# DELIVERABLE

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## D2.2 Stakeholder (User) Workshops' Results

**Version: 1.0**


**Authors:**

**Andreas Menychtas (NTUA)**
**Pavlos Kranas (NTUA)**
**Ravi Coote (FKIE)**
**Catalina Vasilescu (IM)**
**Philippe Perennez (NAV)**
**Pukul Rana (MCC)**
**Werner Brebels (IBBT)**
**Shenja Van Der Graaf (IBBT)**
**Tanguy Coenen (IBBT)**

**Internal Reviewers:**

**Keith Osman (BCU)**
**Leonidas Kallipolitis (ATC)**


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# 1 Executive Summary

This report consolidates the results of the consultation meetings which were organised by the pilot leads in the frame of WP2 (*"User Requirements Analysis")* of the EPIC Project. The Stakeholder Requirements/Workshops are expected to provide a view of the user requirements that the EPIC platform must cover, identifying the technologies that must be supported by the platform, while on the other hand to analyse the pilot applications' use cases, as well as their limitations and capabilities. An efficient number of relevant stakeholders were invited to those workshops, mainly Living Labs staff and city administrators from the participating countries, providing useful input to the project while extensive discussions took place to clarify technical and business issues for the adaptation of the applications to the EPIC platform.

The results of Stakeholder Requirements/Workshops, presented within this document, cover the user requirements that will be considered towards the realisation of the EPIC platform, as well as describe the functionalities and capabilities that the pilot applications provide. A complete list of each scenario's use cases is listed, in combination with the general architecture of the applications. Moreover, the full set of both administrative and technical answers to a specific questionnaire is presented, as discussed at the workshops. This document will provide valuable input to T2.4 ("*Technical Requirements Creation*") for the implementation of the platform elements, as well as for the development of the Roadmap in WP6.

# 2 Introduction

This report includes the results of the consultation meetings ("Stakeholder Requirements/Workshops") which were organised by the pilot leads of the EPIC Project. The key aim of this report is to summarise all the results accrued through the extended discussions between all partners involved in this task and the relevant stakeholders of all three pilot leads. Moreover, an extensive analysis of the applications' use cases and their general architecture is presented.

The document is divided into three main sections. Section 3 is devoted to the presentation of the three pilot applications. More precisely, a general view of the application is described at first, presenting the purpose and scenario of each one of them. In addition, a complete list of all use cases is presented and aims to its better understanding. Finally, the general architecture of the applications is described briefly, helping to identify the key software components and the relations between the application and its external data providers.

In section 4 the stakeholder workshops that took place within the previous period are described in detail. The date and place of every workshop is referred, with a complete list of all stakeholders who participated and the agenda of each.

Section 5 presents the participants' responses to a predefined questionnaire, along with the relevant stakeholders who were responsible to answer each question. The questionnaire was created based on the extensive discussions between all technical and non-technical partners involved in the project that took place at the beginning of this work package. However, the pilot leads that organized the workshops adapted the questionnaire to the specific needs of the relevant pilot application in order to improve the communication between the workshop participants and enhance the requirement acquisition process. The outcomes and recommendations of the stakeholder meetings are presented in this section in a summarised and categorised list of tables. Finally, the general conclusions derived from this document are described in section 6.

# 3 EPIC Pilot Applications

## 3.1 Brussels - Relocation Service

### 3.1.1 Application Scenario

An end-user, typically someone looking for a residence in a foreign country (expats, international students, etc.) creates a relocation profile. The profile is used to identify the resources which are required for handling the relocation process.

Of course, this person and his or her family have certain requirements regarding the neighbourhood in which they are planning to live. Almost every person and his/her family that has to relocate to a new city will be confronted with choices to make. These choices are subject to all kinds of constraints (environmental, traffic, transportation, schools, etc.)

By creating a search query and filters, the user will be able to define those criteria and conditions. When executing the query, the user will get an overview of all the points of interest (POIs) and real estate properties that are located in the areas that match the query filters. This will be presented as a list view. Besides the list view, one will have the option to view the results on a map (e.g. by using Google Maps or Open Street Map).

Once the results have been returned, the user is able to view detailed information about a particular POI or a real estate property (price, broker, rooms, area, contact info, etc.) or he/she can save the query and query results. Saving query results gives the user the option of quickly retrieving these results later.

In addition, the application will be available to users with advanced mobile devices supporting the latest technologies, including 3G networking and positioning and location services (iPhone/Android). Through the mobile relocation application, the user will be able to view the resulting objects in a 'live view' browser with the help of augmented reality (AR) technology (e.g. Layar or WikiTude), once again having the possibility of retrieving more detailed information about a specific POI or property.

After the end-user has explored areas of a city that match his/her criteria, he/she will decide to relocate. When the end-user has actually decided to relocate to the previously explored city, the relocation service furthermore provides the end-user with information about necessary government-related duties he/she has to perform. The relocation service offers options for the end-user to semi-automate the process of relocation, for example, by providing application forms the end-user can fill out. Optionally, for a higher degree of automation, the relocation service may also be able to initialize internal application processes and communicate with the public administration in order to prepare the administration for the pending relocation and to minimize the relocation effort for the end-user.

