

CREA IDEA LAB

Think tank for advanced cities



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THE RIVER OF TIME

Building, shaping and transforming cities means building, shaping and transforming the life of their people.

Each place gets its proper life thanks to its habitants. People are stories from the past, actions in the present and dreams for the future.

While thinking in technological adoption, understanding and integrating the people and their legacy is key for a successful transition in the new digital future.

We advocate for purposed-centred design of the city's infrastructures deployed through an integration of its vision and understanding at all levels.

We have been promoting a unique city design methodology through our work in CREA IDEA LAB since 2014. It consists of the best global practices and also of the learning from past projects.

CREA IDEA LAB has its roots in Europe and as a result we work closely with such great cities as Barcelona, Milan, Amsterdam and Eindhoven.

The European effort to scale the smart city pilots for the purpose of bringing the traditional municipalities into the new digital era, has helped us understand the importance of the integration of the past knowledge with the present opportunities and the dreams for the future.

Katerina Zalamova, PhD

Founder of CREA IDEA LAB



*“The value of a city is its people.
The future of a city is its people’s
dreams. The new era of smart
cities is about cities building
futures.”*

ABOUT

Incorporated and based in Barcelona, Spain CREA IDEA LAB LTD. is a think tank for advanced smart cities consultancy and development. The company has its own R&D department and startup incubator which are developing solutions for the Smart Cities market. It has participated in the EU projects Triangulum (HORIZON2020-No 656478) and Urban Wins (HORIZON2020-No 690047) in Sabadell, Spain since 2016.

CREA IDEA LAB is a member of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC), EU AI Alliance, the IoT Catalan Alliance of the Catalanian Government and the Chamber of Commerce Brasil-Catalonia.

We have a wide network of technology suppliers to help our clients stay up-to date with relevant technology solutions.

TEAM

Dr. Katerina Zalamova is a recognised Smart Cities expert with a special interest in zero waste infrastructures and the circular economy along with the adoption of digital infrastructures focused on economic development and social change.

Along with her Smart City consultancy, Dr. Zalamova runs the think-tank for business ideas, CREA IDEA LAB, with the objective to transfer new technologies and circular economy knowledge to the new and growing smart societies. At CREA IDEA LAB she also fosters, mentors and supports new smart innovators and young entrepreneurs who she believes will be the next developers and applicators of the new smart cities.

Cormac Kelly, with a particular interest in smart city technology and critical communications consultancy is the CTO and Technology Partnerships Director. He acts as innovation and IoT advisor for CREA IDEA LAB. Cormac has 25 plus years' experience in the security, IoT, and critical communications industry where he has had various commissions and experiences around innovative Application & Platform Solutions, IP-Networks, Mesh & LTE Communications Systems, Video Surveillance, Access Control and Tracking solutions. This along with his experience in Cyber Security Solutions and Enterprise Security Sales gives him a deep commercial and hands on expertise from selling to government, first responder agencies, city municipalities and commercial clients around the world.

SHAPING THE TRANSITION

CREA IDEA LAB is on mission to help municipalities and regions shape and get maximum benefit from transitioning to the new digital future where cities infrastructures transform to interactive ones and adapt to the citizen's needs and their main component are the people.

We are focused on making your citizens proud with their city.



CORMAC M. KELLY

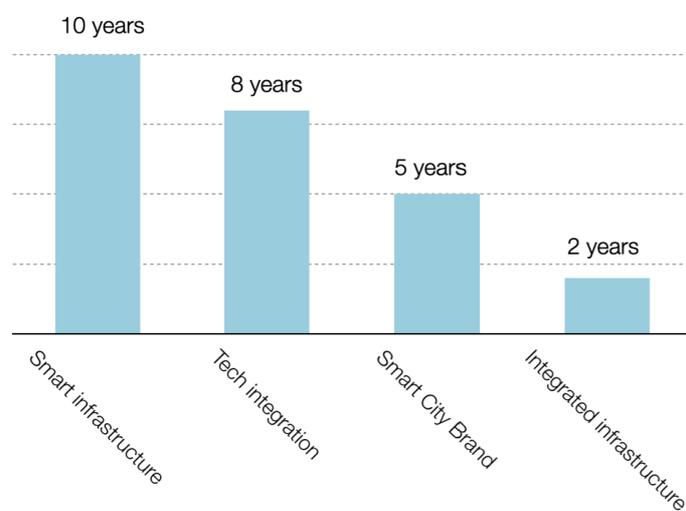
CTO & Technical
Integrator's Partnerships



KATERINA ZALAMOVA

CEO & Head of Business
Strategy

“Time for deployment of a successful smart city project decreases with the number of integrated elements such as technical integration, citizen engagement, unified legal framework, etc.”



