

# Doing the deal of your lifetime – With the Procurement Quality Suite (PQS)



- Webinar rules:
  - The Webinar will start in few minutes
  - You'll be muted throughout the Webinar
  - There's a chat box for you to ask questions at any time during the webinar
  - Please address comments and questions to the user "The REUSE Company" and not to the presenter directly
  - If you have any technical issues please use this chat box, or mail us at: [support@reusecompany.com](mailto:support@reusecompany.com)
  - The Webinar will be recorded. A link to the recording will be sent to you in few days time

# TRC WEBINARS 2018

**Doing the deal of your lifetime –  
With the Procurement Quality Suite  
(PQS)**

Friday, 01 June 2018

## Presenters' profile



**Christer Fröling**



**Elena Gallego**

- Introduction to Procurement Quality Suite - PQS
- Why requirements quality matter in procurement
- What is a complete, consistent and correct set of bidding documents?
- How can the REUSE tools enhance the quality of a bid?
- Demo of some key features in PQS
- Q&A

- Introduction to Procurement Quality Suite - PQS
- Why requirements quality matter in procurement
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- How can the REUSE tools enhance the quality of a bid?
- Demo of some key features in PQS
- Q&A



# The REUSE Company – TRC - Worldwide



- Local partners: France, Germany, Italy, Spain and Japan
- Customers in different countries along United States, Europe and Asia
- TRC Headquarters is based on Madrid (Spain)
- United Kingdom TRC office
- Scandinavian TRC office (Sweden)



# The REUSE Company (TRC)

## Tools and solutions for knowledge Traceability, Reuse and Quality management

Specialized in the application of **Semantic Analysis Technologies** to a wide range of industries (Aerospace, Defense, Automotive, Railway, Energy...)

Focus: System/Software **Reuse, Traceability and Quality**. Integration of tools and technology from **The REUSE Company** facilitates the representation, analysis and exploitation of knowledge and enables a knowledge-centric systems engineering approach.

Mission: promoting system/software and knowledge reuse within any organization, by offering processes, methods, tools and services. Technology fully integrated within the organization production chain.

**Innovative technologies applied to  
Knowledge Reuse**

# Systems Engineering Studio v18.1



## Verification Studio (V&V Studio)

Manages the preparation of verification actions

Manages the realization of verification actions

Manages and improves the quality of all types of work-products

Manages the results of the verification process



## Authoring Tools (RAT)

Assists you in the activity of writing requirements and other natural language text

Performs Correctness and Consistency analysis on the fly

Suggests terminology changes based on a central knowledge base

Fully integrated in your Requirements Management Tool and Modelling Tool



## Knowledge Manager (KM)

Manages terminology and knowledge of your system

Helps you in the creation of patterns

Provides methods for automatic generation of Ontologies

Manages knowledge evolution over time



## Traceability Studio

Manages trace links between all sorts of information

Discovers user-tailored trace links

Monitors and reports trace links in a tailorable platform

Connects every tool involved in the systems engineering processes



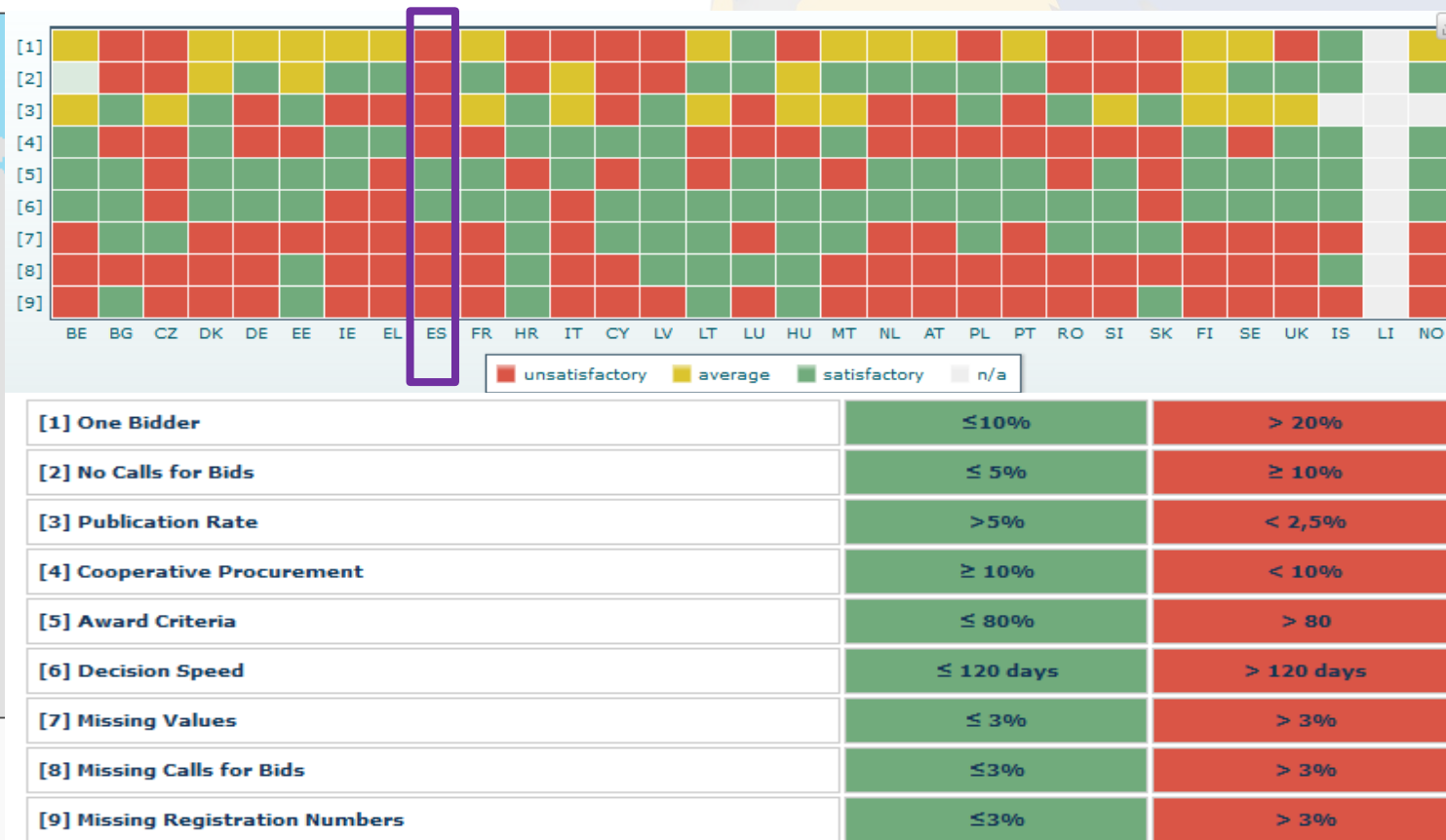
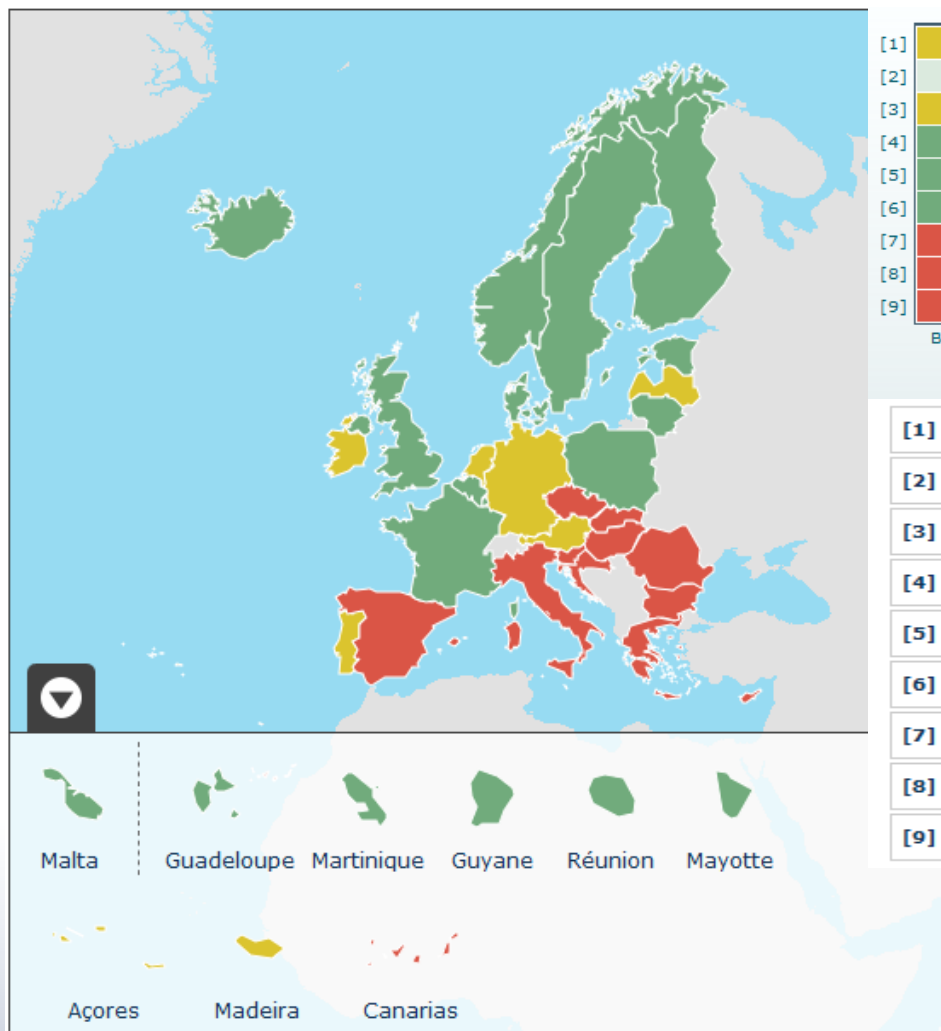


# The Procurement Quality Suite - PQS

Public procurement, the buying of works, goods or services by public bodies, accounts for over 14% of EU GDP

€ 2.3 trillion (2016)

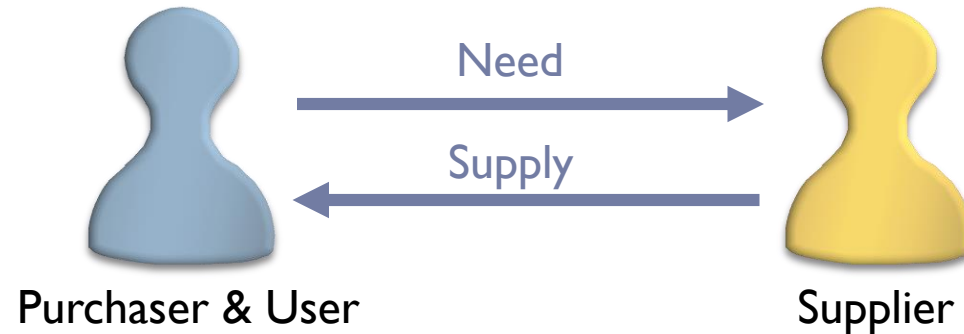
# Sound procedural management fulfilment (today)



[http://ec.europa.eu/internal\\_market/scoreboard/performance\\_per\\_policy\\_area/public\\_procurement/index\\_en.htm](http://ec.europa.eu/internal_market/scoreboard/performance_per_policy_area/public_procurement/index_en.htm)

## Simple Definitions:

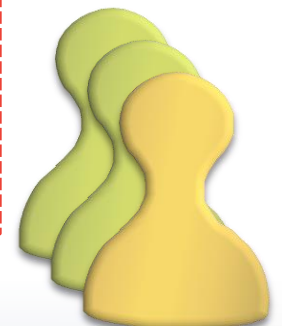
### ➤ Acquisition



### ➤ Procurement



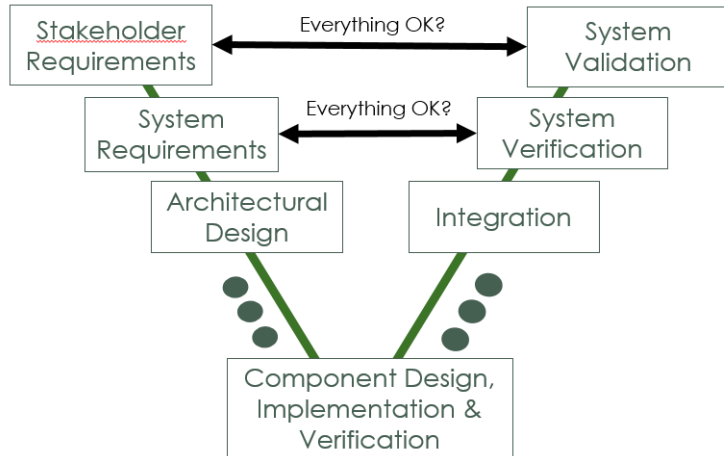
Rules, laws & regulations



Bidders & Supplier



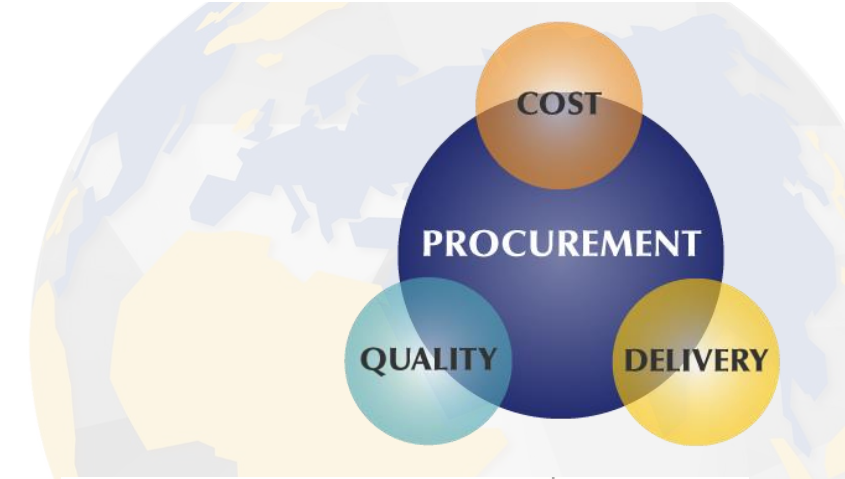
## Why the need for a Procurement quality suite?



