



ACTUARIAL SOCIETY
OF SOUTH AFRICA

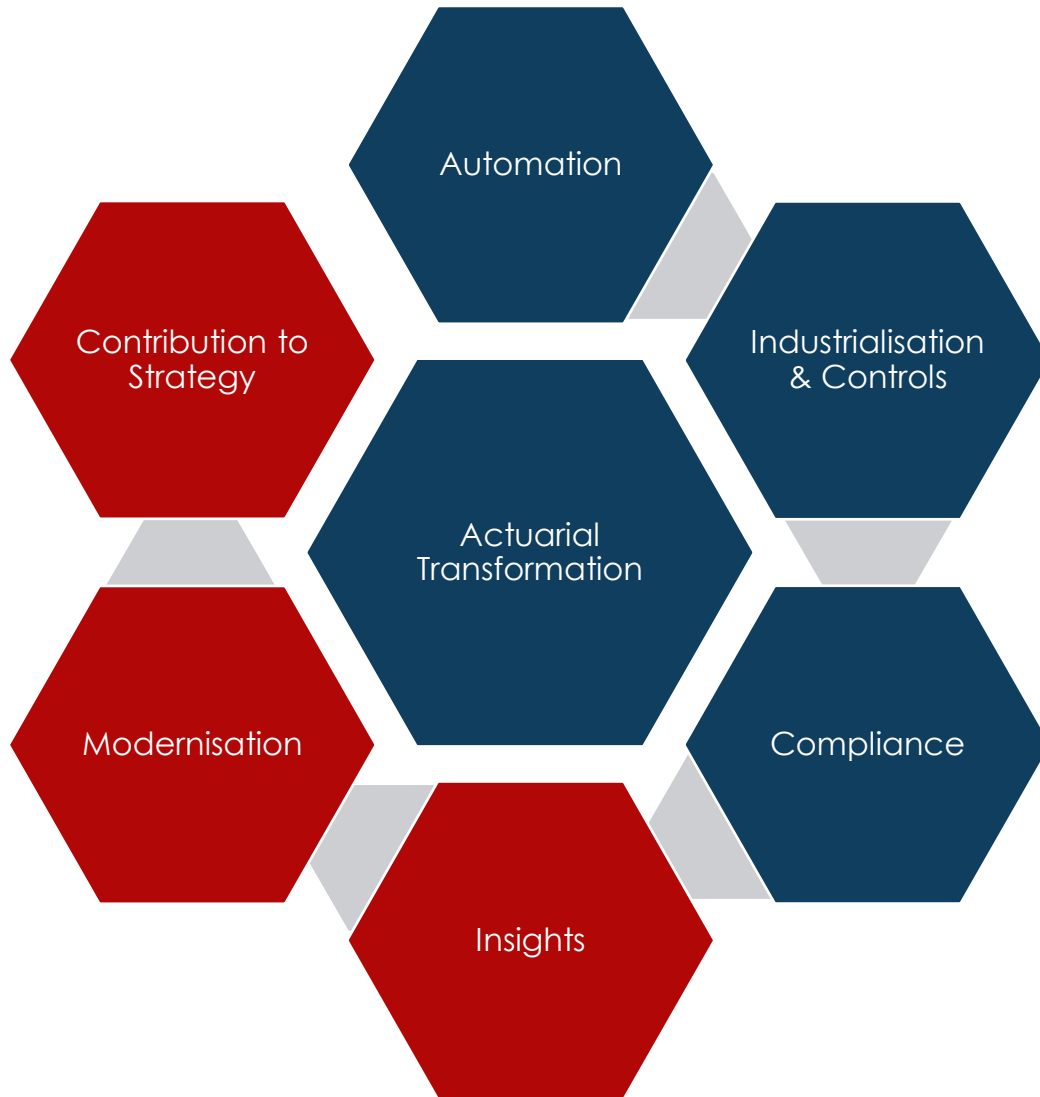
Advancing Actuarial Excellence

Transform Your Life: *Actuarial Transformation for Life Insurers*

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15 May 2025

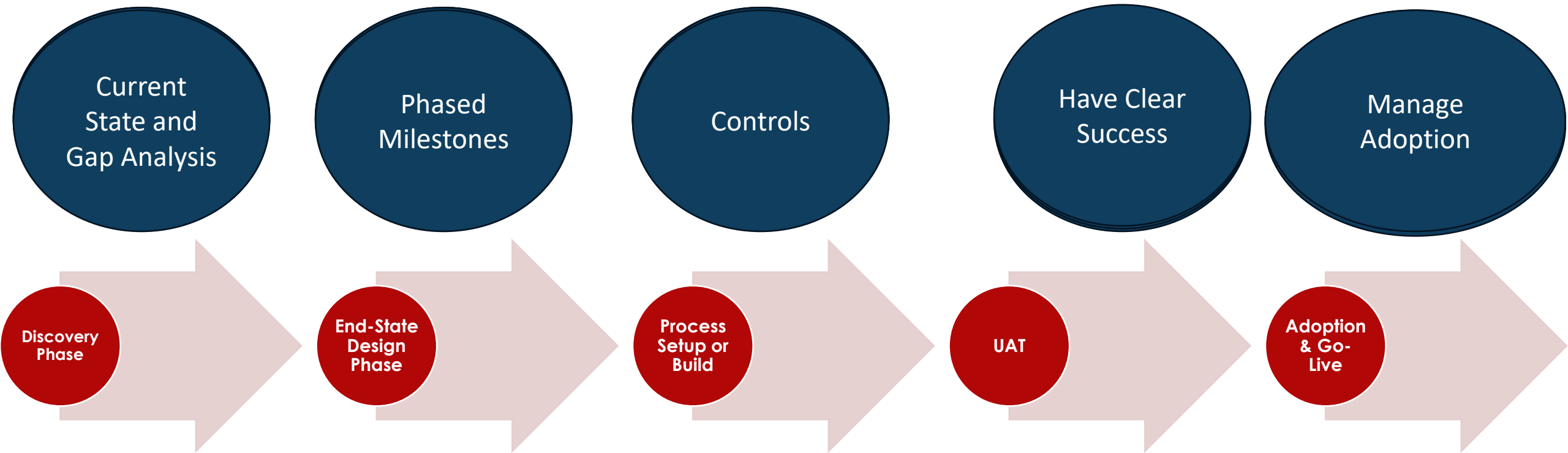
Setting the scene



Up Next

- Transformation Process
- Benefits of transformation
- The Actuarial Cyborg and System Design
- Diagnostic Lead Decision Making
- Application : Corporate Actuarial
- Application : Dynamic Pricing
- Tying it all up

