

# Energy Knowledge Hub -Powered by OpenAI

 **Microsoft**  
Solutions Partner

Infrastructure (Azure)  
Data & AI (Azure)  
Digital & App Innovation (Azure)  
Security  
Biz Applications



# Celebal Specialization and Strength



## Partnerships



## Advanced Specialization



- AI & Machine Learning
- Analytics
- Infra and Database Migration
- Kubernetes
- Cloud Security
- Low Code No Code
- Intelligent Automation



INDIA | USA | CANADA | APJ | MIDDLE EAST | AUS

**2800+**  
Employees

**800+**  
AI experienced  
professionals

**500+**  
AI Certifications



## Industries We Serve



Manufacturing



Retail & CPG



Financial  
Services



Energy &  
Sustainability

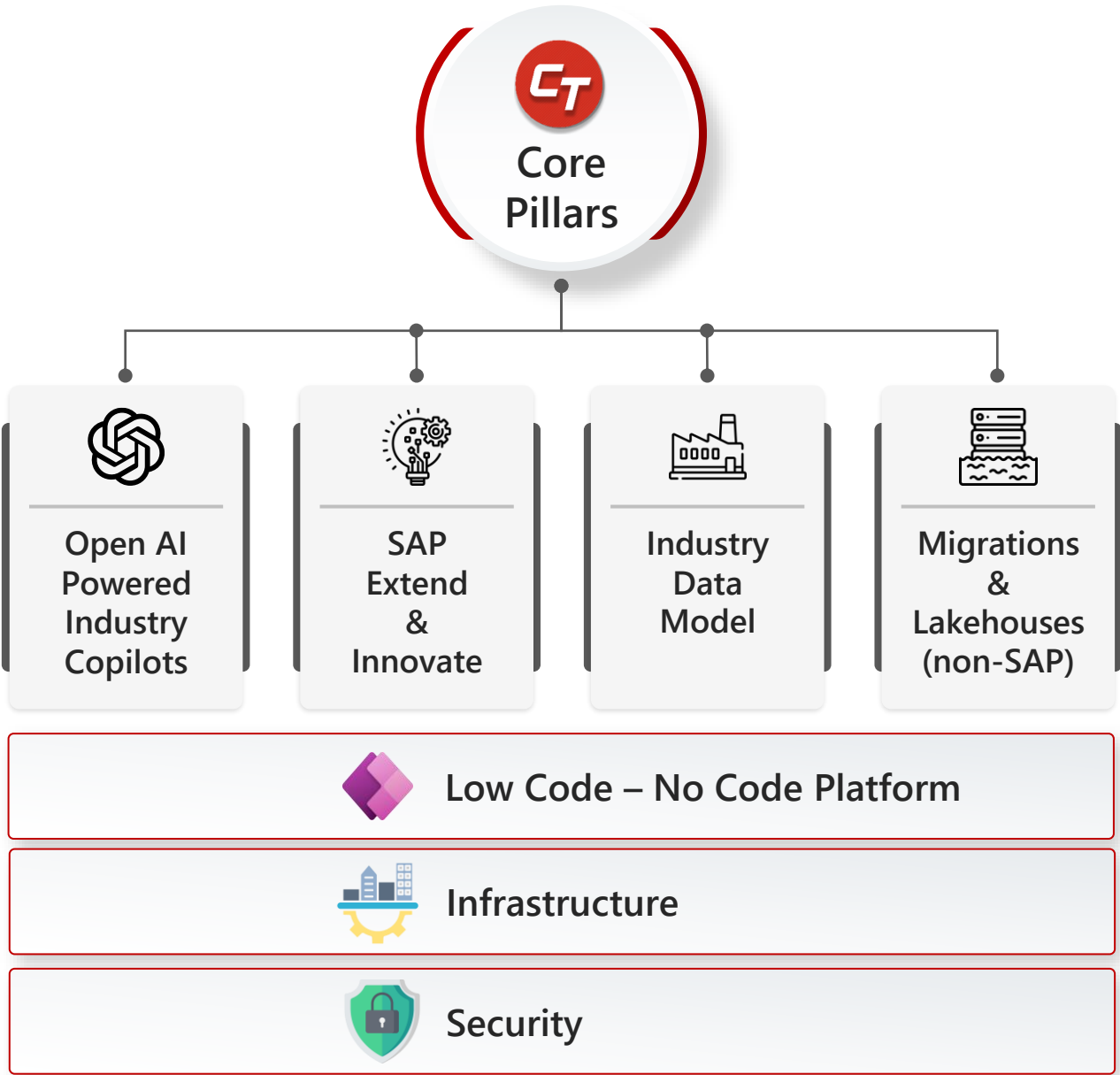


Healthcare &  
Life Sciences



Media &  
Entertainment

# Celebal Core Pillars





## 1. Brief Description of the Solution:

**Energy Knowledge Hub, powered by OpenAI**, is an innovative platform hosted on Azure, leveraging OpenAI's advanced natural language processing capabilities to revolutionize knowledge management in the energy sector. It provides utilities, researchers, and stakeholders with a centralized repository and intelligent search engine for accessing, analyzing, and generating insights from vast amounts of energy-related data and documents.

## 2. Business Problem It Solves:

The energy sector faces challenges in efficiently managing and extracting actionable insights from extensive volumes of unstructured data, including regulatory documents, research papers, and industry reports. Traditional methods of information retrieval and analysis are time-consuming and often fail to uncover valuable insights quickly. Energy Knowledge Hub addresses these challenges by offering AI-powered tools to unlock the full potential of data-driven decision-making.

## 3. Value Add for Customer:

- Advanced Search and Analytics:** The platform uses AI-driven natural language processing to enhance search capabilities, enabling users to quickly find relevant information and insights from diverse sources.
- Knowledge Generation:** By analyzing and synthesizing data, Energy Knowledge Hub generates actionable insights and recommendations, facilitating informed decision-making and strategic planning.
- Efficiency and Productivity:** Automating the extraction of insights from unstructured data streamlines workflows, saves time, and improves operational efficiency for energy professionals.
- Scalability and Integration:** Built on Azure, the solution scales effortlessly to accommodate growing datasets and integrates seamlessly with existing IT infrastructure and applications, ensuring easy deployment and compatibility.

Energy Knowledge Hub, powered by OpenAI, empowers energy stakeholders to harness the power of AI for enhanced knowledge discovery, strategic planning, and operational excellence in the dynamic energy landscape.

Business Challenge

Power generation plants deals with lot of operational challenges on the daily basis. While the solutions to these issues may be documented in manuals and other documents, accessing and utilizing this information efficiently can be a significant business challenge. Therefore, a proposed solution that can extract relevant knowledge from these documents and present it to operators when needed can help streamline operations and enhance productivity.



Solution

This will be end to end solution that will involve creating the virtual space for the remote operators to enter the plant through the Industrial metaverse, utilize the Enterprise Knowledge Advisor solution that will involve the document data extraction, building the embedding model, indexing the embedding and information retrieval using the similarity search.



Lots of Documents with Diagrams and flows of machineries that need lot of human attention to understand.



.Language Constraints



Help for operators working remote or in plant in terms of support with the information available in the document.



Improved error mitigation time.

Impacts

Improved Operators manual effort in the plant to understand and find the solution



Audience

✓ Operators in Plant /Remote



Solution Highlights

100

Japanese/English

10

Open AI- Ada embedding,  
GPT-3.5 turbo

Text data, images,  
diagrams

Operators

Language Support

Machine/User Scenario

Models

Content Type



CELEBAL  
TECHNOLOGIES

# Thank You