



# Data processing and analytics in Smart Cities: enabling empowerment, behavior adaptation, optimization and innovation

*KAKDERI CHRISTINA, URENIO Research, OK!Thess 02.10.'18*

**Areas of Expertise**

**RESEARCH**

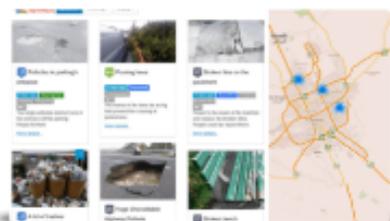
- Smart & intelligent cities
- Innovation ecosystems
- Cyber innovation platforms

**STRATEGY**

- Strategies for smart cities & regions
- Strategic planning methods and e-tools
- Assessment and metrics

**APPLICATIONS**

- ICOS. Intelligent cities software repository
- URENIO apps portfolio
- Cloud for apps



**Improve My City**



**CloudFunding**

**Watch: Intelligent Cities – Smart Cities – Innovation Ecosystems**

**When technology activists meet neighbours in Plaça del Sol**

Posted at 29 September 2018 in Collaborative Innovation



The *‘Botellón no me deja dormir’* project is a collaborative project co-created by the community of neighbours in Plaça del Sol and technology activists from the project Making Sense EU. A diverse group of people collaborated in order to measure the levels of noise pollution in an attempt to claim a more convivial and inclusive public space.

[Continue Reading](#)

**Colorado Open Lab set to open in 2019**

Posted at 27 September 2018 in Intelligent Cities / Smart Cities



The Colorado Open Lab, an Internet of Things engineering lab for customer development showcase and innovation collaboration to fast track development of IoT appliances and AI-enhanced applications, will open before mid-2019.

[Continue Reading](#)

**New report about the economic links between cities and towns**

Posted at 24 September 2018 in Cities



The report *Talk of the Town: The economic links between cities and towns* was recently published by the Centre for Cities in UK. Its main objective is to understand how British

**Watch: Categories**

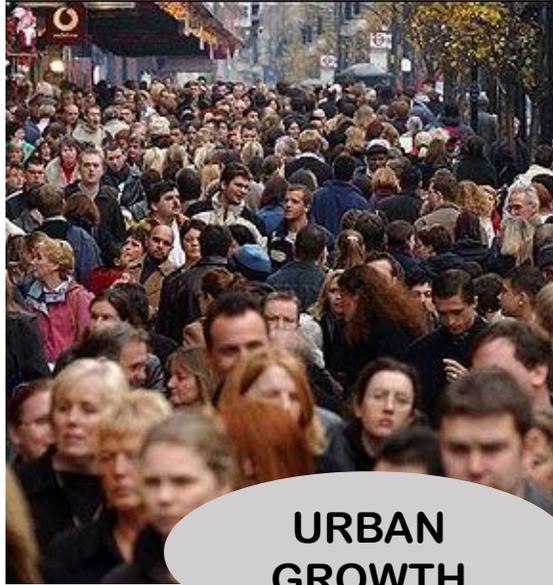
**INTELLIGENT CITIES**

- Digital Cities / Cyber Cities
- Intelligent / Smart Cities Strategy
- Business Models
- IntelCities Measurement
- Videos on Intelligent Cities

**INNOVATIONS ECOSYSTEMS**

- Innovation
- Knowledge Economy
- Innovation Clusters
- Innovative Companies
- Technology Parks
- Incubators
- Living Labs
- Innovative Cities & Regions
- Regional Systems of Innovation
- Innovation Strategies
- Innovation Measurement

**PLATFORMS – APPLICATIONS**



**URBAN  
GROWTH**



**AGEING  
POPULATION**



**EXPECTATIONS  
FOR BETTER  
QUALITY OF LIFE**



**CLIMATE  
CHANGE**



**INFRASTRUCTURE  
DEMAND AND  
MANAGEMENT**



**SAFETY &  
SECURITY**



**INFRASTRUCTURE  
DEMAND AND  
MANAGEMENT**

Real-time Air Quality map. Check how air quality fares in your city as compared to others

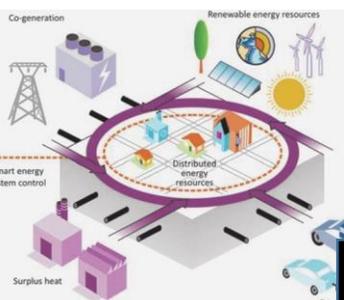


Environment

Mobility

Safety

Resilience



Quality of life

Planning



Why choose Spacehive?

- Your best chance of success**  
52% of our funding campaigns are successful - higher than any other platform.
- The right tools**  
Making places better can be tricky. We've built a bunch of clever features to make life easier - from verifying your project plan so you can attract lots of backers to extensive help documentation.
- Over 500,000 users**  
On Spacehive you can attract thousands of potential backers.



Economy

Utilities

City branding



Innovation



Real-time Air Quality map. Check how air quality fares in your city as compared to others