### 3.1.2 Use Cases

The use cases related with the Relocation Service scenario (RSx) are separated in two phases: 1) *Looking for a new location* and 2) *Actual moment of relocation.*

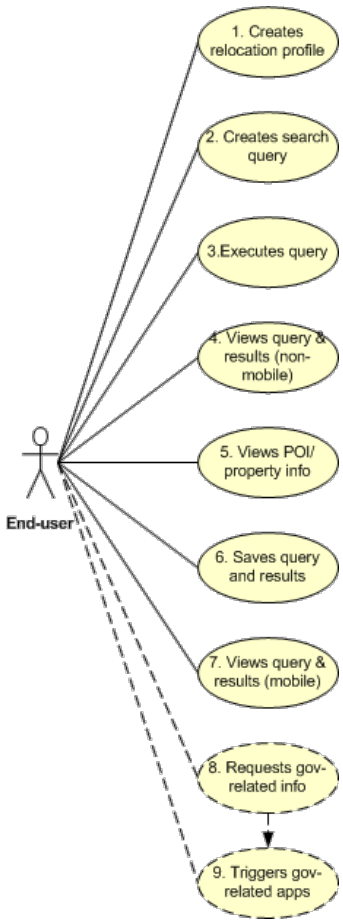



**Figure 1: Relocation Application - Use case diagram**

#### 3.1.2.1 Phase 1: Looking for a new location

**Table 1: Use Case RS1**

| | |
|---|---|
| **ID** | RS1 |
| **Name** | **End-user creates a relocation profile** |
| **Description** | An end-user, typically someone looking for a residence in a foreign country (expats, international students, etc.) creates a relocation profile. The profile is used to identify the resources that are required for handling the relocation process. |

**Table 2: Use Case RS2**

| | |
|---|---|
| **ID** | RS2 |
| **Name** | **End-user creates a search query** |
| **Description** | The end-user has certain requirements concerning the neighbourhood he/she (and his/her family) would like to live in. By creating a search query and defining filters, he/she can narrow down the set of areas which qualify as an adequate place to live. |

**Table 3: Use Case RS3**

| | |
|---|---|
| **ID** | RS3 |
| **Name** | **End-user queries POIs and real estate data** |
| **Description** | The query is executed against the available data sources. This will result in a set of POIs and real estate objects, located in an area that matches the criteria in the query. |

**Table 4: Use Case RS4**

| | |
|---|---|
| **ID** | RS4 |
| **Name** | **End-user views results in browser (Non-mobile)** |
| **Description** | When query results are returned, in the form of POIs and real estate properties, those results can be viewed in a list or on a map in a non-mobile browser, i.e. a pc or laptop. |

**Table 5: Use Case RS5**

| | |
|---|---|
| **ID** | RS5 |
| **Name** | **End-user views detailed information about POI or property** |
| **Description** | By clicking on a particular POI or property item, the user is able to request detailed information about the item. In the case of real estate property, this information could contain price info, broker contact info, property info (number of rooms, area, etc.), pictures, etc. When available, information on the area in which the POI is situated, are presented to the user. |

**Table 6: Use Case RS6**

| | |
|---|---|
| **ID** | RS6 |
| **Name** | **End-user saves query results** |
| **Description** | After a successful query search, the end-user is able to save both the query and the results (POIs and properties) in an external database. An end-user can save as many queries as s/he wants.<br>The end-user can decide at any time to retrieve a previously created query and execute it again. |

**Table 7: Use Case RS7**

| | |
|---|---|
| **ID** | RS7 |
| **Name** | **End-user views results in AR-browser (Mobile)** |
| **Description** | Saved query results can be retrieved on a mobile device, supporting the latest technologies including 3G-networking, GPS, camera, compass, etc. (e.g. iPhone or Android-based phone). By using augmented reality, the POIs and real estate properties can be viewed in an AR-browser, presenting information about the end-user's surroundings, presented as a live Augmented reality view or a map view. |

### 3.1.2.2 Phase 1: Actual moment of relocation

**Table 8: Use Case RS8**

| | |
|---|---|
| **ID** | RS8 |
| **Name** | **End-user requests government-related information** |
| **Description** | After an exploration of the city, the end-user will decide to move to the city. The relocation service then provides the user with information about government-related obligations of the new residence administration that the citizen has to take care of (registration, needed certificates, application for child benefits, and health insurance for the family). |

**Table 9: Use Case RS9**

| | |
|---|---|
| **ID** | RS9 (optional) |

| | |
|---|---|
| **Name** | **End-user triggers government-related applications, automatically invoked by the relocation service** |
| **Description** | This case is automatically invoked when a user states and confirms the relocation process. |

### 3.1.3 General Architecture

Figure 2 shows the general architecture of the relocation application. From an end-user's perspective, a non-mobile client (e.g. a PC) connects with the IBM Government Industry Framework cloud model [3] in a browser environment. Whenever a data request (i.e. execute query) from the client is sent to the cloud, the request is first handled by the semantic layer (FKIE service) and 'translated' into an unambiguous artificial language (generated by a grammar like C2LG [4] which is defined by XML schemata.

