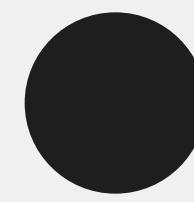




# Summary Video

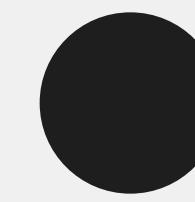
Team 86

# Use-Case and Novelty



## The Setting

In a financial setting, due diligence refers to a very thorough investigation of a potential investment conducted by a prospective buyer/seller. The objective is to confirm the accuracy of the seller's information and appraise its value. These investigations are typically undertaken by investors and companies considering M&A deals, and high-stakes investment.



## The Bottleneck

The complexity arises from the need for exhaustive, detailed analysis and reasoning across financial datasets which often require frequent updates; creating the perfect opportunity for an Agentic RAG solution leveraging [Pathway's Dynamic Capabilities](#)

# Challenges of Financial Due Diligence

## Time Intensive & Manual

According to a study by the National Bureau of Economic Research, companies that **spend more time on due diligence miss out on more potential deals** than those who spend less time. The average time spent on due diligence for a single investment being **around 6 weeks**.

## High Stakes

According to a study by Deloitte, companies that conduct thorough due diligence have a **success rate of 85%**, while those that don't have a success rate of just **15%**.

## Extremely Costly

According to a recent survey, the average cost for due diligence services is **around \$50,000**. However, these costs can vary widely depending on the specific services needed, with some firms spending as much as **\$150,000** on due diligence professionals.

# Current Gaps

## Status Quo

From market research, we found out that there are very few companies actually attempting to tackle automating / aiding the due diligence work-flows;

## Where do current AI solutions fall short?

Current analysts and researchers, have RAG-based tools assisting them for other financial tasks and here are their major points of failure:

- Handling Complex Queries
- Tabular and Mathematical Reasoning
- Drawing relevant predictive and prescriptive insights

and with that we Present to You the...

# FINANCIAL

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# AGENTIC

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# AUTONOMOUS

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# ACCURATE

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# SYSTEM

**Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation**

# THROUGH

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# EVOLVING (DYNAMIC)

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# RETRIEVAL

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# AUGMENTED

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# GENERATION

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# TOO LONG ...?

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# WE CALL IT - FA<sup>3</sup>STER

Financial Agentic Autonomous and Accurate System  
Through Evolving (Dynamic) Retrieval Augmented  
Generation

# FA<sup>3</sup>STER

[ Financial Agentic Autonomous and Accurate System Through Evolving  
(Dynamic) Retrieval Augmented Generation ]

