

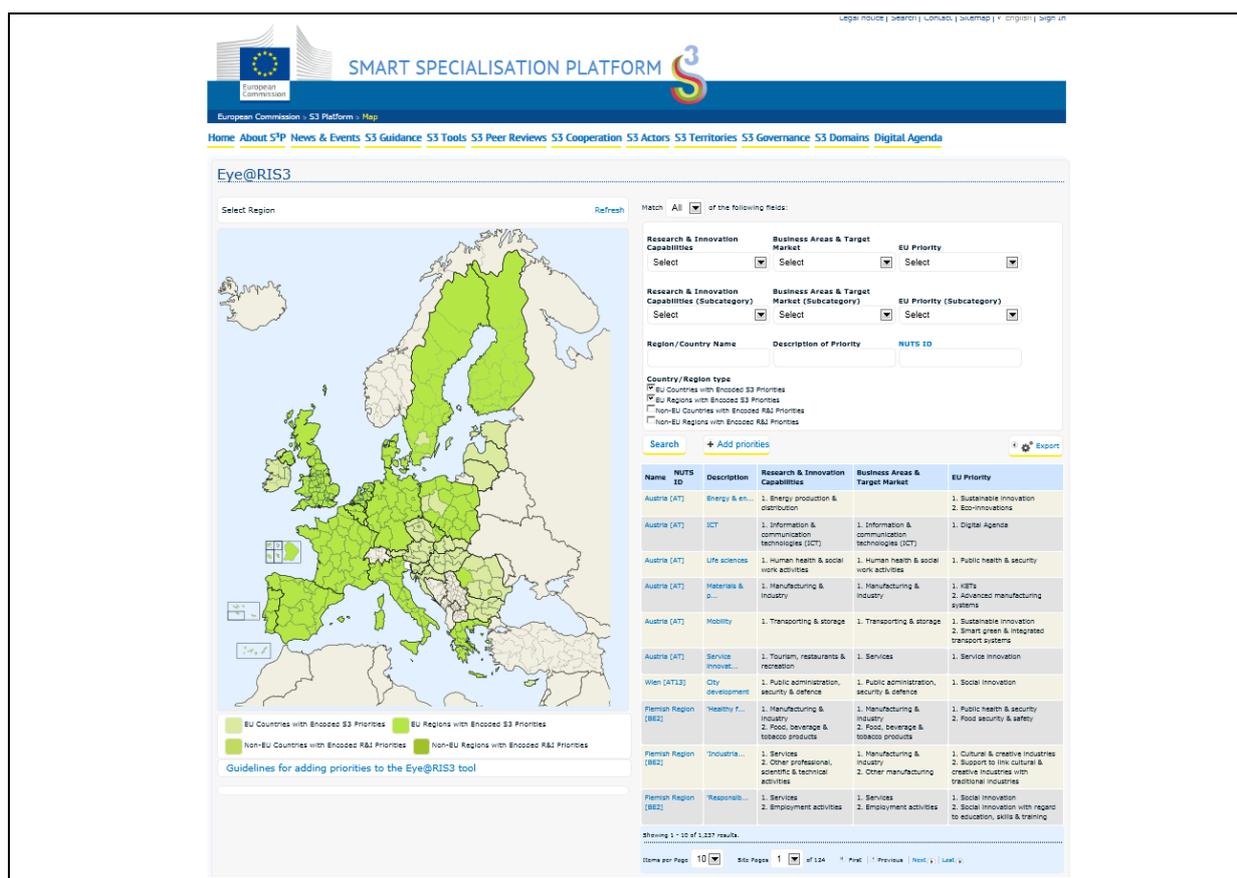
# Guide to the Eye@RIS3?

This document will give you guidance on how to use the Eye@RIS3 database. The first section gives an introduction to the tool and the ideas behind its development. Chapter two explains where the data comes from and the ideas behind how it is structured. Chapter three provides instructions on how to search data in the tool and how one can upload data to it. The appendices contain lists of all categories available in the database.

