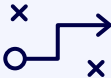


# Casual AI: Grasp customer behavior to enhance retention of retirement funds

Using causaLens platform  
powered by Causal AI

# Executive summary

## Problem statement



- Insurers often seek to understand how customer behavior affects retention.
- Traditional machine learning techniques fall short in finding the best retention strategies
- Insurers look to adopt advanced AI model that offer data insights on how customer actions

1

## Solution developed



- The 'Boost Customer Retention' solution uses Causal AI to develop effective retention strategies by identifying causal relationships
- The causaLens platform's decisionOS component is enhanced with synthetic datasets for deeper insights into retirement plans
- Its Causal Net Model and decision intelligence engine provide actionable recommendations through causal graphs

2

## Technology used



- Causal Net Model using PyTorch, CVXPY, or Pyro engines
- causaLens Decision Trees
- DoubleML algorithms
- Open-source ML packages
- decisionApp for Intervention and Counterfactual scenarios modeling

3

## Business benefits

- Solution empowers the loss adjustors and field surveyors to work faster
- Expedite claims processing by at least 20-30%.
- Improve customer retention by 10-15% through quicker claim settlement
- Reduce operations effort in mundane admin activities by at least 15– 20%.



4

# Problem statement | Business context



## Business context

01

Significant life events or job changes may lead over **30% of all permanent workers** and up to **50% of temporary workers** to **cash out their retirement**, risking their savings.

02

Insurers are therefore **improving customer service**, introducing **innovative retirement income products**, **auto-enrollment**, and **auto plan portability**

03

A Tier I North America based P&C insurer sought to understand the **capabilities of Causal AI models** in **identifying causal factors** and **performing counterfactual analysis** for **enabling better decision making**

04

They want to **boost customer retention** using synthetic data sets of retirement plan transactions and beneficiary demographics

