AGENTIC AI AT WELLS FARGO

I co-led the first comprehensive design explorations of agentic and generative AI at Wells Fargo. As design lead, I partnered with teams across the enterprise to explore and test consequential impacts of next-gen autonomous agents and workflows on our banking ecosystem, human colleagues and 70 million customers. As a direct result, my work generated a partnership with Google Cloud to extend Gemini Deep Research, NotebookLM, and Agentspace capabilities to 35,000 bankers.

CONTEXT

Every day, Wells Fargo bank employees navigate countless procedures, evolving regulations, and complex banking systems—all while ensuring accurate assessment, regulatory compliance and fast decision-making. Wells Fargo's risk mitigation strategy for agentic AI in its Corporate & Investment Banking (CIB) division focuses on a "human in the loop" approach, robust governance frameworks, and partnerships to ensure secure and compliant deployment. CIB teams operate within a strong risk mitigating and compliance-driven culture, accountable for making sound risk decisions aligned with the business unit's risk appetite. Opting for lower-risk applications and human oversight, Wells Fargo aims to use AI technology to enhance existing risk management processes rather than fully automate them, relying on slower, manual processes of data analysis, querying, annotation and decision-making.[1]

PROBLEM

Bankers are overwhelmed with noise, moving quickly across disparate systems of siloed information. Employees often arrive at critical decisions with narrow or outdated knowledge, or base deal team decisions on routine, precedent or subject-matter expertise. Bankers preparing for client meetings must search for and synthesize client data and market information, often requiring support from colleagues and additional time. Furthermore, Wells Fargo employees with limited or recent access to generative and agentic AI tools are without adequate education training to ensure they understand how to use AI tools responsibly and identify potential issues. Today, CIB teams rely heavily on their own bandwidth and knowledge to make critical decisions and respond to customers with accurate, timely information to gain a competitive advantage. Accountable for making sound risk decisions, bankers are reluctant and unfamiliar with AI agents in the loop.

How might we supercharge portfolio bankers and relationship managers with intelligent tools such as natural language processing, unified search and AI analysis to increase efficiency and accuracy, and maximize output to gain a competitive advantage

INSIGHTS

Same goal, but tools are siloed

Teams are part of a fluid ecosystem with the same goal yet tools are siloed

Anomalies create more work

Teams find critical anomalies and changes to compliance requirements– must explain and document

Bankers feel lost and overwhelmed

Bankers are limited on time and must search through scattered documents for policy and critical resources

Lack of consistency and history

Managers are handicapped by lack of consistency across data– leads to errors

In-depth interviews with Relationship Managers and Portfolio Managers revealed a deep understanding of opportunity areas and pain points.

