

**Why ISO15926?
(EPISTLE Implementors Forum)**

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EPISTLE —

ISO 15926 Overview

EPISTLE —

- Requirements
- Why not STEP?
- Architecture
- Status and Plans

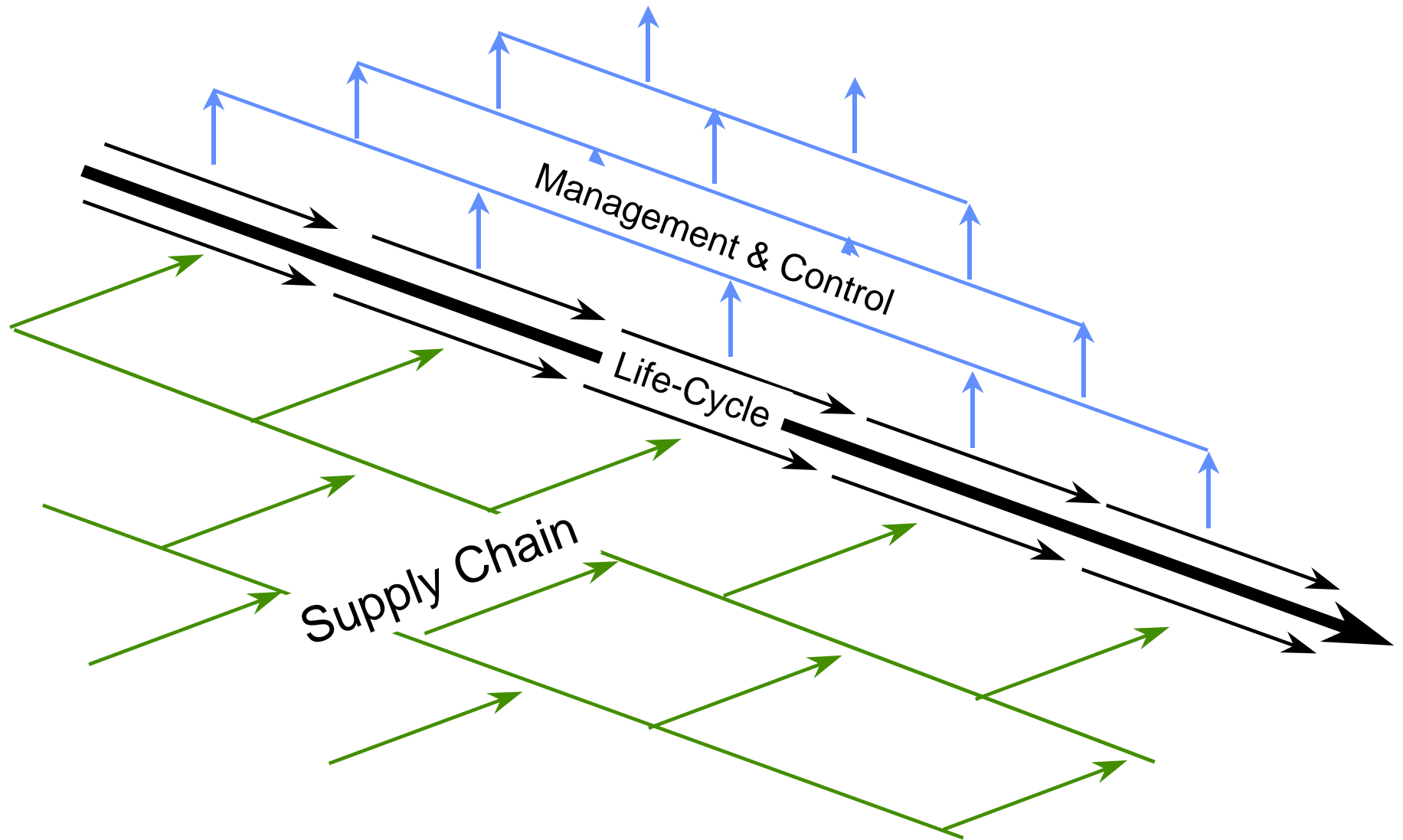
Requirements

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- Data Integration amongst:
 - Many Systems
 - Many Organisations
- Life-time Data Management
 - History as well as current state
 - Design, Construction, Operations & Maintenance
- Data Sheets rather than Drawings
- Focus on one off products

