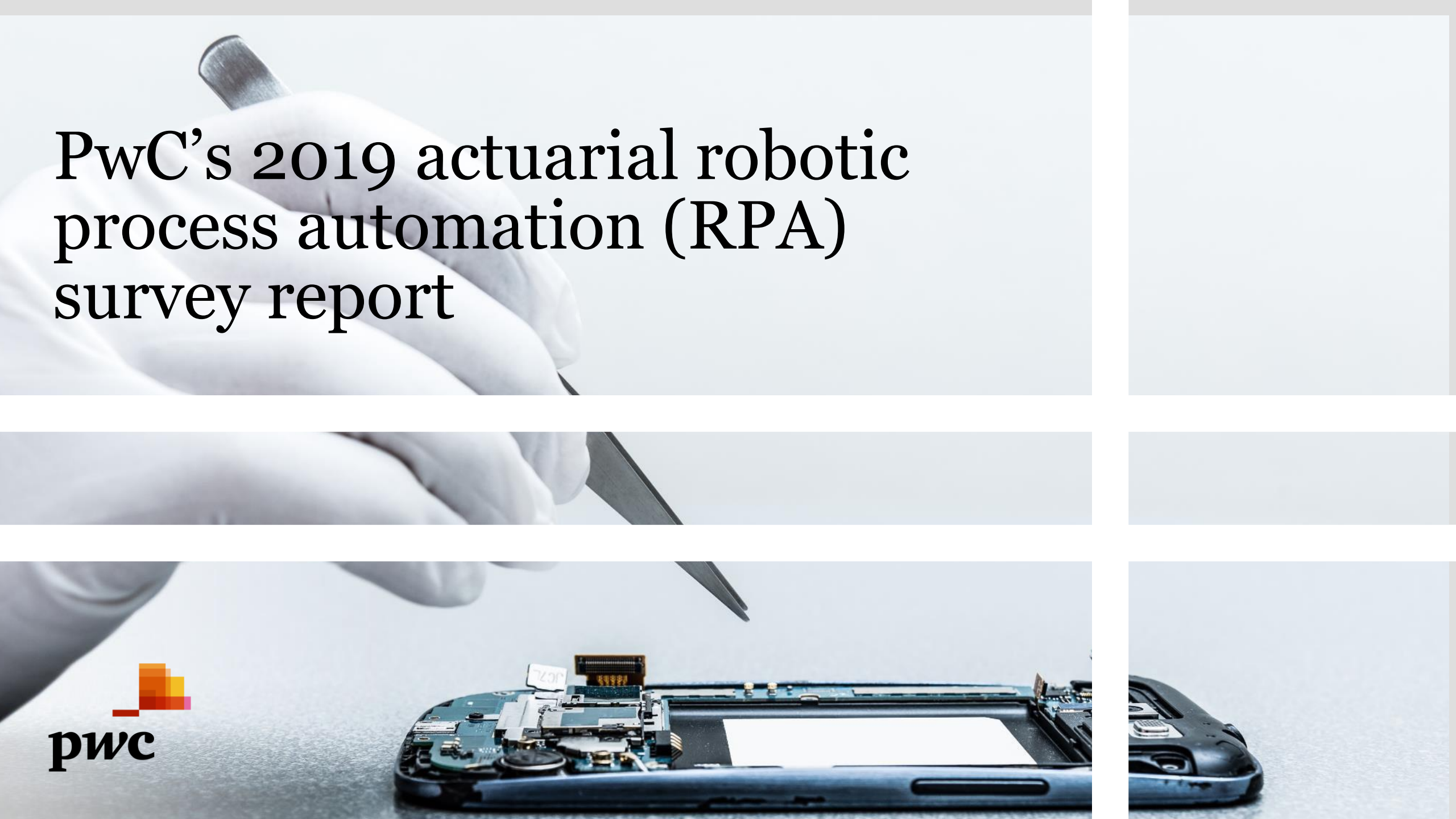
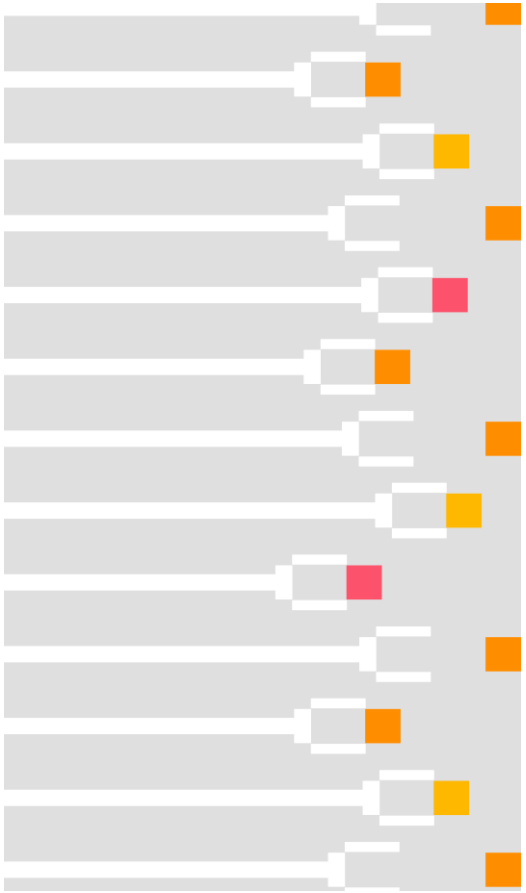
PwC's 2019 actuarial robotic process automation (RPA) survey report