The service broker within the service-oriented architecture is then responsible for communicating with the external data sources, by means of web service technology (e.g. SOAP or REST services). Data is being transferred and a result is returned to the client, once again translated based on the definitions in the XML scheme.

The end-user is now able to save the results of the query in a database for later retrieval on a mobile client.

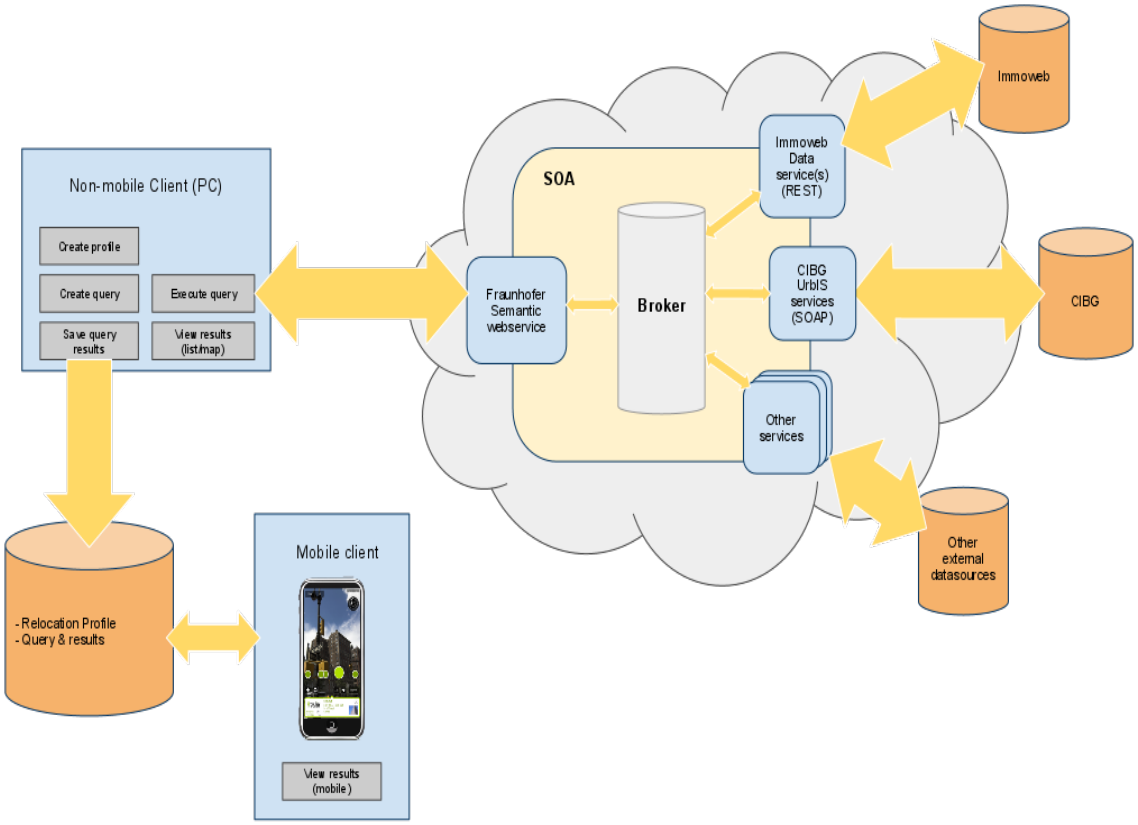



**Figure 2: Relocation Application - Architecture diagram**

## 3.2 Issy-Les-Moulineaux - Urban Planning Service

### 3.2.1 Application Scenario

The Urban Planning Application helps users to understand the vision of the city and experience potential developments by accessing and experiencing relevant information like sounds, statistics, geometrics, dynamic flows and media. The user can virtually fly over and move around the digital 3D model of the city, entering major sites like in a video game.

The end-user can opt for a general discovery of the city, or he/she can choose a specific topic of interest (Leisure and Culture, Sustainable Development, Urban Planning projects, Public Services, Enterprises).

After selecting the main topic, the points of interest in the city associated to it, are highlighted on the 3D map. The user can simply fly over the city and choose the POI he/she would like to have information about. By clicking on the desired item, the user has access to general info, pictures and videos. He/she can also take a virtual tour of the place and access its web site, for more detailed information.

By selecting the topic “Enterprises”, the user can view all the companies registered in Issy (either by 3D aerial view or in a side list) and can access useful information

such as photos, presentation videos, latest job offers (to which the user can apply directly) and their official website for further information.

If the user has an idea about the point of interest he/she is searching for, but is not sure where to find it (i.e. in which topic), he/she can use the search query for a fast finding and locating of the item.

