AI KDD: Livelink RAG AI Chatbot Enablement

Document Control

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Context

EBRD users have requirements to securely query text and figures in narratives, tables and images across authoritative versions of documents in Livelink, and process such data using natural language.

One of the ways of addressing such requirements is Retrieval Augmented Generation (RAG) pattern involving combination of vector search and large language models. This paper provides recommendations on the preferred technical solutions for enable this functionality for Livelink managed documents.

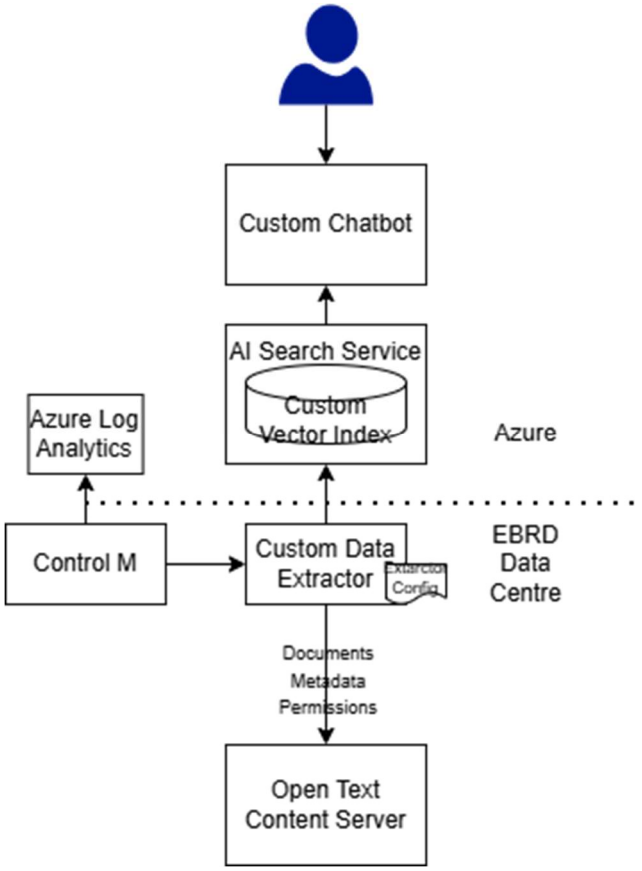
Solution Approach

Area	Constraint	Solution Approach
Complex authorisation	Biggest document library managed in Livelink (ProjectLink) implements a complex granular access control model. Vector database technology supporting such requirement is insufficiently mature. Azure AI Search document level access control is still in Preview.	Avoid usage of Retrieval Augmented Generation pattern in areas with complex access control requirements
Index size constraints	As of the time of the writing, vector database technology supporting retrieval augmented generation does not perform well on large data volumes (over 100s GB).	Construct smaller indices centered around information assets or their groupings

