Capital Facilities Information Hand Over Specification

CFIHOS Industry Standard based on the

Shell Engineering Information Specification (EIS)

Design and Engineering Practice 82.00.10.30

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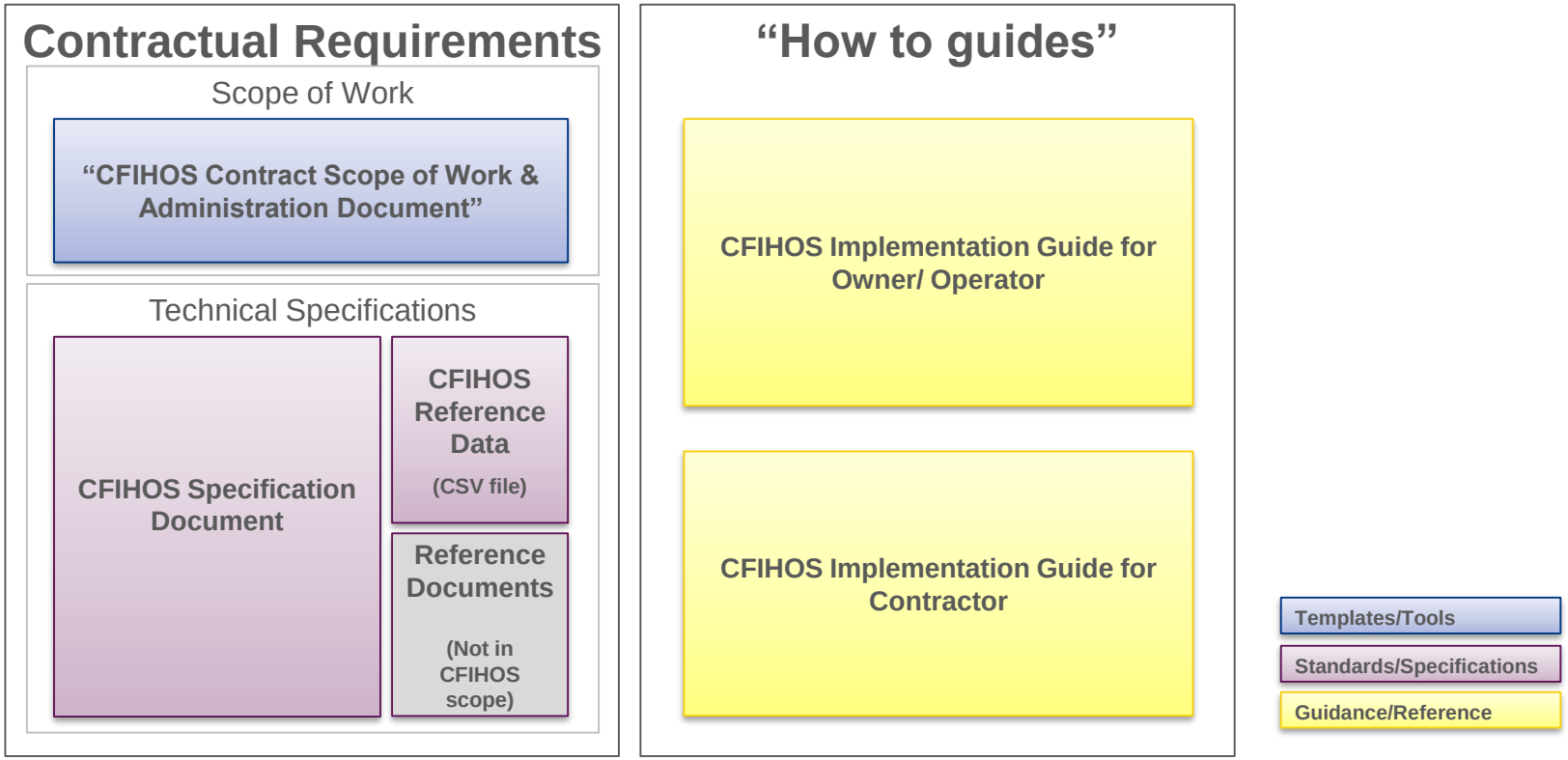
AGENDA

