

# Capital Facilities Information Hand Over Standard

## CFIHOS



- **WHAT IS CFIHOS?**
- **WHY IS CFIHOS NEEDED?**
- **WHAT DOES IT INCLUDE ?**
- **HOW CAN HAND-OVER BE IMPROVED ?**
- **HOW CAN DATUM360 HELP ?**

# What is CFIHOS ?

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CFIHOS is:

- an international initiative coordinated by USPI
- members include owner/operators, EPCs, and manufacturers
- based on successful hand-over practices in major oil companies
- focused on oil, gas, petrochemicals and power industries
- issued in draft, and is currently seeking application feedback
- using Datum360 internally to develop the standard

CFIHOS uses the Datum360 EIS (Engineering Information System) to manage:

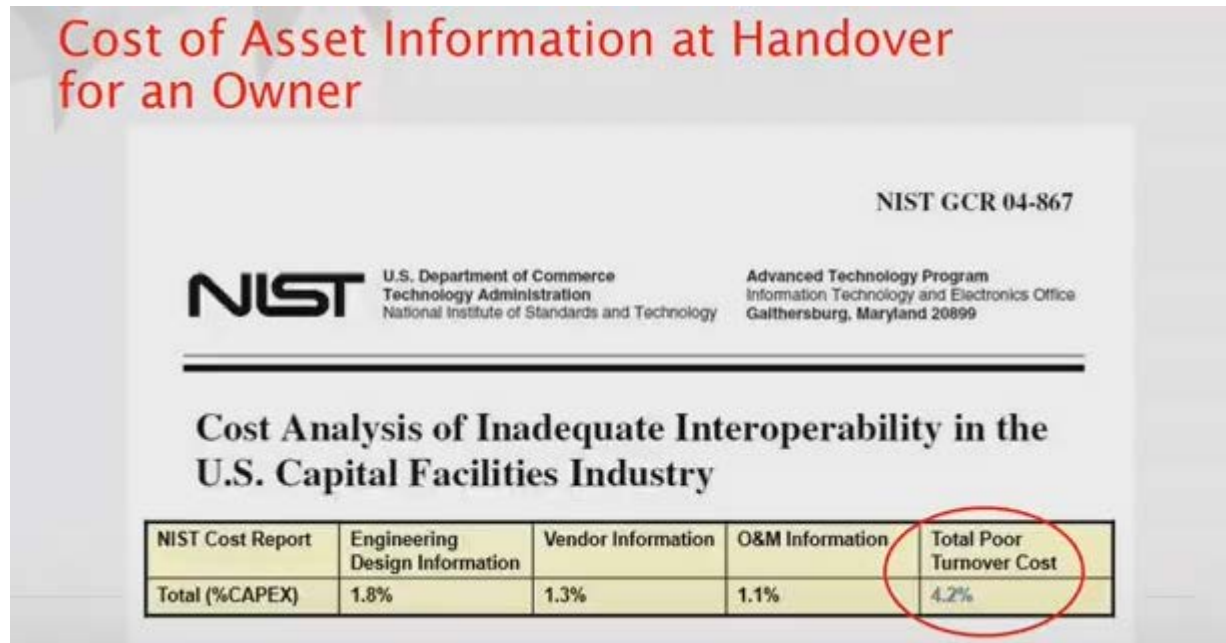
- Standard product class libraries (including CFIHOS and O/O)
- Lists of EPC and vendor deliverables (e.g. master drawing lists)
- Hand-over data requirements and formats
- Standard contractor and vendor contract templates

# Why is CFIHOS Needed ?

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High cost of current hand-over practices.

For example, NIST estimates over 4% of Total project cost is wasted through inefficient transfer of Engineering, Vendor and Operation Maintenance information.



# What Does CFIHOS Include?

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Standards, work processes and tools to assist with efficient hand over of engineering information to Operations and Maintenance.

