

Developing an Internal AI Agent for Target of Interest Discovery

A global pharmaceutical research and development organization desired to advance its early target discovery capabilities by creating a centralized resource that combined pre-clinical and clinical insights for a variety of stakeholders (*e.g., computational biologists, discovery biologists, translational scientists, clinical/early dev, other relevant therapeutic area specialists*) to expedite the gathering, qualification, and summarization of target evidence.

Initial capabilities were hindered by time-intensive manual aggregation and curation across multiple external and internal data sources, resulting in varying levels of deliverable quality based on a scientist's level of knowledge and experience. External data was spread across multiple public research websites. Internal data was distributed across legacy Word, PowerPoint, Excel, and PDF files stored in multiple repositories and Teams sites. Very little of the data was easily searchable, centrally accessible, or consistently organized.

As a result, the client experienced the following challenges:

- Limited visibility into previous pursuits of potential targets
- Duplication of research/analysis efforts
- Inconsistent documentation, analysis, and synthesis of target evidence
- Inefficient and time-consuming target research workflows

Recognizing the need for a more scalable and standardized approach, Clarkston Consulting was engaged to assess current target discovery practices and define the business requirements for a centralized "Target Evidence Dashboard." The objective was to establish a unified, searchable platform that could serve as a foundational resource for target evidence insights across functions.

Life Sciences Case Study

PROJECT OVERVIEW

INDUSTRY



Life Sciences

PRODUCTS AND SERVICES



Pharmaceuticals

PRIMARY OBJECTIVES

- Establish a unified, searchable platform that consolidates fragmented internal and external data related to targets of interest
- Streamline the gathering, qualification, and summarization of target evidence to minimize manual effort and prevent redundant research and analysis
- Standardize how target evidence is documented, synthesized, and reviewed to increase visibility into prior work and improve confidence in early-stage evaluation decisions

RESOLUTION

- Conducted cross-functional Voice of Customer interviews to understand current-state target discovery workflows, pain points, and requirements
- Defined future-state business and user requirements for a centralized Target Evidence Dashboard
- Developed use cases to align stakeholders on solution scope and priority capabilities
- Designed a phased roadmap for MVP development, expansion, and data onboarding
- Drove the development of a proof-of-concept using generative AI to enable search and summarization of historical Target of Interest (TOI) materials
- Led stakeholder demos, pilot launch, and feedback collection to validate functionality and drive iterative refinement.

KEY BENEFITS

- Improved visibility into historical target evaluations
- Reduced duplication of research efforts
- Accelerated target evidence gathering and synthesis
- Established a scalable foundation for expanding to additional data sources and future use cases



KPIs

- Reduction in time to compile target evidence
- Adoption and active usage rate

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