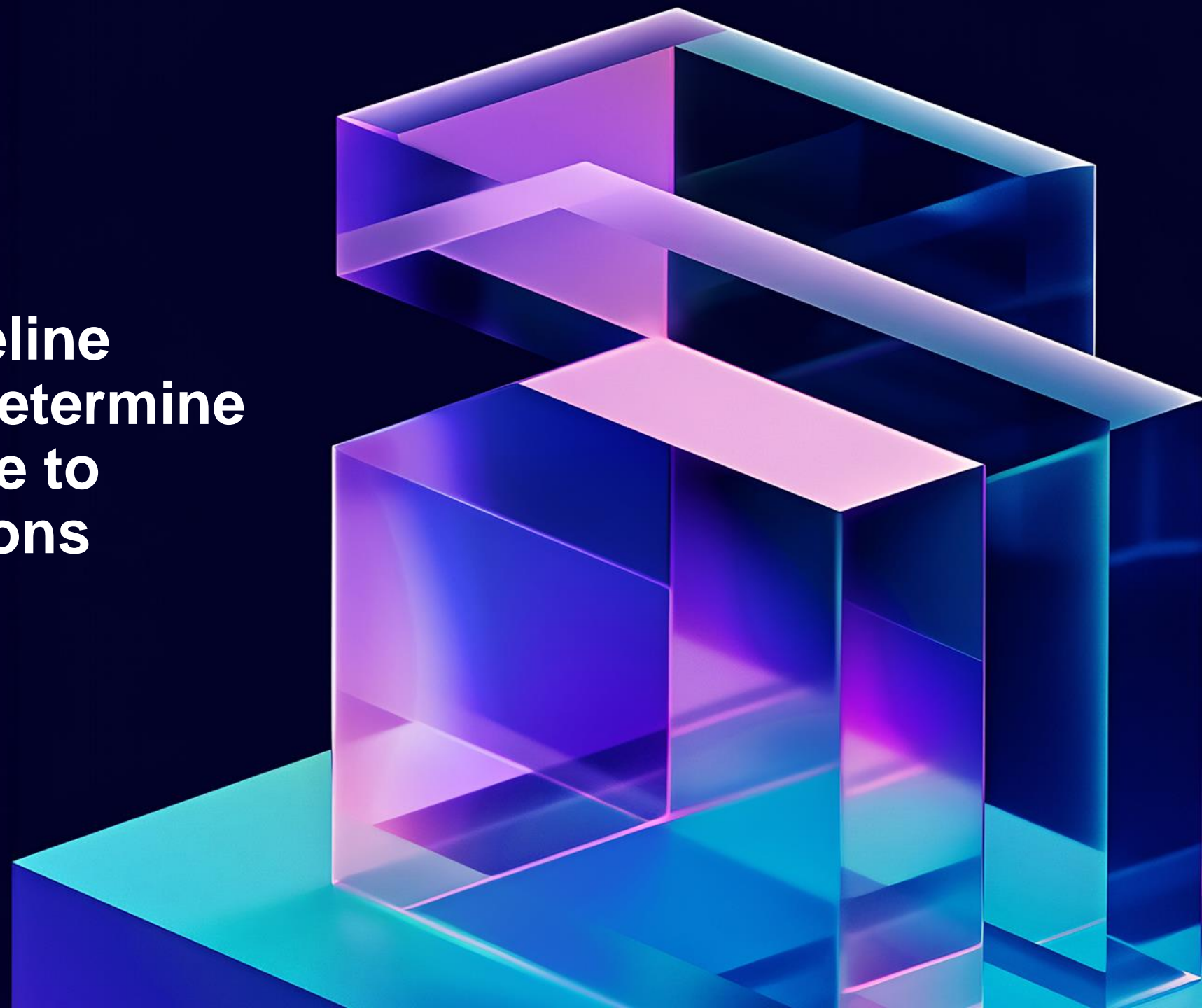
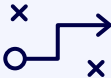


# Elevate UW guideline adherence and determine policy precedence to accelerate decisions



# Executive summary

## Problem statement



- Evaluating unique and unstructured risk across Life and P&C
- Time-consuming manual processes
- Inconsistent decision-making
- Difficulty in keeping up with changing customer expectations