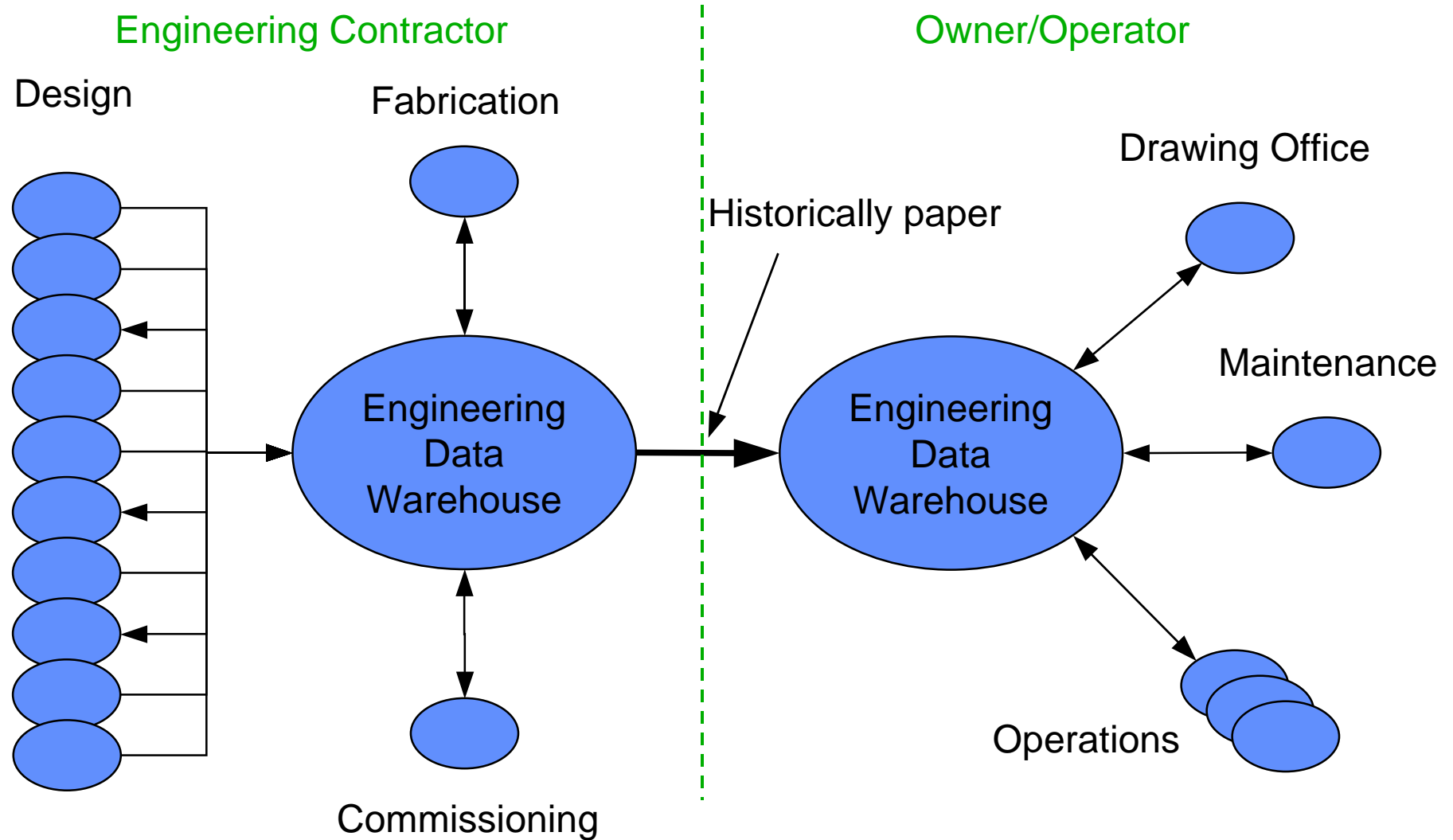
Different Dimensions to Integration

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Data Handover

EPISTLE —



Why Not STEP?