Foreword



The demand for automation to reduce costs and make greater use of data has driven a push for adoption of new technologies in the financial services sector. However, the insurance industry has historically lagged behind its financial services counterparts in the exploration and adoption of automation, specifically through robotics. The actuarial function, in particular – while an exemplary candidate for the automation of data gathering, preparation, calculation, and reporting – has been slow to automate workflows and implement automation technology.

Innovative insurance carriers have begun turning to robotic process automation (RPA) software as a leading solution to automate workflows and streamline operational activities. RPA is the use of automated rules-based software that executes pre-programmed tasks across multiple platforms. While challenges exist in the design, implementation, and governance of RPA solutions, the benefits of scaling RPA across an enterprise, including deployment within actuarial function, can generate efficiencies to improve the bottom line.

PwC's 2019 actuarial RPA survey report investigates the current and future landscape of RPA within the actuarial function across several topics, exploration & adoption, risks & challenges, areas of use, and governance & controls. In addition, we explore the next steps in automation, intelligent process automation, software that incorporates cognitive intelligence to execute tasks and update rules based on "learned" trends, requiring minimal human oversight.

Key takeaways

01

Actuarial functions are still in early stages of adoption of RPA.

02

Life insurers tend to manage RPA more centrally than P&C insurers, through a dedicated RPA center of excellence.

03

There is significant opportunity for insurers to upskill around RPA.

04

Challenges in the adoption of RPA include technical complexity of implementation and instability of current operations.

05 Insurers currently use RPA primarily in data & reporting and finance/accounting processes and see potential opportunity in Actuarial processes.

Survey overview

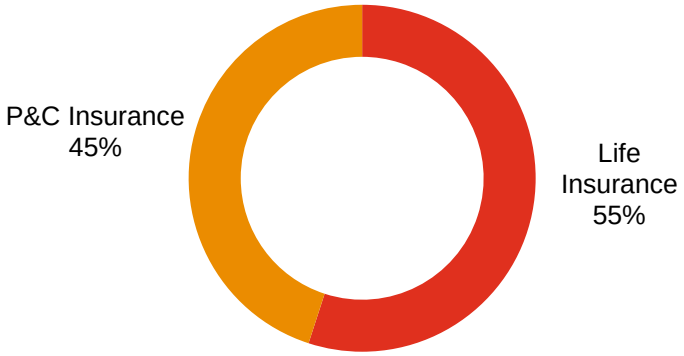
PwC conducted a survey in the 4th quarter of 2018 to understand the current state of the use of RPA technology to support actuarial processes for both Life and P&C companies. We asked approximately 15 questions covering exploration & adoption, risks & challenges, areas of use, and governance & controls.

A total of 44 companies participated in the survey: 20 P&C and 24 Life. For purposes of categorizing responses, company size was assigned based on the company-wide global gross written premium. (P&C: Large: > 10bn US$, Medium: >2bn US$, Small: <2bn US$; Life: Large >10bn US$, Medium >3.5bn US$, Small: <3.5bn US$). Based on this criteria, 15 companies were classified as large, 16 as medium and 13 as small.

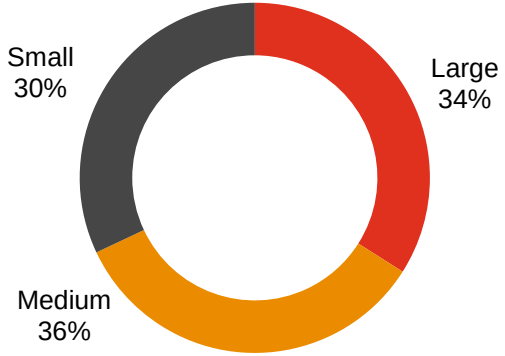
Of the survey respondents approximately 80% were aligned with the actuarial function. Other respondents were from the finance, information technology, management or RPA center of excellence functions.

