

# D 2.2 Definition of clusters and categories

Version 1.0

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## Control Sheet

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## Executive Summary

This Deliverable 2.2 elaborates on the cluster topics and analysing categories. The deliverable:

1. Defines the cluster topics needed for the classification of collected best practices and procurement case studies, which will be presented in D.2.3 (Catalogue of best practices M12);
2. Elaborates on a structure of analysing categories, which is the basis of the work planned in WP3;

As SPICE collected the first set of best practices in WP2 and gained an overview of planned interviews and activities of the SPICE project, the cluster topics and analysing categories, which have been shortly described in the SPICE proposal text, need to be further elaborated and explained in more details. The aim of the current Deliverable 2.2 is to set up a **first list of cluster topics and analysing categories** in cooperation with WP3 and WP4. This list might be adapted, depending on the analyses of the best practices. This list is in line with the data collection strategy of D.2.1. This structure (cluster topics / analysing categories) will be used by the whole SPICE project in its reporting and dissemination, ensuring a consistent way of reporting.

## 1. Introduction

The main goal of SPICE is to share experiences on procurement of innovation of transport and mobility solutions and to analyse these experiences to formulate recommendations that can be used in the future by public procurers in Europe.

Based on D.2.1 “Specification of required input” and the issues identified by the public procurers of the consortium SPICE did further elaborate the cluster topics and analysing criteria from the SPICE proposal. The current Deliverable D.2.2 presents this elaboration.

There is a clear distinction between sorting criteria (chapter 2) and the analysing criteria (chapter 3). The sorting criteria will be used to sort and structure the collected best practice cases. They are also the backbone of the D.2.3 “Catalogue of best practices”. The deliverable D.2.3 will be in the form of a report, however the cases will also be provided online in a way that makes it easy for public procurers and other stakeholders to find the information they need. Therefore some sorting/search criteria are needed (Topic, Country, etc.).

Chapter 2 describes the cluster topics in more detail. Chapter 2 also list other sorting criteria that will be a help when searching information related to the “Catalogue of best practices”.

Based on priorities identified by the SPICE consortium during the proposal stage the SPICE proposal contained the following topics and categories:

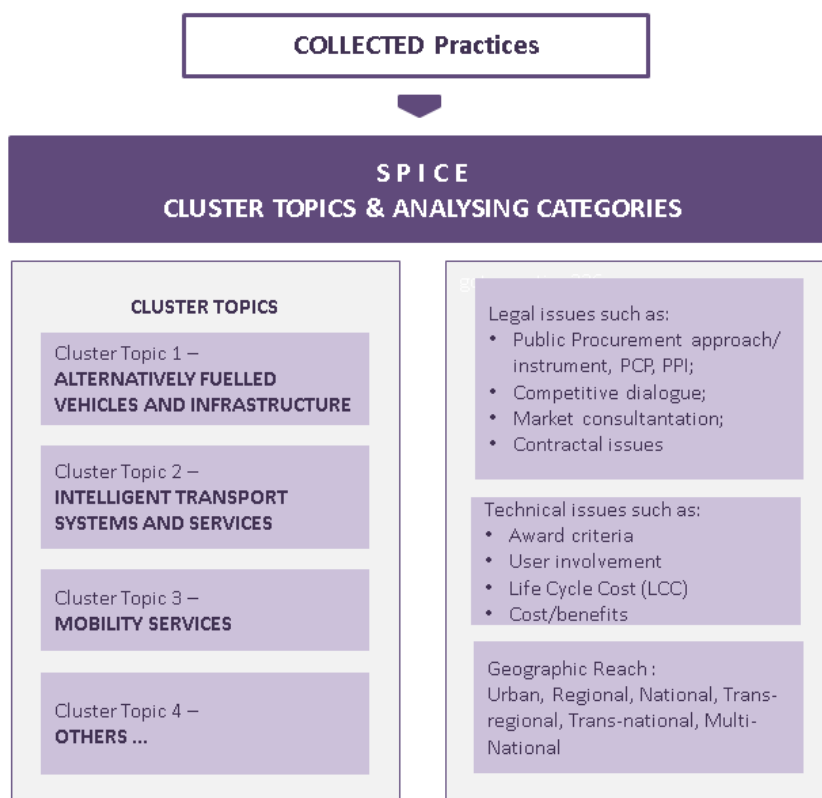


Figure 1: Cluster Topics & Analysing Categories

Since the start of the project in September 2016, the SPICE consortium has been reflecting on these cluster topics and analysing categories. As the cluster topics are quite wide, covering all different kinds of mobility and transportation sectors, it was decided that a minor revision was needed. The current deliverable is used to describe the topics and categories in more detail, adding some subtopics like e.g. the procurement of fleets, which have not been mentioned at the proposal stage. Also the aim of cluster topic 4 “others” is explained.

