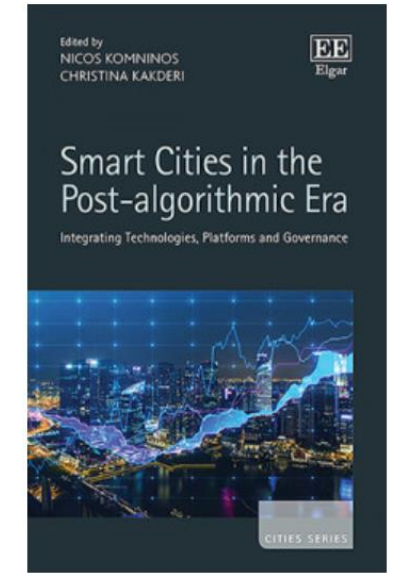
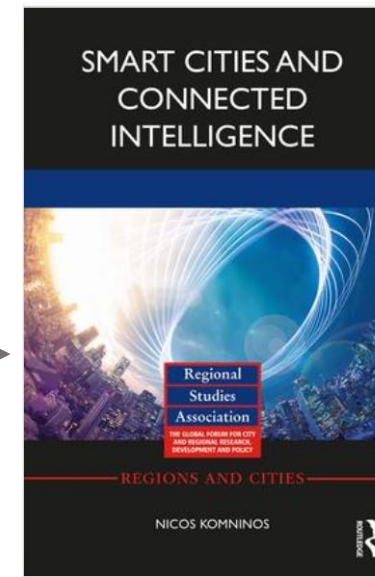
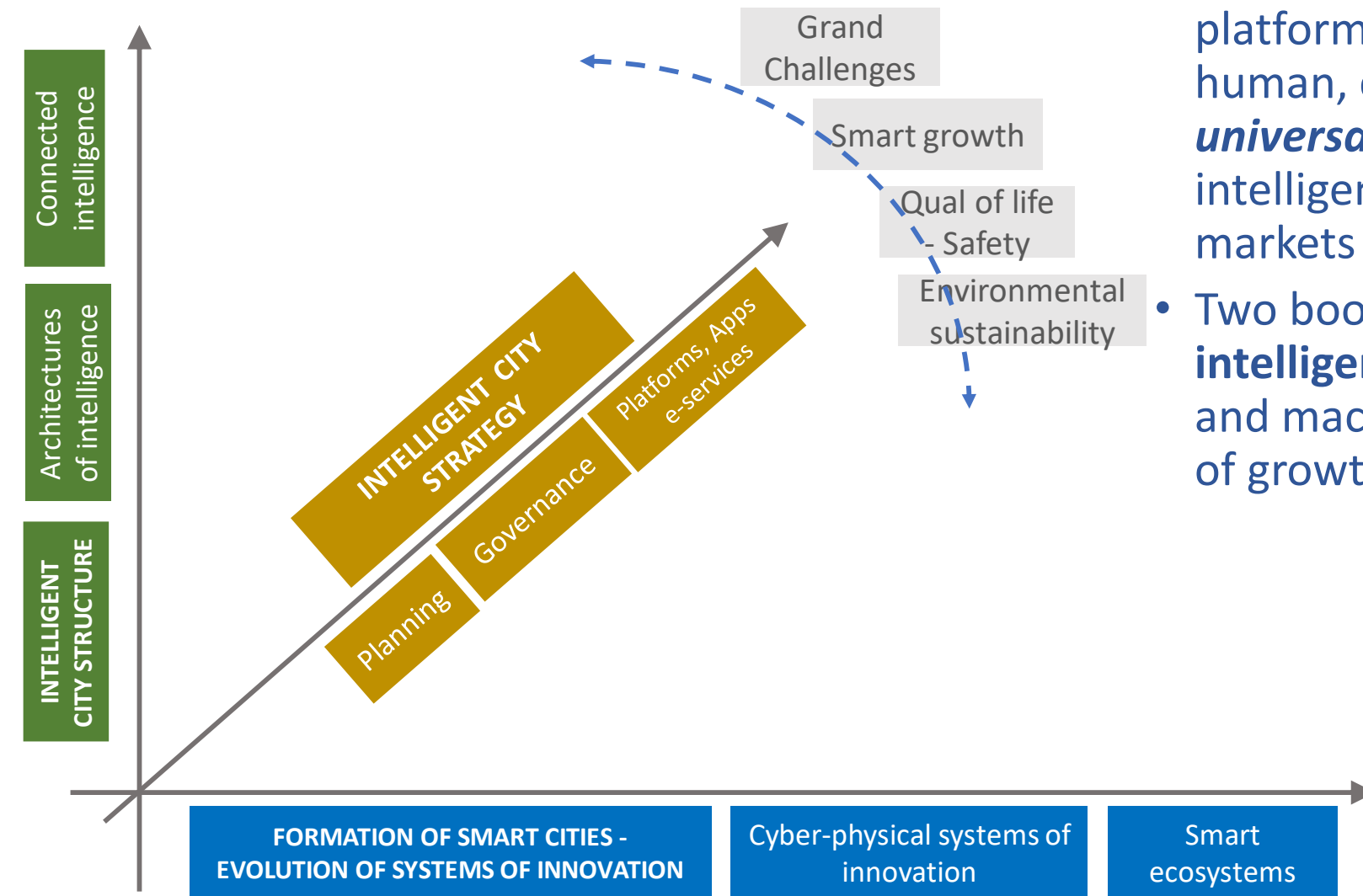


