

# ERIK MOLIN / OPERATIONS SEIIA



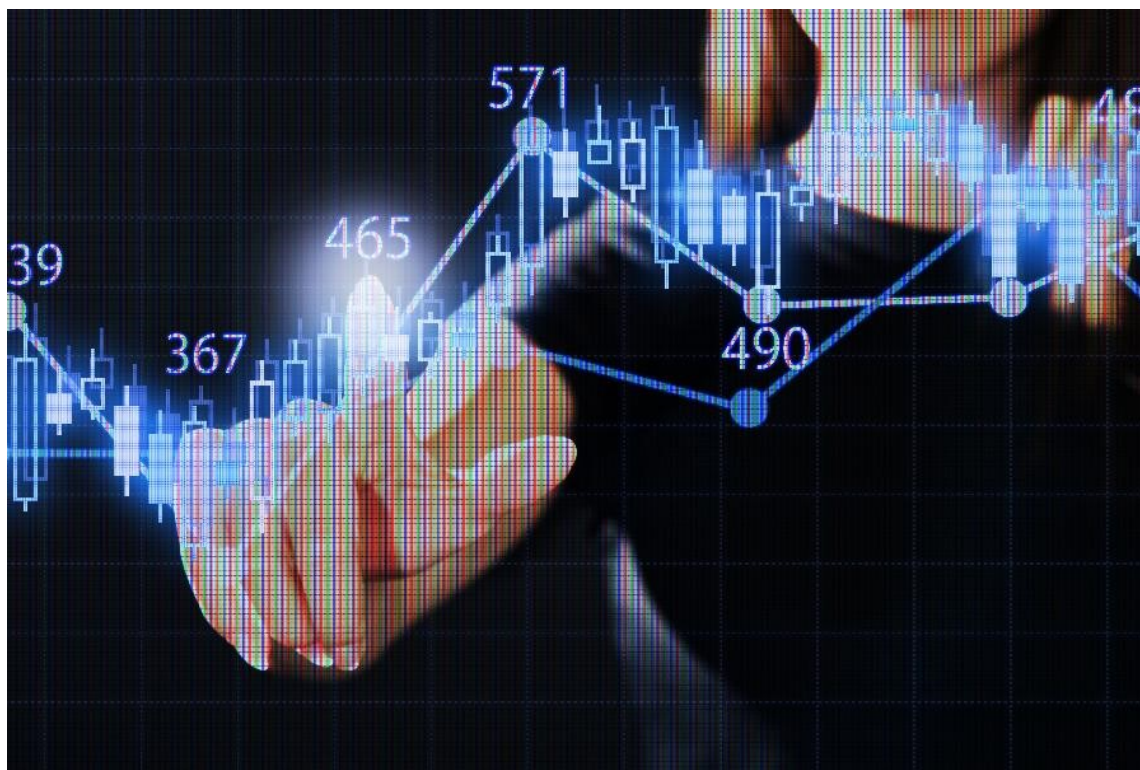


**SWEDISH INDUSTRIAL INTEROPERABILITY  
ASSOCIATION - SEIIA**

## DIGITAL ASSET MANAGEMENT

A major manufacturing operator conducted internal studies and found that typical design, construction, operation and maintenance engineers spend 40 to 60 percent of their time looking for information and validating it.

# WHAT IS SEIIA?



A non profit association for

- increase understanding of interoperability in industry information handover
- adopting international standards and best practice
- participate in international standardization and return Swedish know-how to global development