The technical and legal issues are explained in chapter 3. Based on the interviews for best practice cases SPICE elaborated a list of analysing criteria.

Recommendations (WP3) will be developed for each cluster topic. The recommendations will address both legal and technical issues. When all recommendations are developed, key elements from each recommendation will be summarised in one document and will be used to form the SPICE white paper.

As described in D.2.1 “specification of required input”, not only the case studies will be the basis for analysis and recommendations. SPICE will do additional interviews about the major barriers of procurement and talk to experts using the SPICE stakeholder group.

## 2. Sorting Criteria – The Cluster Topics

In this chapter the four cluster topics are described in more detail.

### 2.1 Cluster Topics

#### Cluster Topic 1: Alternatively fuelled vehicles and infrastructure

Within this cluster, the following procurements and topics are covered:

1.) Alternatively fuelled vehicles: these vehicles are defined as any vehicle that is designed to “operate on an alternative fuel (e.g., compressed natural gas, methane blend, electricity). As defined by the Energy Policy Act, any dedicated, flexible-fuel, or dual-fuel vehicle designed to operate on at least one alternative fuel. Therefore “an alternative fuel vehicle is a vehicle that runs on a fuel other than traditional petroleum fuels (petrol or diesel fuel); and also refers to any technology of powering an engine that does not involve solely petroleum (e.g. electric car, hybrid electric vehicles, solar powered)”.<sup>1</sup>

SPICE is focusing on any alternative-fuel vehicle that has potential to reduce air pollution and improve energy efficiency, to address climate change issues. This covers all type of vehicles purchased by public procurers such as:

- Public transport vehicles
  - Busses
  - Tram
  - Tube
  - Train
  - Others
- Sharing or renting vehicles purchased by public procurers:

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<sup>1</sup> [http://en.openei.org/wiki/Definition:Alternative-fuel\\_vehicle](http://en.openei.org/wiki/Definition:Alternative-fuel_vehicle)

- Bikes
- Cars
- Busses
- Others
- logistics vehicles
- transport vehicles for disable and elderly when applicable
- Clean sustainable fleets

2.) Infrastructure adoptions: Often also small infrastructure adoptions are needed when procuring new systems; these needed adoptions are also covered by Cluster Topic 1. One example is charging infrastructure for electric vehicles.

### Cluster Topic 2: Intelligent transport systems and services

Within this cluster the following procurements and topics are covered:

1.) Intelligent Transport Systems: To define ITS SPICE is using the definition of the European Commission: "Intelligent Transport Systems (ITS) are advanced applications which without embodying intelligence as such aim to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated and 'smarter' use of transport networks. ITS integrate telecommunications, electronics and information technologies with transport engineering in order to plan, design, operate, maintain and manage transport systems."<sup>2</sup> These systems have potentials to reduce congestion and make transport safer, cleaner and more efficient such as traffic control systems, in-vehicle information supports, street lighting, intelligent parking payment;

The following table give some examples of ITS applications that are of high interest for cities and urban areas which fall under cluster topic 2 of the project<sup>3</sup>:

Main categories of ITS applications	Subcategories relevant for cities		
Demand and access management	Restricted access	Road pricing	
Traffic management and control	Lane Management	Public transport priority	Signal control
Travel and traffic information	Parking guidance	Travel and traffic information	

<sup>2</sup> Directive 2010/40/EU or the European Parliament and of the Council of 7 July 2010, Article 3 and 4

<sup>3</sup> These categories have been identified by CiViTAS 2015, Policy Note: Intelligent Transport Systems and traffic management in urban areas, p. 11

### Cluster Topic 3: Mobility services

This cluster covers all kind of mobility services which have potentials to reduce congestion and pollution and also improve social inclusion, including Mobility as a Service (MaaS) as well as conventional public transport services, ticketing and traveller information services;

Mobility services which are based on ITS fit in both Cluster Topic 2 and 3.