Participant Data

Types of Insurance Carrier



Size of Insurance Carrier

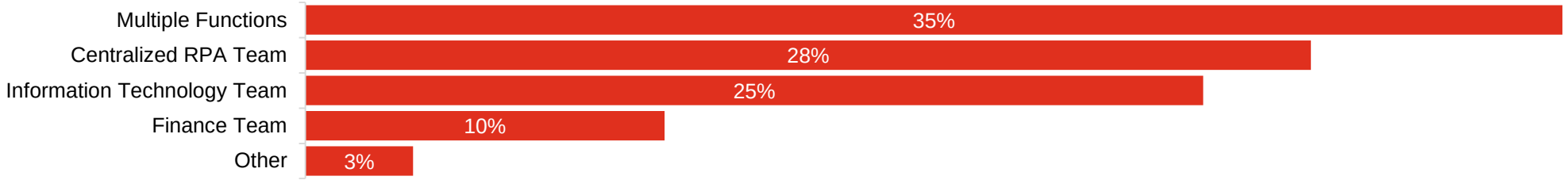


RPA uses by insurers

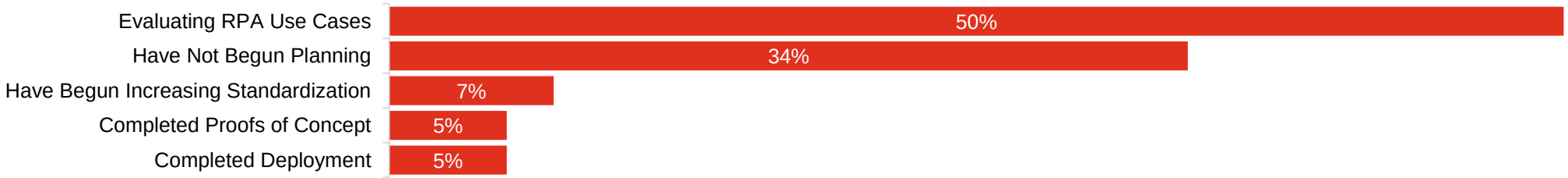
RPA tends to be more centrally managed in Life insurers than P&C insurers. P&C respondents tended to have multiple functions exploring RPA usage on a case-by-case basis.

The actuarial departments within survey respondents are at an early stage of RPA exploration, with 90% of insurers having not made any meaningful progress to RPA implementation and therefore realizing the benefits/cost efficiencies that they have to offer. Life companies were better progressed than P&C companies in their actuarial RPA journey.

Who is leading RPA exploration within your organization?



Where is the Actuarial function in your organization's exploration of RPA?



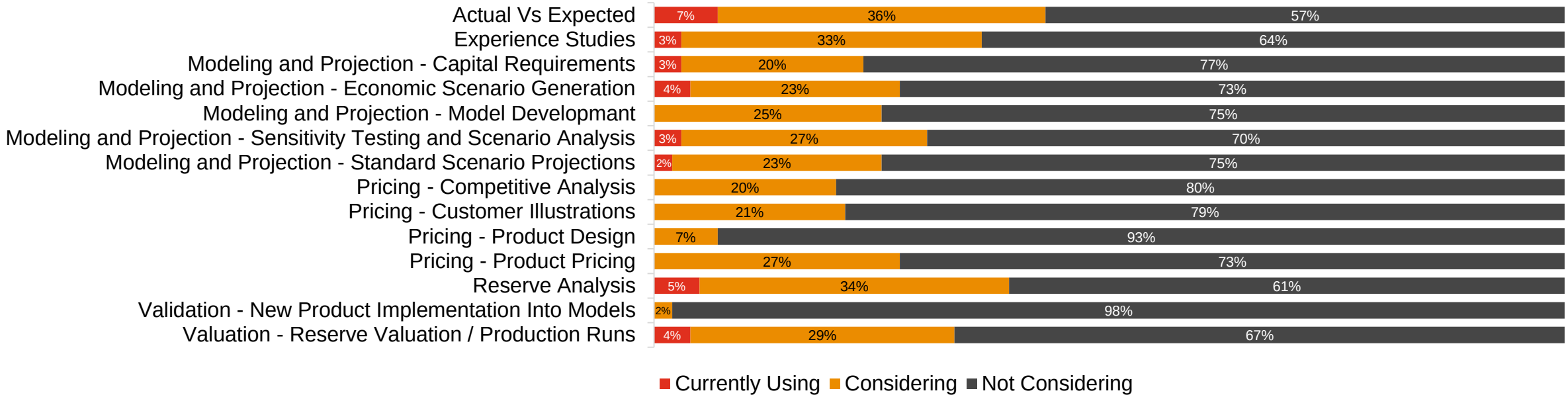
The following 5 slides detail the current state of use of RPA technology within various functions at insurers.