Solution Options

A. Custom Chatbot

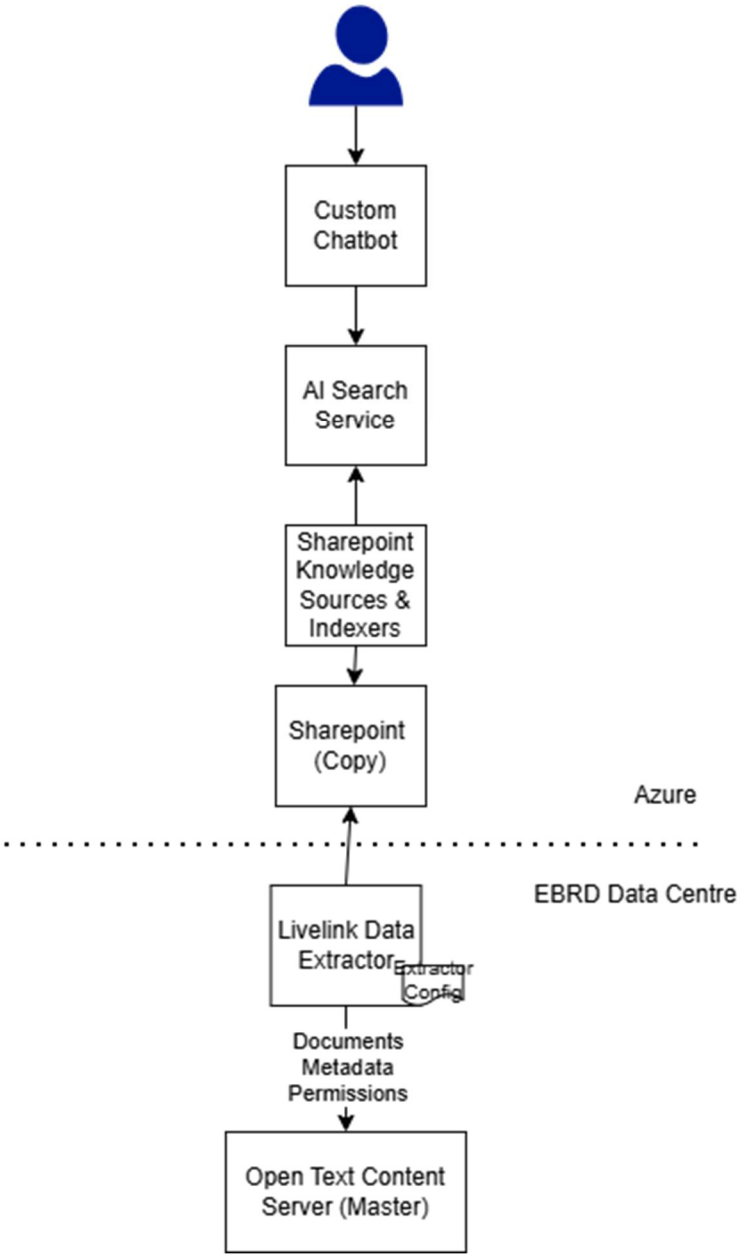
Solution involves a custom chatbot supported by a vector database following AI Search Service Tool High Level Design) populated by content from Livelink.



For choice of technology underpinning AI Search Service, see AI Platform Technology Architecture. Custom Ingestor would be implemented using Livelink Team's programming language of choice.

B. Custom Chatbot Via Sharepoint

This solution involves custom chatbot interrogating vector database populated automatically with documents from Sharepoint which have been replicated to this system from Livelink. Method for creation of vector indices is dependent on specific business requirement.



Analysis

	A. Custom Chatbot	B. Custom Chatbot via Sharepoint
Business	**G** Meets custom chatbot requirements	**G** Meets custom chatbot requirements

Technology	**A** Alignment with Information Management Strategic Direction unclear	**A** Alignment with Information Management Strategic Direction unclear
Security	**G** Supports existing access control requirements or their future modifications	**G** Supports existing access control requirements or their future modifications
Data	**G** Uses data from authoritative data source; minimises manual data manipulation	**G** Uses data from authoritative data source; minimises manual data manipulation
Vendor / Commercial	**A** Interface build cost (depending on the scale) at the order £100+k, interface maintenance cost around £20k p.a.	**R** Reuses centralised chatbot infrastructure. Upfront costs at the scale of £300-500k, operating costs around £50
Delivery	**G** Implementation can proceed subject t mobilisation of Livelink resources	**A** Design required
Support	**G** Supportable with application of appropriate monitoring tools	**G** Supportable with application of appropriate monitoring tools
Overall Ranking	**1**	**2**

Decision

Use custom vector indices managed in AI Search Service pre-populated by selected data set directly from Livelink.

Consequences

- Delivery can start in 2026
- Custom vector indices would need to be treated as an interim solution with lifespan of 2-3 years, after which they are likely to be migrated to the Strategic Information Management solution.
- A specialist resource will be required to build custom interfaces