URENIO Research & INTELSPACE Technologies

# Research area (1): Intelligent cities / smart cities

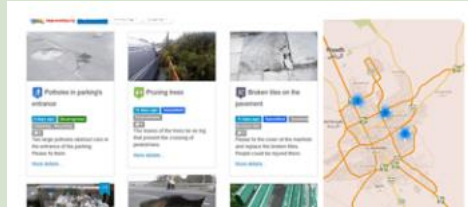
## Recent research:

- **Connected Intelligence Spaces:** ecosystems, platforms, applications enabling to connect human, collective, and machine intelligence; *universal architecture* of connected intelligence spaces across sectors, vertical markets and ecosystems
- Two books on **smart cities and connected intelligence:** Integration of human, collective, and machine intelligence to address challenges of growth, safety, and sustainability



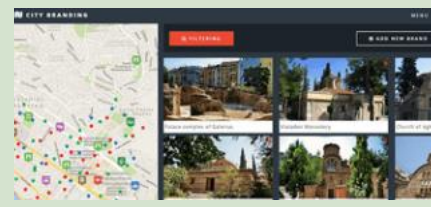
# PLATFORMS and applications for smart cities

## GOVERNANCE



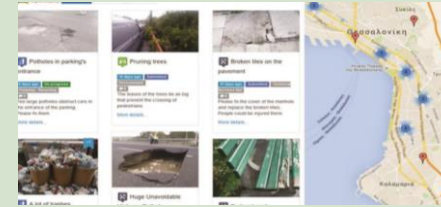
CITIZEN REQUEST

## ECONOMIC GROWTH



CITY BRANDING

## SAFETY



SAFETY REQUESTS

## ENVIRONMENT

**Intelligent City Software & Solutions**

ICOS website supports a community offering software and solutions in the field of intelligent cities / smart cities. The community will serve to showcase existing projects, provide a forum for discussing projects and processes, and guide developers' groups in applications' creation, contribution, and release.

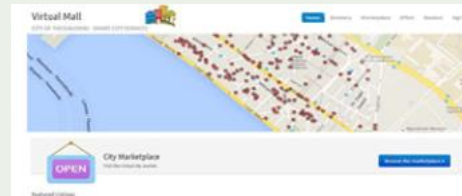
Featured open source applications for:

- Innovation Economy**
- Living in Cities—Quality of Life**
- City Infrastructure and Utilities**

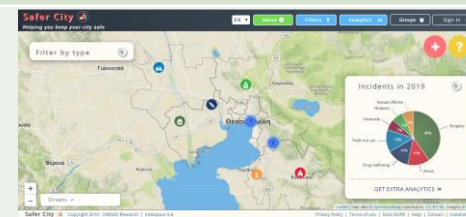
Other applications shown include: Citizeninvestor, AirCasting, AMCO – Smart Parking System, City Governance, Generic, Envision Tomorrow, and Mapzen.



STRATEGY CO-DESIGN



MARKETPLACE



SAFE CITY



MONITORING & DATA REP



CROWDFUNDING

**Hotel Energy Solutions**

Supports the adoption of energy efficiency and renewable energy technologies

Benchmark your energy use/efficiency

The benchmarking tool enables European Small and Medium Enterprises (SMEs) in the accommodation sector to assess their current energy use/efficiency and carbon footprint against similar enterprises.

Top 4 reasons to use the energy calculator: Access energy use, Technological Solutions, Cut energy costs, Reduce CO2 emissions.

ENERGY & CO2

Collaboration for the Valorisation of R&D

The **ITERVALLE** Platform supports the process of valorisation of research results. It is not only a meta-repository of R&D results, but also a collaborative space facilitating the interaction between researchers, companies and experts, improving the collaboration and knowledge sharing, and supporting a culture of innovation among them.

