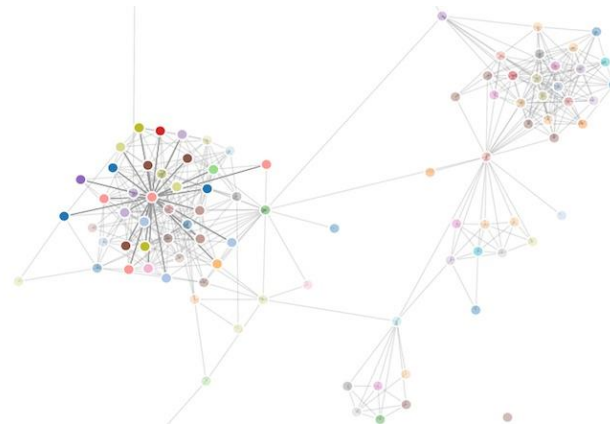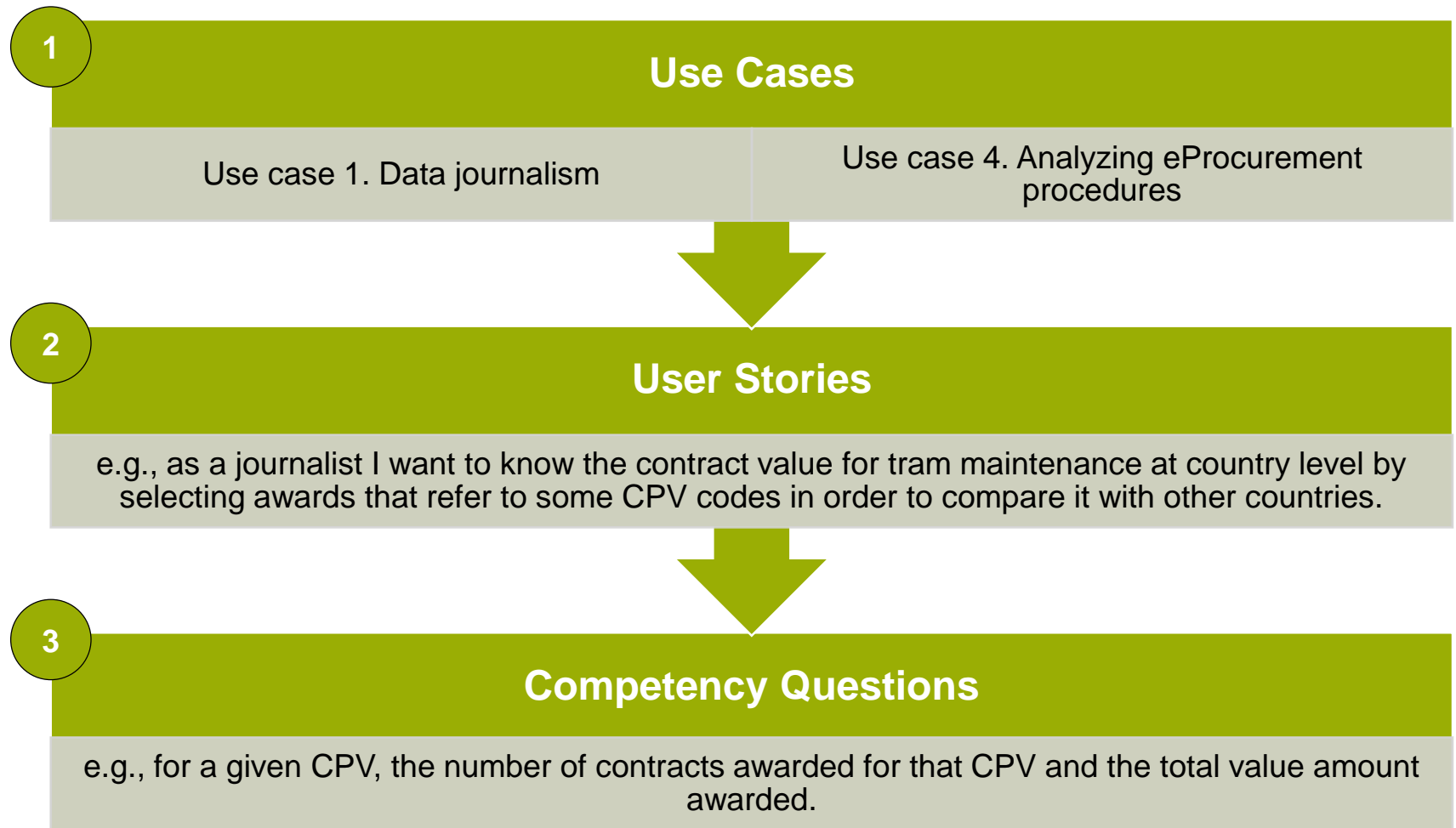# e-Procurement Ontology (ePO)