Example Transformation Process



Benefits of Actuarial Transformation



Operational Efficiency

- Automation of tasks
- Faster reporting cycles
- Streamlined data flow

Improved Accuracy and Consistency

- Fewer errors
- Standardized methods
- Audit-ready calculations

Faster Insights and Responsiveness

- Quick scenario runs
- Agile assumption updates
- Faster reports

Enhanced Business Value

- Time for analysis
- Better pricing & capital use
- Link to business value

Governance and Control

- Data traceability
- Built-in checks
- Regulatory compliance

Empowered Actuarial Teams

- Less repetitive work
- Upskill with tech
- Cross-team collaboration

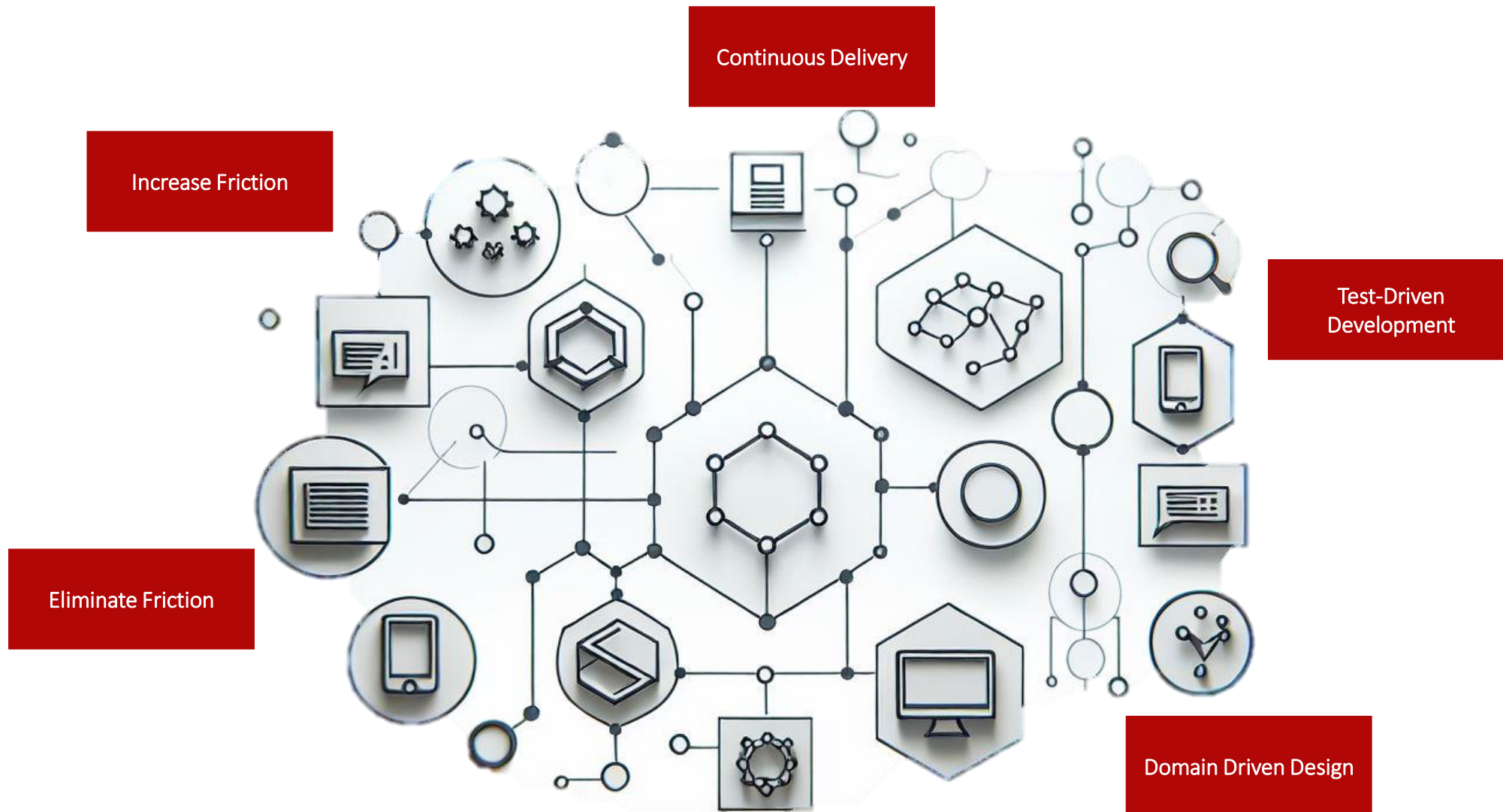
The Actuarial Cyborg



- Rely on automation and human judgement
- Apply good corporate governance
- Find the optimal balance between machine and actuary



Systems Design



Diagnostic Led Decision Making (DLX)



A **tech-enabled, top-down, diagnostics-led processes**

means:

- Deriving base assumptions / parameterisation up front, taking an algorithmic / rules-based approach as much as appropriate.
- Automated batch-runs and/or run manual triggers where required
- Reviewing the dashboards populated automatically
- Identifying where a deep dive is warranted via RAG codes - for example where results may be **materially** inappropriate or where there could be material **business gain** from actuarial insight.
- Thereby adjusting base assumptions by exception, rather than for every class in every period.

Secondary benefits

- A focus on story-telling and results uncertainty, **even amongst junior actuaries.**
- Smoothing of workload peaks and troughs that are typical in traditional reserving teams.
- More fulfilling work and increased job satisfaction.

Accepted trade-offs

- High up-front investment (time and cost) required to develop and embed the approach.
- In a highly automated and easy to maintain model, there is less flexibility for “model tinkering” and ad-hoc manual intervention.