- CFIHOS scope
- CFIHOS use cases
- CFIHOS status
- MOU between USPI and IOGP
- Target governance under IOGP
- Handover plan to IOGP
- Status

CFIHOS CONTENT OVERVIEW



And CFIHOS is also

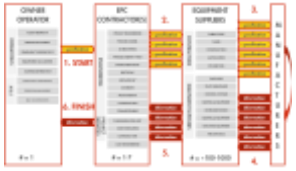
A data Model
For structuring data and documents about project execution and asset management

A set of requirements for implementation software
Outlining the functional requirements for handover systems

What are the CFIHOS core use cases?

Project Execution

1. **Interoperability:** Drive consistency through a common specification and dictionary from day 1 to reduce cost of consolidation of information at each step in the supply chain across the project

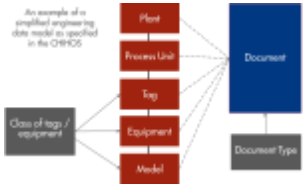


2. **Debottlenecking:** Raise productivity by applying the “theory of constraints”1: e.g. find bottlenecks in design review & approval process using status reporting on information delivery & review

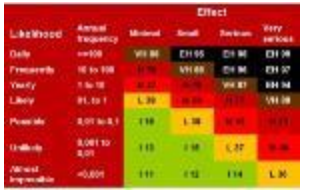
3. **Accelerated handovers:** Continuously stage and validate asset data to assure data quality and accelerate population of operational systems to speed up the first oil date.

Operations

4. **Speed up searches for information**. Reduce “search-time” by linking documents to tags (often quoted as 25% of operational staff time). Improve management of change for brownfield modifications.



5. **Reduce operational risk.** Demonstrate control over “As Built” asset information. Use as a “minimum standard” for asset information. Use as a specification for integrated service contractors & data cleaning.



CFIHOS ALIGNMENT STATUS

Part	Activity	Status
Scope of Work & Admin Doc	Complete generic text for OO's	Finalising draft for final review
Specification Doc	Complete generic text for OO's	Finalising draft for final review
Data Model	Align structure and objects	Complete, One outstanding issue to resolve
Reference Data Library	Align Tag Classes & Properties	Complete, One outstanding issue to resolve
	Align Equipment Classes & Properties	Complete
	Align Document Types & Metadata	Complete
OO Guide	Complete knowledge guide for OO's	Finalising draft for final review
EPC Guide	Complete knowledge guide for EPC's	Finalising draft for final review