**The System perspective**  
 "Getting the right system  
 and solving the right problem"



**The Business perspective**  
 "Meeting financial constraints and  
 procurement laws"



**The Asset perspective**  
 "As a user I want my capability  
 need fulfilled and maintained  
 over time"

# Poor requirements = High odds of failure!



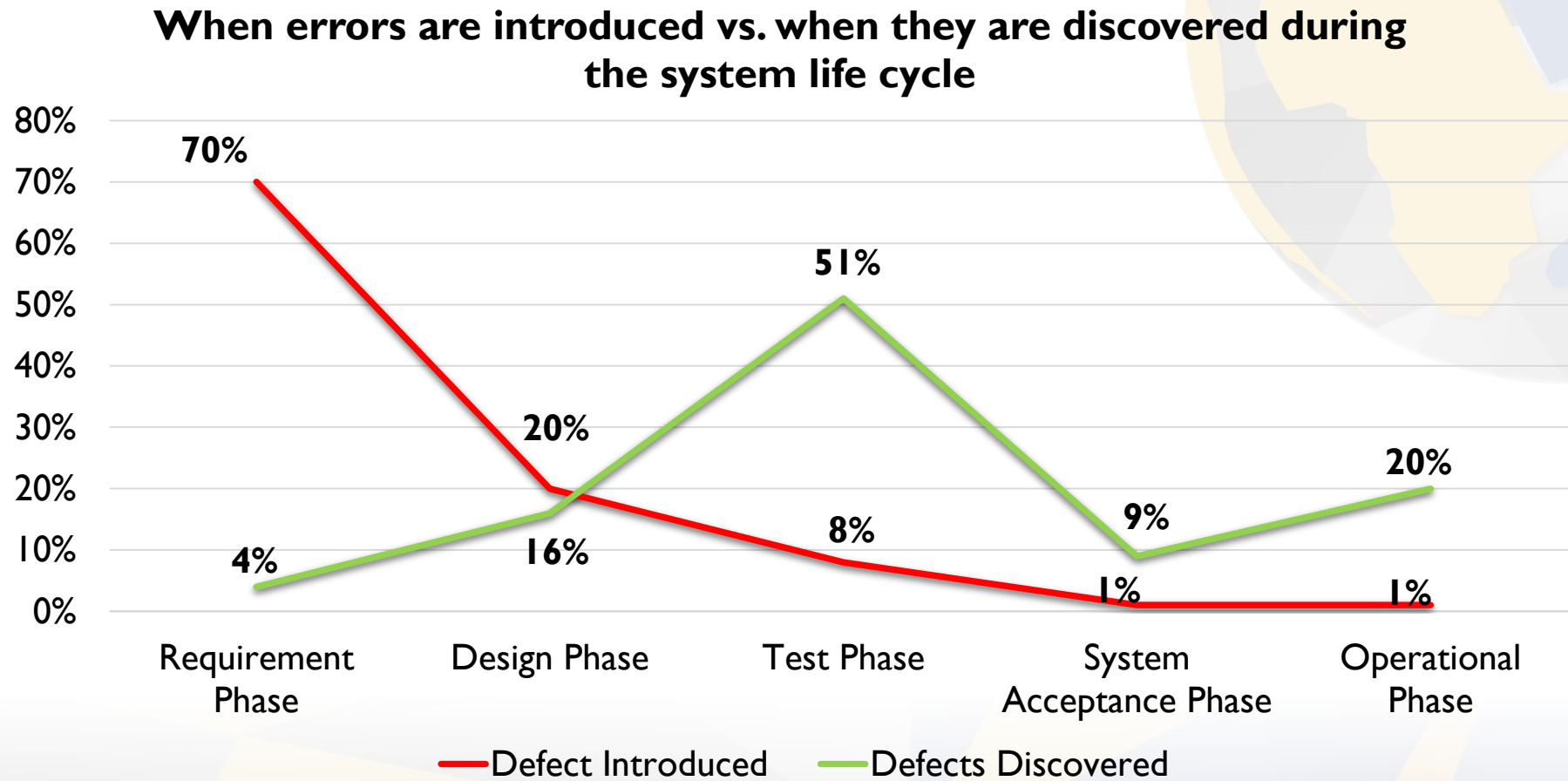
by Dr. Gina Guillaume-Joseph who studied over 200 failed projects with a total value of **15 billion dollars in sunken cost**. I was not surprised by the result. The main reason for project failure was ranked like this:

Project failure factor	Odds of project failure
Project Schedule Delays	78,6%
Changing or Unclear Requirements	29,9%
Project Failure in Test Phase	11,4%

(Source: Improving Software Project Outcomes Through Predictive Analytics, ENGINEERING MANAGEMENT REVIEW, 2015)

Source: <https://requirementdoctor.blog/>

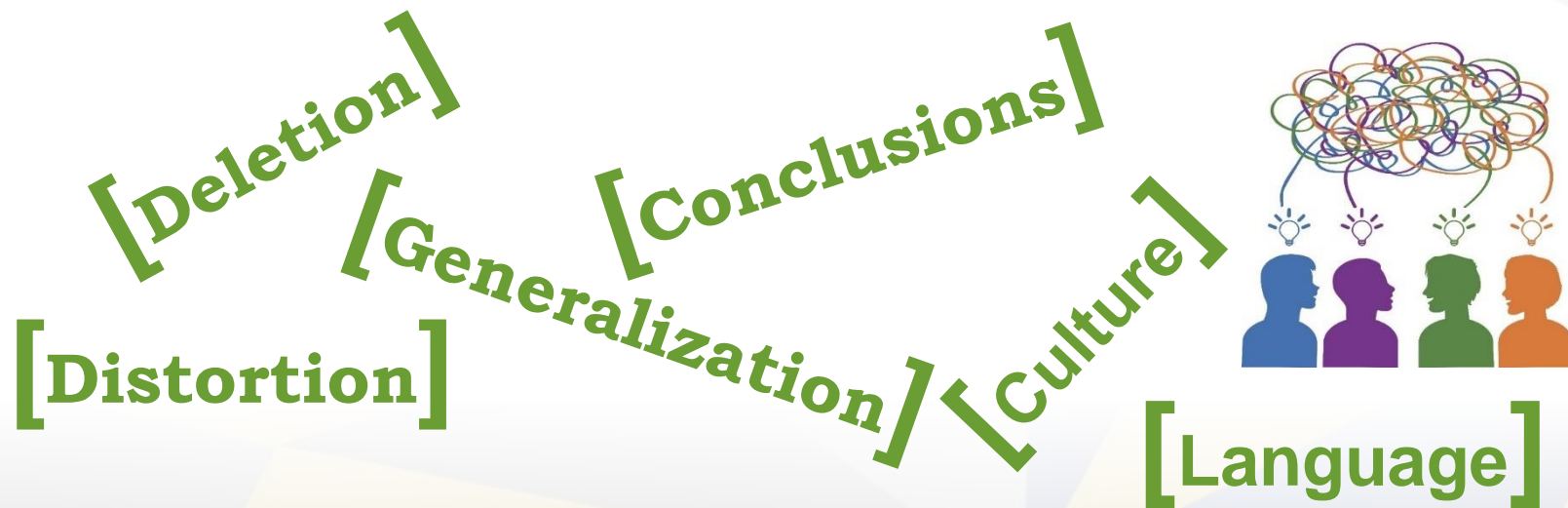
## REQUIREMENTS are the reason for FAILURE



Source: IBM Business research 2017

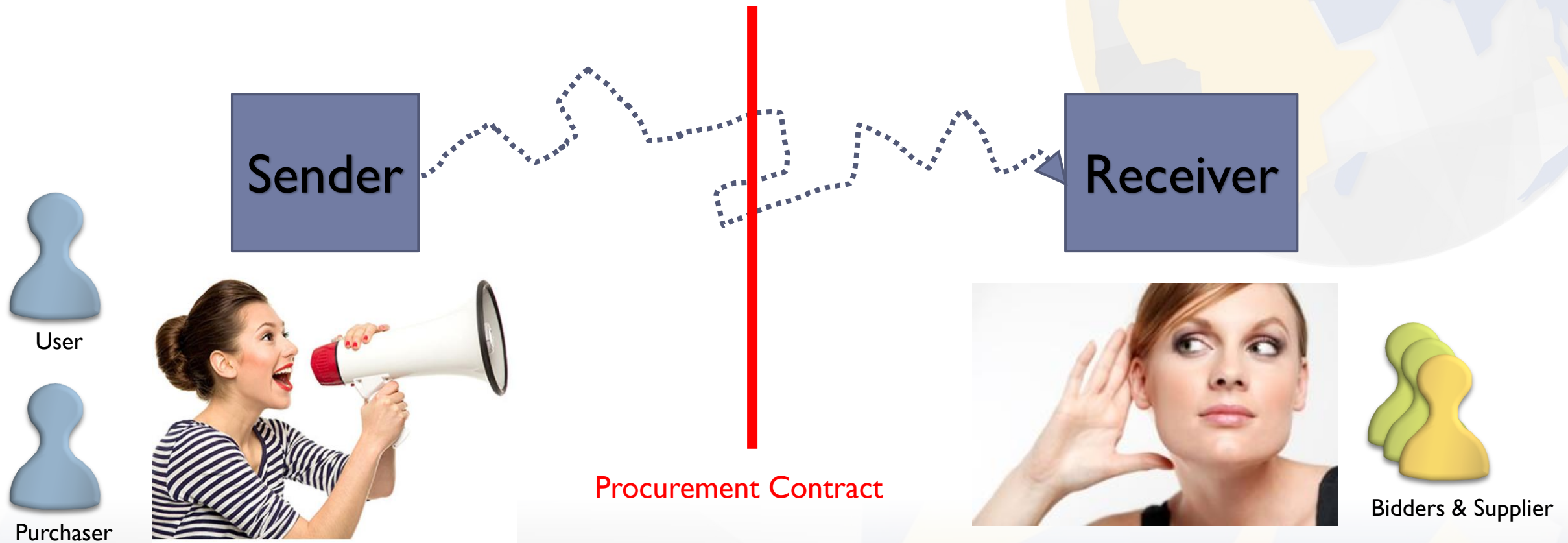
## Why focusing on requirements quality

- Because communication among **humans** is not always that easy:
  - Neuro Linguistic Programming (NLP) principles:

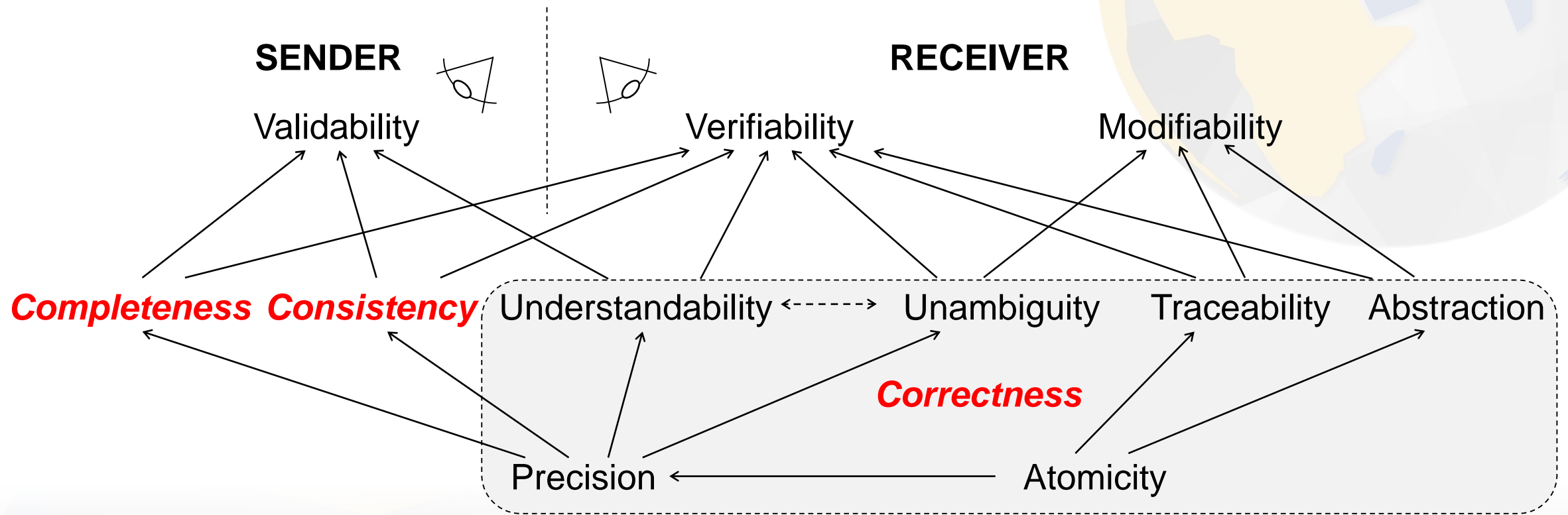




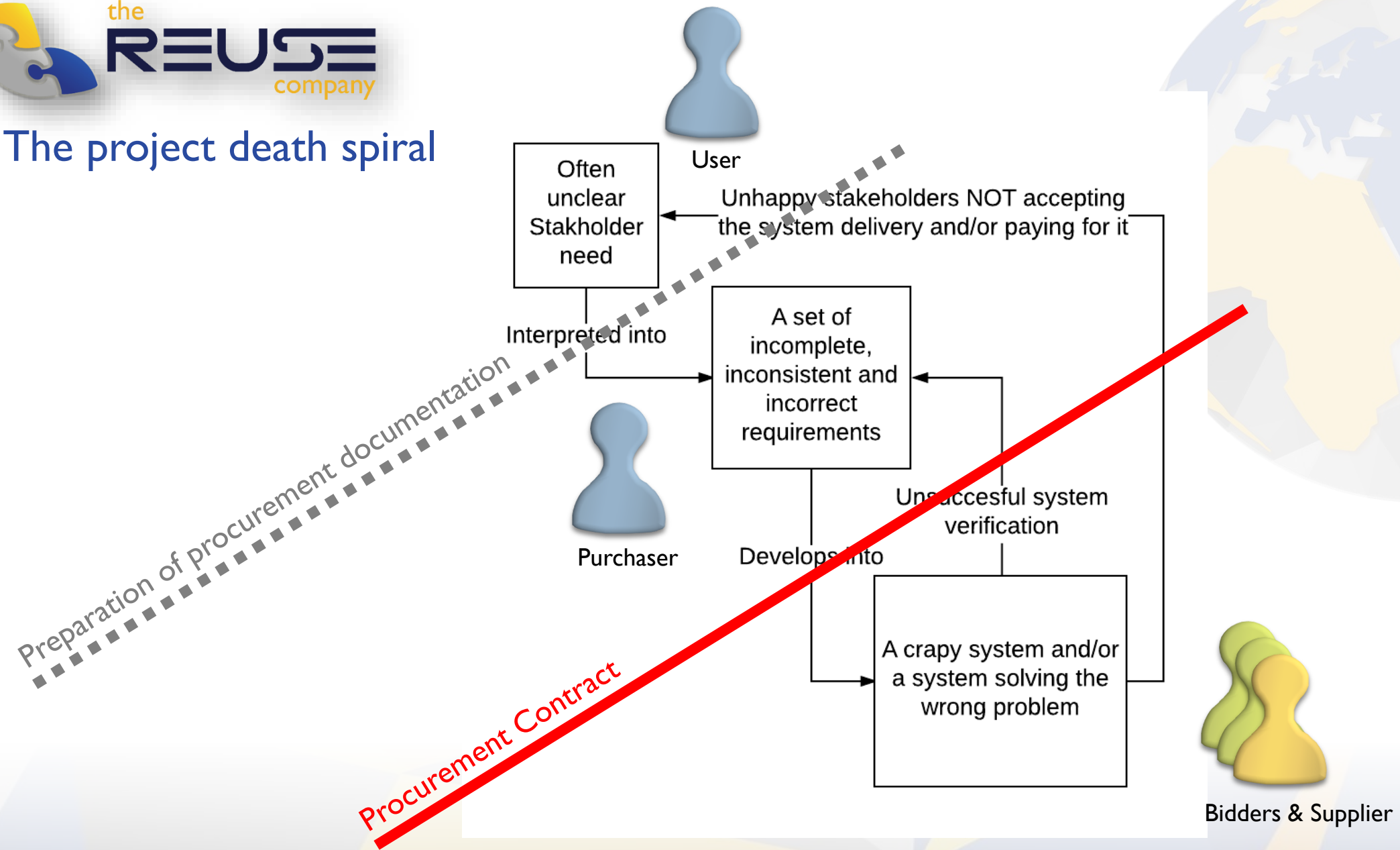
Requirements are used to capture and describe a need



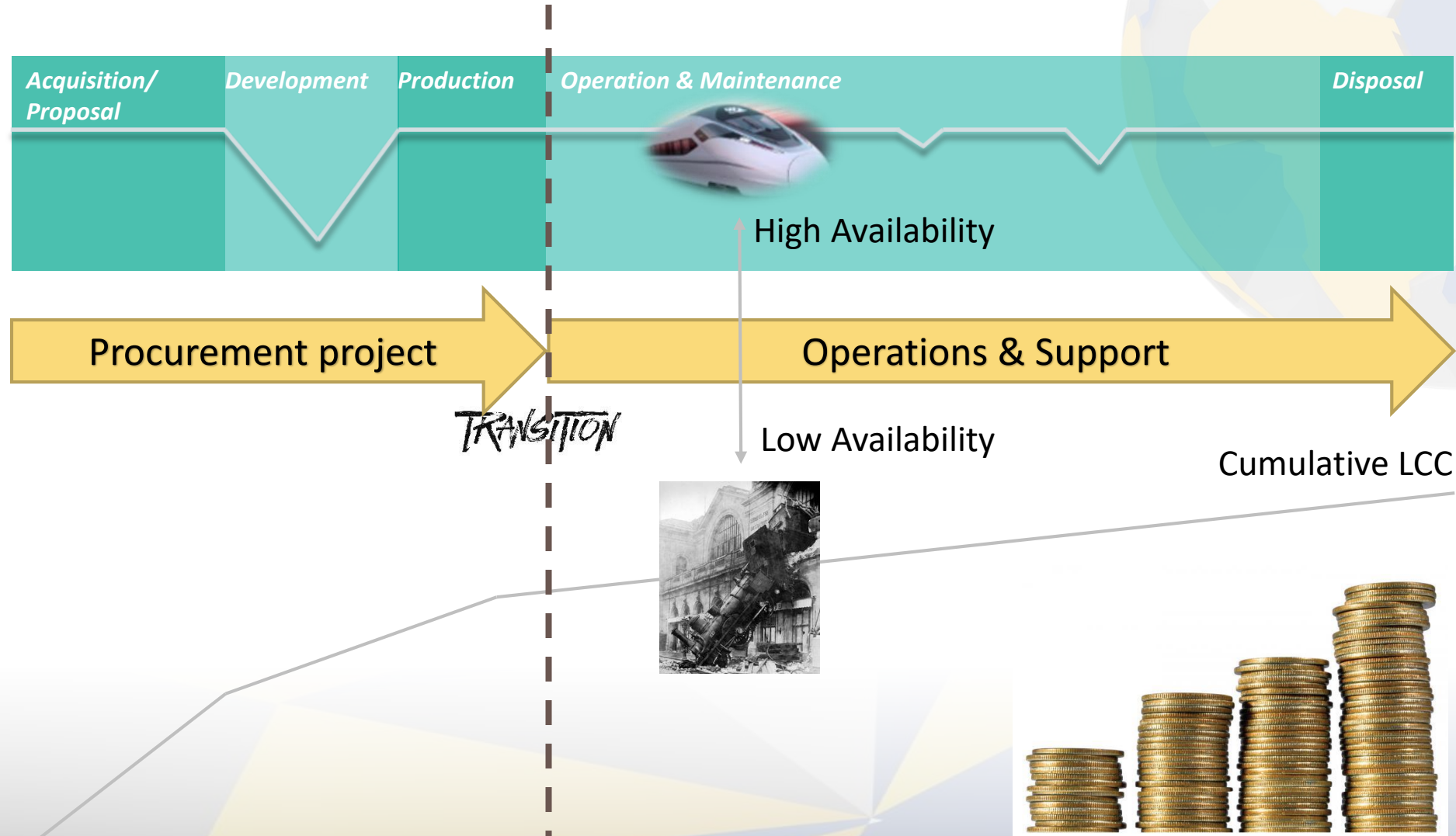
# The meaning of understanding each other



# The project death spiral



# The System Life cycle of Procurement: In theory





# The System Life cycle of Procurement: In practice



Google

bad procurement



Allt

Bilder

Kartor

Nyheter

Videor

Fler

Inställningar

Verktyg

Ungefär 48 200 000 resultat (0,38 sekunder)

## Consequences of Bad Procurement - Procurify Blog

<https://blog.procurify.com/.../consequences-of-bad-procuremen...> ▼ Översätt den här sidan

28 sep. 2015 - We've all heard the positive things that a streamlined procurement process can do for a company—lower costs, increased efficiency and increased profits, to name a few—but there are consequences of having bad procurement. Sure the consequences might not be as bad as having dinosaurs loose at a ...

## Bad Procurement: A Roundup of Recent Procurement Scandals ...

[spendmatters.com/.../bad-procurement-roundup-recent-procure...](https://spendmatters.com/.../bad-procurement-roundup-recent-procure...) ▼ Översätt den här sidan

6 apr. 2017 - Procurement scandals haven't been a priority coverage area on Spend Matters, but that may change soon. Monday's Afternoon Coffee column covered the news, broken by the New York Post, that the chief procurement officer for New York City's Metropolitan Transportation Authority (MTA) has been fired ...

## Best Of: Bad Procurement Lessons - Spend Matters

[spendmatters.com/2014/11/.../best-of-bad-procurement-lessons/](https://spendmatters.com/2014/11/.../best-of-bad-procurement-lessons/) ▼ Översätt den här sidan

27 nov. 2014 - Here on Spend Matters, we share our insights on how procurement can improve, expand, innovate, be efficient, etc. To do so, sometimes we talk about bad examples of procurement to show CPOs and other supply chain professionals what not to do in their organization to be successful. Here we provide a ...

## Avoid These Five Procurement Practices at All Costs | blur Group Blog

<https://www.bluraroup.com/.../procurement.../avoid-these-proc...> ▼ Översätt den här sidan

## Mind the gap! France **spends \$15 billion on trains** that are too fat for 1,300 station platforms – *Independent*

“SNCF's failure to verify measurements results in cost of **€50m to modify 1,300 platforms** in one in six regional stations”

“The train due on platform one will not be arriving for the foreseeable future – because **it is too big.**”

“RFF sent SNCF the dimensions of stations built less than 30 years ago. It was then discovered – after it was too late – that the trains, due to go into service from now until 2016, were too big by several centimeters for stations built more than 50 years ago.”

SNCF said **only 341 trains** – 182 from Alstom and 159 from Bombardier – were affected.

<https://www.theguardian.com/world/2014/may/21/french-railway-operator-sncf-orders-trains-too-big>

<http://www.independent.co.uk/news/world/europe/french-rail-operator-orders-hundreds-of-new-trains-too-big-for-platforms-9412274.html>



## Wrong requirements means 30 MEUR law suite

### SL kräver 300 miljoner för fiasko med signalsystem

Signalsystemet till t-banans röda linje skulle bana väg för förarlösa tåg. Men efter flera år av förseningar har SL tappat förtroendet för leverantören.

– Vi kräver i ett första steg tillbaka 300 miljoner kronor av förskottet, säger vd:n Caroline Ottosson.



Det nya signalsystemet på tunnelbanans röda linje är försenat flera år. Foto: Claudio Bresciani/TT

kräver tillbaka 300 miljoner kronor av förskottet. Enligt avtalet skulle de den 30 september i år kunna visa hur de skulle kunna slutföra uppdraget på ett trovärdigt sätt. Men vår genomgång visar att man inte uppfyller krav på grundläggande funktionalitet, säger Caroline Ottosson till SvD.