1.) Conventional mobility services are for example:

- Public transport services
- Bike sharing services
- Ticketing services
- Travel information services
- And such like

2.) Mobility as a Service (MaaS) is defined as:

“Multimodal and sustainable mobility services addressing customers’ transport needs by integrating planning and payment on a one-stop-shop principle”<sup>4</sup>. Characteristics of MaaS are:

- Flexible, efficient, user-oriented and ecological mobility services
- Utilizes technology
  - Exploitation of mobile devices (also for payment)
- Uses one-stop-shop principle (MaaS operator)
  - Combines multiple modes of transport
  - Different services under one fare and on the same ticket
  - Integrated routing, booking and payment
- Might combine passenger and freight transport operations
  - Especially urban delivery and distribution in rural areas
- Could cover various rental and sharing services
- Multimodal route planners

### Cluster Topic 4: Others:

During the proposal stage SPICE planned to use this cluster for all “relevant topics that do not fall into the categories above”. At this stage of the project the consortium and the SPICE stakeholders discussed what kind of cases will be clustered under this topic. During the interviews and the process of selecting interesting cases SPICE partners did find examples that do not fit into the field of transport, but are of great value for the later on analysis done in WP3. These include all kind of innovative public procurement where a special procedure like competitive dialogue and similar has been used. The learnings from using different procedures and instruments can be adopted for the transport and mobility sector. If there are interesting cases from outside Europe they may also be grouped here. The SPICE Stakeholders will select good best practice examples of interest together with the SPICE consortium according to their needs.

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<sup>4</sup> Definiton provided by the MaaSifE Projekt



## 2.2 Other sorting criteria and categories for the online case studies:

Other sorting criteria may be a help to an easier search for information to support public procurers. Such criteria are:

### 1.) Location of the procurement:

The case studies collected by SPICE will be sortable by the category Member State. A digital map is provided on [www.spice-project.eu](http://www.spice-project.eu) supporting the representation of the location of the cases:



**Figure 2: SPICE best practice map**

In the original proposal of cluster categories and analysing criteria the geographical reach was listed as analysing criteria. This has been changed. Within the case description that will be provided it will be explained where the procurement took place. But the category location better fits within the searching and clustering categories. “Joint procurement” will on the other hand be legal analysing criteria, as using joint procurement is creating many legal challenges (special contracts, different procurement laws etc.).

2.) Time of the procurement: in order to filter if the public procurement took place recently or not the date of the procurement is also a searching criteria.

3.) Type of document: there will be a differentiation between tender documents and full best practice case descriptions provided by SPICE.

4.) A key word search is planned if needed. It depends on the collected documents and the number of them provided to see if such a keyword search will be needed.

### 3. Analysing Criteria of SPICE

The analysing criteria of SPICE will be used for all the cases and all other information collected throughout the project. The focus of the analysis will be set by the SPICE stakeholders and has to stay flexible to exactly support their needs and interests. Generally 3 different kinds of issues will be analysed:



#### 3.1 Legal issues

The legal analysis will be based on procurement law issues within the EU-procurement law, i.e. the procurement directives (2014/24/EU – the procurement directive – and 2014/23/EU – the utilities directive). In procurement legal challenges encountered, including procurement containing (potential) innovative solutions, seldom depends on the objective of the procurement project (cars, roads, technology etc.). The legal challenges are often common challenges in any procurement project, ignited by complex and not always transparent legislation. SPICE has therefor decided that the legal analysis will not be based on the four cluster topics but on a more general systematic approach, and – to the extent possible – exemplified by cases and input collected in WP2 and during WP4.

The legal analysis will be based on a systematisation of the legal approaches used to innovation procurement. They are divided in the following chapters, analysing criteria and sub-criteria.

1. Procurement of innovation – legal definition
  - Procurement of R&D ctr. Innovation
2. Procurement procedures
  - Overview (the procurement procedures according to the EU procurement directives)
  - Procedures supporting innovation procurement
    - competitive dialogue
    - innovation partnership
3. Procurement approaches
  - Introduction (the spectre of approaches, e.g. market consultation, functionally bases demands, variants, use of TCO)
  - Market consultation and preparation
  - Joint procurement

4. Contract models and terms supporting innovation
  - Contract models – partnership design (Public-Private-Partnership, the Alliance Model)
  - Contract terms supporting innovation
    - Trial/test periods, diversion of risk, agile contracts etc.