Foreword | Key Takeaways | Survey Overview | RPA Uses by Insurers | RPA Uses by Case | Impact on Offshoring | Tools and Governance | Skills Assessment and Development | What's Next: IPA

Use of RPA within different functions in the insurer

Actuarial Processes

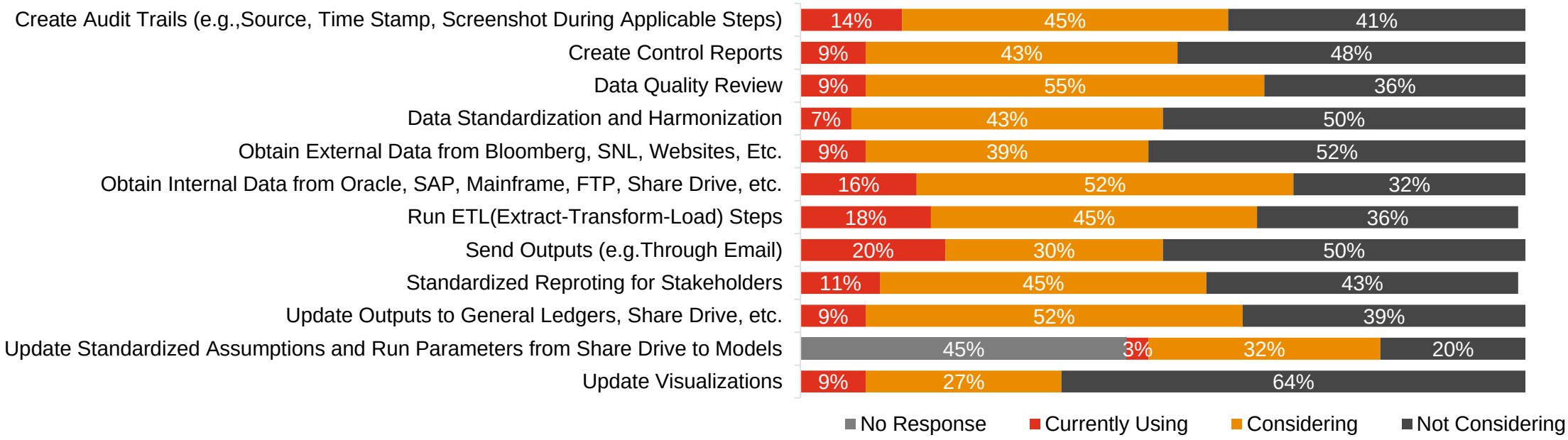
Life insurers are considering the use of RPA within more actuarial processes than P&C insurers. Product design and new product additions in validation models are the two main areas where the least respondents are considering the use of RPA.



Use of RPA within different functions in the insurer (continued)

Data and Reporting Processes

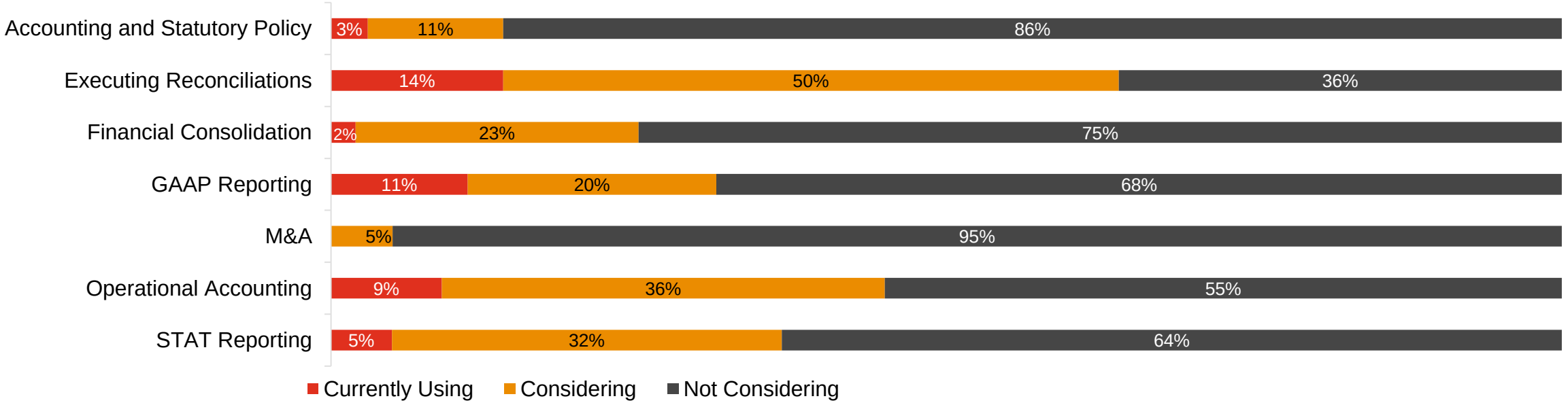
The current processes where RPA are most frequently used are sending outputs and running ETL (Extract-Transform-Load) steps. Life Insurers are considering the use of RPA within more data and reporting processes than P&C insurers.



