Notes from the urbanAPI project

Dear Reader

The project urbanAPI commenced on September 1, 2011 for a duration of three years. Its main goal is to develop tools for interactive analysis, simulation and visualisation for urban agile policy implementation.

I am delighted to announce that the project has successfully started in its third year and I take this opportunity to highlight the progress and results so far.

urbanAPI has already been presented at numerous conferences and events. Wherever we introduced the project, it found positive resonance. We hope that you will find it interesting as well. Enjoy reading and please do not hesitate to send us your feedback.

Dr. Joachim Rix
Co-ordinator of the urbanAPI Project

urbanAPI in brief

The 7th Framework Programme of the European Commission fosters ICT enabled governance transformation in Europe, funding projects contributing to this objective. urbanAPI - Interactive Analysis, Simulation and Visualisation Tools for Urban Agile Policy Implementation – is one of these projects. Led by Fraunhofer IGD (Germany) and supported by development partners UWE, Bristol (UK), AIT (Austria), GeoVille (Austria) and city partners Vienna (Austria), Bologna (Italy), Ruse (Bulgaria), and Vitoria-Gasteiz (Spain), it is investing €3 million in the development of ICT applications supporting the management of European cities.

urbanAPI provides ICT enabled solutions adapting governance models to deliver more effective decision making, supporting stakeholder engagement and citizen participation, in order to enhance sustainable urban policy development and delivery. The urbanAPI applications can be used for decision support, conflict management, analysis and visualisation and rely on innovative interaction platforms. They support policy makers, planners and stakeholders at different governance and spatial levels – urban quarter level, municipal level, and urban region level. urbanAPI web applications make use of state-of-the-art web technologies such as X3DOM to display 3D contents over the WebGL API.

urbanAPI adopts an agile development methodology with cyclic and multiple tasks running in parallel, developing a toolset that creates advanced ICT-based intelligence in three urban planning contexts:

- The **3D Scenario Creator** application directly addresses the issue of stakeholder engagement in the planning process through the development and provision of enhanced 3D virtual reality visualisations of neighbourhood development proposals.
- The **Mobility Explorer** provides mobile phone based ICT solutions that permit the analysis and visual representation of socio-economic activity across cities and in relation to the various land-use elements of the city.
- The **Urban Development Simulator** prototype provides ICT simulation tools for interactive city region development simulation addressing urban growth and densification as a result of planning interventions.

A major added value of the urbanAPI toolset is the ability for these smart applications to support transformational governance, facilitating the shift from a purely top-down planning approach, to one which is fully engaged with bottom-up initiatives supported by public intervention and stakeholder involvement.

urbanAPI is co-funded by the European Commission within the 7th Framework Programme

Project news

Project status update

In the third project year urbanAPI has commenced a review and evaluation cycle with the end users of the participating cities as well as members of the Stakeholder Board, following the assessment method developed. During the evaluation it is planned to offer a system introduction, hands on training session and an online evaluation questionnaire to all the users. Following feedback from the users, a second iteration round of updates and improvements of the tool set and the applications will be the main focus of activity, as well as the provision of additional functionality according to upcoming requirements.

Smart Green Cities Conference in Bristol

The urbanAPI project will be presented at the **Smart Green Cities Conference** in Bristol 1-3 April 2014 with the objective to support discussion on integrated data and monitoring. The conference is organised by the EU funded URBAN-NEXUS project that supports the dissemination of research on the promotion of smart green cities via integrated urban governance. The aim of the conference is to review both research and practical examples of smart urban governance including the demonstration of smart city tools.

URBAN-NEXUS

The Bristol conference is the final event in a series of Dialogue Cafés hosted by URBAN-NEXUS, and combines the themes of urban climate resilience, health and quality of life, and urban land competition into a framework for the attainment of smart green cities. During the conference, participants from throughout Europe will have the opportunity to debate the state-of-the-art in European research, discuss the core issues of smart green cities and review city-based demonstrations.

Policy modelling

The objective of the urbanAPI project is the full exploitation of smart tools and methodologies supporting decision-making for sustainable urban development. Achieving this exploitation potential requires full understanding of the wider urban governance context in which urbanAPI tools and applications connect with urban governance processes and contribute to the flow of intelligence necessary to support plan making and decision taking (see diagram depicting Urban Governance Policy Cycle). This understanding permits the further development of these tools and the identification of application commonalities in the urbanAPI partner cities. Specifications of commonalities will then be translated into generic tools and methodologies applicable to a wide range of cities throughout Europe, and indeed globally. The ultimate aim is the commercial exploitation of the urbanAPI toolset, and the elaboration of future strategies for tool development via further RTD engagement.

urbanAPI is co-funded by the European Commission within the 7th Framework Programme

In respect of the above UWE and AEW are working with partner cities Vienna, Vitoria-Gasteiz, Bologna and Ruse to map out the procedures of plan making and decision making in respect of the various city agencies and actors involved. From this it is possible to discover what information is used and required, by which organisations/actors, for what purpose, at what time, and thereby identify the information and intelligence management relationships between these organisations/actors. In this way the project will elaborate the potentials for the development of common tools that can be usefully applied in a wide variety of city contexts throughout Europe.

