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1) Executive Summary

a) Introduction
In line with the 2009 Lisbon treaty to “encourage the participation of young people in democratic life in Europe”, the European Commission (EC) has launched the 2014-2020 Erasmus+ Programme for Education, training, youth and sport, to tackle the escalating socio-economic challenges facing the large metropolises development frameworks in the EU countries. With the youth running high risks of unemployment rates, social exclusion and marginalization, the lack of strong accountability mechanisms for youth societal and political engagement in the decision making process, remain jeopardizing the political and economic stability of Europe governing systems. Accordingly, post 2015 accountability mechanisms will be demonstrated via the utilisation of Volunteered Geographic Information (VGI) toolkit, to assure the equal access of youth to institutional governance, and participation rights in community advocacy planning. This project will promote synergies between the EC social programmes, and the European Innovation Partnership on Smart Cities and Communities- Operational Implementation Plan (OIP) to formulate strong foundations of young people leadership, assisting in gaining sustainable life learning skills for urban governance, and forming a continuum of effective and inclusive citizen based accountability.

b) Purpose of the Study
This paper examines the youth utilization of Inquiry-based discovery conceptualization, as sustainable toolkit for community mapping, generation of user-modified maps, and dissemination of spatial data. In the pursuit of innovative youth applications of social capital as spatial citizens, equal access to digital geo-referenced data and urban land-use policies, will gain particular attention, highlighting the challenges posed by the youth as obstacles to citizen agency, services delivery, and interpretation of open innovation ‘thick’ and ‘thin’ engagement on urban planning participatory representations and geo-media analysis.

c) Approach
The ideal of Volunteered Geographic Information (VGI)-Youth Urban Governance toolkit will be introduced in support to the implementation of the European Innovation Partnership on Smart Cities and Communities- Operational Implementation Plan (OIP) programme, with emphasize on Citizen Focus Priority area instrumental design solutions, as guidelines for policy makers, local governance and community stakeholders to enforce young people participatory qualitative accessibility to geo communication database, and impact the youth engagement in spatial planning e-governance. Moving beyond the mere crowdsourcing public policy of knowledge exchange, and random sample of poll surveying, to reinforced task-based engagement of the youth in the place making design process, a number of relevant sub themes will be inspected, such as the youth design innovation of data collection instruments, and how to visualize and combine environmental observations with narrative urban qualities, to generate predictions and evidence based planning decisions.
2) Volunteered Geographic Information (VGI)-Youth Urban Governance Toolkit

d) Defined as “The harnessing of tools to create, assemble, and disseminate geographic data provided voluntarily by individuals”, Volunteered Geographic Information can work as a great vehicle to empower youth urban governance, and participation in spatial planning community practices. (Goodchild, 2007).

With the beginning of GIS Corps in 2003 Atlanta, Georgia, GIS was utilized by highly specialized experts, to strengthen the local capacity of using spatial information technologies, and develop web-based interactive mapping applications. This was followed by the Open Street Map editing tool that goes beyond legalization of map technical resources and restrictions on accessibility, to vector based editable map, which allows the public to upload GPS track logs in innovative, productive and effective approach.

With the widespread of ITC, predominance of young people utilization of mobile location technologies and web based applications is significantly increasing, according to the 2015 statistical data for the Eurostat resource. ICT surveys for EU state countries on access and internet connectivity (Figure 1) have shown that young people aged 16–29 have made higher computer and internet than the rest of the population on a daily basis. Four out of every five (80 %) young people used a computer on a daily basis in 2014, nearly 20 percentage points higher than among the whole population (63 %)” Eurostat Statistics Explained, (2015).

