



LOTAR – Parts 120, 121, 125, etc (Rick Zuray – AIA/Jean-Yves Delaunay – ASD)

Potential areas of future collaboration – functional requirements for next 5 years

- MBSE (Peter Pan – AIA) including MoSSEC (Adrian Murton)
- Geometric Dimensioning and Tolerancing (Jean-Yves Delaunay – ASD)
- New STEP capabilities – target requirements (Jean-Yves Delaunay – ASD)
- XML strategy for transactions (Evelyn Thompson – AIA/Samy Scemama – ASD)
- Visualisation – 14306, PRC, 3D-PDF, X3D (Jean Brange – Global view + ASD)
- Linked data eg OSLC – (Nicolas Figay - ASD)

Other tasks – please advise in advance

- Adoption strategies – vendor, business
- Status of existing Implementer Forums: CAX-IF, PDM-IF, ...(Jean-Yves – ASD)
- Requirements for Implementer Forums (All)

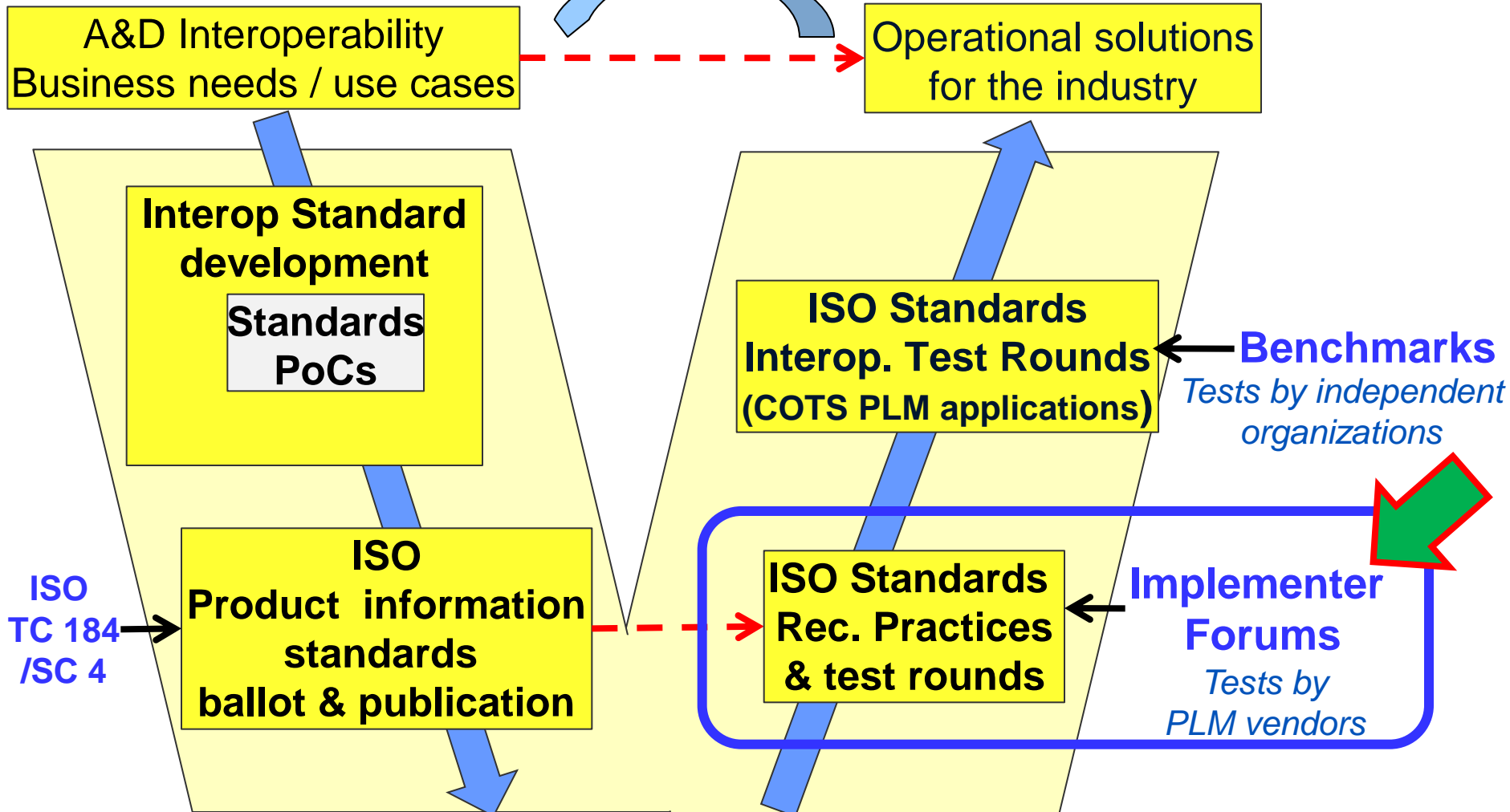


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- Status of support of Impl. Forums by standardization associations, AIA and ASD
- Summary – next actions

