

Agenda with Minutes

Technical Advisory Board

Thu, 04 June 2015 13:30:00 +01:00 (CET)

1 Participants

Name	Role	Present
Robin Benjamins	Chair	X
Kari Anne Haaland Thorsen	Vice-chair, SIG Subsurface	
Ravi Grampurohit	Instrumentation and Control	
Manoj Dharwadkar	Geometry	
Frode Myren	IT Architecture	
Markus Stumptner	O&M	
Darijus Strasunskas	MMT	X
Avin Mathew	MIMOSA	X
Mark Palmer	FIATECH	
David Leal		X
Ian Glendinning		
Magne Valen-Sendstand		
Andrew Prosser		X
Onno Paap		X
Victor Agroskin		X
Keith Willshaw		X
Nils Sandsmark	Observer	X
Trinh Nguyen	Secretary	X

2 Minutes

2.1 Approval of agenda

Approved!

2.2 Approval of minutes

Approved!

2.3 Review of Actions

Action (1 2015-03-05): new chair for instrument SIG [Nils].

The Instrument SIG chair has not been filled yet.

2.4 Proposal for new ISO 15926

- a. Part 13: Integrated lifecycle asset planning

Reason: Planning data needs to be integrated.

Goal: transfer of planning data is no longer an issue.

Status: The ILAP initiative came from oil companies (Statoil, ConocoPhillips, and Eni Norge). The project started in the beginning of 2014. Software systems involved in the ILAP project include Primavera, SAP, Safran, MS Project. The ILAP project provides an ontology for planning as an extension of ISO 15926 and an XML schema for data exchange. The schema is a view on ISO 15926 planning ontology. The homepage of the ILAP project is ilap.org.

Plan: having committee draft available in June.

- b. Part 12: Life cycle integration ontology

Part 12 provides an alternative representation of Part 2. The main difference between Part 12 and Part 2 is that all classes of relationships in Part 2 are represented by properties in Part 12. Classes of relationships in Part 2 do not have name, thus it is required to produce names for the corresponding properties in Part 12.

Part 12 uses OWL (Web Ontology Language), a W3C recommendation to represent the ISO 15926 ontology.

The benefits of Part 12 include: ontology can be edited using tools such as Topbraid Composer, Protégé; attract more users from Semantic Web community; querying the ontology is much more faster and easier.

Part 12 can be found here:

<https://www.posccaesar.org/browser/PCAmembersArea/standards/15926/012%20WD>

- c. Part 6: Methodology for the development and validation of reference data - Edition 2

Part 6 is an extension to Part 4 to deal with metadata. It has classes to represent status, submitter, etc. It is also an extension to SKOS.

Part 6 is represented in OWL. Part 6 – Edition 2 adds an OWL representation in annex in addition to Edition 1.

Part 6 can be found here:

<https://www.posccaesar.org/browser/PCAmembersArea/standards/15926/006%20TS/Proposed%20ed2>

2.5 Migration to Part 12 & RDL Classification

Reason: The benefits of having OWL representation for the RDL are mentioned in Sect. 2.4.

Status: The PCA RDL is currently divided into sub components including PCA RDL Core, UoM, Standard, Standard Profile, Project, Research Project, Part 7, and Part 3. These sub components are extracted from the PCA RDL and residing in different files.

So far only the PCA RDL Core has been migrated to Part 12.

Plan: UoM is under review. Once UoM is approved by ISO, it will be also migrated to PCA RDL Core according to Part 12.

2.6 SVRDL and SVRDL namespace

There is a difference in namespace between PCA and what is desired to be in SVRDL. Thus, the MRAIL team requests for a change in namespace to align with JORD specs.

The use of namespace '<http://svrdl.community.data.posccaesar.org/rdl/>' for use in the svrdl endpoint is granted.

For what concerns SVRDL versioning, PCA can offer its current solution which consists of Development, Staging, and Production.

Action (2 2015-06-04): look into the report from Julian [Robin].

2.7 Report from MMT

A subset based on the EDRC Project UC2 is organized as Batch 4. Deadline for voting Batch 4 is June 15th.