## 1. Introduction to the Eye@RIS3

In order to support Europe's region in developing RIS3s the European Commission has set up the Smart Specialisation Platform (S3P). One important tool developed by the S3P to support the regions is the Eye@RIS3 database.<sup>1</sup> This is a database on priorities in RIS3s, as these have been indicated by regions and member states. The data comes from a number of sources, such as the regions and countries themselves filling out the database, but also by S3P personal finding data in Operational Programmes and RIS3 documents and similar national and regional innovation strategies.

Figure 1: Eye@RIS3 web interface



The Eye@RIS3 is an interactive online tool intended to give an overview of the envisaged RIS3 priorities of regions/countries in Europe. By updating the online database with regional/national priorities regions /countries can gain visibility and have an opportunity to be recognised by potential

<sup>1</sup> <http://s3platform.jrc.ec.europa.eu/map>

counterparts looking for collaboration on a certain topic (for European Innovation Partnerships, Horizon2020 projects, expansion of the EIT Knowledge and Innovation Communities, INTERREG projects, thematic workshops, etc.). The online tool also allows making comparisons of RIS3 specialisations across Europe for a better understanding of how other regions and countries are developing their RIS3 and possibly identify competitive niches.

The Eye@RIS3 has been developed as a tool to help strategy development rather than a source of statistical data. Regions are encouraged to introduce/update input in the database, which will produce a realistic map of the process of RIS3 development.

Currently (5<sup>th</sup> of December 2014) the data consists of 1307 priorities from 22 EU countries, 176 EU regions and 16 non EU countries and 18 non-EU regions. In average the 218 regions or countries have 6 priorities, with the region that has most total number of priorities have 17.

This is around 65 % of Europe's total of 271 NUTS2 regions, which is the main level for participation in the S3 Platform (even though there are exceptions to this). At the same time in countries where there is no regional data there is national data, to the extent that there is data for almost all of the EU28 territory, with the exception of three Italian regions.

## **2. The Eye@RIS3 data**

At the centre of the database are the regional priorities. Each priority consists of a setup of six main categories, i) name of region or member state, ii) name of priority - description, iii), research and innovation capability, iv) business area and target market, v) EU Priority and vi) Data source. Every region and country can fill out as many priorities as there are in their RIS3s.

The data on region and countries follows the Eurostat nomenclature on NUTs regions. In the database there are data on NUTS1, 2 and 3 levels included, as Europe differs with regard to at what level administrative responsibilities lay. However, NUTS2 is by far the most common category.

Each priority also consists of descriptive or name data. This is a brief text that normally starts with the name of the priority and then is followed by a bit of descriptive text that further explains what the prioritised area is. This field is possibly the most important to fill out, as this is the data category that can best describe the area of activity. From the S3 platforms point of view, this category should always be filled in.

Many regional/national priorities are not confined to a single traditional sector, but are merging cross-sector activities and/or specialised niches. Furthermore many priorities connect certain regional/national capabilities with the EU objectives. In order to take this in to account each priority is described through three main categories (with subcategories for more specificity). The idea behind these three categories are to capture both the regional research and innovation capabilities, the business areas and target market and top down prioritised policy objectives envisioned as departure point. Out of these categories the first two categories and the higher level of granularity are almost always being filled out (all categories and all levels do not have to be filled out). The approach cannot create perfect matches with all the ideas of the regions, but serves the purpose of an easy to use tool to give initial indications of where regions are aiming with their priorities. The entire list of these categories can be found in Appendices 1 and 2.

In some cases a region intend to work with a number of traditional sectors in a cross sector activity, where it may also be that the regional capabilities and target markets are the same, or many. Here the principal is to try to choose the more logical selections and to compensate for loss of data by describing the priority in more detail in the free text category "Name/description".

The development of the two first categories is based on Nace 1 and Nace 2 codes and OECD categories, but with some modification. For the prioritised policy area categories the S3 Platform has created a list of 10 top areas and around 6 subcategories, based on areas emphasised in EU2020 and Innovation Union, gathering Grand Challenges and prioritised policy areas like Creative and Cultural Industries, KETs and Social Innovation, Digital Agenda.<sup>2</sup> The list of categories has also increased and been modified in the work with the database to better fit with what the regions are prioritising.

The database also contains information on what the source of the data is, when the data is from and at what time it was inserted in the database.