*”The delivered control system doesn't fulfil requirements for basic functionality and the Purchaser goes to court to get compensation...”*



## What is wrong with Canada's military procurement process?



Andy Radia

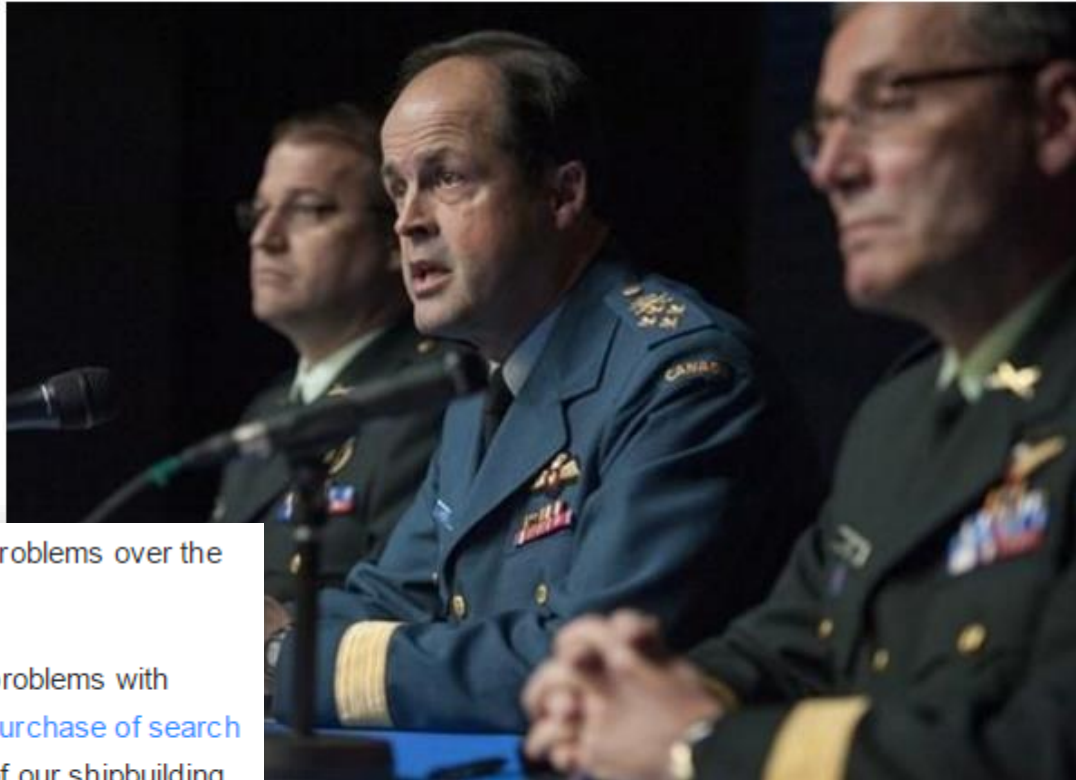
Canada Politics December 20, 2013



There has been a lot of negative press about Canada's procurement problems over the past several years.

Successive governments have had trouble procuring [military trucks](#), problems with [second-hand submarines](#) bought from the UK in 1998, [delays on the purchase of search and rescue planes](#) and have faced [ongoing questions](#) about the cost of our shipbuilding program.

And let's not forget about the F-35 fiasco and the government's "re-set" of that procurement process last year.



<https://ca.news.yahoo.com/blogs/canada-politics/wrong-canada-military-procurement-213306039.html>



# What is the result of a “bad” procurement documentation...

**WRONG PRODUCT**



and/or

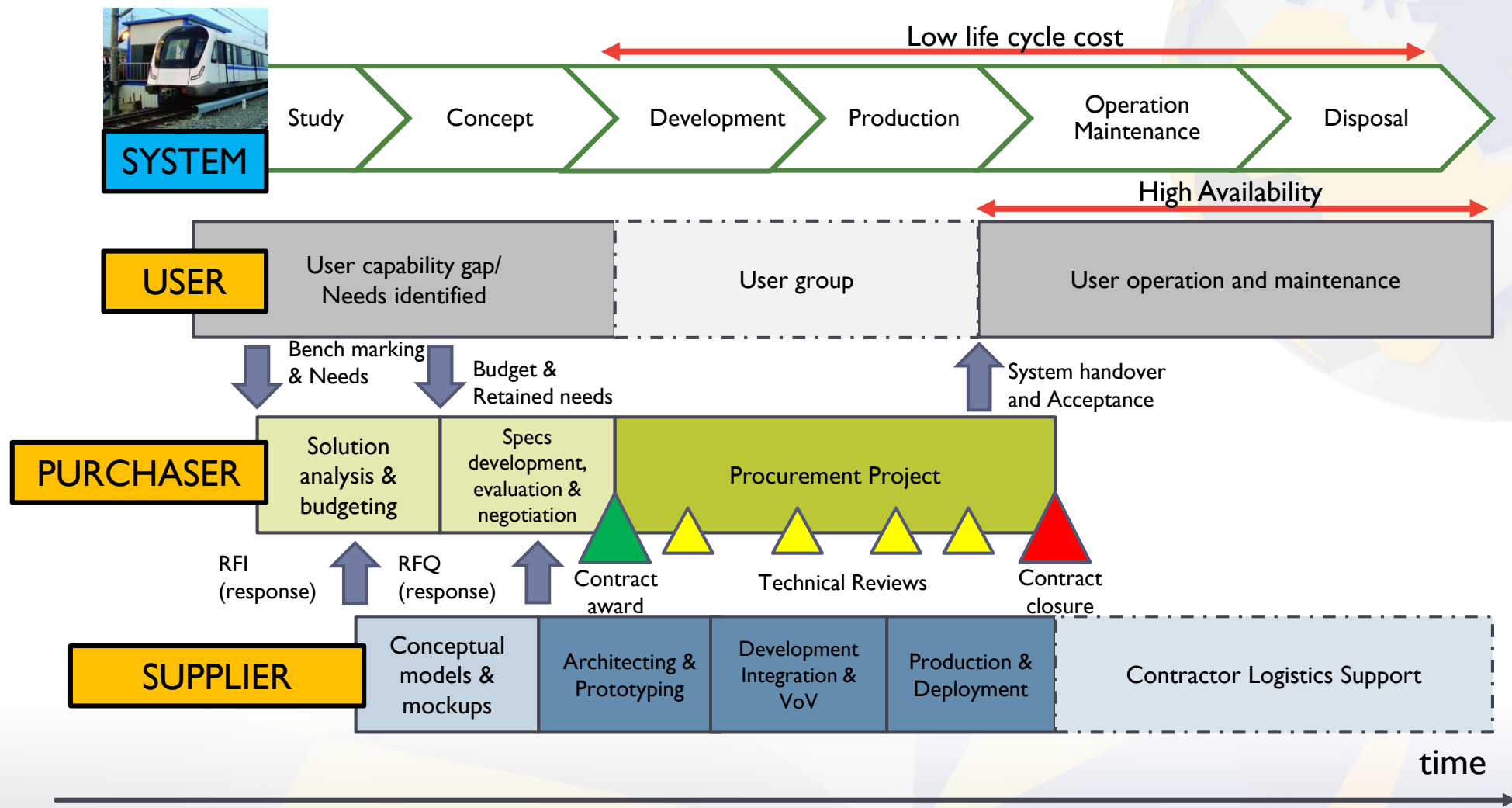


and/or

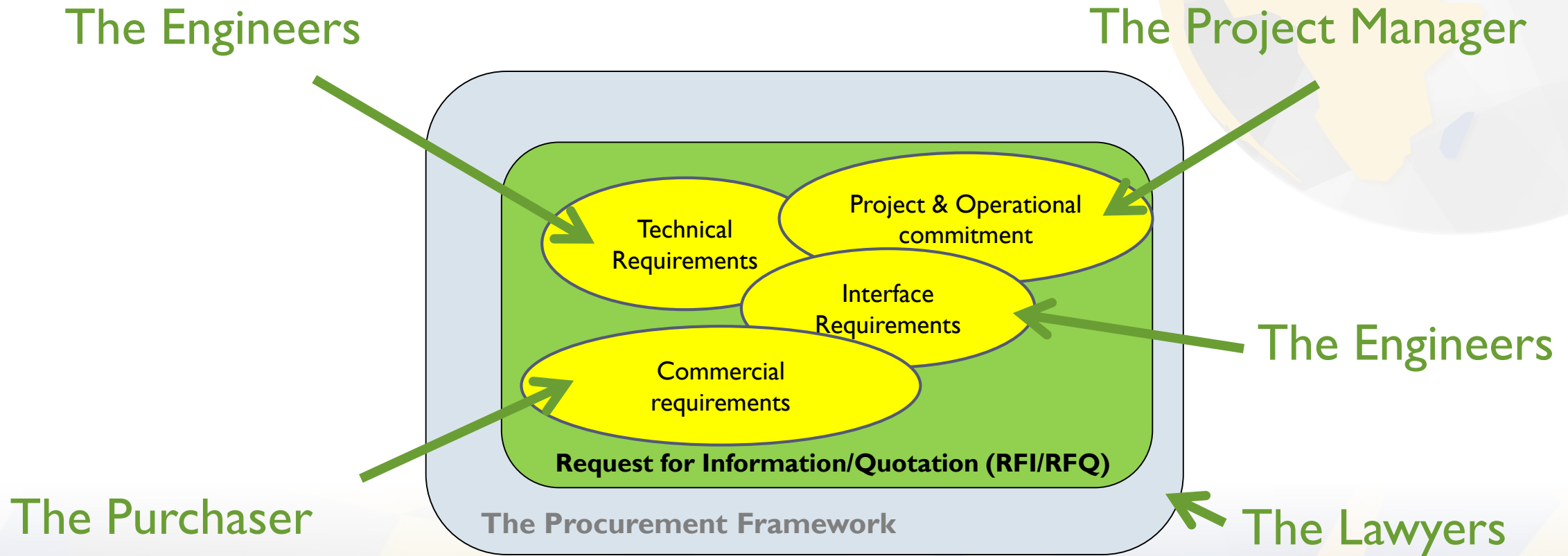


4190 appeals (8%)  
and 6,9 month average delay

Source: <http://www.upphandlingsmyndigheten.se/aktuellt/uppdrag-att-kartlagga-overprovade-upphandlingar/>

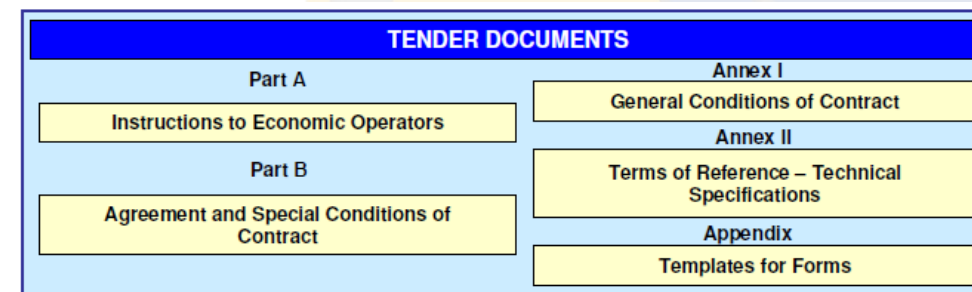


# Who are responsible for what in the procurement documentation?



# The content of the Procurement/Tendering documentation (example)

- There is **allot** of information in a typical Tender....
- We need to make sure that this information is:
- **Correct**
  - All data must be correct. Incorrect data adds risk, cost and delays after failed verification or validation
- **Complete**
  - Incomplete data increases project risk, efforts and possible late changes to contract/design after failed verification or validation
- **Consistent**
  - Inconsistent data increases project risk, effort and possible late changes to contract/design



## Part A: Instructions to Economic Operators

The Table below lists the key information contained in Part A – "Instructions to Economic Operators" of the tender documents:

- Key details of the tender procedure
- Legal framework
- Provision of clarifications on the tender documents
- Eligibility and requirements for participation
- Format and submission of tenders
- Conduct of the tender procedure
- Conclusion of the tender procedure

## Part B: Agreement and Special Conditions of Contract

The Table below lists the key contents of Part B – "Agreement and Special Conditions of Contract" of the tender documents:

- Structure of the contract
- Contract scope
- Contract value
- Project organisation and administration
- Date of commencement and period of implementation
- Conditions and procedure for payment
- Penalties for delay
- Settlement of disputes
- Communication between the parties

## Annex I: General Conditions of Contract

The Table below lists the key contents of Annex I – "General Conditions of Contract" of the tender documents:

- Ownership – Intellectual and property rights
- Obligations of the Contracting Authority
- Performance Guarantee
- Assignment
- Subcontracting
- Confidentiality – Secrecy
- Code of ethics
- Conflict of interests
- Protection of employees
- Amendment to the contract
- Payments
- Administrative and financial penalties
- Breach of contract
- Insurance – indemnification
- Termination by the Contracting Authority
- Termination by the Contractor
- Force majeure
- Settlement of disputes