MMT report can be found here: https://www.posccaesar.org/svn/pub/SIG/TAB/reports/2015-06-04/MMT_20150604.pdf

The MMT meeting minutes can be found here:

<https://www.posccaesar.org/wiki/SigMmtMom280515>

List of MMT members:

<https://www.posccaesar.org/wiki/SigMmt/SigMmtMembers>

2.8 Report from other SIGs

2.9 Status on the RDL improvement

2.10 Agenda for next month

1. Approval of agenda
2. Approval of minutes
3. Review of Actions
4. SVRDL and SVRDL namespace
 - a. Status & plan
 - b. Version management
5. Report from MMT
6. Report from other SIGs
7. Status on the RDL improvement
8. Agenda for next month
9. A.O.B

2.11 A.O.B

- Send meeting invitation to Andrew Prosser, Onno Paap, Victor Agroskin, and Keith Willshaw.
- Meeting invitation June 26th – 14-15:00

3 Actions

Action (1 2015-03-05): new chair for instrument SIG [Nils].

Action (2 2015-06-04): look into the report from Julian [Robin].

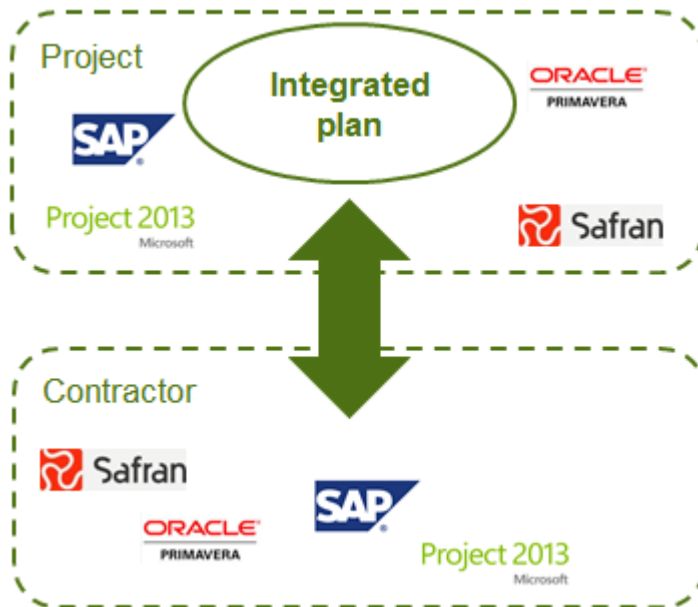
Integrated Lifecycle Asset Planning (ILAP)

PCA TAB meeting

4 June 2015

Nils Sandsmark

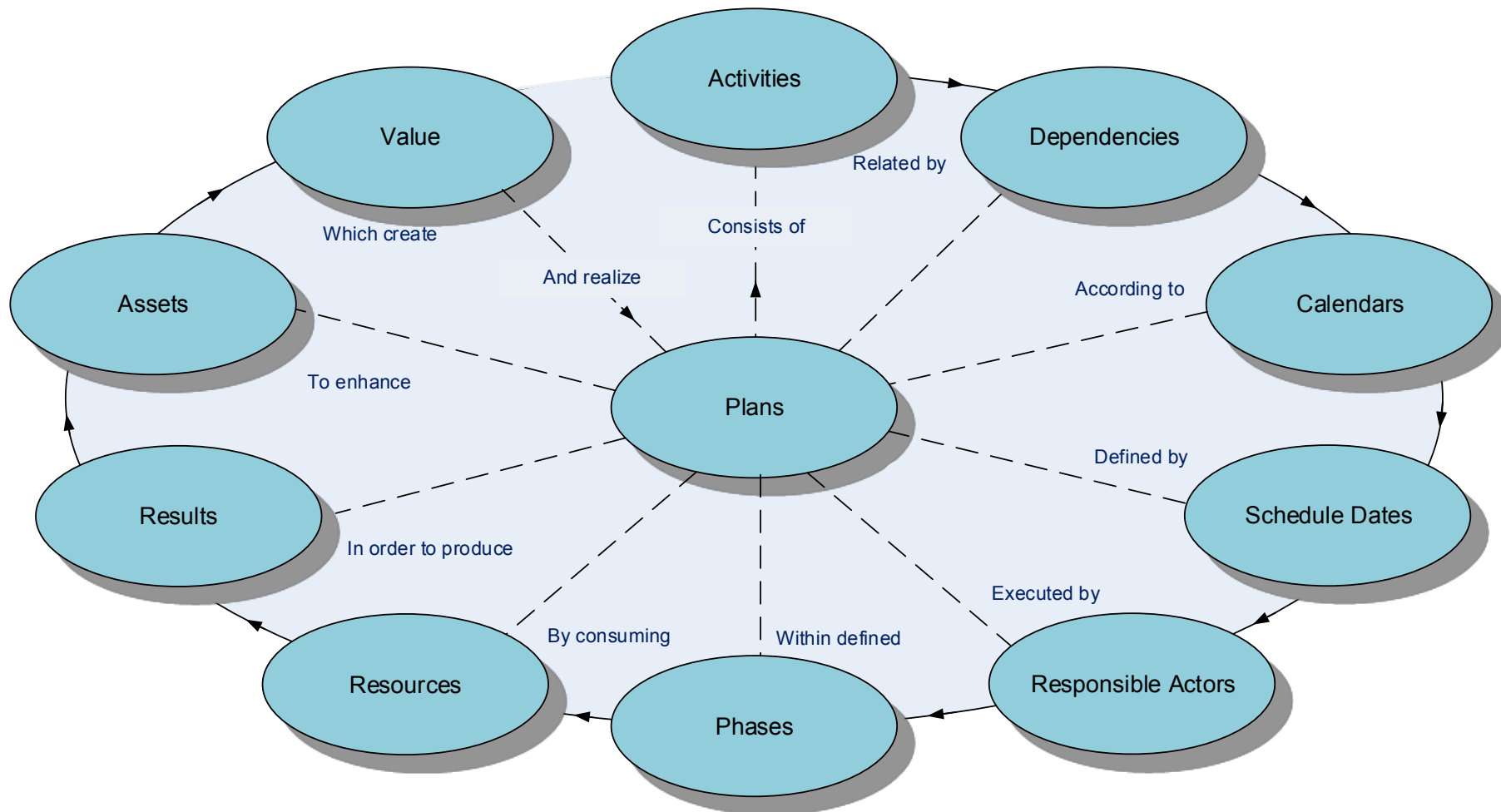
Integrated Lifecycle Asset Planning (ILAP)