Expect completion of CFIHOS release 1.4 first fully aligned version mid 2019

USPI/IOGP MOU SUMMARY

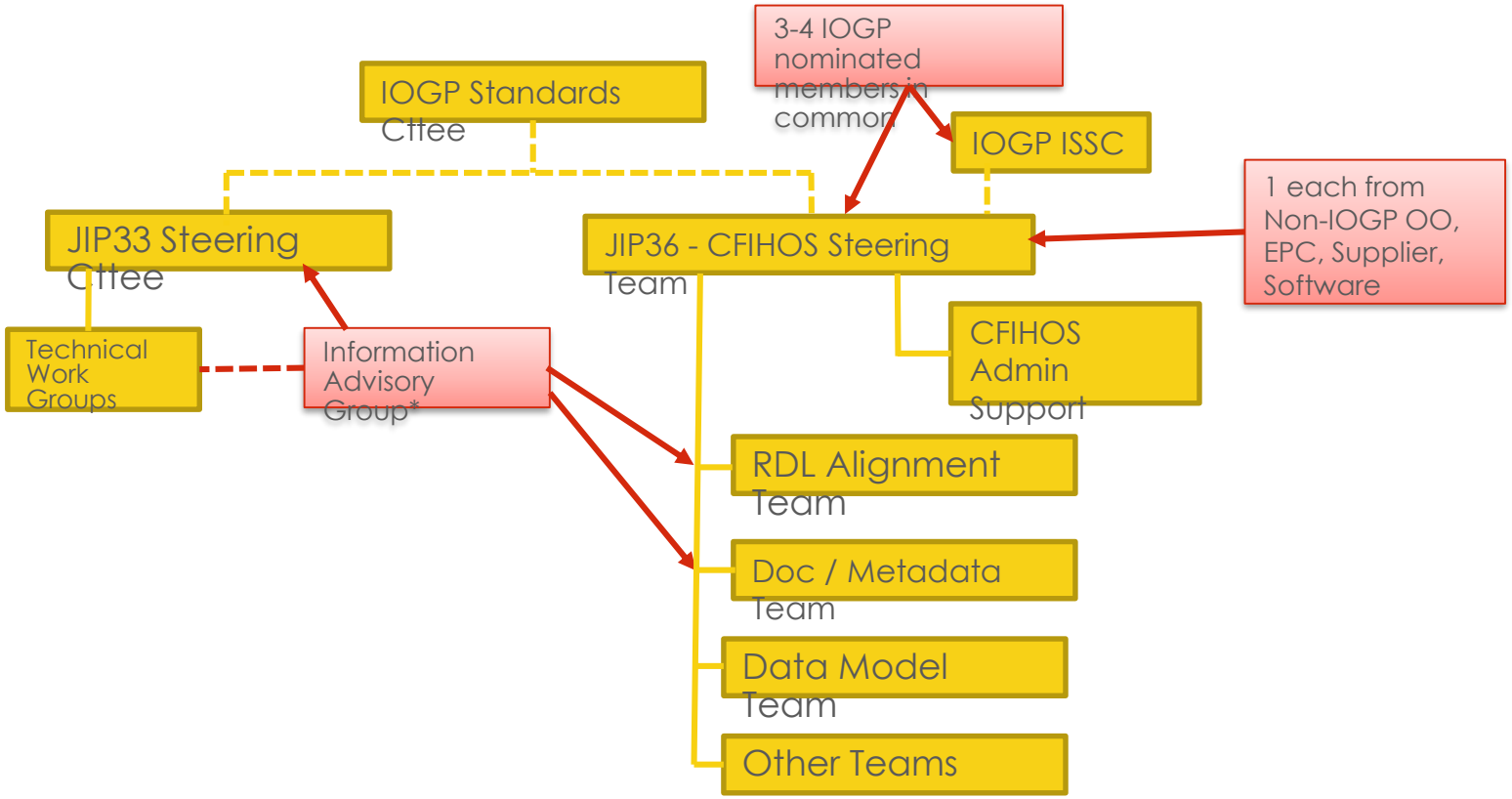
During Transition Period

- USPI to continue to administer CFIHOS in current capacity (maintain momentum) - including collaboration sites, communication channels and convening F-2-F meetings to maintain business as usual operation
- CFIHOS funding will be based on collecting member subscriptions by USPI for 2019. IOGP work (including Project Director funding, JIP33 support) to be funded by IOGP
  - USPI to be funded through 2019, even if transition completes before end of 2019
- Work with CFIHOS USPI to IOGP transition team to enable an efficient handover of current document artefacts, 3rd party MOUs, CFIHOS IP