Having this in mind, the employment of young people ICT skills remains a necessity to benefit from and contribute to a knowledge-based urban planning governance, and community base sustainable economy. A Digital Agenda for Urban Planning aiming at maximising the benefit of the digital era it to take action to empower the youth utilization of Inquiry-based discovery conceptualization ICT tools, as sustainable approach for community mapping, enhancing participation in generating user-modified maps, and dissemination of urban spatial data.
e) Planning and Education: Y-PLAN

To demonstrate this viewpoint it is useful to consider the Y-PLAN (Youth-Plan-Learn-Act, Now!) methodology, initiated by UC Berkeley Center for Cities+ Schools (CC+S), and grounded in over a decade of educational research with the purpose of engaging young people of all ages in mapping their surrounding built environment, and the re-visioning of local neighbourhood regeneration programmes.

f) VGI Liability concept and Risk Management techniques

Bearing in mind the previous points the financial and technical complexity process accompanied by acquiring, updating and maintaining government institutional datasets remains an obstacle. VGI data provided by the young, can act as reliable and updated spatial information for industry and citizens; nevertheless, yet further investigation regarding the legal liability of the integrated voluntary information into authoritative Geospatial Data Infrastructure is to be considered. This paper will explore the existing prototypes used to validate data quality and examine legal liability issues around VGI. Restrictions of organizational practices, regulations, legal Licensing and other Intellectual Property Rights will be identified to state clear responsibilities and lines of communication for stakeholders, creating clear reporting channels for the young public participants.

Liability Risk Management techniques should apply, to assure safe and secure resource control when implementing VGI into organizational datasets. The identification of possible risks also remains as a necessity to set evaluation standards of risk occurrence against magnitude of VGI harm. Monitoring, regular checks and quality assurance of spatial data contributed by the public, enable GI organization to employ continuous identification of VGI new risks, regular usage of rating, and feedback system on contributed data.


  g) YOUTH socio-economic challenges

Current levels of youth socio-economic challenges are to be explored in the context of EU Policy shaping the future of European labor markets, and youth urban governance. In accordance with the Lisbon Treaty 2009, the European Commission 2014-2020 Erasmus+ Programme is targeted to support "Europe’s human talent and social capital, while confirming the principle of lifelong learning by linking support to formal, non-formal and informal learning throughout education, training and youth fields". (Erasmus Programme Guide, 2015). Presenting the most significant milestone in the development of Children's Rights since the European Union establishment, the Lisbon Treaty open the doors for integrating the young people rights in Urban Planning Governance, and all stage of the decision making and the Charter of Fundamental Rights implementation process.

With the rise of youth unemployment rates, the acquiring of holistic analytical approach is important to understand the impact of capacity building, and skills attainment on youth labor market flexibility and employer institutional demands. The engagement of young people in research based methodologies of urban planning through community mapping, personal interviews, and site observations utilizing ITC mobile devices and GIS technologies, will deliver the unique EU model of scientific based problem definition, "presenting evidence-based solutions for a client and panel of authentic stakeholders with the power to act on young people’s ideas". (Y-PLAN, 2014).
h) 2014-2020 Erasmus+

Building on the achievement of the previous 2007-2003 European Programmes improving youth employment rates and career development strategies (Figure 2), Erasmus+ moves beyond lifelong learning programmes, and vocational education international dimensions, to promoting synergies with civil society organizations, and cross fertilization throughout the fields of youth non-formal and informal learning, via the Erasmus+: Youth in Action Programme. Associated with Europe 2020 objectives of enhanced economy, mobility, education and employment, the growing use of digital learning supports youth active citizenship, intercultural dialogue and social inclusion policy reforms, that can greatly be achieved by the youth equal access to spatial planning tools, and participation in city urban design policy reforms and implementation schemes.

**EMployment and Career development**

**Erasmus Students**

More than 85% of Erasmus students study or train abroad to enhance their employability abroad

**Unemployment Rate**

Young people who study or train abroad are half as likely to face long-term unemployment. 5 years after graduation, the unemployment rate of Erasmus students is 23% lower.

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4) EC Planning Policy and City e-Governance

i) European Innovation Partnership on Smart Cities and Communities

Operational Implementation Plan (OIP)

The European Innovation Partnership on Smart Cities and Communities has recently issued the Strategic Implementation Plan (SIP), in the purpose of laying-out the framework of the EU Partnership, to achieve "a significant improvement of citizens’ quality of life, an increased competitiveness of Europe’s industry and innovative SMEs together with a strong contribution to sustainability and the EU’s 20/20/20 energy and climate targets". (Strategic Implementation Plan, p.3)
Working within three main themes, Sustainable Urban Mobility, Sustainable Districts and Built Environment, Integrated Infrastructure Processes, eleven priority areas are defined as guidelines for actions, providing detailed implementation criteria to advance smart cities within the European context (Figure 3). An intersection between human capacity, civil society, local community groups, Information technology, transportation, and energy in the urban environment is formed in the Citizen Focused priority area. Here, “citizen-led projects scale” are introduced as drivers to identify citizen-based problems leading to instrumental design proposals, that would assure targeting the most significance local obstacles, and the configuration of the most efficient planning solution, reflecting local citizen insights, voice, and needs.