Fast & Dynamic

Autonomous & Accurate

Cost-effective & Scalable

---

At the heart of Faster are 4 key components

---

1

Pre Retrieval &  
Retrieval  
Architecture

2

Post  
Retrieval  
Architecture

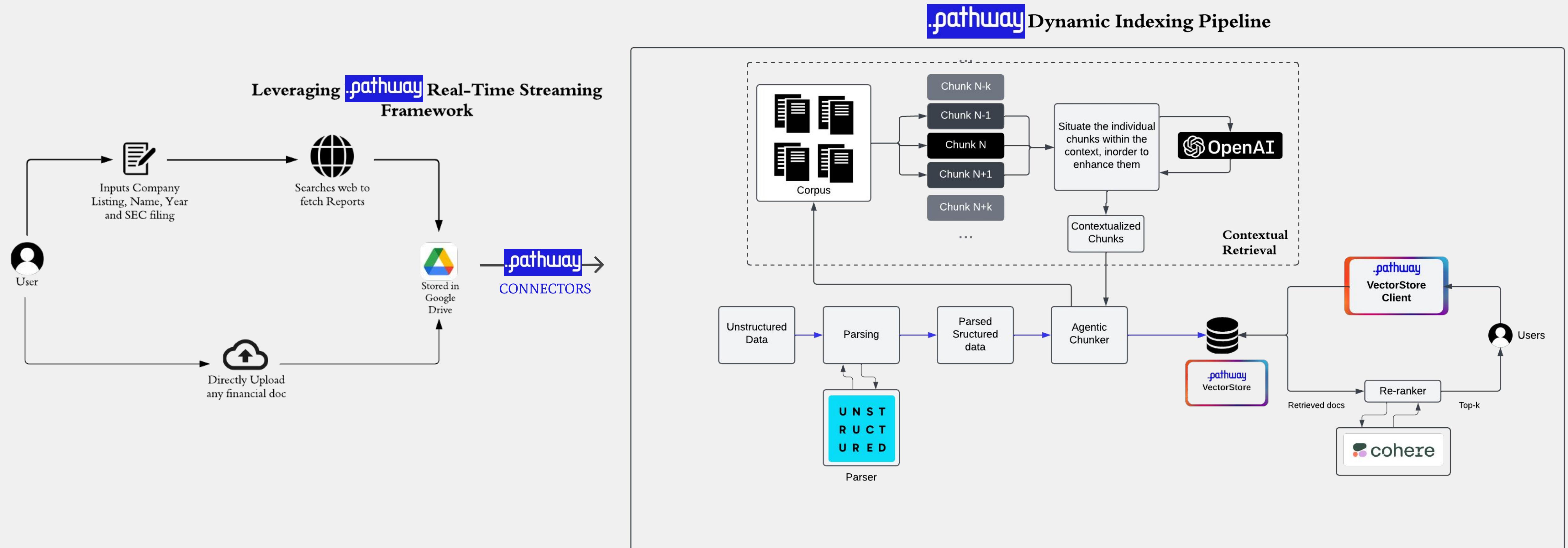
3

Vertical  
Autonomous  
Layer

4

UI

# FA<sup>3</sup>STER's Pre Retrieval & Retrieval Architecture



Extensive literature survey and experimentation

Agentic Chunker

Leverages both **Pathway's** real-time streaming framework coupled with its dynamic indexing framework (DIF)

Developed custom classes for the parser and agentic chunker within **Pathway's** DIF