**SEIIA.SE** Swedish Industrial  
Interoperability Association





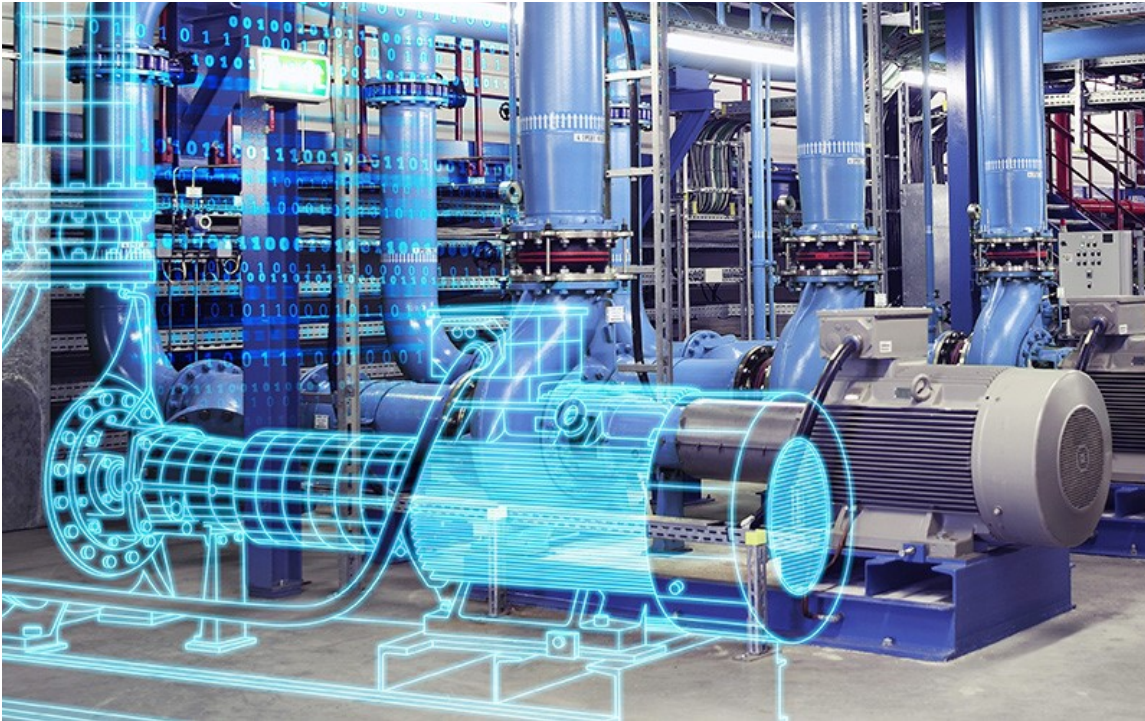
INTERNATIONAL NETWORK AND PARTNERS

# BOARD



- **The Interim Board:**
- **Johnny Sundström / Stora Enso / Chairman.**
- Niklas Noren / Preem Göteborg.
- Mats Larsson / Iggesund – Holmen.
- Conny Olsson / Stockholm Vatten.
- Andres Dingvall Rauchwerger / WSP.
- Bo Ottosson/ Siemens.
- Björn Jonsson / ABB.
- Rolf Sandberg / Metsä Husum Mill.
- Mattias O’Nils / Mid Sweden University.
- Rogier Jongeling / Plan B

