Transforming Underwriting Through Analytics

Analytics in Action
Intelligent Intervention
Underwriting Decision Support

March 2019

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Underwriting Decision Support

- Overview and Introduction
- What's happening in the market
- Future of underwriting
- Intelligent Underwriting Intervention
- Decision Support
- Underwriting Workbench

Learning Objectives

- Understanding where analytics can add value to case underwriting

- Use case exploration:

  - Active Renewal Management

  - Survey Optimisation

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Market

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Market Themes

Low Growth

Aggressive Competition

Slim Margins

Analytics

Large Losses

Disruptive distribution

Insurtech

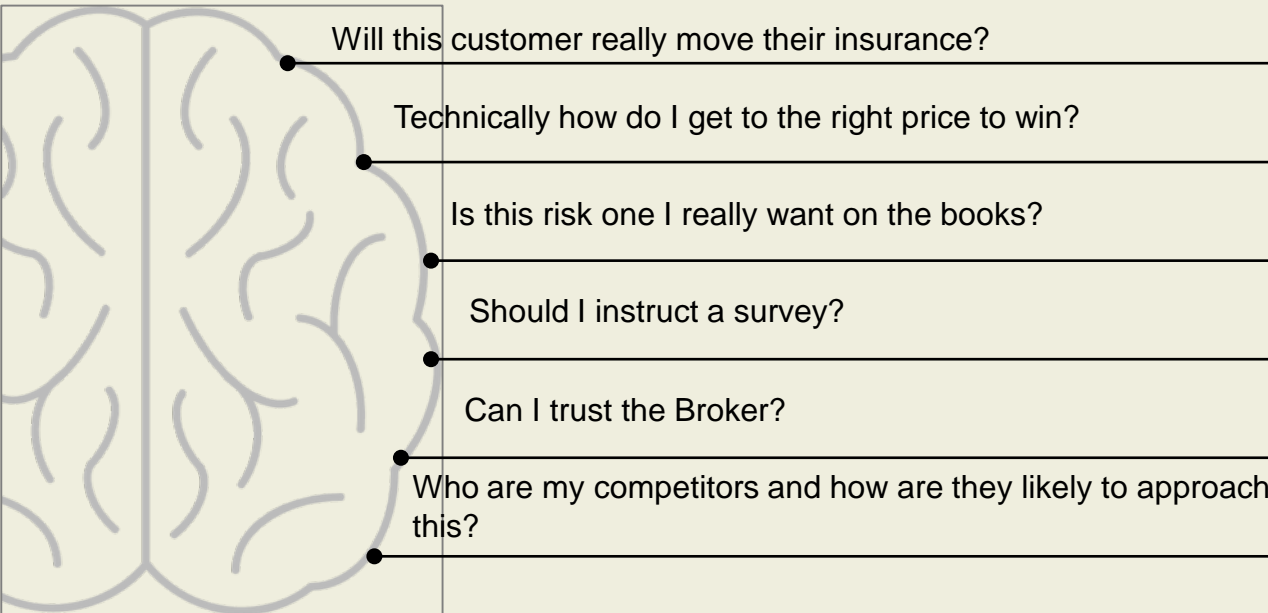Political Uncertainty

Ageing IT Infrastructure

Value Chain Compression

Commercial insurance is a complex transaction…
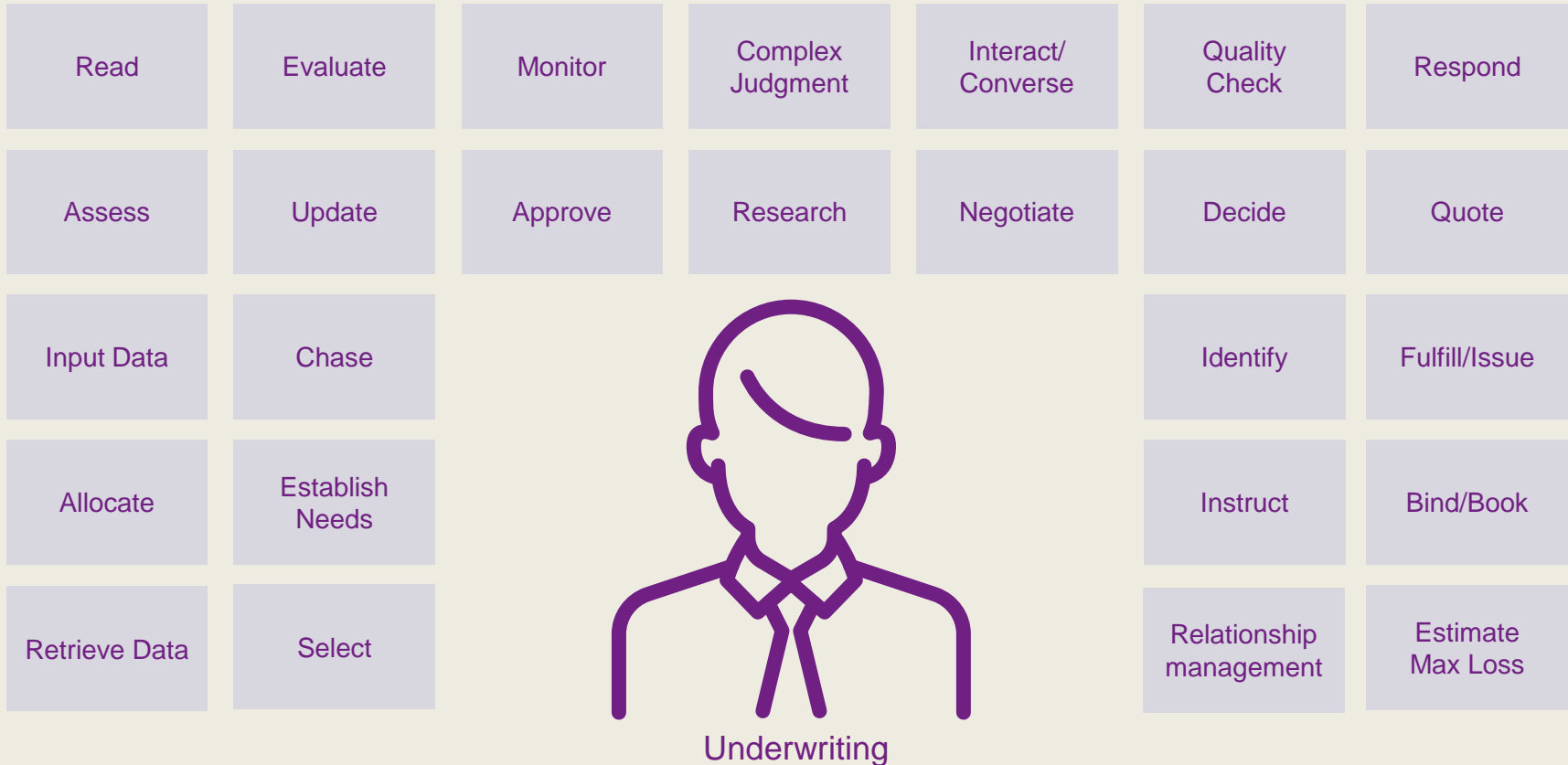
Performance Improvement Pillars

What is the underwriter thinking about?
Commercial insurance is an experience based profession requiring complex decision making and judgement.