Use of RPA within different functions in the insurer (continued)

Finance/Accounting Processes

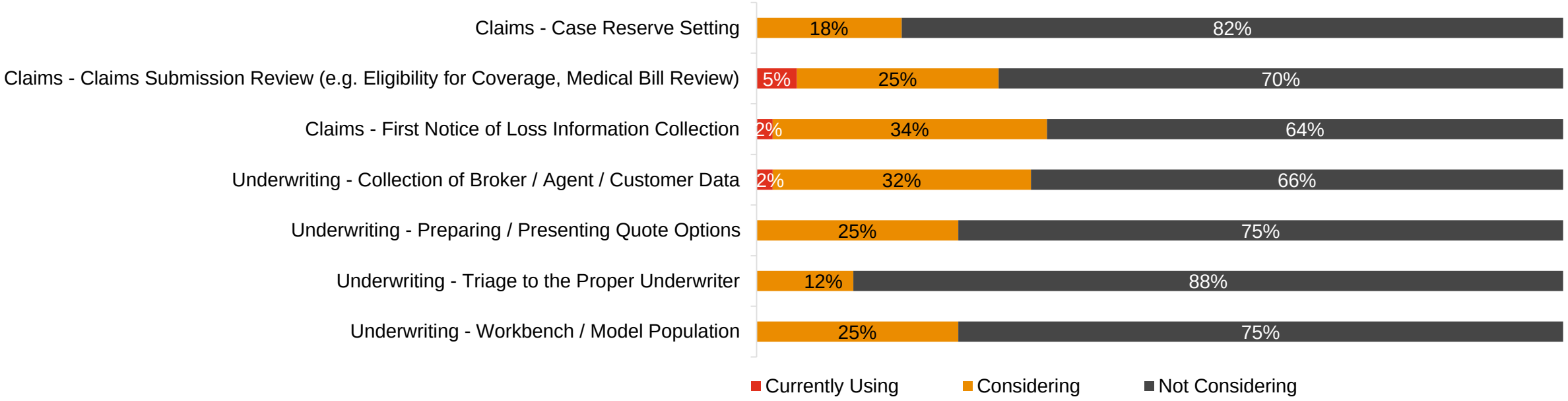
The majority of respondents are currently using or considering the use of RPA in executing reconciliations, given the ability to gain scale by standardizing process steps.



Use of RPA within different functions in the insurer (continued)

Operations Processes

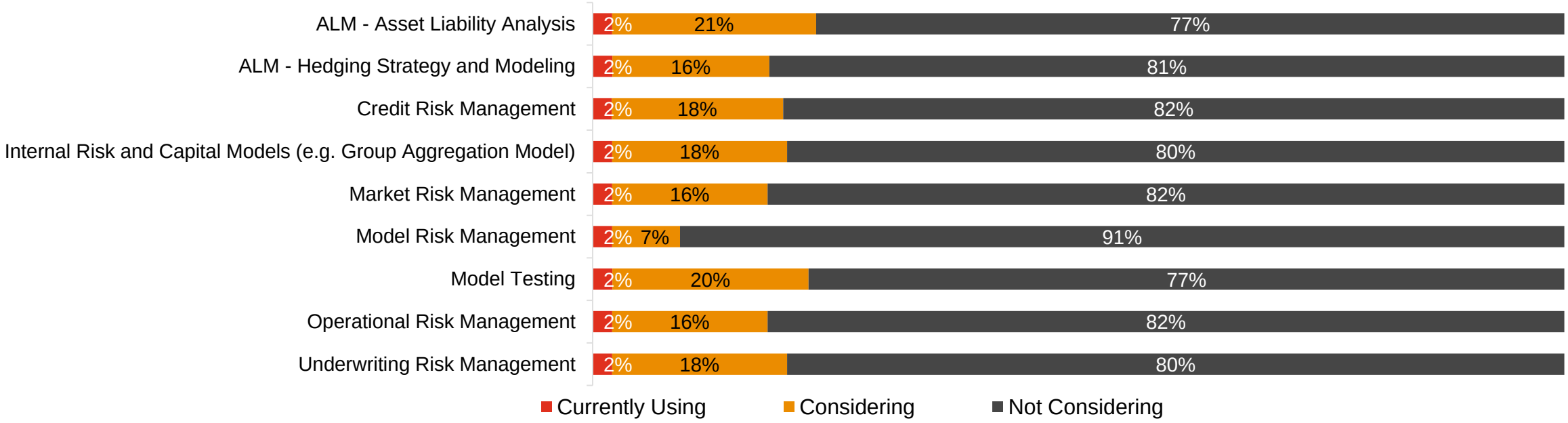
No responding P&C insurer is currently using RPA in any of the claims or underwriting processes cited below, and the majority are not considering its use at this time. Life insurers are more readily considering the use of RPA within these processes.