Publications Office – Unit C2

elicitation of requirements

Methodology

The methodology used to obtain the competency questions is as follows:

1 **Use Cases**

Use case 1. Data journalism	Use case 4. Analyzing eProcurement procedures

↓

2 **User Stories**

e.g., as a journalist I want to know the contract value for tram maintenance at country level by selecting awards that refer to some CPV codes in order to compare it with other countries.

↓

3 **Competency Questions**

e.g., for a given CPV, the number of contracts awarded for that CPV and the total value amount awarded.

Use Cases: Transparency and Monitoring

	Use Case 1. Data journalism	Use Case 4. Analysing eProcurement procedures
Description	Citizens want to have insights in the way that contracting authorities are procuring services, hence spending public money.	The information on how contracting authorities use the procurement procedures permits to know whether they are used properly and to identify the possible shortcomings of the legal design.
Actors	Media and Journalists	Parliament, Authorities, Academia, Auditors- regulators, Contracting authorities
Final recipients	Citizens	Contracting authorities, Economic operators, Citizens
Preconditions	A system or repository which contains information about tenders coming from European sources, such as TED, or national sources, such as red.es, interconnected using the e-procurement ontology.	-
Flow	As a journalist, Clara is calculating the total number of tenders and their volume in terms of EUR regarding public transport in the country. In particular, she is assessing the contract value, net of VAT, for CPV codes in order to compare it with other countries including Belgium and France. The benefit is that Thanks to the article, citizens become aware of the spending on tram maintenance between countries.	• Count of contracts and budget volume in percentage of contracts awarded by each of the procedures provided for in the legislation. • Count of contracts modifications and amount in percentage of these modifications in relation with the awarded/evaluated and modified budget, and which other conditions are modified compared to the evaluated/awarded conditions (for example completion date of the contract). • List of steps taken by a contract. • Types of award criteria used in relation with the contract type (works, supplies, etc.) or the contract object.

User Stories

A way to identify information requirements is to draft very simple sentence structured around three main axes:

1. Who benefits from it?
2. What is the need?
3. What is the benefit?

The structure of the sentence is always like this:

"As a **<role of the user>**, I need **<something>** in order to **<benefit>**."

Example:

As a **contracting authority (ROLE)**, I need to know **the number of tenderers that have submitted a tender (WHAT DO I NEED?)** in order to **add it to the award notice (BENEFIT)**.

User Stories

Examples:

Role	User Stories	Use case
Citizen	As a citizen I want to know who the winner is, what was the total value amount awarded of the contract, what were the selection criteria, who was the procuring entity by CPV, so I can know how much public money is spent.	1
Citizen - Journalist	As a journalist I want to know the contract value for tram maintenance at country level by selecting awards that refer to some CPV codes in order to compare it with other countries.	
Economic Operator	As an Economic Operator, I want to know what award criteria the contracting authorities use for contracts in my business, so that I can know if I have to lower the price of the tender.	
Contracting Authority	As a Contracting Authority, I want to know the number of contracts modifications and amount in percentage of these modifications in relation with the awarded/evaluated and modified budget, so I can improve future procurement procedures.	4
	As a Contracting Authority, I want to know the percentage of contracts awarded segmented by contract nature, so I can prepare the annual report.	
	As a Contracting Authority, I want to know the percentage of contracts awarded segmented by procurement procedure, so I can prepare the annual report.	