When the end-user has information about a problem in the city (i.e. a hole in the road, a red light that doesn't work properly, damaged notice boards or road signs, etc.), he/she may share it with the local administration through the section "File a report". By clicking on this section, the user has to fill in a form with the following information: location (address where the incident was reported), description of the report and optionally, an image with the report. If the user wishes to follow up on his/her demand, he/she can leave his/her contact details (name, email, phone), allowing the local administration to send him/her a confirmation mail/sms and an issue-number. The same case applies for a local government agent who wants to report a problem in the city to his/her colleagues.

A SME accesses the platform to inquire about similar products and services in the city or simply to have an idea about the companies based in Issy. After selecting the topic "Enterprises", the SME can view all the companies registered in Issy and can access useful information such as photos, presentation video, latest job offers and the official websites for further information and contact. This is a good opportunity for companies to learn about each other's activities, advertise their products and inform others about changes and evolutions, and also a good way to find similarities and partnership ideas.

### 3.2.2 Use Cases

The use cases for the Urban Planning scenario (UPx) are presented in the following tables:

**Table 10: Use Case UP1**

| | |
|---|---|
| **ID** | UP1 |
| **Name** | **End-user chooses his/her topic of interest** |
| **Description** | The end-user (citizen or visitor) has the choice to take a general tour of the city, or he/she to choose a specific topic of interest (Leisure and Culture, Sustainable Development, Urban Planning projects, Public Services, Enterprises). |

**Table 11: Use Case UP2**

| | |
|---|---|
| **ID** | UP2 |
| **Name** | **End-user selects his/her point(s) of interest** |

| | |
|---|---|
| **Description** | After the end-user has selected the main topic, the points of interest in the city associated to that theme are highlighted on the 3D map. The user can simply fly over the city and choose the POI he/she would like to have information about. By clicking on the desired item, the user has access to general info, pictures and videos. He/she can also take a virtual tour of the place and access its web site, for more detailed information.<br><br>By selecting the topic "Enterprises", the user can view all the companies registered in Issy (either by aerial view or in a side list), and can access useful information such as photos, presentation video, latest job offers and of course their official website for further information. |

**Table 12: Use Case UP3**

| | |
|---|---|
| **ID** | UP3 |
| **Name** | **End-user queries POIs** |
| **Description** | The user has an idea about the point of interest he/she is searching for, but is not sure where to find it (i.e. in which topic). He/she can use the search query to locate the item rapidly. |

**Table 13: Use Case UP4**

| | |
|---|---|
| **ID** | UP4 |
| **Name** | **End-user files a report** |
| **Description** | The end-user wants to inform the local administration about an incident in the city (a hole in the road, a red light that doesn't work properly, damaged notice boards or road signs, etc.). The user chooses the topic "File a report". A form will appear asking him/her for the following information: location (address where the incident was reported), description of the report, image with the report (optional).<br><br>Optionally, the user can leave his/her contact details (name, email, phone), allowing the local administration to send him/her a confirmation mail/sms and an issue-number. |

**Table 14: Use Case UP5**

| | |
|---|---|
| **ID** | UP5 |
| **Name** | **Local government agent files a report** |

| | |
|---|---|
| **Description** | Same case as described above, where a local government agent reports to his/her colleagues a problem/dysfunction in the city. |

**Table 15: Use Case UP6**

| | |
|---|---|
| **ID** | UP6 |
| **Name** | **SMEs inquire about existing products and services** |
| **Description** | SMEs access the platform to inquire about similar services in the city or simply to have an idea about the companies based in Issy. After selecting the topic "Enterprises", the SME can view all the companies registered in Issy (either by aerial view or in a side list), and can access useful information such as photos, presentation video, latest job offers and the official website for further information. This is a good opportunity for companies to learn about each other's activities, find similarities and partnership ideas. |

They are also summarised at the above figure:

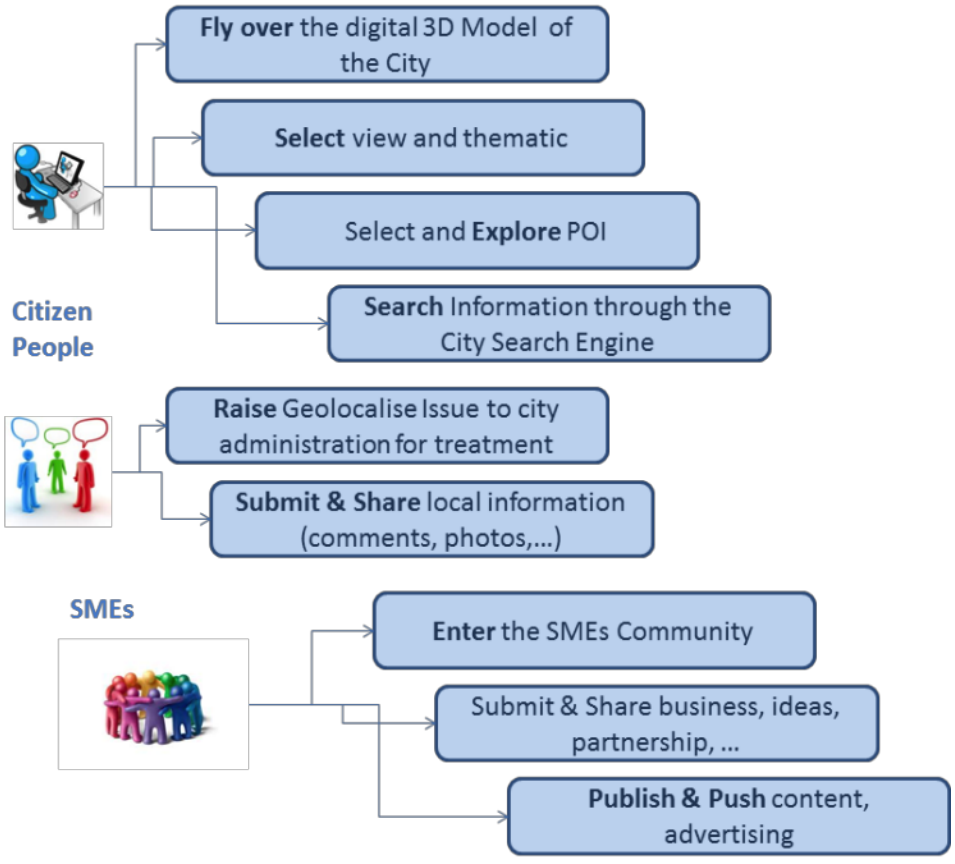



**Figure 3: Urban Planning Application - Use Case Diagram**

### 3.2.3 General Architecture

In the following figures the general architecture of the urban planning service is presented. More precisely, Figure 4 shows the software components that consist the pre-production process, while in Figure 5 the client architecture is presented.