Use of RPA within different functions in the insurer (continued)

Risk Management Processes

No P&C insurer is currently using RPA in any risk management process and the majority are not considering its use in any of the processes cited below. Asset liability analysis is the area where life insurers are most readily considering the use of RPA.

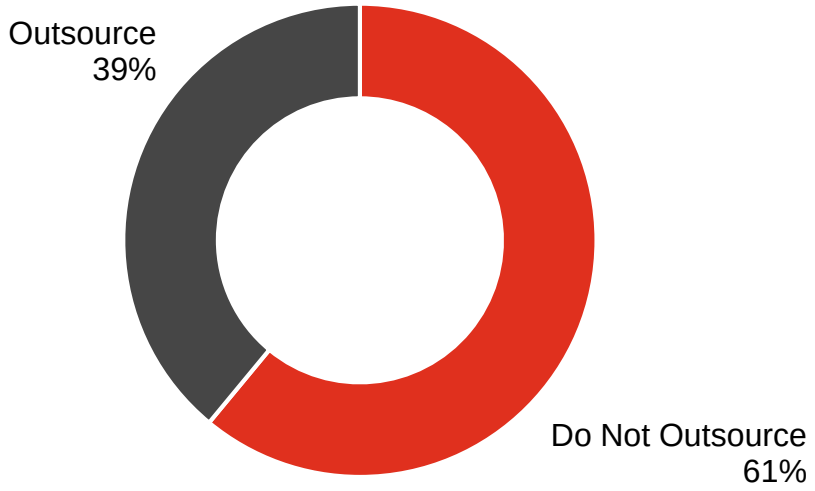


RPA's Impact on outsourcing/offshoring

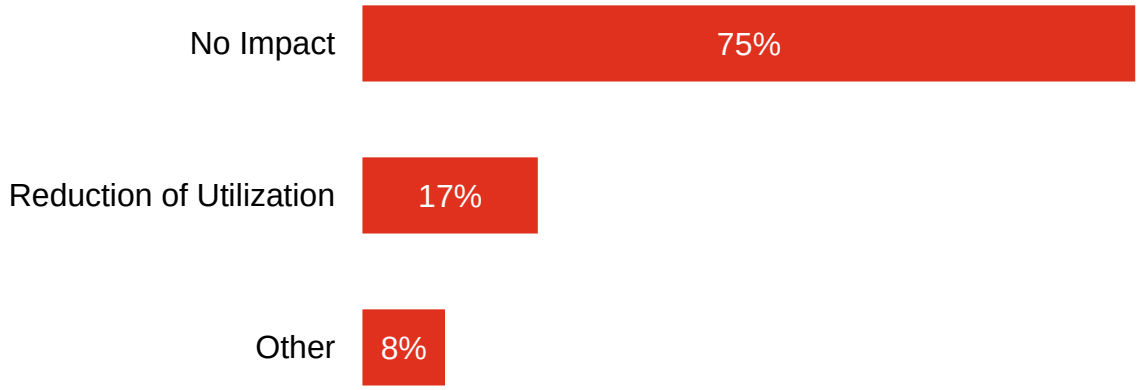
Over 60% of survey respondents do not currently use outsourcing/offshoring solutions within the actuarial function.

Of the respondents who currently use outsourcing/offshoring, the majority do not expect that RPA will have an impact on the utilization of outsourcing/offshoring levels. However, a quarter of P&C respondents think that RPA will impact the use of outsourcing/offshoring, whereas no life insurers think this will be the case.

How are organizations deploying outsourcing?



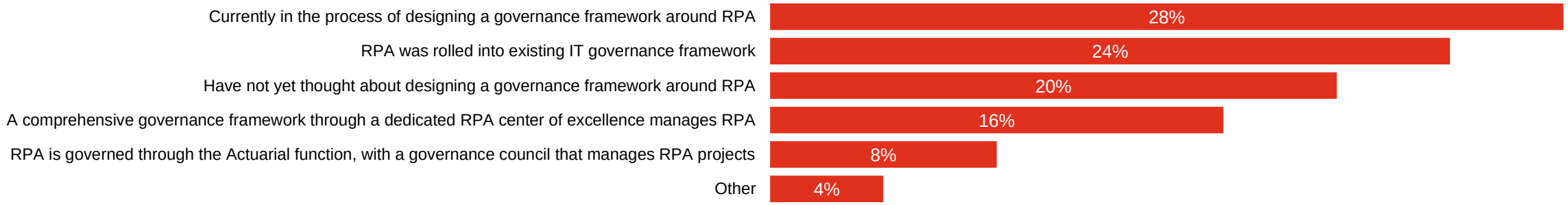
How will the use of RPA impact outsourcing solutions within the Actuarial function?



