

Equity-Based Insurance Guarantees Conference

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Data Enrichment for VA's and EIA's

Brian Campbell

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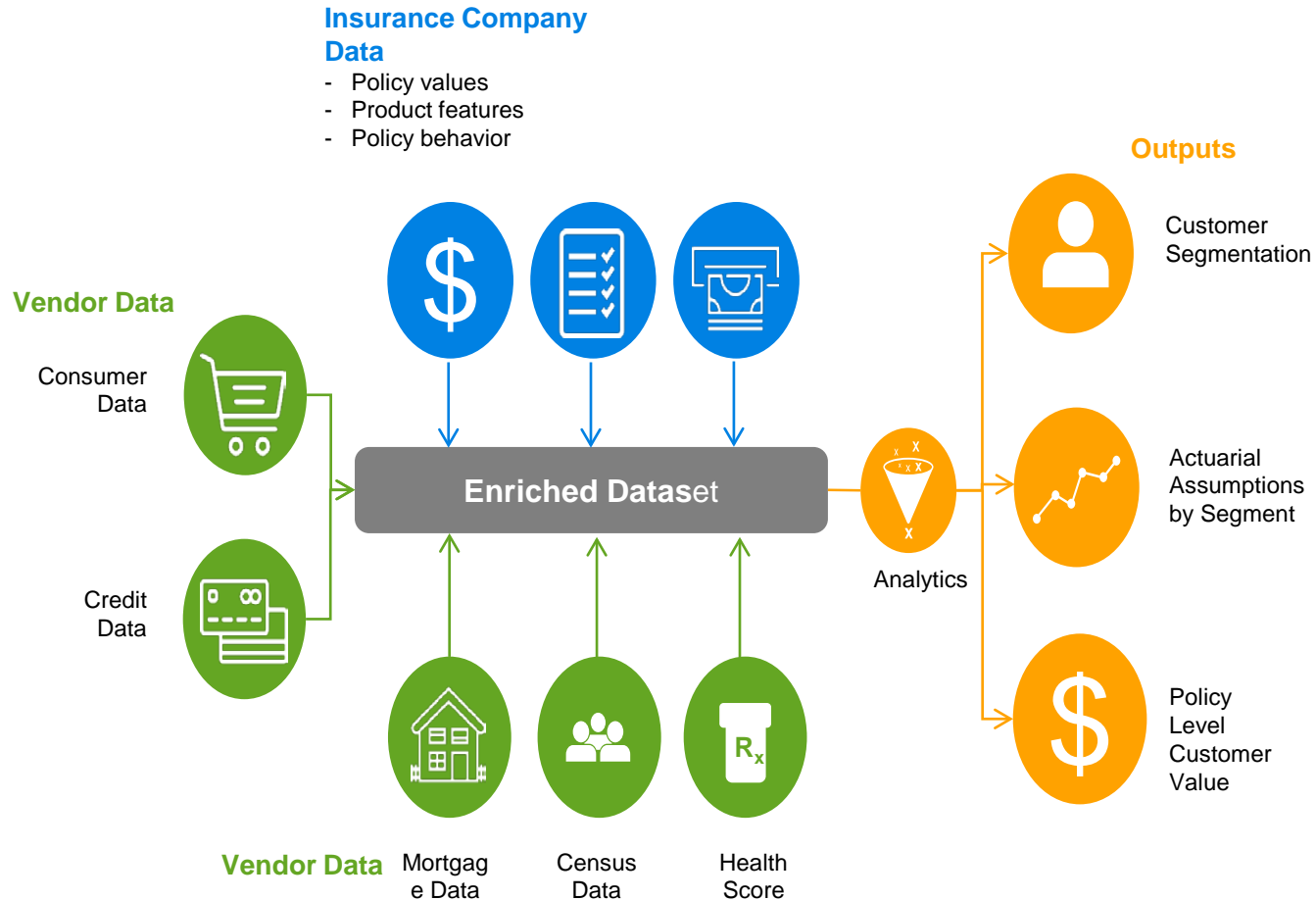


SOA Equity Based Insurance Guarantee Conference

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Enriched Data Diagram



What Is Data Enrichment?