Will this customer really move their insurance?

Technically how do I get to the right price to win?

Is this risk one I really want on the books?

Should I instruct a survey?

Can I trust the Broker?

Who are my competitors and how are they likely to approach this?

Data Strategy & Delivery

Analytics

Automation and Business Process Engineering

Technology

Current Underwriting task allocation

Read	Evaluate	Monitor	Complex Judgment	Interact/ Converse	Quality Check	Respond
Assess	Update	Approve	Research	Negotiate	Decide	Quote
Input Data	Chase				Identify	Fulfill/Issue
Allocate	Establish Needs				Instruct	Bind/Book
Retrieve Data	Select				Relationship management	Estimate Max Loss

Underwriting

Illustrative

Underwriting task allocation – with robotic process automation (RPA)

Underwriting

Read	Evaluate	Monitor	Complex Judgment	Respond	Quality Check	Relationship Management
Assess	Identify	Approve	Research	Negotiate	Decide	Allocate

Chase	Interact/ Converse	Update	Estimate Max Loss
Interact/ Converse	Retrieve Data	Input Data	Instruct
Quote	Fulfill/ Issue	Bind/Book	Establish Needs
Select	Chase	Update	

Underwriting
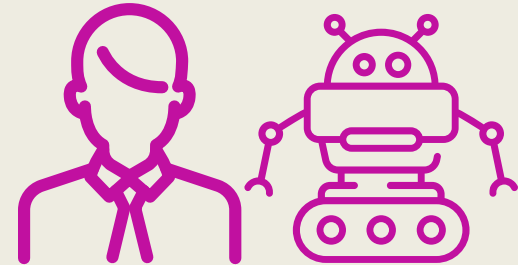
Underwriting & Robot

Illustrative

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Underwriting task allocation – with RPA & Artificial Intelligence

Underwriting

Complex Judgment	Chase	Retrieve Data	Allocate	Evaluate	Interact/ Converse	Approve	Quote
Relationship management		Input Data	Read	Update	Monitor	Research	Fulfill/Issue
			Assess	Negotiate	Quality Check	Decide	Bind/Book
			Respond	Identify	Estimate Max Loss	Instruct	Establish Needs
							Select

Underwriting

Underwriting & Robot

Underwriting & Robot & Artificial Intelligence

Illustrative

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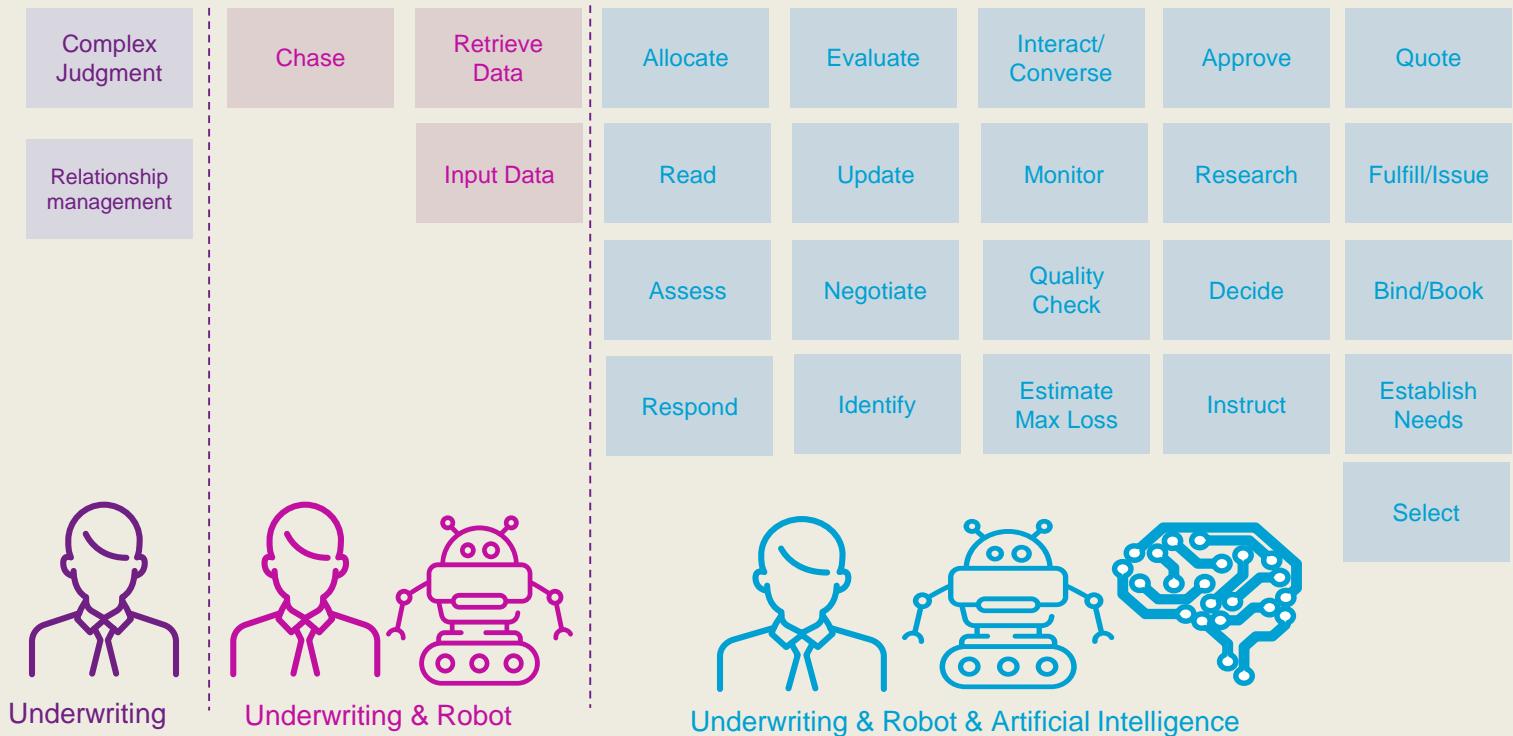
Intelligent Underwriting Intervention and decision support