RPA Tools and governance

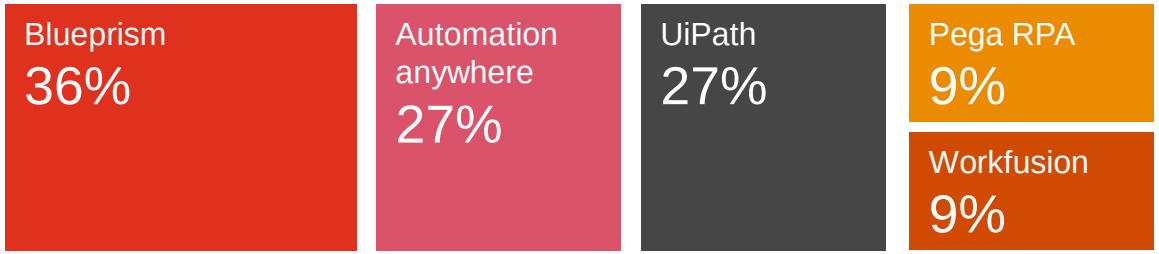
RPA tends to be more centrally managed in Life insurers than P&C insurers, with life insurers displaying a higher likelihood of maintaining a comprehensive governance framework through a dedicated RPA center of excellence manages RPA. Only half of our respondents have a governance framework in place. There are a variety of RPA tools currently being used in RPA implementations with no clear market leaders.

How are organizations governing RPA ?

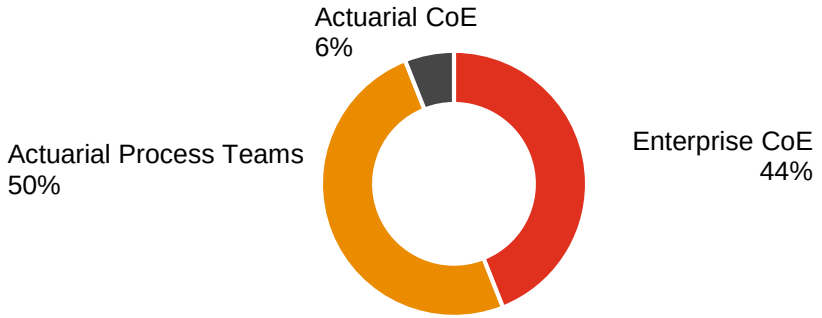


Which tool is being used ?

As some companies use more than one tool, the percentages in this graphic total to more than 100%



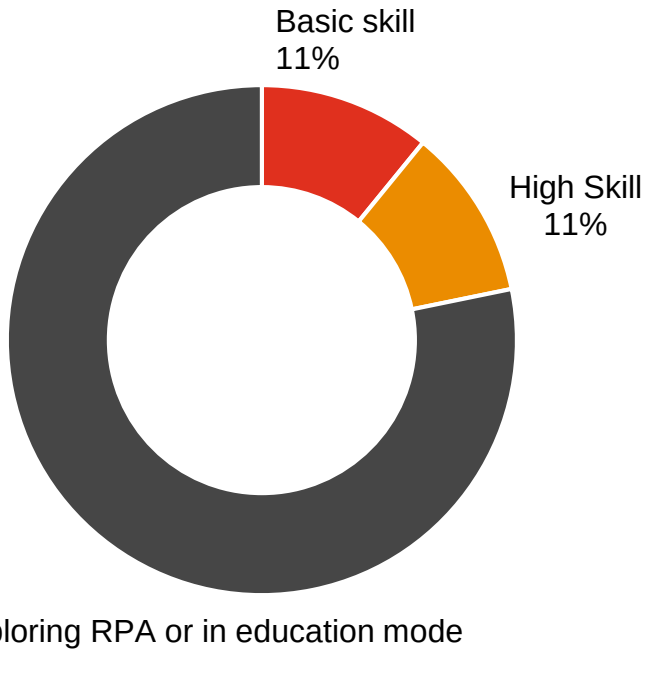
Which internal parties manage RPA?