Techopedia Defines it as:

“Data enrichment is a general term that refers to processes used to **enhance, refine** or otherwise **improve raw data**.”

“This idea and other similar concepts contribute to making data a **valuable asset** for almost any modern business or enterprise.”

Why It's Important?

- Predictive Modeling looks for relationships across data components so it's vital to have reliable data
 - Recent studies on VA and EIA behavior have identified new variables of importance that may not be available in your current data sets
 - VA's and EIA's are especially dynamic products so its reasonable to expect you will need an enhanced data set to analysis behaviors and manage your block.
- Study Outcomes may be Flawed if Data isn't Reliable
- Management may miss Critical Opportunities to Act if Data not Immediately Available
- Management needs to consider masking or grouping techniques to deal with Risk of Data Breech and Perceptions on Sensitive Data Usage

Fields of Importance for EIAs and VAs

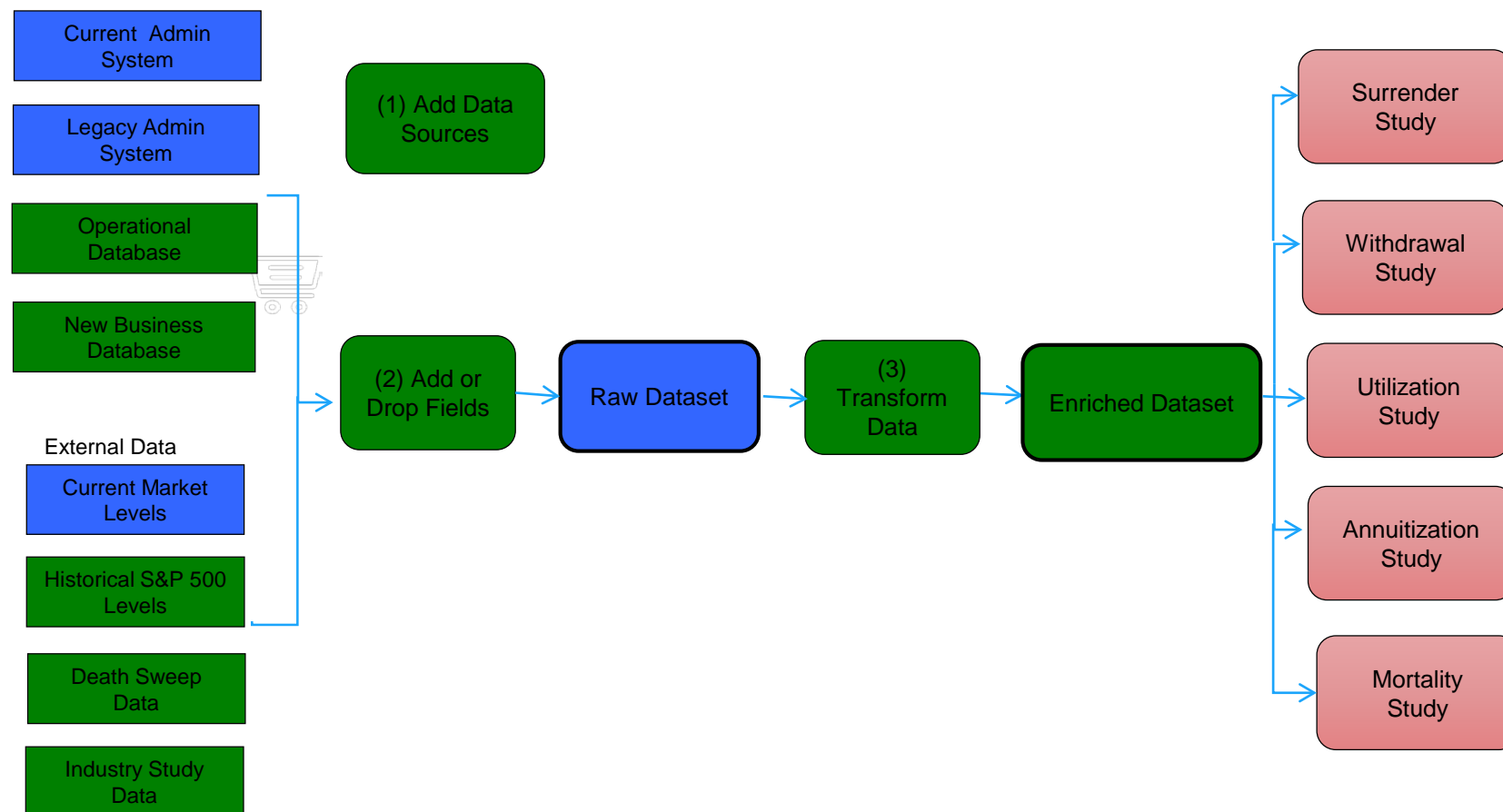
Drivers for Surrender Studies	Drivers for Utilization Studies	Drivers for Mortality Studies
Policy Duration	Attained Age	Date of Death
SC Schedule	Tax Status	Guar Type
LB Type	Income Date	Age
Withdrawal History	Size	Duration
Contract Size	Joint Status	Gender
Moneyness		Tax Status
		Joint Status

