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1. The Platform’s Public Website

1.1. Homepage

The demo website of INNOLAB Regional Innovation Ecosystem Platform is available in the following address:

http://platform.innolabs.org/

The Platform supports three languages: English, Ukrainian or Belarussian and Russian

1.2. Structure

- Home
- Organisations
  - Browse Organisations
  - Filter Organisations
- Visualisations
  - Bar Charts
1.3. Main Content Elements

Uses can add to the platform their organisation’s profile, as well as news and activities. The platform uses the submitted information in order to produce 5 types of visualisations: Bar Charts, Pie Charts, Scatter Plots, Word Cloud and the Node Map.

1.3.1. Organisations

Five types of Organisations can be included in the platform: 1) University Labs, 2) Product or Service Providers, 3) Commercial Organisations, 4) Technology Transfer Organisations and 4) Funding Agents. The requested information for each organisation are the following:

**Organisation Profile**

1. Name
2. Type of organisation
   A. University Lab
   B. Product or Service Provider
   C. Commercial Organisation
   D. Technology Transfer Organisation
   E. Funding
3. Description
4. Website (URL)
5. Legal form
   a. Public Institution
   b. Company
   c. Non-profit Organisation
6. Products and services
7. Category (Science or Sector)
8. Contact details
9. Region
10. Country

In order visualisations to be created the following data are required for each organization:

<table>
<thead>
<tr>
<th>Annual Performance</th>
<th>Collaboration per project or contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>One record per year (current or previous) containing:</td>
<td>1. Name of organisation (Automatically from the profile template)</td>
</tr>
</tbody>
</table>
The classification of the organisations is based on Thematic Areas (Annex 1) and Sectors (Annex 2).
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**Organisation Profile**

**URENIO Research**

The URBAN AND REGIONAL INNOVATION Research Lab (URENIO) is an interdisciplinairy laboratory for the promotion of research and supply of scientific and technological services. URENIO is part of the Department of Urban and Regional Planning in the Faculty of Engineering, Aristotle University of Thessaloniki (see URENIO Research).

The initial research focus of URENIO concerned the technological development of cities and regions and their ability to create and maintain supporting R&D, human skills, and innovation. Interest in the contribution of technological innovation to urban and regional development peaked after 1980 by economic geography research on industrial districts of central Italy, new industrial spaces in the west coast of the USA, and the planning of large infrastructures in Japan. These new forms of agglomeration brought the so-called series of phenomena with major impact on urban and regional development, such as the geographical concentration of innovative activities, the rise of R&D and innovation in competitiveness and growth, the drivers of innovative agglomerations, the two-barriers and streams in terms of knowledge and innovation. Since then, technology and innovation have been a standard point of reference in the development and planning of cities and regions.

**Products and services**

The current research emphasis, however, is on intelligent cities and regions. Intelligent cities are 3-layer systems of innovation, combining (1) innovative starters, (2) innovative technology learning institutions, and (3) digital innovation environments.

**Contact Details**

Website: [http://www.erenio.org](http://www.erenio.org)

Address: University Campus

City: Thessaloniki

Country: Greece

**Other Info**

Type of Organisation: University Lab

Legal Form: Public

Thematic Areas: Architecture

Status: EU - Education, V - Education

Posted on 01/01/2013 by justin w. - Rethinking the paradigm.

**Screenshot 3 – Organisation’s Details**

1. Select Thematic Area
2. Select Sector
3. Click “Search”

**Screenshot 4 – Filter Organisations by Thematic Area AND Sector**
Filter Organisations

Thematic Area
- Agricultural sciences
- Biochemistry
- Biological sciences
- Biotechnology
- Chemical engineering
- Chemistry
- Civil engineering
- Electrical and computer engineering
- Environmental engineering

Filter Organisations

Sector
- Agriculture, hunting and forestry
  - 01 - Agriculture, hunting and related service activities
  - 02 - Forestry, logging and related service activities
- Fishing
  - 05 - Fishing, operation of fish hatcheries and fish farms
- Mining and quarrying
  - 10 - Mining of coal and lignite; extraction of peat
  - 11 - Extraction of crude petroleum and natural gas
  - 12 - Mining of uranium and thorium ores
  - 13 - Mining of metal ores

Test Organisation

Test Organisation is mainly involved in competitive projects from the European R&D Framework Programmes (FP) and the Innovative Actions of the European Regional Development Fund. The Organisation took part in numerous projects funded by national and...

Architecture – 45: Construction, 61: Water transport

URENIO Research

The URBAN AND REGIONAL INNOVATION Research Unit (URENIO) is a university laboratory for the promotion of research and supply of scientific and technological services. URENIO is part of the Department of Urban and Regional Planning in the Faculty of Eng...

