Automating Data Intake Process in Commercial Underwriting

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Contents

Data Intake problem in Commercial Insurance

What is the biggest hurdle in Commercial Insurance for rapidly turning around a quote request, especially for mid and large markets? It is undoubtedly the submission data intake processing. Many carriers have tackled standardization of submission forms, but not that of accompanying data.

For example, it is typical for a midsize to large commercial property risk to include thousands of locations and property types, called as Statement of Value (SOVs). Brokers typically send it as an excel file with possibly multiple worksheets. Sometimes, loss run reports are attached (again in excel or pdf format). They use inconsistent/free-flow format. The addresses and data may be incomplete, and need to be tagged with the information available in-house.

Carriers typically have a data processing (called as prep or profiling) team that scrubs the data, puts it in a consistent format, maps codes (e.g. occupancy codes) to internal standards, enriches data with internally available information, and then sends the information to underwriters. This process may take multiple days to weeks, depending on the size and quality of data.

After this process is done, Underwriters conduct risk assessment, classification, pricing, and respond to quotes. The quality and turnaround time of underwriting process depend completely on the underlying data quality. As there are typically thousands of locations, this process can be expedited by appropriately flagging the risks that they should pay attention to. This can also happen during the data intake process.
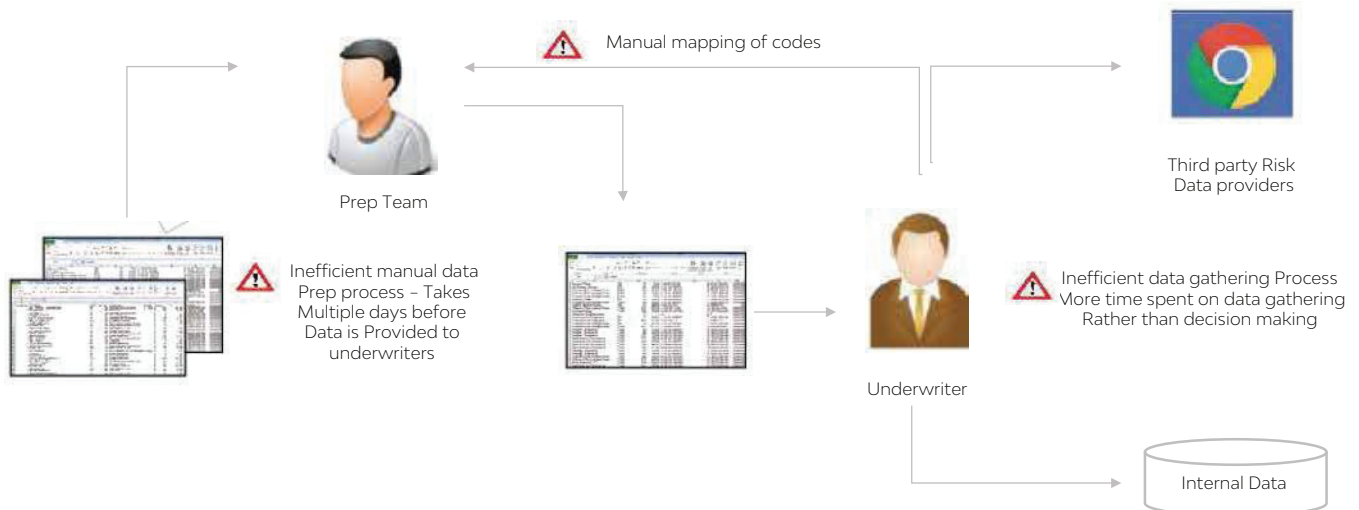

Clearly, the turnaround time and quality can be significantly improved if the current manual process is replaced by more automated data intake process. To summarize, the data intake process must:

- Handle inconsistent input files in multiple formats
- Improve data quality by scrubbing the data
- Enrich missing/incomplete data
- Map external codes to internal codes
- Run rules to flag the risks for underwriting scrutiny