![Fig(3) European Innovation Partnership on Smart Cities and Communities](image)

j) Socio-Cultural Shifts: equal access of youth to institutional governance

With the excessive use of youth for ICT technology, social media, mobile devices and cloud computing, the monitoring of youth attitudes and behaviours through voluntary GIS will help assess their needs, fill the gaps across the EU local governments’ institutional services, and youth-oriented community services, with the “standardization of pan-European data so that the diversity of European cities becomes clear”. (Strategic Implementation Plan, p.38)

The OIP Maturity model, can work as a foundation for the Volunteered Geographic Information (VGI)-Youth Urban Governance toolkit, to determine the state of youth accessibility progress, development goals, and progress funding budgets and implementation time frames according to realistic measures. Successful practices will be used as information base of approaches to disseminate knowledge at the EU regional level, and provide insights for learning from progressive cities.
5) Post 2015 accountability mechanisms

k) Future Capacity: equal access of youth to institutional governance

In response to community demographic changes, youth societal expectations and technology challenges, a shift in city urban planning capabilities and technical participatory approaches need to take place far from traditional spatial planning policies and administrative boundaries. Greater citizen inclusion in delivering public services, innovation and institutional governance societal progress can be achieved through establishing local neighbourhood youth engagement KPIs as standardized EC metrics, to motivate competitiveness between and among cities, achieve best standards of young people mobilization towards 'Energy Neutral Neighbourhoods.' (Strategic Implementation Plan, p.39)

Equal access of youth to community-led initiatives, raise the awareness of responsibility, improve the sense of social cohesion, and would assure sustainable engagement in public services maintenance. The form of local energy cooperatives led by young people stimulate new employment opportunities and capacity building programmes, generating inventory on best practices for broader EC planning policies.

l) Digital geo-referenced data collection tools: Young people advocacy planning and awareness

Volunteered Geographic Information (VGI)-Youth Urban Governance toolkit, will facilitate the young people integrated participation in long term regional planning perspectives, and short term local city urban management actions. Maximizing the young people use of city open data, will enable resources integration across city sectors, and generate innovative smart city infrastructural services, utilities, energy, and mobility, waste, and water management. City Urban Visualization method, is one of the OIP Citizen Focus potential actions to create an enabling environment. This can focus on the youth as targeted group, by implementing VGI visualization techniques, to involve the young in city planning real time view, for more realistic understanding of current policies, and wider participatory vision for future governmental plans.

Web technologies and volunteer geographical systems have increased the availability of spatial information at different geographical scales. Taking into account the engagement of young people in georeferenced data and massive use of ICT, their participation in advancing smart cities mobility technological solutions in the fields of sensors networks, remote sensing systems, and spatial data infrastructures, is highly considerable. Thus, new GIS database must develop to open access of spatial data, providing efficient storage, integration and processing of volunteered geographic information, and overcome spatial data quality management and integrity constraints.

6) Conclusions and Recommendations

m) EC Policy: Inquiry-based discovery city urban conceptualization

The utilization of GIS as a toolkit of youth urban governance can best be achieved through the implementation of the European Innovation Partnership on Smart Cities and Communities Operational Implementation plan, to deliver real value of the Lisbon treaty youth oriented framework, and accelerate actions towards creating scalable smart cities measures, and deliver demonstrable evidence of the 2014-2020 Erasmus+ programmes. The employment of young people ICT skills remains a necessity to benefit from and contribute to knowledge-based urban planning governance and overcome youth socio economic challenges, conducting a regional EU approach, to help stimulate the next wave of successful initiatives for young Citizen Focus Priority implementation scheme.
7) References

3. Andriy R., April,(2013), Legal Issues and Validation of Volunteered Geographic Information