THTH Spring Webinar - 28 May 2021

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CFIHOS

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CFIHOS at a Glance

If you think of Operators, Contractors, Vendors and Suppliers speaking about processes, documents and data, but all speaking different languages, CFIHOS gives us a common language.

What is CFIHOS?

CFIHOS (pronounced see-foss) is an information standard delivering a common language for equipment and engineering deliverables across the supply chain.

The goal of CFIHOS is to eliminate the friction in getting the right information (data and documents) to start, operate, maintain, and decommission your facilities.

Why CFIHOS?

No one Owner Operator can unlock all the value in data-centric delivery for projects.

As CFIHOS matures, it provides an important service as a common language and a defined minimum.
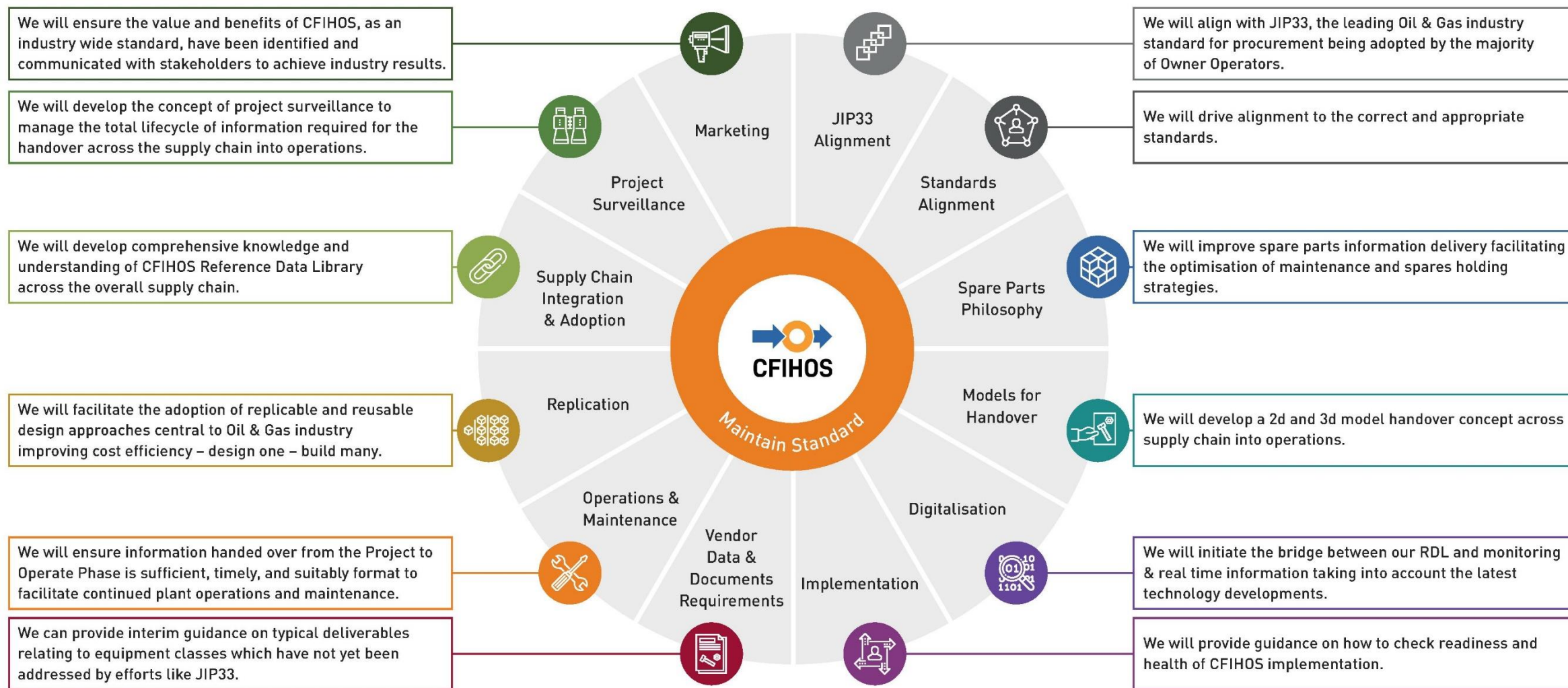
What is CFIHOS not?

CFIHOS is not cost plus. What CFIHOS specifies is a common language and structure to turn over information that already exists in EPC systems.

