The Innovative Network Lounge
«'Șezătoarea' Rețelei Inovatoare»
Technology Transfer Opportunities
within the Smart Cities Platform
Oportunități de Transfer Tehnologic
în cadrul Platformei Orașelor Inteligente

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Abstract. *Smart solutions for urban spaces feed upon* optimized management **and** civil engagement. *COLLABORATION IS CHANGING DESIGN resulting in profound needs for urban reconversion towards* hybrid spaces **targeting** *responsive public spaces. City needs to produce benefits, being a capacity in itself. "What would I want ?" to see, to do, to find, to indulge, to encounter, to promote, to attract, to sense, to entertain, to inherit [...] to « live and let die » sustainably. This is also determining New Ways of Working: technology becomes invisible, resulting into a more human scale of our built environments, ensuring the existence of social spaces, a good environment and generally speaking, a high quality of life.*

Smart implies joint capitalization ("piggy-banking" concept), means not just a(nother) prêt-a-portrait concept, and triggers a multifaceted approach ("quick & dirty" ideas / solutions). Drawbacks in Romania so far relate to fragmented territorial intelligence and the need for a certain critical mass willing to get involved.

Programming intelligence in isolation is not enough to keep cities competitive and allow for the dissemination of the concept. Shared knowledge between smart businesses can easily be done throughout a platform of smart city initiatives. Puting together developers, researchers and administration responsibles will widely involve shared fee stakeholder participation, allowing for both calibration of end products and raising market awareness.

The proposed discussion will answer the question of How (?) to cluster on knowledge transfer targeting competitive identities. Added value lies within creating ecosystems at local level for a global impact, echoing outcomes. Public-Private Cooperation Companies might partly solve a range of issues at hand.

Sumar

Oraşele necesită producţie de ***beneficii***, devenind ***capacităţi*** în ele însele. „Ce ne-am dori să regăsim în ele?" să antrenăm, să atragem, să tolerăm, să simţim, să vizualizăm, să promovăm, să moştenim [...], să trăim şi să lăsăm să moară sustenabil. **Spaţiul urban** devine **program 'soft',** permiţând între **idei**. Păstrarea oraşelor pregătite, productive, inovative şi competitive (Trautman, 2011) se poate realiza printr-o eficace şi eficientă **reţea incubatoare** de cunoaştere şi tehnologii.

Oraşele ca **incubatoare** de **reţele de inovaţie** se bazează pe crearea de **sinergii**. În societatea contemporană, trecerea de la o producţie bazată pe *resurse*, la o producţie bazată pe *cunoaştere*, este determinată de posibilităţile de transfer ale celei din urmă. Transferul de cunoaştere este abilitatea de a dezvolta **servicii clusterizate** interschimbabile şi integrate în scopul sprijinirii **cerinţelor mediului de afaceri**. *Împărtăşirea cunoaşterii* între *afaceri inteligente* se poate realiza cu uşurinţă prin intermediul unei platforme de iniţiative inteligente. Inteligenţa capitalizează un nivel ridicat de trai, productivitate şi durabilitate privind natura oricăror aspecte considerate.

Discuţia propusă vizează răspunsuri la întrebarea „Cum (?) să clusterizăm bazându-ne pe *transfer de cunoaştere* vizând *identităţi competitive*". O întreagă paletă tematică ne este pusă la dispoziţie, începând cu **laboratoarele-habitat sociale** – în cadrul cărora **democraţia participativă** a dus la dezvoltarea termenului de *'oraş negociat'* – continuând cu **reţelele de inovaţie auto-organizate/colaborative**, i**ncubatoarele publice** – care îşi asumă accelerarea dezvoltării ideilor în beneficiul binelui public, încorporând un proces de *'civicitate'*, măsură şi rafinament în cadrul ideilor comunităţii culturale – şi extrapolând către **camerele de colaborare**, **centrele de inovare**, **laboratoarele de creaţie** ş.a. asemănătoare. Toate acestea beneficiază de premisele unei înfiinţări uşoare, debordând în câştig de cauză: asigură competitivitatea plajei de servicii/produse; antrenează capacitatea partenerilor şi consilierilor; pun la dispoziţie o reţea extinsă de experţi şi cercetători din cadrul institutelor de servicii tehnologice; găzduiesc conferinţe şi ateliere de lucru, oferind posibilitatea de a socializa profesional; contribuie la căutarea mijloacelor de finanţare.