The Implementer Forums in the development cycle of interoperability capabilities based on open standards

Lessons learnt, new needs



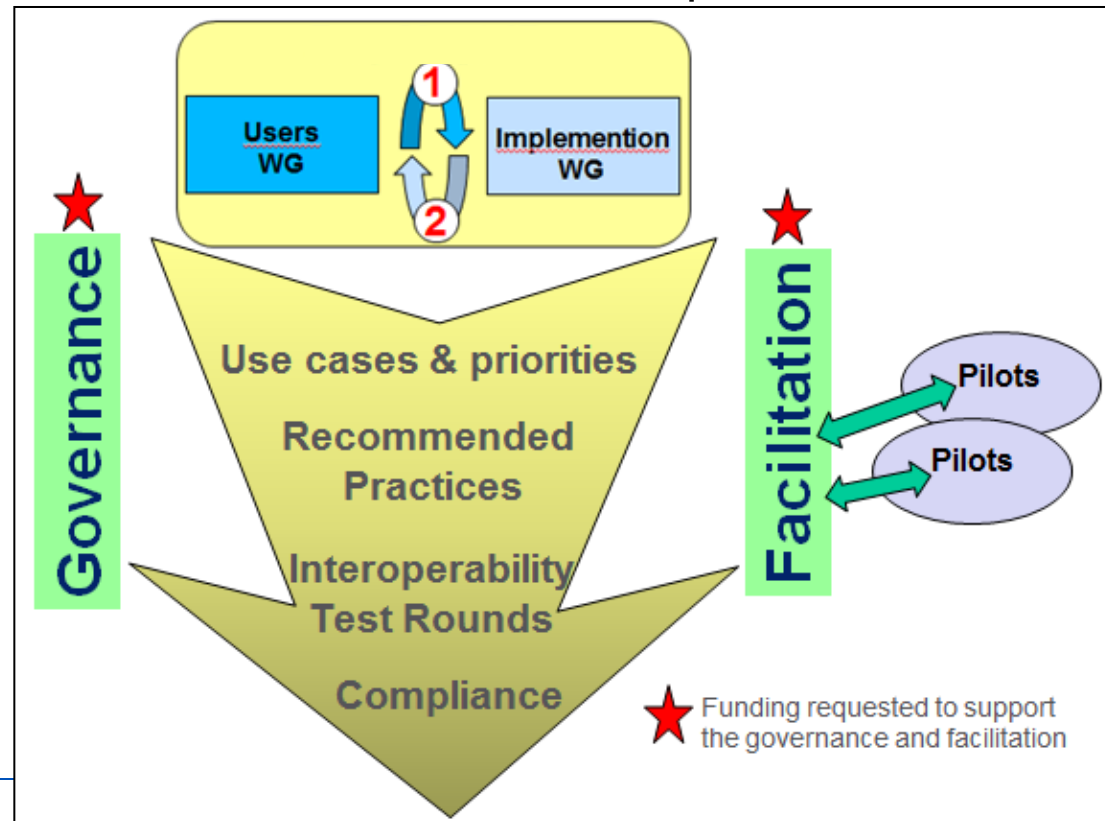


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Remind of the objective and business value of an Implementer Forum

- **OBJECTIVE**: Cooperation platform between industries and COTS PLM vendors / integrators to speed up the development of COTS interoperable solutions, and ensure that user's business needs are satisfied.
- **BUSINESS VALUE**: Secure the investment in standard development by ensuring coordination between manufacturers and COTS PLM solutions providers

- User requirements drive implementation & testing
- Interoperable COTS PLM solutions
- Consensus based solutions



Overview of the WGs of the CAX-IF and of the PDM-IF (xDM-IF as the target)

CAX IF

PDES Inc, ProSTEP iVIP
and AFNeT

Kinematics

Composite

Mechanical

ALM

Electrical
(2017)

CAM

CAE (2017)

Assembly
Structure.