All 215,000 employees use Microsoft Teams daily

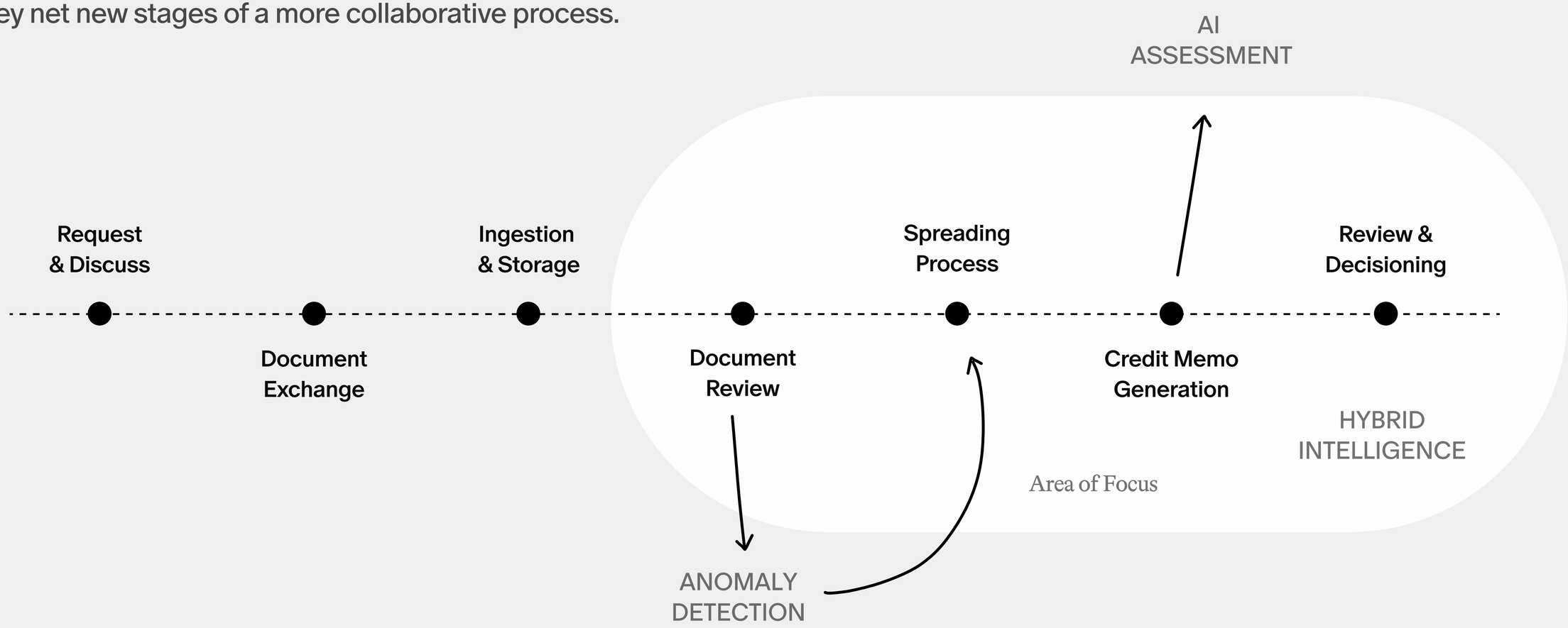
90% of data requests are manual

Forms are tackled linearly

73% of underwriting documents have errors or outdated information

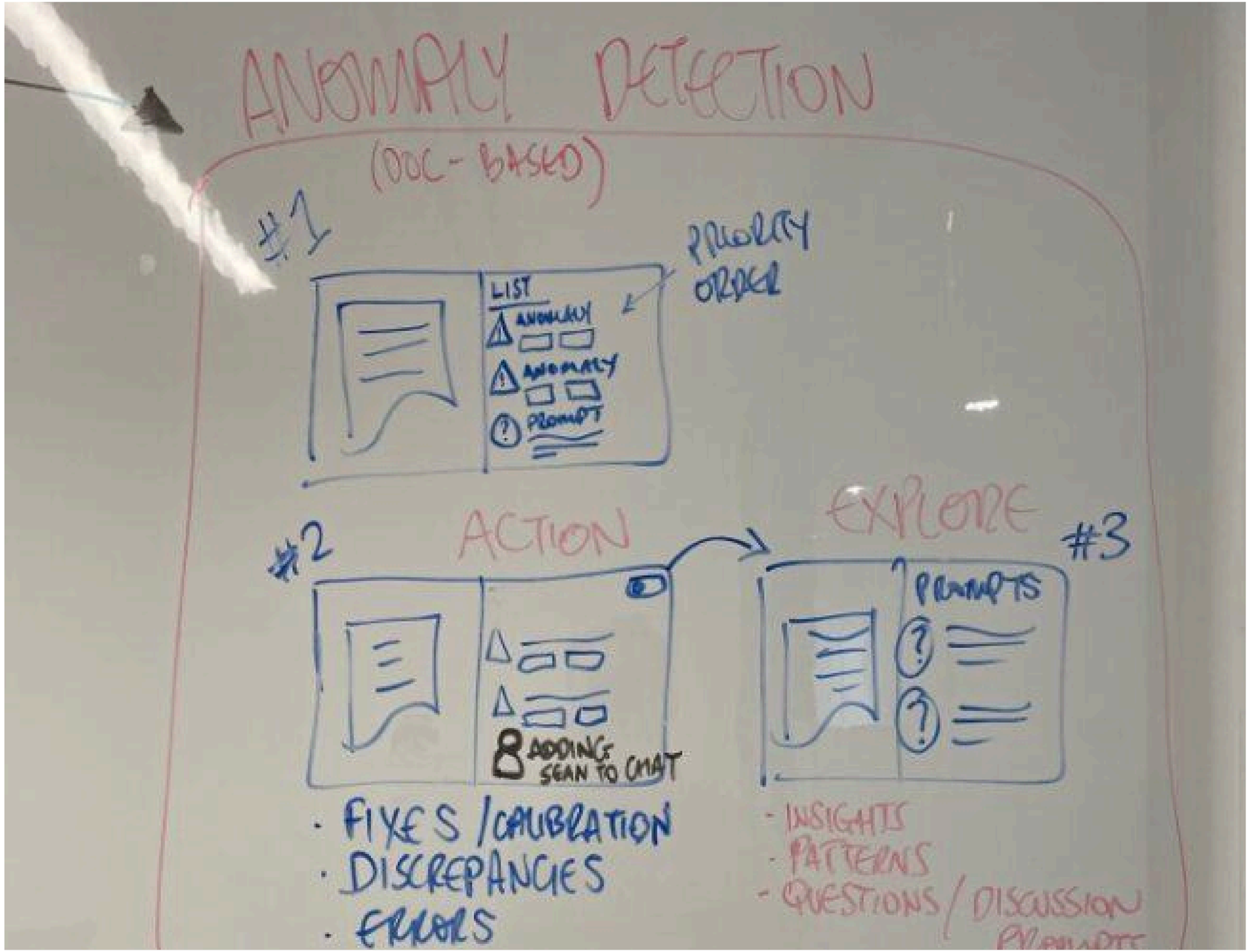
Underwriting Process

The team identified our core area of focus to be the risk assessment of lending as it relates to the underwriting process (including memo generation and decision-making). Anomaly detection and AI assessment were key net new stages of a more collaborative process.



Iterative Logic

I developed thinking around the problem and possible solutions on whiteboards to capture ideas and questions. Iterated rapidly with engineers and PMs to expand concepts and determine a design approach



Initially, I assumed a human-in-the-loop solution was sufficient to automate and streamline the financial spreading process. By requiring just enough human oversight while increasing output and speed with autonomous AI reasoning logic, I was betting that we could reduce the load for bankers and focus attention on client-facing JTBD, improving cost-to-income efficiency ratios.

However, after researching and conducting banker interviews, we understood bankers trust colleagues more than AI reasoning models, and how individual bias leads to poor lending decision-making. We realized the consequential impact of AI hallucinations and reasoning logic gone awry. We had to shift and consider tradeoffs.