Având oportunitatea de a transfera asemenea iniţiative în afara mediului lor de producţie, ar însemna **exportul inteligent de cunoaştere** către un model rezilient necesar de adoptat în cadrul unei palete mai largi de medii de locuire. Aceasta porneşte de la premisa uneia sau mai multor ***societăţi* bazate pe cunoaştere** înspre direcţia investirii în ***alianţe* de cunoaştere**.

A pune la un loc dezvoltatori, cercetători şi responsabili din cadrul administraţiilor va implica pe larg participare echitabilă şi echidistantă din partea

acționarilor interesați, permițând atât **calibrarea produselor finite,** cât și **creșterea gradului de conștientizare a pieței**.

Valoarea adăugată se regăsește în **crearea ecosistemelor la nivel local,** în scopul unui impact global, răsunător prin rezultat. Aparatele de guvernanță locale, regionale și naționale pot demara parteneriate cu mediul de afaceri privat în direcția dezvoltării **modelelor de afaceri multiservicii**.

Livrarea de **bunuri inteligente** – sau așa-numitele **'bunătăți'** ☺ – pentru cetățeni, facilitează demararea **inițiativelor creative de afaceri**, incubând aplicații inteligente, livrare de conținut și o industrie bazată pe **creștere economică ecologică**.

Platforma orașelor inteligente românești vizează să întrunească administrații, universități, centre de cercetare și întreprinderi (în special IMM-uri) având un interes ridicat în a **încheia parteneriate** strânse pe proiecte specifice de dezvoltare urbană/teritorială, dezvoltând o platformă pentru dezvoltare urbană/teritorială bazată pe **inițiative inteligente**.

Neajunsurile în România se raportează momentan la o **inteligență teritorială fragmentată** și la o necesitate de a asigura o **anumită masă critică** dornică de a se implica.

Platforma orașelor inteligente românești necesită proviziune dincolo de nivelul minim de infrastructură caracteristică posibilelor orașe sustenabile, vizând **inițiativă**, **implicare constantă din partea comunității** și **investiții majore** în „internetul lucrurilor", transport, spații urbane și clădiri, și deopotrivă, în infrastructuri de tip *soft*.

O aprovizionare cu asemenea soluții inovatoare – precum sisteme de gestiune inteligentă a clădirilor, sisteme de transport inteligent, sisteme de gestiune inteligentă a energiei ș.a. inițiative demarate din punct de vedere social – împuternicește orașele în **utilizarea acestei rețele de inovație ca 'șezătoare' pentru vizualizarea și modelarea** infrastructurii urbane în scopul de a furniza servicii urbane inovatoare și a gestiona **sustenabilitatea urbană**. Orașele din cadrul platformei vor beneficia de o serie de avantaje având acces la soluții inovatoare și la oportunitatea de a le testa.

O provocare majoră o constituie însă **dezvoltarea modelelor de guvernare** și a cadrelor-conținut necesare în vederea susținerii **parteneriatelor public-private** care permit aparatelor de guvernare și industriei IT (integratorilor de sistem, dezvoltatorilor de aplicații și furnizorilor de servicii) schimburi informaționale și **colaborări transsectoriale în cadrul ecosistemului unei comunități** în vederea transformării operațiilor la nivel de oraș.

O asemenea infrastructură poate veni în ajutorul celor însărcinați cu gestiunea orașelor în scopul înțelegerii cadrelor-conținut necesare pentru dezvoltarea **sistemelor de gestiune** care **accelerează livrarea de informații** și

implicit îmbunătățesc calitatea vieții, ating sustenabilitatea urbană și obiectivele de mediu, sporind totodată eficiența economică și incluziunea socială.

Soluțiile inteligente pentru spațiile urbane se hrănesc din **gestiune optimizată** și **angajament civic**. Tendințele actuale de identificare a individului – ca parte fragmentară dintr-o *multime habitând spațiile publice* – cu societatea în delinearea unui spațiu de manifestare, și necesitatea interacțiunii sociale prin intermediul variilor fluxuri de rețea și relaționare, asigură un grad suficient de participare. **Capitalul social** constituie pilonul de bază în cadrul **plasticității rețelei**, **inovării colaborative** și a **dezvoltării continue a capacităților**.