.pathway

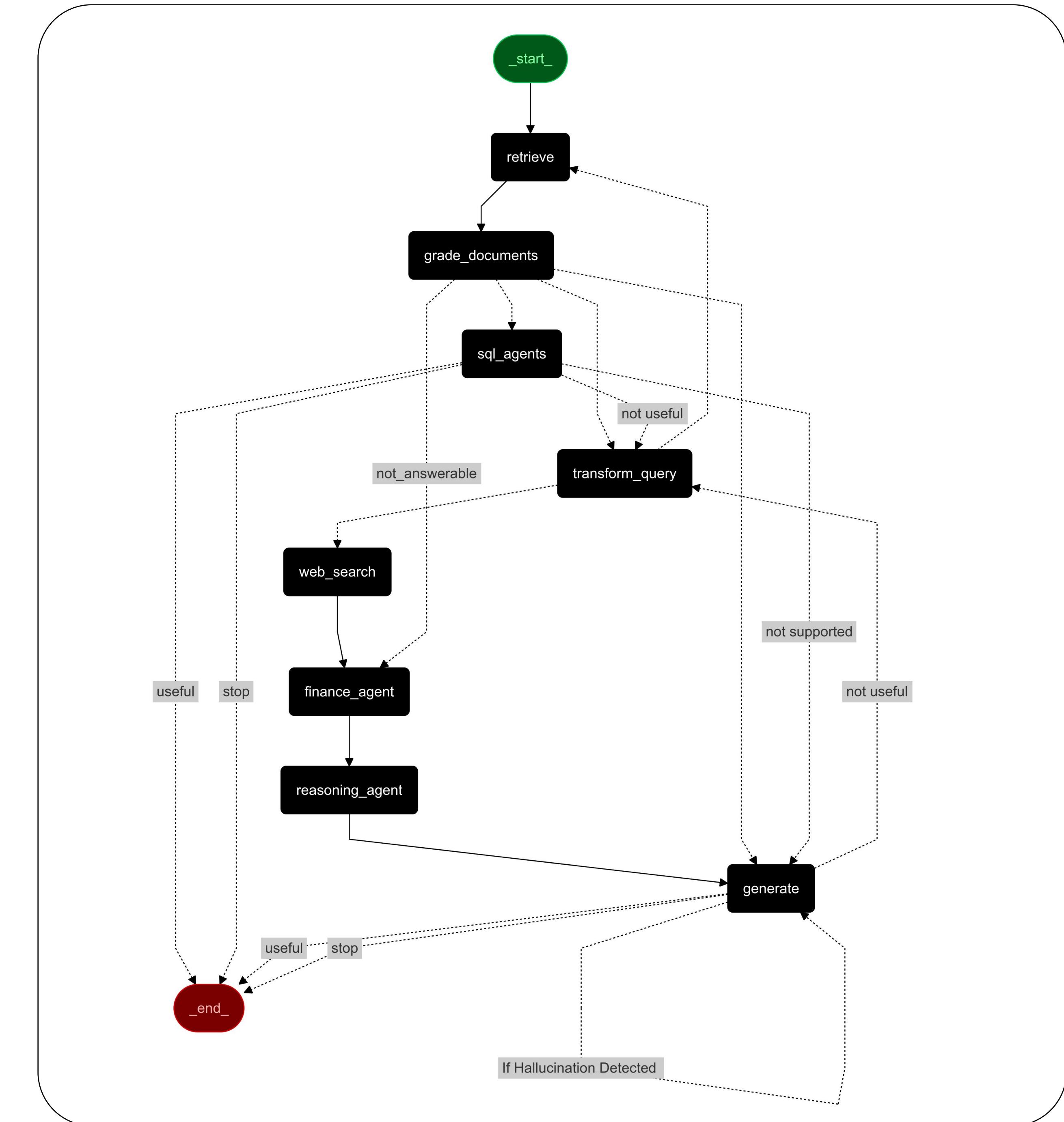
# FA<sup>3</sup>STER

## Post Retrieval Architecture

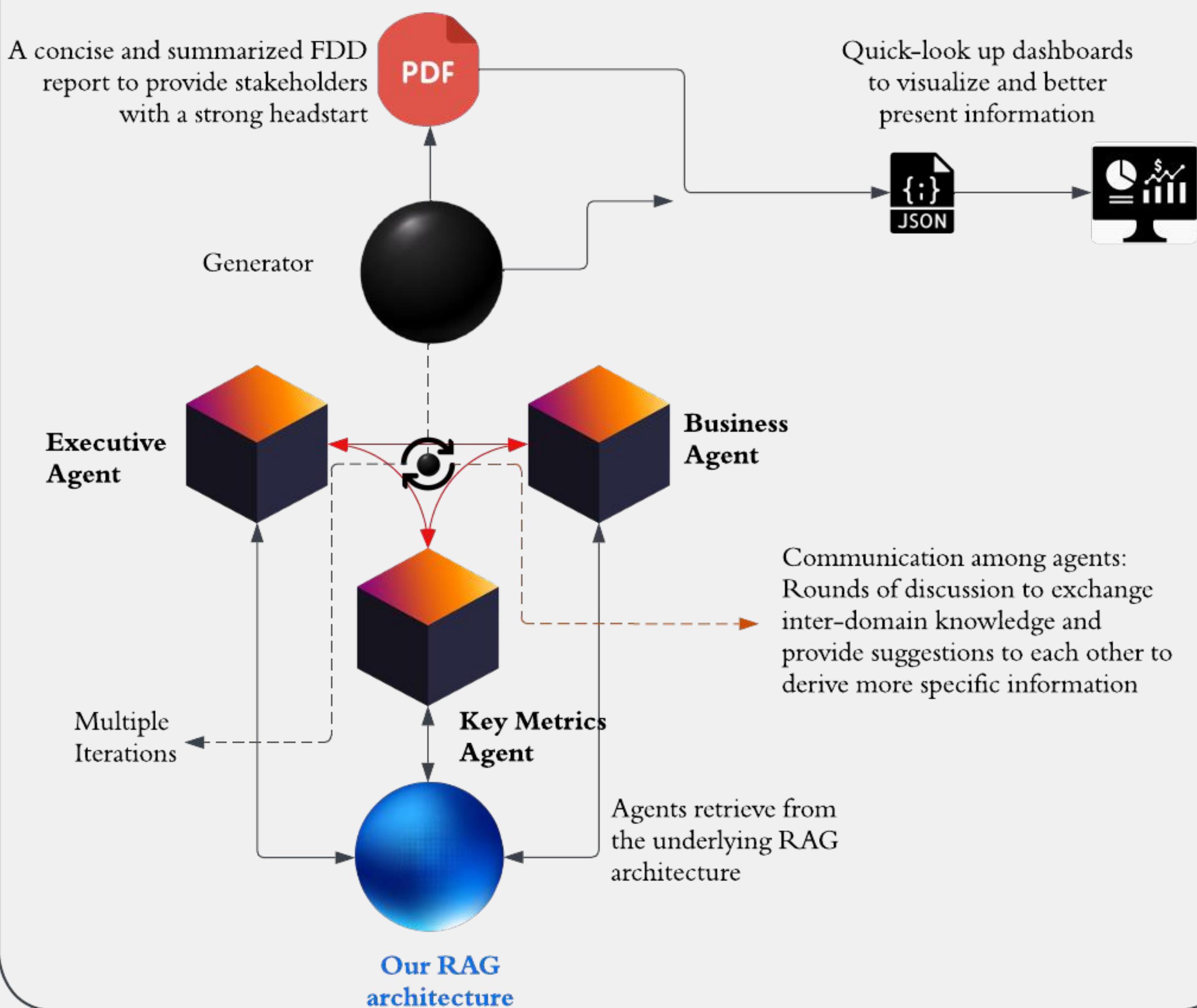
Developed and incorporated a wide array of **Agents** and **Tools** with diverse capabilities!

**Robust** and **Resilient** to failures

**Intelligent** and **Autonomous**



# FA<sup>3</sup>STER's Vertical Autonomous Layer



**Vertically Scaled** (Built atop the described RAG architecture)

Intelligent Layer of **inter-networked agents** that can discuss, collaborate and give each other suggestions all the while being able to leverage the **agentic RAG architecture** as a tool !

