IMPROVING UNDERWRITING EXPENSE MEASUREMENT FOR A UK-BASED INSURANCE COMPANY THROUGH AN ACTIVITY-BASED REPORTING SOLUTION

Abstract

The Infosys BPM analytics team developed a bespoke reporting solution for a UK based commercial insurer to measure underwriting service expenses for each line of business (LOB). This allowed the insurer to identify high expense contributors (for e.g., the expense contribution of broker A from region B which is higher compared to others, the cost incurred due to repeated transactions on the same proposal, etc.), which are important factors in measuring and improving profitability.

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Business challenge

Our client – a market-leading global specialty insurer and reinsurer with a major presence in Lloyd's market and significant US and international reach.

The insurer's underwriting service cost started to increase. This gave rise to a significant challenge – they were unable to identify the major drivers of expense at different dimensions such as the region (underwriter region, risk, etc.), placing basis (declaration, binder, etc.), sections (risk layer A, risk layer B etc.), underwriters (underwriter A, underwriter B etc.), brokers (broker A, broker B, etc.) and more.

Specifically, the insurer wanted to develop an expense reporting solution for their underwriting services that:

- Identified and mapped different activities and sub-activities at the LOB level

- Allocated and accounted the cost for each sub-activity level under each LOB

- Provided multidimensional reporting to view the breakup of cost

The Infosys BPM analytics solution

Infosys used an activity-based costing approach to create the underwriting expense reporting solution. This approach recognizes the relationship between costs and activities under each LOB. Through this relationship, the costs of different activities can be assigned in such a way that the expense drivers at the activity and sub-activity level can be identified.

The Infosys BPM Analytics team came up with the following approach to create the expense reporting solution:

- **Data analysis at an activity and sub-activity level:** Our team gathered data for different underwriting activities (indexing, proposal processing, etc.) and sub-activities (processing slips, pre-renewals, etc.) that were being performed by the Infosys BPM operations team. All the available associated cost data was assigned to each of these activities / sub-activities for LOB's and its corresponding dimension (the placing basis, new business, renewal business, underwriter, region, etc.).
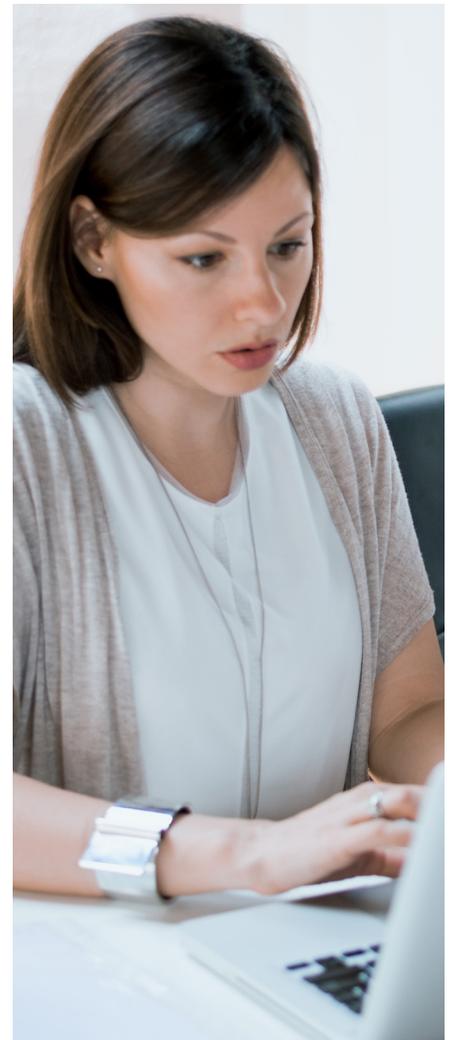
Line of Businesses (LOBs)

Cargo	Marine liability	Hull	Aviation War
Engineering	Health Care	Airlines	Energy
Terrorism	Accident & Health	Marine Liability	General Aviation
Aerospace	Specialist Liability	....	....