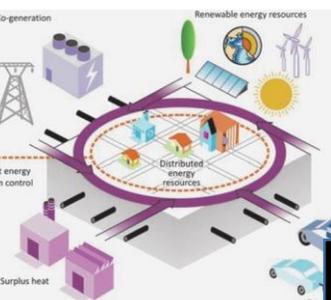


Environment

Mobility

Safety

Resilience



Quality of life

Planning



Economy

Utilities

City branding



Innovation



## The city as agglomeration of ecosystems (hubs & networks)

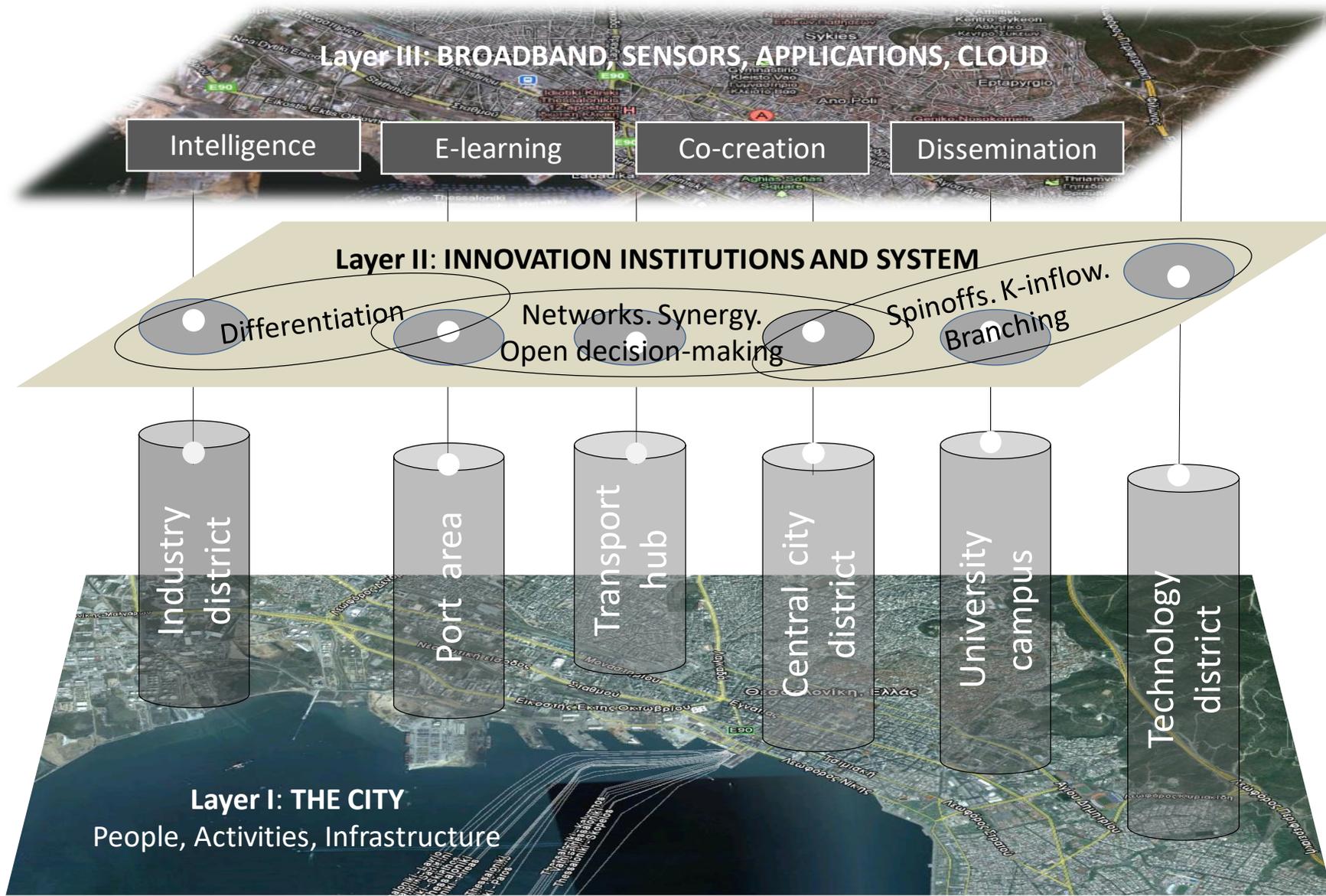
- ⊕ CBD / historic center
- ⊕ Financial center
- ⊕ Industrial districts
- ⊕ Technology districts
- ⊕ University campus
- ⊕ Transport hubs
- ⊕ Port area
- ⊕ Housing districts
  
- ⊕ Transportation networks
- ⊕ Energy networks
- ⊕ Broadband networks

## Forces that make ecosystems

- Agglomeration of similar entities
- Common infrastructure
- Common labour market / skills
- Common market, competition
- Common growth/decline path
- Similar strategies
- Data and knowledge spillovers
- Sharing of knowledge base



A 1943 map showing how London would look based on 'social and functional analysis', which Patrick Abercrombie helped to draw up



# Data processing and analytics in Smart Cities: enabling empowerment, behavior adaptation, optimization and innovation

# Governance



### Potholes in parking's entrance

6 days ago **On progress**

Cleaning - Recycling

0

Two large potholes obstruct cars in the entrance of the parking. Please fix them.

[More details...](#)



### Pruning trees

11 days ago **Submitted**

Environment

0

The leaves of the trees be as big that prevent the crossing of pedestrians.

[More details...](#)



### Broken tiles on the pavement

11 days ago **Submitted** **Technical**

Services Dpt

0

Please fix the cover of the manhole and replace the broken tiles. People could be injured there.

[More details...](#)



### A lot of trashes

12 days ago **Submitted** **Cleaning**

- Recycling



### Huge Unavoidable Highway Pothole

11 days ago **Submitted** **Technical**

Services Dpt



### Broken bench

12 days ago **Acknowledged**

Technical Services Dpt



## Category

### Technical Services Dpt

- Road striping
- Parking prohibition
- Unnamed streets
- Traffic lights
- Defective road lights
- Potholes
- Playgrounds

### Municipal Police

- Abandoned vehicles
- Illegal parking
- Illegal billboards
- Noise
- Stray animals
- Pets

### Environment

- Tree pruning
- Dangerous Tree Branches
- Cutting Grass in public areas
- Obstructed traffic signs
- Irrigation network damage

### Urban planning

- Dangerous buildings

### Cleaning - Recycling

- Replace trashcans
- Waste disposal
- Collecting big objects
- Cleaning of public spaces

