HELIOS
Knowledge Management Portal

Optimizing Unstructured Environmental and Geotechnical Data

Use Cases


Industrials


Governments


Consultants

Optimize unstructured environmental and geotechnical data management with Generative AI-Powered EQuIS Helios

Helios transforms how EQuIS handles environmental and geotechnical unstructured data such as PDFs, photos, and videos instead of EQuIS Schema DT_files. Helios stores these files in Azure Blob Storage and automatically processes and analyzes the content with Microsoft Azure AI Services.

Upload hundreds of files and terabytes of data with a simple drag-and-drop interface and Helios then summarizes, indexes, and extracts metadata—all within minutes or hours, compared to a manual process that can take days or weeks.

This streamlined, AI-powered workflow enables you to securely manage, access, and gain insights from your unstructured data faster and more effectively than ever before.

Moving Unstructured Data into Structured Data

Once your unstructured data are stored in a Helios repository, what's next?

Helios detects and extracts structured data within unstructured files with Optical Character Recognition (OCR) technology. These files can then be transformed into structured formats ready for seamless migration into EQuIS or other systems.

Helios unlocks the value hidden in unstructured content making it actionable, searchable, and ready for downstream use.

Optimize EQuIS Performance

Storing unstructured or IoT data directly in EQuIS tables consumes valuable space and processing power, slowing performance and complicating data management.

Helios places unstructured data into Azure Blob Storage, freeing up EQuIS to do what it does best: managing structured environmental and geotechnical data. This improves system speed and scalability and enhances data analysis and understanding.

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HELIOS Use Cases

CHALLENGE	PAIN POINTS	HELIOS SOLUTION
DATA CONSOLIDATION Data and information have been stored for decades across multiple locations including paper, disk drives, cloud platforms, and desktops. Reports, field notes, spreadsheets, emails, and other critical files remain fragmented, creating challenges in accessibility and organization.	• Information is fragmented and hard to find • Fees for data retrieval • No centralized, searchable repository • Security concerns with distributed storage	Helios compiles, indexes and establishes a secure, searchable repository to safeguard and streamline all historical data and information assets.
PROJECT TRANSITION & DATA MIGRATION You've secured a major contract but the previous consultant did not use a data management system. You are presented with numerous spreadsheets, pdf's, scanned documents, photographs, paper files, and other disparate data sources.	• Data are in inaccessible formats (scanned documents) • Labor intensive manual review processes • Increased risk of data loss or error • Data preparation tasks lead to project delays	AI-driven document summarization, indexing and extraction provides easier review, faster searches and quicker data transition and migration.
COST-EFFECTIVE DOCUMENT STORAGE Storing, managing and accessing thousands of scanned and hardcopy boring logs, field notes and project files and documents is time consuming and costly.	• Costly and inefficient digital or physical storage • Inefficient document and data search and retrieval	Cost-effective, secure storage with advanced search functionality. Search using keywords, metadata, and summarized content for boring logs, lab reports and other files.
DATA EXTRACTION Transfer of large project files containing PDFs, scans and Microsoft Office files containing tabular data requiring extraction, review, correction, and analysis.	• Manual review and data extraction is time-intensive • High risk of transcription errors • Infinite number of files and pages to review	Continually improving AI-Driven data extraction from multiple file formats rapidly transforms data into a usable form.
LEGACY DOCUMENT MANAGEMENT Historical records such as paper documents, permits, field notes and reports must be preserved.	• Stored physical documents spans many years • Physical documents deteriorate over time • Physical archives must be manually searched • Files are stored in various formats (Hardcopy, PDF, MS Office formats) and locations	Scanned documents are searched and data extracted with OCR. Data can be stored in safe, cost-effective, cloud-based environment.

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