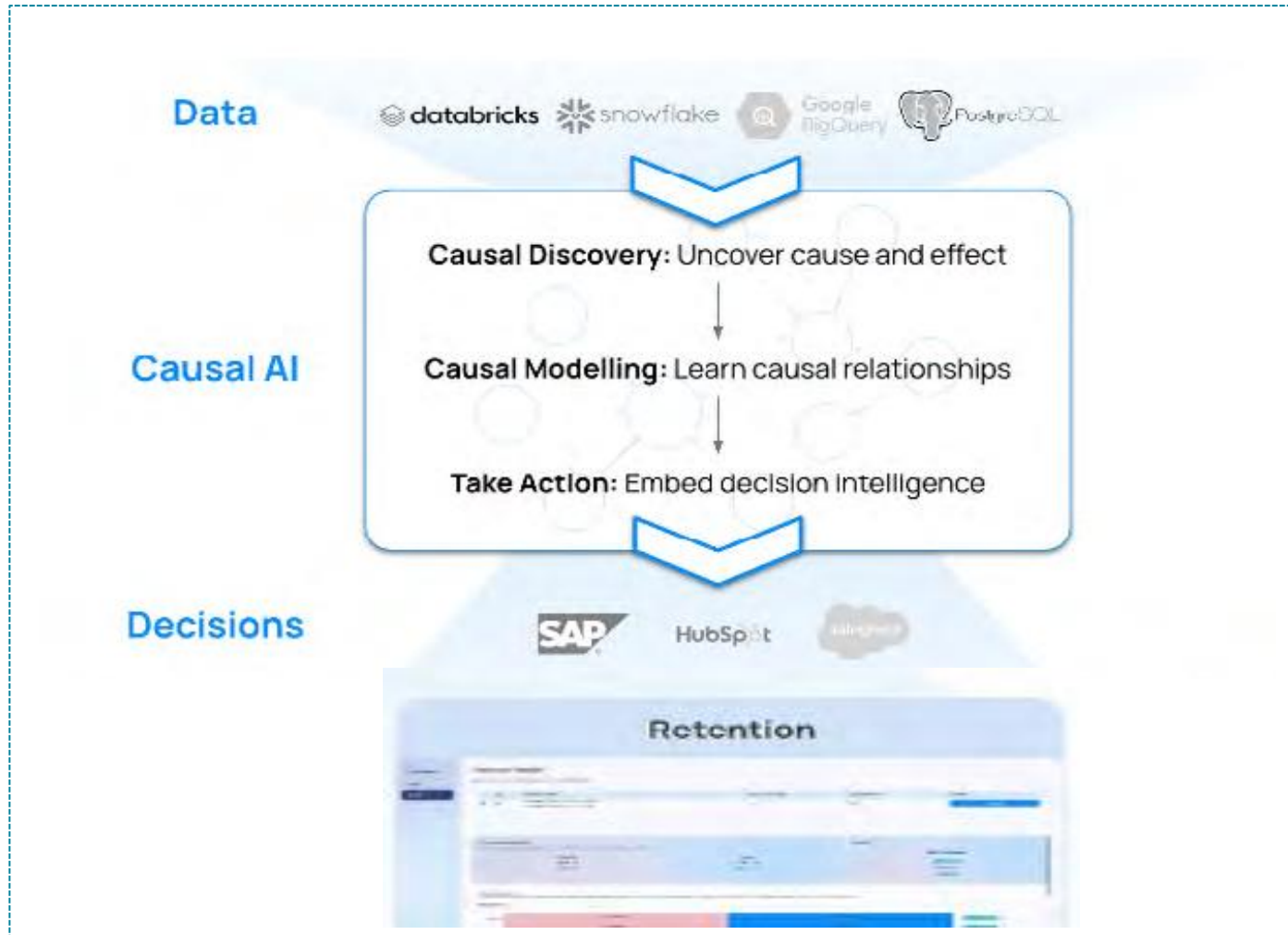
05

The aim is to evaluate the causaLens platform's ability to create **Causal AI models** that **enhance customer retention and inform better strategies** by uncovering causal links and applying counterfactual analysis.