LEGACY FOCUSED

Our approach to any project is human-centric and legacy focused. In our work we integrate your traditions, heritage and legacy to the latest technological trends to help your city keep its unique identity for future generations.

Our methodology is to translate your vision for

the future in a smart city design where every element, every person has its own unique and precious place and contribution. We believe a city is its people with their relationships, stories and dreams.

We advocate for **integrated designs** where one smart infrastructure provides multiple services and has accelerated deployment times and lower costs.

PROCESS

Shaping cities from dreams. Building unique local economies.

Our process is based on the best practice of city analysis, co-creation and citizen engagement. We translate your vision to the stakeholders and to your citizens under a definition of your Smart City Brand.

The Smart city starts before placing a single sensor. Then, we work with a holistic approach integrating people to technologies and economical growth.

FIRST STEP

While valuing firstly the city legacy, we define a macro framework based on the city history, traditions, heritage, nature and people identity.

People identity is a concept developed by CREA IDEA LAB, which defines the characteristics of a city within which its citizens identify themselves and are proud to belong to their specific city.

SECOND STEP

Definition of futures. At this stage, we shape your dreams about your city under a conceptual roadmap to the future. We set a framework of targets and metrics which position your dreamed city in the last global trends and internationally accepted agreements such as the **UN 2030 Agenda**.

THIRD STEP

Personalised digital transformation experience. On this stage, we select the best technological mix to materialise the dreams of our clients and stakeholders about their city.

We help our clients establish the interoperability and data management protocols as well to build a comfortable legal framework which will insure smooth implementation, deployment and exploitation

of the cities infrastructures.

Lastly, this design of the stakeholder relationship can be used to fully automate the city management and the interactions at all levels.

FOURTH STEP

Setting the fundamentals for a novel economic growth. Our process concludes with an identification of a portfolio of business models and strategy aiming to boost your local economic growth.

Smart urban economy is a novel concept developed by CREA IDEA LAB. We promote a novel economic development for the city based on the exploitation of its smart cities infrastructure from stakeholders at all levels. Citizens, enterprises and public administration can create and get value through their interaction with the smart city.



SERVICES

CREA IDEA LAB offers services in three main areas: consultancy, training and innovation. Our services are oriented to two main targets: public administration and businesses.

CONSULTANCY

Our consultancy services for any level of public administration are:

- Smart City Brand & Strategic Roadmap.
- Tender preparation, execution and control in the deployment process.
- Technological and impact expertise.
- Economic promotion and scaling up of smart infrastructures.

Our consultancy services for businesses are:

- New Economy Business Models: implementation of exponential, data, virtual and circular economies.
- Open Source Intelligence Technology
- Investigations As A Service (INVaaS)

TRAINING

CREA IDEA LAB offers own and in-collaboration training programs for policy makers, city planners, businesses and entrepreneurs. Our training methodology is based on Learning-By-

Resolving-Your Case. We have programs about assessing impact on future, data economy, circular economy, artificial intelligence & digital leadership, future shaping & evaluation along with cybersecurity of smart cities.

INNOVATION

We have a strong focus on research and innovation. We offer services of prototyping, demonstration and validation of solutions.

CREA IDEA LAB runs its own incubator for generating and validating technological solutions and business models.

We have experience in the following areas:

- Connected transportation: smart bike roads, electrical vehicle connected roads, green e-health active ageing tours.
- Hybrid smart lighting infrastructures, includes smart lighting, air quality, 5G and civil protection monitoring.
- Social infrastructures: smart commerce, smart entertainment, smart tourism.
- Zero Waste smart infrastructures.
- Drones & civil protection.
- Green energy and smart districts.
- Conservation and protection of cultural heritage and biodiversity.



PORTFOLIO

CONSULTANCY
TRAINING
INNOVATION



smart city brand

Consultancy project

2015

Client: Department of Innovation,
City of Sabadell

Objective: Circular Economy
roadmap

Target population: Makers

Industries: Supply-chain, Creative
industries, Education

Sabadell is the second largest city in the province of the Vallès Occidental in Catalonia, Spain, and is home to 200,000 residents. It is based 20 km north-west of Barcelona.

Sabadell famously led the Industrial Revolution in Catalonia with its textile mills, becoming the most important wool city in the whole of Spain and earning itself the title of the "Catalan Manchester".

CREA IDEA LAB engaged in a visionary consultancy project with the Department of Innovation of City of Sabadell through the EU HORIZON 2020 Triangulum project.

We designed a strategic definition and roadmap for circular economy sharing platform where spaces and equipment are connected to people and discarded resources from the local businesses.

In the project, we had analysed the most impacted social groups and industries. Additionally, we designed a digital platform and on-boarding citizen engaging campaigns.

