

# 4<sup>th</sup> **INDONESIAN ACTUARIES SUMMIT 2019**

**"ACTUARY AND BUSINESS ETHICS"**



**NOVOTEL LAMPUNG, 28<sup>th</sup> -29<sup>th</sup> MARCH 2019**

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"ACTUARY AND BUSINESS ETHICS"

## **The Actuarial Roles in Data and Systems for IFRS 17 compliance**

**Rudi Winklhofer  
& Mehul Dave**

**Deloitte.**

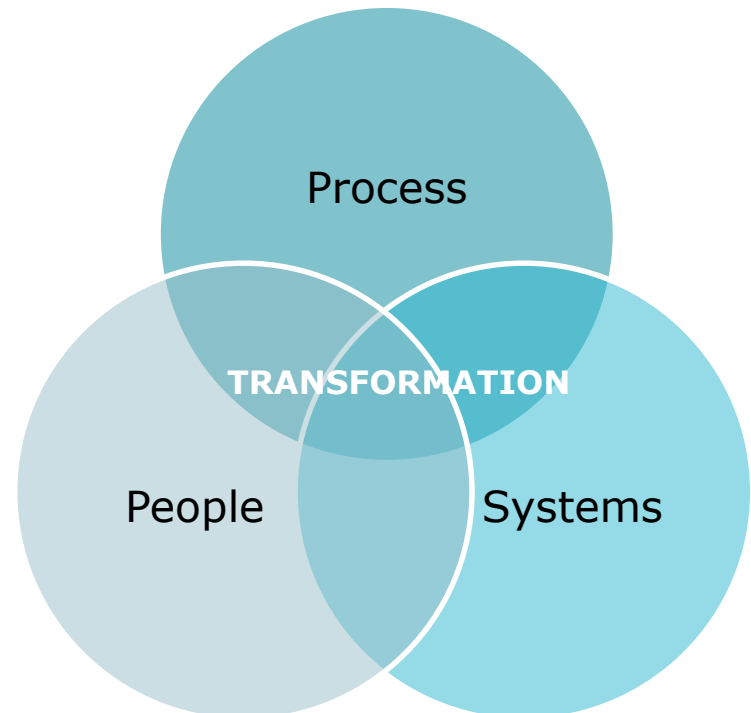
**[rwinklhofer@deloitte.com](mailto:rwinklhofer@deloitte.com) (+65 8157 6654)**

**[mehdave@deloitte.com](mailto:mehdave@deloitte.com) (+65 9789 7444)**

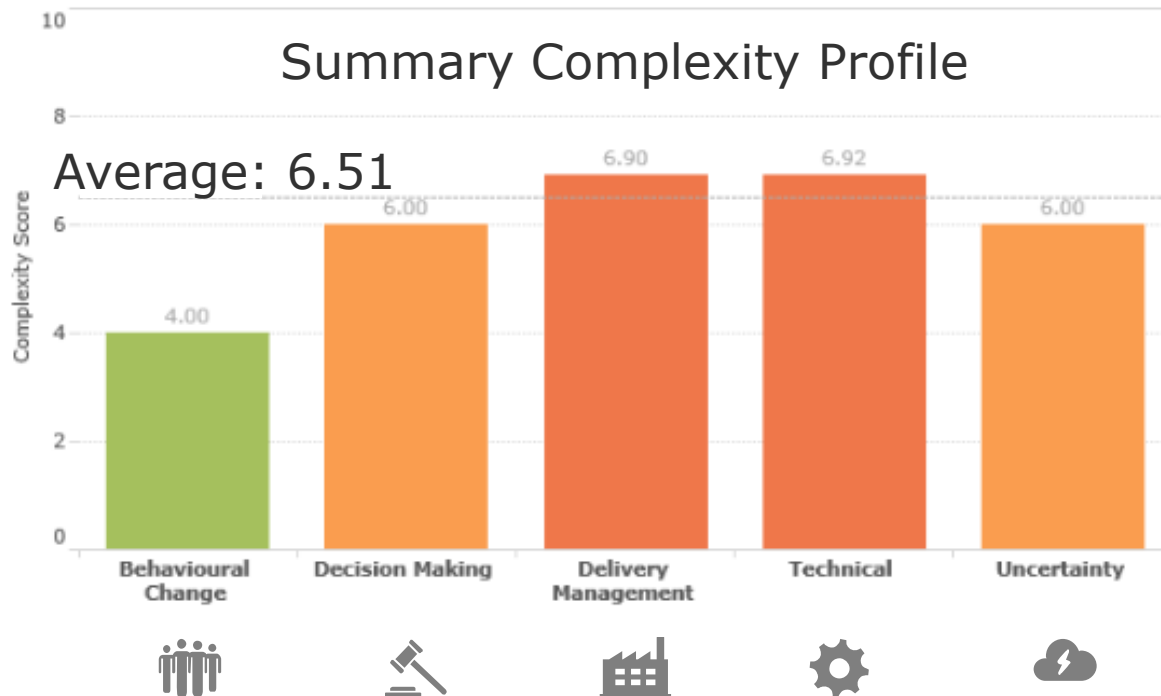
**IFRS 17 is a key  
transformation for the  
Insurance Industry**