Fields of Importance for EIAs and VAs

Requirements for New Regs	Are Prone to Data Limitation Issues	Risky due to Breach or Sensitivity Concern
AG43	Policy Status History	Social Security No
VM22	Joint Status & Roles	Credit Card Info
IFRS 17	Benefit Base	Credit Scores
DOL	ITM	Health Attributes
	Date of Death	Policy Number
	Guarantee Exercise	Address

Enriched Data - Flow Diagram

Internal Company Data



Process Considerations in Enriching Data

➤ Documentation

- Variable Names and Descriptions
- Source of Data plus any Manipulations Defined
- Decisions Support

➤ Governance and Controls

- Formal Change Management process including sign-offs
- Lower environments available for release testing
- Visual flow chart can aid in determining risk points to control

➤ Automation

- Efficiency and speed provide more analysis time
- Business Needs and Requirements that Spell Out
- Production Environment
- Encourage adding automatic quality checks

Enriched Data - Flow Diagram

Internal Company Data

Current Admin System

Legacy Admin System

Operational Database

New Business Database

External Data

Current Market Levels

Historical S&P 500 Levels

Death Sweep Data

Industry Study Data

(1) Add Data Sources

(2) Add or Drop Fields

Raw Dataset

(3) Transform Data

Enriched Dataset

Surrender Study

Withdrawal Study

Utilization Study

Annuitization Study

Mortality Study

Documentation

Governance and Control

Automation

Enriched Data Uses Beyond Behavior Studies

➤ Reserving

- Support Enhanced Inforce data creation for Principal Based modeling

➤ Pricing

- Provide more robust data to explore new and changing relationships
- Allows for more granularity in product pricing

➤ Product Management

- Provide more robust data to predict future situations

➤ Capital Management

- More reliability to distributional data to define tails

➤ Hedging Support

- More robust data allows for more sophisticated hedging as warranted

Key Takeaways

- “Your data is a valuable asset that can be made more valuable through enrichment.”
- “The dynamic nature of EIAs and VAs with guarantees requires a more robust data set so enrichment considerations are very important.”
- “There are important variables being identified by predictive modeling and other studies that you should consider adding to your data set.”
- “Your process needs to be well defined so that you can add or modify your enrichment procedures over time.”
- “Controls, governance and documentation are foundations that will help keep your data valuable.”
- “Your enrichment process should consider the risks of public perception concerns and data breach risks.”

Questions?

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