Ultimately, AI agents would not be fully autonomous decision-makers, but rather collaborative contributors weighing-in equally with bankers at key stages. Agents would scrutinize bankers actions and vice-versa to gain confidence, make group decisions, and stay informed.

To depict our concepts loosely but with enough fidelity, I opted to build a design system and component library that could flex between Microsoft Teams-- the enterprise-wide application for daily collaborative work and document repository-- and a custom platform-agnostic net new interface. Visualizing the workflows realistically was key to gaining stakeholder buy-in.

SOLUTION

Agents in MS Teams Apps

Bankers access intelligent tools in custom MS Teams apps where action modules and agents orchestrate team workflows while coordinating data requests

Natural Language Processing

Conversational UI with agents that enable syntax matching for standardized outputs, search over document repositories and document generation

Synthesized Activity Feed

Bankers see a visual timeline and ledger of activity by contributor (agent or human) or task to stay informed and coordinated

Anomaly Detection

Agents analyze documents and relevant content to the task or project– flags anomalies across systems for resolution, remediation or correction

Natural Language Processing

Natural language prompts allow bankers to use common phrases with AI. Syntax matching to pre-engineered outputs proved essential to speed performance, reliability and usability.

A natural language banker prompt to generate a new memo

DESIGN TRADEOFFS

Depict in Microsoft Teams

Familiar to all Wells Fargo employees but limited by MS Teams design system and architectural constraints