# What is an Insurance Transformation?

- An Insurance Transformation is a fundamental change to an the operations of an insurer, across People, Process and Systems
- IFRS 17 is a major Finance and Actuarial transformation for insurers and the industry
- IFRS 17 will instill significant change for Processes and Systems, with a lesser impact for People change



# How complex will IFRS 17 transformation be?

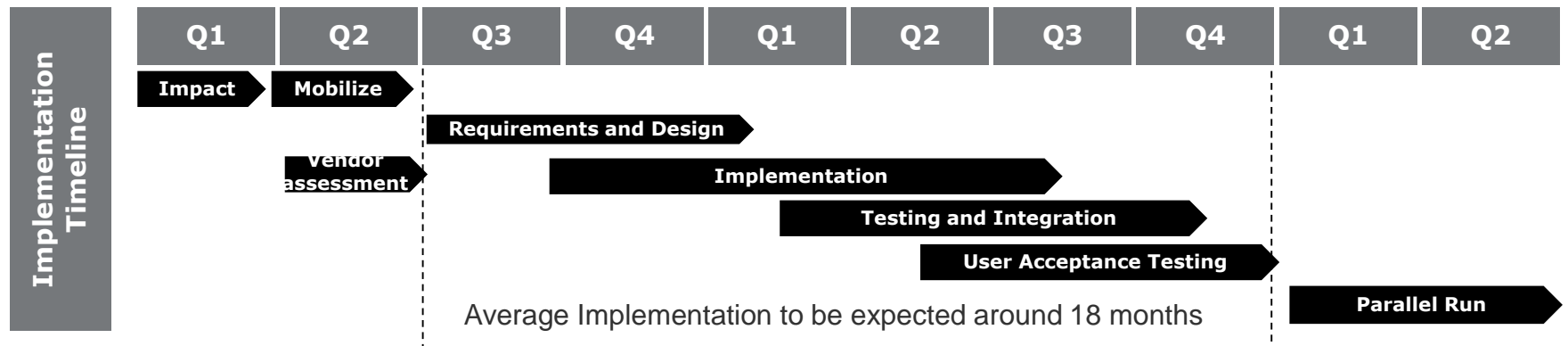


- Solvency II programmes scored an average of 6.6 from a possible maximum complexity of 10.
- Programmes that register this complexity are generally larger programmes which have a high degree of complexity and impact several functions.