With regard to the data in the database there are a number of caveats. First of all, the data in the database at this point is not developed and confirmed for true statistical analysis, but have been generated in order to stimulate contacts between regions, so there might be imbalances in the size of statistical categories and completeness with regard to covering economic activities.

Furthermore, some of the data comes from sources that might be dated, and much can have happened in this time period. It may be that priorities have changed completely or become more refined, as the RIS3 is a process of stakeholder involvement to develop specific areas. However, the database is continuously being updated with the ambition to have as updated information as possible. With the finalisation of negotiations of partnership Agreements and Operational programmes the situation is improving. ,

The priorities indicated may also due to presentations and names given be slightly misinterpreted, and/or broader and more encompassing than envisaged in order to give more space for future activities. Regions have also been encouraged to go beyond mere sectors; this is also the reason for the database to have the option to register multi dimension priorities. Therefor it is not straightforward to do sectoral comparisons.

### **3. How to operate the Eye@RIS3**

The Eye@RIS3 is operated through a web interface that allows users to access the database over the Internet, both to search other regions priorities and to upload data. In this section we will first describe how to search the database and then also how to upload data to it. The Eye@RIS3 main page is shown in Figure 1 and can be accessed through <http://s3platform.jrc.ec.europa.eu/map>

#### **3.1 Searching the Eye@RIS3 database**

In the web interface for searching there are a number of drop-down menus and search boxes that allows a user to search among regional priorities. By using the Eye@RIS3 tool users can identify regions that have self-identified various RIS3 priorities, e.g. agro-food or ICT, etc. The outcome of

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<sup>2</sup> For the entire list of categories please see the appendices.

the search depends on which filters are being used, capabilities, target markets and policy priorities or by various keywords in free text accompanying the RIS3 priority descriptions.

The user can search for a specific region or member states priorities, by entering the name of the region or MS in the search filter called “Region/Country Name”, one can also enter the NUTS ID in the search box for that, see Figure 2.

The regions are also sorted along the lines of being EU or non-EU region or Member State. The data can be selected to include only some of these categories or all.

The regions are stored with the name that they have in the NUTS classification, but are not sensitive for language specific characters, i.e. one need to search for Toscana to find Tuscany, but can search for Skane without writing Skåne. Another way to find a regions priorities is to double click in the map on the specific region or MS, which will take the user to a regional page, where priorities are listed, background info on the region provided and contact data to regional representatives.

The user can also search through the free text field of “Description of Priority”, see figure 2. Here one can write key words or parts of words and the database will list all priorities with this text fragment in the description and then press the search button. One should be aware that users can be using slightly denominations and for example some have put in data as Bio-technology, others as Biotechnology. So one should sometimes do additional searches or in this case one can also search for only bio that will capture both spellings.

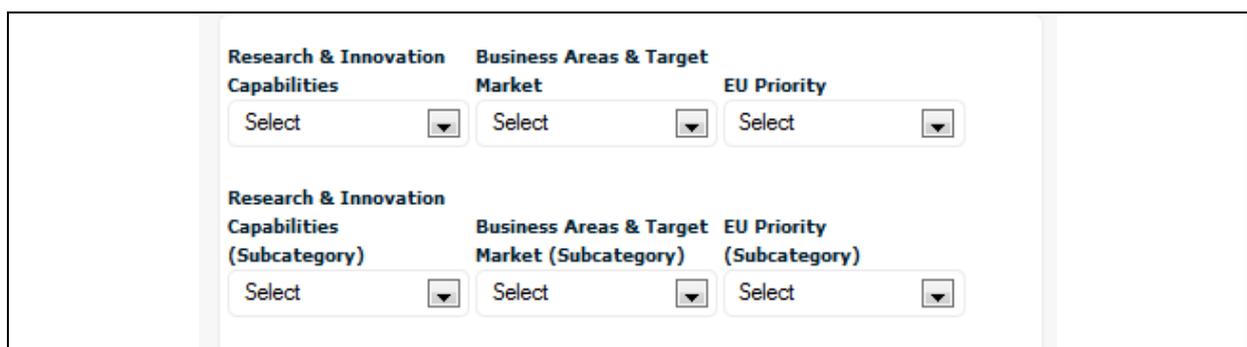
**Figure 2: Search Boxes for Region/Country Name, NUTS ID and Description of Priority**



The image shows a search interface with three input fields. The first field is labeled "Region/Country Name", the second "Description of Priority", and the third "NUTS ID". The "NUTS ID" field contains the number "3".