Architecture – 80: Education, M: Education

Screenshot 5 – Organisations in Thematic Area “Architecture”

Screenshot 6 - Organisations in Thematic Area “Architecture” and Sector “Education”
1.3.2. News and Activities

Each Organisation can post its news and activities.

**Handbook on cross border collaboration and living labs**

Handbook: This handbook on cross border collaboration and living labs is a valuable tool for anyone interested in the field of innovation and collaboration. It provides guidance on how to establish and maintain cross border collaborations, which can be beneficial for organisations looking to expand their reach and resources.

**News and Activities**

News and Activities: The platform offers a dedicated section for news and activities, where organisations can post updates and information. This is a great way to keep the community informed and engaged.

**On the Platform’s Public Website**

The Platform’s Public Website: The platform’s public website is accessible to everyone, allowing organisations to showcase their news and activities to a wider audience. This can help increase visibility and attract new members to the platform.

**Themes**

Themes: The platform offers various themes, such as development in science, technology, and innovation. These themes are organized into subcategories, making it easy for users to find relevant information.

**Categories**

Categories: The platform offers a range of categories, such as architecture, technology, and innovation management. These categories help users to filter and find the information they are looking for.

**Sectors**

Sectors: The platform offers various sectors, such as manufacturing and technology. These sectors help to group related news and activities, allowing users to see a broader picture of what is happening in specific industries.

**Open Data’s real value**

Open Data: Open data is a valuable asset that can enhance collaboration and innovation. It provides a wealth of information that can be used to create new solutions and improve existing ones.

**Report on cyber security and resilience of smart cities**

Report: The report on cyber security and resilience of smart cities is a comprehensive guide on how to protect against cyber threats. It provides strategies and best practices for ensuring the security and resilience of smart cities.

**Types of innovation**

Innovation Types: The platform offers various types of innovation, such as incremental innovation and disruptive innovation. These types help to categorize the innovations that are being shared on the platform.

**Types of collaboration & networking**

Collaboration Types: The platform offers various types of collaboration and networking, such as academic networks and industry collaboration. These types help to organize the collaboration and networking activities that are taking place on the platform.
The classification of the news and activities is based on Thematic Areas (Annex 1), Sectors (Annex 2), Themes, Categories, Target Organisations, Types of Innovation Referred and Type of Collaboration and Networking (Annex 3).
1.4. Intelligent Analytics Tools

The regional innovation ecosystem platform can display the information that is stored in it using a variety of visualisations. In that way, the user of the platform can quickly and efficiently view trends regarding the performance of the actors in the ecosystem, the main themes of their activities and the relationships between them. Each type of analysis is supported by one or more appropriate visualisations that help the user better understand the data of the platform and make inferences about the regional innovation ecosystem.

Five types of visualisations are included in the platform and are accessible from the main menu: bar charts, pie charts, scatter plots, word clouds, and node maps (Figure 1). Each type of visualisation is explained in more detail below.

1.4.1. Bar Charts

Bar charts can be used to visualise cumulative quantitative information regarding the actors of the platform. The actors are grouped based on their type (university labs, service providers, commercial enterprises, and funding agents). The user can select the year and the quantitative variable they wish to see information about, and the visualisation is automatically updated accordingly. The variables that can be selected are:

- The **number of projects** that the actors were a partner in
- The **number of staff** working for the actors
- The **amount of research grants** won (for university labs) or the **annual turnover** (for all other actor types)
- The **number of PhD students** (only for university labs), and
- The **number of publications** published (only for university labs)
In the example above, the user has selected to see the number of projects in which the actors of the platform were involved during the year 2013. Here the user can quickly identify exact values (for example, that university labs as a whole took part in 90 projects in 2013) and also make comparisons between actor types (seeing, in this case, that commercial enterprises and university labs were the most active actor types in 2013 with respect to the number of projects they were involved in).

1.4.2. Pie Charts

Pie charts show the same types of information as bar charts, but allow for even more efficient comparisons between the actor types. By hovering with the mouse over each area of the pie chart, the user can see the exact number that is represented by that area. In the example below (Figure 3), the user has selected to see the turnover/amount of research grants of the actors for the year 2013.

1.4.3. Scatter Plots

Scatter plots are able to show the same quantitative information as bar charts and pie charts, but have the advantage of displaying two variables at a time, in a two-dimensional plot. Using scatter plots, the
user can identify correlations between variables for the actors in the platform. Because they represent
actors as single points in the diagram, they are able to display information about each actor independently (in contrast to bar charts and pie charts that display cumulative information about each actor type). By hovering over each point, a tooltip with the name of the actor represented is displayed, along with the exact values of the two variables for that actor.

![Screenshot 13 - Scatter plot showing number of projects and number of staff for the actors in 2012](image)

In the example above (Figure 4), the user chose to display the number of projects and the number of staff for the actors in the year 2012. Here, the user can get an idea about the distribution of the actors in regard to the projects undertaken and the staff they employ, and one can also identify a possible positive correlation between those two variables (i.e. that actors employing more staff tend to participate in more projects).