# Transformation Timeline and Project Phases

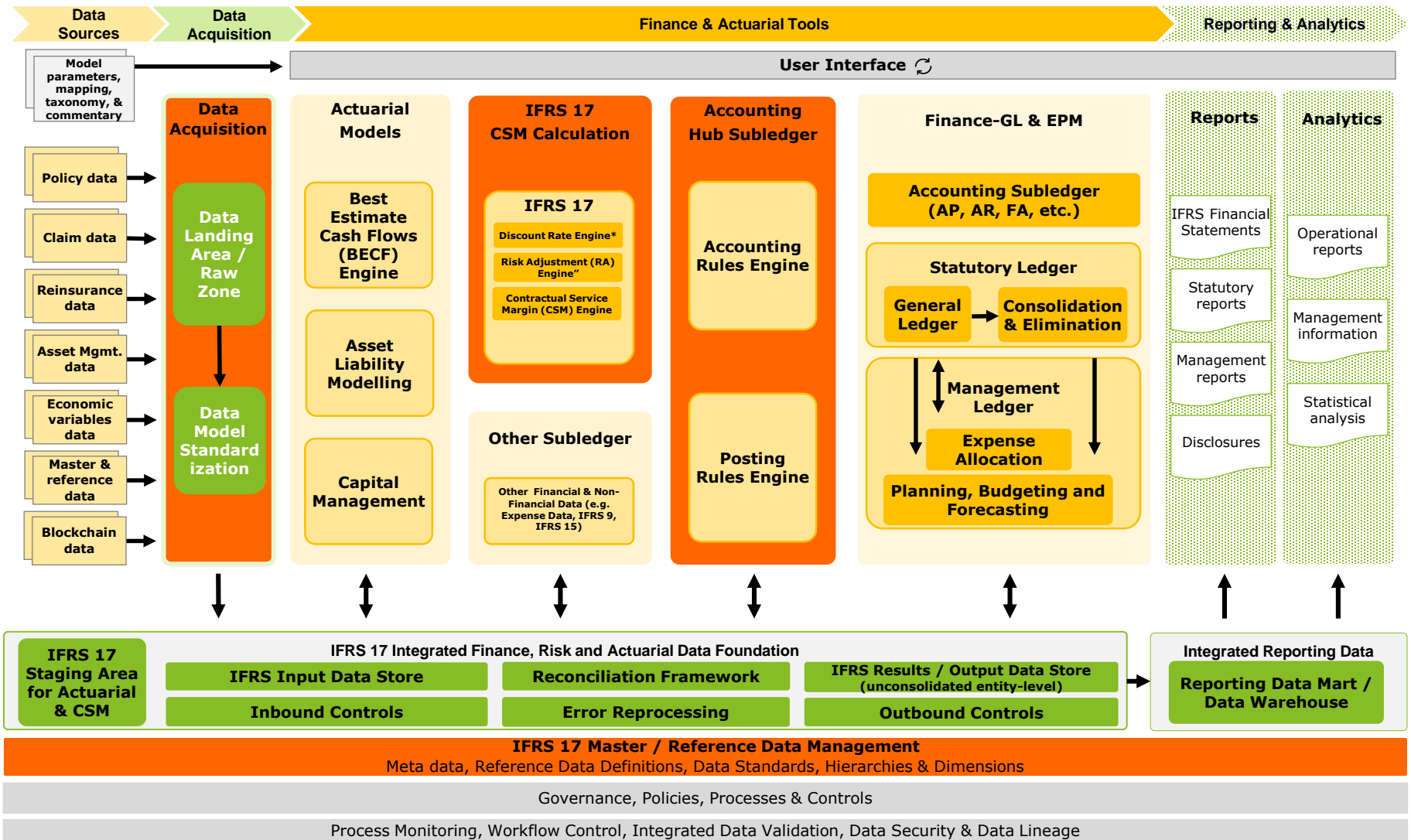
## Phases of an IFRS 17 Transformation Project

- **Impact** – Financial- and Business Impact Assessment
- **Mobilize** – governance, planning, resourcing, budgeting,
- **Requirements** – capture and document end-state IFRS 17 requirements
- **Design** – produce functional and technical designs that meet requirements, including new processes
- **Vendor Assessment** – choose and procure tools and systems and service providers to support IFRS 17
- **Implementation** – build new tools and systems, and implement new processes
- **Testing and Integration** – test new tools, systems and processes in isolation and end-to-end
- **User Acceptance Testing** – acceptance by end-users of IFRS 17 tools, systems and processes
- **Parallel Run and Remediate** – run IFRS 17 in parallel through 2020 and remediate known issues