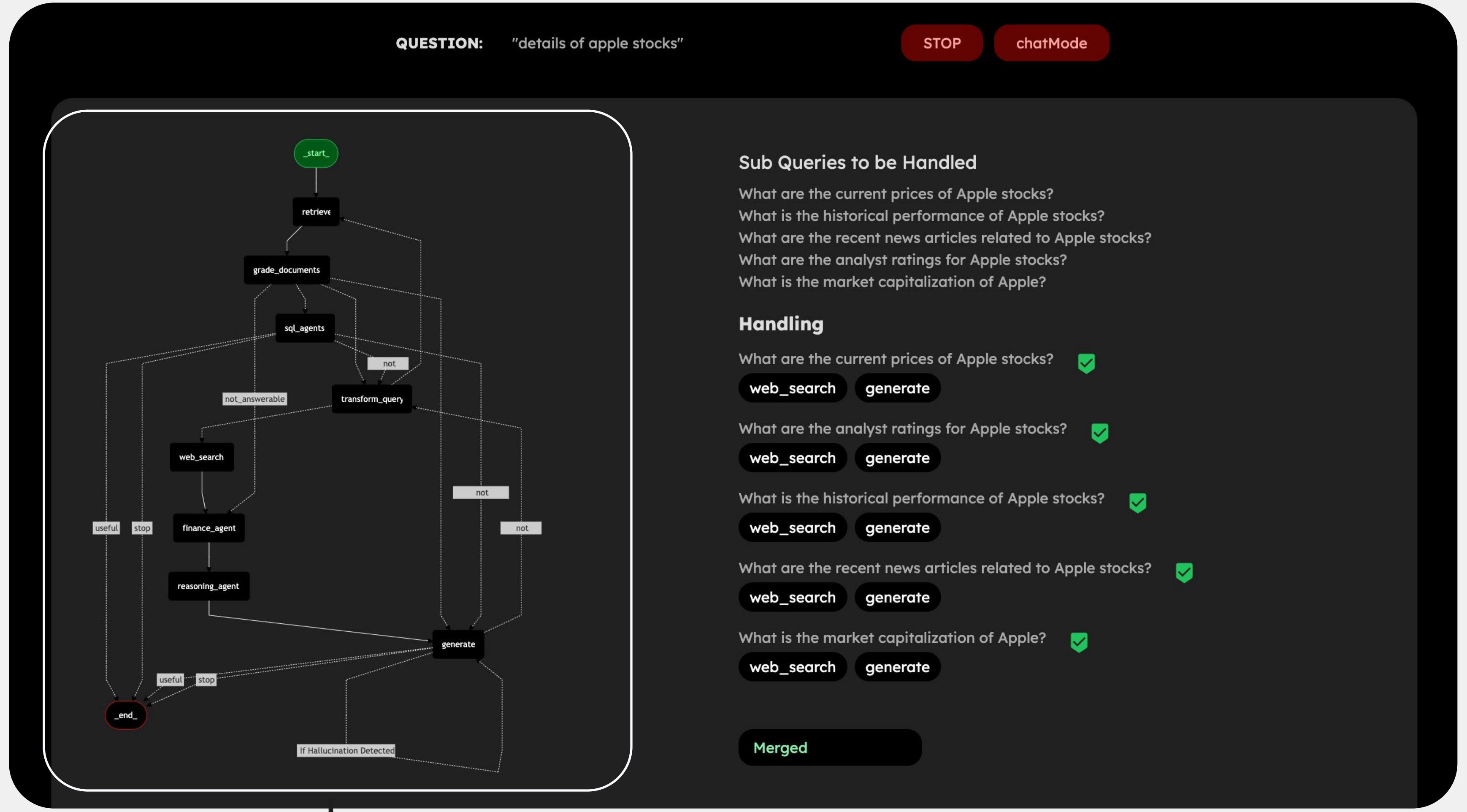
Generates a concise, summarized **FDD report** and an actionable **dashboard** to provide stakeholders with a solid head-start !