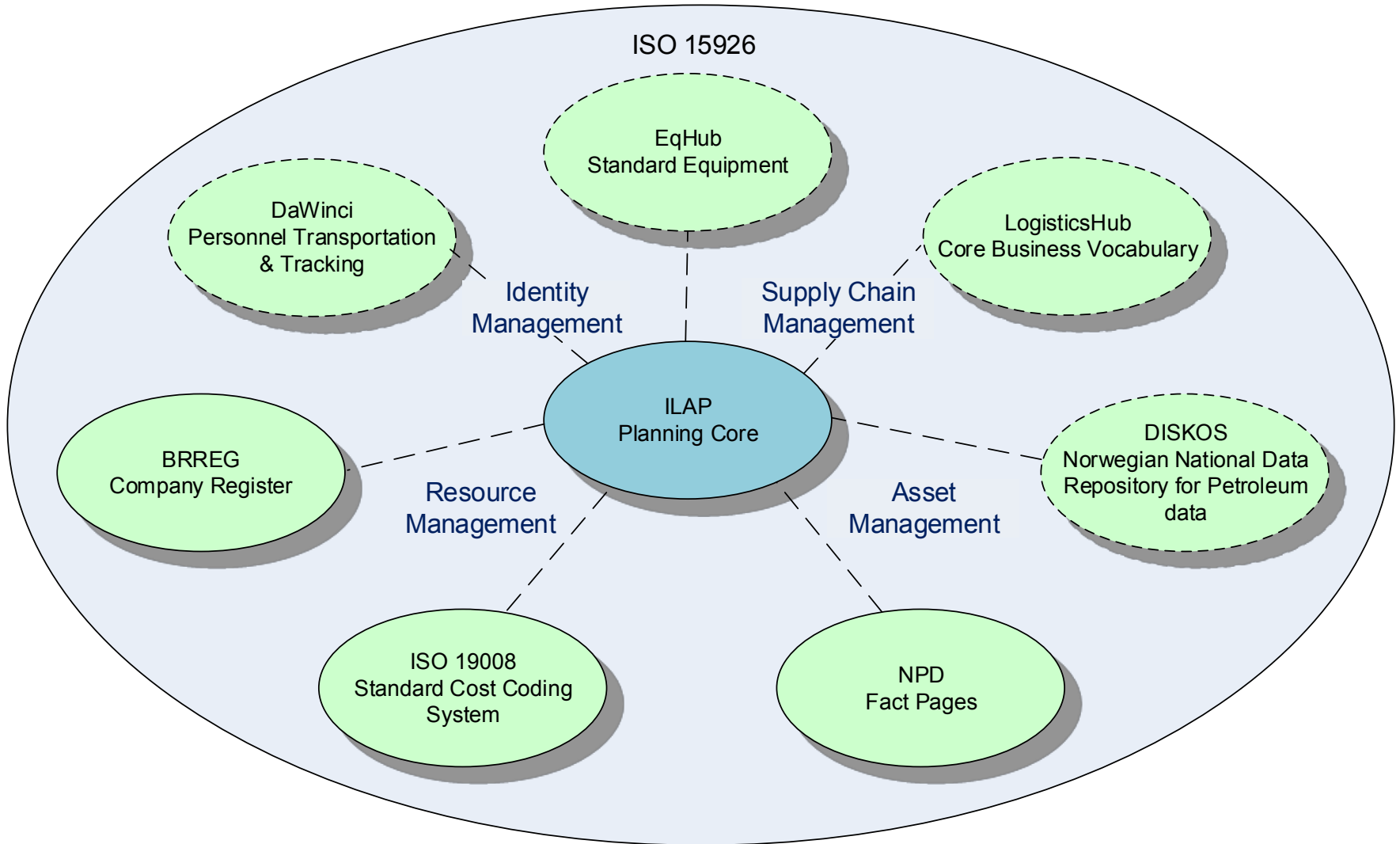
Planning data needs to be integrated!