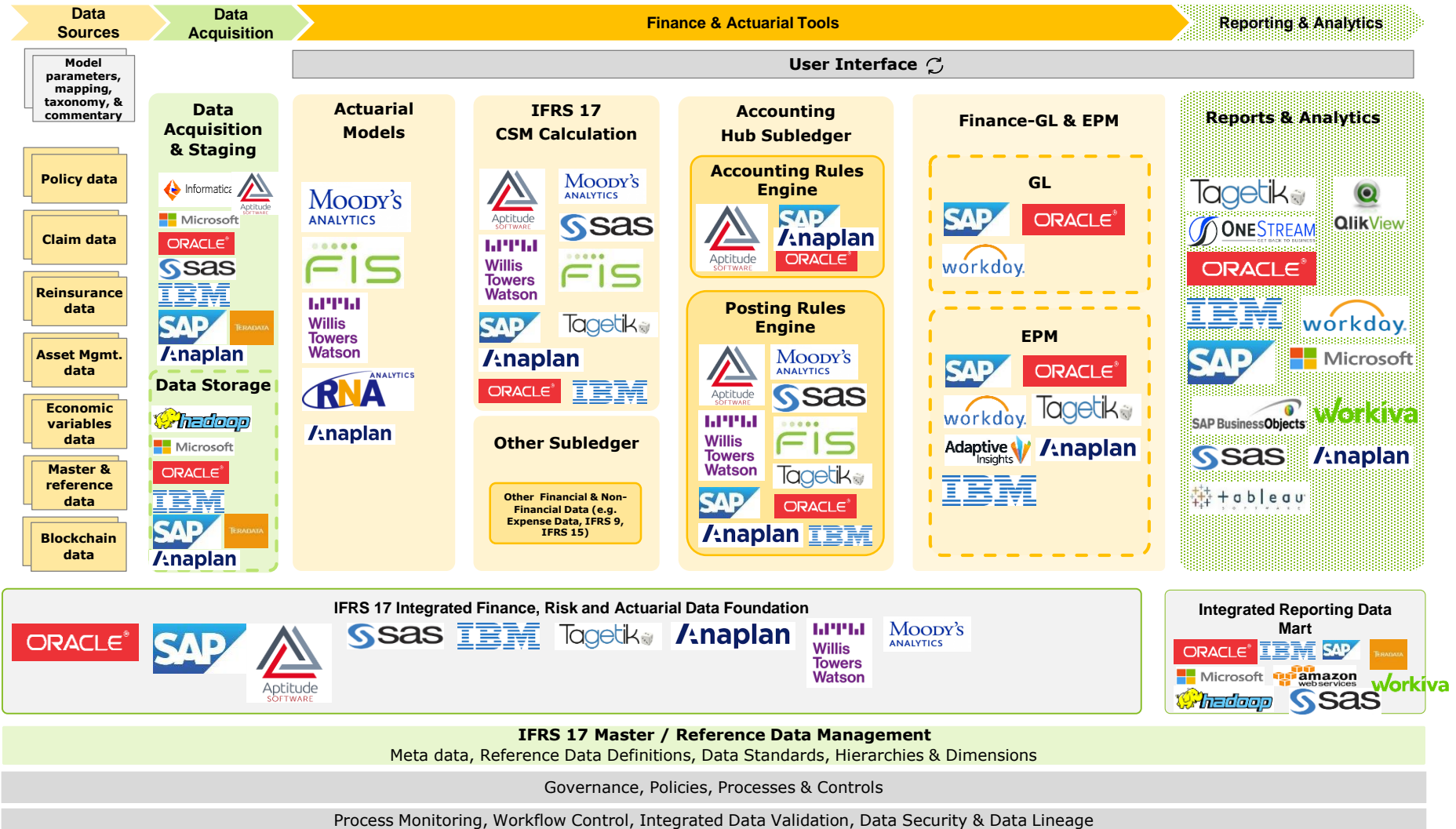
# **Data and Systems Impact of IFRS17**

# Reference Architecture for IFRS 17

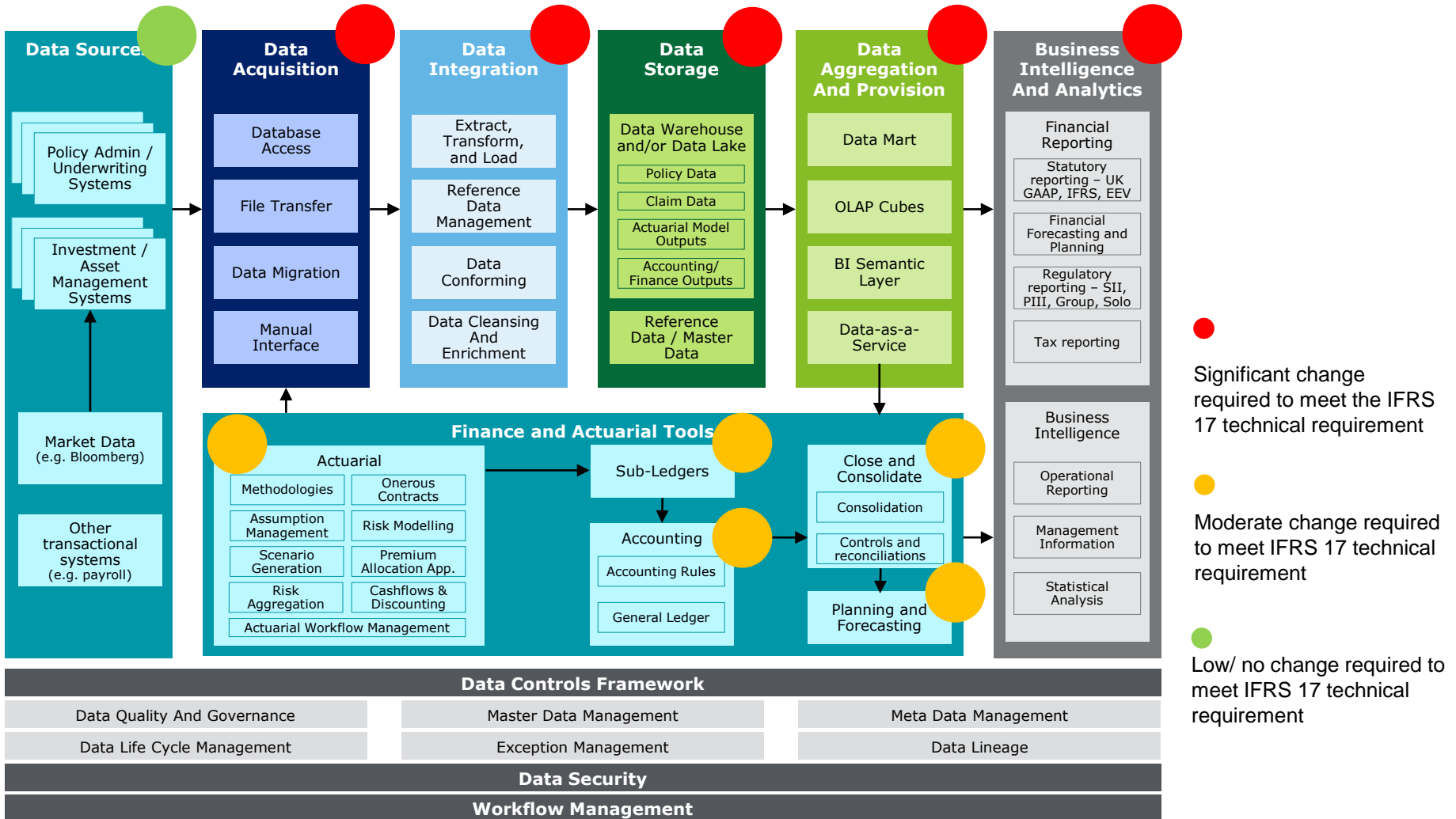


\* The Discount Rate and Risk Adjustment Engines may also be found within the actuarial systems. Where these will be utilized is an important upfront decision.

# Vendor Solution Landscape



# Data Implications with IFRS 17



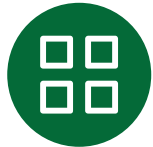
**IFRS17:  
An Opportunity for the  
Exponential Actuary?**

# Actuarial Pain Points – Can They Be Removed?

Current actuarial processes are typically manual, time-consuming and often not value-add.