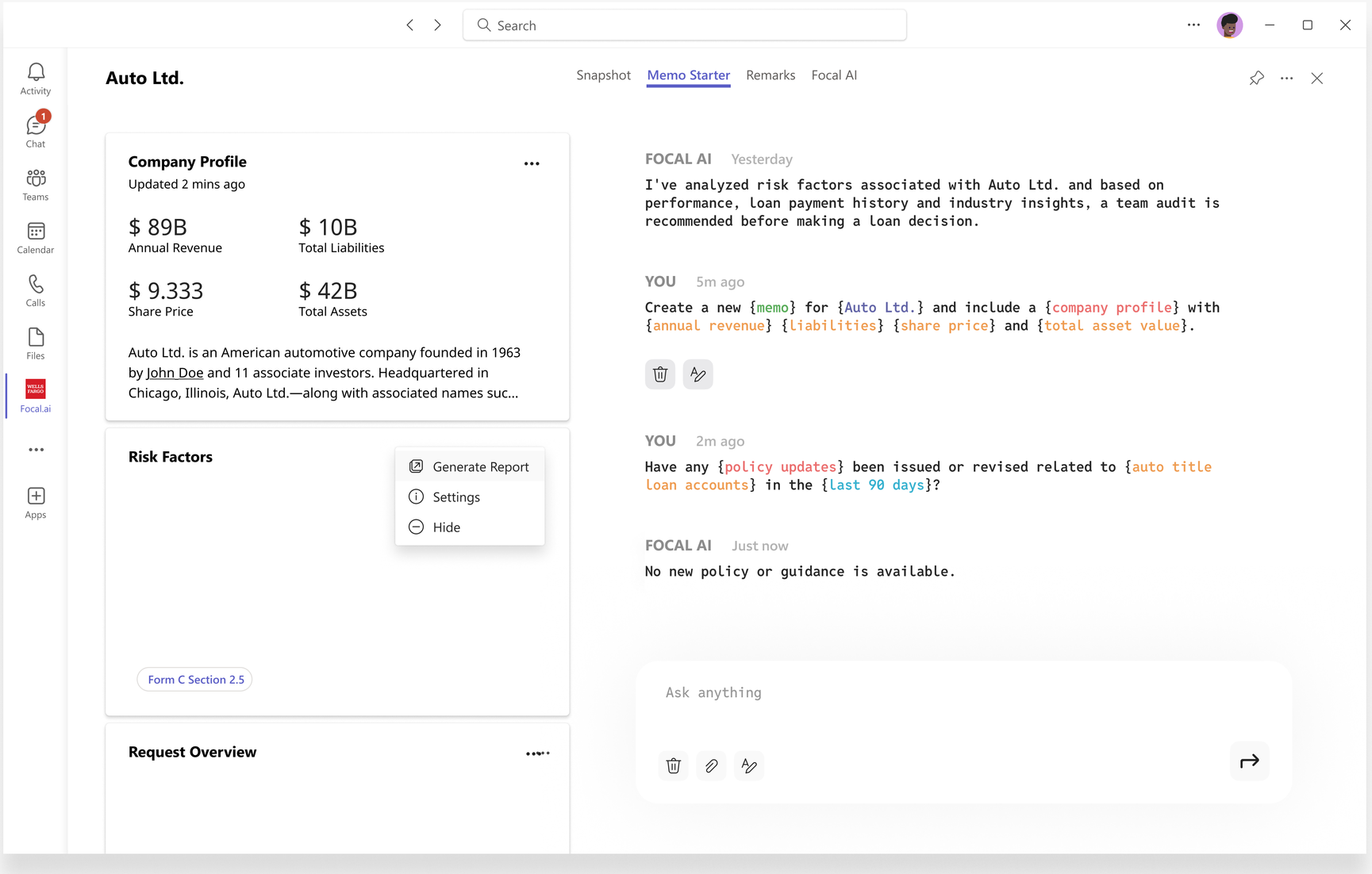
Easier for engineers to implement with robust documentation and existing components

VS

Create a net new agnostic platform

Unfamiliar to users, yet able to create UI and architecture without external constraints