### Δ.Ε.Υ.Α.

- Water Supply
- Sewage

### Suggestions

### Other issues

#### #999. Χριστουγεννιάτικη Διακόσμηση **Closed**

Επαρχιακή Οδός Νέο Ρύσιο - Αρναία, Θέρμη 570 06, Ελλάδα

Issue reported one year ago

0 votes

#### #998. ΑΣΦΑΛΤΟΣΤΡΩΣΗ ΔΡΟΜΟΥ **Acknowledged**

ΠΛΑΤΕΙΑ, Θέρμη 570 01, Ελλάδα

Issue reported one year ago

0 votes

#### #997. Κλαδιά για περισυλλογή **Open**

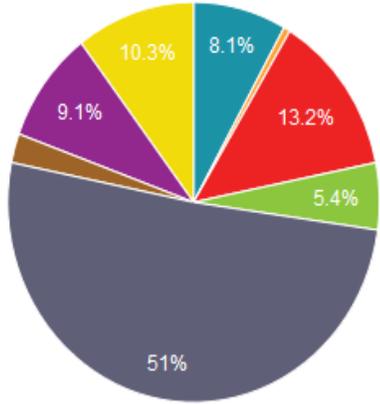
Ειρήνης Ιασωνίδη, Θέρμη 570 01, Ελλάδα

Issue reported one year ago

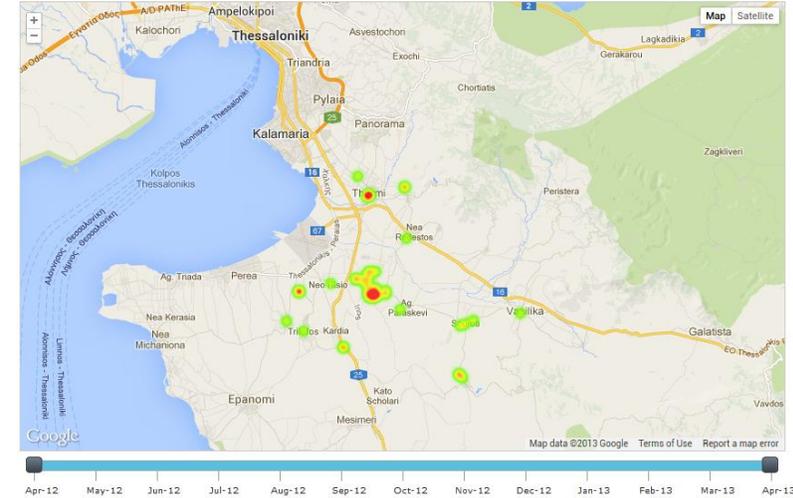
3 votes



# Improve my city



Department	Days to answer	Days to resolve
Municipal Police	126.3	226
Urban planning	3.5	1007.4
Cleaning - Recycling	129.3	389.6
Environment	77.2	413.9
Technical Services Dpt	12.8	373.8
Suggestions	157.4	519.5
Other issues	262.9	482.1
Δ.E.Y.A.	724.7	882.6



Assess the performance of different departments

Reveals city areas with dissatisfied citizens

## Issues

889 Total



133 Open

268 Acknowledged

488 Closed

## Comments

1752

## Votes

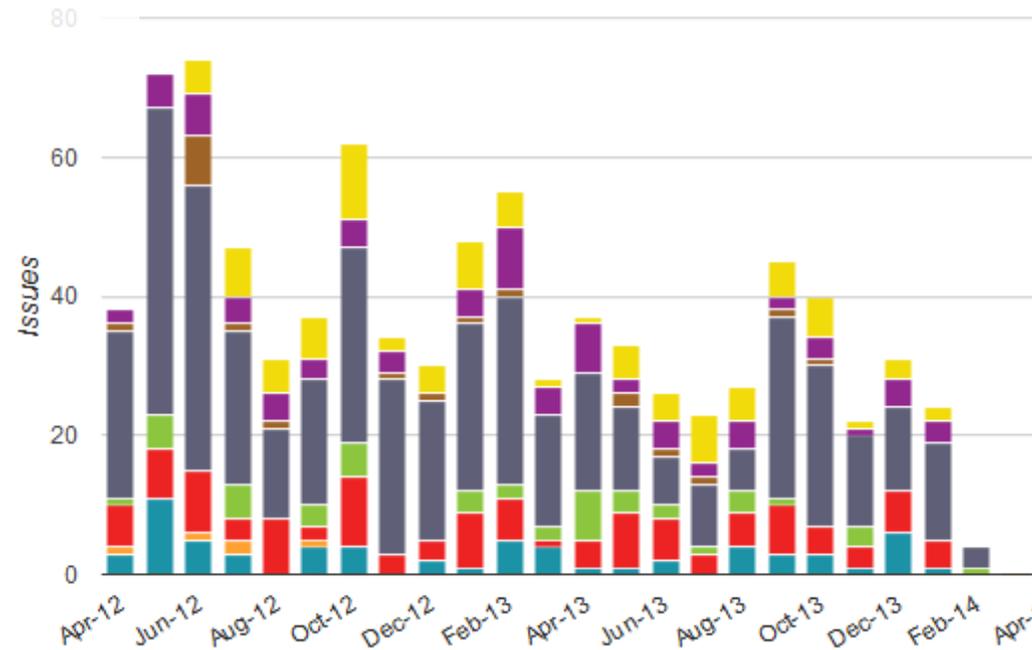
1127

## Users

801

## Platform active for

3 years, 5 months, 17 day(s)



Fixed

Καταχωρήθηκε Γνωστοποιήθηκε Σε εξέλιξη Απαντήθηκε >  
 Κλειστό Στο αρχείο

Κατηγορία: Οδοστρώμα - Πεζοδρόμια  
 Δημιουργήθηκε: πριν 2 μήνες

**Περιγραφή**  
 Ανεβαίνοντας τη Μ. Μπότσαρη πριν φτάσουμε στη Κ. Καραμανλή, στη δεξιά πλευρά στον πεζόδρομο υπάρχει εδώ και πολλούς μήνες (πρώτη φορά το είδα τον περασμένο Ιούλιο (ένα χρόνο πριν δηλαδή... ενδεχομένως να είναι μεγαλύτερο διάστημα εκεί) ένα καμένο περιττώρο. Για ποιο λόγο δεν απομακρύνεται από εκείνο το σημείο; Μ' ενημερώσατε τον Φεβρουάριο ότι γνωρίζετε το θέμα, ότι η άδεια που περιττώει έχει ληξει από τον Δεκέμβριο του 2014 και απομένει να το απομακρύνετε..... Γιατί δεν έχει γίνει ακόμα αυτό.