Another way of finding priorities is to filter the database through the different categories of research and innovation capability, business area and target market, and EU Priority. This can be done by choosing categories and sub categories (to increase preciseness) from a set of drop down menus, see Figure 3. One can use many categories or only one. One can do a search of all or any, the first means that it will do a cross search so that it is only the priorities that are connected to all the categories indicated by the drop down menus and text field that will be listed. Whereas the any option will list all categories that are indicated by any of the search options indicated.

**Figure 3: Drop down menus to filter searches**

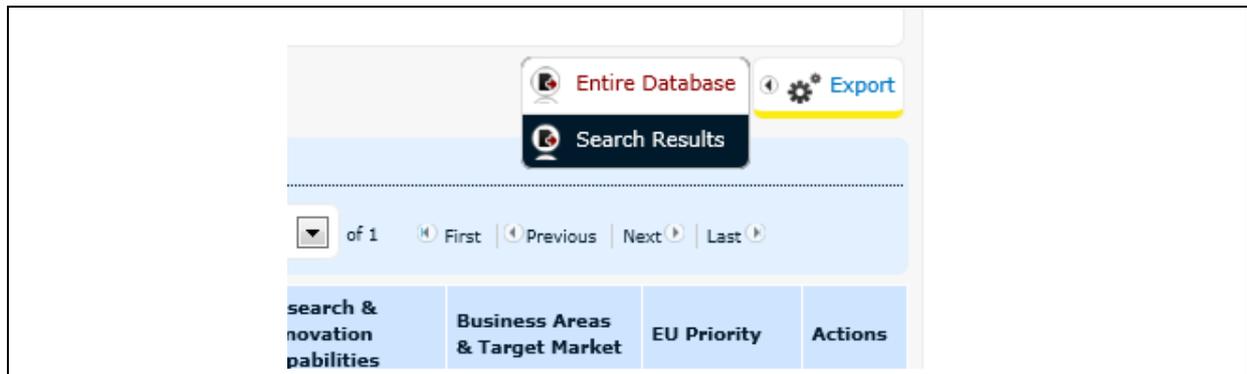


The image shows two rows of filter menus. The first row has three dropdown menus: "Research & Innovation Capabilities", "Business Areas & Target Market", and "EU Priority". The second row has three dropdown menus: "Research & Innovation Capabilities (Subcategory)", "Business Areas & Target Market (Subcategory)", and "EU Priority (Subcategory)".

The results from the searches are displayed in a list in alphabetical order of country codes (e.g. AT, BE, BG, CY, CZ etc.) starting with the national RIS3 priorities, where available, and then regional priorities by the appropriate NUTS ID code (e.g. PL, PL11, PL12, PL21, PL31 etc.).

The user can also export the search as an excel file, as well as the entire database by pressing the export button and then choose either “Entire database” or “ Search result”, see Figure 4.

**Figure 4: Export data**



While the database cannot create perfect matches with all the priorities as identified by the regions/countries, it serves as a user friendly tool to provide an indication of where regions/countries are considering focusing their investments in the coming years.

### 3.2 Uploading data to the Eye@RIS3

Regions/countries are invited to introduce and regularly update their inputs in the database, which will in turn produce a realistic map of the RIS3 priorities in Europe as an output of the developing RIS3 strategies. The overall quality of the database reflects the quality and precision of the RIS3 priorities entered for individual regions and countries.

As mentioned in section 2. each data entry consists of six parts, i) region or member state, ii) Description, iii), research and innovation capability, iv) business area and target market, v) EU Priority and vi) Data source.

Before proceeding with the section by section entries, we would like to give a brief introduction on each of the three main filtering categories: Capabilities, Target Markets and EU Priorities. The logic behind the three categories is the following:

- which research and innovation capability will be used for the priority activities;
- which business area and target market will be addressed;
- and EU priorities: does the priority connect to any EU objectives?