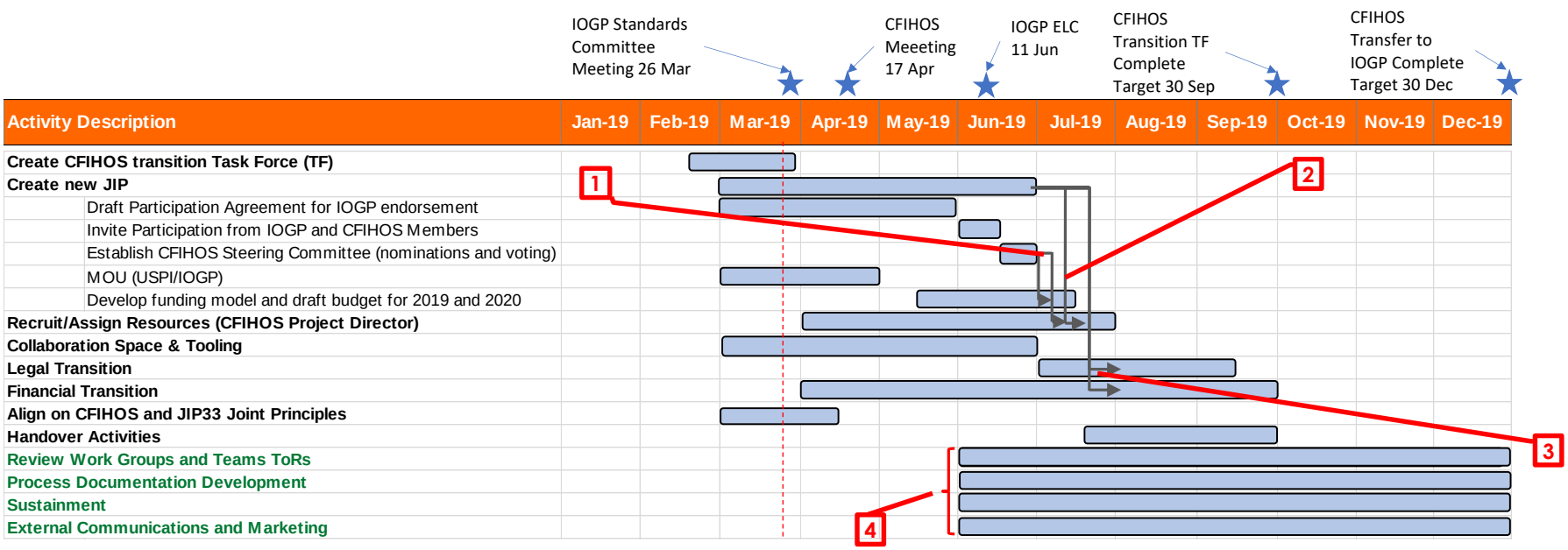
Post Transition Period

- USPI will retain ISO representation on technical committee (TC184/SC4) for CFIHOS transition to ISO in near term (IOGP to review relationship between TC184 and TC67)
- Undertake paid targeted work scopes for CFIHOS incorporation based ISSCs prioritisation, if requested by CFIHOS steering committee

IOGP JIP36 – CFIHOS GOVERNANCE



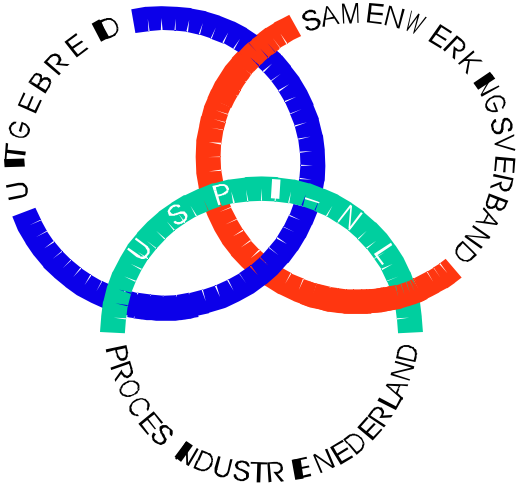
CFIHOS TRANSFER TO IOGP TIMELINE



Notes:
1 – Establishing new CFIHOS steering committee is key input to funding model & budget and hiring Project Director
2 – CFIHOS Project Director job offer cannot be made until new JIP is formally stood up
3 – Legal and Financial transition cannot be completed until JIP is formally stood up
4 – Activities not required to be completed before transition taskforce target completion

NEXT STEPS – ALL INITIATED – CA 50% DONE

- Develop Participation Agreement, agree with stakeholders and issue to IOGP members and existing CFIHOS members for signing up to JIP36 CFIHOS
- Solicit nominations for 8 positions on JIP36 CFIHOS Steering Committee from IOGP and existing CFIHOS members and conduct chair/vice chair elections
- Invite CFIHOS and IOGP members to identify potential Project Director candidates
- Draft a 5 year plan with estimated work hours and costs for long term options, based on results of ISSC Standards Survey
- Draft IOGP – USPI MOU