Today, the project is successfully implemented with the deployment of a network of five Fab-labs and five object-exchange markets in closed relationships in their closest neighbourhoods.



smart city brand

Consultancy project

2017

Client: Department of Innovation, City of New York.

Objective: Closing the digital gap

Target population: Low-income and marginal groups

Industries: Tourism, Education

New York Smart & Equitable City is the brand under which the smart city strategy of City of New York has been deployed since 2015.

CREA IDEA LAB participated on a workshop about citizen engagement in smart cities at the New York Smart City Conference 2017 held by the Department of Innovation of City of New York.

We co-created a design for a citizen engagement initiative during this workshop. Then, the ideas recollected during the co-creation process was deployed for the City Council of the City of New York as a consultancy project for a design and testing of the ideas.

The project's objective was to close the digital gap for socially marginal and low-income groups by their engagement to the city smart infrastructure.

The design of the citizen engagement initiative was based on the touristic guide business model. The novelty stood in the design of touristic roads showing the key elements of the city smart infrastructure as electric car chargers, advanced street telephone cabins, biking stations, innovation hubs and city labs.

The initiative provides a self-employment to the target citizens while teaching them about smart technologies and applications. Additionally, the city enriches its touristic promotion agenda with the new offering which results in a novel tool for city international branding and wide promotion.



smart city brand

Consultancy project

2018-2019

In collaboration with SIARQ

Client: City Council of L'Escala.

Objective: To define a Smart City Brand for the municipality and a strategic roadmap for the implementation of smart city infrastructures

Target population: Citizens

Industries: Tourism, Transport, Logistics, Communications, Energy, Waste, Environmental protection

L'Escala is a municipality in the region of the Alt Empordà in Girona, Catalonia, Spain. It is situated on the Costa Brava, located between the southern end of the Gulf of Roses and Cala (bay) Montgó. It is an important fishing port and tourist centre, and has an important industry about anchovies.

The main objective of the Smart City Brand consultancy service provided to the City Council was to define a macro framework and strategic roadmap for the successful deployment of smart infrastructures about smart waste management, smart mobility and smart economic promotion.

We analysed its history, cultural heritage, socio-economic situation and the state-of-art of its infrastructures. Then, it was defined the following smart city brand: **Future With Nature-** *A city of the future build in a unique natural environment in completely respectful and harmonic symbiosis.*

The defined brand had set an ambitious macro framework of indicators for the right selection of the technologies, their implementation and monitoring of their impact. The base of the framework was set on the objective to achieve a sustainable growth for the city population without damaging the natural environment and keeping the attraction elements of the municipality as provider of a slow-pass, healthy, enjoyable, secure lifestyle.

The main focus has been summarised as *infrastructures and public services which make the citizen's life easy.*

The following infrastructures have been designed: an interactive management system for the parking areas in the city center, smart waste recollection, smart lighting and smart touristic promotion platform.



t r a i n i n g

Citizen Engagement

2018-2019

In collaboration with 3d-Seed

Client: Department of Innovation, City of Sabadell

Objective: To build a mobile space for citizen education about circular economy

Target population: Citizens

Industries: Education, Tourism, Waste, Environmental protection

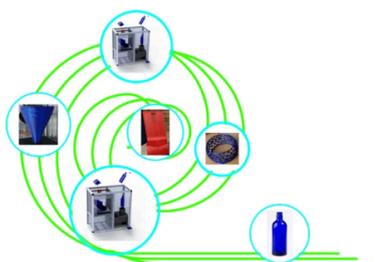
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CREA IDEA LAB engaged with the Department of Innovation of City of Sabadell through the EU HORIZON 2020 UrbanWins project in a consultancy project about citizen education in circular economy.

We designed a mobile space and and training program about circular economy with specific content for kids, parents, youth and elderly.

We run the activities in **five weekend events** moving the space around the city.

The innovation activity was offered by our partner 3d-Seed who present a 3D-printer which could print souvenirs from plastic bottles. Then, the citizens came with their bottles and we taught them how to operate the machine by themselves. Through the process, the participants could directly experiment the circularity and got better understanding of the circular economy principals.





i n n o v a t i o n

Prototyping project

2016-2017

Client: DKV Seguros Médicos-
medical insurer enterprise in
Barcelona

Objective: Improving emergency
response at homes and public
buildings

Target population: Elderly living
alone

Industries: E-health, Civil
protection, Emergency
responders, Smart buildings

Every day in Spain, there are 167 high risk medical cases while the average emergency response is 15 minutes causing fatalities and anxiety for the citizens at the scene.

Additionally, tele-medicine, implemented as a smart home solution for living alone elderly people, shows a need for a mobile device in the technological mix in case of emergency.

We have developed a narrow fit **solution** to address this specific demand under a request of DKV Seguros Médicos. The project has been developed in the CREA IDEA LAB incubator program 2016- 2017.