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Challenge is how to overcome current ways of working

Difficult to optimise pricing, underwriting and risk selection
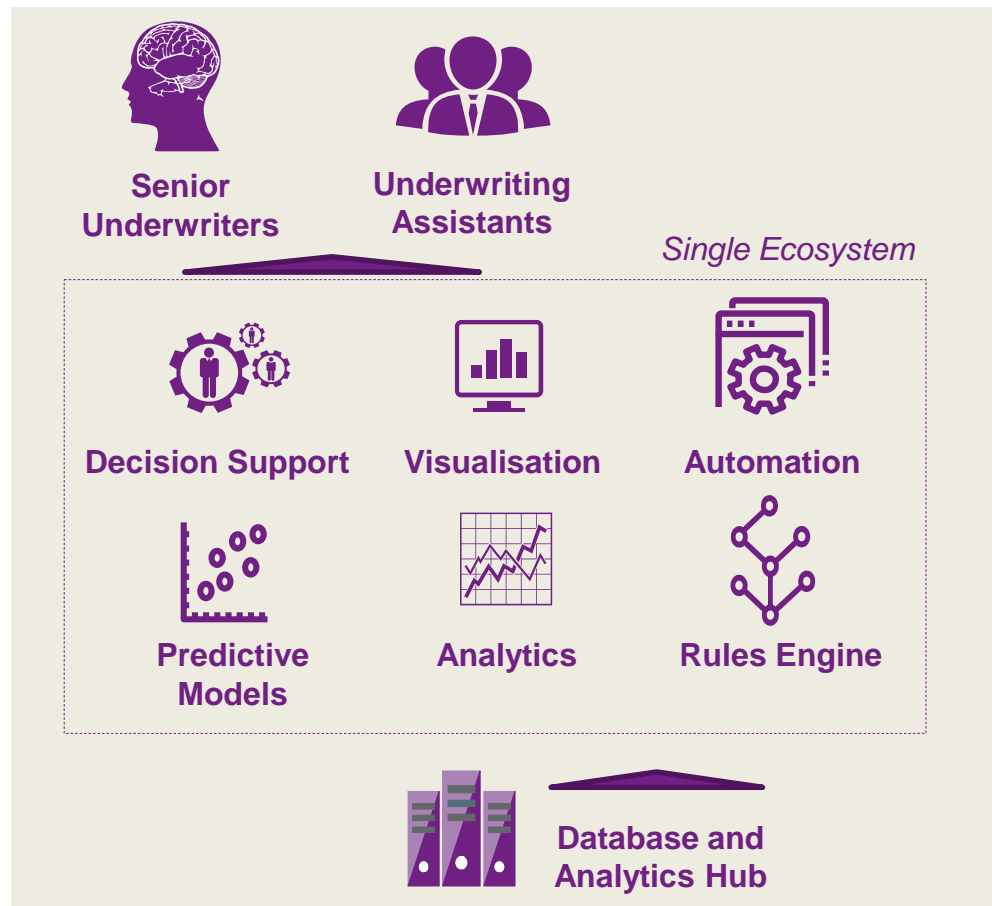
DISAGGREGATED PEOPLE, PROCESSES AND DATA

Senior Underwriters

U/W Case Managers

Offshore

Sales teams

Mainframe(s)

Processes

Rating tools

Multiple Data Stacks

Workflow

Surveys
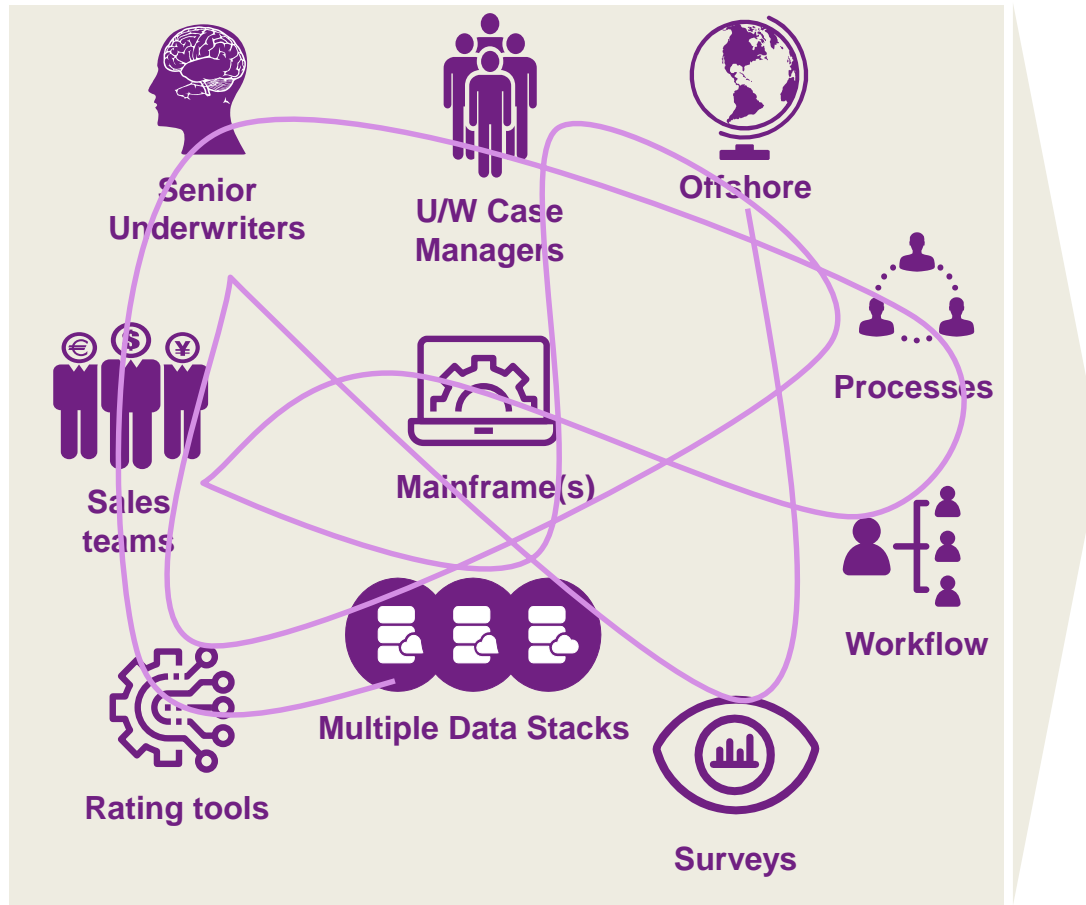
REDUCING UNDERWRITING PROFITABILITY