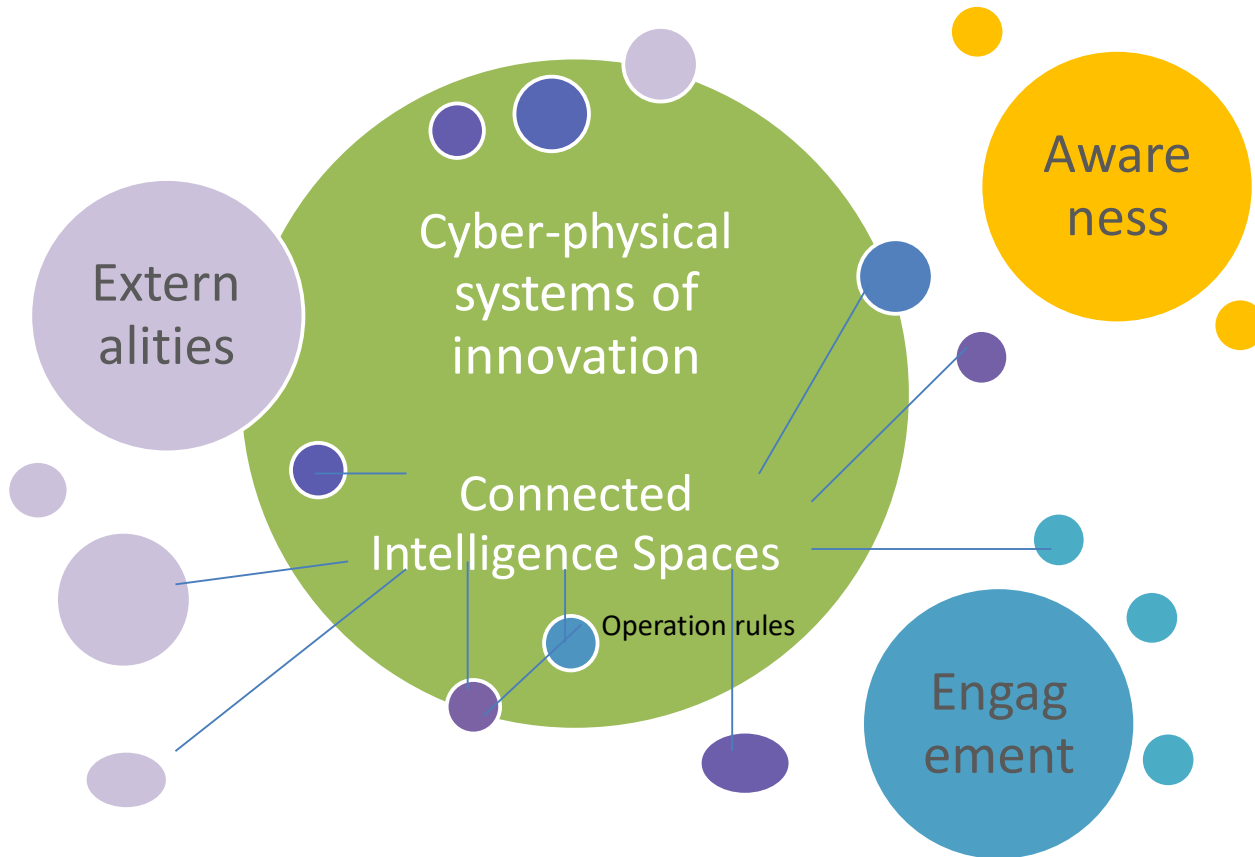
Key features: R&D Repository, Valorisation Plans, IP Agreements.

R&D REPOSITORY



AIR POLLUTION

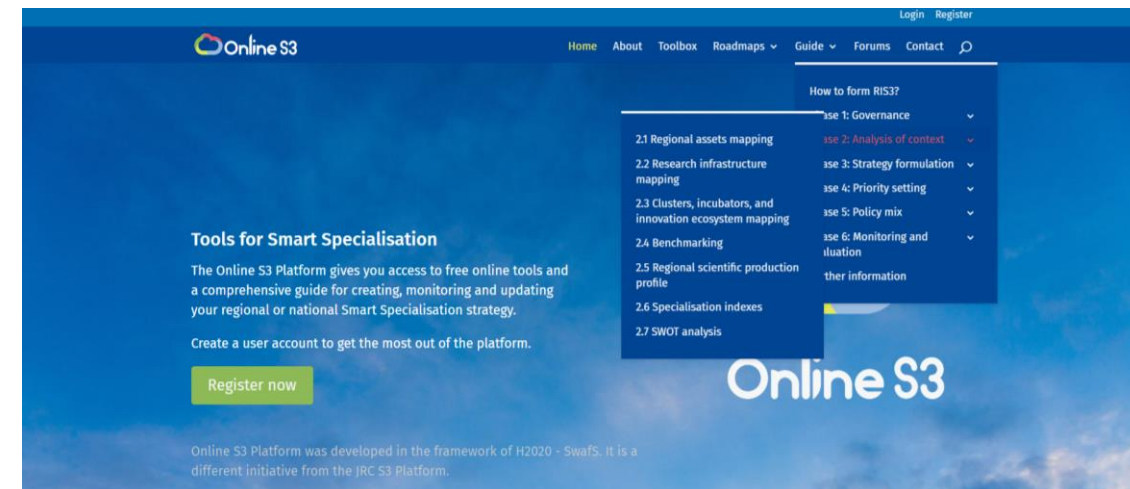
# Research area (2): Cyber-physical systems of innovation



**Q:** What happens to a system of innovation (routines & performance) when it connects to the Internet? Which mutations occur at the supply and demand sides of innovation?