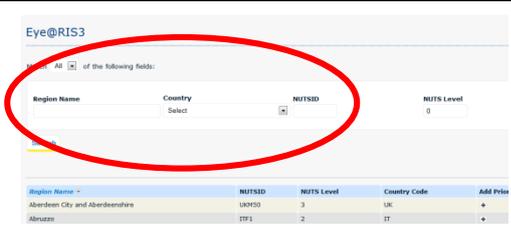
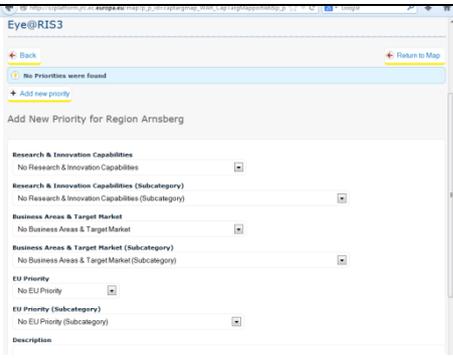
Many regional/national priorities are not confined to a single traditional sector, but are merging cross-sector activities and/or specialised niches. Furthermore many priorities connect certain regional/national capabilities with the EU objectives. In order to take this in to account each priority shall be described through three main categories (with subcategories for more specificity) and accompanied by a short text description.

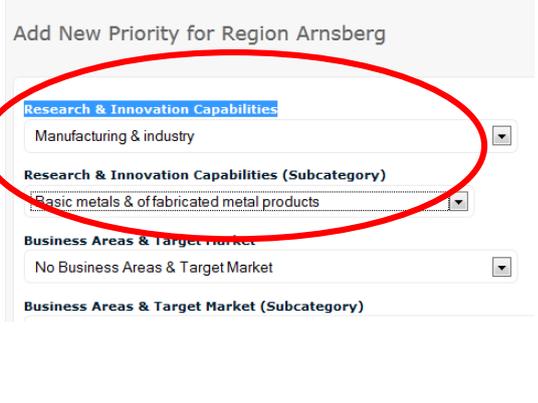
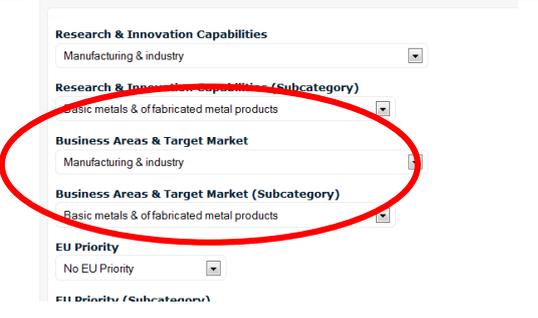
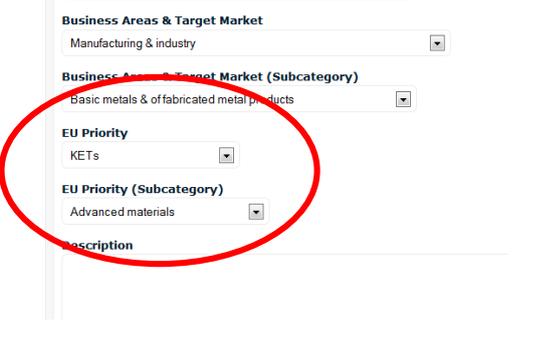
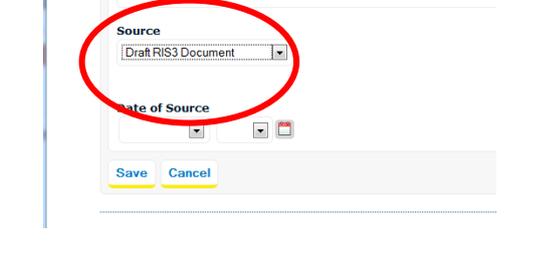
The Eye@RIS3 search mechanism takes into consideration all the words in the free text, so that depending on the quality of detailed information on the specific niches the searches can be fairly specific. In cases where regional capabilities and target markets are the same, this can be noted in the selection. Furthermore it is not always entirely evident which are the capabilities and which are target markets, thus the system allows choosing both.