UITGEBREID
SAMENWERKINGSVERBAND
PROCESINDUSTRIE NEDERLAND
USPILNL

IOGP CFIHOS TASK FORCE MEMBERS

Company	Name	Email
ExxonMobil	Robert Talbot - Chair	robert.talbot@exxonmobil.com
BP	Richard Mortimer	richard.mortimer@bp.com
Chevron	Vic Samuel	Vic.Samuel@chevron.com
Shell/USPI	Anders Thostrup	a.thostrup@shell.com
BP	Harmohan Dhanjal	Harmohan.Dhanjal@uk.bp.com
IOGP	Alf Reidar Johansen	arj@iog.org
JIP33	Adri Postema	ap@iogp.org
JIP33	Ted Fletcher	tf@iogp-jip33.org
Equinor	Milenija Stojkovic Helgesen	milhe@equinor.com
Total	Laurent Ricarrere	laurent.ricarrere@total.com

RISKS AND MITIGATIONS

Risks	Mitigations
Loss of focus on data standard to support EPC handover for all process industries	Establish new JIP for CFIHOS (vs part of JIP33)
Loss of inclusiveness of industry groups from Chemical, Nuclear, Contractor, Software provider and Supplier	Appointment of non-IOGP members on JIPxx – CFIHOS Steering Committee Regular communication with all CFIHOS members during transition
Recruitment of CFIHOS Project Director	Invite IOGP and CFIHOS members to identify potential candidates Engage recruitment agency to assist with advertising more widely
Funding for CFIHOS Administrative support and maintenance	Maintain funding from CFIHOS members to supplement IOGP support. Establish budget for CFIHOS JIPxx independent of JIP33 Leverage IOGP resources.
Alignment between CFIHOS and JIP33	Incorporate Lessons Learned from Phase 2 into Phase 3 plans
Mis-alignment of Data Model between CFIHOS, EPIM-STI and JIP33	Engage CFIHOS Data Model team with EPIM-STI and JIP33 to align

CFIHOS Document Content Overview

CFIHOS Contract Scope of Work & Administration Document
[C-TP-0001] NEW DOCUMENT FOR V1.4

Contract Scope of Work language "specimen" for Contractor's CFIHOS related deliverables, invoking

- Specify all information sets to be delivered
  - 3D Model
  - CFIHOS Data set as specified in spec doc
  - Smart P&IDs
  - Spare Parts, etc.
- Specify relevant technical specifications
  - CFIHOS Specification document, including relevant template of the 5
  - CFIHOS reference data
  - Other reference documents (tagging specification, doc numbering spec, 3D model, spare parts etc)

Admin Instructions Description in the Contract of HOW (inc. WHO and WHEN) the Scope of Work will be conducted or managed.

- IM Process & Workflows – Procedural framework, lollipop, EPC IM plan
- Information Quality criteria – incl. project dictionary and classification
- Information from subcontractors - Data Exchange/ interface management in supply chain, including project RDL compliance
- Regulations, Standards, Export control
- Information security
- Controlled / uncontrolled documents
- Timing of key deliverables – including information handover / takeover
- Frequency of data exchange
- Roles & Responsibilities – including information review and approval responsibilities
- Competency profiles
- Training requirements
- Reporting/Progress Measurement
- Transmittal management

CFIHOS Specification Document [C-SP-0001]. Engineering Information handover specification

- Scope, including 5 templates, with reference to the annex.
  - Specify templates to be used for package and equipment suppliers
- Normative references
- Terms, Definitions, Acronyms & Abbreviations (Master)
- General principles and requirements
- Project Dictionary and Classification
- Information Format Requirements
- Data
  - Data specification and updates
  - Handover Plant Breakdown structure
  - Classification
- Documents
  - Document specification
  - Document and File Structures
  - Document References
  - Physical Record Requirements
- Data- & file-structure of transmittals
- Specify revision control and document metadata
- Specify coordinate measurement system to be used
- Annex: Customizable template to be populated for a contract
  - Specification of information model
  - Specification of the objects and data fields to be delivered
  - Descriptive text, where relevant