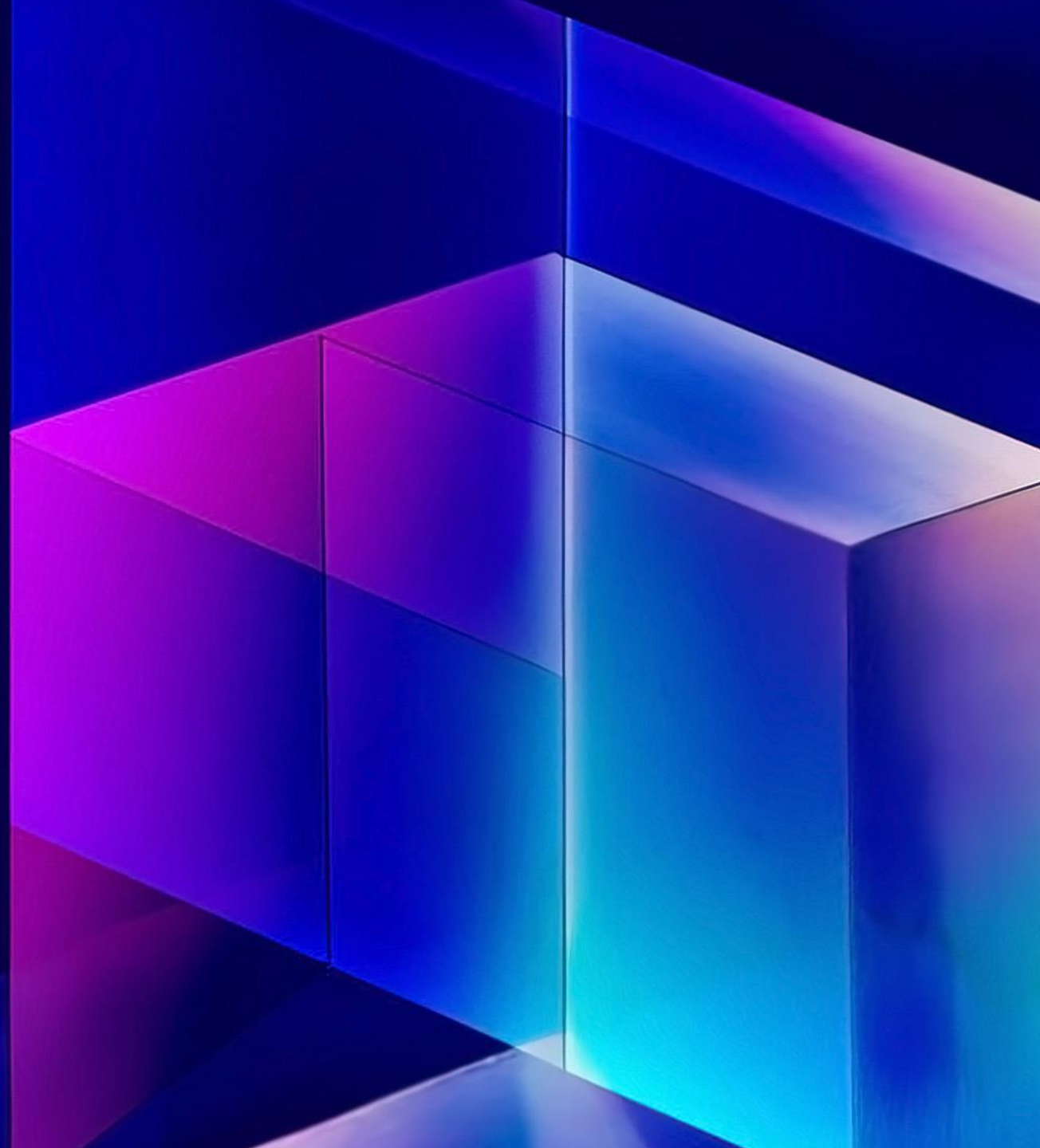
06

The aim is to identify the "true" factors that influence customer attrition and help identify effective retention strategies

# Solution developed



**Let us walk you  
through an example**



# What happened?



## Context/Background



A retirement plan provider in North America serves millions of plan holders with various accounts and retirement service. They wanted to prioritize customer retention which is crucial for retaining plan holder funds



## Key takeaways

- The company sought to **understand customer interactions' impact on retention**
- They found **traditional machine learning inadequate** for strategy optimization.
- They aimed to leverage the **Causal AI model on causaLens's platform** for its **deep data insights and explainable AI**
- The platform's counterfactual scenario modeling capabilities were intended to help identify **actionable retention strategies.**

# What was the next Plan of Action?

A retirement plan provider's data strategy team built Causal AI model using the **causaLens** platform where the team:

- Relies on deep data insights to understand key causal factors for customer attrition
- Looks to build actionable customer retention strategies using counterfactual scenario modeling techniques for boost of retention

The Company's data strategy team **launches decisionOS module** from **causaLens** platform powered by Causal AI:

- The **causal factors influencing customer retention** are understood
- **Actionable retention strategies** by running **counterfactual scenario models** are identified



# What are the business values?

It is recommended that insurers could benefit from adopting this data science based Causal AI technology, since it:



Enhances predictive accuracy

1



Offers valuable insights into customer behavior

2



Facilitates more robust business decisions

3

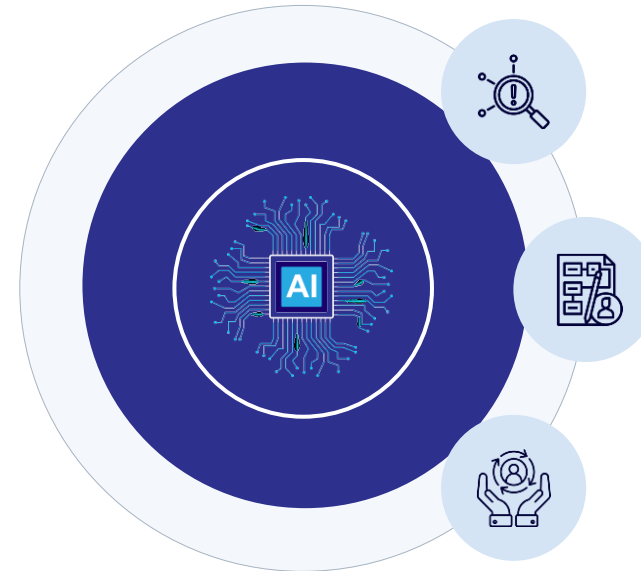


Increases efficiency in risk assessment through modeling intervention and counterfactual scenarios

4

Additionally, our causal AI solution identified:

6 key causal variables influencing around 80% of causal relationships impacting customer retention