1

## Solution developed



- Automating Data Extraction from insurance applications, documents, and other sources, reducing the manual effort required
- Generating Personalized Policy Recommendations tailored to the individual's risk profile and needs
- Assisting with Risk Assessment and Pricing
- Leveraging a fully managed Amazon Bedrock

2

## Technology used



- Generative AI - Amazon Bedrock
- Large Language Models (LLMs) – Anthropic's Claude Models
- Integration and Deployment – Gen AI models powered by Amazon Bedrock into the insurance company's existing underwriting workflows and systems

3

## X-Factor (Business benefits)

- Increased Efficiency and Productivity
- Enhanced Consistency and Accuracy
- Improved Customer Experience

- Competitive Advantage
- Cost Savings



4

# Insurance underwriting challenges



## Time consuming and manual process:

Time-consuming and error-prone manual extraction of relevant information from a wide range of applicant documents



## Rule validation:

Challenges in verifying that information provided adheres to the insurer's complex underwriting guidelines, especially when dealing with unstructured data and varying document formats



## Underwriting guidelines adherence:

Challenges Difficulty in consistently applying underwriting guidelines across all decisions, leading to potential inconsistencies and human bias

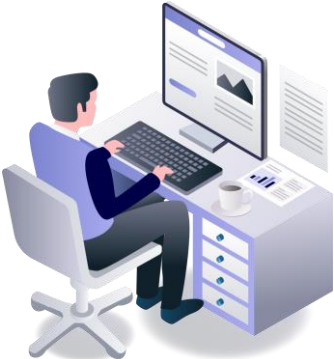


## Decision justification:

Challenges in providing clear and objective justifications for underwriting decisions, especially when denying applications or offering modified terms

# Day-in-the-life of an Insurance Underwriter

John Doe is an Insurance Underwriter for all policy seekers including higher-risk individuals



