.

## The Modernization Effect

How will Modernization impact the current and future actuarial workforce?

What new skills are needed and how will these be developed? What existing skills will no longer be needed and can be deprioritized?

How will companies handle those unable to adapt? Retain high performing actuaries? Attract new top talent?

How will boundaries between actuaries and other professions be impacted?

Short Term

## A Broader Impact

How can actuaries utilize strengths / training / education to expand into new areas of practice?

Where can actuaries add the most value? Where can we have the most impact?

What are the barriers to actuaries working in these areas (internal and external)?

How do actuarial credentialing / educational bodies need to adapt to improve accessibility to other areas for actuaries?

Short-to-Mid Term

## The Profession at Risk

In what ways is the profession itself most likely to be truly disrupted?

How will the changing nature of risk and the future of insurance pressure the profession to remain relevant?

What is the value of the actuary? What is the value of the credential? What defines an “actuary”?

When are we most likely to experience these pressures and what steps must be taken today to prepare for them?

Mid-to-Long Term

# Which areas of the economy are the actuarial skills most suited to?

|                                | Data Acquisition & Transformation | Methodology Research & Development | Model Development & Maintenance | Financial Planning | Results Analysis, Reporting & Communication | Risk Management | Predictive Analytics |
|--------------------------------|-----------------------------------|------------------------------------|---------------------------------|--------------------|---|-----------------|----------------------|
| Energy                         |                                   |                                    |                                 |                    |   |                 |                      |
| Materials/Industrials          |                                   |                                    |                                 |                    |   |                 |                      |
| Consumer Staples/Discretionary |                                   |                                    |                                 |                    |   |                 |                      |
| Healthcare                     |                                   |                                    |                                 |                    |   |                 |                      |
| Financials                     |                                   |                                    |                                 |                    |   |                 |                      |
| Information Technology         |                                   |                                    |                                 |                    |   |                 |                      |
| Communication Services         |                                   |                                    |                                 |                    |   |                 |                      |
| Utilities                      |                                   |                                    |                                 |                    |   |                 |                      |
| Real Estate                    |                                   |                                    |                                 |                    |   |                 |                      |
| Nonprofit and Government       |                                   |                                    |                                 |                    |   |                 |                      |

## Key

|  |                  |                   |                  |                 |
|--|------------------|-------------------|------------------|-----------------|
|  | Very well suited | Quite well suited | Less well suited | Not well suited |
|--|------------------|-------------------|------------------|-----------------|

# Tomorrow's “at risk” capabilities

1. **Data-driven decisions** We use insights from big data and advanced analytics in workforce decision-making. **(40%)**
2. **Skills gap** We use data analytics to predict and monitor skills gaps in our workforce. **(34%)**
3. **Remove bias** We use data analytics to de-bias hiring and rewards. **(34%)**
4. **Tech-savvy HR** Our HR leaders have a depth of understanding and insight into the technological landscape. **(34%)**
5. **Flexible talent** We are able to engage easily with flexible talent as and when they are needed. **(34%)**
6. **Manageable workloads** The workload is manageable enough at our company that employees are able to make full use of their vacation allowance and relax away from work pressures most evenings and weekends. **(33%)**
7. **Advanced workforce planning** We use sophisticated workforce planning and predictive analytics. **(33%)**
8. **Modern career paths** We have moved away from an ‘up-or-out’ career model towards multiple career paths that cater to diverse employee needs and aspirations. **(32%)**
9. **Adaptability** Our talent practices and processes (e.g. rotations, secondments, learning and development opportunities, etc.) are designed to nurture employee agility and adaptability. **(32%)**
10. **Ecosystem of workspaces** We have designed workspaces to promote wellbeing, for instance, with spaces for relaxation, recuperation, and to accommodate a variety of working styles. **(31%)**

Percentages based on: a survey of 1,246 business and HR leaders in 79 countries asked “how important are the following to the future of your organization?” and “to what extent do you agree or disagree with these statements right now?”





## What actions are most important for your organization to prepare for the future of work?

Hiring new talent

Upskilling current  
workforce

Using contingent  
workers to supplement  
skill gaps

All of the above

# 6

Closing remarks

# Where to begin – No regrets moves

Insurance firms should make digital investments to benefit current and future generations.

## Understand your current employee population

- Assess impacts once you have a through analysis of your people
- Know your population's capabilities and skills
- Understand key processes they follow

## Make sure you have good (enough) baseline data

- Learn about employees' current workload; time for execution of daily processes as well as where opportunities for efficiency exist
- Begin to analyze and assess where capacity can change post-automation

## Know your processes to transform

- Accelerate transformation with knowledge of your processes and policies
- This will help you understand when and how to execute your people transitions and develop your workforce transformation

## Invest in upskilling opportunities

- To remain competitive, a cultural and learning mindset shift is critical to success
- People need to adapt and deepen their skill sets to enable a culture of innovation and efficiency

## Identify the skills profile of your future workforce

- Gauge skills profile of your target workforce; align it to business targets and industry trends
- Predicting (and assessing) the new capabilities that you'll need will lead to tangible business benefits down the road

## Remember that this is an ongoing journey...

- Once automation of one task or process is complete, consider additional steps needed
- Extend automation and leverage lessons learned from previous rollouts

Q&A

# Thank you!



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[www.linkedin.com/in/jenna-jackson-96074311](https://www.linkedin.com/in/jenna-jackson-96074311)