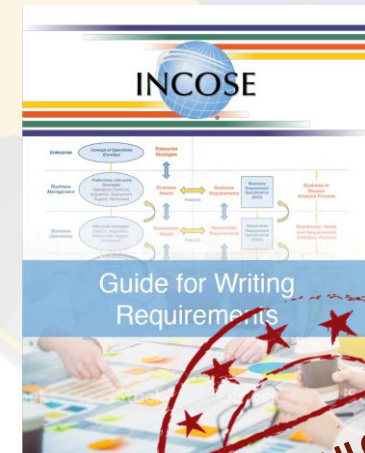
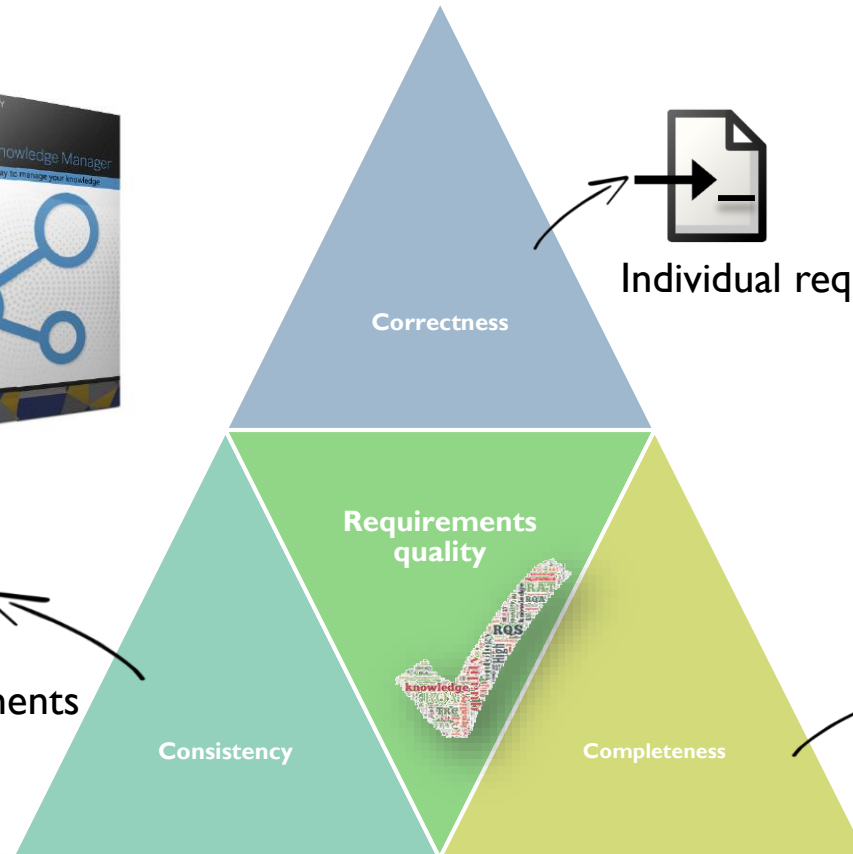
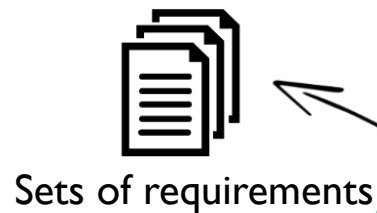
## Annex II: Terms of Reference – Technical Specifications

The Table below lists the key contents of Annex II "Terms of Reference – Technical Specifications".

- Background information
- Objective and expected results
- Assumptions and risks
- Project scope (technical specifications)
- Delivery times
- Project location and duration of implementation
- Special requirements (staffing, equipment etc.)



# Requirements quality metrics - The CCC\* approach



\*CCC – Correctness, Consistency and Completeness

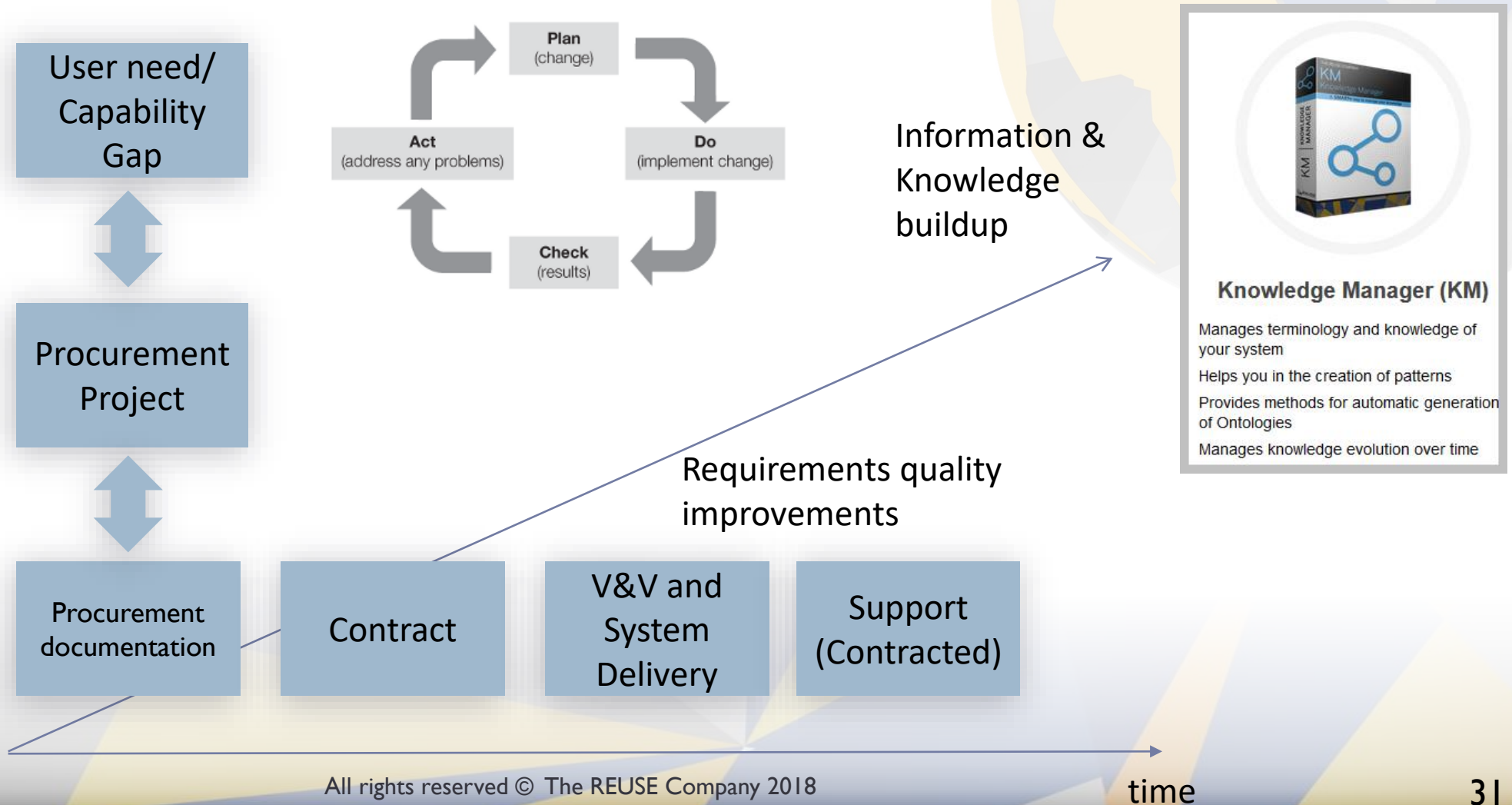




# Systems Engineering Studio v18.1: *The Procurement Quality Suite application*

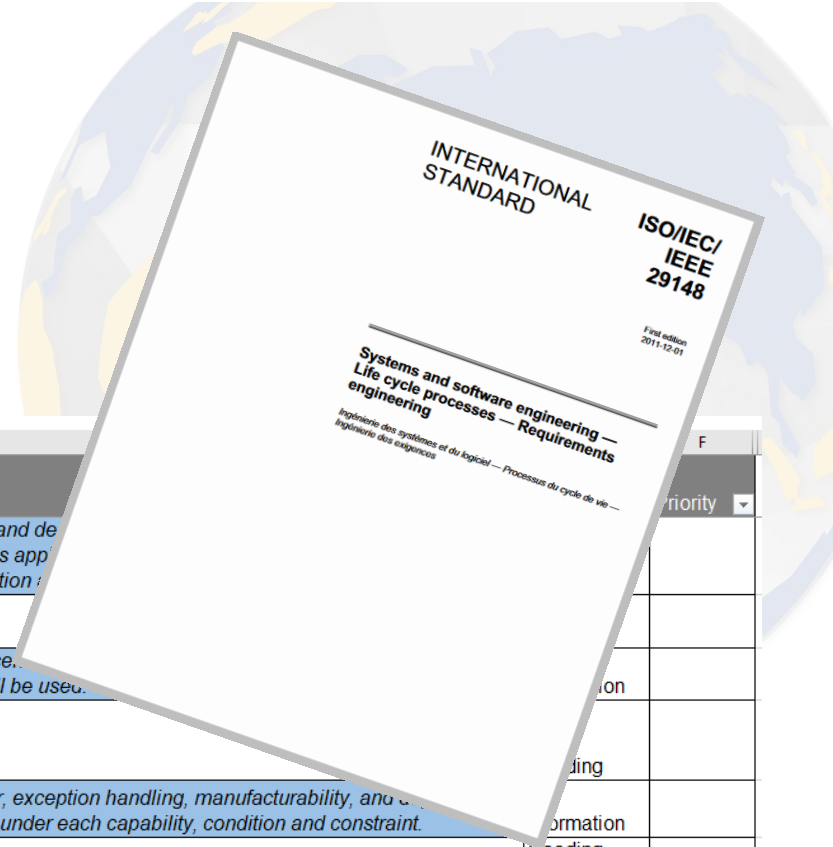
Friday, 01 June 2018

# Knowledge increases over time – Reuse of knowledge



## Starting position for many procurement projects...

graph				Styles
REQ001: The System Shall....				
Object Identifier	Section	Object Heading	Object Text	Priority
SyRS_026	2,7		Description: The assumptions and dependencies applicable to the allocation of resources.	
SyRS_027	2,8	2.8 Operational scenarios		
SyRS_028	2,8		Description: The operational scenarios, including examples of how the system will be used.	
SyRS_029	3,0	3 System capabilities, conditions, and constraints		
SyRS_030	3,0		Description: System behaviour, exception handling, manufacturability, and other aspects shall be covered as applicable under each capability, condition and constraint.	
SyRS_031	3,1	3.1 Physical		
SyRS_032	3,1,1	3.1.1 Construction		
			Description: The construction clause of the SyRS shall include the environmental (mechanical, electrical, chemical) characteristics of where the system will be installed.  For example, the weight limits of the system, moments of inertia, dimensional and volume limitations, crew space, operator station layout, ingress, egress, and access for maintenance should be specified here.  The construction clause of the SyRS shall include requirements for materials to be used in the item or service covered by this specification.  The construction clause of the SyRS shall include requirements covering nameplates and system markings, interchangeability of equipment, and workmanship.	Information
SyRS_034	3,1,1		The System shall...	Requirement SHALL