**Φωτογραφίες**




Before: 6 months  
Now: 2 days



#935. Καταστροφή σκεπασμάτων αποχετεύσεων στον πεζόδρομο της Αγίας Θεοδώρας

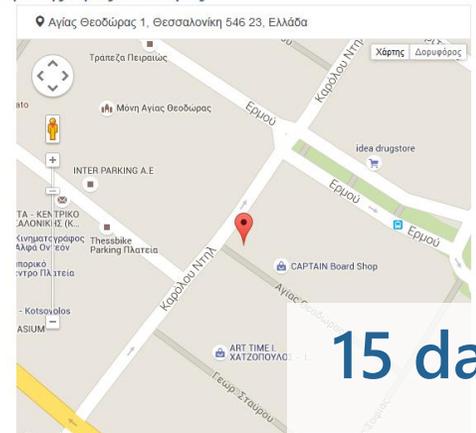
X

Καταχωρήθηκε Γνωστοποιήθηκε > Σε εξέλιξη Απαντήθηκε >  
 Κλειστό Στο αρχείο

Κατηγορία: Συντήρηση κοινοχρήστων χώρων & πλατειών  
 Δημιουργήθηκε: πριν 23 μέρες

**Περιγραφή**  
 Αγνώστοι έχουν καταστρέψει τα σκεπάσματα από τα φρεάτια στην Αγία Θεοδώρας 1 και 5

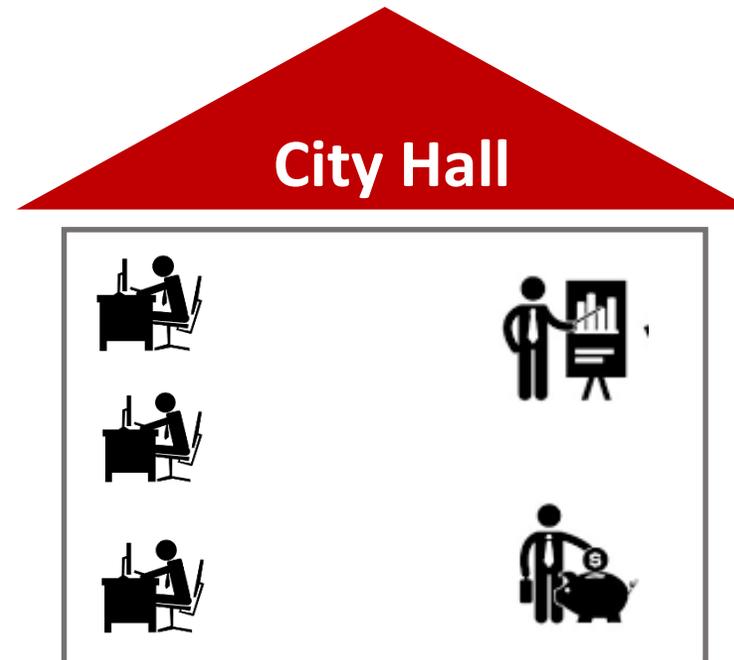
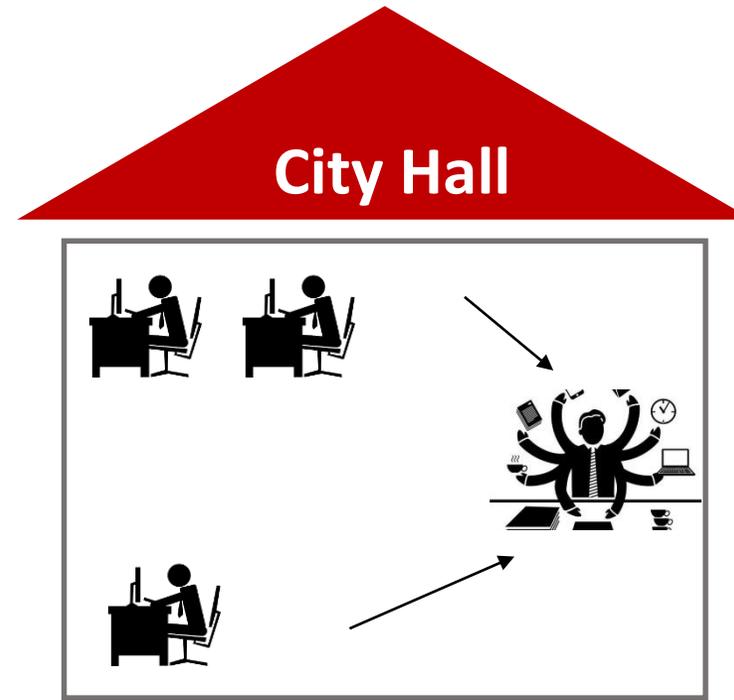
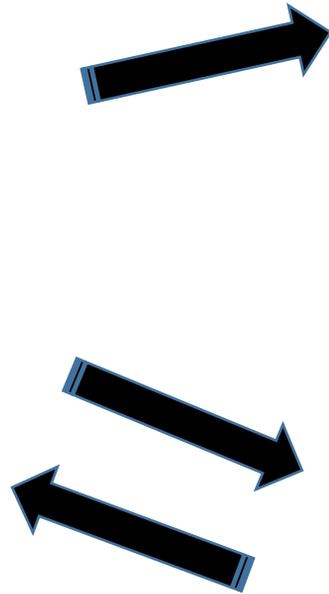
**Φωτογραφίες**

