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DESIGNING SMART GOVERNANCE IN BELGRADE

Keywords: smart city, green, sustainable, resilient.

PROJEKTOWANIE ZARZĄDZANIA SMART W BELGRADZIE

Słowa kluczowe: smart city, zieleń, zrównoważenie, elastyczność.

Introduction

Today cities are becoming ever more complex systems with vast amounts of data flowing through various channels of our societies. By adding layers and layers of complexity, we as individuals become more disoriented in the vast amount of available information, possibilities and choices. It is only when we are able to structure this information and data into meaningful patterns, can we find ways to understand and cope with the issues at hand. Whether it be seeking employment, better education, cultural events or trying to solve complex issues at a larger scale, similar principles apply. Cultivating a community and bringing people together represents one of the most important aspects of how we choose to use these tools/technologies to make an impact on cities and the globe. The process of building a web application/digital platform should be based on MVP – *Minimum viable product*, which means that the product should be put into function as soon as possible and tested with minimum investments in time and money. The reason for this is also a better way to find a path to potential users and to make corrections early on, to get rid of needless categories, or to add and develop new applications for the platform. The first phase of the project includes making a map with hyperlinks, pinpoints and other tools which ensures the efficient mapping of start-ups, collaborative spaces, cultural events, etc, so that users can easily search and get information.

Authors of new platform - students of Master class named "City and Design" at the Faculty of Architecture University of Belgrade, under the mentoring of Prof. Dr Eva Vaništa Lazarević represent newgrowing young specialists; those who will be responsible for the development of cities in the 21st century, new *soft* leaders which should be soon incorporated in planning of smart government of Belgrade.

Prof. Lazarević has been founding her educational career upon mixing theoretical but also practical way of learning. Several times she founded different non-governmental organizations with her students focused on upgrading the urban life – mixed and intertwined with implementation of new technologies.

1. Smart Governance for new planning¹

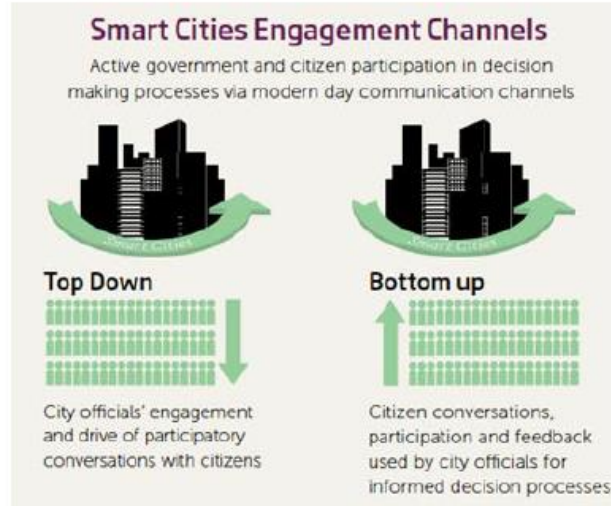
Striving for a single EU market, which Serbia is entering in the years to come - means guaranteeing labour mobility in the era of crisis, reducing barriers for the entry and exit of companies and eliminating unjustified restrictions for business and professional services. For EU public administrations there is intention to improve digital exchanges between administrations and enterprises as well as citizens, to rolling-out E-procurement EU wide, to promote the use of public sector information, to open public data and to implement trans european services. In a word to develop EU wide on line service and to modernise public administration.

Working together even closer – we are all coping with today’s complexity and pace of changes in a context of constrained resources which requires integrations of diverse insights, experience and expertise, cooperation from different organisations. Though, the main topic of smart governance is to tailor workflows to citizens and businesses which need extensive process overhauls across administration but also, in Serbia, to battle against a corruption and to work under the absence of strict EU laws, not yet implemented in practice.