- Poor data integration

- Difficult to extract and master information

- Fragmented underwriting processes

- High variation and low control over underwriting decision making

- Underwriting leakage

- Silos operating across functions and geographies

- Inefficient and expensive to run

Operating model designed to improve top and bottom line
Delivering solutions that align decision making/accuracy to strategy

INTEGRATING PEOPLE, PROCESS AND DATA

Single Ecosystem

Senior Underwriters

Underwriting Assistants

Decision Support

Visualisation

Automation

Predictive Models

Analytics

Rules Engine

Database and Analytics Hub

IMPROVING ALL PARTS OF INSURANCE P&L

- High consistency in pricing and underwriting decisions – selection as well as routing

- Decision augmentation designed into processes

- Significant increase in both information and intervention points for management

- Active Portfolio Management

- Removes or reduces non-expert processing which causes delays and traps expense

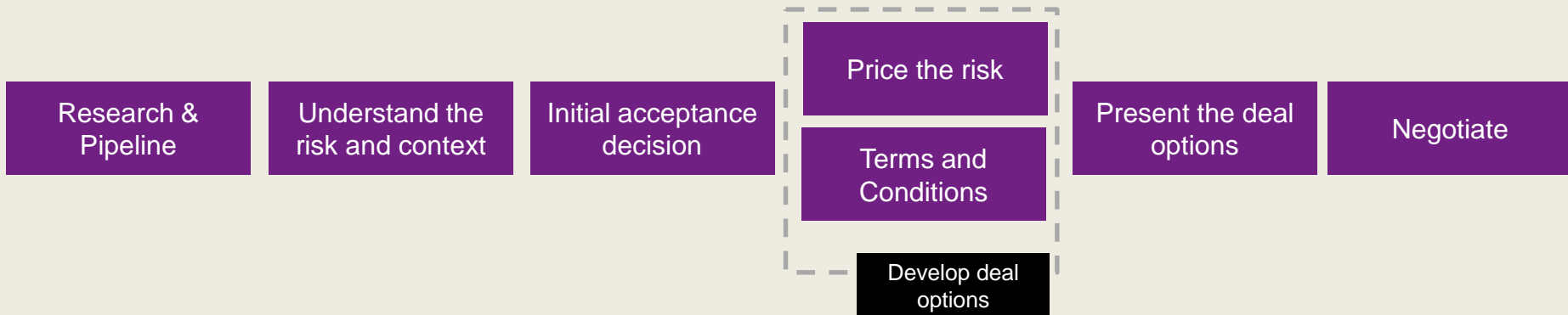- Repatriating process – no need for offshoring

Use Cases:
 - **Active Renewal Management**
 - **Survey Optimisation**

# The importance of a process

An underwriting process

| Research & Pipeline | Understand the risk and context | Initial acceptance decision | Price the risk / Terms and Conditions / Develop deal options | Present the deal options | Negotiate |

- Research & Pipeline
- Understand the risk and context
- Initial acceptance decision
- Price the risk
- Terms and Conditions
- Develop deal options
- Present the deal options
- Negotiate

Injecting sophistication into decision rules

Intervention Rules

Using an increasingly wide range of internal and external data assets, it possible to develop, test and deploy a range of models across the workflow process:
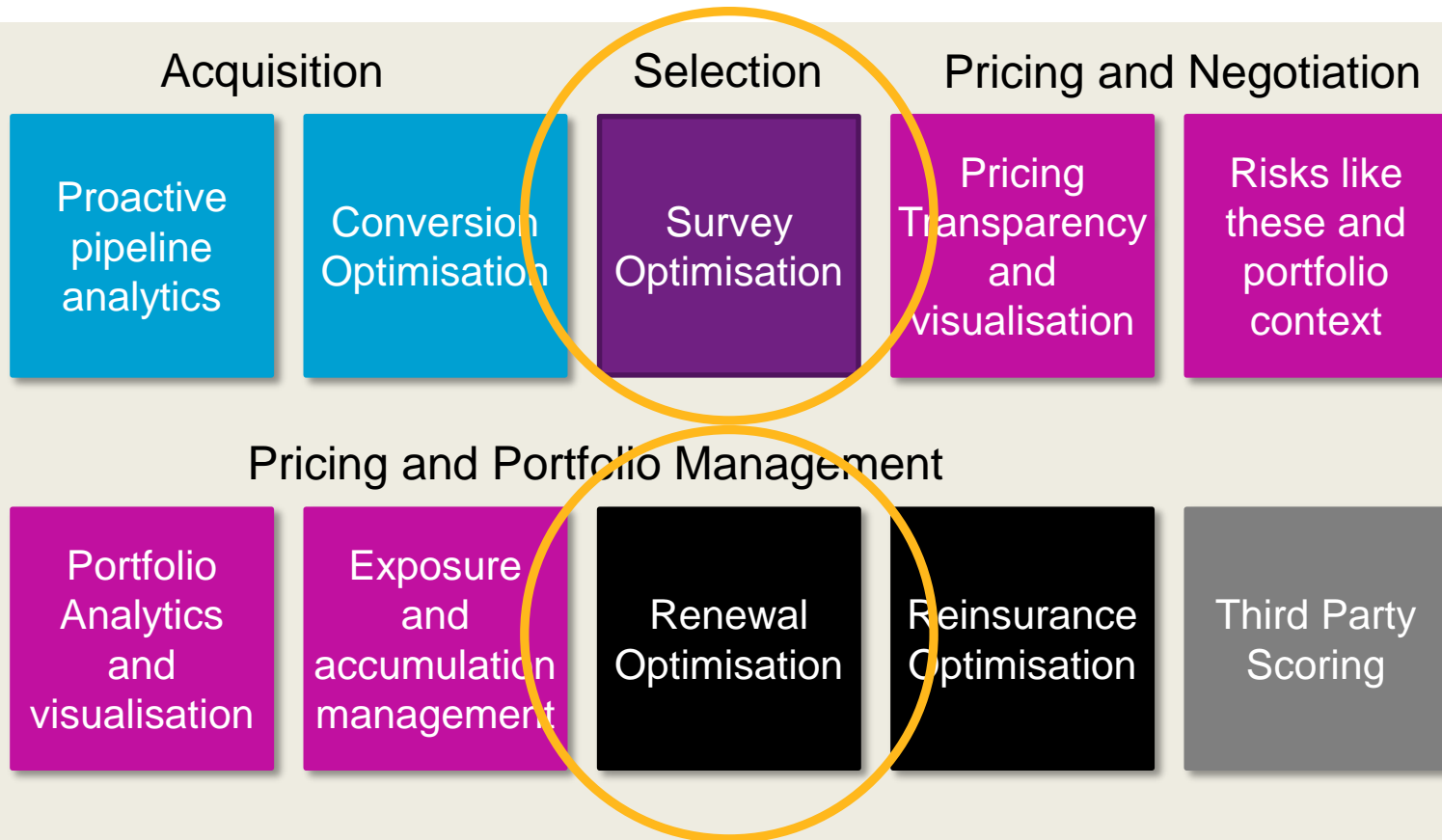
- Pricing

