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
▶ The Webinar will be recorded. A link to the recording will be sent to you in few days time
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
Agenda

- 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
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)
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)

Simple Definitions:

 Acquisition

- Need
- Supply

Procurement

- Need
- Transition

Rules, laws & regulations

- Publish request
- Quote & Evaluate
- Negotiate & Contract
- Develop & Supply

Suppliers

Bidders & Supplier

Purchaser & User

User

Purchaser
Why the need for a Procurement quality suite?

The Business perspective
"Meeting financial constraints and procurement laws"

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

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:

<table>
<thead>
<tr>
<th>Project failure factor</th>
<th>Odds of project failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Schedule Delays</td>
<td>78,6%</td>
</tr>
<tr>
<td>Changing or Unclear Requirements</td>
<td>29,9%</td>
</tr>
<tr>
<td>Project Failure In Test Phase</td>
<td>11,4%</td>
</tr>
</tbody>
</table>

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

Source: https://requirementdoctor.blog/
REQUIREMENTS are the reason for FAILURE

When errors are introduced vs. when they are discovered during the system life cycle

- **Defect Introduced**
  - Requirement Phase: 4%
  - Design Phase: 16%
  - Test Phase: 8%
  - System Acceptance Phase: 1%
  - Operational Phase: 1%

- **Defects Discovered**
  - Requirement Phase: 70%
  - Design Phase: 20%
  - Test Phase: 51%
  - System Acceptance Phase: 9%
  - Operational Phase: 20%

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

Sender

Receiver

Procurement Contract

User

Purchaser

Bidders & Supplier
The meaning of understanding each other

- Validability
- Verifiability
- Modifiability
- Completeness
- Consistency
- Understandability
- Unambiguity
- Traceability
- Abstraction
- Precision
- Atomicity
- Correctness

Sender

Receiver
The project death spiral

1. Often unclear Stakeholder need
   - Interpreted into
   - Purchaser

2. Unhappy stakeholders NOT accepting the system delivery and/or paying for it
   - A set of incomplete, inconsistent and incorrect requirements
   - Develops into
   - Unsuccessful system verification
   - A crapy system and/or a system solving the wrong problem

3. Preparation of procurement documentation

Procurement Contract

Bidders & Supplier
The System Life cycle of Procurement: In theory

Acquisition/Proposal | Development | Production | Operation & Maintenance | Disposal

Procurement project | Operations & Support

High Availability

Low Availability

Cumulative LCC
The System Life cycle of Procurement: In practice

Consequences of Bad Procurement - Procurify Blog
https://blog.procurify.com/.../consequences-of-bad-procurement/... - Oversätt 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... - Oversätt 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 Alhambra 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/... - Oversätt 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.blurgroup.com/.../procurement/.../avoid-these-proc... - Oversätt den här sidan
Mind le 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
Wrong requirements means 30 MEUR law suite

SL kräver 300 miljoner för fiasko med signaletsystem

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.

”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.

What is the result of a “bad” procurement documentation…

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

Source: http://www.upphandlingsmyndigheten.se/aktuellt/uppdrag-att-kartlago-averprovade-upphandlingar/
USER capability gap/ Needs identified

Solution analysis & budgeting

Specs development, evaluation & negotiation

Procurement Project

Conceptual models & mockups

Architecting & Prototyping

Development Integration & VoV

Production & Deployment

Contractor Logistics Support

All rights reserved © The REUSE Company 2018
Who are responsible for what in the procurement documentation?

The Engineers

The Project Manager

The Engineers

The Lawyers

The Purchaser
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
Requirements quality metrics

- The CCC* approach

*CCC – Correctness, Consistency and Completeness
Systems Engineering Studio v18.1: The Procurement Quality Suite application
Knowledge increases over time – Reuse of knowledge

User need/Capability Gap

Procurement

Procurement documentation

Project

Contract

V&V and System Delivery

Support (Contracted)

Plan (change)

Do (implement change)

Check (results)

Act (address any problems)

Information & Knowledge buildup

Requirements quality improvements

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

All rights reserved © The REUSE Company 2018
Starting position for many procurement projects…