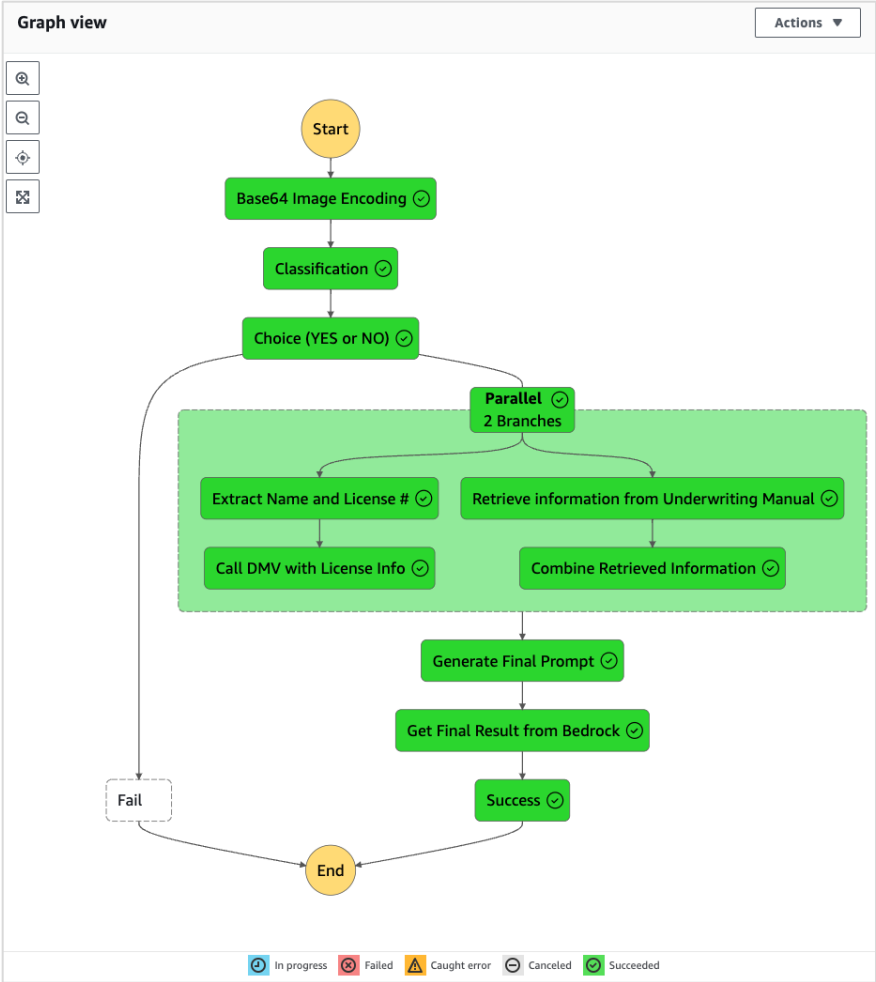
10 years of underwriting expertise

Relies on data for decisions

Needs to account for all the changes that are continuously happening across different states in: underwriting guidelines, government regulations for adherence and compliance, policy and surcharge premium changes

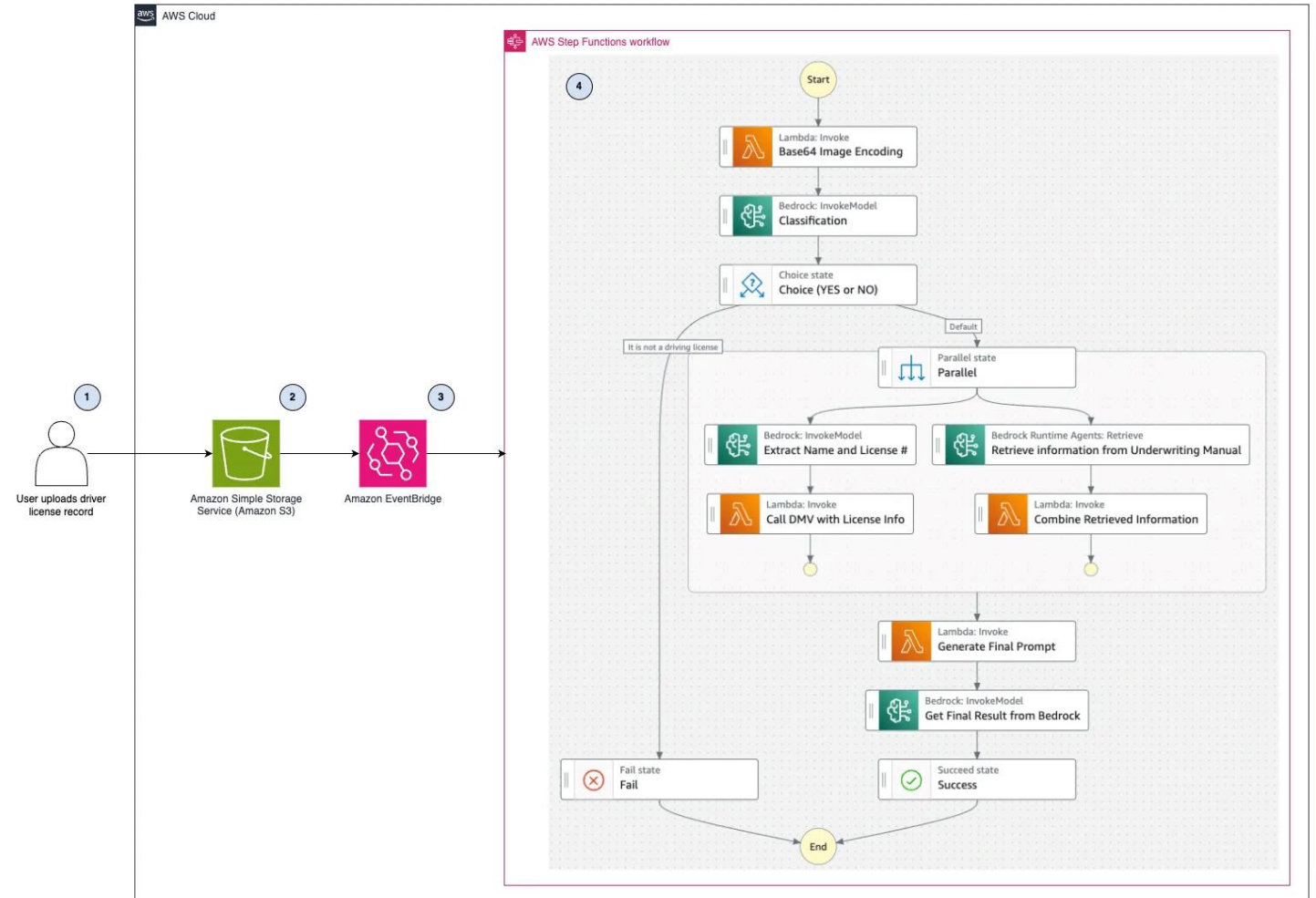
Looks to provide a policy based on the underwriting guidelines