- Risk selection

- Structured interventions

- Routing

- Prioritisation

- Evaluation

These can be used to automate all or part of the business process or support human intervention with decision support

Third Party data
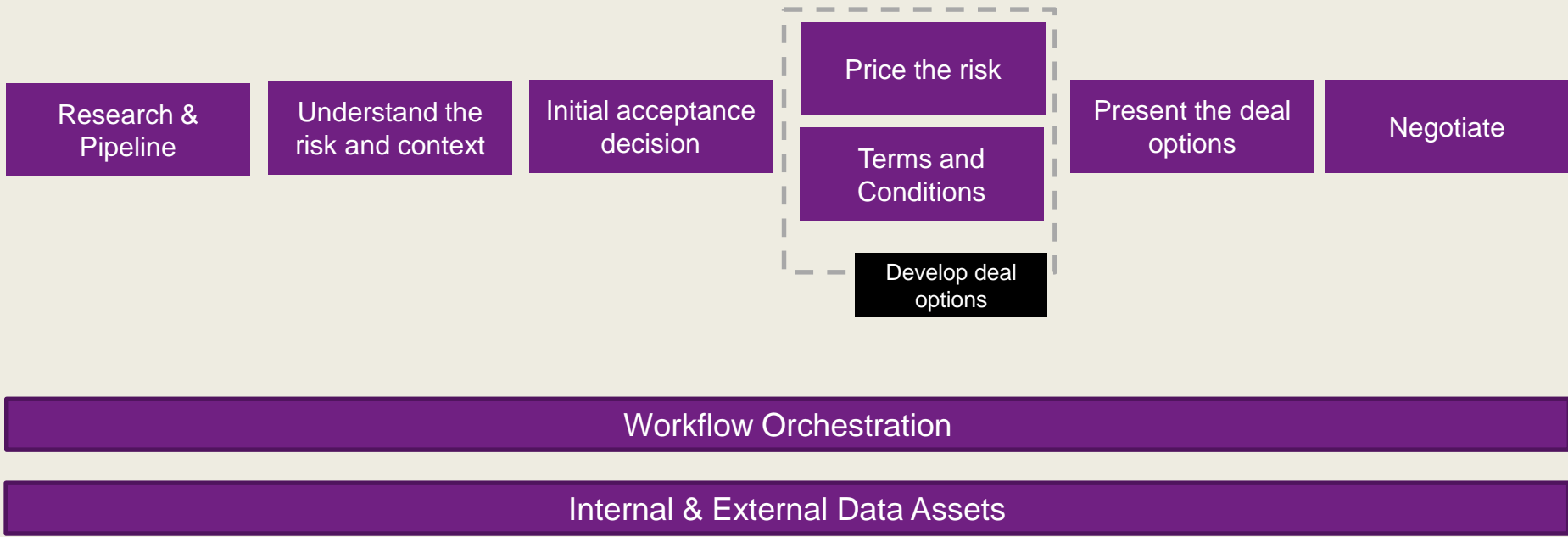
Distribution Analytics

Geographic understanding

Portfolio Insight
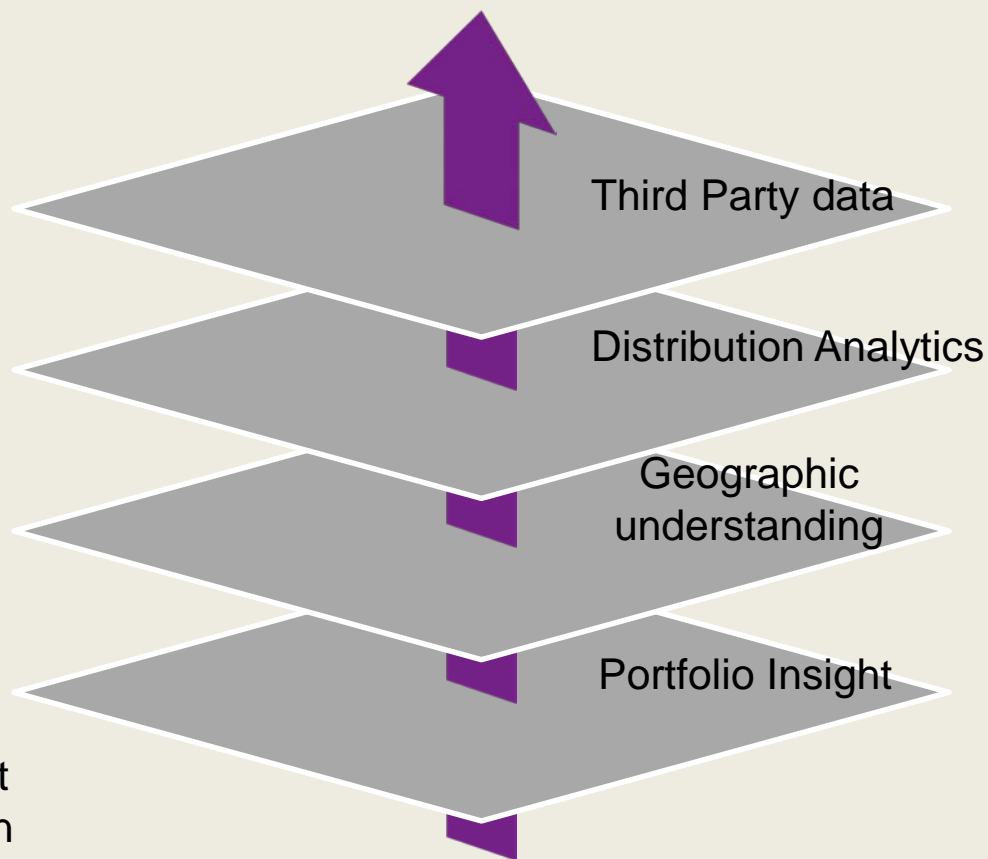
Decision support

Our view of the key elements of decision support across the value chain

Combining Insight and workflow

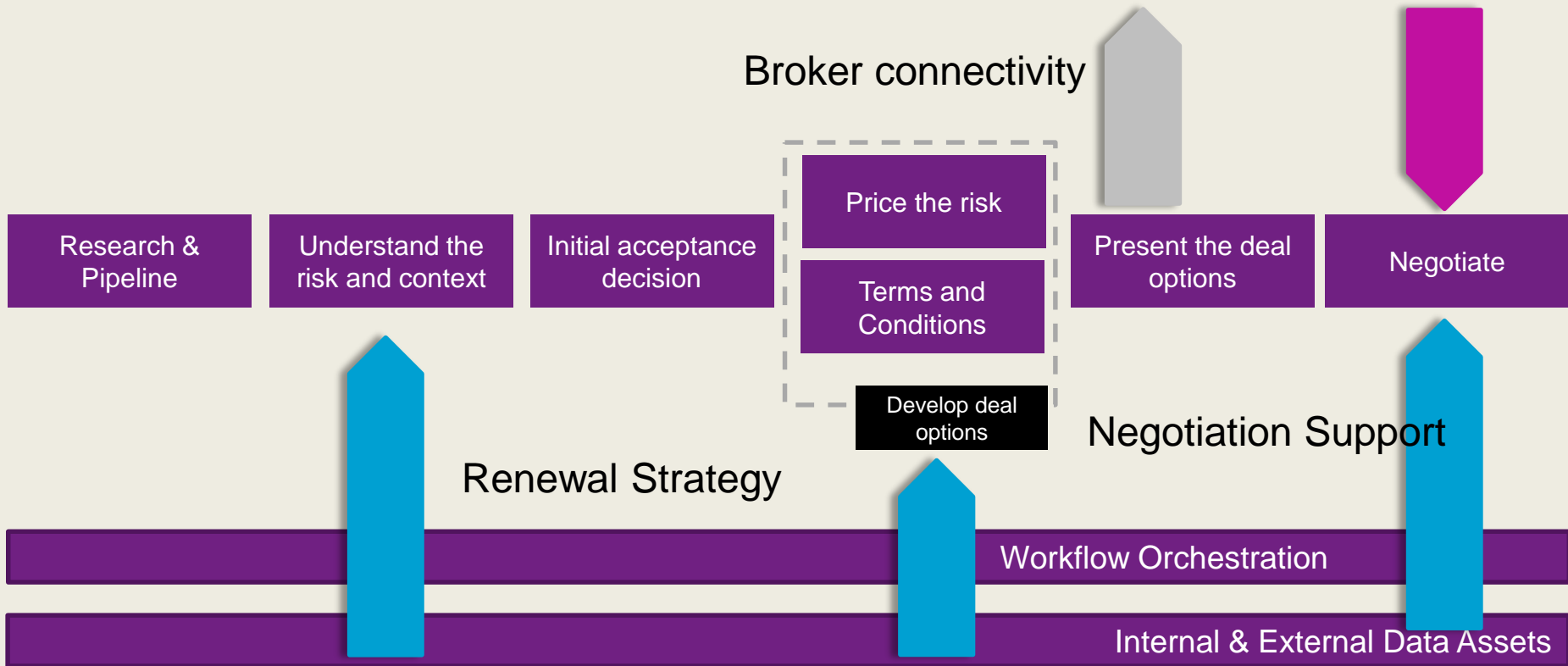## *The underwriting process*

| Research & Pipeline | Understand the risk and context | Initial acceptance decision | Price the risk / Terms and Conditions (Develop deal options) | Present the deal options | Negotiate |

Workflow Orchestration

Internal & External Data Assets

Example – Analytics, Operational Models & Decision Support

Renewal Optimisation

Broker automated Trading Rules

Broker connectivity

Research & Pipeline	Understand the risk and context	Initial acceptance decision	Price the risk	Present the deal options	Negotiate

Terms and Conditions

Develop deal options

Negotiation Support

Renewal Strategy

Workflow Orchestration

Internal & External Data Assets

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Example – Analytics, Operational Models & Decision Support

Renewal Optimisation