Un rol important pentru universități – pe lângă cel de a **furniza absolvenților locuri de muncă bazate pe cercetare intensivă**, create de contextualizarea tipică orașelor inteligente, sau cel de a atinge noi frontiere, punând la dispoziție accesul la expertiză – este acela de a-și pune în valoare **abilitățile de evaluare** în scopul **furnizării de consultanță autorităților locale** vizând impactul variilor abordări în a ataca provocări specifice.

Formarea funcționarilor publici în lansările efective de proiecte/programe și analizarea impactulor pe care acestea le au în cadrul comunităților, prin **co-implicarea** lor în cadrul procedurilor, ridică încă o dată problema acoperirii unei dezvoltări continue a capacităților, în scopul familiarizării consumatorilor de rând cu soluțiile inovatoare urmând a fi adoptate cu entuziasm de orașe.

Scopul general al inovării printr-o asemenea rețea utilitară este de a furniza formare pentru **orașe reziliente** capabile de a-și schimba identitățile și structurile pentru a-și asigura cetățenii cu același nivel de trai sau chiar unul mai bun. Aceasta conduce la posibilitatea *reconversiilor urbane,* generând **spații hibride** în scopul mult-așteptatelor **spații publice respondente**.

Introduction

'Cities' define urban agglomerations in general, as well as the administrative units governing them. 'City' can also refer more generally to perceptions of an *urban way of life* and **specific cultural** or **social features**, as well as *functional places* of **economic activity** and **exchange**. 'City' may also refer to two different realities: the *de jure* city – the administrative city – and the *de facto* city – the larger socio-economic agglomeration. The *de jure* city corresponds to a large extent to the historic city with its clear borders for trade and defence and a well-defined city centre. The *de facto* city corresponds to physical or socio-economic realities which have been approached through either a morphological or a functional definition.

From the perspective of social innovation, a smart city is not just a city with advanced technology, but it is a city that approaches in a smart way the various

dimensions and challenges that found its identity: at least, the economic dimension, that of the human and social capital and the governance one.

The cities of tomorrow will stop growing outwards and instead grow inwards in various forms of re-densification. There will be **clustered cities** with *multiple centres* and *various forms of neighbourhoods*, redesigned by **social innovation**.

Smart solutions for urban spaces feed upon **optimized management** and **civil engagement.** Without a proper strategy, openness and standardization activities, a smart initiative threatens to become a financial burden rather than a solution for today's cities.

Towards resilient and inclusive economies mitingating for a development model in which economic growth should encompass more employment opportunities, t**he proposed discussion will answer the question of** *How* **(***?***) to cluster on** *knowledge transfer* **targeting** *competitive identities***.**

On the premises of **Knowledge / Technology Transfer** between Public and Private domains

In a world wide trend of advancing economies from a *resource-based* to a *knowledge-based* production, a series of governments have increasingly added on their agendas words like "knowledge" and "innovation" weighting heavily on economic growth, social development, and employment facilitation. In such context, promoting 'knowledge transfer' has increasingly become a subject of public and economic policy.

Knowledge transfer is the ability to develop interchangeable and integrated **clustered services** to support **business requirements**.

Embrained, Embodied, Encultured, Embedded knowledge refer to more than simply data or information stored as layers in a collection – the transfer processes go beyond merely translating skills and/or abilities, regardless of their flexibilities.

Smart implies **joint capitalization** ("piggy-banking" concept), means not just a(nother) prêt-a-portrait concept, and triggers a **multifaceted** approach ("*quick & dirty*" ideas / solutions).

Programming intelligence in isolation is not enough to keep cities competitive and allow for the dissemination of the concept. *Shared knowledge* between *smart businesses* can easily be done throughout a platform of smart city

initiatives. Keeping cities prepared, productive, innovative, and competitive (Steve Trautman, corporate America's leading knowledge transfer expert) can be ensured through an efficient and effective hub networking on knowledge and technologies.

Drawbacks in Romania so far relate to **fragmented territorial intelligence** and the need for a **certain critical mass** willing to get involved.

Steps within the Knowledge Transfer Process:
- Identifying knowledge holders;
- Motivation to share ☺ Incentives of Pro-activism;
- Designing a sharing mechanism to facilitate the transfer;
- Executing the transfer plan;
- Measuring toolkit – ensuring the transfer;
- Applying transferred knowledge / technologies;
- Monitoring – Evaluating – Disseminating Building Successes.