**Pre-Production Process:**

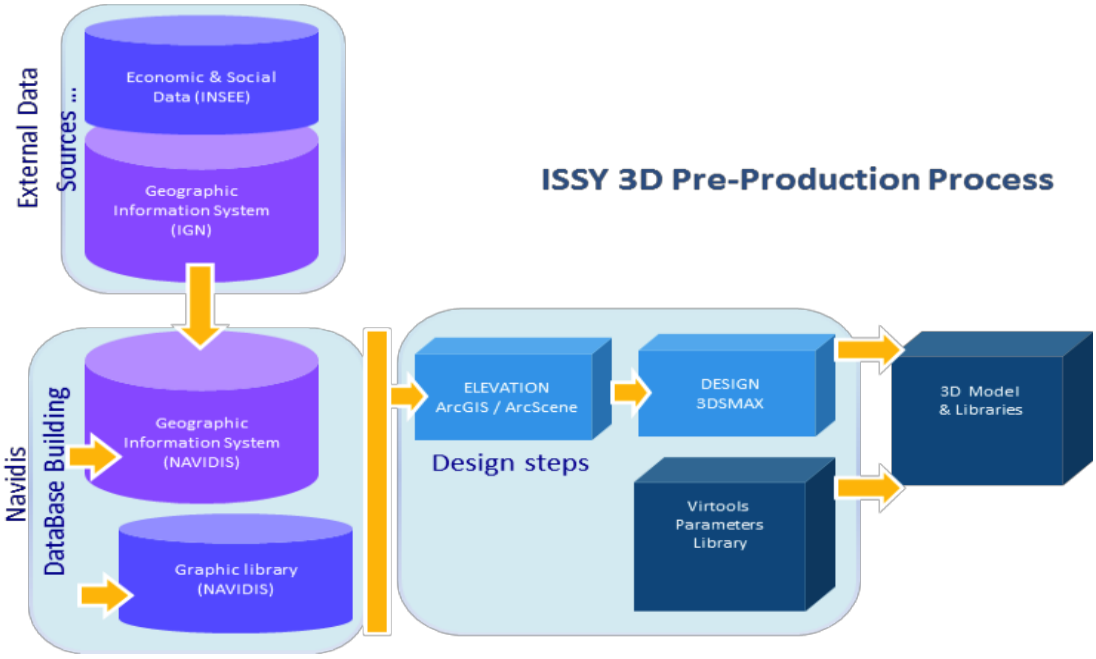



**Figure 4: Urban Planning Application - Architecture Diagram**

**Client Architecture:**

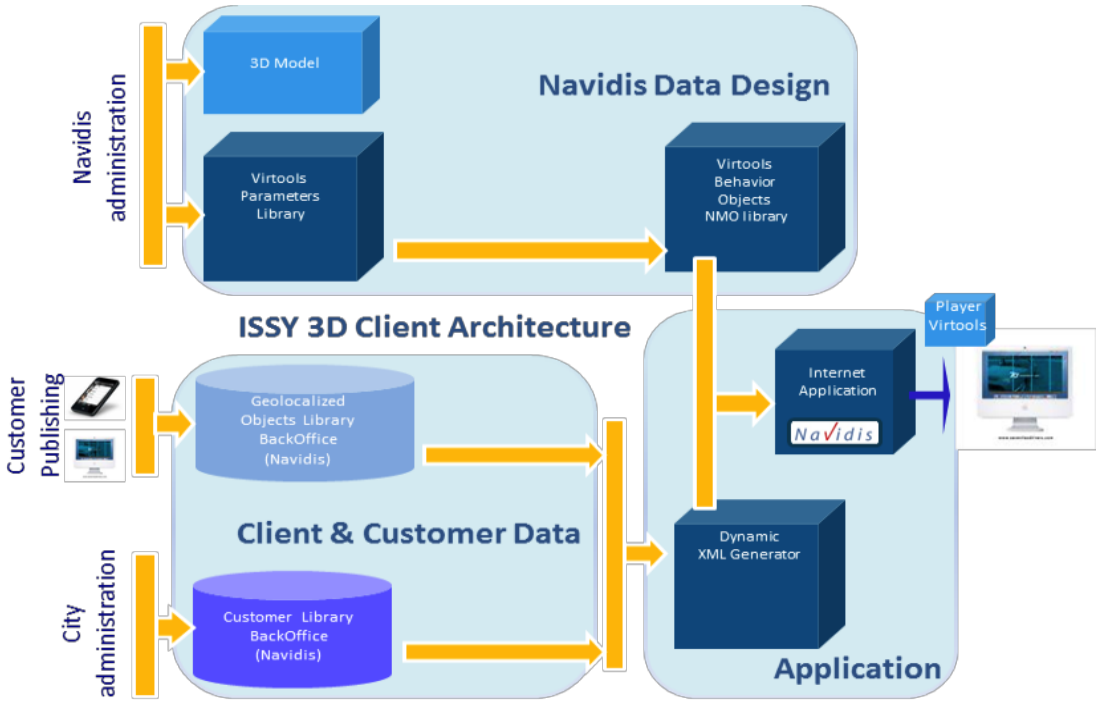



**Figure 5: Urban Planning Application – Client Architecture Diagram**

## 3.3 Manchester - Smart Environment Service

### 3.3.1 Application Scenario

The smart environment service will extend the application of domestic and commercial energy monitoring systems by making visible both energy consumption data and supporting contextual data such as internal and external temperature, humidity, light levels, occupancy, etc. Energy consumption will be measured with varying degrees of granularity from total energy down to the consumption and use of individual appliances, to give both instantaneous real-time measurements and historical data. To allow comparison between properties/ regions / countries, etc it will be necessary to supplement the energy data with data relating to the property / household / location and supplement this with local weather data etc.

An energy usage "dashboard" will allow users to understand their instantaneous and longer-term energy consumption by aggregating and reporting data in different formats. Comparisons with similar types of household / property / community, etc will be possible by aggregating other anonymous data feeds, making use of additional meta-data to describe the usage context. The impact will be to empower personalised action on climate change, which will enable new policies such as Personal Carbon Allowances as well as supporting the 'Smart City' vision using a cloud-based data management system.

Birmingham City University will assist the achievement of the 'Smart City' vision through development of a universal framework for usage monitoring of energy (UFUME), which can consume data feeds from a wider variety of energy monitoring devices including domestic units and data feeds from Building Management Systems, etc used in public and commercial buildings. The focus of this activity will be to maximise access to energy usage data sources that are currently available, either because they feed into existing applications such as *Energyhive,* Google Power Meter or Pachube or because "plug-ins" have been created to support the specific data protocols used by commercial systems and sensors with agreed standards.

UFUME will implement a rigorous Internet of Things (IoT) philosophy, allowing a fully distributed registration and meta-data mark-up of distributed sensors and actuators. UFUME will embrace a wide range of existing application standards for sensor data mark-up; available APIs and existing and emergent IEEE and ISO/IEC standards for smart-sensors and associated systems.

In order to pilot the success of UFUME, Hildebrand and MCC are contributing the outputs from FP7 DEHEMS project and Hildebrand Energyhive [1] Energyhive is an energy monitoring product which allows users to view the household's energy consumption via a web-based dashboard. The product collates household data at regular intervals via one or more energy monitoring units located in the home. This contribution, the implementation of *Energyhive* into the Cloud based EPIC platform will demonstrate how domestic monitoring and customisable user interfaces can directly influence the behaviour of individuals.

For the EU project context, it is important to recognise that a wide range of energy monitoring hardware and visualisation tools are in development across the energy monitoring market, with varying degrees of sophistication and intended end-use. Thus, UFUME will ensure that maximum use can be made of available data from a variety of sensor data sources, and aggregate these into a common format, allowing for wide-ranging aggregation and comparison across a wide range of usage contexts, including households, public buildings and commercial premises, which all fall within scope of a truly smart-city.

### 3.3.2 Use Cases

A general use case diagram of the application is presented in Figure 6.