# FA<sup>3</sup>STER's UI

Easy-to-Use

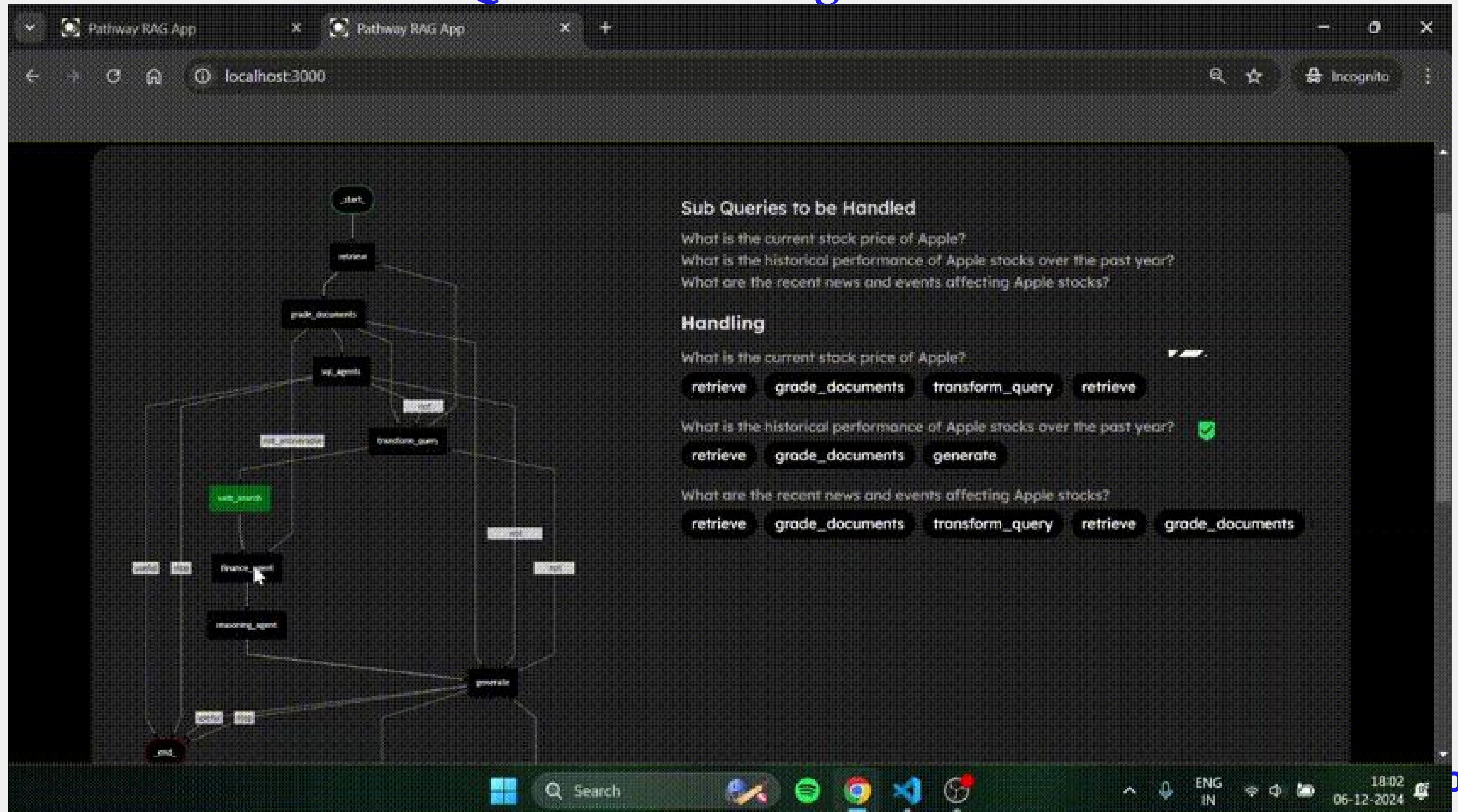
**Promotes Transparency:**  
We LITERALLY stream  
everything that's happening  
under the hood to ensure a  
**transparent and  
responsible AI** interaction

**Operates in 2 modes:**  
**Chat Mode** - Direct QnA  
with underlying RAG  
**Report Mode** - Generates  
Reports and Dashboards