Metamodel-driven Solution

Those who have tried to automate the process know that the solution to this problem is not simple; due to variety of input formats, different types of data for different products and varied

enrichment requirements. The solution needs to be - Highly configurable, Metamodel-driven, auto-mated with provision of manual intervention as required.
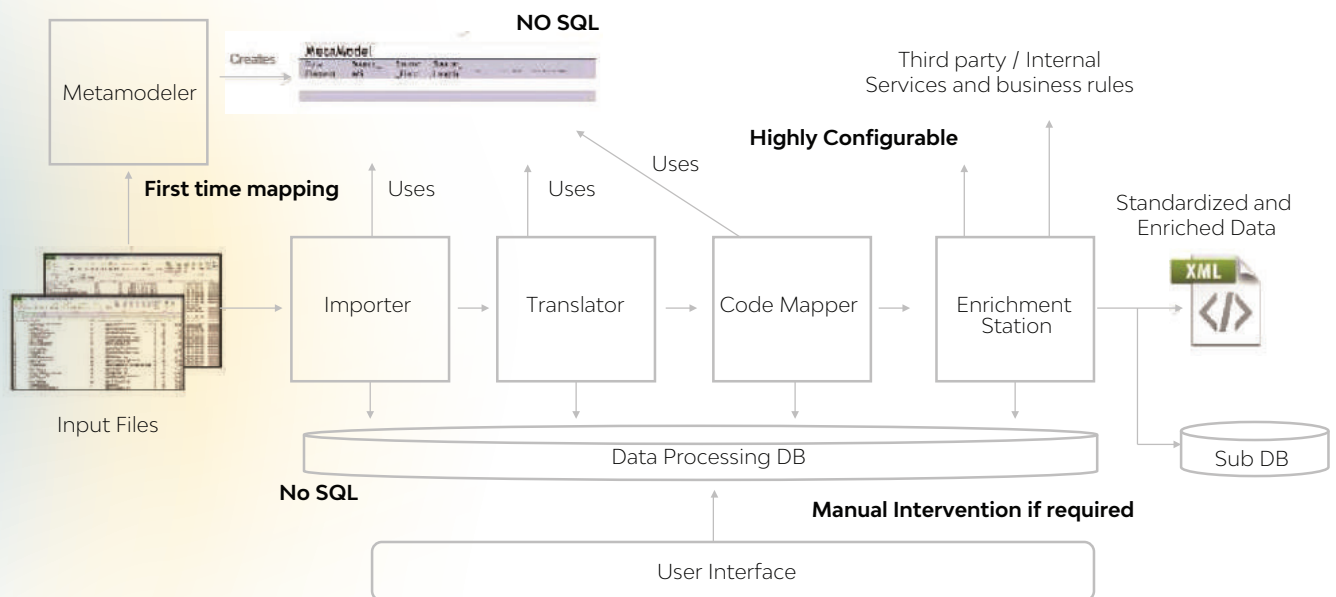
The heart of the solution is a **Metamodel,** which means a model of a model. It stores the information on how every input file should be interpreted, and how it should be mapped to internal formats and codes. Due to varying number of data elements, formats and mapping rules, the best way to store this Metamodel is to leverage 'No SQL' databases. The **Importer** is a batch routine that imports ongoing feeds by leveraging the Metamodel information. The **Translator** uses the translation engine to covert the input data elements into standardized formats that can be used internally. The **Code Mapper** allows mapping incoming codes to the industry standards such as **ACORD** or internal standards. This functionality

may require manual intervention if the code mapping rules are not defined for all the codes. The **Enrichment station** allows configuring third party or internal services that should be invoked to enrich the data. For example, you may get specific peril data for every location from third parties and append to the data. It also runs the configured rules to flag specific risks for a deeper evaluation. Once the standardized and enriched data is available, it will be sent to an underwriting workstation for further processing. The better quality, standardized data also enables the use of analytical models, thereby providing quality insights to underwriters.

Business Benefits

The solution provides following business benefits:

- Reduction in the overall cycle time by as much as 50% (calculated for large market property risks)

- Eliminate or reduce manual intervention needs significantly, thereby reducing costs by as much as 35%

- Improve decision making due to better quality, enriched data that can be leveraged for advanced analytics

About the Author

Amit Unde is an Associate Vice President and CTO for Insurance at L&T Infotech. He leads L&T Infotech's Insurance Solutions Office and Enterprise Architecture Practice in North America. He has about 19 years of experience working with insurance companies across the globe. He has a blend of technology and insurance domain expertise, and has helped leading carriers, brokers and reinsurance firms in defining their Enterprise Architecture and IT Strategy Roadmap.

Amit specializes in Commercial Underwriting and Risk Management Solutions, and has been at forefront of leveraging modern technologies such as Location Intelligence and Big Data Analytics, for better risk selection and pricing. He leads development of L&T Infotech's Underwriting and Risk intelligence solution called AccuRUSITM.