Training - From Data Lakes to Digital Twins

DIGTWIN-EN-D | **Distance only** | **2 days**

In a digital networked environment, new approaches are coming up to put in place an Information Management Framework towards the use of a Digital Twin to support various processes along the plant lifecycle Why an Information Management Framework? Which standards to build it? How to preserve the semantics of data and control their interpretation? How to improve the data consistency and quality? How to enable the reuse of information? Which use cases for a digital twin? A standards-based approach is a prerequisite to succeed in the digital transition in industry. Other aspects need also to addressed to mitigate the risks of this digital transition impacting an industrial ecosystem

Level

Awareness

Public

Professionals from all Oil&Gas and Renewable Energies' disciplines who plan to have responsibilities in the digital transition progam in their industrial context and in the data management domain

Objectives

Attendees will be able to implement the following skills:

- Understand how to build an Information Management Framework based on standards
- Understand the key concepts and what is at stake in the digital transition from methodological, technological, economical and social points of view

Pedagogical & technical resources

This course can be delivered using in-person lectures or virtual classrooms. Each training module contains lectures, hands-on practices and/or case studies

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

INTRODUCTION TO INFORMATION MANAGEMENT FRAMEWORK

Introduction to ISO/IEC 81346, Reference Designation System: key concepts, the differents parts (1,2, 10 and 12), methods and tools.
Application to Power Systems, Civil Works and Oil and Gas Systems.

© IFPTraining

The READI (Requirements And Digital Information) project: Lessons learnt and future work.

DATA INTEGRATION STANDARDS

ISO 15926, Integration of life-cycle data in process plants including Oil and Gas production facilities: the different parts of the standard and their evolution.
Introduction to W3C standards: RDF, OWL, SPARQL.
ISO 15926-14, Data model adapted for OWL 2 DL.
ISO 15926-4 and Posc Caesar Association Reference Data Library.

INTRODUCTION TO DIGITAL TWINS

Definition of a digital twin and its purposes.
Industrie 4.0 and Asset Administration Shell.
Benefits of a digital twin in the various phases of the plant-lifecyle.
Challenges and why a semantic information management framework is needed for a full benefit of a digital transition in industry?

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

© IFPTraining