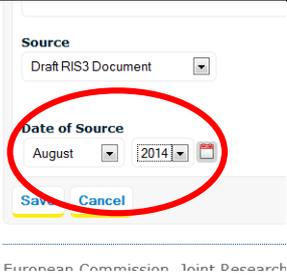
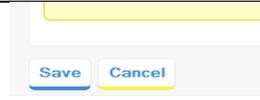
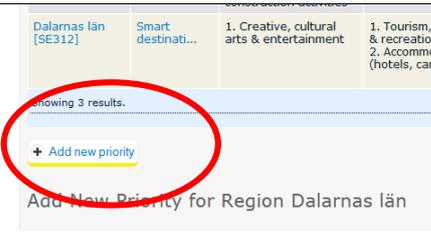
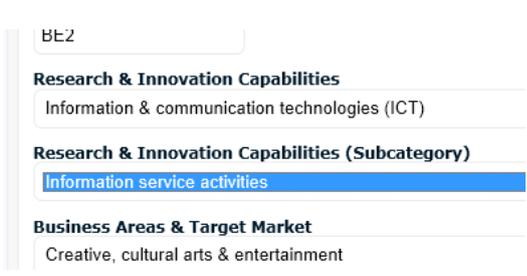
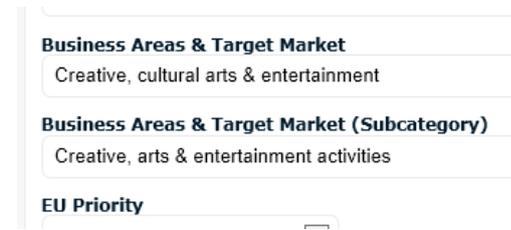
Please note that not all the fields and sub-categories are required to be filled-in if your priority is aimed to remain at a more general level. In some cases a region/country is aiming to specialise at a higher category level which is more general than the activities described by the more specific subcategories. Often there are also priorities that do not connect to an EU objective.

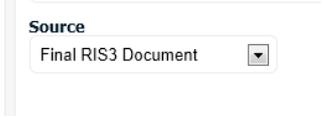
To upload information on your regional/national RIS3 priorities, please follow the following steps.

**Figure 4: Stepwise guide to upload data**

<p><b>Step 1.</b> Click the button - Add Priorities</p>	 <p>The screenshot shows a search interface with a 'Search' button and a '+ Add priorities' button circled in red. Below the buttons is a table with columns: Name, NUTS ID, Description, and Research &amp; Innovation Capabilities. A row is visible for 'Wien [AT13]' with 'City' as the description and '1. Public' as the capability.</p>
<p><b>Step 2.</b> Select your region/country, either by writing the name in the field of Region Name, or using the drop down menu. Make sure to choose the right NUTS level for your region. By selecting your country all regions in your country will appear on a list below.</p>	 <p>The screenshot shows the 'Region Name' field circled in red. Below it is a table with columns: Region Name, NUTS ID, NUTS Level, and Country Code. A row is visible for 'Aberdeen City and Aberdeenshire' with NUTS ID 'UKM50', NUTS Level '3', and Country Code 'UK'.</p>
<p><b>Step 3.</b> Then click the button "Add Priorities" at the right hand side of the text table. Please make sure that you click on the row corresponding to the region/country you want to add data for.</p>	 <p>The screenshot shows a table with columns: NUTS Level, Country Code, and Add Priorities. A row is visible for NUTS Level '3' and Country Code 'UK' with the 'Add Priorities' button circled in red.</p>
<p><b>Step 4.</b> You should now be on your regional page, where you can start filling out the priorities.</p>	 <p>The screenshot shows the 'Add New Priority for Region Arnsberg' form. It includes fields for: Research &amp; Innovation Capabilities, Research &amp; Innovation Capabilities (Subcategory), Business Areas &amp; Target Market, Business Areas &amp; Target Market (Subcategory), EU Priority, EU Priority (Subcategory), and Description.</p>