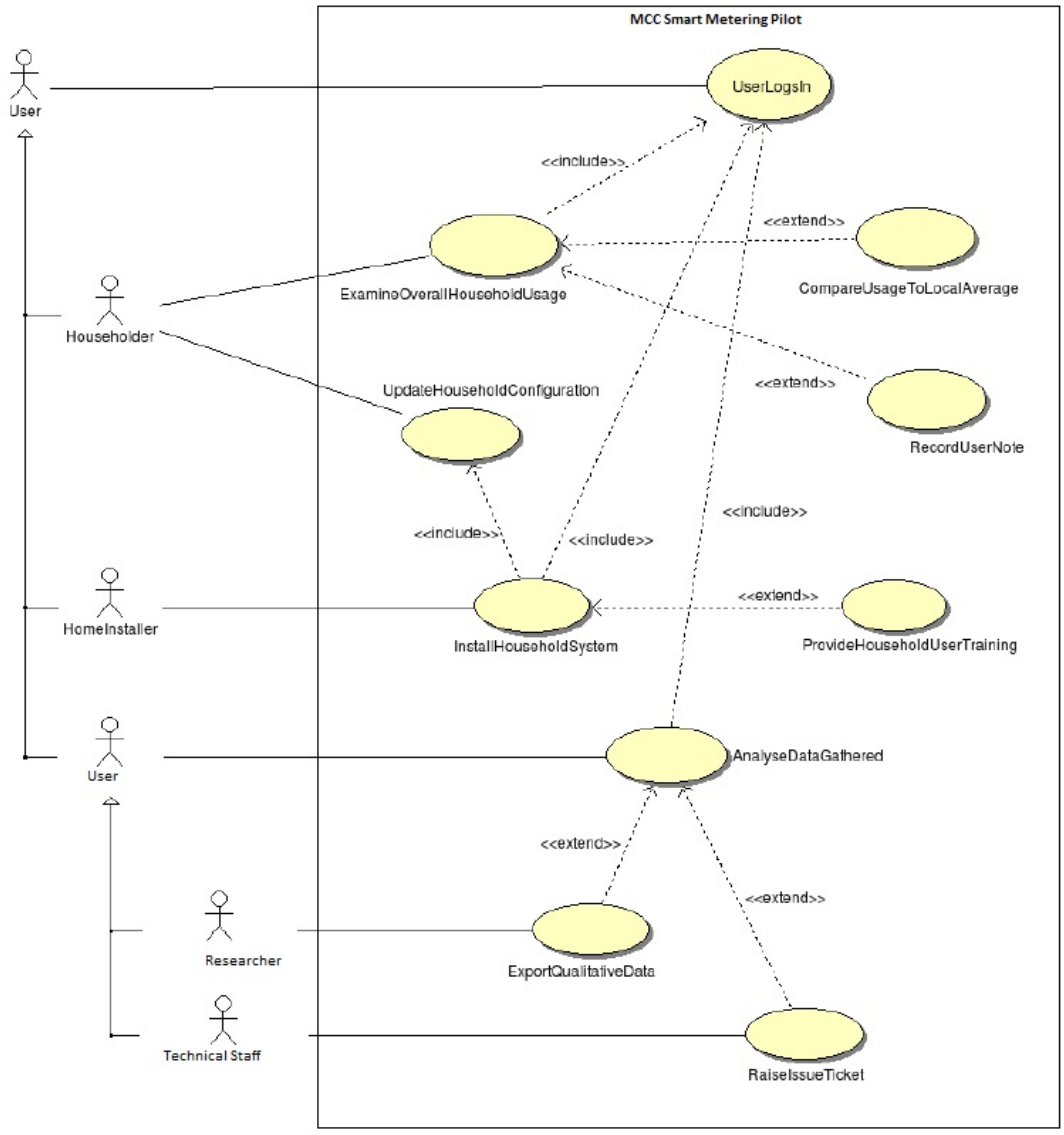



**Figure 6: Smart Environment Application - Use Case diagram**

**Table 16: Use Case SE1**

| | |
|---|---|
| **ID** | SE1 |
| **Name** | **User Log in** |
| **Description** | A user authenticates to the core system in order to access the functionality, and is granted access according to rights that are allocated in the system configuration. |

**Table 17: Use Case SE2**

| | |
|---|---|
| **ID** | SE2 |
| **Name** | **Examine Overall Household Usage** |
| **Description** | The householder wishes to review the overall power usage over the last month and is concerned to see if any peaks in usage occurred and when. After logging in, the user is presented with a screen showing the current usage, the usage so far this month and a field showing an estimate of the recent usage compared to last month's bill. The usage so far this month is available as kWh, Cost and CO2 emission and is able to read off the date/time and level of consumption across the past month in graphical form. When the user enters this screen, the system will select or construct a suitable tip to present to the users regarding their usage. This will be tailored to the particular household based on the past and present power usage pattern, and their preferences priorities as recorded in the system. The user will be able to rate the tip according to: (i) clarity/understandability, (ii) relevance, (iii) level of usefulness, according to their own perception and also to record a free text comment in response to the tip. This response information will be recorded against the household, the tip displayed, and the time/date. |

**Table 18: Use Case SE3**

| | |
|---|---|
| **ID** | SE3 |
| **Name** | **Compare usage to local average** |
| **Description** | The users wish to compare their own household usage this month against the average usage across local households for the past month. A screen is shown in which both current usage and usage so far may be compared with a "local" average for households in the close vicinity. |