- John uploads the Driving License.
  - Identify relevant precedents with high degree of accuracy from historical policy data
- Let's see how the interaction goes



# A solution for streamlining insurance underwriting

- Users upload an image of a driver's license record to an Amazon Simple Storage Service (Amazon S3) bucket. The bucket is configured to send event notifications to Amazon EventBridge.
- An EventBridge rule is configured to start an AWS Step Functions state machine when objects are uploaded to the S3 bucket.
- EventBridge sends the event data to the Step Functions workflow, which will orchestrate multiple AWS services to perform the required tasks for underwriting rules validation.
- The state machine starts and runs a series of event-driven steps:
- The workflow begins with the "Base64 Image Encoding" state, which encodes an image of the uploaded driver's license into Base64 format.
- The Base64 encoding is then passed to the "Classification" state, which invokes Anthropic Claude 3 Haiku on Amazon Bedrock to classify the image as a driver's license.
- Based on the classification result, the workflow decides whether to proceed using the "Choice (YES or NO)" state.
- If classified as a driver's license, the workflow proceeds to the "Parallel" state to run two Amazon Bedrock tasks in parallel. If not classified as a driver's license, the workflow will fail.



# How you can build it with Amazon Bedrock

## Leveraging generative AI for Insurance Underwriting:

Utilize the capabilities of generative AI models to automate and streamline various tasks in the insurance underwriting process.

1

## Automating data extraction:

Apply generative AI techniques to extract relevant information from a wide range of applicant documents and forms, reducing the manual effort required.

2

## Generating personalized Policy Recommendations:

Leverage generative AI models to analyze customer data and generate personalized policy recommendations tailored to the individual's risk profile and needs.

3

## Assisting with risk assessment and pricing:

Utilize generative AI models to provide more accurate and consistent risk analysis, leading to better-informed underwriting decisions and pricing.