For example, a type of technology transfer might cover smart city heating schemes aiming at district heating networks, which would strengthen cities' energy resilience as well as tackling fuel poverty. Such a case study is presented by The Energy Technology Institute (ETI) in UK, which is a public private research partnership, involving six companies whose funding of projects is matched by the public sector, in particular EPSRC. Its Smart Systems and Heat (SSH) Programme aims to design and test a commercially viable Smart Energy System in the UK, facilitating improved heat management and low carbon energy services across the country. This involves the investigation of mass-market consumer behaviour and requirements to understand the likely future demand for heat and energy usage. The design methodology phase of the programme is under way, and work has begun on Enabling Component Technologies (identifying gaps in the potential range of smart systems technologies), Energy System Design Tool Development (assessing the impact of a Smart Energy System in a geographical area), Data Management and Architecture (fulfilling information and service requirements of a smart energy system), Value Management and Delivery (identifying how value can be delivered across the value chain) and Consumer Behaviour Study (insight into consumer requirements for heat and energy both now and in the future). ETI has also started engagement work with local authorities, who will provide the demonstration locations for the second phase of the programme: a mass-market field trial of up to 10,000 homes to ensure any system design can be replicated geographically across the UK.

In the case of Trilogis (Rovereto, Italy), the concept of **Paperless Urban Planning** based on **geospatial technologies** target **workflow management**, while getting the civil society involved as **co-designer**. Having the opportunity of transfering such initiatives outside their production environment would export

smart city know-how towards a resilient model for a larger palette of living environments.

New Ways of Working

City needs to produce *benefits*, being a *capacity* in itself. "*What would I want?*" to see, to do, to find, to indulge, to encounter, to promote, to attract, to sense, to entertain, to inherit [...] to «live and let die » (sustainably). If each and every one of its counterparties would independently think as stated above, subsequently clustering on similitudes – based on the premises of place-making juxtaposition, if not for deeper considerations of communitarianism – then urban programming might come in handier, facilitated by such a social preview. Nevertheless, current trends in crowd'space living and the need for social interaction provide through various networking streams sufficient participation. COLLABORATION IS CHANGING DESIGN resulting in profound needs for *urban reconversion* towards **hybrid spaces** targeting the long-awaited **responsive public spaces.**

Technology becomes invisible, resulting into a more human scale of our built environments, ensuring the existence of social spaces, a good environment and generally speaking, a high quality of life.

In the context of weakened links between economic growth and social progress, social innovation offers an opportunity to widen the public space for civic engagement, creativity, innovation and cohesion.

New Ways of Working envisage:

▪ **Living Labs**, 'user-centred, open-innovation ecosystems, often operating in a territorial context (e.g. city, agglomeration, region), in which user-driven innovation is fully integrated in the co-creative process of new services, products and societal infrastructures'. (European Comission)

▪ **Social Living Labs** add on to co-creation, exploration, experimentation and evaluation by mobilisation, capacity building, visioning and monitoring, developing **participative democracy** through a platform where public interest could feed the notion of a '*negotiated city*', permitting negotiation between apparently opposing values and vision. To function, living social labs require a mobilisation of citizens and stakeholders and the opportunity to define objectives, shape content and process and be part of implementation. It also requires a revised and more inclusive vision of the knowledge society and the encouragement of knowledge alliances.

▪ **Collaborative Innovation Networks** (CoINs) are social constructs described by their originator Peter Gloor (a Research Scientist at MIT Sloan's Center for Collective Intelligence) as "cyberteams of self-motivated people with a collective vision, enabled by the Web to collaborate in achieving a common goal by sharing ideas, information, and work." COINs rely on modern technology such

as the Internet, e-mail, and other communications vehicles for information sharing. Creativity, collaboration, and communication are their hallmarks.

▪ **Self-Organizing Innovation Networks are explained by** Robert Rycroft (Elliott School of International Affairs of George Washington University) as innovation networks organized around constant learning in their capacity for 'combining and recombining these learned capabilities without centralized, detailed managerial guidance.' He also leads towards the theory that 'globalization and self-organizing networks may be **coevolving**. At the same time, [it] seems to induce **cooperation** among innovative organizations.'