PDM
/CM

MB Req. (N1)
Management

MBSE.

Simulation
Data Mngt.

Modeling
& Simul.

PDES Inc ?

Maintenar

N1: Text based and model based

Functionality covered / tested
by the Implementer Forum
as a specific Working Group
and associated Airbus priority:

Priority 1

Priority 2

covered

covered

Planned
Extension

Planned
Extension

Related ISO STEP standards (AP = Application Protocols)

AP242 e1

IS in 2014

IS = International Standard

AP242 e2

In dev. planned IS in 2018

AP209 e2

IS in 2014

AP239 e3

In dev. planned IS in 2018

AP233 e2

in prep.: planned IS in 2018 (TBC)

Mossec e1

in prep.: planned IS in 2019 (TBC)

Draft roadmap of Implementer Forums of interest for LOTAR project



Draft
Sept. 2016

	Implementer Forums (IF)	2016				2017				2018				2019				2020			
	CAx IF																				
P1XX	Mechanical (AP242 ed1 and +)				ed1 IS				ed1 IS				ed2 DIS			ed2 IS			ed2 IS		
	Machining Feature (AP242 ed1 and +)								ed1 IS				ed2 DIS			ed2 IS			ed2 IS		
	3D Kinematics (AP242 ed1 and +)								ed1 IS				ed2 DIS			ed2 IS			ed2 IS		
P3XX	3D Composite design (STEP AP 242)								ed1 IS				ed2 DIS			ed2 IS			ed2 IS		
	3D additive manuf. (AP242 ed2 and +)								(LOTAR pilot)				ed2 DIS			ed2 IS			ed2 IS		
P4XX	Electrical Harness (AP242 ed2 and +)				(LOTAR pilot)				(LOTAR pilot)				ed2 DIS			ed2 IS			ed2 IS		
P6XX	Engin. Analysis & Simul. (AP209 ed1 & +)				(LOTAR pilot)				ed2 IS				ed2 IS			ed2 IS			ed3 IS		
	PDM - xDM IF																				
P2XX	PDM (AP242 ed1and +)				ed1 IS				ed1 IS				ed2 DIS			ed2 IS			ed2 IS		
	PDM (AP239 ed3 and +)												ed3 CD ?			ed3 DIS			ed3 IS		
P610	SDM (AP209 ed2 and +) ?															ed2 IS			ed2 IS		
P5XX	Requirement Mngt. (AP242 e1 and +)								ed1 IS				ed2 DIS			ed2 IS			ed2 IS		
	Requirement Mngt. (AP239 e3 and +)												ed3 CD ?			ed3 DIS			ed3 IS		

Status of support of Implementer Forums by standardization associations, AIA and ASD



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AIA and ASD level of support of PLM Implementers Forums

(Draft to be updated)

					Supporting associations			Priority of interest	
Name	Technical discipline	standard tested	Start	Status	PDES Inc	Prostep iViP	AFNeT	AIA	ASD
CAX IF	Mechanical design	AP242 E1 & +	1999	Run	Y	Y	Y		P1
	Mechanical manuf.	AP238 E2	2016	In prep.	?	?	Y		TBD
	Composite design	AP242 E2	2016	Run	Y	No	Y		P1
	3D printing design	AP242 E2	2017	In prep.	?	No	Y		P1
	Kinematics	AP242 E1 & +	2017?	Target	?	Y	Y		P1
	Elec. & wiring Harness	AP242 E2	2017	In prep.	Y	No	Y		P1
	PCB assembly design	AP210 E3	?	5 Y roadmap	?	?	TBD		TBD
	Struct. Analysis	AP209 E2	2017	In prep.	Y	Y	Y		P1
xDM IF	PDM/CM	AP242 E1	2015	Run	Prep.	Yes	Yes		P1
	Simulation Data Mngt	AP209 E2	2018	5 Y roadmap	?		Y		P2
	Req., V&V Mngt	AP242 E1 (N2)	2017	Target	Prep.	No	Yes (N1)		P1
	MBSE								
	Collab. Multi Disc. Sim	MoSSEC V1	2018?	Target	Prep.	?	Y		P2
	ILS (N3)	AP239 E3	2018?	5 Y roadmap	Prep?	?	Prep.		P1?
PDF Forum	3D visualization	PDF E / PDF 3D	2015?						TBD
JT IF	3D visualization	JT	2013?						TBD