### 1.4.4. Word Cloud

Word clouds show the most frequently used words in all the posts of the platform, or alternatively in posts belonging to a specific thematic area. Most frequently appearing words are shown in larger font, allowing the user to get a feeling about the main themes discussed in each thematic area, or, in other words, what the posts in that area are mostly about. The user selects the thematic area they want (or “All Thematic Areas” to select all of the thematic areas at once) and the relevant word cloud fills the rest of the page. In the example below, the user selected to see the word cloud for posts in the thematic area of “Electrical and computer engineering” (Figure 5). Some of the words that stand out in this area are “business”, “data” and “management”.

![INNOLAB Innovation Labs](image)
Node Map

The node map is able to visualise the relationships between the actors of the platform, i.e. which actors have collaborated with each other in projects during one or more years. In that way, it is easy to identify groups of actors working together, as well as which actors are connected the most with others. Using checkboxes, the user can select one or more years for which to display the relevant collaborations, and can also filter the results to show collaborations involving partners in Ukraine, Belarus, or either. The node map is updated automatically after every selection and the nodes can also be dragged around with the mouse, creating a more interactive view. In the example below, the user chose to show collaborations involving either Ukrainian or Belarusian partners that took place in 2013 and 2014 (Figure 6). In this case, one can identify eight groups of collaborators (one large group involving 11 actors, two middle-sized ones involving 6-7 actors, and five smaller ones involving 2-4 actors).
Screenshot 15 – Node map showing relationships between actors during 2013 and 2014
2. Website Administration

The authorized members can add content to the site by visiting the administration backend. The backend is available at: http://platform.innolabs.org/wp-admin/ or regional platform address/wp-admin

2.1. Login

The users should authenticate themselves by entering their username and password in the login screen. If someone can’t remember his password he should click on “Lost your password” link and follow the instructions.

![Login to the backend](attachment:image.png)

Screenshot 16 - Login to the backend

The platform supports various users’ roles. The most common are 1) Administrators, 2) Editors and 3) Authors. Each role has different capabilities on handling content and users.

2.2. Dashboard

After the successful login the user accesses the administration dashboard. The dashboard is the entry point to platform’s management. Depending on user’s role the dashboard offers different functionality.
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Screenshot 17 - Administration dashboard for Administrators

Screenshot 18 – Administration dashboard for Editors
2.3. Users’ Management

Administrators can Add / Remove or Edit Users.
2.4. Add / Edit Organisations

The user can see all Organisations by clicking “Organisations”.

Screenshot 21 – Add new user (Administrators)

Screenshot 22 – All Organisations (Administrators, Editors)
Administrators and Editors are able to edit Organisations’ profiles created by other users. Authors have access only to their Organisations. The users can edit an Organisation’s profile by clicking its name on the list.

Administrators, Editors and Authors can add new organisations by clicking “Add New Organisation”.

After filling the field with the requested information the user should click the “Save Draft” button in order the Organisation to be stored in the platform. By clicking “Publish” the Organisation is published on the platform’s website. The next step for the user is to add “Annual Records” and “Collaborations”
The user can create new Annual Records and Collaborations by clicking “Add New Annual Record” or “Add New Collaboration”.

**Screenshot 24 – Annual records and Collaborations are active after saving.**

**Screenshot 25 – Add annual record**

**Screenshot 26- Annual Records**
Screenshot 27 – Add Collaboration's details
Screenshot 28 – The Collaboration’s details
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Website Administration

Screenshot 29 – Organisations template completed
2.5. Add / Edit New and Activities

The user can see all News and Activities by clicking “Posts”.

Administrators and Editors are able to edit posts created by other users. Authors have access only to their post. The users can edit post by clicking its name on the list.

Administrators, Editors and Authors can add new posts by clicking “Add New”. 
The user save the post in the database by clicking “Save Draft”. When the post is completed he can publish it in the platform’s website by clicking “Publish”
2.6. Add / Edit Taxonomies

Administrators and Editors can add / edit the taxonomies (Thematic Areas, Sectors, Themes, Categories, Target Organisations, Types of Innovation Referred and Type of Collaboration and Networking) used for the classification of Organisations and Posts.
Screenshot 34 – Add / Edit Themes
ANNEX 1

Thematic Areas
Related to scientific fields

- Agricultural sciences
- Architecture
- Biochemistry
- Biological sciences
- Biotechnology
- Chemical engineering
- Chemistry
- Civil engineering
- Electrical and computer engineering
- Environmental engineering
- Forestry
- Geological sciences
- Information and communication technologies
- Mechanical engineering
- Medical sciences
- Metallurgy
- Organization and management of enterprises
- Other engineering
- Pharmaceutical sciences
- Physical sciences
- Regional and urban planning
- Veterinary sciences
ANNEX 2