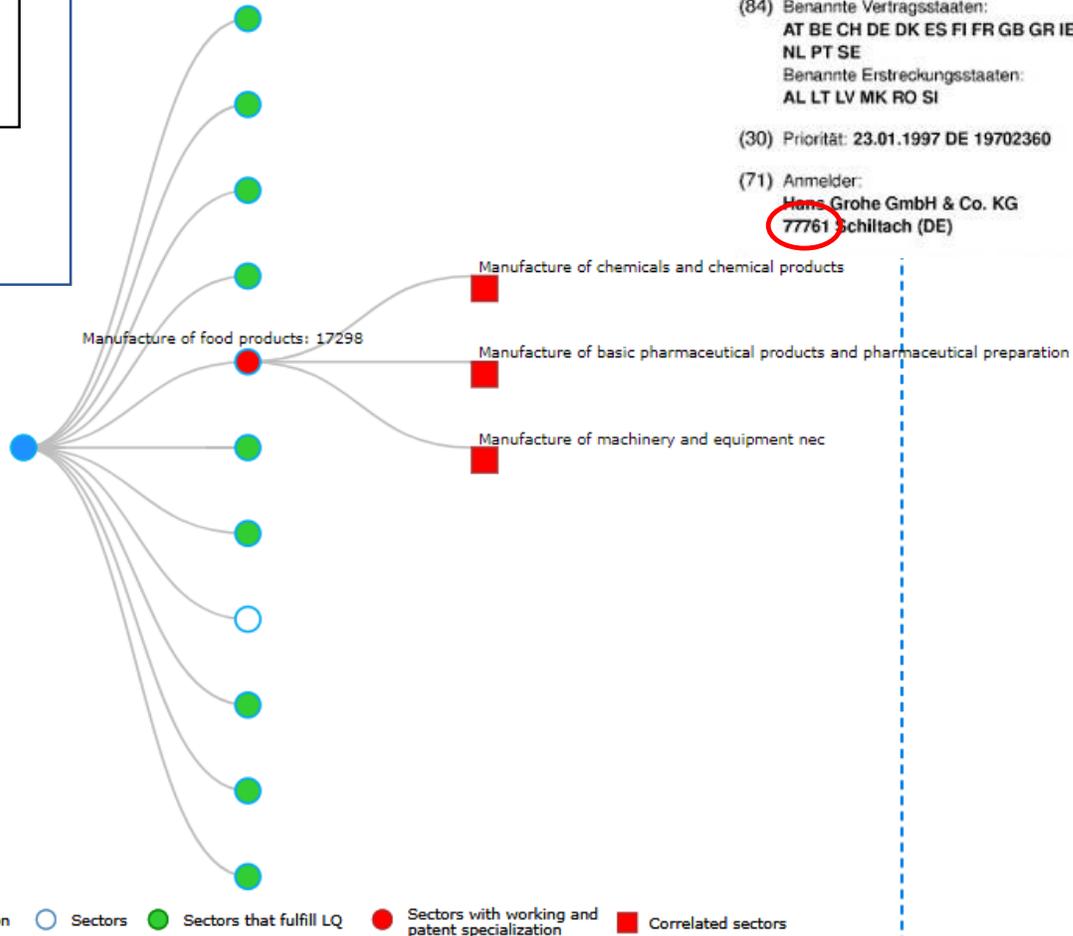
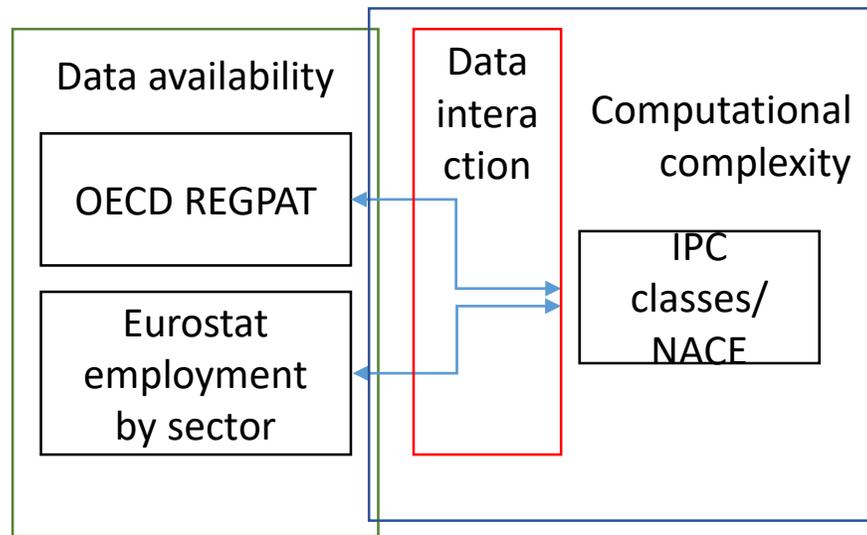
15 days later



- Optimization of resources
- Empowerment



# Related variety for the selection of specialisation



- Technological specialisation
- Cognitive proximity


 Europäisches Patentamt  
 European Patent Office  
 Office européen des brevets

(19)  (11) EP 0 855 545 A3

(12) **EUROPÄISCHE PATENTANMELDUNG**

(88) Veröffentlichungstag A3: 21.10.1998 Patentblatt 1998/43 (51) Int. Cl.<sup>8</sup> **F16K 35/02, F16K 31/60**

(43) Veröffentlichungstag A2: 29.07.1998 Patentblatt 1998/31

(21) Anmeldenummer: 97122593.3

(22) Anmeldetag: 20.12.1997

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(84) Benannte Vertragsstaaten: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE  
 Benannte Erstreckungsstaaten: AL LT LV MK RO SI

(72) Erfinder: Lorch, Werner  
 78713 Schramberg (DE)

(30) Priorität: 23.01.1997 DE 19702360

(74) Vertreter: Patentanwälte Ruff, Beier, Schöndorf und Mütschele  
 Willy-Brandt-Strasse 28  
 70173 Stuttgart (DE)

(71) Anmelder: **Hans Grohe GmbH & Co. KG**  
 77761 Schiltach (DE)