Summary – next actions

- Planned organizations of PLM Implementer Forums per WGs,
 - focused on technical discipline:
 - CAx** : Mechanical, Electrical, Composite, ALM, etc, CAE, etc
 - xDM**: PDM, SDM, R,V&V Mngt., MBSE, etc
 - covering all the activities of information interoperability:
 - exchange, sharing, linked data, LT archiving, etc
 - Confirmation of support of AIA and ASD in the activities:
 - of the CAx Implementer Forums: coordination set up
 - and of the xDM Implementer Forums: in progress
 - Close coordination between AIA and ASD for the development of new standards and for the participation in Implementer Forums
 - : to be reviewed regularly (1 time / year?)
- Link with A&D PLM Action Group?





The logo for E-Business SSG (E-Business Standardization Steering Group) is shown, consisting of the text 'E-Business' and 'SSG' in blue, with a blue arrow pointing upwards and to the right.

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Use case 2 overview, proposed to the PDM-IF

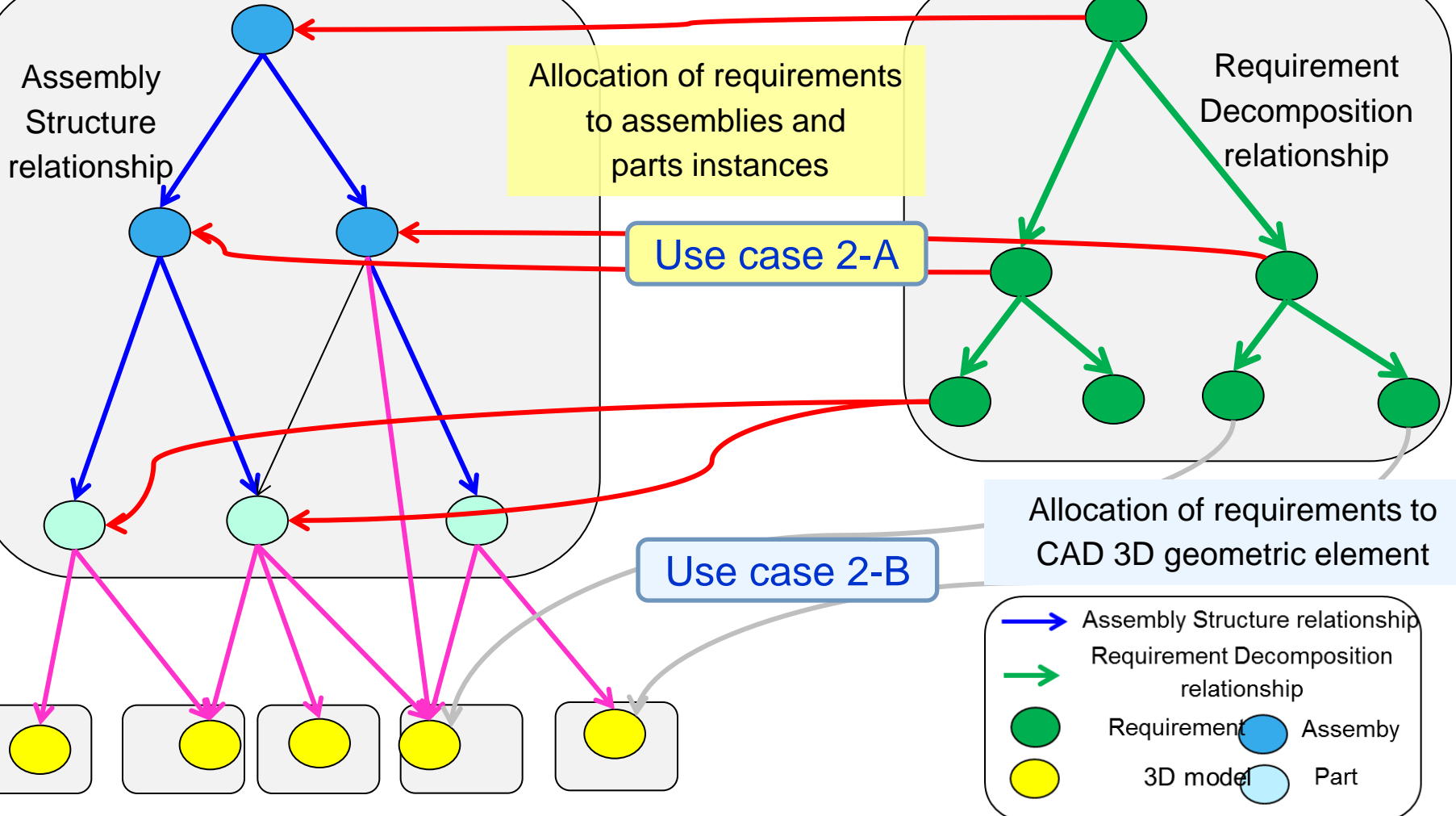
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PDM-IF

