



Data Modeling & Visualization-Focused Connective Layer For Multi-Line Insurance & Reinsurance Companies

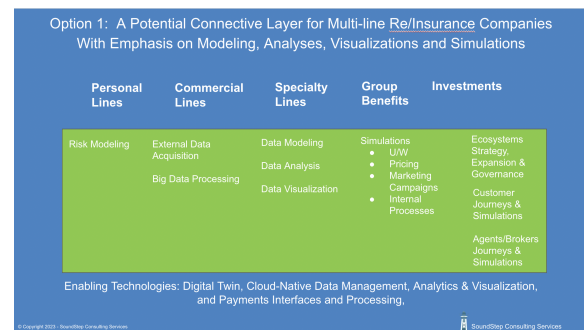
Multi-Line Businesses

Multi-line insurance and reinsurance businesses have separate business units for each line of business. More often than not each business unit has a dedicated set of actuaries, risks and data analysts. The limitations of data management practices and technologies of the past has not enabled the sharing of data acquisition, data cleansing, modeling, analyses, and visualization activities among the business units. The nature of each line of business has also made it difficult to coordinate with an IT department the computing power, the loading and unloading of data and models, the storage space, the relevant mathematical algorithms, and other support services required by the actuaries and the analysts. And in most companies this has also resulted in IT having to dedicate teams to each business unit in support of the actuarial services and risk management function.

A Connective Layer to Consider

Each line of business in a multi-line insurance or reinsurance business can benefit from having a *Data Modeling and Visualization Connective Layer*. The layer includes data management (from acquisition through data qualification, cleansing and

preparation, storage, archiving, retrieval, and post-retention period disposal), data analysis algorithms and tools, data modeling, data visualization, and finalization for distribution and consumption. This connective layer is shown in the Option 1 diagram below.



This connective layer would have been difficult to create and sustain with the technologies and practices of the past.

Digital Technologies and AI

The enabling technologies that are available today which can be harnessed to support the aforementioned connective layer include Digital Twin for simulations (offline or in real-time) and Cloud-Native Data Management, Analytics and Visualization which are now provided by Amazon AWS,



Microsoft Azure, Google Cloud, and several other Cloud Services and Infrastructure providers. Cloud Services and Infrastructure provide the best option to enable real-time, on-demand data acquisition, modeling, analytics and visualization from any location. The need to schedule with an internal IT department for additional computing power or storage space or to load and unload trending data and versions of models can be eliminated.

The business of risk management, analytics, modeling and visualization should need not be an offline, when-resources-are-available type of business - especially with today's technologies.

Extending the Connective Layer

In the Option 1 diagram, Payments Interfaces and Processing were included as enabling technologies. The payments industry has developed and continues to develop real-time payments processing through applications programming interfaces (API) or via embedded modules or subsystems. The payments include all the traditional credit and debit cards (Visa, MasterCard, Amex, etc.), relatively new methods such as Apple Pay, Google Pay, Venmo, and many others. The inclusion of payments processing in any connective layer that extends outside the re/insurer's business is a critical component for embedded insurance/embedded finance.

Enhanced Illustrations and Proposals

A Data Modeling and Visualization connective layer can be extended to customers, agents, brokers, cedants, and

other reinsurers (for covers requiring multiple reinsurers). This layer can enable the distribution of content-rich and visually-appealing proposals and illustrations. Simulated data, grid and spatial models, and examples of how the risks were simulated, quantified, rated and priced can be shared with cedants (as part of a reinsurance agreement or a separate value-added/fee for service arrangement).

Critical Requirements

In order to develop a Data Modeling and Visualization Connective layer the critical requirements are an ecosystem vision and strategy that covers the internal and/or external players to be connected, and an executive leader who's willing to sponsor and champion the implementation of the vision. The vision and the leader are in the critical path of this transformative opportunity and for once, not the enabling technologies.

A Sound Step...

that multi-line re/insurance leaders and their business strategists should take is to look within their company and leverage their own actuaries, risk, and data analyst to gauge the size the Data Modeling and Visualization connective layer opportunity and shape the vision and its implementation.





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