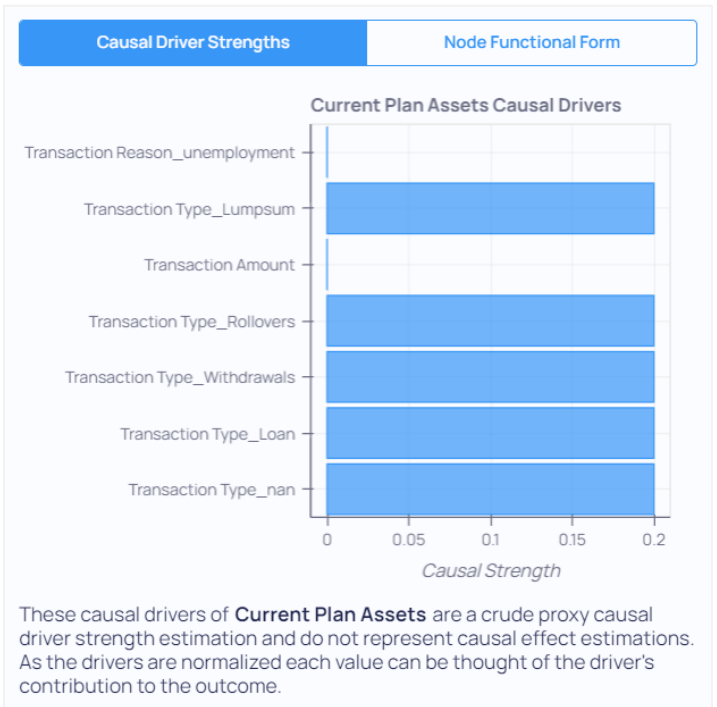
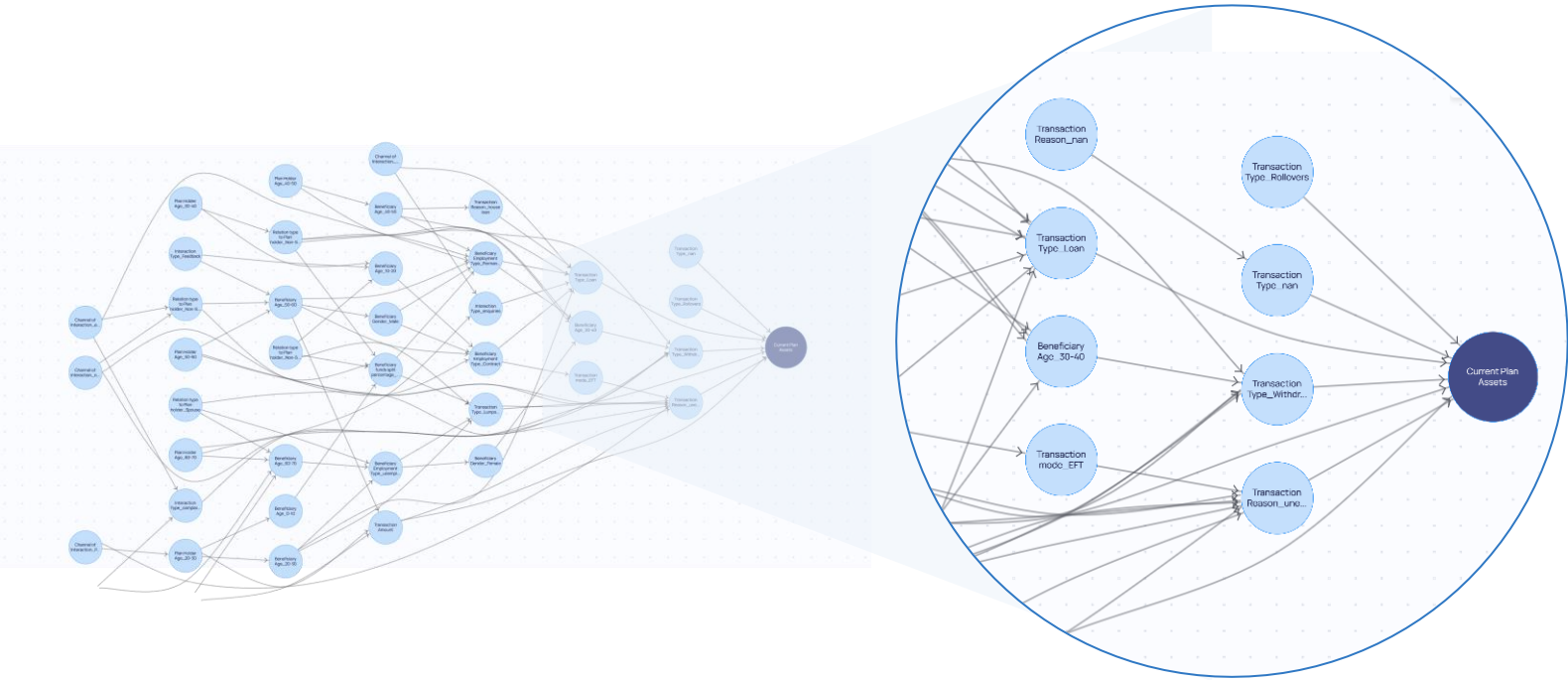
Successfully simulated 4 counterfactual scenarios providing actionable strategies to improve customer retention