Ensure Specification Document is consistent with the updated CFIHOS Data Model and the Reference Data supplied to contractor in CSV format

CFIHOS Document Content Overview

CFIHOS Implementation Guide for Owner/ Operator [C-GD-0001]

Instructions on how to customize the Specification and implement the CFIHOS Standard

- Introduction
  - Scope, Target Audience
  - Terms, Definitions, Acronyms, and Abbreviations (Master in SpecDoc)
  - References
  - Information Management Principles and Process in Projects
  - CFIHOS Education Sessions
- How to use the CFIHOS standard on a Project
  - Specify Information Requirements
    - Contractual "Information Requirements Package" Overview
    - Creating a Contract Information Requirements Package
    - Select CFIHOS Template – (Handover scenarios, Life Cycle phases, relationship between templates and RDL)
    - Identify additional project specific requirements
    - Adjust template for local needs
    - Internal review and approval of information specification
    - Generate reference data
    - Add Reference Data and Reference Documents to specification
    - Finalise package
    - Incorporate in tender documents
    - Adjustments due to bidder clarification
    - Finalise information specification at contract award
- Generate Information Deliverable
  - Contractor Actions
  - Review and Confirm understanding of the Information Requirements Package
  - Owner/Operator Reviews and validates information delivered
  - Owner/Operator Return comments
  - Contractor Incorporates comments
- Handover of Information
- Where to retrieve documents and templates

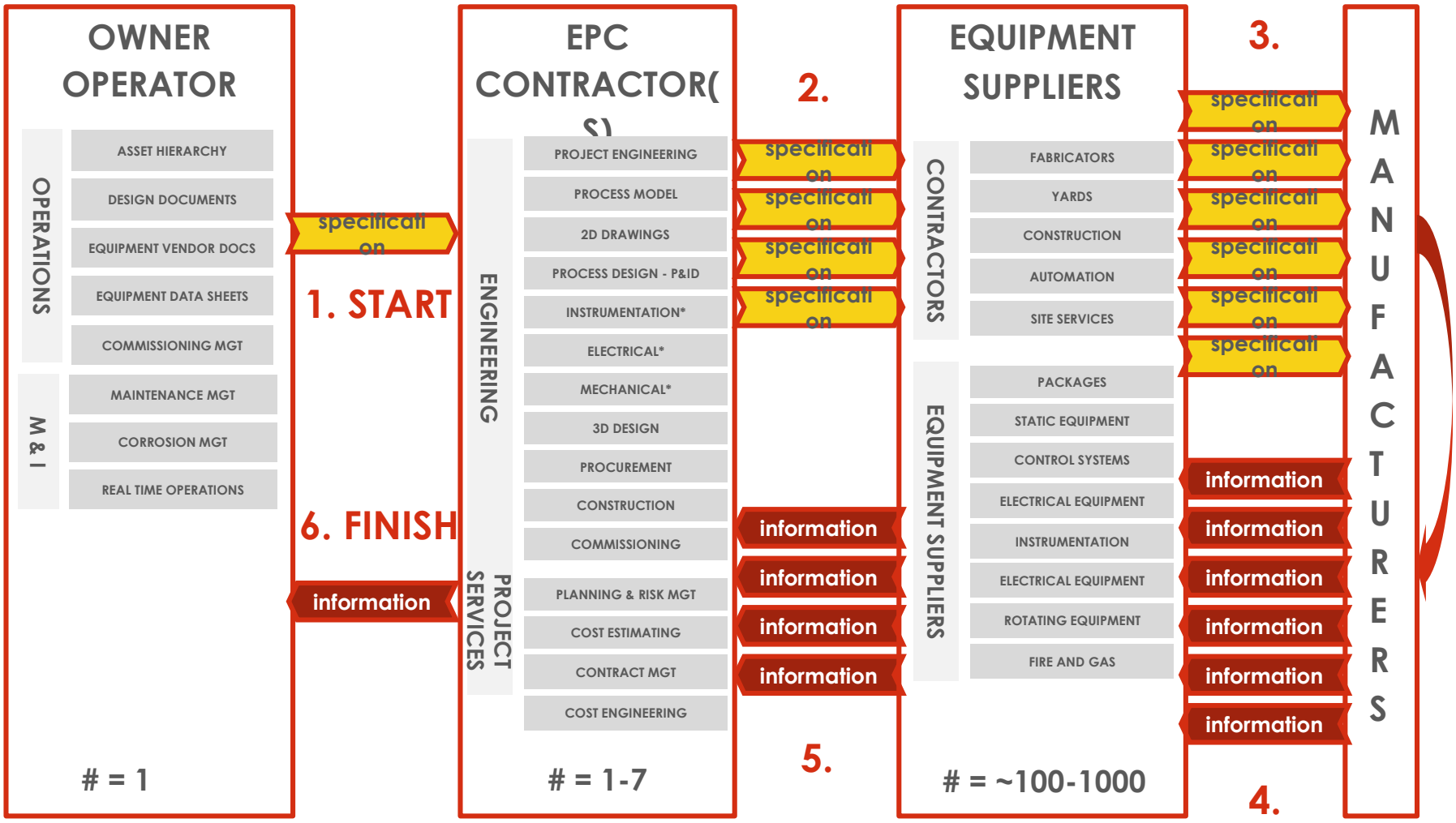
Question: Do we want to add the 5 full templates as appendix?