- Improved Project Control and operational risk management with integrated plans
- Project: Integrated Lifecycle Asset Planning
- Goal: transfer of planning data is no longer an issue
- Customers are crucial to achieve this

ILAP Planning Core ontology



ILAP External Reference Data



Planners in the front seat

Four owners/operators have co-operated since 2012



Status:

- Roadmap for future ILAP standards, IT infrastructure and adapter developed
- Proof of concept adapters developed and tested for SAP, Primavera and Safran developed and tested
- Main focus now is first version functional adapter for SAP, Primavera and Safran
- The ISO process is according to plan, “Committee draft” will be filed in June as planned



Importance of “Native OWL”

David Leal, CAESAR Systems Limited

What does “Native OWL” mean

- It means expressing the requirements of ISO 15926 using the capabilities of OWL – i.e. “deep embedding”.
 - **Shallow embedding:** The act of representing one logic or language with another by providing a syntactic translation.
 - **Deep embedding:** The act of representing one language, typically a logic or programming language, with another by modelling expressions in the former as data in the latter.
- OWL has its own approach to specialisation and classification, and to relationships.
 - Deep embedding uses them
 - Shallow embedding ignores them, and instead provides a representation using OWL syntax but not OWL semantics.
- ISO 15926-8 is shallow embedding. ISO 15926-12 is deep embedding.
 - Both are valid approaches, with different strengths and weaknesses.



Advantages and disadvantages of “Native OWL”

Advantages:

- **Commercial Off The Shelf Tools work!**
 - You do not have to write your own.
 - Protégé (open source) and TopBraid (proprietary) can be used

Disadvantages:

- There are some requirements for which work-arounds must be found in “Native OWL”
 - None of these requirements occur within the current Part 4.
 - They are only a minor part of the current PCA-RDL.
 - Also
 - OWL is being developed and future versions may address more ISO 15926 requirements.
 - There is active work on “provenance” within W3C which may address some ISO 15926 requirements



Advantages and disadvantages of “Part 8 OWL”

Advantages:

- This is a stable RDF representation of data that is totally under control of ISO TC 184/SC 4.
 - Software applications can be written for this representation
- This representation works well with the template methodology.

Disadvantages:

- **Commercial Off The Shelf Tools do not work!**
 - You have to write your own.
 - Protégé (open source) and TopBraid (proprietary) do not display the OWL in a useful way

“Native OWL” for the ISO 15926 Generic Classes

- The ISO 15926 Generic Classes – or upper ontology – is defined in Part 2
 - This is a shallow embedding of ISO 15926 in EXPRESS. Therefore it is difficult to implement using standard EXPRESS tools.
- A representation of the ISO 15926 Generic Classes in OWL, with deep embedding, will make them easy to implement using standard OWL tools.
 - **Current commercial implementations of ISO 15926 are creating their own deep embeddings. It is urgently necessary to standardise this implementation approach.**
- The ISO 15926 Generic Classes are the root classes for an ISO 15926 RDL. A “native OWL” representation will enable both to be browsed together using standard OWL tools.
 - At present we have different representations for the Generic Classes (EXPRESS) and for the RDL (spreadsheets). This is because of the limitations of the EXPRESS technology.
 - The use of OWL will enable a single representation for both.