Use the app

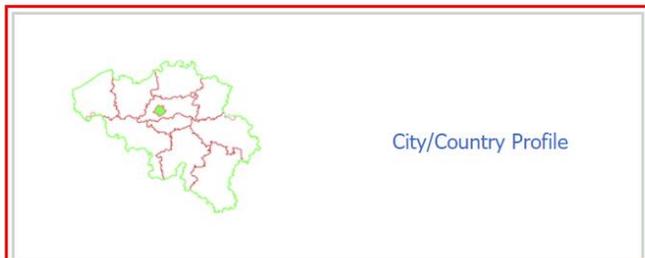
Related variety analysis

# Scientific production profile for identifying scientific specialisation



Online S3 Platform

## Scientific Production Profile

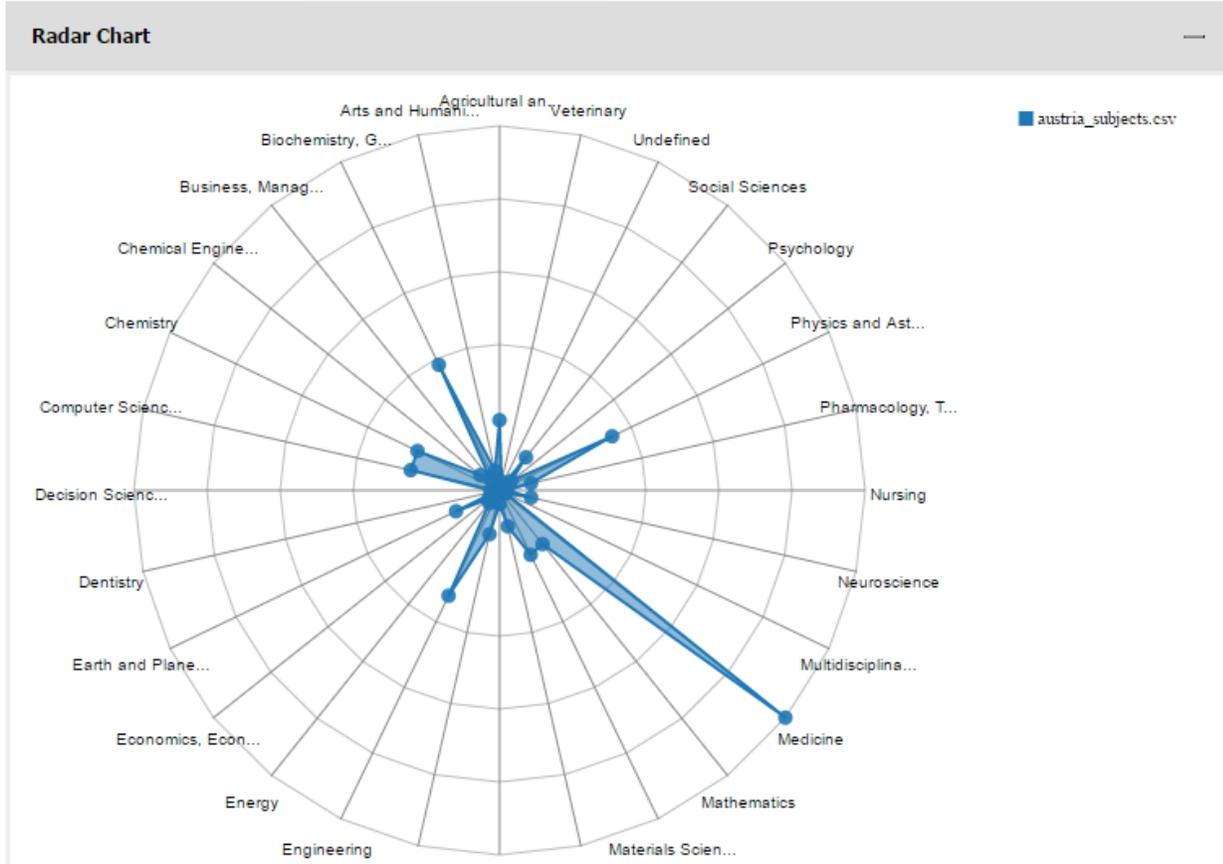


Press it to clear the data and Insert new

Subject Area Analysis

Add CSV file(s)

Clear



Export Report Doc

Report

Press it to Export a Report

Files Uploaded:

1 austria\_subjects.csv

Information for uploaded files

Activate it to include the chart in the report

Add Radar Chart to Doc

Press it to Save the Chart as an Image

Export Radar Chart as PNG

Bar Chart Display the Bar chart

Add Comments About Charts Add Comments

# Online S3 Platform

Action Plan Co-design



[Guide](#) | [Related Documents](#) | [Access to application](#)

[Sign in](#)

[Online S3 Platform](#) > [Policy mix](#) > [Action plan](#)

## Create or Participate to an Action Plan Co-design Process

### Co-design for Regional Authorities



#### [Setup a RIS3 Action Plan Co-design Process](#)

Initiate the co-design process by adding to the platform your region's Action Plan. Receive feedback from stakeholders and citizens.

#### [Find a Relevant Action](#)

Search and browse actions based on their Thematic Objectives /

### Co-design for Citizens



#### [Co-design Your Region's Action Plan](#)

Search and browse action plans based on their Region and Consultation Status (Open / Closed).

#### [Find a Relevant Action](#)

Search and browse actions based on their Thematic Objectives /

## 1.a.1. Strengthening research infrastructures in accordance with the National Roadmap of Research Infrastructure

Research infrastructures are a pole of attraction both for the research and academic community and for industry, as addressing global challenges requires the co-operation of national high-level scientific infrastructures and mobilizes better education and technical training of the human resources involved.

The purpose of the action is to strengthen national research infrastructures and effective networking of the research network to provide access to high-quality research infrastructures and their optimal use both by the research community and the public sector as well as by businesses and industry.

The funding of research infrastructure actions will be done through three-year calls for proposals and the roadmap will be updated accordingly. The actions refer to three main categories of activities regarding:

1. Enhance networking among the entities of the central unit and the key nodes of the research infrastructure
2. Improve the level/framework of the provided services
3. Strengthen joint research programs to support the operation of infrastructures and the provision of high-quality services, promoting innovation

### Delivery mechanisms

Subsidy

### Measurable targets

- T4224: Average number of citations per paper written by Greek researchers (impact factor)
- T4225: Number of supported research infrastructures
- T3302: Regional Innovation Centers
- T2251: Number of projects improving research infrastructures
- T1601: Number of supported entities
- T2101: Supported research infrastructures
- CO25: Number of researchers working in improved research infrastructure facilities
- CO24: Number of new researchers in supported entities

### Thematic Objective and Investment Priority

Investment Priority 1a: Strengthening research and innovation infrastructures, Thematic Objective 1 - Research and Innovation

### Target groups / beneficiaries

Companies, Public Authorities (Regional), R&D Institutions, Universities & Educational Institutions, User Communities

### Actors involved

Public Authorities (Local), Public Authorities (National), Public Authorities (Regional), R&D Institutions, Universities & Educational Institutions

### Budget

81900000

### Funding Source(s)

ERDF

### Timeframes

-

### Additional Information

### List of Actions

- **1.a.1. Strengthening research infrastructures in accordance with the National Roadmap of Research Infrastructure**
- 1.a.2. Specialized networks of competence centers
- 1.a.3. Development of professional knowledge and skills in intellectual property, innovation and technology management, exports etc.
- 1.b.1. Strengthening human research potential through doctoral research
- 1.b.2. Supporting the research dimension of higher education
- 1.b.3. Supporting post-doctorate researchers
- 1.b.5. Collaborative initiatives RTD&I
- 1.b.6. Development of innovative products/services proposed by businesses
- 1.b.7. Support for testing products and services
- 1.b.8. Strategic Plans of Research Institutions
- 1.b.9. Integrated Research Strategies for Higher Education
- 1.c.1. Design and operation of a digital platform for research and innovation

How complete do you consider the description of the action?



