Underwriting-Focused Connective Layer For Multi-Line Insurance & Reinsurance Companies

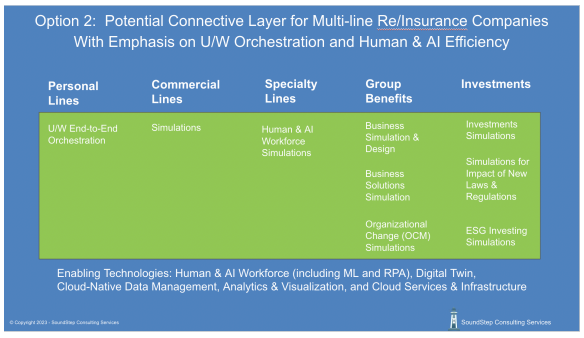
Multi-Line Businesses

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 underwriters, actuaries, risks and data analysts, and underwriting support personnel. Within each business unit underwriters are involved in various activities across the insurance or reinsurance value chain, from product management through claims. Underwriting orchestration within a business unit is challenging enough and creating a community of underwriters across business units is extremely difficult unless it's supported by a technology-enabled connective layer.

A Connective Layer to Consider

There are several options for creating a connective layer in a multi-line insurance or reinsurance business. One option that a SoundStep Consulting article described in a *Data Modeling and Visualization Connective Layer*. The other option (refer to the Option 2 diagram) is to purposely create a connective layer for the underwriting function across all lines of business. By definition, a connective layer brings together all services, capabilities, solutions, enablers, and tools that can be shared while preserving the uniqueness of each organization or unit that utilizes it (in this case, the underwriting team from each business unit). For those who are unfamiliar with the Connective Layer concept, SoundStep Consulting Services provides online documents that provide an overview and examples.

The Underwriting Orchestration Connective Layer highlighted in Green in the diagram below consists of a shared Underwriting End-to-End Orchestration process and enabling technologies.



Digital Technologies and AI

The enabling technologies required to implement the aforementioned connective layer include an Underwriting Orchestration

Processes that leverages Machine Language (ML), Robotics Process Automation (RPA), and Artificial Intelligence (AI) to coordinate the human and AI activities, Digital Twin for simulations (offline and/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 are crucial to be able to support real-time, on-demand data acquisition, modeling, analytics and simulations from any location. The need to schedule with an internal IT department the computing power or storage space or to load and unload data for simulation must be replaced by Cloud Services provided on-demand by third party cloud providers.

A Higher Level of Orchestration

The Underwriting Orchestration-Focused Connective Layer provides a higher level of orchestration because:

- Data from internal and external sources can be acquired and gathered on behalf of all the underwriting and actuarial functions across all business units
- Risk identification and classification by risk type and customer type can be conducted as one activity instead of separate, by line of business activity. For example, new and/or complex risks that are likely to be the focus of specialty lines underwriters can be directed toward the risk modeling and simulations that are tailored for those types of risks (e.g. cyber, convective storms, pandemics); and risks that will have an impact on Group Benefits (e.g. pandemic impact on employers and employees) can be channeled to the appropriate risk modeling and simulations activities.
- Collaboration among underwriters and actuaries, for example, with respect to commercial lines products that can be tailored to personal lines in order to target micro mom-and-pop businesses who need both personal and business insurance coverage can be significantly improved.
- As specialty lines risks become more predictable and quantifiable through simulations and claims experience new products can be created for the commercial and personal lines.
- Risks, Pricing, Loss Development and other risk management related activities can be greatly enhanced through simulations.
- Simulations can also identify new underwriting requirements so that submission data requirements can be enhanced in lock-step.

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.

Simulations and Digital Twins

Two related but different capabilities that insurers and reinsurers need to build now which will have short-term and longer term benefits are simulations and digital twins.

The aforementioned enabling technologies can readily support simulations of existing internal processes and workflows with the aim of streamlining them and/or identifying opportunities for deploying AI solutions. This applies to all underwriting processes as well, and to all other processes from product management through claims that need to be orchestrated via a single underwriting end-to-end orchestration process.

Simulations can significantly improve decision-making in organizational change management as well as in understanding the impact of new laws and regulations on the business and the end-customers. It can also make significant contributions in the insurance/reinsurance investments (asset-liabilities management) business that are looking beyond the traditional fixed-income assets but must remain within the guidelines established by regulators.

While simulations have historically meant the use of defined parameters and synthetic data, the Digital Twins technology brings the capability to create a digital copy or persona of an physical object or system and the environment it's in and utilize real-time data to simulate events. In the current world of Internet of Things (IoTs) the digital twins technology will steadily find its way into mainstream business.

Critical Requirements

A connective layer that enables the sharing of simulations and digital twin capabilities will benefit all units in an insurance or reinsurance multi-line business. Since the re/insurance business is essentially a business of risk management and underwriting, having an Underwriting Orchestration Connective Layer is very compelling.

The critical requirements are a company-wide vision and strategy to build a single underwriting-orchestrated simulations and digital twins capability that can be shared by any line of business, and an executive leader who's willing to sponsor and champion its implementation. As with any company-wide connective layer, the vision and the leader are in the critical path of this transformative opportunity.