<p><b>Step 5.</b> The first step is to indicate what kind of regional Research &amp; Innovation Capabilities will be used. Here we will use the example of Smart Steel from the region of Dalarna in Sweden. For Dalarna that would be Capabilities of “Manufacturing &amp; industry” and the subcategory of “Basic metals and of fabricated metal products”.</p>	
<p><b>Step 6.</b> Next, you indicate which kind of Business Areas &amp; Target Markets that will be addressed by that RIS3 priority? In the case Dalarna it is first “Manufacturing and industry” and the subcategory of “Basic metals and of fabricated metal products”.</p>	
<p><b>Step 7.</b> The next step is to indicate if the priority connects to any of the EU policy Objectives. In Dalarna this connects to Key Enabling Technologies (KETs) and the subcategory of Advanced Materials.</p>	
<p><b>Step 8.</b> After this, please write the name of the priority and a short description. For the region of Dalarna that would be “Smart steel - material, steel production and manufacturing of advanced products”.</p>	
<p><b>Step 9.</b> Next indicate what is the source of the information for the data, in our case a draft</p>	

<p><b>Step 10.</b> Next indicate from when is the data, i.e. what is the date of the source, in our case it is August 2014.</p>	
<p><b>Step 11.</b> When this is done press "Save".</p>	
<p><b>Step 12.</b> To continue adding priorities, click once more "Add new priority", at the top of the page.</p>	
<p><b>Step 13.</b> Next we will use the example of "Media and digitalisation of cultural heritage." from the Flemish region of Belgium. The first step is to indicate what kind of regional Research &amp; Innovation Capabilities will be used, for the Flemish region it is "Information &amp; Communication technologies (ICT)" and the "Information Service activities".</p>	
<p><b>Step 14.</b> Next, you indicate which kind of Business Areas &amp; Target Markets that will be addressed by that RIS3 priority? In the case of the Flemish region it is first "Creative, cultural arts &amp; entertainment" and the subcategory of "Creative, arts &amp; entertainment activities".</p>	
<p><b>Step 15.</b> The next step is to indicate if the priority connects to any of the EU policy Objectives. In the case of the Flemish region this connects to "Digital agenda" and the subcategory "New media &amp; easier access to cultural contents (e.g. heritage)".</p>	
<p><b>Step 16.</b> After this, please write the name of the priority and a short description. For the Flemish region that would be "Media and digitalisation of cultural heritage - sub</p>	

domain of 'Smart services' smart specialisation domain.”.	
<b>Step 17.</b> Next indicate, what the source of the information for the data is, in our case it is a Final RIS3 document.	
<b>Step 18.</b> Next indicate from when is the data, i.e. what is the date of the source, in our case it is February 2013.	
<b>Step 19.</b> When this is done press "Save".	

Please note that the entered RIS3 priorities will not be displayed on the website immediately as they need to be confirmed / approved by the database administrator. The S3 Platform foresees regular daily check-in of the Eye@RIS3 database entries, but it might exceptionally take a few days for a particular entry/update to be displayed on the website.

## Appendix 1: Categories and sub-categories for ‘research and innovation capabilities’ and ‘business areas and target markets’

<b>Agriculture, forestry and fishing</b>
Agricultural services
Crop and animal production, hunting and related service activities
Fishing and aquaculture
Forestry and logging
<b>Construction</b>
Construction of buildings
Civil engineering
Specialised construction activities
<b>Creative and cultural arts and entertainment</b>
Amusement and recreation activities
Creative, arts and entertainment activities
Gambling and betting activities
Libraries, archives, museums and other cultural activities
Sports activities
<b>Energy production and distribution</b>
Energy distribution
Power generation/renewable sources
<b>Human health and social work activities</b>
Human health activities (medical services)
Residential care activities
Social work activities without accommodation
<b>Information and communication technologies (ICT)</b>
Computer programming, consultancy and related activities
Information service activities
Motion picture, video and television programme production, sound recording and music publishing activities
Programming and broadcasting activities
Publishing activities
Telecommunications
<b>Manufacturing and industry</b>
Basic metals and of fabricated metal products
Basic pharmaceutical products and pharmaceutical preparations
Biotechnology
Chemicals and chemical products
Coke and refined petroleum products
Computer, electronic and optical products
Electrical equipment
Food, beverage and tobacco products
Furniture
Handicrafts
Machinery and equipment n.e.c.
Motor vehicles and other transport equipment