The solution consists of a nano drone equipped with AI face recognition and video conference application which enables a direct connection of the emergency teams to the scene in the same time when the alert is accepted.

Three different business cases were validated for the industries of e-Health, emergency response and civic protection.

The solution received awards from two innovation competitions: the Intel Innovators IOTSWC 2016 and the Port of Barcelona Challenge 2017.



innovation

Prototyping project

2018

Client: SIARQ LTD

Objective: Developing a package of social services on top of smart lighting infrastructure

Target population: Citizens

Industries: Education, Innovation, Tourism, Creative Industries, Civil Protection, Green energy

SIARQ is a design and engineering company, specialized in clean energy urban furniture solutions forming part of the smart infrastructure which supports the Internet of Things in urban environments.

CREA IDEA LAB developed an **innovation project** for SIARQ about a hybrid smart lighting platform where multiple public services can be developed on a stand-alone smart lighting infrastructure.

The solution was called LIVING LAB because we built the concept replicating the best practices from the smart cities Living Labs running in Europe.

LIVING LAB is the first privately run smart city infrastructure. It demonstrated a variety of novel concepts around low-cost testing, low-risk technical deployment and citizen engagement to smart street lights.

During the development of the project, we could design and test our ideas about an integrated infrastructure studying different levels of integration: only technical, technical deployment integrated to citizen engagement, or to economic growth.

We could demonstrate that smart city projects can be developed as private initiatives speeding up the digitalisation of the cities and leapfrogging the political and public tendering issues.



i n n o v a t i o n

Consultancy project

2019-2020

In collaboration with GEO COSMO Research Center, UK

Client: National government of Turkey

Objective: Deployment of smart infrastructure for earthquake forecasting

Target population: Citizens

Industries: Civil protection, Strategic infrastructures protection, Smart transport

Earthquakes have claimed millions of lives in the last 100 years, and improvements in technology have only slightly reduced the death toll.

GEO COSMO Research Center UK has been developing and promoting a novel smart infrastructure for forecasting earthquakes within 2 days lead before major event.

Earthquakes are common in Turkey because of the country location in the middle of the Mediterranean-Black Sea seismic zone.

The last major earthquake with a magnitude of 6.8 occurred in January 2020 in the town of Sivrice in Elazig province. It caused the death of more than 31 citizens and 1600 were injured.

CREA IDEA LAB developed for the Turkish national government a strategic adoption plan for the deployment of the **GEO COSMO technology**.

The implementation of the project is agreed to start by the Spring of 2021.

The projects consists of 10 GEO COSMO monitoring stations placed in 500 km area a long the west coast of Turkey.

The project recollects additional deployment of connected roads infrastructure, satellite monitoring for civil protection and a unified data platform.

INFLUENCE

We are leaders in evolving the understanding about smart cities development

CREA IDEA LAB has strong focus on developing methodologies for successful building of smart cities projects. We believe it is never only about technology but it is about the purposeful application of the technology.

We contribute to the International community of smart city developers through our memberships in different organisations, such as the **European Innovation Partnership on Smart Cities and Communities**, the **European AI Alliance**, the **IoT Catalan Alliance**, the **Chamber of Commerce Brazil-Catalonia**.

CREA IDEA LAB have been actively collaborating in the organisation of the satellite events of Mobile World Congress since 2016 and we have been an ambassador of the IOTSWC since 2019. Additionally, we have been actively participating at the Smart City Expo World Congress since 2015.

CREA IDEA LAB is a founding member and core organiser of think tank group "Advanced Artificial Intelligence" in Barcelona. The think tank group was found in 2019. Its first annual meeting was celebrated in February 2020 under the name **AI Tech Spirit** Conference where 38 international experts debated for two days about the future of the AI technology, ethics, finance, political aspects and applications.

Additionally, we are influencers in the technological development and its implementation strategies, where we look to keep a wide public debate focused around the social impact of the technology. For this reason, CREA IDEA LAB is the organiser of the **LEGACY SUMMIT**, a conference focused to showcase best practices oriented to create the future that will be in 100 years from now.

We have developed strategic relationships with technology developers, integrators and providers which helps us position ourselves in the front-line of the smart cities innovation. Thanks to these collaborations CREA IDEA LAB counts with an extended network of international experts in all fields of the smart cities market.

The main areas of research in CREA IDEA LAB are the following:

- ▶ **INTEGRATED SMART INFRASTRUCTURES**
- ▶ **INDEPENDENT ROBOTICS AND SMART CITIES**
- ▶ **SMART CITY DIGITAL TWINS**
- ▶ **NATURE AS AN INFRASTRUCTURE**
- ▶ **FUTURE SOCIETIES**

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