## Recent research:


- Research and Innovations Strategies for Smart Specialisation (RIS<sup>3</sup>). RIS<sup>3</sup> and EDP (Entrepreneurial Discovery Process). Governance of RIS<sup>3</sup>
- Digitally assisted RIS<sup>3</sup>, cyber-physical systems of innovation, smart ecosystems through connected intelligence spaces
- ONLINE S3: Facilitate RIS<sup>3</sup> by 28 online apps and 4 roadmaps. RIS<sup>3</sup> 2.0 (2021-2027)



# Online S3 Platform: 28 applications and 5 roadmaps for RIS3

## Context analysis


### Phase 1: Governance



**Use the app**

**Vision sharing**


Allows RIS3 managers to create visually attractive infographics to present the strategy's vision.



Available soon

**Stakeholder engagement**


Invite RIS3 stakeholders to use online deliberation functionalities specifically tailored for EDP.



Available soon

**Debate at a glance**

Enables participatory deliberation using argument mapping software.




Available soon

**Legal administrative framework**

Provides an overview of EU processes of selecting and funding projects.


### Phase 2: Analysis of context



**Use the app**

**Regional assets mapping**


A comprehensive and up-to-date mapping of the key regional assets.



**Use the app**

**Research infrastructure mapping**


A comprehensive and up-to-date mapping of the existing and planned research infrastructures across the EU regions.



Available soon

**Clusters, incubators & innovation ecosystem mapping**


Defining the framework, concepts and categories for mapping the innovation ecosystem of each region.



**Use the app**

**Benchmarking**


Compares the performance of a region with regions that are structurally similar.



**Use the app**

**Regional scientific production profile**


Production of 'scientific profiles' for regions based on Web of Science (WoS) data, Scopus and Google Scholar data.



Available soon

**Specialisation indexes**

Technological and economic indexes for understanding the position of regional activities in global value chains




**Use the app**

**SWOT analysis**

Analysis of regional strengths, weaknesses, opportunities and threats is a key starting point for applying more elaborate RIS3 methods.

## Strategy design


### Phase 3: Strategy formulation



Available soon

**Collaborative vision building**


Tailored online guidelines on the necessary additional steps to arrive at a shared vision for regional smart specialisation strategy.



Available soon

**Scenario building**

Creates different scenarios to illustrate visions of possible future or aspects of possible future.




Available soon

**Delphi - Foresight**

Delphi is the most emblematic foresight or future studies method. The method makes the data collection and analyses faster and easier.


### Phase 4: Priority setting



Available soon

**EDP focus groups**


Supports focus groups of stakeholders and business leaders involved in the EDP process, and the communication of conclusions about the opportunities emerged by the local and national authorities.



Available soon

**Extraversion analysis**

Detects possible industry segments in which regions present increased extraversion, in terms of exports, attraction of FDI, or other forms of regional openness.




Available soon

**Related variety analysis**

Calculates the Related/Unrelated variety entropy indexes. It will compare 2-digit and 5-digit sector shares (%) and will estimate the entropy index for regions.

## Implementation


### Phase 5: Policy mix



**Use the app**

**Intervention logic**


Allows to identify if different policy measures are coherent with the vision and objectives of the region.



Available soon

**Action co-design**


Co-design is a well-established approach in the process of creation, particularly within the public sector.



Available soon

**Budgeting**


Provides a framework for using different budgeting methods (incremental, zero budgeting) to capture the funding dimension.



Available soon

**State aid law compliance**


Aims at considering the funding possibilities of public authorities to sustain competition within the internal market.



Available soon

**Calls consultation**


Enable RIS3 stakeholders to assess calls for projects under S3 operational programmes that are made by regional authorities.



Available soon

**Innovation maps**

Online visualisation tool that traces out information about regional technological trends using grant data.




Available soon

**Open data tool**

Data repository that allows for a freely grained tracking of projects and initiatives implemented in each region with a link to respective S3 priorities.


### Phase 6: Monitoring & evaluation



Available soon

**Monitoring**


Collects and processes information about the achievement of expected results and the degree of implementation of policy measures.



**Use the app**

**Definition of output and result indicators**

Output and result indicators constitute an essential part of RIS3 monitoring and evaluation.



Available soon

**Balanced scorecard**

Ensures that the activities are in line with its vision and strategy, and monitors the performance against strategic goals.