Cloud-based solutions for Smart Cities: The EPIC project

Open Innovation for Internet-enabled services in Smart Cities, European Commission Workshop, Brussels, 13/09/’12
EPIC’s primary objective is to be the **first choice service innovation and delivery platform (with Roadmap)** for medium sized (50,000–500,000 inhabitants) cities across Europe  

so that any city can share cost-effectively, access and adapt a range of services to work smarter to meet the needs of most, if not all, their citizens, visitors and a wide range of business/social relationships
• Create an extensible cloud-based solution for cities wishing to become smarter
• Host Pilot applications, software components and data source access as client services and developer resources
• Open-standards for web-services and portlets ensures vendor neutrality & maximises post-project re-usability
• Integrate external open and commercial data sources through web-services, SOAP, REST, WSDL, etc
• Aim for client-agnostic and browser-agnostic solutions
Take 4 External Data Sources ...
Add 1 Cloud Platform ...
Expose Data via Web-Services ...
Add Portlets to Deliver the User Interfaces ...
Connect it all Together Using the Internet ...
Voila: The EPIC Solution for Smart Cities!

- CIBG Web-Service
- ImmoWeb Web-Service
- Relocation Pilot
- User Client Devices
- Urban Planning Pilot
- Urban Planning W/S
- Unity 3D Engine
- Urban Planning Portlets
- EPIC Service Catalogue
- User Management Portlets
- User Management Web Services
- Points of Interest Web Services
- Properties Search Web-Services

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- EnergyHive Web-Services
- Generic Monitoring Framework (GMF) Web Services
- Smart Environment Pilot Domestic Energy
- Smart Environment Pilot Public Buildings
- Smart Environment Web-Services (Domestic Energy)
- Smart Environment Web-Services (Public Buildings)
Brussels Pilot: Relocation Service

https://portal.epic-cities.eu/wps/myportal
Hello Wvdbosch,

This app will assist you in finding the perfect spot to live in Brussels.

Select any of the options below to get started.

My favorites

Find properties

What's around me?

SOAP Test

Logout

2 Story Duplex Appartment


Price €280.000
ISSY Pilot: Urban Planning
https://portal.epic-cities.eu/wps/myportal
Living Lab User Feedback

Content quality – Living in Brussels

Gender

Male
Female
Prefer Not to Say

Perceived usefulness – Using the Relocation Service would enable me to accomplish a property more quickly

How useful is the Urban Planning Service for you? Please indicate to what extent you agree or disagree.

- The Urban Planning Service is a playful way of discovering the city through its major sites
EPIC Sustainable Business Models

EPIC OUTPUTS

1. Cloud Platform
2. Smart City Service’s (via Service Catalogue)
3. Roadmap

Consultancy Offering

Technical Offering

SUSTAINABLE APPROACH

Full Scale offering to Large Cities ready to buy a Platform
Individual service offerings to private and public sector customers
Consultancy offering to Small and Medium Cities wanting to start the journey to becoming smarter by creating a smart city strategy

DELIVERED VIA

Industry Scenario
SME Scenario
Aggregator Scenario
### Key Metrics

<table>
<thead>
<tr>
<th>Indicator No.</th>
<th>Relating To Which Objective /Results</th>
<th>Indicator</th>
<th>Method of Measurement</th>
<th>Expected Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Successfully extend an innovative open cloud architecture to create an industrial strength scalable European wide platform for eService delivery</td>
<td>Platform Functionality</td>
<td>Adherence to product specifications</td>
<td>100%</td>
</tr>
<tr>
<td>A2</td>
<td></td>
<td>Platform Interoperability</td>
<td>Levels of true SaaS interoperability</td>
<td>Level 2</td>
</tr>
<tr>
<td>B1</td>
<td>Use existing validated applications from living lab innovation ecosystems to deliver true value within the collaborative platform and take shared service delivery beyond the state of the art</td>
<td>Applications</td>
<td>Number of initial service applications plugged into Cloud</td>
<td>3</td>
</tr>
<tr>
<td>B2</td>
<td></td>
<td>Testing</td>
<td>Annual testing pass rate</td>
<td>100%</td>
</tr>
<tr>
<td>C1</td>
<td>Investigate and understand how to overcome key European Interoperability barriers such as shared authentication, security, and languages</td>
<td>Knowledge Transfer</td>
<td>Number of meetings with other projects who could help enhance the platform</td>
<td>9</td>
</tr>
<tr>
<td>C2</td>
<td></td>
<td>Lessons Learned</td>
<td>Number of improvements made to the platform learned from other projects</td>
<td>15</td>
</tr>
<tr>
<td>D1</td>
<td>Deploy the platform using a pilot methodology that (a) creates a feedback loop for improvement and (b) shows a significant impact to both the city and to citizens/businesses</td>
<td>Pilot Locations</td>
<td>Number of deployment cities</td>
<td>4</td>
</tr>
<tr>
<td>D2</td>
<td></td>
<td>Platform Availability</td>
<td>Uptime</td>
<td>95%</td>
</tr>
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## Key Metrics

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<tr>
<td>E1</td>
<td>Create a business focused Road Map to increase cities level of knowledge about how to become a “smart” city</td>
<td>Project Framework</td>
<td>Number of potential clients surveyed</td>
<td>75</td>
</tr>
<tr>
<td>E2</td>
<td>Management Practices</td>
<td>Take up of Roadmap by Smart Cities (ENoLL)</td>
<td>16</td>
<td>Via partner ENoLL potential of +200 cities</td>
</tr>
<tr>
<td>F1</td>
<td>Provide added value to cities and citizens through the rapid uptake of new services</td>
<td>Platform Use</td>
<td>Number of administrators in the Cities using EPIC</td>
<td>40</td>
</tr>
<tr>
<td>F2</td>
<td>Benefits Realisation</td>
<td>Targets in benefits plan achieved</td>
<td>80%</td>
<td>Benefits well defined in WPS but difficult to measure at this moment, user testing will make this more tangible</td>
</tr>
<tr>
<td>G1</td>
<td>Create a sustainable offering that will provide a wide range of opportunities for new, higher quality, sustainable services for citizens and businesses after the funding ends</td>
<td>Dissemination</td>
<td>Minimum number of dissemination opportunities attended</td>
<td>36</td>
</tr>
<tr>
<td>G2</td>
<td>Business Plan</td>
<td>Peer reviewed by relevant stakeholders</td>
<td>3</td>
<td>n/a</td>
</tr>
<tr>
<td>H1</td>
<td>Evaluate the levels of the pilots success, and identify any future changes that are needed</td>
<td>End User Satisfaction</td>
<td>Survey/Interview results</td>
<td>50</td>
</tr>
<tr>
<td>H2</td>
<td>Citizens/SME’s to directly benefit</td>
<td>No of citizens/SME’s who were involved in the EPIC pilot</td>
<td>1.550</td>
<td>User testing just started</td>
</tr>
</tbody>
</table>
Thank you!

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http://www.epic-cities.eu