



DAR Engineering Develops Digital Enterprise Management System to Streamline Data Workflows and Standardize Operating Procedures

ProjectWise[®] Provides a Single Source of Truth, Unifying 17 Terabytes of Data and 8.5 Million Drawings and Design Documents Worldwide

RETHINKING DATA MANAGEMENT

With the advent of modern technology, the business landscape has undergone a significant transformation. This transformation has not only altered the way companies operate, but also emphasized the crucial role of data management in terms of workflow, security, and storage. Ensuring the safe, accessible, and efficient handling of data has become paramount. To thrive in today's data-driven society, organizations must implement digital data management practices and standardize processes to minimize data theft and optimize project delivery. Considering these challenges, DAR International for Engineering Consultancy embarked on a comprehensive reassessment of their data management processes and initiated a strategic data management initiative, known as Data Management System (DMS), across all business sectors and offices globally. The primary objective of this project was to digitize engineering data workflows, enhance data management, strengthen security measures, and streamline data storage practices. "DAR decided to launch DMS to address and answer all apprehensions related to data," said Imran Hayat, lead engineer for DMS at DAR.

The DMS project had an extensive scope, covering a wide range of tasks, policies, procedures, and practices across various engineering services. These services span engineering services ranging from transmission, distribution, and healthcare to infrastructure and general consultancy. Historically, DAR relied on password-protected traditional file servers for data and information sharing, limiting accessibility and security, and resulting in slow data transfer rates, especially with their offshore offices. With a goal to eliminate coordination challenges, standardize workflows, and ensure seamless, secure

accessibility to all company and project data, DAR sought to implement DMS via one common platform across all business sectors and offices worldwide.

INTEGRATING DIVERSIFIED SERVICES ACROSS GLOBAL LOCATIONS

Initially, DAR explored different software packages to implement DMS, but these systems failed to meet their diversification and bandwidth requirements. "Multiple scopes of work are being performed as we are dealing with customized consultancy services related to multiple and diversified fields," said Hayat. As an engineering consultancy, DAR had different project-specific, detailed procedures that needed to be performed prior to executing a particular service. They found that many software packages could not accommodate the diversified services in a standardized manner, nor could they provide the transmission capacity for the large quantities of data across global locations to enable users to successfully perform their specified activities remotely. The shortcomings of these applications affected data storage, workflow implementation, and security, and ultimately the quality and timeliness of deliverables.

"A large number of problems were faced during the implementation of DMS, as this project was one of its kind," said Hayat. DAR realized they needed to find a common platform to integrate and standardize data processes and workflows for all their diversified services throughout their global offices. Yet, with remote accessibility and real-time information sharing, DAR also faced the threat of crucial data being compromised to technology theft. Their connected data management system also had to ensure enhanced data security and privacy.

PROJECT SUMMARY ORGANIZATION

International for Engineering Consultancy

SOLUTION

Enterprise Engineering

LOCATION

Saudi Arabia

PROJECT OBJECTIVES

- ◆ To address issues related to data workflows and security across multiple business sectors and office locations.
- ◆ To standardize and centralize data management while resolving all engineering third-party software issues.

PROJECT PLAYBOOK

ProjectWise

FAST FACTS

- ◆ DAR provides diversified engineering services across multiple business sectors spanning several countries.
- ◆ They initiated development of their data management system to streamline and digitalize data and workflows across all sectors and offices and address potential data security issues.
- ◆ They selected ProjectWise to provide a connected digital platform and single source of truth, creating a good solution for all third-party engineering software.

ROI

- ◆ Using ProjectWise as the DMS foundation enabled DAR to unify 8.5 million documents and designs totaling 17 terabytes of data.
- ◆ Bentley's digital solution has already saved 40% in resource hours on DAR's substation design projects.

“Our experience with ProjectWise finally inspired us to implement a DMS based on Bentley’s portfolio.”

– Imran Hayat, Lead Engineer for DMS, DAR International for Engineering Consultancy

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PROJECTWISE PROVIDES A HOLISTIC SOLUTION

DAR opted to use ProjectWise for the DMS development, implementing Bentley’s single, collaborative digital platform across all local Saudi Arabia offices and international offices in Pakistan, Egypt, India, and U.K., spanning all company business sectors. “All business units of the company, ranging from transmission and distribution, tendering, sales, studies, infrastructure, health care, building, and general consultant services are efficiently equipped with the advanced features and functions of ProjectWise,” said Hayat. ProjectWise supports DMS in defining and iterating clear procedures to be followed within the different engineering departments to ensure controlled accessibility, availability, and security of data. It also helped form a standardized folder structure and file naming conventions, along with the development and deployment of workflows and procedures pertaining to the entire project lifecycle, providing a holistic technology solution that ensures quality compliance from inception to the completion of any engineering project.

ProjectWise not only provided customization features to accommodate DAR’s diverse services, but also the bandwidth necessary to manage more than 8.5 million drawings and design documents within the DMS to ensure real-time accessibility to users across different regions and countries. With more than 17 terabytes of virtual data available, the DMS streamlines workflows and eases DAR’s business activities all in a controlled environment, ensuring data security and privacy. “We believe that it’s the place where Bentley really shines. We are confident that the security and privacy provided by Bentley is second to none, and it has added great value to our business model,” said Hayat.



DAR provides diversified engineering services across multiple business sectors spanning several countries.

BEYOND DATA STORAGE AND SHARING

DAR’s ProjectWise-based DMS is helping project teams to manage, share, and distribute engineering project content and perform reviews in a single platform. Its successful implementation has eliminated coordination issues and guaranteed real-time availability of accurate data and correct document versions to authorized persons, providing a secure system where data tempering is eliminated or rare. Working in the connected virtual platform facilitates paperless approvals, which has reduced paper trails to a negligible level, minimizing DAR’s environmental footprint and transforming the way resources are being utilized, leading to improved processes and a reduction in work hours. Using their substation design sector as an example, the implementation of the DMS has already reduced resource hours by 40%.

DAR’s DMS solution goes beyond document and data sharing to automate and standardize traditional processes that have enhanced document quality, as well as stakeholder and client communication. “Initially, ProjectWise was being used only as data storage and sharing platform, but at later stages, workflows, policies, ProjectWise drive and folder structures were introduced to enhance the efficiency of this platform,” said Hayat. Its deployment enables tailored dashboards to be prepared for each project team for any business sector, providing a bird’s-eye view of the entire scope of work, and has facilitated effortless data tracking with standard folder structures for each business unit. The implementation of digital workflows in a connected data environment streamlines internal and stakeholder approval processes and enables control and monitoring of the various client submissions. “Bentley has unquestionably added value to our standard operating procedures,” said Hayat.



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