# FUNDAMENTAL IN SEIIA



## Not invent any new wheels

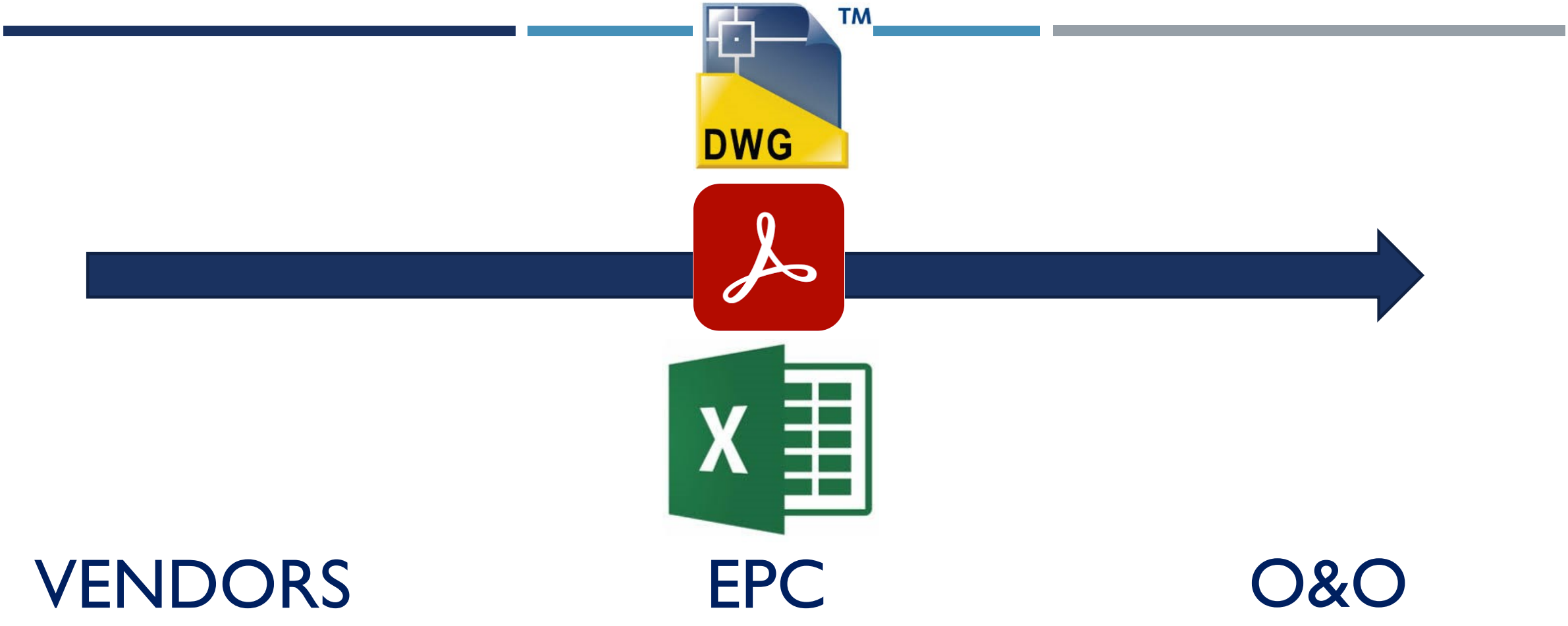
There is lot of industrial standards and ISO/IEC standards that we could adopt and participate in further development instead of develop new.

## Act Global

The Interoperability issue is not a local, national questions it's a global issue.

## Open not closed!

Non proprietary systems and strategies



HANDOVER





HANDOVER

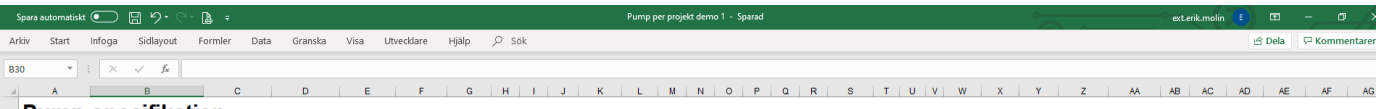
Capital Facilities Information Handover Specification