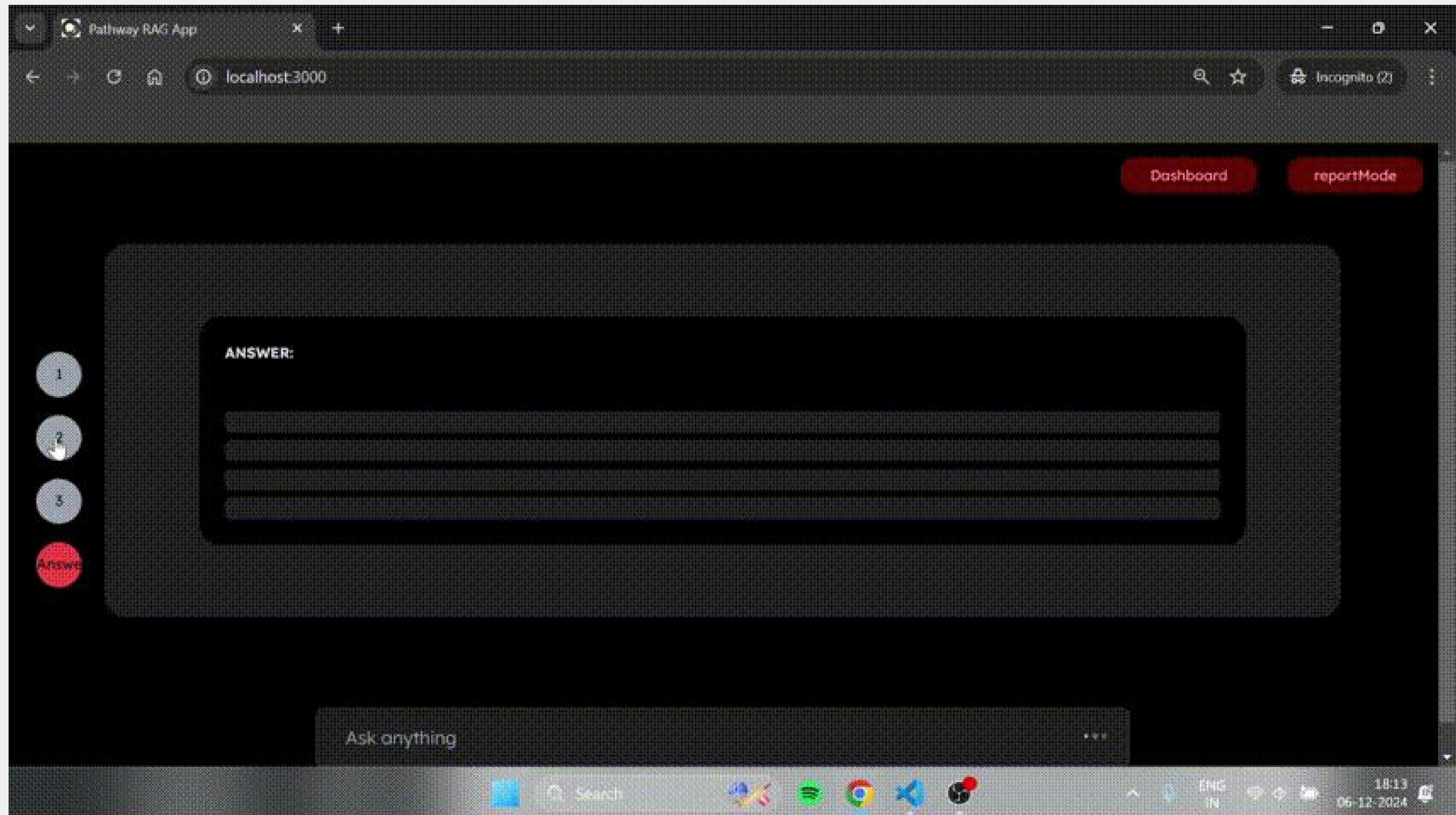


Dynamic graph that visualizes the  
entire agent workflow in real time,  
highlighting the **current nodes** and  
**operational states**.

# Chat Mode - Direct QnA with our Agentic RAG



# Report Mode - The VAL



# Light & Summarized FDD reports to provide head-starts

The screenshot shows a PDF viewer interface with a dark theme. The top bar displays the file name "Final\_report\_gen.pdf", page number "1 / 8", zoom level "117%", and various document controls. The main content area contains the following text:

Generated on: December 06, 2024

---

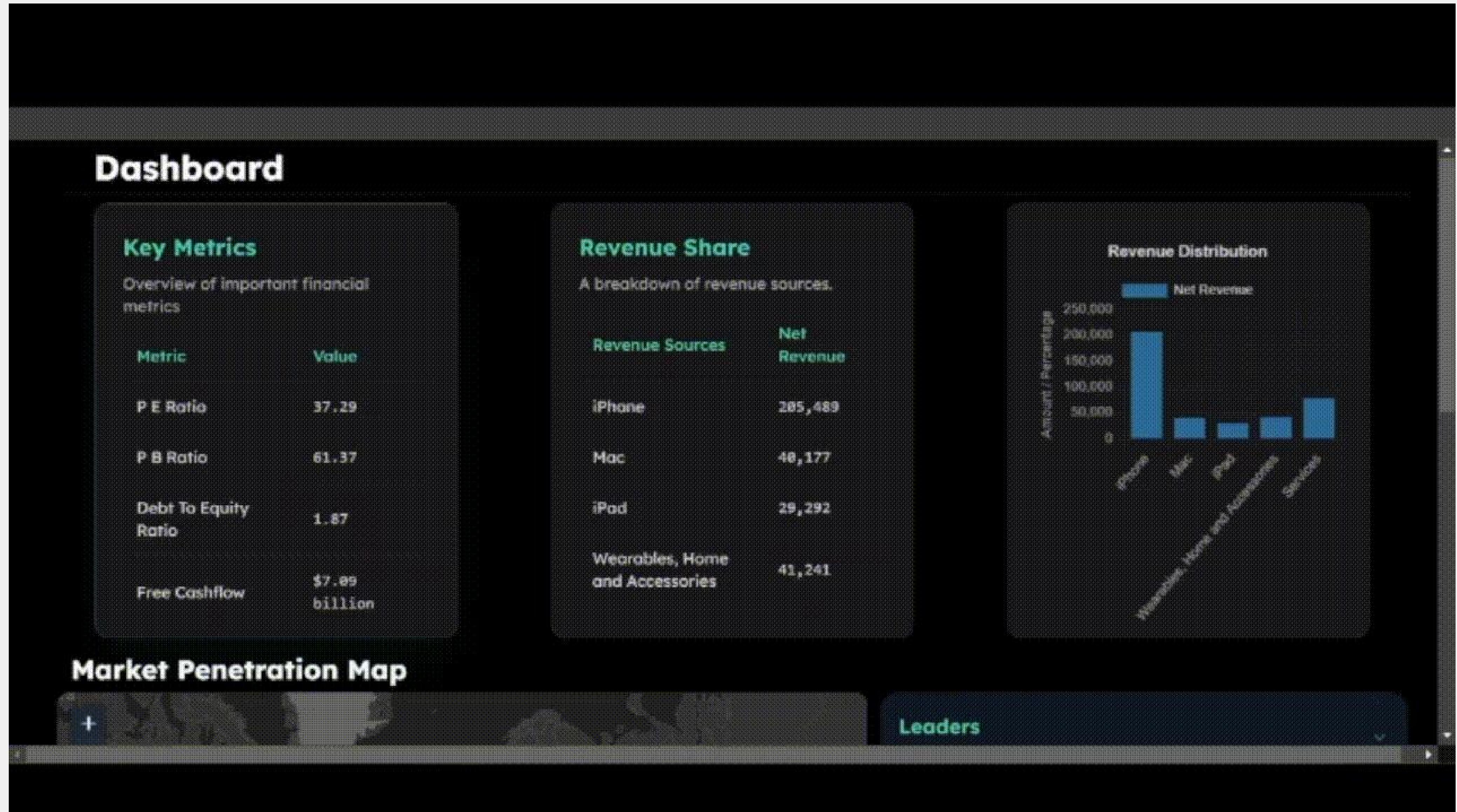
## APPLE INC. KEY METRICS REPORT

---

### Key Metrics

- 1. Price-to-Earnings (P/E) Ratio: 37.29
- 2. Price-to-Book (P/B) Ratio: 61.37
- 3. Debt-to-Equity Ratio: 1.87
- 4. Free Cash Flow: \$7.09 billion
- 5. Price/Earnings to Growth (PEG) Ratio: -45.94
- 6. Working Capital Ratio: 0.87
- 7. Quick Ratio: 0.83

# Dashboards to visualize FDD insights and key-sections



To,

# The Engineers

- Practical Problem Solving
- Adaptability Across Domains - The Vertical Autonomous Layer
- Scalable Solution
- Innovative Design, yet simplistic and elegant technical solutions

**MIND** ==