▪ **Incubator Networks** arised from the aggregation of incubators into networks, used to share good practices and can spread new methodologies. Europe has the well established European Business Centre (EBN) association that federate more than 250 eBICs all over the Europe. EBN is animate its network for 25 years now. France has its national network of technopoles, pre-incubators, and eBICs: RETIS-INNOVATION. This network mutualize resources to internationalize startups. Spain has a national network too: ANCES that regroup more than 30 eBICs. Of 1000 incubators across Europe, 500 are situated in Germany, successfully supporting entrepreneurship and the regional industries. Some of them are organized federally within the ADT (*Arbeitsgemeinschaft Deutscher Innovations-, Technologie-, und Gründerzentren e.V.*).

▪ **Public Incubators** are similar to business incubators, though their intent is to accelerate the development of ideas for the benefit of the public good. Many universities and non-profit organization succeed in a goal of public good, though few if any provide a democratic process of refinement. A public incubator incorporates a process of citizenry, measurement, and refinement to culture community ideas.

The Innovative Network Lounge

Cities are expensive systems to run, and they are becoming increasingly more so, unless a programmatic approach to revisiting the price paid per value provided is employed in the (very) near future, through the multiple axes of a long term perspective, what we call a smart approach.

Current needs just have to focus on **reassessing all available means** in order to **create functional synergies**. This can be done pro-actively by **steering the progress** in support to sustainable initiatives, fed by a more accurate perception of human environments / surrounding reality(ies).

Collaboration rooms, innovation centers, creativity labs, whatever the preferred terminology, these centers can be relatively easy to set up yet have enormous payoff.

The innovation networks:
- help companies turn ideas into competitive products or services;
- serve as sparring partners and advisors in relation to the development needs a company is facing;
- provide access to an extensive network of experts and researchers at universities, technological service institutes and in other companies, local as well as global;
- host conferences and workshops where one can gain insight into the most recent technologies and have the opportunity to network with other companies, researchers and specialists;
- help in finding funding to implement projects.

Incentives of A National Smart Cities Platform

Cities cannot be defined solely by their administrative boundaries, nor can urban policies target only city-level administrative units. Urban problems may have very local symptoms but require wider territorial solutions. Urban policy needs to be understood and to operate in a *multi-scalar context*. New forms of governance are essential to respond to these urban challenges.

In the case of Romania, the governance structure continues to be fairly centralized despite efforts geared towards decentralization. The central government's *modus operandi* is characterized by a predominantly sectoral approach, with most of the country's Operational Plans also being implemented in a sectoral manner (except for the Regional Operation Plan, which features some important integrated approaches towards (r)urban development). On top of that, horizontal cooperation and coordination is weak and the local governance is still largely thinking and operating in an outdated manner, using old-fashioned decision-making processes and tools.

Another aspect that should be considered by Romanian cities is to think out of the usual sectoral and top-down approach and to focus their development strategies on becoming smart, innovative and attractive places for their citizens. In order to provide the right, needed solutions to their demographic, **co-designing** the local strategies together with the citizens will be a key aspect: it will allow sorting out the still-fuzzy demand for smart services through a **bilateral process of learning**: citizens will better grasp the meaning and impact of "*smartness*" and local authorities will be able to assess the real smart priorities.

It will also offer support to local administrations and strengthen their ability to take right decisions and create smart local governance. Last but not least, it will enhance integration, collaboration and cooperation at the city-level.

The Romanian Smart Cities Platform needs provision beyond the basic infrastructural levels of potentially sustainable cities, targeting:

- a firmly conducted initiative, within which the set vision and its planning processes need to be kept holistic;
- constant community involvement throughout participatory dialogue;
- major investments in the IoT (Internet of Things), transport, urban spaces and buildings, as well as *soft* infrastructures.

The need for Flexible Multi-Scalar Governance

Problems solved at the level closest to the citizens who are able to deal effectively with them have to be complemented with better coordination at a higher level, to avoid transferring problems from one local level to another, or from the city centre to its periphery.

City leadership needs to imply a clear and consistent vision of what the future city offers its people, with a commitment to deliver the necessary change. Engaging active social involvement could be achieved by including city service dashboards to enable citizens to compare and challenge performance.