Market Sectors

NACE Codes (http://goo.gl/EXyXIE)

Each region should select a subsection of the sectors according to its specialization

A – Agriculture, hunting and forestry
   — 01 – Agriculture, hunting and related service activities
   — 02 – Forestry, logging and related service activities

B – Fishing
   — 05 – Fishing, operation of fish hatcheries and fish farms

C – Mining and quarrying
   — 10 – Mining of coal and lignite; extraction of peat
   — 11 – Extraction of crude petroleum and natural gas
   — 12 – Mining of uranium and thorium ores
   — 13 – Mining of metal ores
   — 14 – Other mining and quarrying

D – Manufacturing
   — 15 – Manufacture of food products and beverages
   — 16 – Manufacture of tobacco products
   — 17 – Manufacture of textiles
   — 18 – Manufacture of wearing apparel; dressing and dyeing of fur
   — 19 – Tanning and dressing of leather
   — 20 – Manufacture of wood and of products of wood and cork, except furniture
   — 21 – Manufacture of pulp, paper and paper products
   — 22 – Publishing, printing and reproduction of recorded media
   — 23 – Manufacture of coke, refined petroleum products and nuclear fuel
   — 24 – Manufacture of chemicals and chemical products
   — 25 – Manufacture of rubber and plastic products
   — 26 – Manufacture of other non-metallic mineral products
   — 27 – Manufacture of basic metals
   — 28 – Manufacture of fabricated metal products, except machinery and equipment
   — 29 – Manufacture of machinery and equipment n.e.c.
   — 30 – Manufacture of office machinery and computers
   — 31 – Manufacture of electrical machinery and apparatus n.e.c
   — 32 – Manufacture of radio, television and communication equipment and apparatus
   — 33 – Manufacture of medical, precision and optical instruments, watches and clocks
   — 34 – Manufacture of motor vehicles, trailers and semi-trailers
   — 35 – Manufacture of other transport equipment
   — 36 – Manufacture of furniture; manufacturing n.e.c.
   — 37 – Recycling

E – Electricity, gas and water supply
   — 40 – Electricity, gas, steam and hot water supply
   — 41 – Collection, purification and distribution of water

F – Construction
   — 45 – Construction
### G – Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
- 50 – Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
- 51 – Wholesale trade and commission trade, except of motor vehicles and motorcycles
- 52 – Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods

### H – Hotels and restaurants
- 55 – Hotels and restaurants

### I – Transport, storage and communication
- 60 – Land transport; transport via pipelines
- 61 – Water transport
- 62 – Air transport
- 63 – Supporting and auxiliary transport activities; activities of travel agencies
- 64 – Post and telecommunications

### J – Financial intermediation
- 65 – Financial intermediation, except insurance and pension funding
- 66 – Insurance and pension funding, except compulsory social security
- 67 – Activities auxiliary to financial intermediation

### K – Real estate, renting and business activities
- 70 – Real estate activities
- 71 – Renting of machinery and equipment without operator and of personal and household goods
- 72 – Computer and related activities
- 73 – Research and development
- 74 – Other business activities

### L – Public administration and defense; compulsory social security
- 75 – Public administration and defense; compulsory social security

### M – Education
- 80 – Education

### N – Health and social work
- 85 – Health and social work

### O – Other community, social and personal service activities
- 90 – Sewage and refuse disposal, sanitation and similar activities
- 91 – Activities of membership organizations n.e.c.
- 92 – Recreational, cultural and sporting activities
- 93 – Other service activities

### P – Private households with employed persons
- 95 – Private households with employed persons

### Q – Extra-territorial organizations and bodies
- 99 – Extra-territorial organizations and bodies
ANNEX 3

Characterization of posts – Filters to be selected
The visitor can apply the filters and see only posts that meet these filters

1. THEME of the POST
   - Developments in science
   - Developments in technology
   - Innovation
   - Related to new market
   - Related to research commercialization
   - Related to collaboration
   - Related to academic spin-offs

2. CATEGORY
   - Science and technology categories
   - Market – NACE 2digit
   - Laboratory news
   - Company news

3. CONCERNS
   - University laboratories
   - Companies
   - Technology intermediary organizations
   - Funding organizations
   - Development support organizations
   - Other organizations

4. TYPE OF INNOVATION REFERRED
   - Technological innovation
   - Non technological innovation
   - Social innovation
   - User-driven innovation
   - Radical innovation to the world
   - Innovation to the market
   - Incremental innovation to the company

5. TYPE OF COLLABORATION AND NETWORKING
   - Academic network
   - University – Industry network
   - Virtual collaboration network
- Spin-off, spin-out activity
- Large multi-actor network
- Regional / national network
- International network