Although, there is in fact a high level of E-environment in Serbia, thanks to globalization & fast implementation of digital Era as well as the presence of smart and intelligent highly educated people. In Serbia we can indeed notice a “Silicon Valley Syndrome” as it was once in Dublin or Tel Aviv - but, unfortunately, with a significant exodus of educated young people to abroad. That younger generation is in fact a real auditorium for smart governance, and a gap between generations can be easily concluded as a problem. Big data, however - has no limits – so there is intention to achieve a full level of smart governance in Serbia, especially and primarily in the context of social data.

¹Abecasis, Margarida: “Smart Government means being enteroperable”; E-Government Conference, Nicosia Cyprus, 2012.

Figure 1.



Source: www.scytl.com

2. Proposal For Smart Governance in Belgrade - Beluppgrade platform

Belgrade became a few years ago a top center of Europe as a settlement for new smart global IT companies. Cheap accommodation and nice and comfortable affordable way of life brought to the city, for a long term stay, a lot of young IT professionals. Nordeus is, for example, a Serbian local Company which is growing fast, becoming globally important. Faculty for Electrotechnical Sciences in Belgrade spawned hundreds of smart professionals each year which found their place in Silicon Valley and Europe, but nowadays they are building their career more and more in their local towns in Serbia.

Figure 2. Nordeus, young and propulsive Serbian company with its offices in London and Dublin, a new form of the Smart IT Company based upon creating the new softwares and FB games



Source: www.nordeus.com

Never the less, in the age of the forth industrial revolution and intensive digitalization of the world, architecture and urbanism will have to respond to these newly established challenges. These technologies are changing the way we live and work, how we learn and communicate, and they also represent new tools that can be used to make an impact in our world. The power of internet brought us the opportunity to scale and spread our ideas, products and services throughout the world. Big data and data mining are giving us opportunities to collect and analyze vast amounts of data, thus giving us an insight into the factual state. Predictive analytics enables us to form new patterns or models and apply them accordingly to improve our cities.

For cities to attract top talent and foster creativity, they have to adopt a set of strategies that will insure the influx of creatives and engineers. Some of these include efficient administration which is able to serve citizens and satisfy their needs, open policies of inclusion and participatory processes, opening the data for analysis and experimentation, enabling a network of collaborative and co-operative spaces, making an ecosystem for innovation and entrepreneurship, creating incentives and tax breaks for newly established enterprises, better connectedness with the world, diversifying community etc. Within these frameworks entrepreneurship, creativity and innovation can be developed. Another part of this equation is a cultural dimension. Culture represents a way to bring people together, to nourish intelectual, emotional and spiritual sensibility, which are directly connected to innovativeness and creativity. A city must also be a cultural hub in order to be an entrepreneurial hub, offering its residents vibrant life and interesting content.

Traditional architectural practice has not yet shown the capacity to adapt quickly and integrate new technologies into its business model. It is especially true for the practice of urban planning and design. Considering that big data, data mining, predictive analytics and various other technologies will have a vast impact on how we think and plan our cities, we have to find new ways to integrate these methods into our practices and use them as tools to enhance our living environment. We, as architects and urban planners, have to define new frameworks and work within them to achieve our common goals.

Figure 3. Logo of the student's association



Source: private resources of the students' association

This is what propelled a group of students from the Faculty of Architecture and the Faculty of Electrical Engineering from the University of Belgrade to initiate a project called Belappgrade. (fig. 3)

The aim of this project is to create a digital platform in the form of a web application that maps different places in the city such as startups, collaborative spaces, cultural events, public art etc. Our mission is to promote entrepreneurship, innovation and creativity in Belgrade, the capital of Serbia. In order for us to start and develop this project, we had to adopt an entrepreneurial mindset and form an interdisciplinary team of students that was able to tackle all the issues that emerged. We used entrepreneurship as a modality through which we created a sustainable framework and dynamic process of creation, so that we could realize our project efficiently. We applied the principles of Lean Startup⁶ and based a product on MVP – Minimum viable product, which stands for a product built with minimum investments in time and resources and put into action as soon as possible to be tested. The digital platform was made with