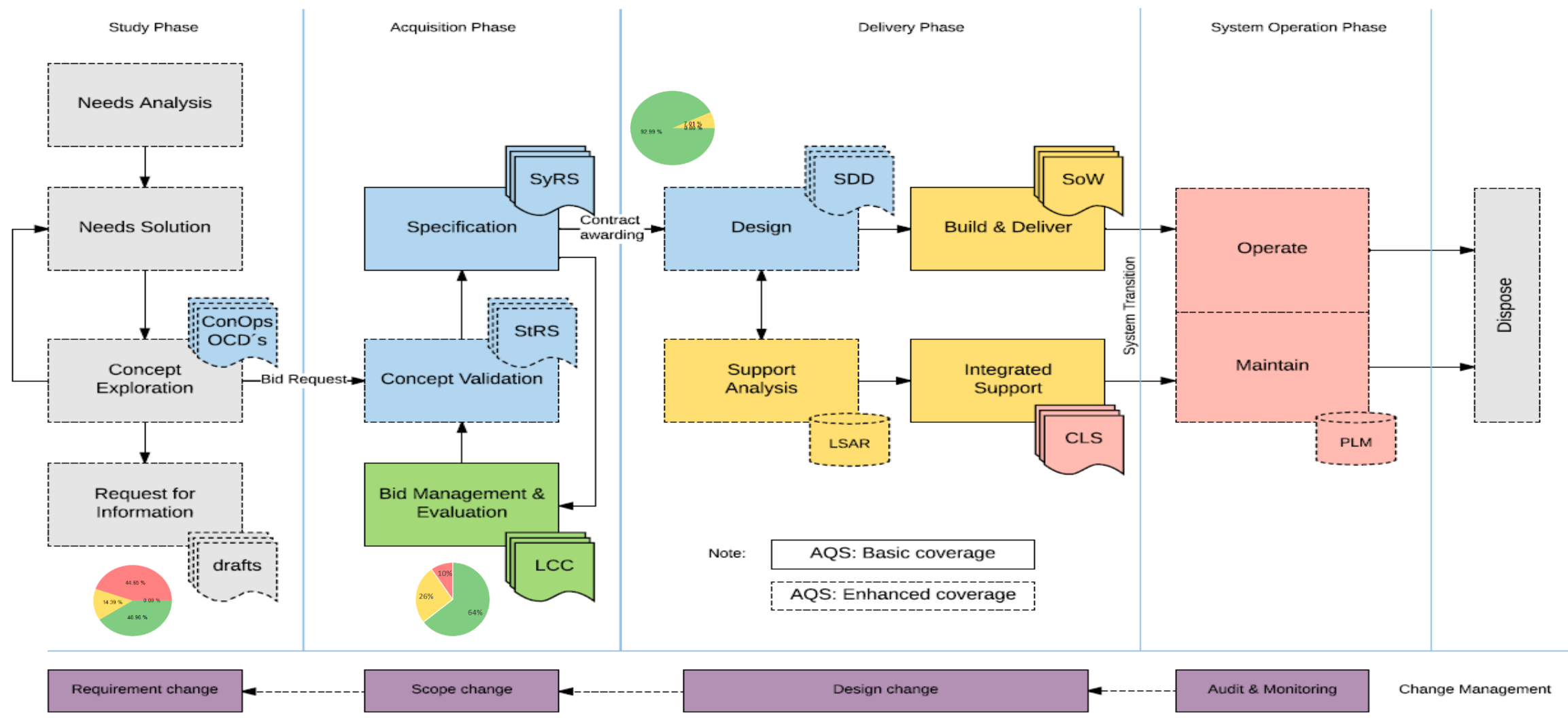
## Content in first PQS release

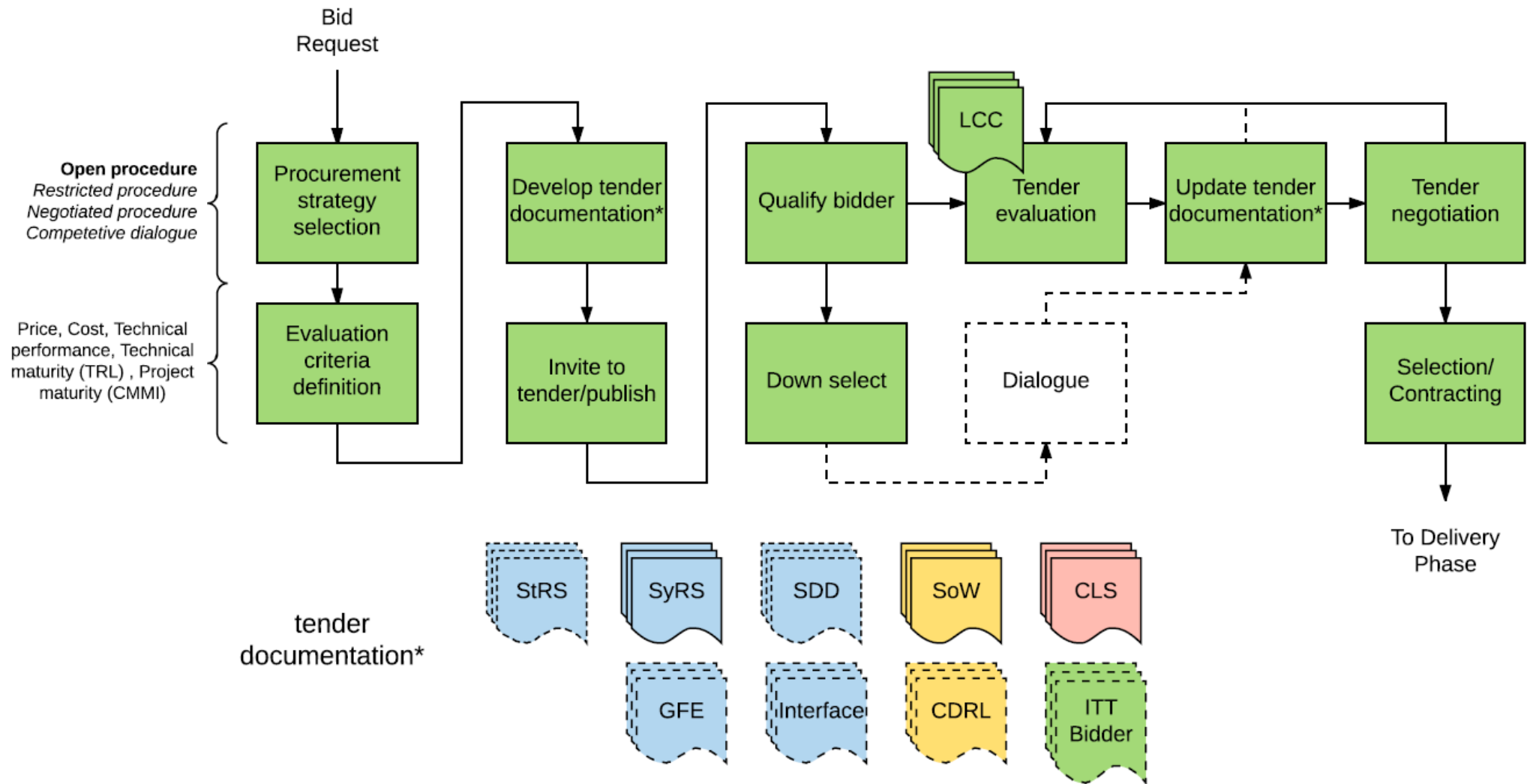
- REUSE VI8.1 tool suite
- KM database with procurement content:
  - Standards and rules
  - Pattern for requirement development
  - Metrics for QA
- Process defined with "Procurement Assistant" Handbook
- Templates (excel) for SyRS, SoW, CLS specifications and Price/LCC response
  
- To come in future releases:
  - Traceability and Change management
  - Evaluation support (technology/price/other)
  - Reports
  - Plus....





## Aquisition life cycle process







the  
**REUSE**  
company



Systems Engineering Studio v18.1:  
*Demonstration for Procurement documentation analysis*

Friday, 01 June 2018

# Systems Engineering Studio v18.1



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# What you are going to see in the Demonstration of SES v18.1

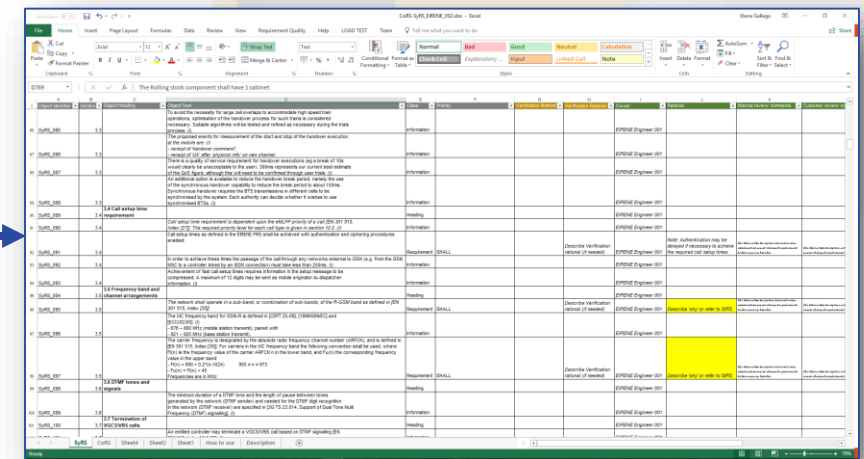
1. Automatic requirements elicitation from documents

2. An application to check compliance with standards in the procurement projects

4. Keep tracing all the information back to their source.

3. How are we performing?





## Automatic Extraction based on **patterns**

## Knowledge - Based Index Process

## Requirements Documents (Excel, DOORS, Word, ...)

FileHomeShareView

Pin to Quick access

Copy

Paste

Cut

Copy path

Paste shortcut

Clipboard

Move to

Copy to

Delete

Rename

Organize

New folder

New item

Easy access

New

Properties

Open

Edit

History

Open

Select all

Select none

Invert selection

Select

←→↕↑

This PC > Projects (D:) > 09 RQS-Libraries > Acquisition Library > v1.0 2017 > Library v1.0 > Ontology > COMPLETE USE CASE

Search COMPLETE USE CASE

Quick access

v1.0 2017

COMPLETE USE CASE

2018 01 30 Upp Stockholm

2018 01 23 - Webinar Quality

2018\_01\_29\_Use\_Cases\_Work

Ontology Composition

Quality Evolution

Creative Cloud Files

OneDrive

This PC

02 - IEG (krnas.kr.inf.uc3m.es)

3D Objects

3-Videos (kcsnas.kcs.local (K

10-Sales (KCSNAS.kcs.local (

Desktop

Documents

Downloads

Music

Pictures

Videos

OS (C:)

Projects (D:)

SDXC (E:)

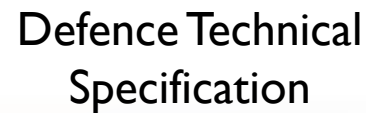
Elena (F:)

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<input type="checkbox"/>	CoRS-SyRS_EIRENE_V02 - Interoperability.eqa	1/22/2018 6:57 PM	EQA File	2 KB
<input type="checkbox"/>	CoRS-SyRS_EIRENE_V02 - Interoperability.xlsx	1/22/2018 6:57 PM	Microsoft Excel W...	190 KB
<input type="checkbox"/>	CoRS-SyRS-RE_EIRENE_V02.eqa	1/30/2018 6:49 PM	EQA File	2 KB
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<input type="checkbox"/>	PQS Railway - Interoperability - Quality.mdb	1/31/2018 9:11 AM	Microsoft Access ...	10,596 KB
<input type="checkbox"/>	PQS v18.1 - DoD Knowledge Base.lib	1/22/2018 6:57 PM	LIB File	914 KB
<input type="checkbox"/>	PQS v18.1 - LCC Knowledge Base.lib	1/22/2018 6:57 PM	LIB File	378 KB
<input type="checkbox"/>	PQS v18.1 - Master Knowledge Base.lib	1/22/2018 6:57 PM	LIB File	376 KB
<input type="checkbox"/>	PQS v18.1 - SoW Knowledge Base.lib	1/22/2018 6:57 PM	LIB File	389 KB
<input type="checkbox"/>	PQS v18.1 - SSS Knowledge Base.lib	1/22/2018 6:57 PM	LIB File	389 KB
<input type="checkbox"/>	PQS v18.1 - Support Knowledge Base.lib	1/22/2018 6:57 PM	LIB File	405 KB
<input type="checkbox"/>	PQS_Procurement_Library_v18.ldb	1/31/2018 9:55 AM	Microsoft Access R...	1 KB
<input type="checkbox"/>	PQS_Procurement_Library_v18.mdb	1/31/2018 9:55 AM	Microsoft Access ...	24,752 KB

17 items1 item selected2.49 MB

Windows Taskbar

System Tray



FileTerminologyConceptual ModelPatternsFormalizationInferenceConfiguration managementExtensibilityAssets storeSettings

Terms

Term suggestions

Import terms

Special sentences

Integrity

Generate terms and frequencies

Tags

Languages

Tokenization rules

Test

Rules

Affixes

Substitutes

Test

Spell checker

Rules

Bigrams rules

Tags probabilities

Test

Disambiguation

Search fields:

Term:

Term tag:

Cluster:

Relationship type:

Identifier:

☐ Equals to:

☐ Greater than:

☐ Lower than:

Relationship filters:

☒ Belongs to domain

☒ Belongs to SCM

☒ Revised

☒ Synonym

Flags:

☒ Flag 1

☒ Flag 2

Advanced filters:

Search in a new window

Search

Terms:

Identifier	Term	Term Tag	Cluster	Relationship type	Belongs to domain	Belongs to SCM	Includes content	Scope Note
48,865 A-1	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	director of manpower, personnel, and services (Air Force)	
48,866 A2	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	antiaircraft	
48,868 A-2	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	intelligence staff officer (Air Force)	
48,867 A2C2	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Army airspace command and control	
48,869 A-3	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	operations directorate (COMAFFOR staff); operations staff officer (Air Force)	
48,870 A-4	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	director of logistics (Air Force)	
48,564 A4A	ACRONYMS	--- Locked ---	--- Locked ---	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Airlines for America [Source: SX000i-B6865-0X000-00]	
48,871 A-5	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	plans directorate (COMAFFOR staff)	
48,872 A-6	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	communications staff officer (Air Force)	
48,873 A-7	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	director of installations and mission support (Air Force)	
48,874 AA	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	assessment agent; avenue of approach	
48,875 AA&E	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	arms, ammunition, and explosives	
48,876 AAA	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	antiaircraft artillery; arrival and assembly area; assign alternate area	
48,877 AABB	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	American Association of Blood Banks	
48,878 AABWS	ACRONYMS	< No «Cluster» >	< No «Relationship type» >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	amphibious assault bulk water system	

16096 term(s)

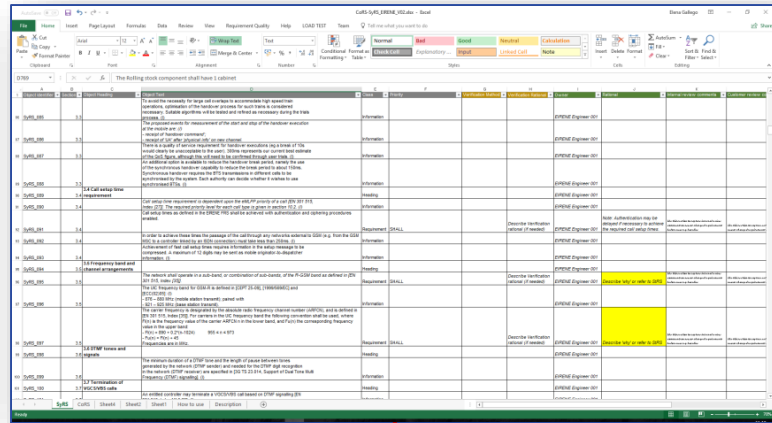
Ready

Connected to 'D:\09 RQS-Libraries\Acquisition Library\v1.0 2017\Library v1.0\Ontology\COMPLETE USE CASE\PQS\_Procurement\_Library\_v18.mdb'