“Native OWL” for an ISO 15926 RDL

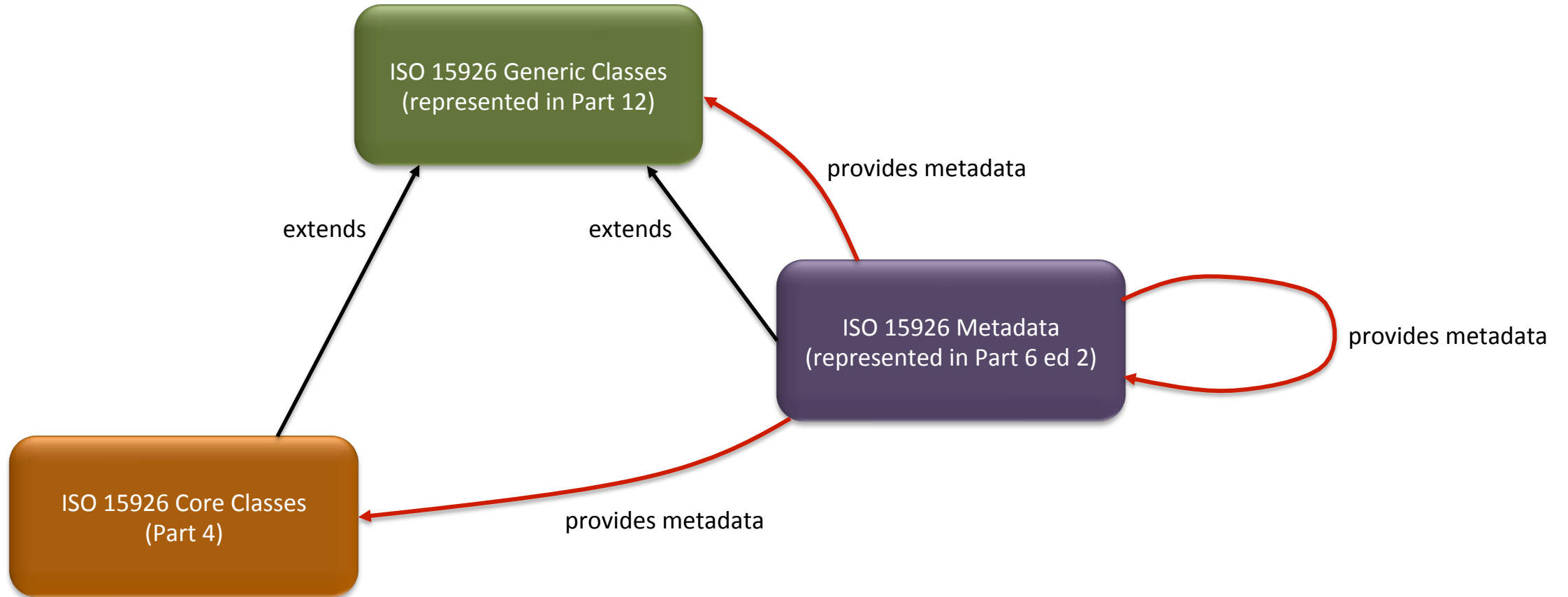
- Usually the development of an ISO 15926 RDL does not require a deep understanding of what is special about ISO 15926 and its 4D approach.
 - Instead it is sufficient to create a good OWL ontology.
- The use of Native OWL tools such as Protégé and TopBraid make developing a good OWL ontology easier.
 - These tools provide good browsing and editing capabilities
- An ISO 15926 RDL relies upon subclasses of Class of Individual and Class of Class of Individual and upon classifications of classes.
 - In early version of OWL this was difficult, but this is now supported within OWL 2 by “punning”.
- Representations of an ISO 15926 RDL as spreadsheets, and as “Part 8 OWL”, can be generated from “Native OWL”



“Native OWL” for definitions, status and history

- RDF is documented in RDF, and OWL is documented in OWL
- An ISO 15926 vocabulary is required to document the ISO 15926 generic classes and an ISO 15926 RDL.
 - The requirements for this vocabulary are defined in Part 6.
 - This vocabulary will extend the capabilities of RDF, OWL, Dublin Core and SKOS to meet these requirements.

Single approach for ISO 15926 parts



Extensible for new industry developments