**RDL Master Objects**  
**Document Version** V1.4  
**Date Issued** 17-Oct-19  
**Date updated** N/A

CFIHOS unique id	ISO15926-4 Unique name	ISO15926-4 Source	ISO15926-4 superclass	ISO 15926-2 entity	created date	modified date	terminated date
CFIHOS-00000001	SITE			A geographical surface that can be identified on a map.			
CFIHOS-00000002	PROCESS UNIT			A decomposition of the "high level" Facility function into more granular "sub-functions".			
CFIHOS-00000003	AREA			A geographical surface occupied by a Plant.			
CFIHOS-00000004	COMMISSIONING UNIT			A grouping of tags (if the commissioning unit is at the lowest level in the structure), or sub-commissioning units, by the commissioning discipline.			
CFIHOS-00000006	MAINTENANCE UNIT			A grouping of maintenance system by the maintenance discipline. This grouping allows one to perform maintenance activities.			
CFIHOS-00000007	MAINTENANCE SYSTEM			A grouping of tags that can be maintained at the same time.			
CFIHOS-00000008	MODEL PART			A type of equipment that is manufactured by a manufacturer.			
CFIHOS-00000009	COMPANY			A legal entity engaged in business as a proprietorship, partnership, corporation, or other form.			
CFIHOS-00000010	CORROSION LOOP			A grouping of tags with similar operating conditions, e.g. pipe, equipment, .. (i.e., made of similar materials of construction, sharing similar corrosion/degradation rate).			
CFIHOS-00000011	CORROSION LOOP TYPE			A classification of corrosion loops.			
CFIHOS-00000012	EQUIPMENT			A physical device designed to perform a function.			
CFIHOS-00000013	EQUIPMENT PROPERTY			A characteristic, or property, that an equipment has.			
CFIHOS-00000014	MODEL PART PROPERTY			A characteristic, or property, than an equipment model has.			
CFIHOS-00000015	TAG PROPERTY			A characteristic, or property, that a tag has.			
CFIHOS-00000016	TAG CLASS PROPERTY			A characteristic, or property, that a tag class has.			
CFIHOS-00000017	EQUIPMENT CLASS PROPERTY			A characteristic, or property, that an equipment class has.			
CFIHOS-00000019	PROPERTY PICKLIST			A set of possible values that can be assigned to a property.			
CFIHOS-00000020	PROPERTY PICKLIST VALUE			A predefined value that can be assigned to a property, in the context of a property picklist.			
CFIHOS-00000021	DISCIPLINE			A branch of knowledge of expertise which is responsible for the content of the deliverable			
CFIHOS-00000022	DOCUMENT MASTER			A placeholder that allows a project to identify a particular information content to be created or updated.			
CFIHOS-00000023	ADDITIONAL FILE			A file that makes up a particular document revision..			
CFIHOS-00000024	TRANSMITTAL			An exchange of information between two companies.			
CFIHOS-00000026	CONSTRUCTION ASSEMBLY			A grouping of tags intended to be assembled and installed as a whole.			
CFIHOS-00000027	DISCIPLINE DOCUMENT TYPE			An identification of what type of document is required for what discipline, and what are their delivery requirements.			
CFIHOS-00000028	TAG			A decomposition of a "high level" Process Unit function into more granular "sub functions"			
CFIHOS-00000029	PROPERTY			A type of feature that is used to distinguish and describe tags, equipment, models or their class.			
CFIHOS-00000030	PROJECT			A temporary endeavour undertaken to create an asset or a service.			
CFIHOS-00000031	PLANT			An assembly of equipment that perform a physical or chemical process, including production, transportation and storage.			
CFIHOS-00000032	DOCUMENT TYPE			A classification of documents.			
CFIHOS-00000033	EQUIPMENT CLASS			A classification of equipment and equipment models, according to its physical assembly of component(s).			
CFIHOS-00000034	TAG CLASS			A classification of tags according to the function they provide.			
CFIHOS-00000035	DOCUMENT REVISION			A user-readable set of data structured in order to be printed and stored as a whole (includes drawings).			
CFIHOS-00000036	PURCHASE ORDER			A commercial document used to request a third party to supply goods or services in return for payment.			
CFIHOS-00000037	LEAF NODE COMMISSIONING UNIT			A commissioning unit that is at the lowest level in the hierarchical structure of commissioning units.			
CFIHOS-00000038	TAG PHYSICAL CONNECTION			A physical connection between tags.			
CFIHOS-00000039	ISO COUNTRY			A country, as recognized by ISO in its 3166-1 standard.			
CFIHOS-00000040	ENGINEERING STATUS			A phase of the engineering activities			
CFIHOS-00000041	SAFETY CRITICAL ITEM GROUP			A classification of tags according to safety requirements.			
CFIHOS-00000042	ISO CURRENCY			A currency, as recognized by the ISO organization in its 4217 standard			
CFIHOS-00000043	DOCUMENT STATUS			A status that a document, revision can have during its lifecycle.			
CFIHOS-00000044	ISO LANGUAGE			A language, as recognized by ISO in its 639-1 standard.			

# LCDM PHASE 2



In principle, we could transfer data from our tools more or less automatically to the desired standard specification.