Application: Corporate Actuarial



Key Automation Outcomes:

- Automation of data extraction, cleaning and reconciliation
- Centralized assumption repositories and workflow approval (IFRS! But also others)
- Faster reporting : shorter valuation following dry run
- Consistent Modelling of the same products under different bases (regulatory, IFRS etc.)
- Reduced operational errors

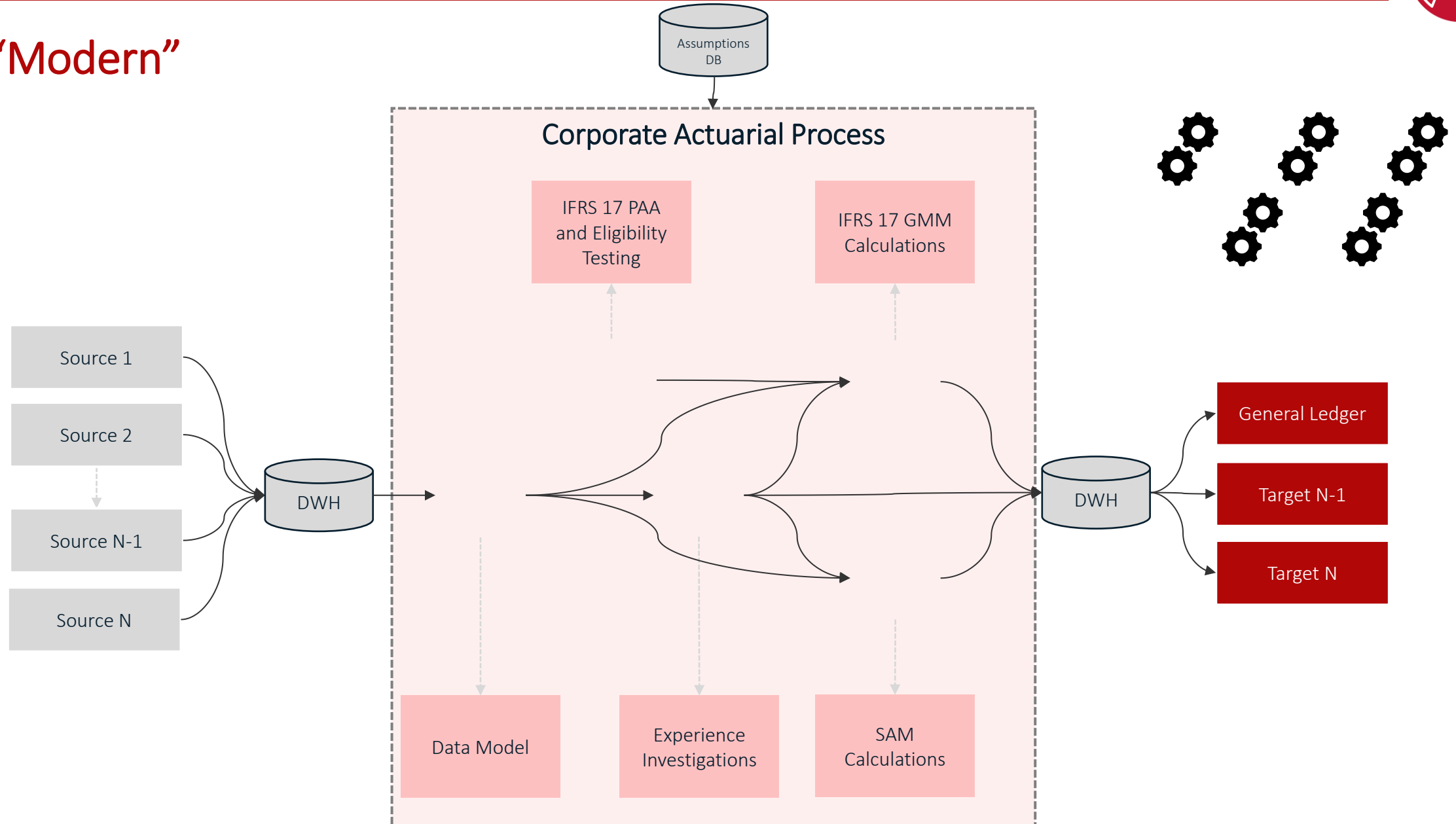
But Actuarial **Transformation!**

- From compliance focused to Strategic focus – Empowered teams
- Stronger governance with assumption tracking and change control management
- On demand responses to the “what-if” But also, being proactive!
- Exploring of new algorithms/bases including artificial intelligence
- Integrated planning – No Silos!

