

### Product Profile

The InnoCielo Advanced Project Workflow module provides a standard environment to manage concurrent projects in the engineering environment.

### Industries

- Life Sciences
- Oil & Gas
- Chemicals
- Energy & Utilities

### Key Advantages

- Reduced project throughput time
- Improved design quality
- Manage project deadlines
- Traceable bottlenecks
- Parallel project execution
- Improved change management
- Achieve regulatory compliance
- Accurate document distribution with less effort
- Support for settlement of legal issues by audit trail
- Manage project cost, time and resources

In today's engineering practices it is common to work in a project driven environment. In this project environment multidisciplinary engineering teams are challenged to handover complex assets, like utilities, plants, facilities and associated engineering content. Engineering projects are further constrained by time frames, resources and budgets. Therefore it is crucial to have a system in place to manage and control the project deliverables and make project progress visible to both the internal organization and external parties.

### Work Breakdown

In order to manage engineering projects a work breakdown structure is created for the various engineering phases (such as concept, definition, basic and detailed engineering but could also be a split for sub-contractors). For every phase the work breakdown structure is split up into disciplines, also to endorse ownership (tasks and responsibilities). From the discipline level downwards the work can be split into activities and deliverables. The InnoCielo Advanced Project Workflow supports all these nested workflows. The interdependent workflows can be interlocked using milestones.

### Concurrent Engineering

Organizations can no longer waste time repeating tasks, thereby prolonging the time it takes to bring assets into operation. Therefore, concurrent engineering has emerged as way of bringing rapid solutions to engineering, procurement and construction processes. The figure below shows the engineering process with multiple change projects (CP1, CP2 and CP3). An as-built project (AB1) is used to collect and merge all the changes and release the document to the as-built environment (AB).

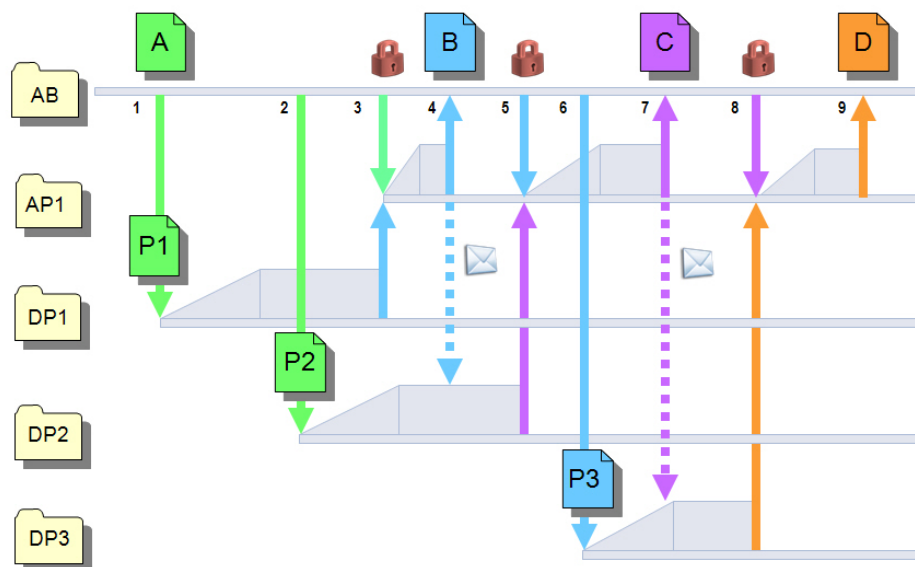


Figure 1: Concurrent engineering with multiple change projects

## Project Handover

The InnoCielo Advanced Project Workflow module provides the ability to establish a consistent as-built environment and a flexible project environment to manage work in progress and engineering content. Master documents are available for maintenance and operations in the as-built environment, while reference documents are derived in the project environment. The picture below shows a master document in the as-built environment, with its referenced documents in the different project environment.

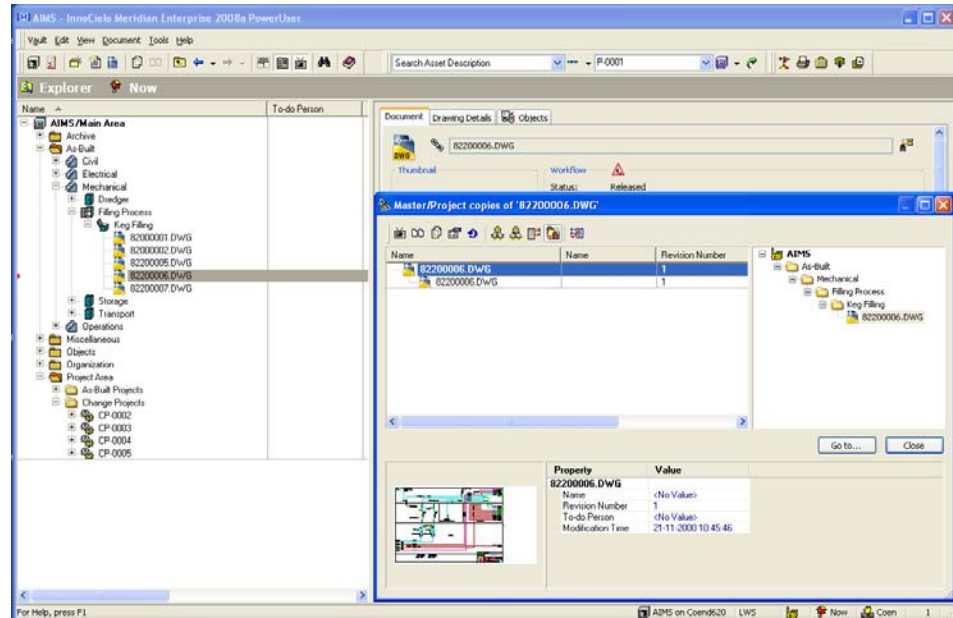


Figure 2: As-built document with project references

A complication often arising is that some master documents are required in several change projects at the same time. This is no problem using InnoCielo Advanced Project Workflow, because all document-project references are tracked.

Before a reference document in a change project is released to the as-built environment, this document must be compared and merged with the latest released master document in an as-built project. The standard compare functionality provides good support for this handover to the main area. There is also an automatic indicator showing whether all documents are available in accordance with statutory or quality requirements. The combination of these two features results in a high level of reliability for the total set of as-built documents for future maintenance work on the new part of the installation.

The Advanced Project Workflow module provides the following functionality:

- Due dates and progress reporting
- Interdependent workflow
- Milestone management
- Configurable distribution and notification rules
- Workflow schema for compliancy
- Parallel review support
- History and change logging
- Audit log per document set and per document
- Extensive commenting facility for audit trail
- Concurrent engineering
- Expedited workflow to meet deadlines

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