CFIHOS Implementation Guide for Contractor [C-GD-0002]

Instructions on how to implement the CFIHOS Standard

- Introduction
  - Scope
  - Target Audience
  - Terms, Definitions, Acronyms, and Abbreviations (Master in SpecDoc)
  - References
  - Information Management Principles and Process in Projects
  - CFIHOS Education Sessions
- Implementation of a (CFIHOS) based information handover standard on a Project
  - Contractual "Information Requirements Package"
    - Contract IM SOW
    - Contract Information Specification
    - Reference Data
  - CFIHOS Implementation Steps at the Contractor
    - Review and Confirm understanding of the Information Requirements Package
    - Determine the approach and procedure for changes to the specification
    - Identify the sources (providers) of the information.
    - Ensure project wide awareness of the requirements for information and quality
    - Implement procedures & tools for information collection, validation and handover
    - Collect, validate and consolidate information
    - Perform handover
- Where to retrieve documents and templates
- Appendix A – Contract Information Requirements Package – Overview

Information handover causes pain for Owner Operators, but also for the rest of the supply chain. How can we fix it?



How is CFIHOS implemented?

Specify information

1. Define IM specification for project scope using CFIHOS templates
2. Embed IM specification in EPCM contract clauses

Manage Information Review

3. Staff up Information Management team
4. Define Data and Document review processes
5. Set up information handover systems – loading, validation, staging

Handover Information

6. Map to target systems and transfer information

CFIHOS provides a platform for a common language and is aligning with other industry data standards via MOUs

USPI CHIFOS
Common handover specification, Data model & Dictionary
=

Common language for Oil and Gas Industry

MOU

MOU

MOU

Equipment Information Requirements
- JIP 33 – Standardizing Equipment Specifications
- EPIM STI – Standardizing Equipment Information Requirements

Process + Instrumentation Diagrams (P+IDs)
- DEXPI: Data Centric Process Drawings

Equipment Datasheets
- MIMOSA – ISDD – Industry Standard Datasheet Definition

The information specification is prepared by scoping relevant CFIHOS content to EPC