Application: Corporate Actuarial



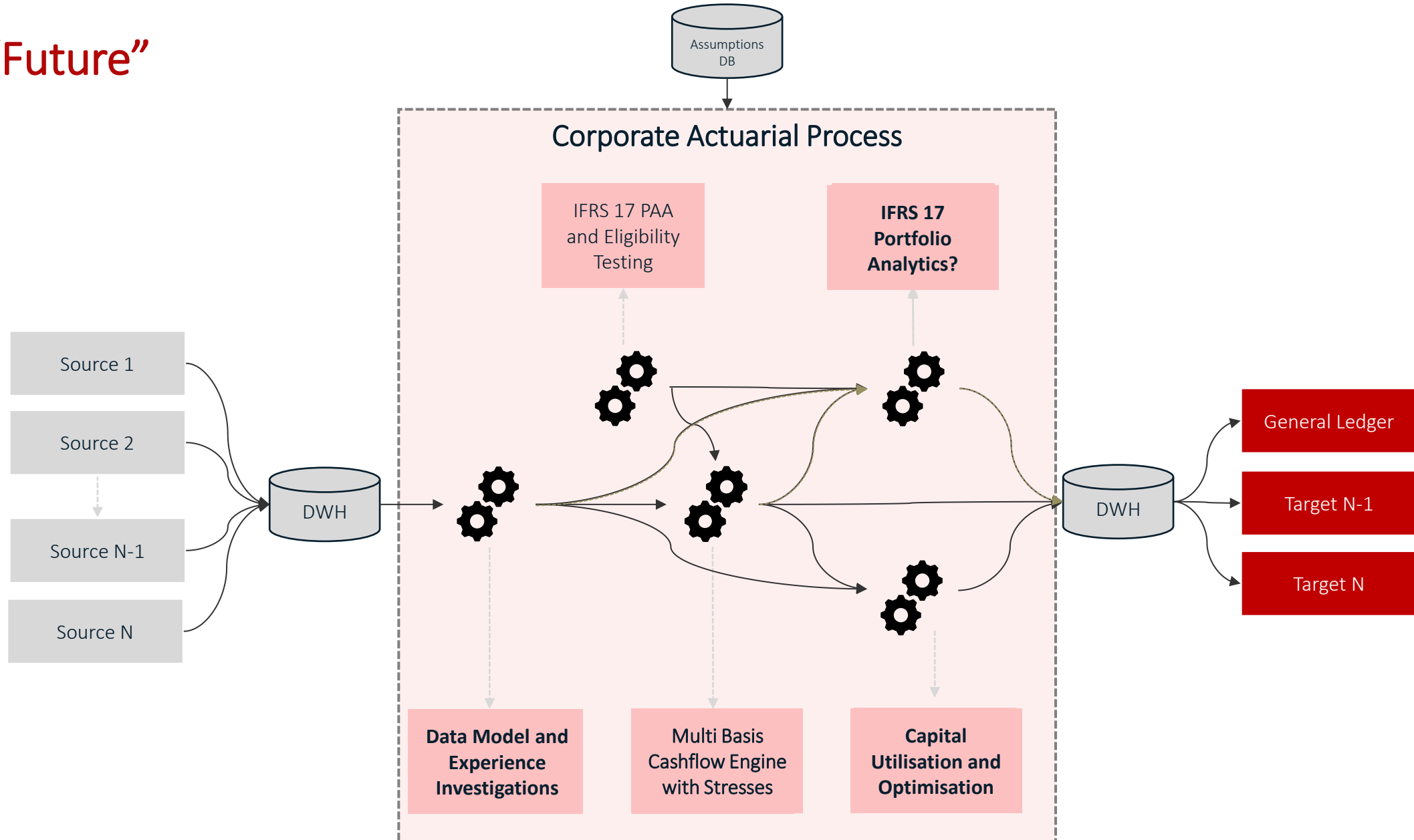
“Modern”



Application: Corporate Actuarial



“Future”