**200+ spreadsheets** linked together to calculate, capture, and allocate investment income



**10,000 unique tools** and spreadsheets required for monthly actuarial financial reporting processes



**90 people** involved in a **6 month** process of updating regulatory AAT memos



1,500 hours spent annually **drafting 500** actuarial reports after analysis has been completed



1,000 model output files **manually copied** and aggregated to refresh Actuarial results



Life Insurance company **doesn't know** how many 90+ year olds they insure



Users wake up at **2:00 a.m.** to confirm models have successfully completed and to kick-off next job



**300 plus Actuarial** models all need to be maintained, updated, and launched manually and reconciled



Company produces **150 product filings** every year



Decentralized business model has **inconsistencies and redundancy** in roles, tools, and approach

# IFRS 17 – The opportunity

## Challenging the Status Quo



With IFRS 17 significantly increasing the complexity of global reporting standards, merely ‘doing more of the same’ will not be enough to meet IFRS 17 requirements



An opportunity to imagine far into the future, imagine what technologies we may have available to us to reach and exceed IFRS 17 requirements and imagine the exponential value we can create with new capabilities enabled by technology.



With this picture of the future, we can begin planning and launching initiatives TODAY. The aim is to begin testing and learning and getting smarter over time so that when IFRS17 arrives, we are not only ahead of the game to meet IFRS17, we will be dictating the game and the future of the way actuaries work.

# Annual Valuation Process
























Ripe for exponential change with the introduction of IFRS 17.



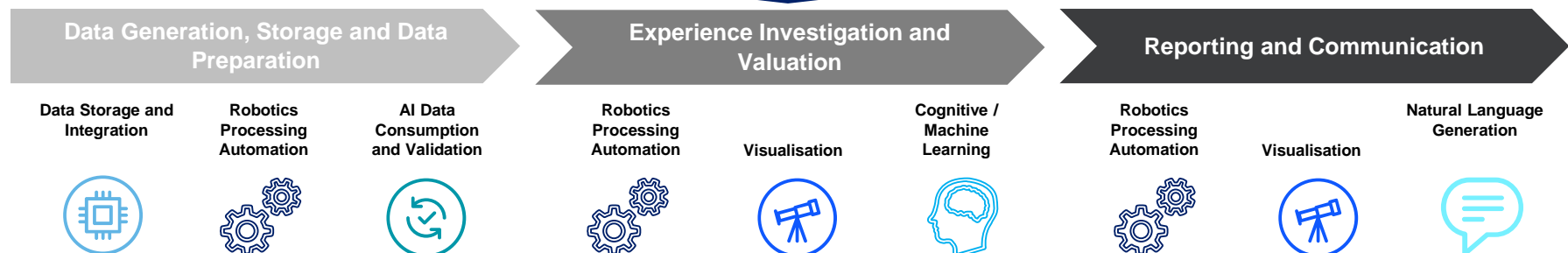
- Discount Rate, CSM & Policy Groupings will need to be maintained from policy inception to termination
- Output from model in one valuation period will need to be used in subsequent valuations (eg CSM)
- Existing Tools may not be adequate
- EI will need to be more granular to track experience for groupings and inform remedial action to avoid onerous contracts. Hard to perform manually
- IFRS17 Compliant models need to be built
- Model will be more complex and good planning is required
- Actuarial teams will need to be trained to use the new models
- Additional pressures due to more complex reporting, including timelines.
- Significant increase in disclosures requirement
- More information from valuation will make communication of results more complex

# Exponential Enablers and Tools

Some companies are investing in new technologies whilst they enhance their IFRS 17 processes. All of the technology enablers below already exist in actuarial processes.

Technology Enabler	Description	Key Solutions Providers
 <b>Data Storage and Integration</b>	Scalable analytics platforms for processing large volumes of structured and unstructured, internal and external data. Can be used to accelerate integration and access to varied types of datasets.	  
 <b>AI Data Consumption and Validation</b>	Converts and/or maps data from one "raw" form into another format that allows for more convenient consumption of the data with the assistance of semi-automated tools.	   
 <b>Robotics Processing Automation</b>	Replicate the repeatable, non-cognitive actions of a human interacting with the user interface of a computer system; it can open email attachments, scrape web data, fill in forms, etc.	   
 <b>Natural Language Generation</b>	Consumes structured data and transforms it into human readable narratives based on custom business rules.	 
 <b>Cognitive / Machine Learning</b>	Uses topological data analysis, neural networks, or other machine learning algorithms to reveal patterns and relationships in data that can be used for model feature development and validation.	 
 <b>Visualisation</b>	Uses graphs and tables to communicate data, results and key messages in an intuitive manner. Can be used for static reporting or in a self-service, drill-down manner.	 

## Enablers for Key Process Areas



**Thank you!**  
**Q&A**