ENG2:55 PM



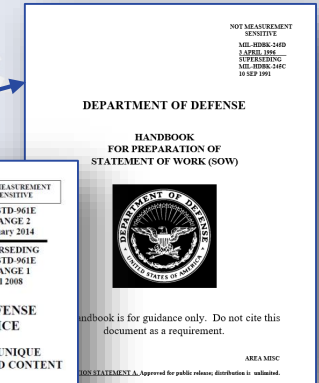
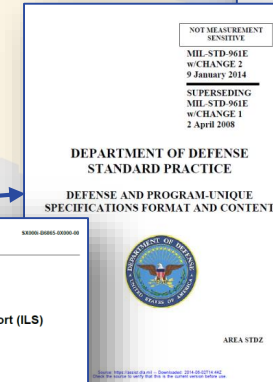
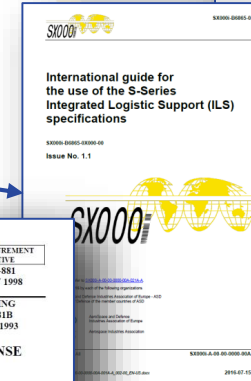
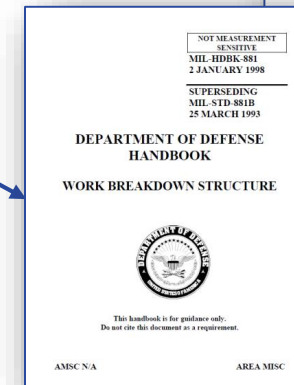
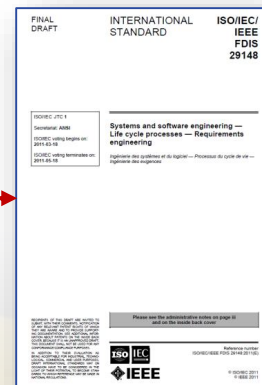
# 3. An application to check compliance with standards



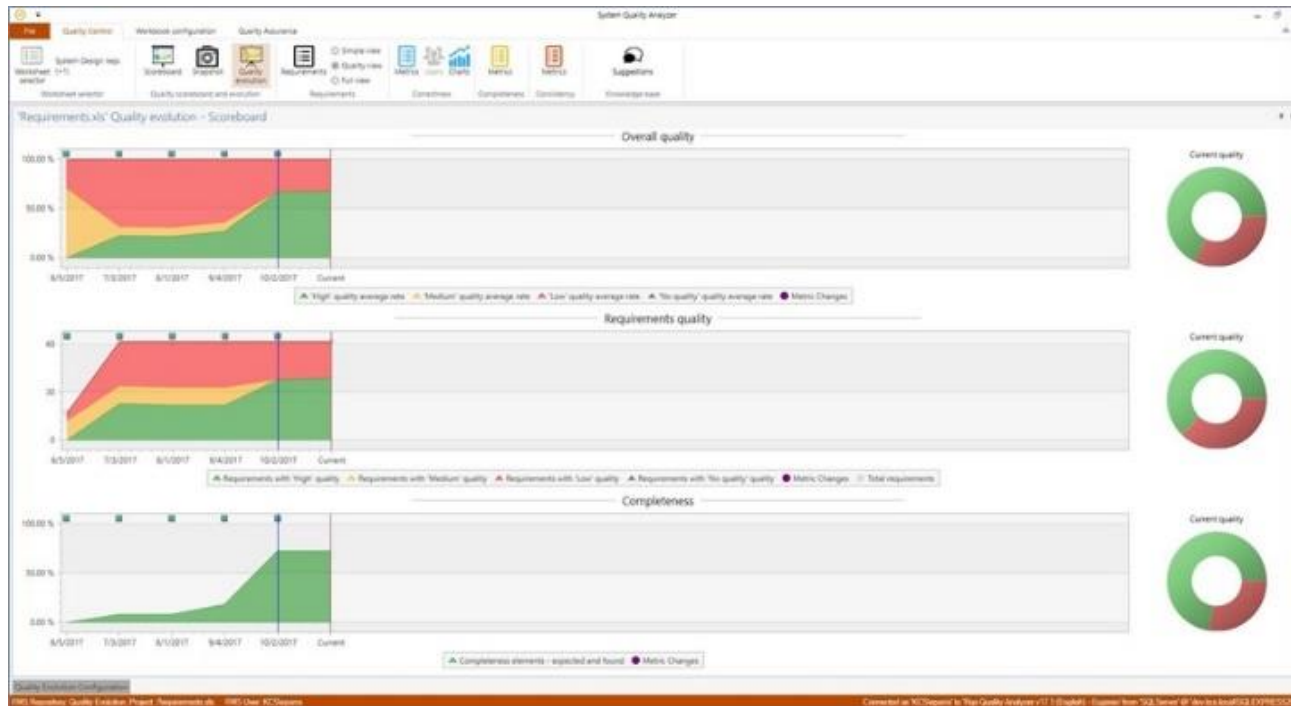
Req ID	Req Text	Standard	Compliance	Notes
REQ-001	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-002	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-003	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-004	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-005	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-006	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-007	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-008	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-009	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	
REQ-010	System shall be able to process 1000 transactions per second.	ISO 9001:2015	Compliant	

Completeness  
Consistency

Correctness  
Completeness  
Consistency



### 3. Keep the performance under control

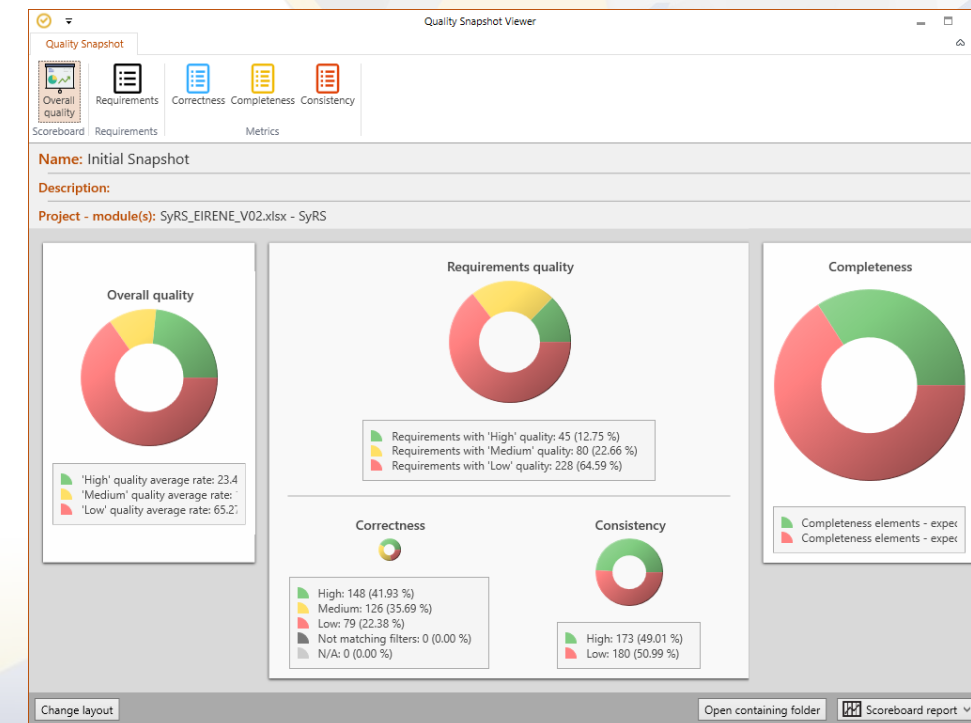


Automatic Evaluation of the  
different bidder's  
documentation!

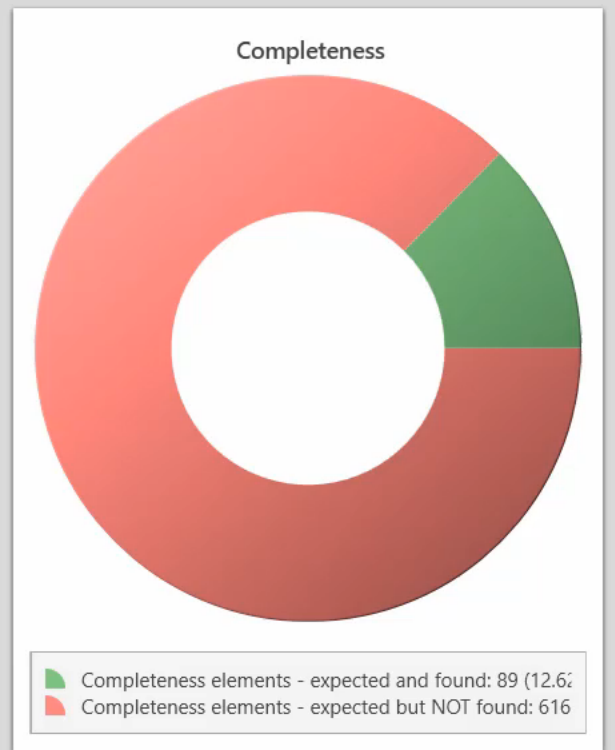
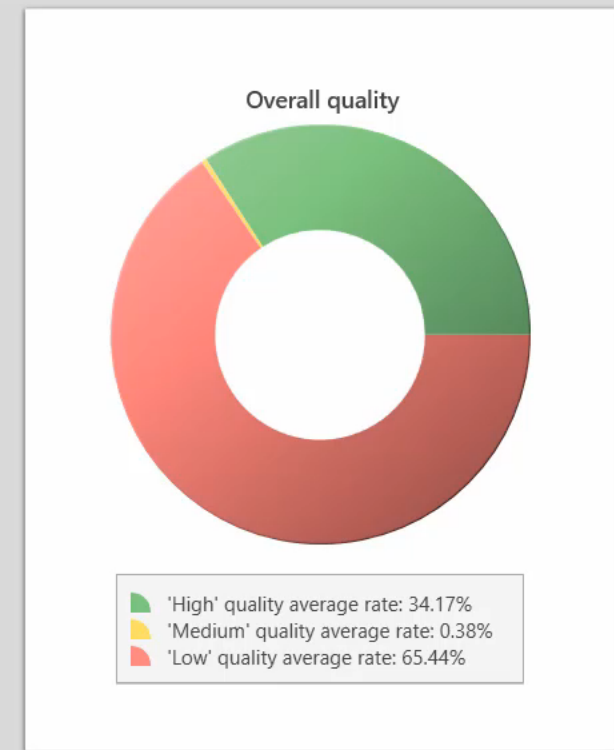
Acquirer  
viewpoint

Supplier  
viewpoint

Key Performance Indicators  
from the beginning, up to today!

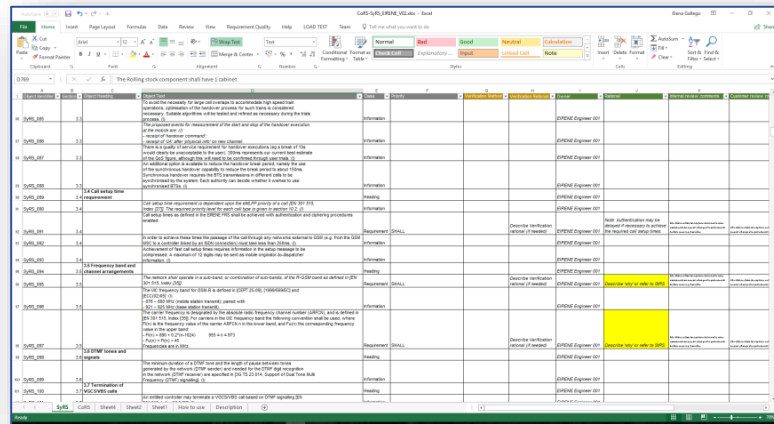


51





# 4. Keep tracing all the information back to their source



ID	Name	Description	Status
1	Requirement 1	...	...
2	Requirement 2	...	...
3	Requirement 3	...	...
4	Requirement 4	...	...
5	Requirement 5	...	...
6	Requirement 6	...	...
7	Requirement 7	...	...
8	Requirement 8	...	...
9	Requirement 9	...	...
10	Requirement 10	...	...
11	Requirement 11	...	...
12	Requirement 12	...	...
13	Requirement 13	...	...
14	Requirement 14	...	...
15	Requirement 15	...	...
16	Requirement 16	...	...
17	Requirement 17	...	...
18	Requirement 18	...	...
19	Requirement 19	...	...
20	Requirement 20	...	...