Renewals impact analysis (property only)

Scenario definitions and summaries

	Scenario Descriptions
Current	Current actual premiums
Scenario 1 - RAG Renewal	Renewing pricing based on RAG flags
Scenario 2 - Technical	Pure technical premium
Scenario 3 - Testing	Proposed new exposure premium in testing environment

	Total GWP	Total Policy Count	Loss Ratio	Average Claim	Average Premium
Current	£11,784,867	226	124.2%	£64,778	£52,145
Scenario 1 - RAG Renewal	£13,828,335	172	76.5%	£61,521	£80,374
Scenario 2 - Technical	£12,770,838	134	76.7%	£73,102	£95,283
Scenario 3 - Testing	£12,780,969	134	76.7%	£73,102	£95,359

Note:
For scenario specific controls, please scro
to the bottom of this report.

Analysis segments

First term: Broker Group

Second term: None

Report settings

Scenario selection:
Scenario Switch
Scenario 3 - Testing

Filter
☑ Broker Group
☑ Product
☑ UWBranch
☑ RAG Dimensions

Demand analysis - policy level

KPI Table

	Current Policy Co...	Renew Policy Co...	Current Loss Ratio	Renew Loss Ratio	Current Avg Prem...	Rene
Broker A	25	16	149.4%	93.7%	£40,876	
Broker B	27	13	104.4%	79.4%	£56,745	
Broker C	48	29	119.3%	69.7%	£65,099	
Broker D	40	23	122.5%	74.2%	£51,061	
Broker E	24	15	100.5%	71.2%	£61,636	
Broker F	15	9	98.6%	65.0%	£45,035	
Broker G	14	9	213.1%	91.4%	£85,101	
Broker H	33	20	109.5%	73.8%	£61,419	