How effective do you consider the action?



How popular do you consider the action?



How innovative do you consider the action?



How mature do you consider the action?



Overall Evaluation

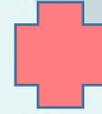


# 3 apps for knowledge based policy making..

Related variety



Scientific  
production profile



Action plan  
co-design

- City data extracted from broader databases
- Combined in an innovative way
- New tools for data extraction and decision making
- Empowering people/ innovative city authorities

Economy

**Virtual Mall**  
CITY OF THESSALONIKI - SMART CITY SERVICES

Home Directory Marketplace Offers Reviews Account

**User Reviews**  
Rate local businesses and help build a strong community.

Read reviews

Featured Listings

### PRINT COPY CENTER

Βασιλέως Ηρακλείου 26, Θεσσαλονίκη  
τηλ. 2310 285148

Φωτοαντίγραφα

[Περισσότερες πληροφορίες »](#)

Εμφάνιση στο χάρτη

### QUARTIER LATIN

Πλάτωνος 1, Θεσσαλονίκη  
τηλ. 2310 232346

Φροντιστήρια Ξένων Γλωσσών

[Περισσότερες πληροφορίες »](#)

Εμφάνιση στο χάρτη

### RENEW BOUTIQUE

rethink reuse restyle  
Προξένου Κορομηλά 5, Θεσσαλονίκη  
τηλ. 2310223910

Αξεσουάρ Ενδύματα

[Περισσότερες πληροφορίες »](#)

Εμφάνιση στο χάρτη

### REPELLA'S

**Virtual Mall**  
CITY OF THESSALONIKI - SMART CITY SERVICES

Home Directory Marketplace Offers Reviews Account

### Marketplace

Search:  Keywords  Near me

Found 23 businesses [1 - 20]

**ARCHE**

Προξένου Κορομηλά 12, Θεσσαλονίκη  
tel. 2310 240011

[More info »](#)

**COP COPINE**

Προξένου Κορομηλά 33, Θεσσαλονίκη  
tel. 2310 234711

[More info »](#)

**Categories**

Διασκέδαση - Ψυχαγωγία

- Βιολογικά Προϊόντα
- Νταρντεν Καφέ
- Ανεμιστήρια
- Εσπεριόρια
- Ζωντανή Μουσική
- Κέντρα Διασκέδασης
- Καφέ
- Καφέ
- Κωλύκκια
- Μικρογεύματα
- Μουσική Σκηνή
- Μπαρ
- Εκδόσεις - Βιβλία - Δίσκοι
- Εμπόριο
- Ένδυση - Υπόδηση
- Εστίαση
- Ηλεκτρικά
- Ηλεκτρονικά
- Ομορφιά - Περιποίηση
- Σπίτι - Κήπος
- Τρόφιμα - Ποτά
- Υγεία
- Υπηρεσίες



## RENEW BOUTIQUE

rethink reuse restyle

Προξένου Κορομηλιά 5, Θεσσαλονίκη

2310223910

<http://www.renew-boutique.com>



Καλώς ήρθατε στην Renew boutique, το πρώτο κατάστημα μεταπώλησης second hand ρούχων και αξεσουάρ στην Θεσσαλονίκη. Με μοναδικά Vintage αντικείμενα, Brands και Χειροποίητα σε καταπληκτικές τιμές!

Το μέρος που μπορείς να Αγοράσεις, να Κερδίζεις και να Προσφέρεις!

Στην Renew boutique μπορείς να βρεις μοναδικές ευκαιρίες σε Second Hand, Stock, Vintage, Brands και Handmade ρούχα, παπούτσια και αξεσουάρ σε καταπληκτικές τιμές όλο τον χρόνο!

Η σελίδα στο κινητό σας



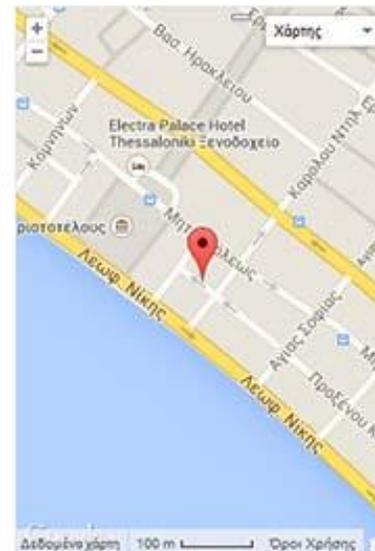
Μάθετε περισσότερα

Σχετικά με εμάς

Ανακαλύψτε μας

Μεταπώληση αντικειμένων

Εκστρατεία A21



Ακολουθήστε μας



Αξιολογήσεις χρηστών

Business

2 μήνες πριν



Στην Renew boutique μπορείς να βρεις μοναδικές ευκαιρίες σε Second Hand, Stock, Vintage, Brands και Handmade ρούχα, παπούτσια και αξεσουάρ σε ... [περισσότερα](#)

Business

2 μήνες πριν



Το μέρος που μπορείς να Αγοράσεις, να Κερδίζεις και να Προσφέρεις!

Όλες οι αξιολογήσεις



oshoes.gr - Παπούτσια  
Θεσσαλονίκη...

Excelshoes

blackout

Κατούνη 19,  
Θεσσαλονίκη, Ελλάδα

MIGATO

ASKARIDIS

Square 5 shoes store

Arche shoes

Parashos

MUST SHOES

Streetwear

Barginiana

Nak Shoes

Αριστοτέλειο  
Πανεπιστήμιο  
Θεσσαλονίκης

Πολυτεχνική  
Σχολή Α.Π.Θ.