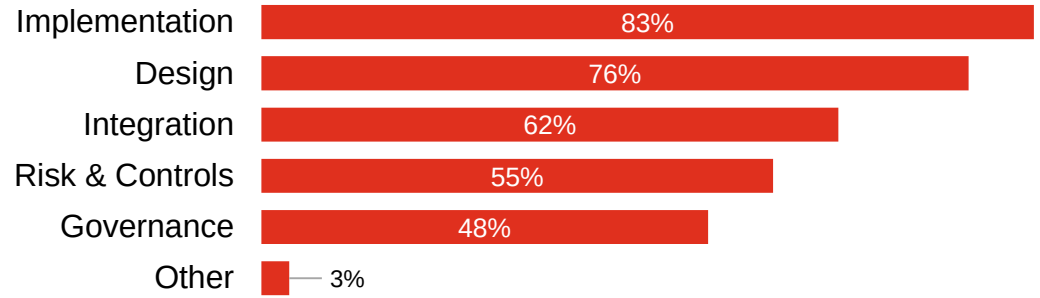
Skill and development of RPA

Nearly 80% of survey respondents are either not currently using RPA within the actuarial team or are in education mode in terms of their skills, with the primary area of focus for improvement of skills being in the implementation of RPA. Life and P&C insurers see their top challenges in trying to apply RPA techniques resulting from technical complexity of underlying processes and a lack of stability of existing processes.

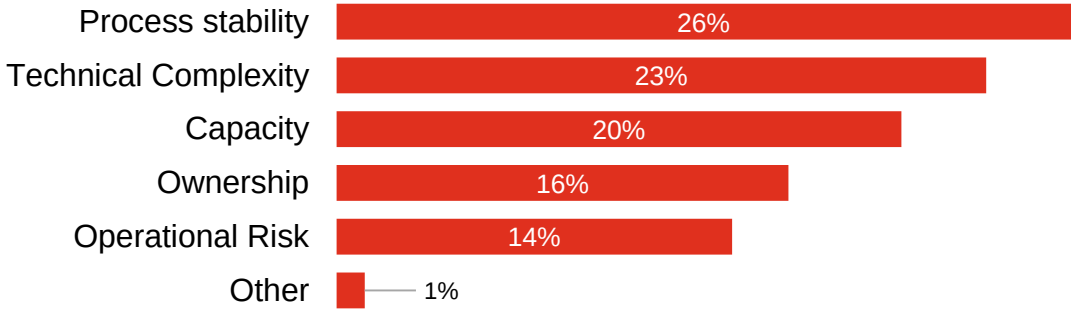
Current skill level within Actuarial team



Top areas for improvement



Top risks and/or challenges of adoption of RPA



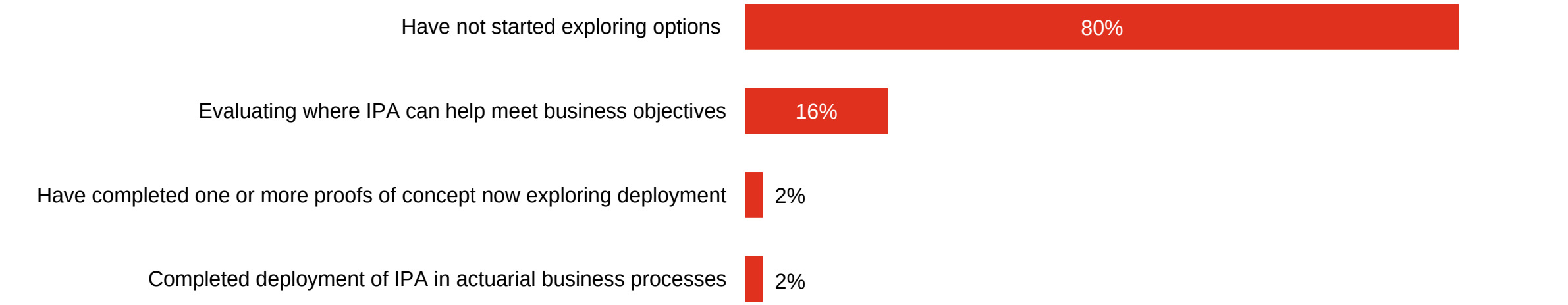
Looking Forward – Intelligent Process Automation

Intelligent Process Automation (IPA) incorporates cognitive intelligence to execute tasks and update rules based on “learned” trends, requiring minimal human oversight.

The majority of respondents have not yet started considering the adoption of IPA within their actuarial function.

We expect to see increased exploration (and ultimately adoption) of IPA in the next few years, particularly in areas such as experience analysis, trend analysis, and data quality remediation. IPA has the potential to significantly enhance our traditional application of actuarial judgment in these cases, perhaps uncovering new insights and complex data interactions.

Where is your Actuarial function in the adoption of IPA (Intelligent Process Automation)?



Thank you

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