Activity & sub-activity under different LOBs

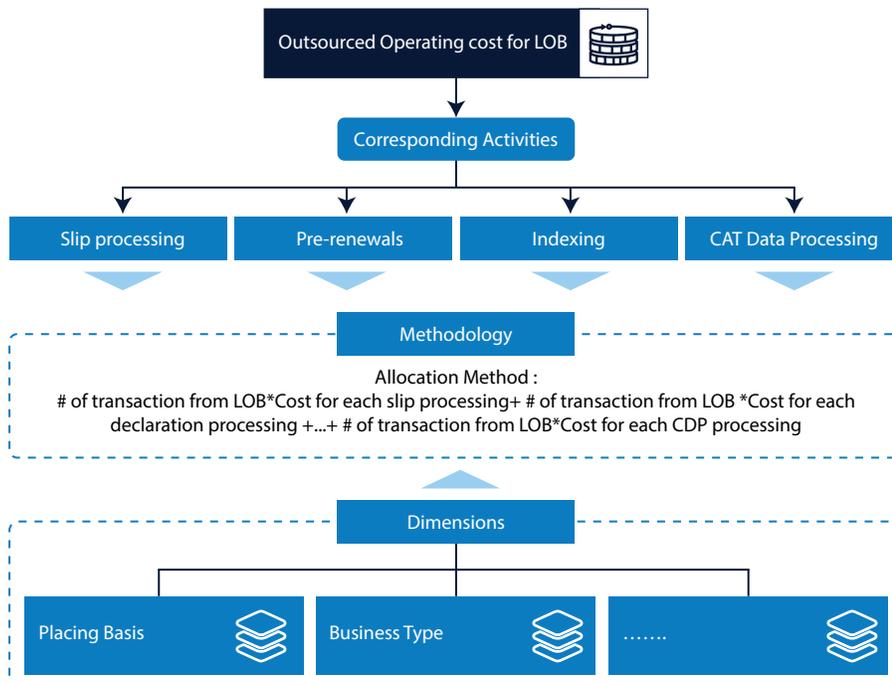|			
Declarations	Quality Control	Document Indexing	Endorsements
Slips Processing	Quote , Promise, and Declinature	Employer Liability Certificate	Data Processing for CAT modelling - Open Market + Declarations (>10 locations) (<=10 locations)
Risk details updates	Pre Renewals Processing	Business Re-assured Management	

RATER

- **Cost allocation methodology:** Our team accounted for the number of transactions processed under each activity for every month for the analysis period. Then, all activities performed for each LOB from multiple databases such as the policy booking system, the underwriting system, the billing system and more were mapped. To allocate the cost under each LOB, the cost of the transaction was accounted based on two methods.

  - **Direct method:** Wherever the costs of a particular transaction could be directly determined, such transaction was assigned the corresponding cost and rolled-up at sub-activity and activity level.

- **Approximation method:** The number of transactions performed by each FTE was first ascertained. Then, the total cost of processing effort was averaged out for each transaction under different sub-activities and rolled-up at an activity level.

Cost allocation per activity

Outsourced Operating cost for LOB

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Corresponding Activities

Slip processing	Pre-renewals	Indexing	CAT Data Processing

Methodology

Allocation Method :
# of transaction from LOB*Cost for each slip processing+ # of transaction from LOB *Cost for each declaration processing +...+ # of transaction from LOB*Cost for each CDP processing

Dimensions

Placing Basis	Business Type	…….

- **Self-serve reporting solution:** Our team created an MS-SQL database consolidating diverse sets of information (policy number, major / minor class, business type, etc.) from multiple source systems (policy booking, underwriting and billing systems, etc.). The solution's output was provided in the form of a Power BI dashboard which included a comprehensive view of the underwriting services expenses at a multidimensional level. This enabled our client to deep dive into the data to get different usable insights.