PDM “As designed” Product Structure

Future RM-IF

Requirement breakdown





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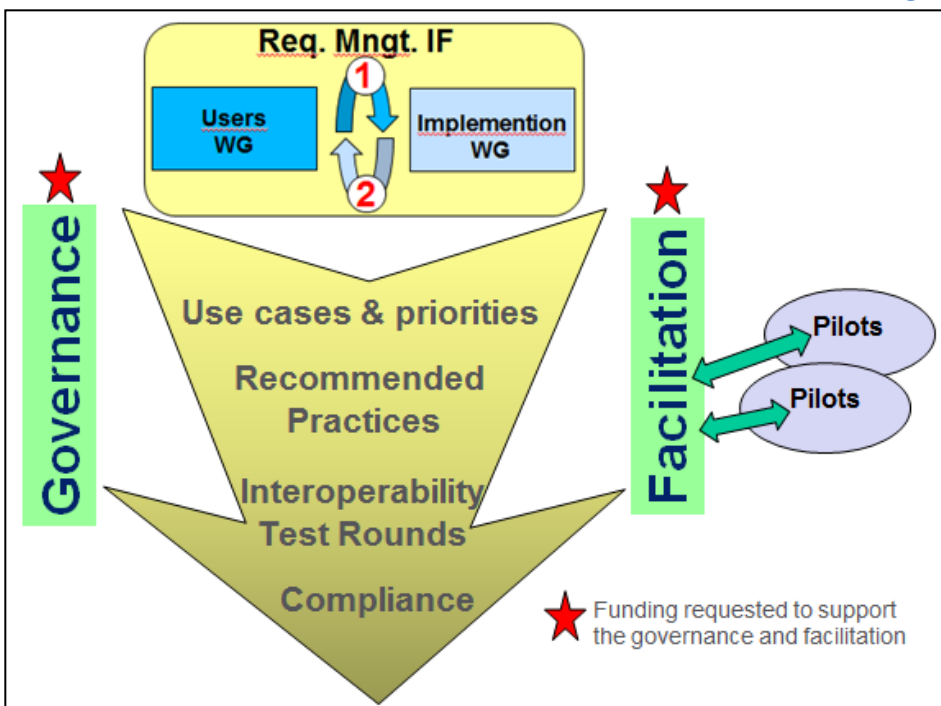
Preparation of the Requirement Management IF based on STEP AP242 ed1 (AP239 ed3) in 2017

• OBECTIVE:

- Cooperation platform between industries and Requirement, V&V Management vendors / integrators to speed up development of COTS solutions, and ensure that user's business needs are satisfied.

• BUSINESS VALUE:

- Secure the investment in standard development by ensuring coordination between manufacturers and requirement management solutions providers



SCOPE of the RM-IF:

Req., V&V Mngt. Information interop.:

- Exchange: *priority of year 1*
- LTA,
- integration/sharing
- Linked data

consistent with ISO STEP
(AP233 / AP242 / AP239)

- Choice of AP242 ed1
BO Model XSD for normative
- Target to move to AP242 ed2 / AP239 ed3 asap