- 1) Template contracts to facilitate specification of requirements and acceptance procedures for:
  - Constructors and Field Contractors
  - Vendors
- 2) Standards defining information and formats to be delivered to the Owner/Operator by:
  - Engineering
  - Constructors and Field Contractors
  - Vendors
- 3) Master Product Class Library including:
  - Standard names of instruments, pumps, vessels, etc.
  - Specification parameters for above
  - Definition of Deliverable data for all of the above

# How can hand-over be improved ?

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Data handed over from different sources must be:

- Complete
- Consistent
- Compliant
- Correct

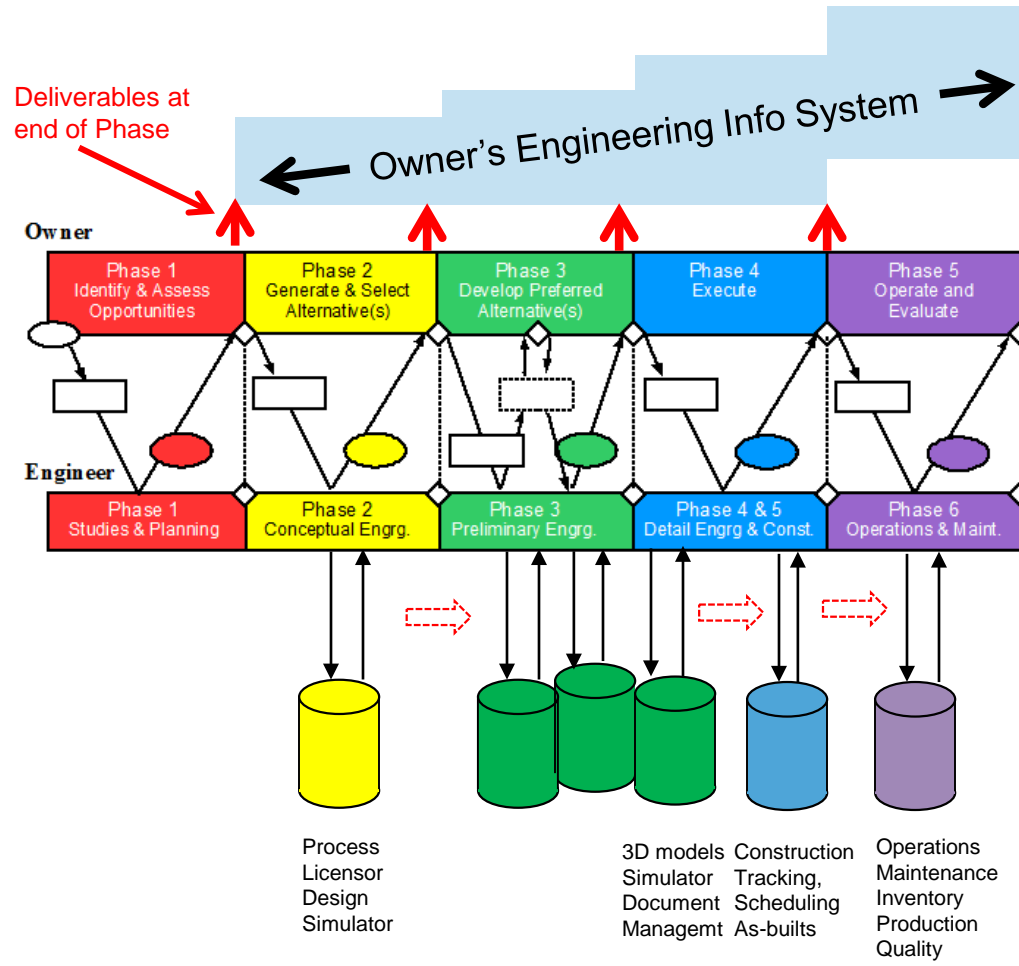
Owner's EIS (Engineering Information System) should provide tools to transfer data from EPC to Owner systems including:

- % Complete Reporting
- Engineering Change Control
- Data Validation

The Owner's EIS should be consistent with yje maintenance systems used by the Owner during Operations (as well as EPC systems).

Data hand-over can no longer be a post-project activity; it must occur continuously.

# Engineering Data Transfer should not be left to the end of the Project



- Owner's Engineering Information System (EIS) is controlled by facility Owner/Operator, but is accessible by EPC, vendors, etc.
- EIS uses Standard CFIHOS data formats
- MoC Work processes insure validity of EIS changes.

Data is developed in "silos" and is often not effectively transferred between Engineering, Construction and Operating Phases