It is not above and beyond what we have asked for before – this just elevates it from PDF to true data.
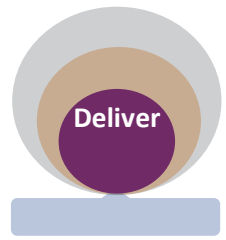
Roadmap

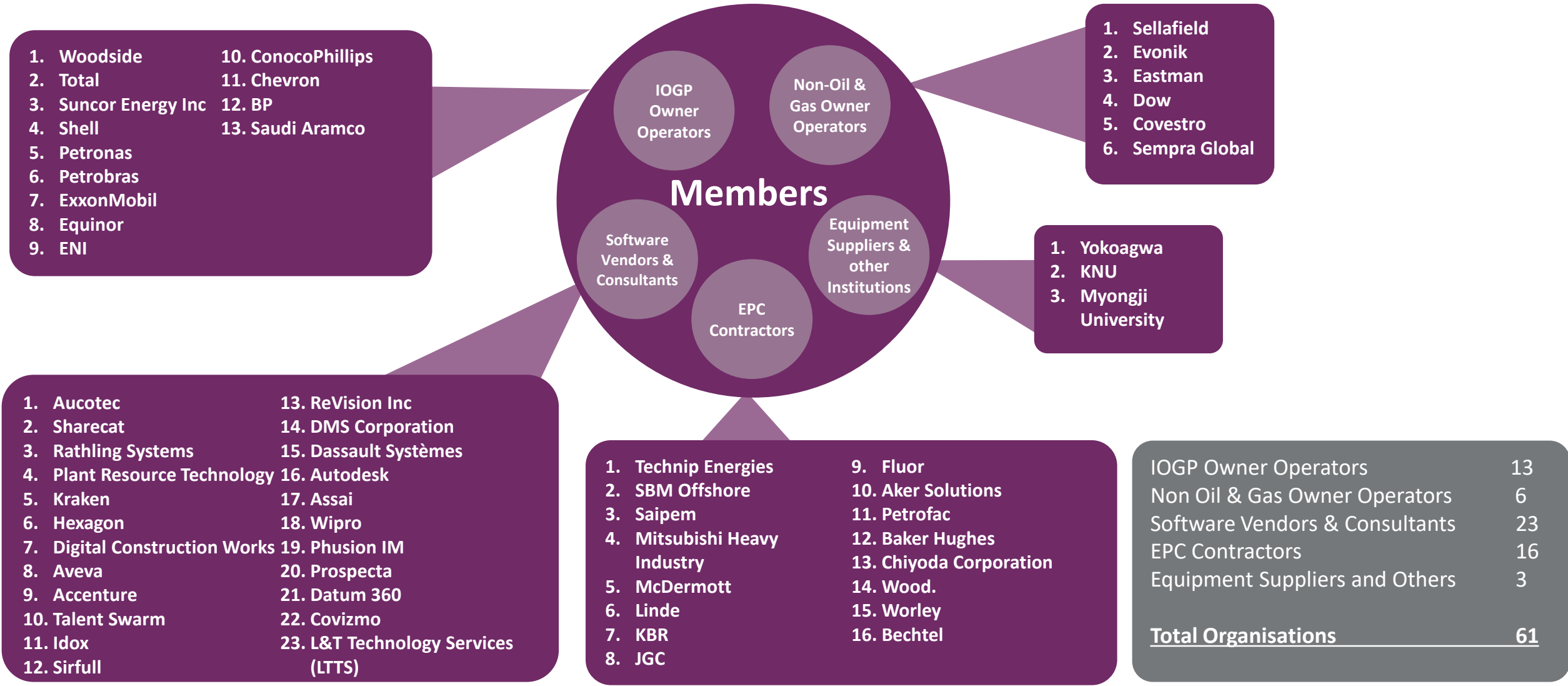We've developed a refreshed view of our Roadmap and aligned our FRs to each element

We will ensure the value and benefits of CFIHOS, as an industry wide standard, have been identified and communicated with stakeholders to achieve industry results.

We will develop the concept of project surveillance to manage the total lifecycle of information required for the handover across the supply chain into operations.

We will develop comprehensive knowledge and understanding of CFIHOS Reference Data Library across the overall supply chain.

We will facilitate the adoption of replicable and reusable design approaches central to Oil & Gas industry improving cost efficiency – design one – build many.

We will ensure information handed over from the Project to Operate Phase is sufficient, timely, and suitably format to facilitate continued plant operations and maintenance.

We can provide interim guidance on typical deliverables relating to equipment classes which have not yet been addressed by efforts like JIP33.

We will align with JIP33, the leading Oil & Gas industry standard for procurement being adopted by the majority of Owner Operators.

We will drive alignment to the correct and appropriate standards.

We will improve spare parts information delivery facilitating the optimisation of maintenance and spares holding strategies.

We will develop a 2d and 3d model handover concept across supply chain into operations.