Loss Ratio
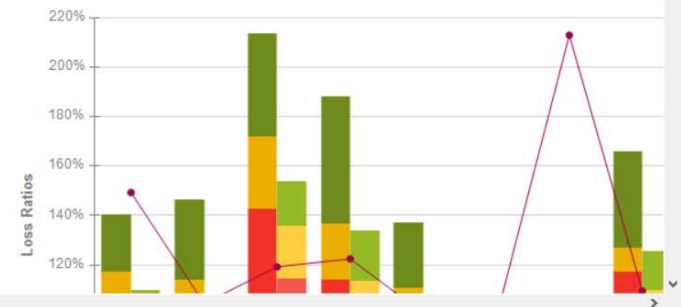
Towers Watson Internal Server

Disk ▾

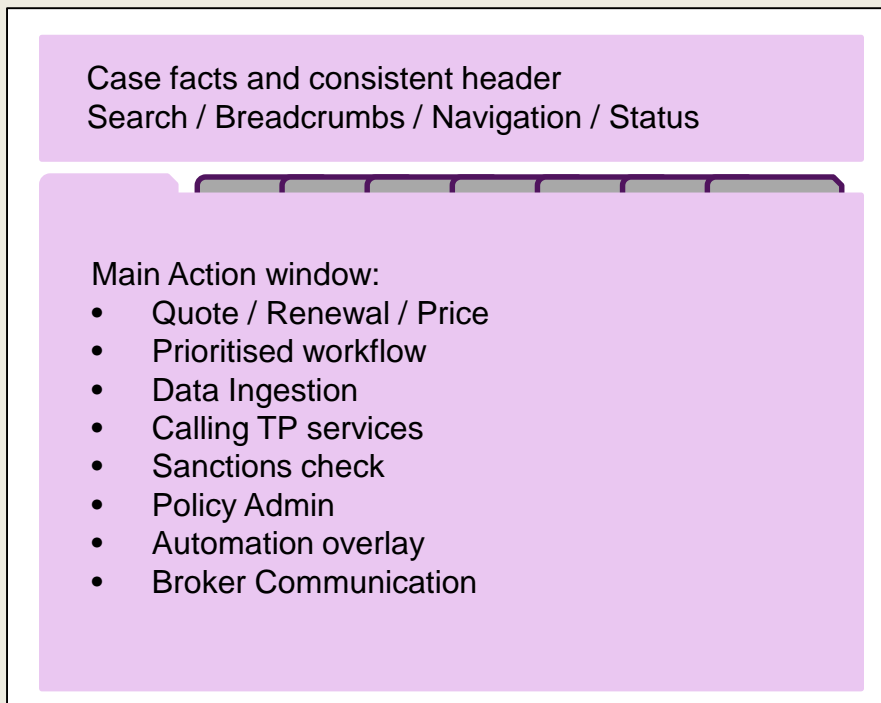# Example – Analytics, Operational Models & Decision Support

Renewal Optimisation
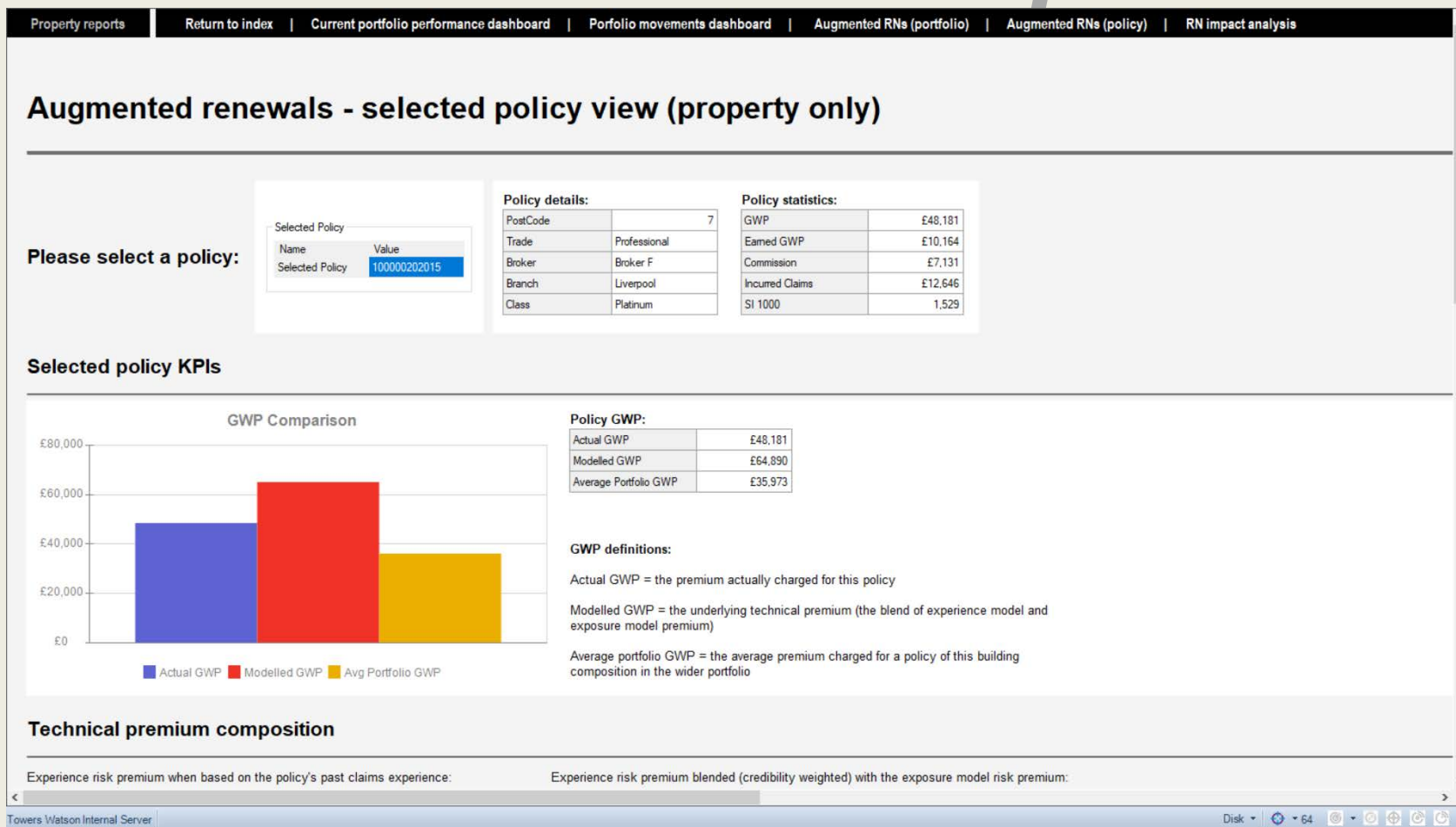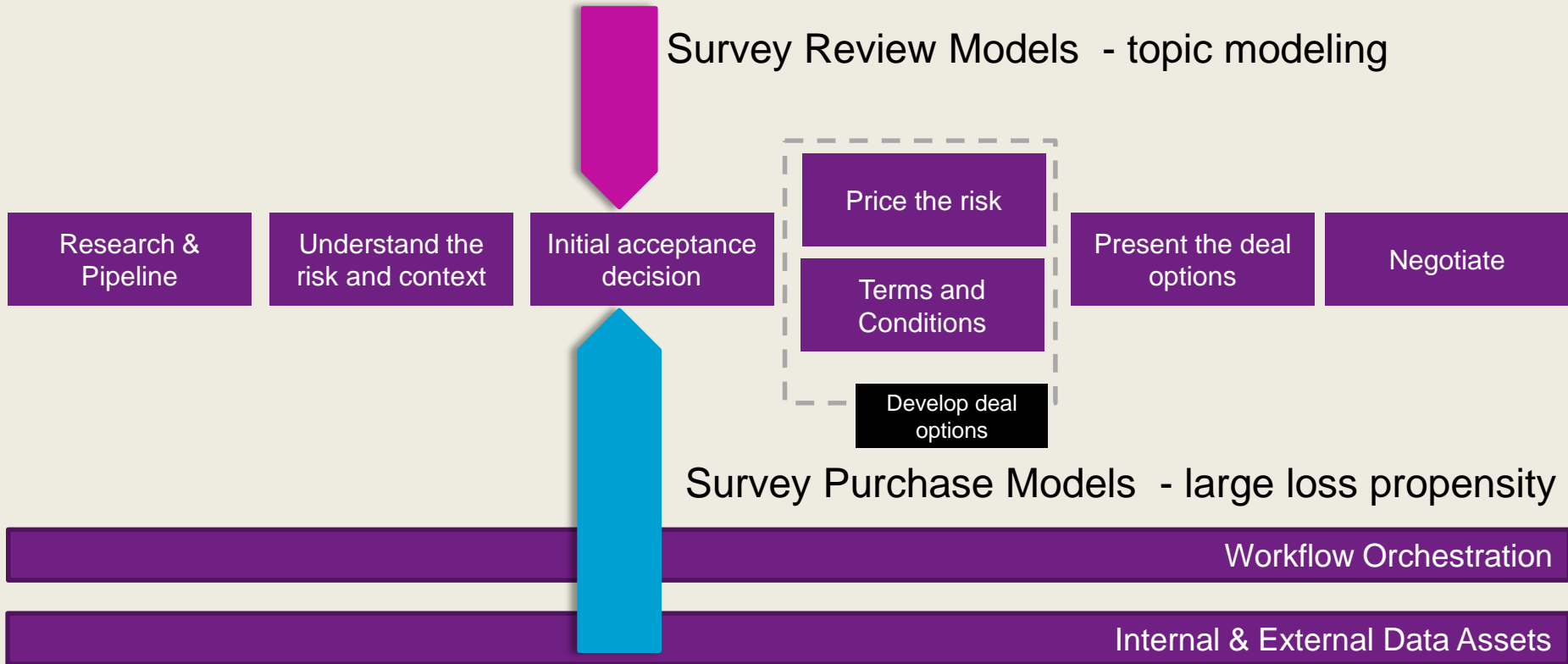
Underwriting Workbench