## Smart Suggestion of Traces based on **Ontology**

**EIRENE**  
EUROPEAN INTEGRATED RAILWAY RADIO  
ENHANCED NETWORK

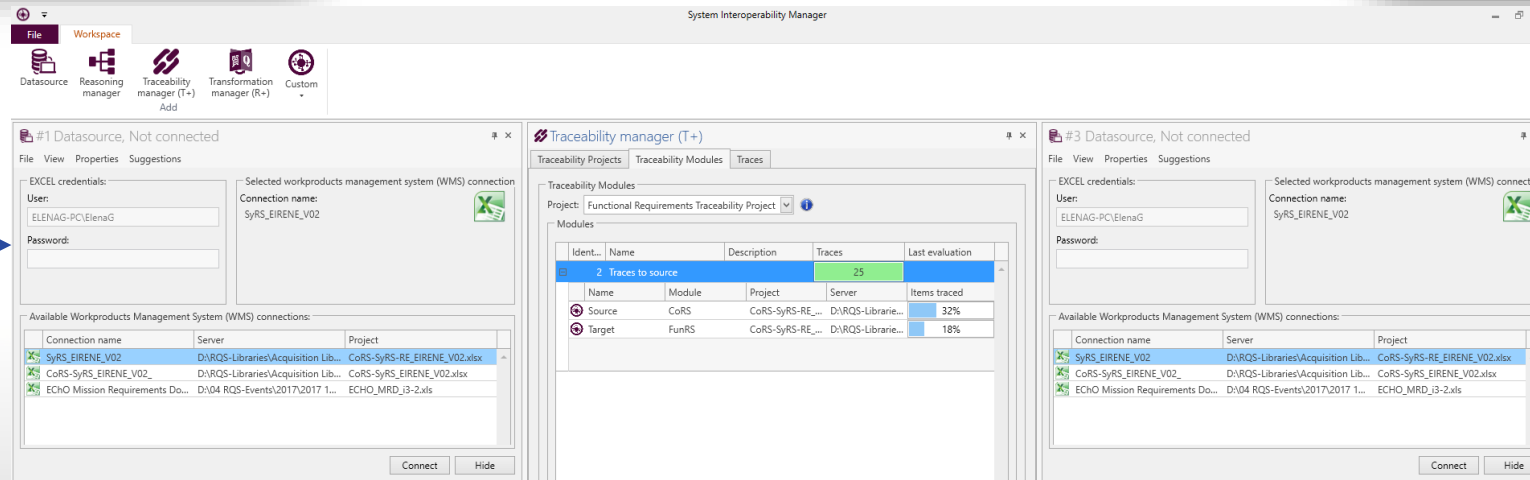
UIC Project EIRENE  
System Requirements

**EIRENE**  
EUROPEAN INTEGRATED RAILWAY RADIO  
ENHANCED NETWORK

UIC Project EIRENE  
Functional Requirements Specification

Source: GSM-R  
Date: 17 May 2006  
Reference: PSA167  
Version: 15  
Number of pages: Cover +

Source: GSM-R Functional Group  
Date: 17 May 2006  
Reference: PSA167/0005  
Version: 7  
No of pages: Cover + 93 pages



**System Interoperability Manager**

**Traceability manager (T+)**

Traceability Projects: Functional Requirements Traceability Project

Ident...	Name	Description	Traces	Last evaluation
2	Traces to source		25	

Name	Module	Project	Server	Items traced
Source	CoRS	CoRS-SyRS-RE...	D:\RQS-Libraries...	32%
Target	FunRS	CoRS-SyRS-RE...	D:\RQS-Libraries...	18%

**#1 Datasource, Not connected**

EXCEL credentials:  
User: ELENA-G-PC\ElenaG  
Password: [Redacted]

Selected workproducts management system (WMS) connection:  
Connection name: SyRS\_EIRENE\_V02

**Available Workproducts Management System (WMS) connections:**

Connection name	Server	Project
SyRS_EIRENE_V02	D:\RQS-Libraries\Acquisition Lib...	CoRS-SyRS-RE_EIRENE_V02.xlsx
CoRS-SyRS_EIRENE_V02	D:\RQS-Libraries\Acquisition Lib...	CoRS-SyRS_EIRENE_V02.xlsx
ECHO Mission Requirements Do...	D:\04 RQS-Events\2017\2017 1...	ECHO_MRD_13-2.xls

**#3 Datasource, Not connected**

EXCEL credentials:  
User: ELENA-G-PC\ElenaG  
Password: [Redacted]

Selected workproducts management system (WMS) connection:  
Connection name: SyRS\_EIRENE\_V02

**Available Workproducts Management System (WMS) connections:**

Connection name	Server	Project
SyRS_EIRENE_V02	D:\RQS-Libraries\Acquisition Lib...	CoRS-SyRS-RE_EIRENE_V02.xlsx
CoRS-SyRS_EIRENE_V02	D:\RQS-Libraries\Acquisition Lib...	CoRS-SyRS_EIRENE_V02.xlsx
ECHO Mission Requirements Do...	D:\04 RQS-Events\2017\2017 1...	ECHO_MRD_13-2.xls

FileWorkspace

#2 Datasource, {Use Case for Procurement PQS Dem...

FileViewPropertiesSuggestions

CoRS

Drag a column header here to group by that column

			Label	Text
	<input type="checkbox"/>		N/A	Every 2 seconds, the power control system shall send...
	<input type="checkbox"/>		N/A	When the voltage level is below 11,5V, the battery sh...
	<input type="checkbox"/>		N/A	If the battery is low, the power control system shall s...
	<input type="checkbox"/>		N/A	The user must activate the emergency battery
	<input type="checkbox"/>		N/A	When the capacity of the accumulator is lower than...
	<input type="checkbox"/>		N/A	The sensor shall acquire T0 with an accuracy of 5 °C
	<input type="checkbox"/>		N/A	The sensor shall acquire T0 within the operating ran...
	<input type="checkbox"/>		N/A	The sensor shall acquire T1 with an accuracy of 5 °C
	<input type="checkbox"/>		N/A	The sensor shall acquire T1 within the operating ran...
	<input type="checkbox"/>		N/A	The sensor shall acquire T1 within the survival range...
	<input type="checkbox"/>		N/A	The sensor shall acquire T2 with an accuracy of 5 °C
	<input type="checkbox"/>		N/A	The sensor shall acquire T2 within the operating ran...
	<input type="checkbox"/>		N/A	The sensor shall acquire T2 within the survival range...
	<input type="checkbox"/>		N/A	The sensor shall acquire T2 within the response time...
	<input type="checkbox"/>		N/A	The sensor shall acquire T3 within the survival range...
	<input type="checkbox"/>		N/A	The sensor shall acquire T3 within the response time...
	<input type="checkbox"/>		N/A	The sensor shall acquire T4 with an accuracy of 5 °C
	<input type="checkbox"/>		N/A	The sensor shall acquire T4 within the operating ran...
	<input type="checkbox"/>		N/A	The sensor shall acquire T4 within the survival range...

Total requirements: 34

☐ Hide non-Requirement

RMS Repository: COMPLETE USE CASE; Project: CoRS-SyRS-I

SaveClose

TRACEABILITY Studio

Traceability projectsTraceability modulesTraces

Traceability project scoreboard:

ID: 2

Number of projects: 2

Number of document

Name: Traceabili  
between  
Functiona

Number of traceability modules: 1

Traceability completeness:

Number of workproducts: 89  
Traced workproducts: 0  
Untraced workproducts: 89

0%

Trace analysis:

Number of traces: 0  
Non-suspects traces: 0  
Suspect traces: 0

0

Traceability projects:

	Name	Description	Modific...	Creatio...
1	Functional R...	This traceability project will mana...	1/31/2...	1/18/20...
2	Traceability b...	Traceability project to connect sy...	5/21/2...	5/21/20...

Number of projects: 2

#3 Datasource, {Use Case for Procurement Demonstr...

FileViewPropertiesSuggestions

FunRS

Drag a column header here to group by that column

			Label	Text
	<input type="checkbox"/>		N/A	The maximum power consumption of the compresso...
	<input type="checkbox"/>		N/A	The maximum power consumption of the fan shall b...
	<input type="checkbox"/>		N/A	The maximum power consumption of the fan blade s...
	<input type="checkbox"/>		N/A	The maximum power consumption of the heater shal...
	<input type="checkbox"/>		N/A	The maximum power consumption of the air conditi...
	<input type="checkbox"/>		N/A	The Air conditioning system shall have 3 heater
	<input type="checkbox"/>		N/A	The Hydraulic system shall have 1 accumulator
	<input type="checkbox"/>		N/A	The Hydraulic system shall have 1 Pump
	<input type="checkbox"/>		N/A	The Hydraulic system shall have 1 relief valve
	<input type="checkbox"/>		N/A	The capacity of the pump shall be lower than 2 gallo...
	<input type="checkbox"/>		N/A	The maximum power consumption of the Rolling Sto...
	<input type="checkbox"/>		N/A	The maximum power consumption of the Auxiliary s...
	<input type="checkbox"/>		N/A	The maximum power consumption of the Braking sy...
	<input type="checkbox"/>		N/A	The maximum power consumption of the cabinet sh...
	<input type="checkbox"/>		N/A	The maximum power consumption of the cabling sh...
	<input checked="" type="checkbox"/>		N/A	The maximum power consumption of the car body s...
	<input type="checkbox"/>		N/A	The maximum power consumption of the car body fi...
	<input type="checkbox"/>		N/A	The maximum power consumption of the communic...
	<input type="checkbox"/>		N/A	The maximum power consumption of the coupler sh...

Total items: 55 , Requirements: 55

☐ Hide non-Requirement

RMS Repository: Ontology; Project: CoRS-SyRS\_EIRENE\_V02.

SaveClose

Connected to: 'D:\09 RQS-Libraries\Acquisition Library\v1.0 2017\Library v1.0\Ontology\COMPLETE USE CASE\PQS Railway - Interoperability - Quality.mdb'

ENG2:43 PM

A word cloud featuring the phrase "Thank You" in numerous languages. The words are arranged in a horizontal, somewhat cloud-like shape. The largest words are "THANK" and "YOU". Other prominent words include "GRACIAS", "ARIGATO", "SHUKURIA", "DANKSCHEEN", "BI'AN", "SHUKRIA", "BOLZIN", and "MERCİ". Smaller words include "TASHAKKUR ATU", "SUKSAMA", "EKGHMET", "YUSPAGADATAM", "TINGKI", "YUHQANYELAY", "CHALTU", "NUHUN", "SNACHALHYA", "SPASSIBO", "WABEEJA", "MAITEKA", "HUI", "YUSPAGADATAM", "GAI", "HATUR", "UNALCHIESH", "SIKOMO", "MAKETAI", "MINMONCHAR", "POLDIES", "MEHRBANI", "MAAKE", "KOMAPSUMNIDA", "GAEJTHO", "AGUYJE", "FAKAAUE", "GOZAIMASHITA", "EFCHARISTO", "TAVTAPUCH", "MEDAWAGSE", "BAIKA", "JUSPAXAR", "ATTO", "DHERYABAD", "AUSHA", "MERASTAWHY", "SANCO", "LAH", "WABEEJA", "MAITEKA", "HUI", "YUSPAGADATAM", "GAI", "HATUR", "UNALCHIESH", "SIKOMO", "MAKETAI", "MINMONCHAR", "POLDIES", "MEHRBANI", "MAAKE", "KOMAPSUMNIDA", "GAEJTHO", "AGUYJE", "FAKAAUE", "GOZAIMASHITA", "EFCHARISTO", "TAVTAPUCH", "MEDAWAGSE", "BAIKA", "JUSPAXAR". The background is a light blue and white map of the United Arab Emirates, with a yellow sun-like shape in the top right corner.





## NEXT WEBINAR – The SMARTER way to improve your requirement specifications

- Requirements are, with no doubts, the main source of re-work in both software and systems intensive projects.
- This webinar introduces these sources of problems and misunderstanding, and provides a set of basic tricks and techniques to overcome the problems and provide error-free requirements specifications to properly set the roots of successful projects.
- All these basic aspects of requirements quality will be covered using a default installation of the tools VERIFICATION Studio and the Rich Authoring Tool.

*Magic Tricks*



19<sup>th</sup> of June at 5.00 pm and 21<sup>th</sup> of June at 9.00 am

Enroll at: <https://www.reusecompany.com/webinars>

## Next Dates:

- Tuesday 19th June 2018 at 5.00 pm CET
- Thursday 21st June 2018 at 9.00 am CET

WEBINAR ID	NAME	DATES	TIME
TRCW-01	Requirements Quality along the supply chain	16/01/2018 18/01/2018	5.00 pm CET 9.00 am CET
TRCW-02	Managing the quality ecosystem: DOORS, Rhapsody, Simulink and Modelica	20/02/2018 22/02/2018	5.00 pm CET 9.00 am CET
TRCW-03	Ontologies Configuration Management	13/03/2018 15/03/2018	5.00 pm CET 9.00 am CET
TRCW-04	Can script based languages, like DXL, hack Natural Language Processing?	10/04/2018 12/04/2018	5.00 pm CET 9.00 am CET
TRCW-05	Procuring systems: PQS for SMARTer acquisition	08/05/2018 09/05/2018	5.00 pm CET 9.00 am CET
TRCW-06	The SMARTER way to improve your requirement specifications	19/06/2018 21/06/2018	5.00 pm CET 9.00 am CET
TRCW-07	Knowledge and Quality management milestones in a SE organization	11/09/2018 13/09/2018	5.00 pm CET 9.00 am CET
TRCW-08	Automatic checking of quality metrics for logical and physical models	16/10/2018 18/10/2018	5.00 pm CET 9.00 am CET
TRCW-09	Following standards patterns in KCSE: An application to EARS patterns in RAT and SKM	03/07/2018 05/07/2018	5.00 pm CET 9.00 am CET
TRCW-10	Tracing system work products: T+ Manager	06/11/2018 08/11/2018	5.00 pm CET 9.00 am CET
TRCW-11	Defining your own quality rules in KCSE: A one-hour practical approach	11/12/2018 13/12/2018	5.00 pm CET 9.00 am CET
TRCW-12	The KCSE approach in a nutshell	15/01/2019 17/01/2019	5.00 pm CET 9.00 am CET
TRCW-13	Requirements Transformations	12/02/2019 14/02/2019	5.00 pm CET 9.00 am CET



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