Nanotechnology and engineering
Printing and reproduction of recorded media
Repair and installation of machinery and equipment
Rubber and plastic products
Textiles, wearing apparel and leather and related products
Wood and paper (except for furniture)
Other manufacturing
Other non-metallic mineral products
<b>Mining and quarrying</b>
Extraction of crude petroleum and natural gas
Mining of coal and lignite
Mining of metal ores
Mining support service activities
Other mining and quarrying
<b>Public administration, security and defence</b>
Defence
Public administration, justice, judicial, public order, fire service and safety activities
<b>Services</b>
Activities auxiliary to financial services and insurance activities
Activities of head offices and management consultancy activities
Advertising and market research
Architectural and engineering activities, technical testing and analysis
Education
Employment activities
Financial service activities, except insurance and pension funding
Insurance, re-insurance and pension funding, except compulsory social security
Legal and accounting activities
Office administrative, office support and other business support activities
Rental and leasing activities
Scientific research and development
Security and investigation activities
Services to buildings and landscape activities
Travel agency, tour operator and other reservation service and related activities
Other professional, scientific and technical activities
<b>Tourism, restaurants and recreation</b>
Accommodation (hotels, camping)
Rental and leasing activities
Restaurants and catering industry
Travel agency, tour operator and other reservation service and related activities
<b>Transporting and storage</b>
Air transport and related services
Postal and courier activities
Rail transport and related services
Road transport and related services

Warehousing and support activities for transportation (logistics storage)
Water transport and related services
<b>Water supply, sewerage, waste management and remediation activities</b>
Sewerage
Waste collection, treatment and disposal activities, materials recovery and remediation activities
Water collection, treatment and supply
<b>Wholesale and retail trade</b>
Retail trade
Wholesale trade

## Appendix 2: Categories and sub-categories for EU priorities

<b>Aeronautics and space</b>
Aeronautics
Aeronautics and environment
Bio-fuels and energy efficiency
Remotely piloted aircrafts
Safety and security
Space
Transport and logistics
<b>Blue growth</b>
Aquaculture
Blue renewable energy
Coastal and maritime tourism
Fisheries
Marine biotechnology
Offshore mining, oil and gas
Shipbuilding and ship repair
Transport and logistics (including highways of the seas)
<b>Cultural and creative industries</b>
Development of regional cultural and creative industries
Support to link cultural and creative industries with traditional industries
<b>Digital Agenda</b>
Automated driverless vehicles
Basic broadband: coverage in rural areas
Cleaner environment and efficient energy networks (e.g. smart grids)
E-Commerce and SMEs online
e-Government (e.g. e-Procurement, e-Participation)
e-Health (e.g. healthy ageing)
e-Inclusion (e.g. e-Skills, e-Learning)
High speed broadband: last mile networks (>30Mbps)
High speed broadband: middle mile and backhaul
ICT trust, cyber security and network security
Intelligent inter-modal and sustainable urban areas (e.g. smart cities)
New media and easier access to cultural contents (e.g. heritage)
Open data and sharing of public sector information
<b>KETs</b>
Advanced manufacturing systems
Advanced materials
Industrial biotechnology
Micro-/nano-electronics
Nanotechnology
Photonics

<b>Nature and biodiversity</b>
Biodiversity
Ecotourism
Nature preservation
<b>Public health and security</b>
Ageing societies
Food security and safety
Public health and well-being
Public safety and pandemics
<b>Service innovation</b>
New or improved organisational models
New or improved service processes
New or improved service products (commodities or public services)
<b>Social innovation</b>
New organisational models and social relations that meet social needs
New products or services that meet social needs
Social innovation with regard to child care
Social innovation with regard to education, skills and training
Social innovation with regard to environmental issues
Social innovation with regard to health, well-being and elder care
Social innovation with regard to social inclusion
<b>Sustainable innovation</b>
Eco-innovations
High-speed rail-road transportation systems
Resource efficiency
Smart green and integrated transport systems
Sustainable agriculture
Sustainable energy and renewables
Sustainable land and water use
Sustainable production and consumption
Waste management
<b>Specific local policy priority</b>