An Underwriter's Digital Environment
Underwriting Workbench

Screen 1 – executing tasks

Case facts and consistent header
Search / Breadcrumbs / Navigation / Status

Main Action window:
- Quote / Renewal / Price
- Prioritised workflow
- Data Ingestion
- Calling TP services
- Sanctions check
- Policy Admin
- Automation overlay
- Broker Communication

Screen 2 – decision support

Context Sensitive Support:
- Performance
- Conversion
- Portfolio Context
- Data scores
- Accumulations
- UW Guides

Tabulated TP Data Object Data:
- Geospatial
- Financial
- Asset search
- News

| Survey |
| Wording |
| Claims |
| My Portfolio |
| Industry Insight |
| Secure Chat |
| Configure |
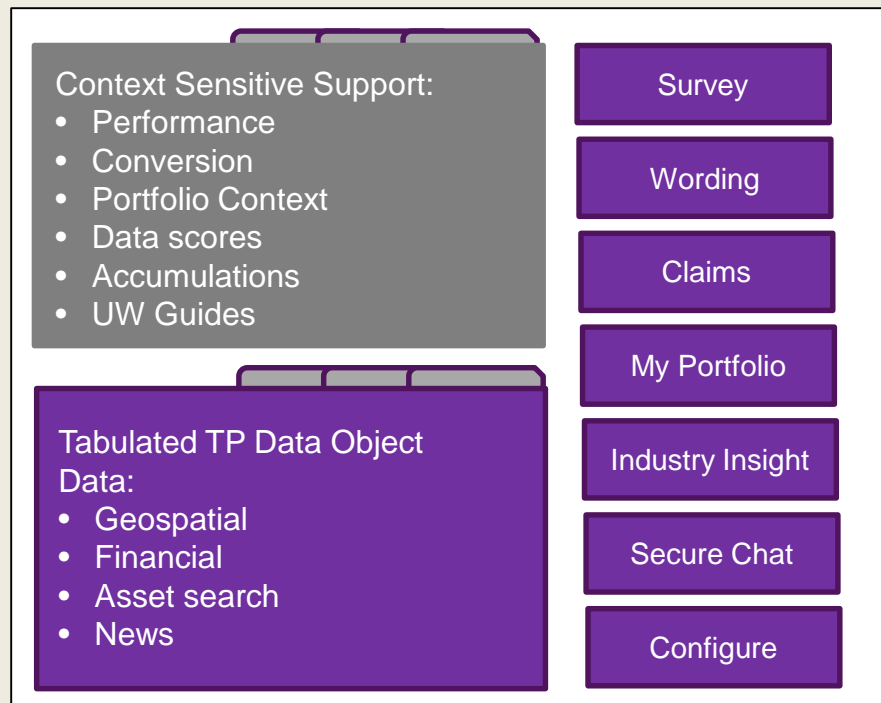
Data integration to mainframe, data warehousing, pricing and analytics hub, unstructured data. TP services and broker portals

An Underwriter's Digital Environment

Underwriting Workbench - workflow, analytical decision support and data integration