We will initiate the bridge between our RDL and monitoring & real time information taking into account the latest technology developments.

We will provide guidance on how to check readiness and health of CFIHOS implementation.

Marketing

JIP33 Alignment

Project Surveillance

Standards Alignment

Supply Chain Integration & Adoption

Spare Parts Philosophy

CFIHOS

Maintain Standard

Replication

Models for Handover

Operations & Maintenance

Digitalisation

Vendor Data & Documents Requirements

Implementation

We will ensure that the content of the published specification is maintained, and continuous improvements made.

Current CFIHOS Membership

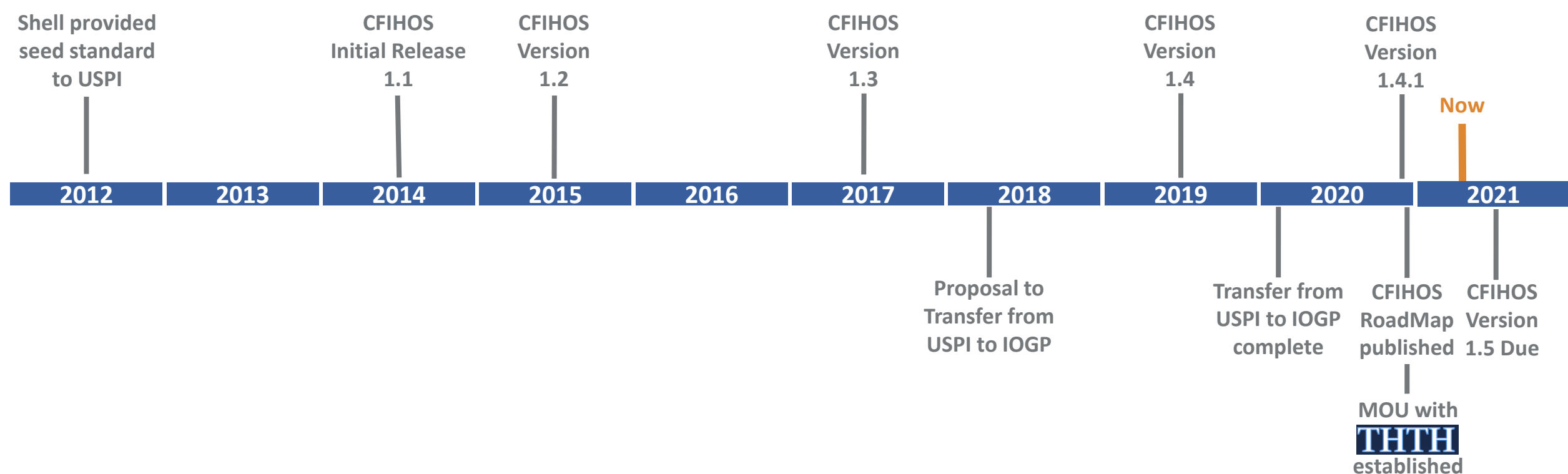Participation has grown to 61 organizations across multiple industry sectors, with over 320 Individual members.

Deliver

Members

- IOGP Owner Operators
- Non-Oil & Gas Owner Operators
- Software Vendors & Consultants
- EPC Contractors
- Equipment Suppliers & other Institutions

IOGP Owner Operators

1. Woodside
2. Total
3. Suncor Energy Inc
4. Shell
5. Petronas
6. Petrobras
7. ExxonMobil
8. Equinor
9. ENI
10. ConocoPhillips
11. Chevron
12. BP
13. Saudi Aramco

Non-Oil & Gas Owner Operators

1. Sellafield
2. Evonik
3. Eastman
4. Dow
5. Covestro
6. Sempra Global

Equipment Suppliers & other Institutions

1. Yokoagwa
2. KNU
3. Myongji University

Software Vendors & Consultants

1. Aucotec
2. Sharecat
3. Rathling Systems
4. Plant Resource Technology
5. Kraken
6. Hexagon
7. Digital Construction Works
8. Aveva
9. Accenture
10. Talent Swarm
11. Idox
12. Sirfull
13. ReVision Inc
14. DMS Corporation
15. Dassault Systèmes
16. Autodesk
17. Assai
18. Wipro
19. Phusion IM
20. Prospecta
21. Datum 360
22. Covizmo
23. L&T Technology Services (LTTS)

EPC Contractors

1. Technip Energies
2. SBM Offshore
3. Saipem
4. Mitsubishi Heavy Industry
5. McDermott
6. Linde
7. KBR
8. JGC
9. Fluor
10. Aker Solutions
11. Petrofac
12. Baker Hughes
13. Chiyoda Corporation
14. Wood.
15. Worley
16. Bechtel

IOGP Owner Operators	13
Non Oil & Gas Owner Operators	6
Software Vendors & Consultants	23
EPC Contractors	16
Equipment Suppliers and Others	3
Total Organisations	**61**

CFIHOS Release Timeline

In 2012 Shell approached process industry organization USPI to turn its Engineering Information Specification (EIS) into an industry standard and later to a standard for the process industries supply chain.