**SCA**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Fält enligt "Objektlista"															
Objektstyp			Beteckning	Funktion + Komplettering text						Typbeteckning				Fabrikat	
			<b>Grunddata</b>												
OBJECTTYPE	DUSID	TREEPOSITION	POSID	A1	I1	I2	GROUPS	NOTES	RUNTIME	A2	A3	A4	A5	A6	B1
Objekttyp = Bladnamn	Dusidentitel	Nivå	Pos.Id	Benämning	Information	Grupp	Anteckningar			Typbeteckning	Till.nr / Serie nr.	Version / Asmodell	Fabrikat	Leverantör (befintlig)	Monter...
CFHCS-1000024			CFHCS-1000018	CFHCS-1000017						CFHCS-1000053	CFHCS-1000083		CFHCS-1000014	CFHCS-1000014	
<a href="http://data.3526.org/utloss/1000024">http://data.3526.org/utloss/1000024</a>			<a href="http://data.3526.org/utloss/1000018">http://data.3526.org/utloss/1000018</a>	<a href="http://data.3526.org/utloss/1000017">http://data.3526.org/utloss/1000017</a>						<a href="http://data.3526.org/utloss/1000053">http://data.3526.org/utloss/1000053</a>	<a href="http://data.3526.org/utloss/1000083">http://data.3526.org/utloss/1000083</a>				

A3 : X ✓ fx electronic frequency converter

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Funktionella strukturer och objekt				Komponent										
2	Tag Class	Tag class CFIHOS unique id / equipment class CFIHOS	tag property name	tag property CFIHOS unique id	equipment property name	equipment property CFIHOS unique id									
3	electronic frequency	IHOS-30000345	explosion protection temperature class	CFIHOS-40000112	ATEX explosive atmosphere	CFIHOS-40000010									
4			explosion protection zone	CFIHOS-40000113	ATEX group	CFIHOS-40000011									
5			operating voltage	CFIHOS-40000603	explosion protection concept	CFIHOS-40000108									
6			rated frequency	CFIHOS-40000522	explosion protection examination cer	CFIHOS-40000109									
7			rated output power	CFIHOS-40000523	explosion protection gas group	CFIHOS-40000110									
8			rated voltage	CFIHOS-40000528	explosion protection material group	CFIHOS-40000612									
9					explosion protection notified body	CFIHOS-40000111									
10					explosion protection temperature cla	CFIHOS-40000112									
11					explosion protection zone	CFIHOS-40000113									
12					ingress protection	CFIHOS-40000173									
13					rated frequency	CFIHOS-40000522									
14					rated output apparent power	CFIHOS-40000325									
15					rated output power	CFIHOS-40000523									
16					rated power factor (lagging)	CFIHOS-40000329									
17					rated voltage	CFIHOS-40000528									
18															
19															
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# NIC INITIATIVE