Basic prerequisites for establishing a National Smart Cities Platform in Romania would cover the **assessment and recalibration of the regulatory framework** for future effective development of solutions, a clear roadmap and **tools** for promoting intelligence & innovation aiming – above all – at **effective procurement procedures**, while at the same time, steering away from barriers usually set up by bureaucratical levels.

Horizontal and vertical coordination is required as cities have to work with other governance levels and reinforce their cooperation and networking with other cities in order to share investments and services which are required at a larger territorial scale. New governance modes based on citizens' empowerment, participation of all relevant stakeholders and innovative use of social capital are needed. Urban policies will have to ensure coherence between sectoral initiatives with spatial impacts and place-based initiatives.

Network Plasticity and Collaborative Innovation

Puting together developers, researchers and administration responsibles will widely involve shared fee stakeholder participation, allowing for both calibration of end products and raising market awareness. This will allow cities, SMEs and businesses to plug in their data and ideas, test the viability of new business models and come up with improved solutions, all for a fraction of the cost they would have to otherwise spend.

"The most important objective is to link companies and knowledge institutions closer together. We would like to help companies realise new aspects of their innovation, so that they do not always approach the usual business

partners. In this way, Innovation Cup helps develop the entire lifestyle industry." says Betina Simonsen, Director of the Innovation Network in Denmark.

An important role for universities besides providing graduates for the knowledge intensive jobs which a smart city creates or creating edgy and attractive districts and access to expertise, is also using their evaluation skills to provide advice to the city authorities on the impact of different approaches to tackling specific challenges.

Smart communities would act as *"honey pots"*, as new firms and young professionals are drawn to the area and create **growth dynamics** based on new clusters of expertise, which spill over into property refurbishment, leisure and entertainment. This, in turn, provides employment opportunities for a much wider segment of the population.

Deploying integrated city systems depends as much on financial innovation as it does on technological innovation. New financial models are required to convert potential revenue streams into effective infrastructure investment. **Public-Private Cooperation Companies might partly solve a range of issues at hand.** In the case of the Danish Innovation Network, co-finance comes from the Ministry of Science, Technology and Innovation, which is responsible for the Innovationsnetværk Danmark (Innovation Network Denmark) programme.

Continuous Development of Capability

As cities become more resilient while having to face a deeper understanding of their business environments in order to cope with economic development, there is clear need for a continuous investment in capacity building for better inclusive strategies.

Social capital becomes key factor in city attractiveness when coming to the build up of **local capacities** and in strenghtening local economies. Social capital is the binder for stimulating collaboration, engagement in networks, dialogue support, being pro-active when taking on challenges or goal driven objectives.

Helping cities to test and prove the business case, to collaborate with business and academia to tackle barriers such as procurement rules or lack of investment which stop new solutions going to scale, to develop a shared perspective, to advise administrations on strategic priorities, whilst co-ordinating governmental policies in areas related to smart cities can trigger the constant development of capabilities at all levels throughout the entire system.

Capitalizing on the innovative capacity of SMEs the lounge could promote new technological applications within the smart cities movement, promoting supply chain initiatives in complex utility service systems and developing interoperable standards to facilitate systems integration. Training officials in the effective releases and analysing the impacts these have on the communities by co-involving them in the procedures, raises once more the question of covering

the continuous development of capabilities in order to accustom the end users with the innovative solutions the cities will eagerly adopt within their period.

Outcomes and Opportunity

Romanian Smart Cities Platform envisions to gather cities, universities, research centers and enterprises (especially SMEs) having an interest to close partnerships on urban/territorial specific development projects, developing a platform for urban/territorial development based on smart initiatives.

A provision of such innovative solutions – like intelligent building management systems, intelligent transportation systems, intelligent energy management systems and other socially driven initiatives – empower cities in using this innovative network as a lounge for visualizing and modeling urban infrastructure to provide innovative urban services and manage urban sustainability. The involved cities would have a definite advantage by getting access to innovative solutions and having the opportunity to test them out.

Added value lies within creating ecosystems at local level for a global impact, echoing outcomes. Local, regional, and national governments can partner with private businesses to develop **multiservice business models**. Furthermore, government should develop the mechanisms that enable small businesses and citizens to participate in civic-service provision, share information, and create new businesses and service models. Delivering **smart goods** – or so-called **goodies** – to citizens facilitate **creative startups**, incubating Smart City applications, content delivery and a **green-growth industry**.