In January 2020 the governance of CFIHOS transferred from USPI to IOGP, becoming Joint Industry Project(JIP) 36 – to assure further development of the CFIHOS project and its growing number of supporting members .

Since the initial release in 2014 there have been four further versions and recently a point release. The current version is 1.4.1.

Shell provided seed standard to USPI		CFIHOS Initial Release 1.1	CFIHOS Version 1.2		CFIHOS Version 1.3		CFIHOS Version 1.4	CFIHOS Version 1.4.1	Now
2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
						Proposal to Transfer from USPI to IOGP		Transfer from USPI to IOGP complete	CFIHOS RoadMap published — CFIHOS Version 1.5 Due

MOU with **THTH** established

We are preparing for Release 1.5

We have a number of features planned to go into the next release, the timeline for release is yet to be agreed.

Feature Name	Feature Number	Process Stage	Including in Release 1.5?
JIP33 - CFIHOS RDL portion (part of former CR0016)	FR14	10 QA and Validation	Yes
JIP33 Part 2 : Enable practical implementation of JIP33 via CFIHOS	FR15	11 Work Complete	Yes
Align CFIHOS Discipline Document Types with JIP33	FR16	9 Working on It	Yes
Align CFIHOS with EPIM	FR18	9 Working on It	Yes
Discipline Document Type Metadata Validation	FR27	9 Working on It	Maybe
CR0034 - Proposed changes to class properties arrangement	FR3	9 Working on It	Yes
CR0032 - V1.4 feedback - RDL	FR4	10 QA and Validation	Yes
CR0031 - Proposed addition of missing classes and properties to CFIHOS RDL	FR7	10 QA and Validation	Yes
Bug fix - inconsistency in the source standards	FR37	9 Working on It	Yes
Process activities and streams	FR43	9 Working on It	Yes
Requirement for Text searchability in pdf files	FR48	10 QA and Validation	Yes
Add CASE to Streams and Activities	FR51	11 Work Complete	Yes
Enrich the RDL with new tag and equipment classes for the subsea equipment	FR52	6 Vote Underway	Maybe
CFIHOS Release Candidate v1.4.1- Release Candidate Reviewer Feedback	FR60	9 Working on It	Yes

We have a number of MOUs including THTH

The main aims of our MOU's are;

- Alignment: How we harness all of the energy that is going into Industry initiatives working on common languages so that our individual building blocks work together.

- Improving International Standards: Ensuring we engage with the correct standards development bodies and technical committees and that our deliverables meet their requirements.

PCA
POSC Caesar Association
Global

EVOLEN
Evolen Association – Energy Made in France

Standards Norway
Sectorial Board Petroleum /Standards Norway and READI-JIP
Norway

THTH
(THTH Association for Decentralized Information Management in Industry) Teollisuuden Hajautetun Tiedonhallinnan yhdistys THTH ry
Finland

MIMOSA
Machinery Information Management Open Systems Alliance
USA

USPI
Uitgebreid Samenwerkingsverband Procesindustrie
Netherlands

DEXPI
(Data Exchange in the Process Industry Initiative) DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V.
Germany

SEIIA
Swedish Industrial Interoperability Association
Sweden

CFIHOS and THTH working together in 2021

The focus for 2021 is to develop a join program to work towards alignment of our common building blocks:

We want to enrich the Reference Data Library (RDL) with equipment classes and attributes from other industries, we are very focussed on Oil and Gas and Nuclear at the moment.

We need to enrich our Data Model to also ensure it applies to other industries.

As we continue to work together, we'll evolve and identify further opportunities.

Currently, we have issued the close out report for the pilot we have undertaken under our MOU with Standards Norway and we'd like the THTH members to review and comment here.

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CFIHOS Purpose

Create a handover specification that can be implemented by operators, contractors and equipment manufacturers and suppliers to standardize the specification of information handover requirements for a project.

CFIHOS will transition to an international standard – our intent is ISO 15926.

Five Elements of CFIHOS

Technical Specification Document
Requirements, rules and principles for information handover

Data Model
For structuring data and documents about assets

Process & Guidance documents
Outlining implementation steps (and do's & don'ts)

Reference Data Library (Dictionary)
Consistent naming of equipment, properties & documents..

Implementation Software Requirements
Outlining functional system requirements for handover