high levels of flexibility and adaptivity so that it can be easily changed to fulfill the users' requirements. The potential users of this app are students, job applicants, organizations, companies, and other individuals interest in these topics. Since it is not always possible to predict who the exact users of our application will be, it is reasonable to assume that changes are inevitable. The concept of an open platform can take significant amounts of data and information, and allows a participation of different companies, organizations and partners, as well as a gradual integration of all important aspects. The application consists of two major categories: Startups and Culture. These reflect the core values that we've adopted in promoting the city and informing our users. Within the category of Startups you can find subcategories that include mapped companies, collaborative spaces, events such as conferences and meetups, and job offers. All of the startup companies in the city are mapped and contain basic information about them, along with contact info, addresses and links to their profiles on social networks. Collaborative spaces include entrepreneurial and innovation hubs which serve to provide spaces work teamwork, offices and workshops. Events include conferences, meetups and workshops. Companies can also register, log into their profiles and post job offers to potential job seekers in the job offers category. In this category user can click on the name of the company, search for a suitable job, and then apply with a CV template through our web application.

In Culture category subcategories are divided between cultural events that include workshops, exhibitions and gatherings, public art which includes different kinds of performances, urban art, graffiti etc. There is also a possibility for organizers of these events to add them to the platform by clicking on ADD EVENT, and then filling a form with description and info, and sending it to the administrators.

This platform offers great opportunities to connect physical places to potential users and inform them about possibilities and activities. Integration of different options, filters, criteria on an interactive map, has the objective to empower users with wider range of opportunities and make a quest for information much easier. We aspired to achieve a balance between providing good quality service by preserving the initial goals on one hand, and on the other making an interesting interactive usage so that platform can stay active for a long period of time.

Figure 4. Belgrade, Serbia



Source: <http://moonplanet.com>

Conclusions

We are seeing major transformations that are occurring in Europe and the rest of the world. Migrations are changing the face of Europe, mobility is becoming more common everyday, densification and resource consumption are developing fast. An insecurity and criminal swallowed the most of European cities.

At the same time, fortunately information technologies are completely changing the way we live, work and communicate with each other. It is in these circumstances that we have to create new frameworks for action and use our knowledge and skills to make a positive impact in the cities we live in. We must find ways to use and integrate technology and innovations as tools in the process of urban planning, urban design, city management etc. Smart cities require smart people who are able to coordinate and articulate transformations on ecological, economic and socio-cultural level.

With the growing population of today's cities one of the most important aspects will be efficient integration of these people into the system. Also, precise information will provide a strong feedback to the administration and urban planners and it can, thus, be used to inform the decisions made by these actors. The systems that insure a good feedback channels are able to build frameworks that enable participatory processes and more democratic distribution of resources.

In the world of rapid transformation and changes, what other way to cope with the issues than to use the resources and technologies available to all of us in order to understand at first, and then act accordingly to provide solutions to

the problems and enhance our living environment. Concepts such as big data and predictive analytics enable us, among other things, to distinct relevant information from vast amounts of data and recognize meaningful patterns. And it is only when we are able to detect meaningful patterns and organize them into well structured models, we can make informed decisions and integrate these conclusions into our plans, concepts, models of development, designs etc.

The progress that was made in the last few decades in the areas of information technologies, but also in other areas, should be seen as a great opportunity to incorporate them and form interdisciplinary teams of experts that will contribute with their unique set of skills and knowledge. Transcending the boundaries of each profession individually so that we can get the best results will be one of the priorities in the near future and it should be embraced as a possibility to secure a good position for our knowledge and skills as architects and urban planners in the ever changing world.

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Streszczenie

Artykuł opisuje kwestie zarządzania miastem w paradygmacie "smart", obecnym w XXI wieku, gdzie wszystko odbywa się w domenie zarządzania informacją cyfrową. W artykule opisano narzędzie stworzone przez studentów magisterskich studiów architektonicznych pod kierunkiem prof. Evy Vaništy Lazarević w Uniwersytetu w Belgradzie w ramach zajęć „Miasto i projektowanie”.

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