## How can Datum360 Facilitate CFIHOS Benefits?

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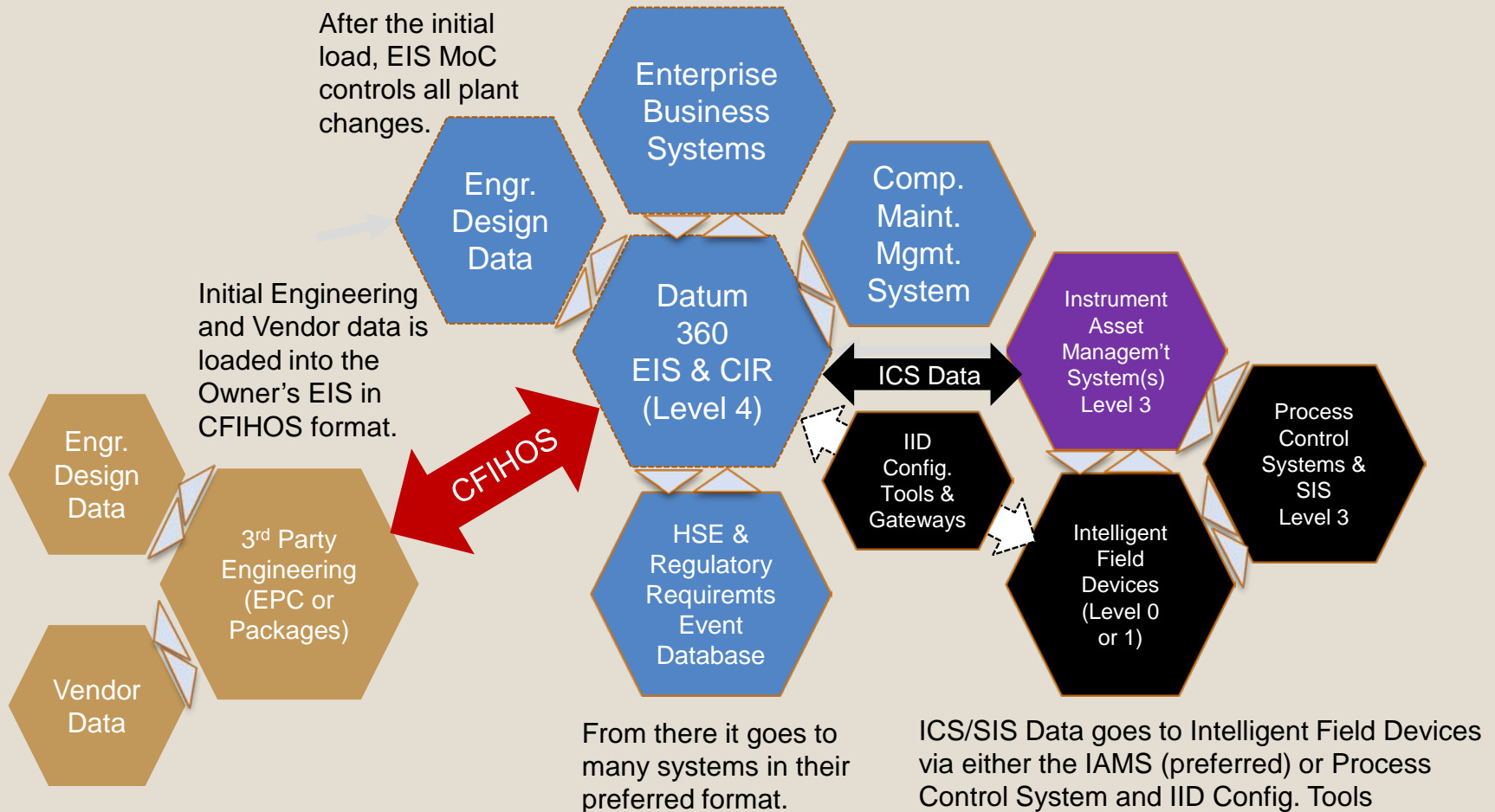
Since Datum 360 was used by the CFIHOS development team, the standard Product Class Libraries, data and format standards, and Contract Templates are already loaded and tested.

Datum 360 is an SaaS (Software as a Service) web-based system. To get started with CFIHOS, a client needs only to log in with a standard personal computer and train their people.

On-going improvements and additions to CFIHOS library will be loaded immediately by Datum360 as they become available. Upgrade costs are included in the monthly Datum360 service.

The same Datum360 web-server is accessed by many companies. Each user therefore benefits from the reliability, efficiency, and shared learning curve of a system with hundreds of users.

# Engineering and Configuration Data





# How can Datum360 Facilitate CFIHOS Improvements?

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Datum360 is specifically designed to help Owner/Operators transfer EPC and Vendor information during engineering, hand-over, ongoing maintenance and turn-around activities. It is optimized to provide:

- Easy access to Technical information (reduce man-hours spent searching for information)
- “Single Source of Truth” for plant personnel, so latest version of drawings and data is clearly indicated, and history is available online
- Engineering Change Control to ensure accuracy of information
- Online Work Processes for Turnover and Maintenance activities
- On-demand Information and Training for site personnel