<table>
<thead>
<tr>
<th>Object Identifier</th>
<th>Section</th>
<th>Object Heading</th>
<th>Object Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>SyRS_026</td>
<td>2.7</td>
<td>2.8 Operational scenarios</td>
<td>Description: The assumptions and dependencies assumptions and dependencies are taken into account in the allocation.</td>
</tr>
<tr>
<td>SyRS_027</td>
<td>2.8</td>
<td>3 System capabilities, conditions, and constraints</td>
<td>Description: The operational scenarios are examples of how the system will be used.</td>
</tr>
<tr>
<td>SyRS_028</td>
<td>2.8</td>
<td>3.1 Physical</td>
<td>Description: System behaviour, exception handling, manufacturability, and operation shall be covered as applicable under each capability, condition and constraint.</td>
</tr>
<tr>
<td>SyRS_029</td>
<td>3.0</td>
<td>3.1.1 Construction</td>
<td>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. The System shall…</td>
</tr>
<tr>
<td>SyRS_030</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SyRS_031</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SyRS_032</td>
<td>3.1.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SyRS_033</td>
<td>3.1.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SyRS_034</td>
<td>3.1.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PQS – Procurement Quality Suite

Set of requirement spec templates: SyRS, SoW & CLS

Bidder compliance response sheets

LCC and Price response sheets

Bidder evaluation: criteria and analysis

On-line Procurement method & guidebook

PDF generator

RM Tool integration

Knowledge Database

*Depends on products and domain

Structures
QA Rules
Patterns
Standards*

On-line Procurement method & guidebook

RM Tool integration

Knowledge Database

*Depends on products and domain
Content in first PQS release

› REUSE V18.1 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…. 
Systems Engineering Studio v18.1: Demonstration for Procurement documentation analysis

Friday, 01 June 2018
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
1. Automatic requirements elicitation from documents

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

3. How are we performing?

4. Keep tracing all the information back to their source.
1. Automatic requirements elicitation from documents

Source Requirements Documents (Word, PDF) → Automatic Extraction based on patterns → Requirements Documents (Excel, DOORS, Word, …)

Simple Index Process → Knowledge-Based Index Process
2. An application to check compliance with standards

- Statement of Work (SoW)
- Defence Technical Specification
- Support CLS / ILS
- Work Breakdown SoW
- Technical Specification SSS
## KNOWLEDGE Manager

### Search fields:

- **Search fields:**
  - **Term:**
  - **Term tag:**
  - **Cluster:**
  - **Relationship type:**

### Identifier:

- **Identifier:**
  - **Belongs to domain**
  - **Belongs to SCM**
  - **Includes content**
  - **Scope Note**

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Term</th>
<th>Term Tag</th>
<th>Cluster</th>
<th>Relationship type</th>
<th>Belongs to domain</th>
<th>Belongs to SCM</th>
<th>Includes content</th>
<th>Scope Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>48,865 A-1</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>director of manpower, personnel, and services (Air Force)</td>
</tr>
<tr>
<td>48,866 A-2</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,868 A-2</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,867 A2C2</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,869 A-3</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,870 A-4</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,564 AAA</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,871 A-5</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,872 A-6</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,873 A-7</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,874 AA</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,875 AA6E</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,876 AAA</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,877 AAB8</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>48,878 AABWS</td>
<td>ACRONYMS</td>
<td>&lt; No «Cluster» &gt;</td>
<td>&lt; No «Relationship type» &gt;</td>
<td>Belongs to domain</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

16956 term(s)
3. An application to check compliance with standards

- Completeness
- Consistency
- Correctness
3. Keep the performance under control

Key Performance Indicators from the beginning, up to today!

Automatic Evaluation of the different bidder’s documentation!
3. Do we specify our projects too much (or not enough)?
4. Keep tracing all the information back to their source

Smart Suggestion of Traces based on Ontology
THANK YOU
Checking Requirements completeness with RQA and DOORS
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.

19th of June at 5.00 pm and 21st of June at 9.00 am

Enroll at: https://www.reusecompany.com/webinars
### Webinar planner

**Next Dates:**
- Tuesday 19th June 2018 at 5.00 pm CET
- Thursday 21st June 2018 at 9.00 am CET

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