Competency Questions

Based on the user stories above, we will ask several questions that should be answered by the eProcurement ontology taking into account the Use Cases 1 and 4.

These questions are the so-called **Competency Questions**.

Some examples of Competency Questions follow…

Competency Questions

Examples:

Competency Questions	Use case
For a given period of time, get the procurement procedures awarded, the procuring entity, the winners, the total value amount, and the selection criteria by CPV.	1
For a given CPV, the number of contracts awarded for that CPV and the total value amount awarded.	
For a given CPV, the number of contracts awarded for that CPV and a maximum number of descendant levels (e.g. 3), get the total amount awarded. The result must include all the descendant CPVs and total amount awarded for the CPV and descendants indicated.	
For a given period of time, get the procurement procedures awarded and the award criteria segmented by CPV.	4
For a given period of time, number of contract modifications , total value amount in percentage of these modifications in relation with the total value amount and modified value amount.	
For a given period of time, percentage of contracts awarded segmented by contract nature (percentage of works, percentage of services, percentage of supplies, etc.).	
For a given period of time, percentage of contracts awarded segmented by procurement procedure (open, restricted, etc).	

User Stories vs Competency Questions

Examples (1/2):

User Stories	Role	Competency Questions	Use case
As a citizen I want to know who the winner is, what was the total value amount awarded of the contract, what were the selection criteria, who was the procuring entity by CPV, so I can know how much public money is spent.	Citizen	- For a given period of time, get the procurement procedures awarded, the procuring entity, the winners, the total value amount, and the selection criteria by CPV.	
As a journalist I want to know the contract value for tram maintenance at country level by selecting awards that refer to some CPV codes in order to compare it with other countries.	Citizen - Journalist	-For a given CPV, the number of contracts awarded for that CPV and the total value amount awarded. - For a given CPV, the number of contracts awarded for that CPV and and a maximum number of descendant levels (e.g. 3), get the total amount awarded. The result must include all the descendant CPVs and total amount awarded for the CPV and descendants indicated.	1

User Stories vs Competency Questions

Examples (2/2):

User Stories	Role	Competency Questions	Use case
As an Economic Operator, I want to know what award criteria the contracting authorities use for contracts in my business, so that I can know if I have to lower the price of the tender.	Economic Operator	For a given period of time, get the procurement procedures awarded and the award criteria segmented by CPV.	
As a Contracting Authority, I want to know the number of contracts modifications and amount in percentage of these modifications in relation with the awarded/evaluated and modified budget, so I can improve future procurement procedures.	Contracting Authority	For a given period of time, number of contract modifications , total value amount in percentage of these modifications in relation with the total value amount and modified value amount.	4
As a Contracting Authority, I want to know the percentage of contracts awarded segmented by contract nature, so I can prepare the annual report.	Contracting Authority	For a given period of time, percentage of contracts awarded segmented by contract nature (percentage of works, percentage of services, percentage of supplies, etc.).	
As a Contracting Authority, I want to know the percentage of contracts awarded segmented by procurement procedure, so I can prepare the annual report.	Contracting Authority	For a given period of time, percentage of contracts awarded segmented by procurement procedure (open, restricted, etc).	

Expectations

What do we expect from the members of the Working Group?

- Review Use Cases 1 and 4.

- Identify new roles, needs and benefits that can emerge from these Use Cases.

- Draft sentences like the ones in the previous examples. Respect the expected structure of the sentence, keep them concise and clear.

<u>Deadlines</u>:

- From 28th March to 19th April

<u>Method for submission</u>:

- We propose a management method similar to the one proposed for the glossary. Templates will be supplied to facilitate the creation and edition.