5. Status of the Member States (of the consortium partners) implementations of the new procurement directives<sup>5</sup>.

The new procurement directives should have been implemented in national legislation by April 18, 2016. However, not all Member States have yet implemented the new directives and thus the new or improved instruments for supporting innovation, e.g. wider access to use competitive dialogue, competitive procedure with negotiation and innovation partnership. Therefore, the implementation of the new directives may have an impact on the procuring authority's ability to procure innovative products and services. SPICE wish to give a short status on the consortium Member States implementation of the new directives by the end of SPICE.

### 3.2 Technical Issues

The technical analysis looks for different technical issues specifically related to innovation procurement and, where relevant, their related legal challenges (technical/legal issues).

Some technical issues have already been identified by the SPICE consortium via the first interviews and best practice collection:

- 1.) User Integration: this is a special goal for many cities, as they want to integrate the citizens e.g. in the needs definition process of the tender. How can this be solved within an innovative procurement framework?
- 2.) Sustainability: There is a rising market demand for sustainable urban mobility solution, but finding a solution how to integrate this goal in the tender documents did prove to be difficult. How does one find criteria to measure sustainability? Which options should be used?
- 3.) Lack of marked availability of needed alternative-fuel vehicles (Cluster Topic 1): in some fields like cluster topic 1 of SPICE many cases of public procurement of alternative-fuel vehicles exist. But there is another challenge: often vehicles that have the size and fulfil the functional requirements the public procurer looks for are not available on the marked. Which procedures could trigger the marked to invest in the deployment of such vehicles, which fulfil the needs? What are the best options of integrating some research, piloting and testing element into the procurement process?
- 4.) Difficulty how to guarantee that the new innovative solution procured will be state of the art one year later.
- 5.) Interoperability with the existing system.
- 6.) Lack of harmonised standards.

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<sup>5</sup> [Directive 2014/24/EU on public procurement](#)  
[Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors](#)  
[Directive 2014/23/EU on the award of concession contracts \(More information\)](#)

7.) Supplier involvement already before the tender: Especially when a solution is new public procurers often have difficulties to formulate a tender document that fits to the requirements or do not even know about possibilities that could solve their needs. In such cases a dialogue with suppliers is needed.

During the technical analysis, the available best practices, problems encountered and other information collected will be scanned to identify also other technical issues that are relevant to consider in more detail. It is difficult to define beforehand the issues that will be found, therefore no structure is given here for the technical issues.

Per technical issue all best practices and problem encountered will be considered, irrespectively from the cluster topics. A best practice of a procurement from a certain cluster topic can well be of interest for another cluster topic (cross fertilization). Only when this analysis per technical issue has been done, it will be clear what the best structure will be to report on this and to provide the recommendations based on these analyses.

### **3.3 Policy issues and Framework**

Although most procurement issues are technical or legal SPICE will also have a look at possible policy issues and framework conditions that might foster the use of innovative procurement approaches, such as awarding criteria that support innovation and/or the procurement of innovative product and services in general.

During the interview phase the public procurers were also asked why they planned to procure this solution and if there is any innovative procurement strategy, law or action plan of the member state/region of organisation, which supports or urges innovative procurement.

SPICE will analyse this policy issues using the following sub-criteria:

- 1.) Policy Goals of the area: this can be zero emission goals, environmental target, innovative procurement targets like a percentage of innovation that has to be procured and similar.
- 2.) Underlying public needs: what was the need behind the procurement?
- 3.) Innovative Framework conditions: this can be innovation agencies, national public procurement agencies, a governance system that allows a lot of exchange between suppliers and public authorities, and similar...

## 4. Summary and conclusions

In preparation of the SPICE analyses of collected the best practices and problems encountered, the previous chapters give a first structure for the sorting criteria and for the analysing criteria. Depending on the outcome of the analyses, adaptations might be needed to this structure.

Sorting criteria will be:

- the cluster topics: alternatively fuelled vehicles and infrastructure, ITS, MaaS and others;
- location of procurement;
- time of procurement;
- possibly also a key word search.

Analysis criteria and sub-criteria are:

- legal issues:
  - o procurement of innovation;
  - o procurement procedures;
  - o procurement approaches;
  - o contract models and terms;
  - o status on implementation of directives.
- technical issues;
  - o no further sub-structure yet, this will result from the analyses.
- policy issues and framework:
  - o policy goals of the area;
  - o underlying public needs;
  - o innovative framework conditions.