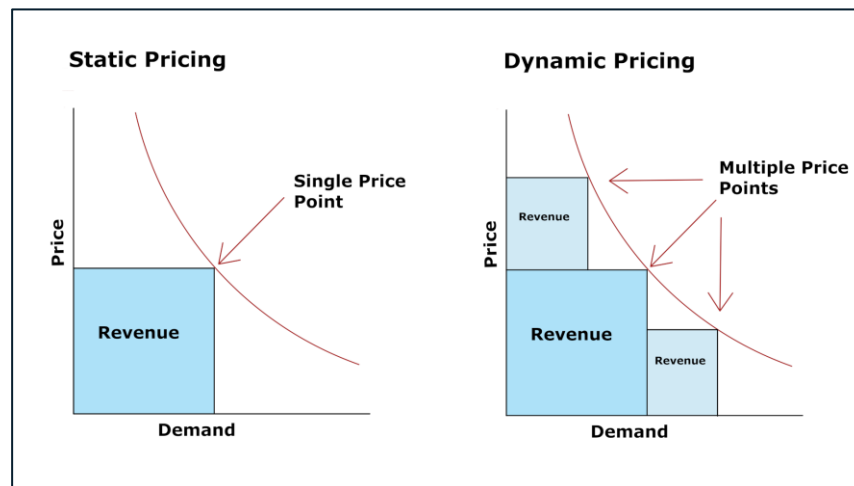


Dynamic Pricing: Theory



What is Dynamic Pricing:

Adjusting premiums regularly based on data signals, customer behaviour, or market conditions



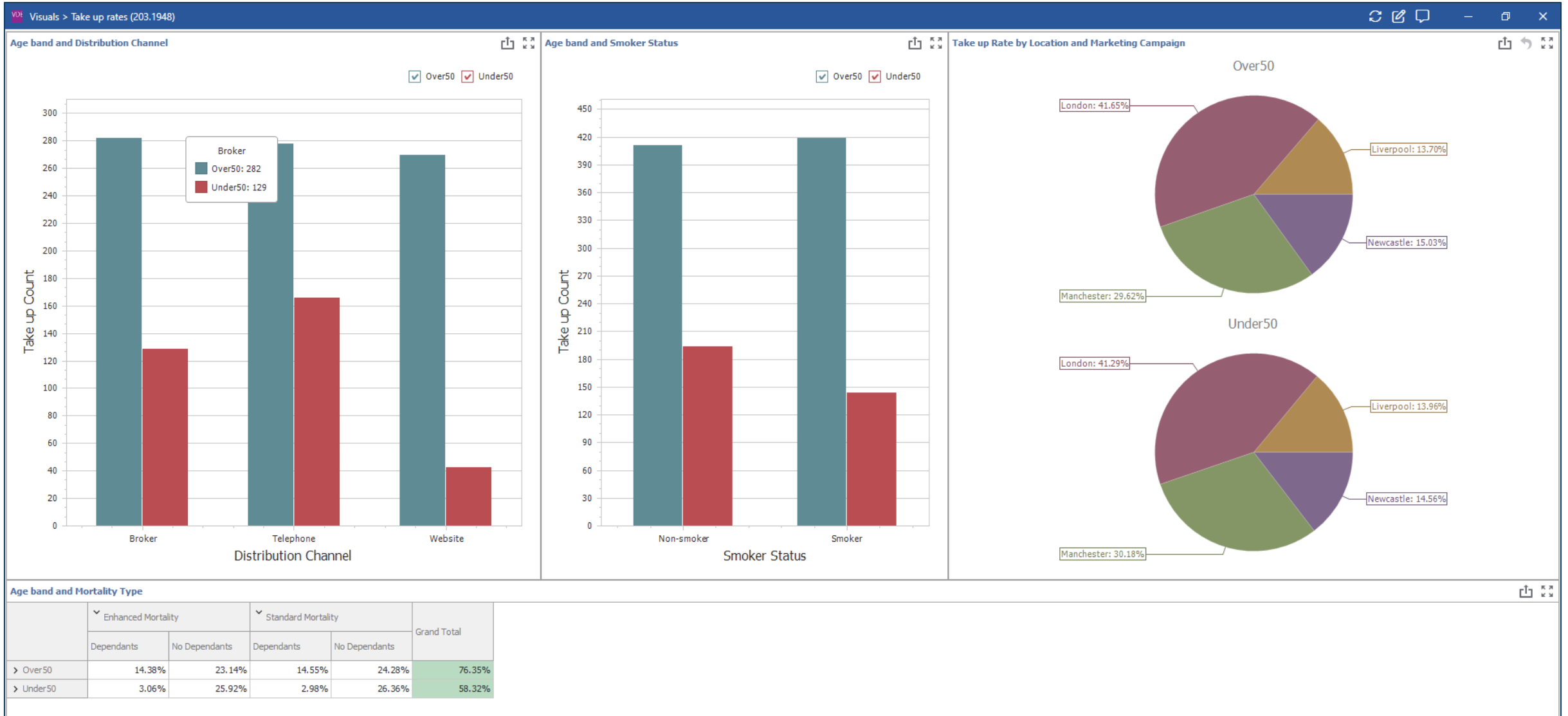
Key Concepts:

Risk differentiation – pricing reflecting risk more accurately using granular data

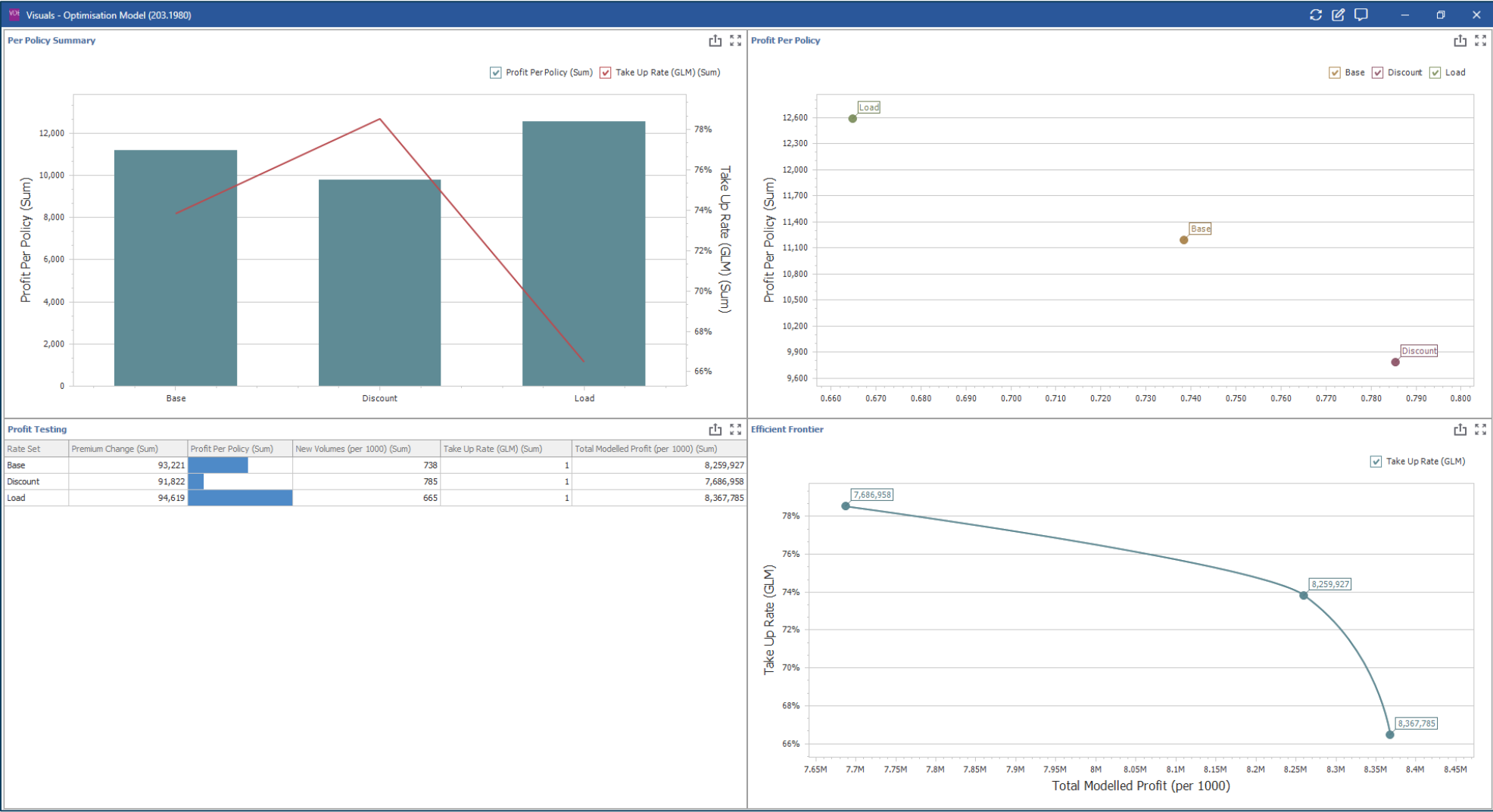
Behavioral Feedback – e.g., lifestyle incentives (experience rating)