Select CFIHOS Template

Verify Information Requirement with Business

Customise CFIHOS Template for local needs

Internal Review and Approval of Information Specification

Generate Reference Data

Add Reference Data to Specification

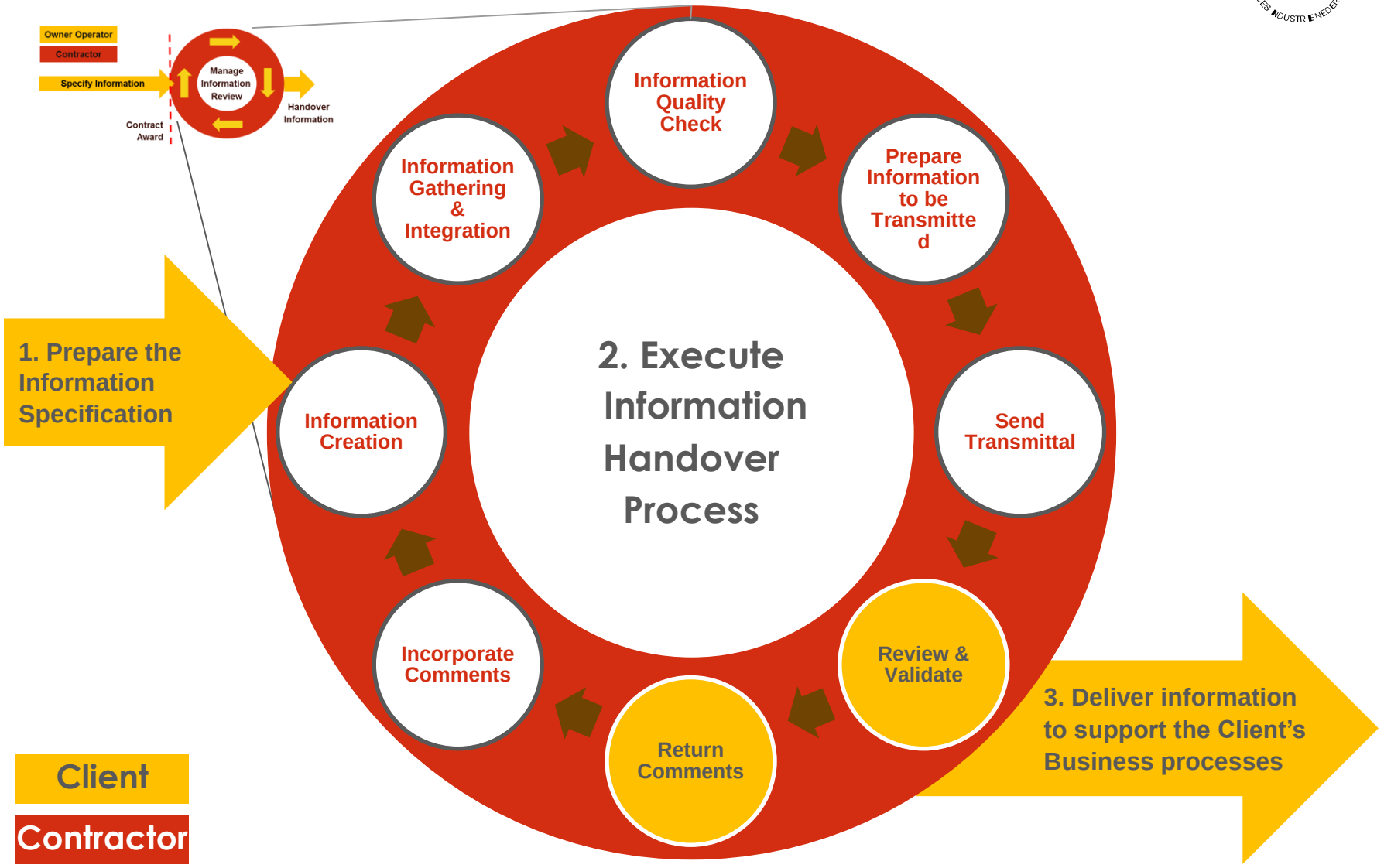
Finalise Package

Incorporate in ITTs

Adjustments due to Bidder Clarification

Finalise Information Specification at Contract Award

Client

Contractor

The information handover process is executed by transmittal, review and approval