As an example, the average cost for slip processing across marine LoB, property LoB, etc. was reported across dimensions such as the broker, placing basis, underwriter, risk class, etc.
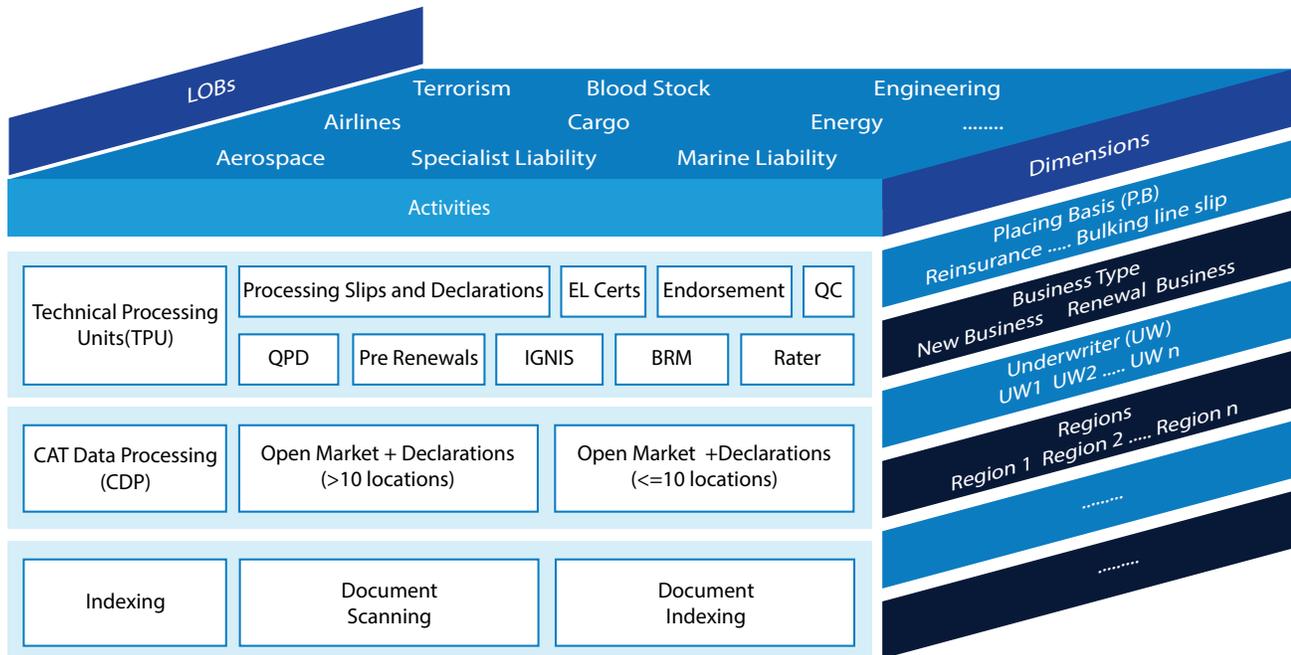
The business impact

Our solution's delivered multi-fold benefits:

- The Infosys BPM Analytics team provided a detailed view of the cost break-up through multiple dimensions which could be drilled down further at an activity and sub-activity level

- We enabled our client to compare metrics (e.g. avg. cost per policy, avg. transaction per policy, etc.) across LOBs and multiple dimensions (e.g.

underwriters, placing basis etc.). and provided insights on the existence of any systematic pattern/trend around cost concentration

- Our analysis revealed that all underwriting activities and sub-activities for similar types of policies do not result in the same cost structure and that some transactions were costing significantly more than others (e.g. the average cost

of slip processing for the Asia region was 20% lesser than Europe and North America)

- Our client has started to use this reporting solution to reduce the cost (up to GBP 50k) incurred due to repeated transactions on the same proposal (e.g. organisation details, broker details, and so on, being updated through multiple requests rather than at one go)

For more information, contact infosysbpm@infosys.com

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