4

## Implementing the solution with Amazon Bedrock:

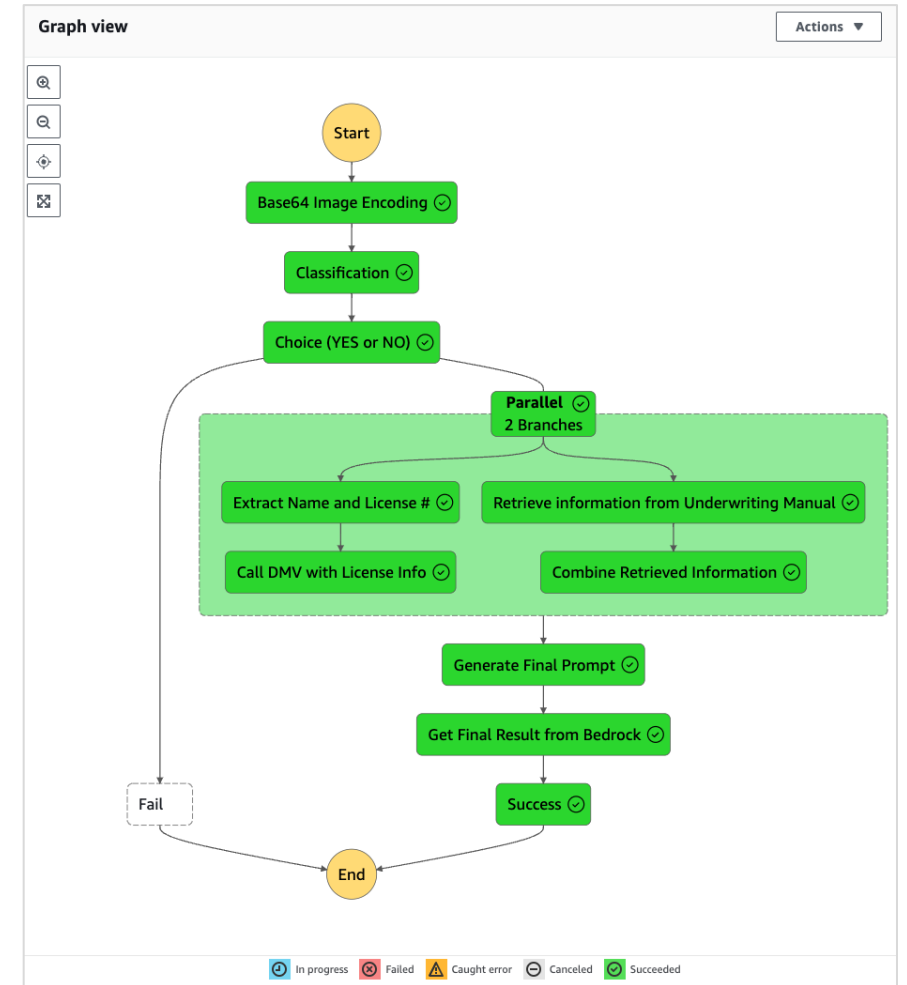
Use Amazon Bedrock, a managed service for large language models, as the platform to power the generative AI capabilities in the insurance underwriting solution. Benefit from the scalability, flexibility, and seamless integration offered by Amazon Bedrock.

5

## Integrating generative AI into existing workflows:

Seamlessly integrate the generative AI-powered capabilities into the insurance company's existing underwriting systems and processes.

6



# X Factor Business value



## Increased efficiency and productivity

Reduce the manual effort and time required in the underwriting process by automation of data extraction, policy recommendation generation, and risk assessment tasks using generative AI.



## Enhanced consistency and accuracy

- Generative AI models can provide more consistent and accurate underwriting decisions by applying objective, data-driven analysis, reducing the subjectivity and variability inherent in traditional manual processes.
- Better risk assessment, more accurate pricing, and fewer errors/inconsistencies in the UW outcomes.



## Improved customer experience

- The personalized policy recommendations and faster underwriting turnaround times enabled by generative AI can provide a more tailored and efficient experience for insurance customers.
- Higher customer satisfaction, retention, and more business opportunities through referrals/cross-selling.



## Competitive advantage

- As an early adopter, the company can gain a competitive edge by offering a more streamlined and technologically advanced underwriting process.
- Attract new customers, win more business, and potentially even command higher premiums due to the perceived value of improved UW experience.



## Cost savings

- The efficiency gains and productivity improvements achieved through the automation of underwriting tasks can lead to significant cost savings for the insurance company, both in terms of reduced manual labor and potential reductions in errors and rework.

# X Factor

## Technical value



### Managed service for LLMs

- Fully managed service that provides the infrastructure, tooling, and pre-trained LLMs for implementing generative AI solutions.
- Quickly integrate and deploy generative AI capabilities without having to build and maintain the underlying infrastructure.



### Flexibility and customization

Ability to fine-tune and customize the pre-trained LLMs to better fit the specific needs and data of the insurance company, further enhancing the effectiveness of the generative AI models.



### Scalability and performance

- Provides the necessary scale and performance to handle the demands of insurance underwriting workflows, which may involve processing large volumes of data and generating personalized outputs.



### Seamless integration

- Offers seamless integration of the generative AI capabilities into the existing insurance underwriting systems and workflows.
- Quickly adopt and benefit from the Generative AI without extensive custom development.



### Regulatory compliance

Provides the necessary security and compliance features to meet the stringent requirements of the insurance industry, which is crucial for the adoption and deployment of such solutions.

# Thank you

Presenter's name will go here

Contact information will go here