Some more examples of Competency Questions

As a citizen I want to know who the winner is, what was the total value amount awarded of the contract, what were the selection criteria, who was the procuring entity by CPV, so I can know how much public money is spent.	Citizen	For a given period of time, get the procurement procedures awarded, the procuring entity, the winners, the total value amount, and the selection criteria by CPV.	1
As a journalist I want to know the contract value for tram maintenance at country level by selecting awards that refer to some CPV codes in order to compare it with other countries.	Citizen - Journalist	-For a given CPV, the number of contracts awarded for that CPV and the total value amount awarded. - For a given CPV, the number of contracts awarded for that CPV and a maximum number of descendant levels (e.g. 3), get the total amount awarded. The result must include all the descendant CPVs and total amount awarded for the CPV and descendants indicated.	1
As an Economic Operator, I want to know what award criteria the contracting authorities use for contracts in my business, so that I can know if I have to lower the price of the tender.	Economic Operator	For a given period of time, get the procurement procedures awarded and the award criteria segmented by CPV.	4
As a Contracting Authority, I want to know the number of contracts modifications and amount in percentage of these modifications in relation with the awarded/evaluated and modified budget, so I can improve future procurement procedures.	Contracting Authority	For a given period of time, number of contract modifications , total value amount in percentage of these modifications in relation with the total value amount and modified value amount.	4
As a Contracting Authority, I want to know the percentage of contracts awarded segmented by contract nature, so I can prepare the annual report.	Contracting Authority	For a given period of time, percentage of contracts awarded segmented by contract nature (percentage of works, percentage of services, percentage of supplies, etc.).	4
As a Contracting Authority, I want to know the percentage of contracts awarded segmented by procurement procedure, so I can prepare the annual report.	Contracting Authority	For a given period of time, percentage of contracts awarded segmented by procurement procedure (open, restricted, etc).	4
As a citizen, I want to know which contracting authorities awarded contracts on specific training, so I can to contact them and sign up for any of the courses.	Citizen	For a given CPV, the contracting authorities that awarded contracts.	1; 4
As a journalist I want to understand the reason why the procuring entity has chosen a competitive dialogue for a particular procurement procedure so I can write an article confirming (or not) that it was used according to the provisions in Directive 2014/24/EU on the reduction of the number of candidates.	Citizen - Journalist		1; 4
As the legal supervisor of the procurement procedures in my municipality I want to check whether the procuring entity has awarded a design contest to the candidate proposed by the jury when the jury decisión is binding so I can prepare my final report.	Legal Supervisor		1; 4
As an SME I want to know the total amount of contracts awarded to SMEs and total amount of contracts awarded to non-SMEs.	Economic Operator	For a given period of time, the total quantity of contracts awarded, the total amount awarded, the number of SMEs awarded for that period, the total amount awarded to the SMEs.	1; 4
As an Economic Operator I want to know the SMEs that were awarded last year, so I can analyze the competition.	Economic Operator	For a given period of time, the number of SMEs awarded.	1; 4
As an architect participating in a design contest I want to know the architect that won the prize, so I can study his works and consider whether he/she can be an interesting partner.	Economic Operator		1; 4
As a Contracting Authority, I want to know what procurement procedures have not been awarded, so I can improve future procurement procedures.	Contracting Authority	Yearly number of procurement procedures not awarded.	1; 4
As a Contracting Authority, I want to know the percentage of procurement procedures divided into lots last year, so I can prepare the annual report.	Contracting Authority	For a given period, percentage of procurement procedures divided into lots.	1; 4
As a Contracting Authority, I want to know the current framework agreements, so I can prepare the framework agreement derived.	Contracting Authority	For a given period of time, number of framework agreements awarded, indicating the Procuring Entity (and types, e.g. Contracting Authority, Contracting Entity, Undertaking) and the Economic Operator(s).	1; 4