EPISTLE —

- Focus
 - Product Centric
 - Point to point data exchange (to an empty system)
 - Snapshot view
 - Context dependent exchange
- Does not support well
 - Incremental update
 - Change audit
- Restricted Extensibility
 - Only upwards compatible changes allowed
 - Complex workarounds for defects

- Generic Framework
 - A multi-dimensional hierarchy of subtypes and supertypes
 - All (but one) entity types are a subtype of at least one other
 - Not industry or discipline specific
- Core Model
 - A number of key templates based on associations
- Reference Data Library
 - A set of standard classes and other reference data
 - Configure the templates to specific purposes
 - Industry and discipline specific
- Equipment Templates
 - Definition of key data for different equipment types

Framework

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- Application Object
 - Individual
 - Class
 - Class of Individual
 - Class of Class

Subtypes of Individual

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- Individual
 - Dimension 1
 - Activity
 - Physical Object
 - Dimension 2
 - Whole Individual
 - Possessed Aspect
 - Dimension 3
 - Plural Individual
 - Single Individual
 - Dimension 4
 - Specific Individual
 - Typical Individual

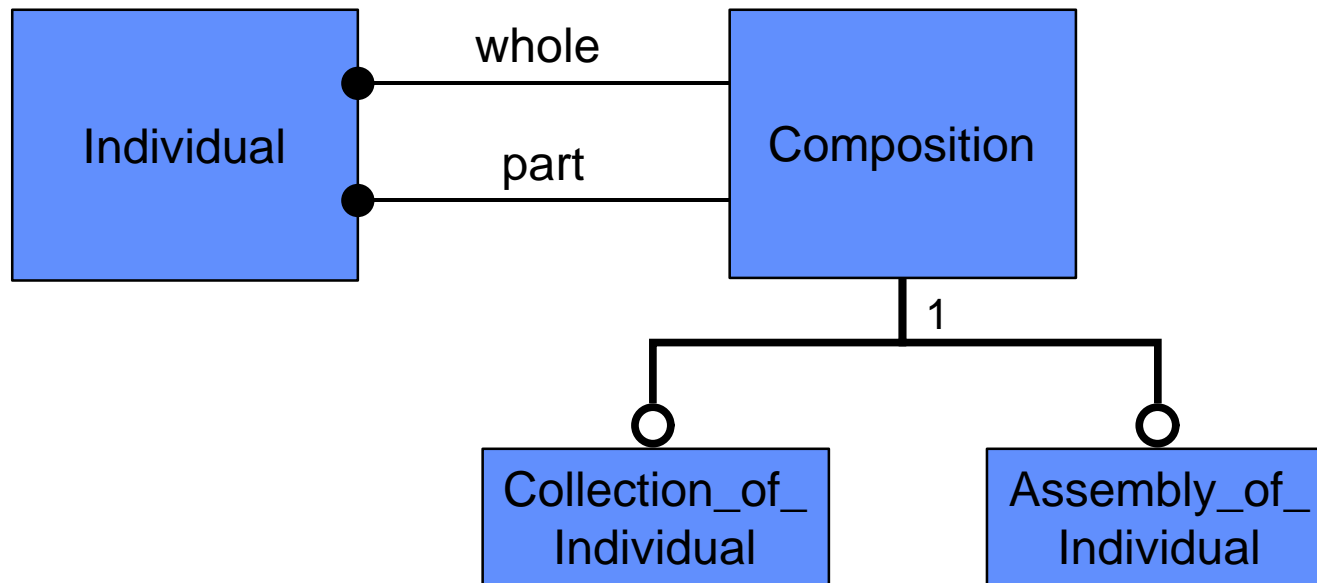
Core Model - Classification

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Core Model - Composition

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Reference Data Library

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- Generic Types of Equipment
 - Pump, Valve, Pipe, Vessel
- Standard Equipment Types
 - Specification standardised, multiple suppliers
 - nuts, bolts, pipes
- Manufacturer's Models
- Materials of Construction