Consortium Meeting

The most recent urbanAPI consortium meeting took place on the 21-22 January 2014 in Darmstadt, hosted by Fraunhofer Institute for Computer Graphics Research IGD. The meeting reviewed planning for further progression of the project during the final year. Special focus was given the further refinement of the products, especially regarding the ontologies and rule editor.

In addition planning of the final urbanAPI events, to take place at the end of the project, was discussed and potential locations selected in both Ghent (EcoProcura 2014) and Gdynia (ISOCARP World Congress 2014).

Papers and scientific publications

The following papers and scientific publications were published in the past project months:

Khan, Z., Ludlow, D. and Loibl, W. (2013), *Applying the CoReS requirements development method for building IT tools for urban management systems: The UrbanAPI project*.Theoretical and Empirical Researches in Urban Management, Vol 8, Issue 4, pp. 25-59.

Khan, Z.; Ludlow, D.; Loibl, W. & Soomro, K. (2014), *ICT enabled participatory urban planning and policy development: The UrbanAPI Project*. Transforming Government: People, Process and Policy. *[in press]*

Ruppert, T. et al. (2014), *Visual Decision Support for Policy Making – Advancing Policy Analysis with Visualization*. In: Policy Practise and Digital Science: Integration complex systems, social simulation, and public administration in policy research. Janssen, M.; Wimmer, M. & Deljoo, A. (eds.). *[to be published]*

Krämer, M. & Stein, A. (2014), *Automated urban management processes: integrating a graphical editor for modular domain-specific languages into a 3D GIS*. In: Proceedings of the 19th international conference on urban planning and regional development in the information society GeoMultimedia. *[to be published]*

Dambruch, J. & Krämer, M. (2014), *Leveraging public participation in urban planning with 3D web technology. [submitted]*

urbanAPI at conferences and events

We cordially invite you to visit urbanAPI at the following conferences:

- **Smart Green Cities Conference – Dialogue Café** on 1-3 April, 2014 in Bristol, United Kingdom
  The urbanAPI project results will be presented at the Smart Green Cities Conference to generate discussion on integrated data and monitoring with participants from throughout Europe.
- **Long Night of Research (Lange Nacht der Forschung)** on 4 April, 2014 in Vienna, Austria
  The Long Night of Research is Austria's largest research event. The main focus is on dialog between scientists and society. In this context the results of the urbanAPI project will be presented.

urbanAPI is co-funded by the European Commission within the 7th Framework Programme

- **European Meeting of Cybernetics and Systems Research (EMSCR)** on 22-25 April 2014 in Vienna, Austria.
  urbanAPI will be presented during the EMSCR meeting to support the development of a common understanding of system sciences in response to global challenges.

For further details of urbanAPI activities at these events – please visit our website **www.urbanAPI.eu**.

Also we thank all our visitors at past events for their valuable contact and feedback:

- **CeBIT 2014**
  on 10-14 March, 2014 in Hannover, Germany
- **Smart City Exhibition 2013**
  on 16-18 October 2013 in Bologna, Italy
- **INTERGEO 2013**
  on 8-10 October 2013 in Essen, Germany
- **WALK21, XIV International Conference on Walking and Liveable Communities**
  on 11-13 September 2013 in Munich, Germany

urbanAPI Consortium

The project was initiated by nine partners from six European countries. The partners include representatives from four application cities, two urban planners and policy modellers, and three development groups. The project partners include:

- Fraunhofer Institute for Computer Graphics Research IGD, Darmstadt, Germany (Coordinator)
- University of the West of England, Bristol, United Kingdom
- Austrian Institute of Technology GmbH, Vienna, Austria
- GeoVille GmbH, Innsbruck, Austria
- AEW srl, Rome, Italy
- City of Bologna (COBO) – Environment Sector, Italy
- Agency for Sustainable Development and Eurointegration “Ecoregions” – ASDE, Bulgaria
- City of Vienna, Municipal Department 18 – Urban Development and Urban Planning, Austria
- Environmental Studies Centre (CEA), City of Vitoria-Gasteiz, Spain

Learn more about urbanAPI by visiting our website **www.urbanAPI.eu**.

Contact & Imprint

urbanAPI Project Office

zeitform
Internet Dienste OHG
Fraunhoferstraße 5
64283 Darmstadt
Germany
Phone: +49 6151 155 637
E-Mail: **po@urbanapi.eu**

urbanAPI Consortium

c/o Fraunhofer IGD
Department Spatial Information Management
Fraunhoferstraße 5
64283 Darmstadt
Germany
Phone: +49 6151 155 420
Email: **coordinator@urbanapi.eu**

Responsible editor: Dr. Joachim Rix

For unsubscribing from the newsletter, please send an email with the subject UNSUBSCRIBE to **newsletter@urbanapi.eu**. You will then be removed from the mailing list.

urbanAPI is co-funded by the European Commission within the 7th Framework Programme