## NORDIC INTEROPERABILITY COOPERATION

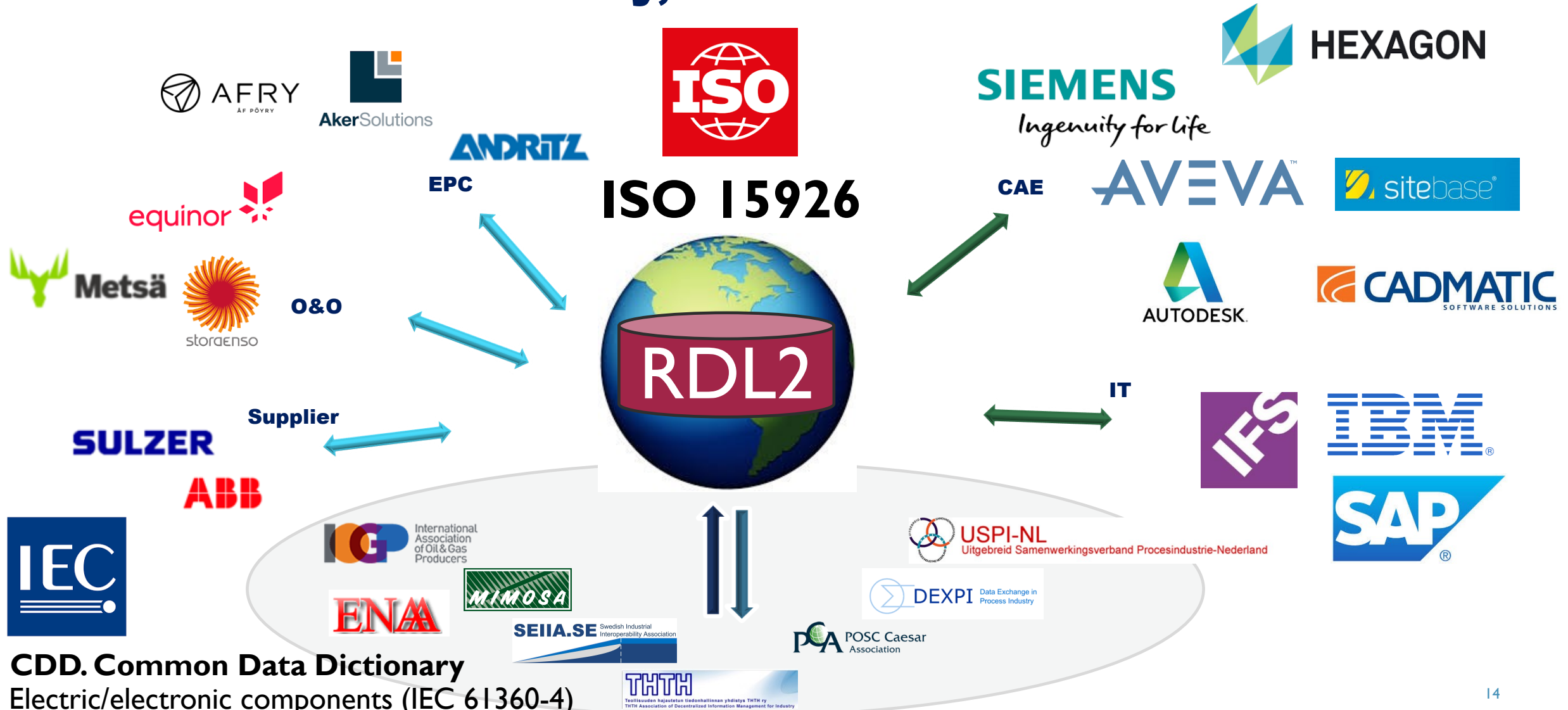


**TRUST**

**COOPERATION**

**UNPRETENTIOUS**

# Asset Intensive Industry, Global Standards



**CDD. Common Data Dictionary**  
 Electric/electronic components (IEC 61360-4)  
 Process automation (IEC 61987 series)  
 Low voltage switchgear (IEC 62683 series)

Classification of objects and codes for classes, ISO/IEC 81346

SUPPORT SEIIA AND BECOME A MEMBER

[HTTPS://SEIIA.SE/MEDLEMMAR](https://seia.se/medlemmar)

**SEIIA.SE** Swedish Industrial  
Interoperability Association

The logo graphic consists of a white, curved shape on the left that tapers to a point, transitioning into a blue shape on the right. A vertical dashed line separates the two shapes. The blue shape has a horizontal bar extending to the right, which is also blue.



THANKS

ERIK.MOLIN@SEIIA.SE





# AutoPID

## Projektägare



## Projektpartner



AFRY Group Sweden AB  
EUROCON SITEBASE AB  
Holmen Paper Aktiebolag  
SSG STANDARD SOLUTIONS GROUP  
AB  
STORA ENSO FORS AKTIEB  
SYMETRI AB

**AutoPID** The idea is to investigate how Swedish industry can streamline and future-proof its processes of plant information for structured information exchange. Huge amounts of existing P&ID formats are today locked in older graphic formats and not manageable in a facility's information lifecycle or to create its digital twin. The aim is to do this with DEXPI (Data Exchange in the Process Industry) and with AI, to translate from historical formats to standardized and interoperable format



**HOLMEN**

**VINNOVA**



# AutoTwin

## Projektägare



**Projektpartners** Boliden Mineral AB  
Calejo Industrial Intelligence AB  
OPTIMATION AB  
Uppsala universitet



**AutoTwin-PRE** will investigate the conditions and roadmap for a larger research and innovation project that envisions a framework enabling the automatic generation and update of Digital Twins with a high level of autonomy and contextual intelligence for complex and large-scale process industrial systems. A mining production environment is often characterized by many interacting and interdependent unit processes, and thus is an ideal starting point of investigation.

VINNOVA