A major challenge, however, is in developing governance models and frameworks supported by public-private partnerships that enable government and the IT industry (systems integrators, applications developers, and service providers) to share information and collaborate across a community's ecosystem to transform city operations.

Such an infrastructure can help city leaders understand the necessary frameworks needed for developing management systems that accelerate information delivery and thereby improve quality of life, achieve urban sustainability and environmental goals, and increase economic efficiency and social inclusion.

Day in the Life of a Green u-City Citizen

Cloud-based Infrastructures from Cisco IBSG 2011 – Such services and related ecosystems can help cities address urban challenges by providing citizens with better alternatives to urban living in combination with existing development policies and urban information infrastructures.

Cities as Hubs for Innovation Networks

The urban space has become a crossbreed place in which phenomenal experience and virtual experience are combined together to create a socio-technological environment based on the combination of place and networks. Continuous interaction between physical locations and information flows (*Castells*, 2004, pp. 138-49) has been made even more intense by the recent dissemination of geo-referenced applications for cutting-edge devices (Location Based Social Network, Geoblogs…). Urban space becomes a software permitting between ideas.

A great prerequisite for smart cities needs to be the **opennes** of these cities, operating by default with straightforwarding transparencies. The communication between citizens and institutions is oriented to promote and facilitate the involvement of citizens in the management of the *res publica*. The cloud/platform city creates an ecosystem that enables both transparency and also economic growth. (Rachel Sterne, chief digital officer of New York)

The 3.0 City does not yet exist, but the challenge is to create **synergies** between possibilities offered by technologies on "energy efficiency with smart grids, alternative and renewable forms of energy, ecological water systems, centralized waste management, and so on…" and capabilities of citizens to use them, to adapt their behaviour to these smart solutions.

According to Charles Landry, the creative city identifies, nurtures, attracts and sustains potential so it is able to mobilize ideas, talents and creative organizations. The built environment – the stage and the setting – is crucial for establishing this *milieu*. A creative *milieu* is a place that contains the necessary requirements in terms of *hard* and *soft* infrastructure to generate a flow of ideas and inventions.

The overall purpose of innovating through such an utilitarian network lounge is to provide upbringing for **resilient cities** capable to change their identities and structures in order to ensure their citizens the same or a better quality of life.

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URBASOFIA's Smart Portfolio includes planning expertize & content management for:

• **Project SUNSHINE – Smart UrbaN ServIces for Higher eNergy Efficiency**

The ICT PSP project delivers innovative digital services for automatic large-scale assessment of building energy behaviour, optimize energy consumption of heating/cooling systems and interoperable control of public illumination systems, targeting to develop a smart service platform accessible from both a web-based client and an App for smartphones and tablets, while its technology will be piloted in 9 city sites for 12 months, aiming at the reduction of energy consumption and emissions by 10-30%.

More information under: **http://www.sunshineproject.eu/**

• **Project i-SCOPE – Interoperable Smart City Services through an Open Platform for Urban Ecosystems**

An ICT PSP project as well, i-SCOPE focuses on personal mobility of disabled people, energy dispersion and solar energy potential assessment, noise mapping and simulation, being piloted in 8 cities and developed as an end product within the consortium ready for wider deployment.

More information under:

http://www.iscopeproject.net/iscopeNew/index.php/about/abstract

• **Project STATUS – Strategic Territorial Agendas for „Small and Middle-sized Towns" Urban Systems**

STATUS touches upon both a co-designed Strategic Agenda and a smart platform. The project is tackling the problem of incoherent urban and regional development in South Eastern European and neighboring countries by jointly developing an approach that can help cities and regions in making integrated and sustainable urban agendas and place based strategies by participatory planning tools, while, at the same time, follows upon cross-cutting constructive interferences among partner cities' planning processes, facilitating the design of effective and efficient urban tools, by creating the SEE Web Platform as an online smart toolkit of practices, solutions and services targeting the European urban settlements.

The Strategic Urban Agenda (SUA) defined through STATUS represents a tool of high potential, which, focused on developing smart cities, can assist Romanian cities to establish and achieve smart goals. SUA accomplishes this both through vision and planning scale, as well as the participative method it uses in this process.

More information under: http://www.iscopeproject.net/iscopeNew/index.php/about/abstract