By utilizing the causal AI model and decisionApp, changes to their customer service strategy were identified, thereby improving retention by an estimated 17%

# Key capabilities (1/2)

## Human Guided Causal Discovery Graph Generation

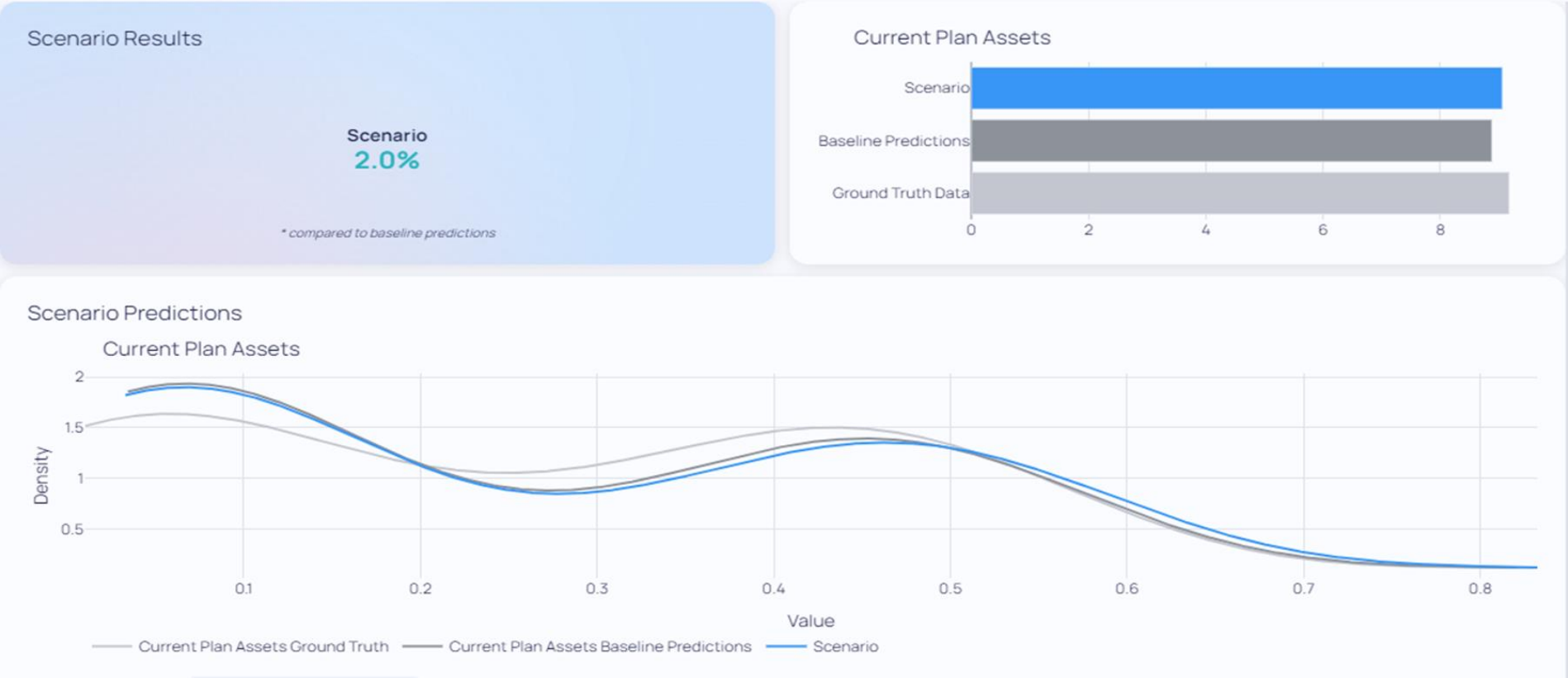
The Retirement Insurers' data strategy team inputs synthetic datasets into the decisionOS module, which employs the Human Guided Causal Discovery (HGCD) process. This generates a Causal Graph that identifies causal factors influencing customer retention. The HGCD process merges top-notch algorithmic causal discovery with insights from insurers' domain experts, thus yielding more precise causal graphs in less time. This allows the data strategy team to comprehend all the cause-and-effect relationships within the observed data.



# Key capabilities (2/2)

## Actionable Strategies based on Counterfactual Scenario Modeling

The data strategy team of Retirement Insurers uses causaLens platform's modeling module to introduce intervention and counterfactual scenarios. This tool allows for accurate analysis of "what-if" situations, generating actionable recommendations to achieve tangible outcomes



**Thank you**