Statistics

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- Data Model Document
 - 300 pages
 - 395 Entity Types
- Reference Data Library
 - c 15,000 approved classes
 - c 30,000 total (this phase)

- February 1997
 - 3 NWI's submitted by Norway and POSC
 - Overview
 - Data Model
 - Reference Data Library Methodology
 - 12 votes for, 1 against (USA) 6 did not respond
 - 7 countries stated intent to participate: Australia, Germany, the Netherlands, Norway, Sweden, UK, USA

ISO 15926 Status - 1

EPISTLE —

- CD Ballot passed for 2 parts:
 - Part 1: Overview and fundamental principles
 - Part 2: Data model - This Part is harmonised with AP221 ARM
- Working Drafts in preparation
 - Register for a Reference Data Library
 - Administrative Standard
 - Technical Standard
 - Initial Content
 - Business case

Plans for ISO 15926

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- DIS ballot for Parts 1&2 by end 2000
- CD Ballot for Register Parts by end 2000?

Implementation Projects -1

EPISTLE —

- Statoil Asgard project
 - Intergraph's NOTIA with POSC/Caesar data model
- ELF Elgin Franklin
 - Using Intergraph's NOTIA with POSC/Caesar data model
- Shell Shearwater project
 - AMEC using Quillion's PETS product with PIPPIN based data model
- OMAN LNG (Shell)
 - Foster Wheeler using PrismTech's product OpenBase with POSC/Caesar Data Model
- Shell Pernis refinery Two projects awaiting
 - INCA Application of AP221 for piping exchange of data
 - GE200 Application of STEP to be specified

Implementation Projects -2

EPISTLE —

- Nigeria LNG
 - Multi-billion \$ LNG train, usage of STEPlib reference data
- Shell - Fresco document management system, Use of STEPlib as Intelligent Thesaurus
- Nanhai
 - New chemicals site - JV of Shell Chemicals & Chinese partners - multi billion \$, wide use of AP221 and STEPlib included in project requirements.
- NAM/GLT
 - Document management system, storage & retrieval using STEPlib.
 - SAP and MATRIX implementation using STEPlib as Engineering dictionary for standardisation.

Implementation Projects -3

EPISTLE —

- CEA
 - Redesigned its 'Plant 4D' CAD system and based its database structure on AP221 and its standard reference data on STEPlib
- Lyondell Chemicals
 - Project in Botlek Europoort on Hold including STEP DWH????
- HOPE/2
 - Creation of a Pump data catalogue on STEP AP221, Demonstration planned for July '99
- JAPAN????

Corporate Internal Developments EPISTLE —

- Foster Wheeler
 - *“FLAIR” FW Lifecycle Asset Information Architecture in 1997.
Now developing an asset lifecycle database (ALD)*
 - *Support of Synergy*
- Amec
 - Corporate engineering repository development.....
- Shell
 - Creation of Asset Information Management (AIM) group
- Bechtel
- UMOE
 - Developing Data warehouse capability using ICS Products for use on Projects late 1999 - POSC/Caesar data model (E)
- MERCK
 - Prototyping the use of AP227

IT Vendor Developments

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- CADCentre
- CEA
- IBM/Dassault
- Intergraph
- I+C=S
- Jacobus/Bentley
- MatrixOne
- PrismTech
- Oracle SYNERGY Project
 - PRISMTECH, Chevron, Foster Wheeler, (Statoil)
- Quillion
- Shell Services International - Kalido

R&D Projects

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- GDT project (\$)
 - Application to exchange data between companies on STEP AP221 Basis using Generic data Templates
- I&C/2 Project
 - Application to exchange Functional Control Logic Diagram between contractors/plant owners and DCS vendor / suppliers. Demonstration planned for Nov 99.
- PIPES/2 Project
 - Catalogue for Piping data on STEP AP221 basis. Demonstration planned for Q-1 '2000