Market Responsiveness – Prices respond to elasticity, reinsurer pricing and econometric data

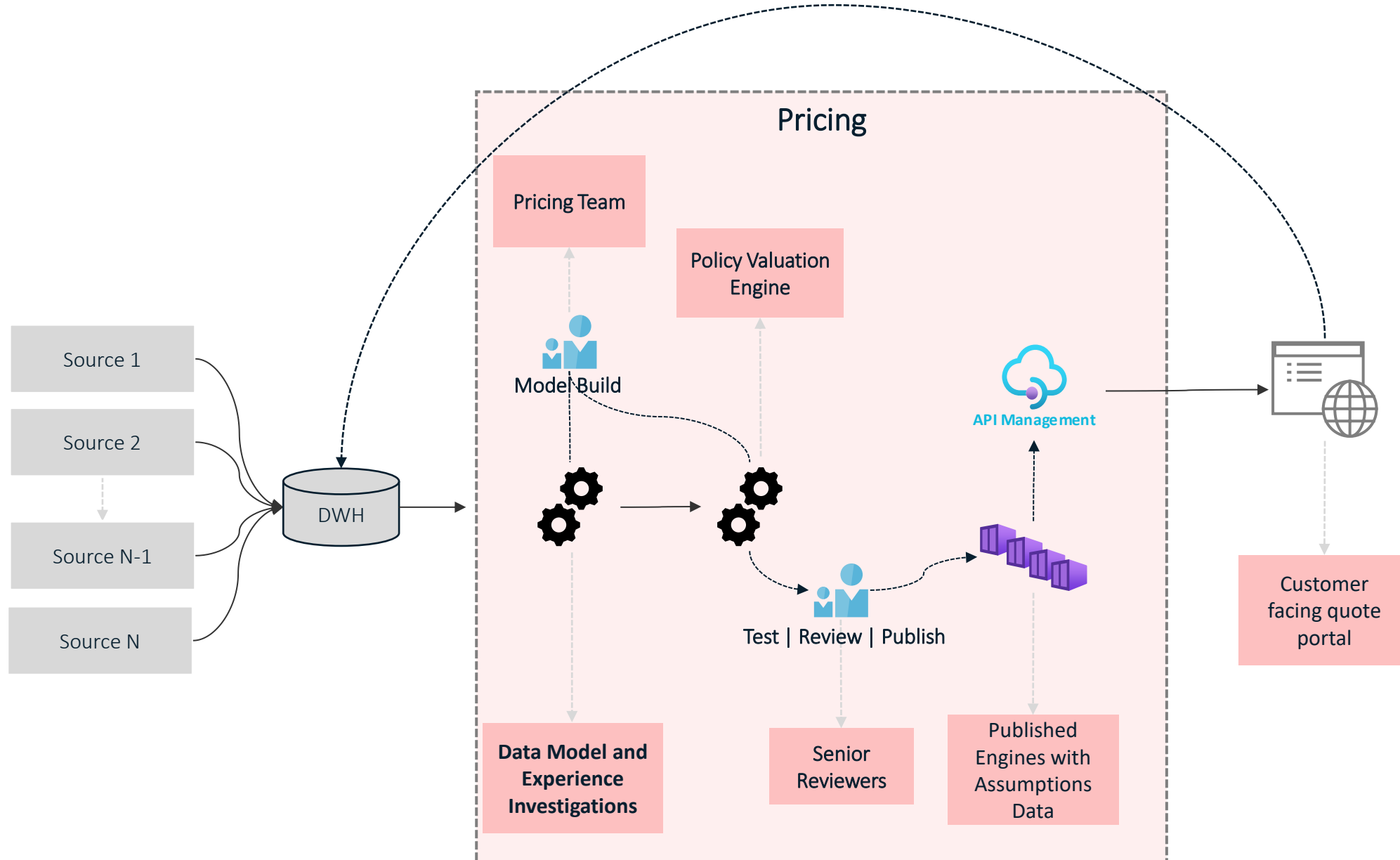
Dynamic Pricing: Theory



Dynamic Pricing: Example Application



Dynamic Pricing: Architecture



Challenge the status quo



Technology and ML is an enabler for automation.



Think about the most value adding activity you can do in your role...
Then imagine a workflow and system to enable your team to do it.



Connect for Questions



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