Poses many questions around who will build, support and life span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Request Overview
FOCAL AI Yesterday
I've analyzed risk factors associated with Auto Ltd. and based on performance, loan payment history and industry insights, a team audit is recommended before making a loan decision.
YOU 5m ago
Create a new {memo} for {Auto Ltd.} and include a {company profile} with {annual revenue} {liabilities} {share price} and {total asset value}.
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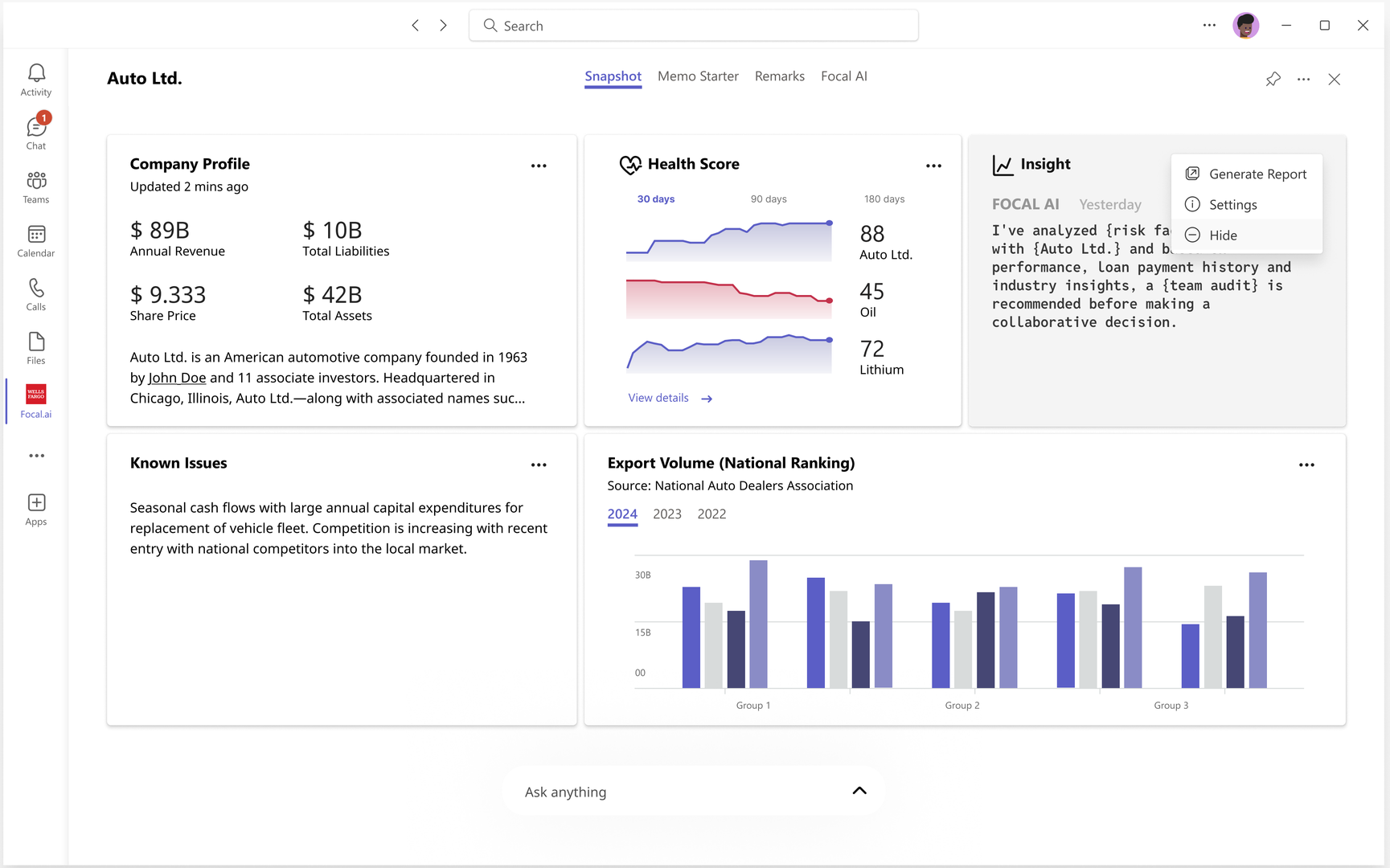
SNAPSHOT VIEW