# Social network for co-financing and collaborating with creative projects that further the common good

LEARN MORE



IN PROGRESS!

SOCIAL

## The 25 seater bus project

By: Inak

The "Ark of the World" needs a 25 seater bus to carry children from shelters and homes to their...

Co-financing



IN PROGRESS!

SOCIAL

## BlindTech

By: Christina Kakderi

For blind children, a world of digital resources and opportunity can remain inaccessible without...

Co-financing



IN PROGRESS!

SOCIAL, TECHNOLOGICAL

## New printer

By: Christina Kakderi

νέας Επιστημονικά Υπεύθυνος ή συνεργάτης σε ερευνητικό πρόγραμμα σας δίνεται η δυνατότητα...

Co-financing





# What is Crowdfunding?



Project Needs **Co-financiers (1)** Crowdsourcing (1) News

CO-FINANCIERS **1** TOTAL CONTRIBUTIONS **1.000 €**

Anonymous Contributed here: **1.000 €** Patron 18/05/2015

+25 Fan +100 Member +500 Supporter +1000 Patron +3000 Visionary €

ECONOMIC NEEDS

**IN PROGRESS!**

Co-financing

OPTIMUM **99.790 €**  
MINIMUM **89.790 €**

RECEIVED **1.000 €**  
REMAINING **0 DAYS**  
CO-FINANCIERS **1**

**CO-FINANCE THIS PROJECT** See more »

A new project by Help Childred Education Categories

PROJECT STATUS: Canceled, **In review**, Evaluation pending, Campaign in progress, Funded, Benefit completed, Closed

DATA EVALUATION **19%**

This graph explains in a visual way the level of data that you have entered together with a basic evaluation completed by the system. To be able to submit the project, you have to reach at least 80%. The criteria that make the "temperature" rise have to do with the relevant information that you provide, the media, images and links that you enter, the degree of openness of the license you choose, the coherence of your estimate with respect to the work that needs to be carried out, etc. Don't forget to take advantage of the tooltips on the right that will guide you through the process.

Profile Promoter Description Expenses Benefits Collaborations Preview

1 2 3 4 5 6 7

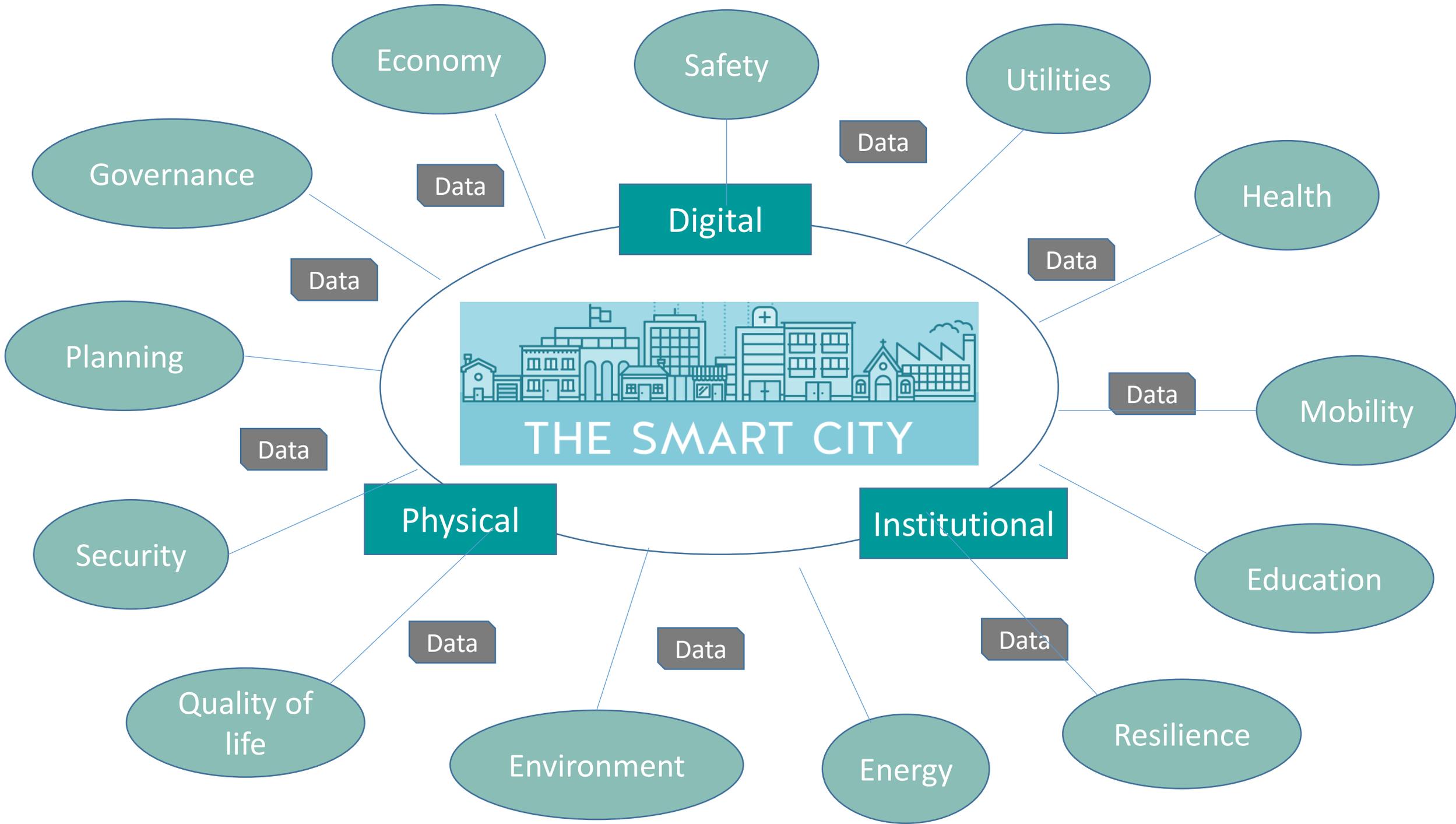
NEW PROJECT

NON-ECONOMIC NEEDS

Looking for

Driver needed  
If someone would like to drive the bus...

**COLLABORATE** See more



# Thank you!

## Christina Kakderi

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