

EMC HANDOVER AND COMMISSIONING

Facilitate the transfer of complex project documentation from construction to operations

ESSENTIALS

- Minimize the amount of time between the end of the design/build phase and commencement of the operational phase
- Migrate content and metadata from multiple sources (or repositories) and legacy systems, with support services to transition from design/build to operations
- Ensure that the data and content exported from the design/build phase has been properly formatted and mapped into the architecture of the production systems
- Receive, transform, organize and import content for operational use as a continuous process throughout the design/build phase
- Manage the commissioning process to ensure that all aspects of the project operate according to specification
- Rely on experienced consultants, proven methodologies and time-tested software tools to streamline all aspects of the handover process

The moment at which a capital project is completed is not the moment when the life of that facility commences. That's important to keep in mind, because the manner by which design/build information is transformed and transferred for the operational phase can have a profound effect on the facility's long-term success and profitability.

A typical \$1 billion capital project has over 200,000 pieces of equipment, each with hundreds of associated documents and drawings: specifications, standard operating procedures (SOPs) and other critical materials. This content must be delivered from the engineering contractor's systems to maintenance and operations systems—in the proper format for the production environment—before the facility can be commissioned and start generating ROI.

To reduce the time required to bring a facility online, this handoff must be carefully orchestrated and managed between the engineering, procurement and construction (EPC) contractors and the facility owners. After completing the design/build phase, every day spent transitioning content is a day that the plant is not operational—and the financial costs of such delays add up quickly. Most analysts agree that the average loss due to poorly managed information handover can exceed 1% of the total capital project expenditure. For a \$1 billion project, that could mean an avoidable loss of over \$10 million. At the same time, the handoff process cannot be rushed or compromised, because the operational and maintenance activities that will rely on this content are critical to plant safety and regulatory compliance. Indeed, the cost of getting it wrong could incur fines that easily exceed the cost of delays.

Today, forward-looking companies perform handover as an ongoing process that takes place systematically throughout the design/build phase, thus minimizing the time required for the plant to become operational. Automation technologies can eliminate manual error, ensure proper transformation and recategorization, and expedite knowledge transfer.

For such automation to work properly, the processes need to be set up and validated by experienced personnel. These are experts who understand the dynamics of both the construction and operational systems, and who can facilitate the mapping and transformation of data between the two.

That's where the EMC® Handover and Commissioning solution comes into play.

FULL SUPPORT FOR THE HANDOVER, COMMISSIONING AND MIGRATION PROCESS

The EMC Handover and Commissioning solution is part of the EMC Documentum® for Engineering, Plant and Facilities Management (Documentum EPFM™) solution suite, providing the integral connection between design/build and operational systems for asset information management. EMC Handover and Commissioning supports the critical scenarios in the transition from design/build to operations: handover, commissioning and migration. The solution supports EPCs and facility owners working with Documentum Capital Projects, Documentum Asset Operations or other information systems.

REDEFINE

SOLUTION OVERVIEW

EMC²

HANDOVER

The handover process involves transforming information created and captured during the design/build phase and transferring control of it to the operations team. This transfer includes project documentation and all maintenance and operations data for the plant.

Handover is typically much more complex than a simple transfer of documents. The information managed during the design/build phase is often organized by discipline (electrical, mechanical, etc.). In the production environment, on the other hand, this information must be organized by assets and processes (pump 12, cooling system 1 and so on). The content and metadata from the design/build infrastructure must be realigned.

COMMISSIONING

Commissioning encompasses testing, calibration and certification of the facility and its systems, including the hardware, software and networks that will operate within the production environment. Commissioning activities ensure that all aspects of the asset operate to specification and are fit for performance.

MIGRATION

Migrating involves moving content from an existing legacy system and/or unmanaged state to a modern information management system. Because migration takes place when the plant is already operational, the process requires several steps. Since many operating plants have legacy documents in various formats and in multiple systems, the migration process includes transforming paper documents into electronic documents that can be stored in a content repository. In addition, migration encompasses a process for transferring documents between the legacy and future systems. These capture-and-import processes require converting documents into standard file formats, organizing them for optimal access, and assigning metadata to create relationships between documents and allow for robust search capabilities.

EMC Content Bridge automates the transformation of document formats, organizational structures and metadata between different systems such as EMC Documentum, Microsoft Access, Microsoft SharePoint, IBM FileNet, XML and shared drives. EMC Content Bridge:

- Maps content and metadata from one system to another
- Extracts content and data from these disparate systems and sources
- Verifies the taxonomy and content form
- Transforms metadata to reflect the target data structure
- Loads content and data into the target system
- Validates ingested or final content, metadata and results
- Simulates end-to-end processes prior to actual migration

SEAMLESS MIGRATION, ACCELERATED HANDOVER AND TIME TO VALUE

The EMC Handover and Commissioning solution supports these essential activities in two ways: via EMC Content Bridge technology, and through the deployment of best practices for operational success.

Leveraging industry best practices, the EMC services team helps ensure that operations and maintenance information is optimally organized for broad search and retrieval. The team assures that all migrated metadata conforms to key industry and regulatory standards, including those associated with the National Electric Reliability Council (NERC), Critical Infrastructure Protocols (CIP), ISO15926 for data interoperability, as well as other health, safety, security and environmental regulations. In addition, the EMC consultants can work closely with owners to stage the commissioning plan around the dynamics of the continuous handover plan, identifying hold points, decision-to-proceed points and go/no-go criteria.

By optimizing the accuracy and speed with which these processes are completed, the EMC Handover and Commissioning solution can make a direct and powerful impact on the plant's profitability.

PART OF A COMPLETE SOLUTION FOR PROJECT AND ASSET MANAGEMENT

With end-to-end support from the Documentum EPFM solution suite, owners and design/build teams alike can take advantage of an approach to the management of data and content that remains consistent throughout the lifecycle of the facility. That consistency of approach not only makes it easier for parties working with large amounts of critical content at each stage in the lifecycle, but it also makes it easier for all parties to manage the transition from one stage to the next.

The bottom line? EMC provides the options you need to deploy a best-in-class enterprise content management solution that you can rely on at every stage of an asset's lifecycle.

GETTING STARTED

To learn more about EMC Handover and Commissioning and the EMC Documentum for Engineering, Plant and Facilities Management solution suite, please visit: www.emc.com/DocumentumForEnergy.

CONTACT US

The EMC Information Intelligence Group (IIG) transforms how organizations connect information with work. Whether on-premise or in the cloud, IIG technologies simplify the complexity of managing and protecting an organization's most valuable asset: information.

To learn more about the EMC Documentum for Engineering, Plant and Facilities Management solution suite, [contact](#) your local representative or authorized reseller—or visit us at www.emc.com, or explore and compare products in the [EMC Store](#).

¹ Capital Project Information Handover by Using a Standards-Based Methodology," Utopia Global Inc., 2012.

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