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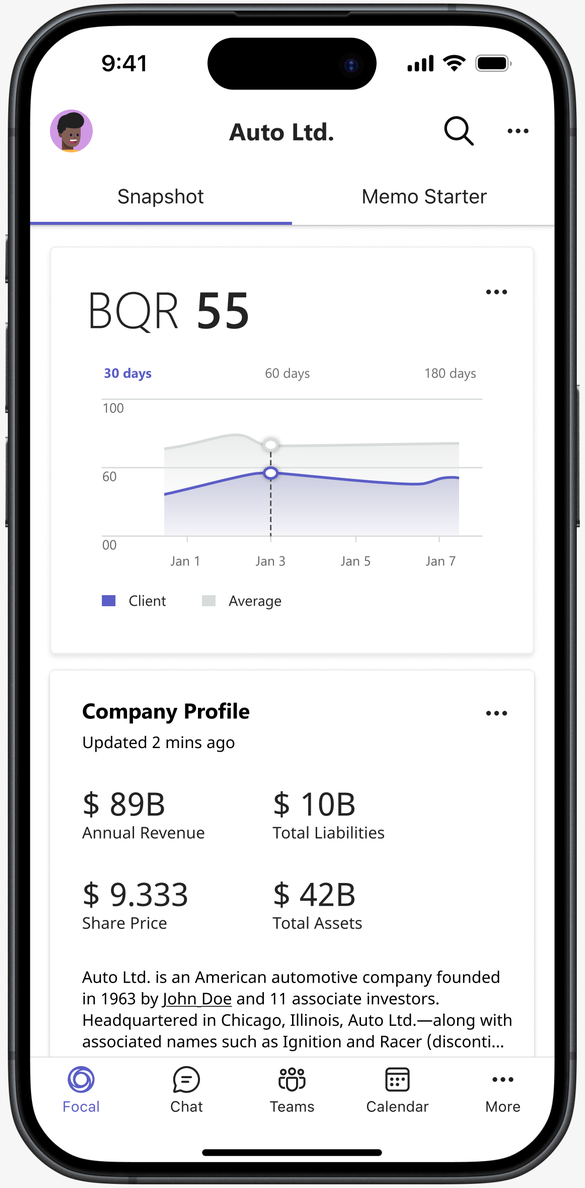
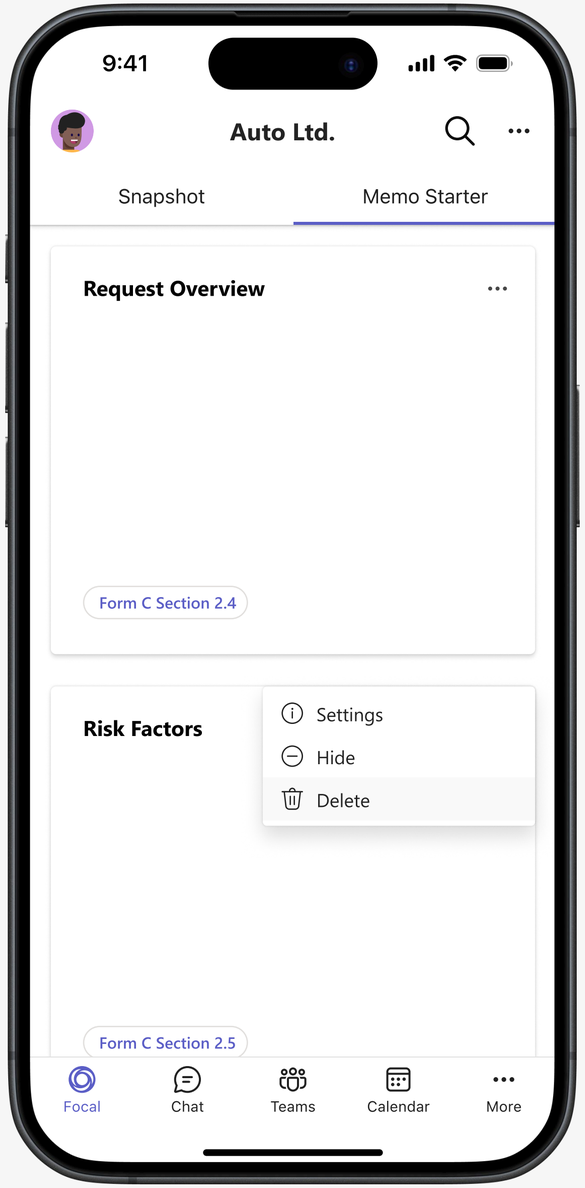


MEMO STARTER



IMPACT

35,000 Bankers now use AI agents for daily tasks

Search, analysis, reporting and collaborative decision-making are supported by AI models

Reduced query response time from days to 30 seconds or less

Cross-functional partnership leveraged data and initiatives across siloed teams

Generated a Partnership with Google

Expanded capabilities with Google Gemini Deep Research, NotebookLM and Agentspace

PATENTS FILED

Bot-to-Bot Financing

Facilitate autonomous and financing decision-making by deploying autonomous decision agent(s) within a client system. Enable AI agents to access financial data from various institutions relevant to the financing decision directly from the client system.

Natural Language Processing Over a Document Repository

Use a document repository to enhance natural language processing by autonomously identifying requests and semantically matching text or audio to provide results or generate permission requests for relevant financial data.

This initiative is foundational to more teams developing generative and agentic AI tools and deploying them to all 215,000 employees. It changes how Wells Fargo teams approach AI problems using design thinking. Our work became a core slide in the investor deck and is highlighted throughout media coverage.

With plans to evolve tools as new AI models are developed, Wells Fargo and partners like Google will help teams become faster at automating tasks, quicker at analyzing information, and overall more efficient at their jobs.

THANK YOU

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