## Smart City

### Open Platform for Smarter Cities

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<th>CHALLENGES</th>
<th>SOLUTIONS</th>
<th>RESULTS</th>
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<td>Lack of Interoperability &amp; Openness</td>
<td>Modular &amp; Service Oriented Approach</td>
<td>Global Smart City Network Sharing Best-practices</td>
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<td>- Today’s city data platforms are fragmented among various divisions of city administration (e.g., mobility, energy, waste, environment, tourism, economy, etc.).</td>
<td>- CEA LETI has developed an OSGi-based open platform for smart cities: sensiNact.</td>
<td>sensiNact has been developed and deployed within various smart city projects. To name a few:</td>
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<td>- Applications and tools using those data platforms are isolated and do not interoperate.</td>
<td>- <strong>Plug &amp; Play:</strong> Device as a Service Approach. Flexibility of adding/removing/updating support for new devices with a minimum impact on the running platform.</td>
<td>- <strong>Smart industrial zone monitoring</strong> in Grenoble to improve the quality of experience of employees in terms of mobility, restaurant services, after-work events, etc.</td>
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<td>- There is an immediate need of tools for rapid integration of dynamic data sources and cross-domain application development.</td>
<td>- <strong>Modular:</strong> Modular development and deployment for enhanced system maintenance and evolution.</td>
<td>- <strong>Smart ski resort</strong> in Chamrousse, to track skiing performance of skiers equipped with sensors; to assist station owners for more efficient resort management.</td>
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<td>- An open innovation approach is necessary for new application ideas to appear with involvement of citizens. The innovators need open APIs, platforms and tools in order to build their innovative applications and services on top of those platforms.</td>
<td>- <strong>Dependable:</strong> Formal data and service model to facilitate reliable IoT applications development.</td>
<td>- <strong>Smart living and well-being</strong> in Isère to enable more autonomy at home for the elderly.</td>
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<td>- <strong>Scalable:</strong> Three layers of architecture (device/gateway/cloud) allowing distribution of data processing at different levels.</td>
<td>- <strong>Environmental monitoring</strong> in Genova and Fujisawa with fix and mobile sensors.</td>
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<td>- <strong>Easy &amp; Quick:</strong> Comprehensive data model and APIs helping to rapidly build IoT applications.</td>
<td>- <strong>Context-aware smart route recommendations</strong> for tourists in Santander city.</td>
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<td>- Collaborations resulted in establishment of a global alliance on smart cities: <strong>Urban Technology Alliance</strong>.</td>
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