**Table 19: Use Case SE4**

| | |
|---|---|
| **ID** | SE4 |
| **Name** | **Install Household System** |
| **Description** | When the household part of the system is installed at a house, a screen is accessed by the installer, which is used to register the household in the system, carry out communication tests between the household and the central database and carry out simple diagnostics to correct any anticipated problems. Basic data will be gathered from the householder at this point and necessary user accounts will be created, linked to the household and get assigned the standard household user rights. The installer will confirm that the householder understands how to use the system. |

**Table 20: Use Case SE5**

| | |
|---|---|
| **ID** | SE5 |
| **Name** | **Record user note** |
| **Description** | The user records a free text note in the database whilst examining their usage. The note is time stamped, linked to the particular user and household in the database and may also be linked to a particular point in the usage history. Users make use of this facility for several purposes, for example:<br>• to record significant events, such as changes in circumstances, switching on - off equipment, etc., for later analysis<br>• to record general observations for later reference<br>• to record issues associated with the usage of the system such as bugs, defects, etc.<br>• to record aspects of the system that they do not understand<br>The user is able to specify which of these purposes the note was created for, in order to assist with later analysis. |

**Table 21: Use Case SE6**

| | |
|---|---|
| **ID** | SE6 |
| **Name** | **Provide household user training** |
| **Description** | Screens will be provided with sample data to allow the user to be trained in the use of the system. The screens will be based on a "sandbox" account already populated/initialized with standard sample data, with full interactivity provided. Detailed operation of this use case will be based on training plans. |

**Table 22: Use Case SE7**

| | |
|---|---|
| **ID** | SE7 |
| **Name** | **Export Qualitative Data** |
| **Description** | The researcher exports data that has not already been exported to the qualitative database. All notes and comments will be exported, as well as metadata regarding notes and their context. The system will keep a record of which data have already been exported in this way. Technical staff will analyse the data for purposes related to maintaining the system. (Bugs, improvements, issues, etc.) |

**Table 23: Use Case SE8**

| | |
|---|---|
| **ID** | SE8 |
| **Name** | **Raise issue ticket** |
| **Description** | The technical staff member analysing the data within the system generates issue tickets regarding bugs or other issues within the ticketing system. They are able to make use of data contained within notes and comments in the system to populate fields in the ticketing system with some degree of automation. |

**Table 24: Use Case SE9**

| | |
|---|---|
| **ID** | SE9 |
| **Name** | **Update house hold configuration** |
| **Description** | User updates the configuration information for a household installation, including password, power tariff information, etc. |

### 3.3.3 General Architecture

In the following figures the general deployment architecture of the smart environment service is presented. More precisely, Figure 7 shows how the sensors are connected to a central gateway via the home network, the software components that constitute the gateway and how the latter is being connected to the application via the internet. In addition, Figure 8 shows the protocols used by the gateway in a more detailed way.

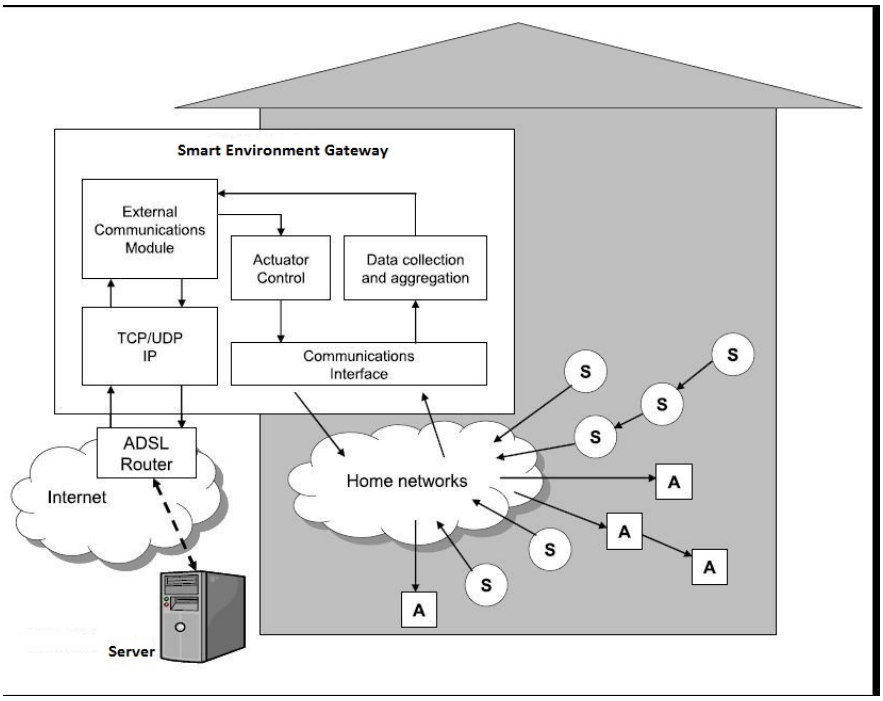



**Figure 7: Smart Environment Application - General Architecture**

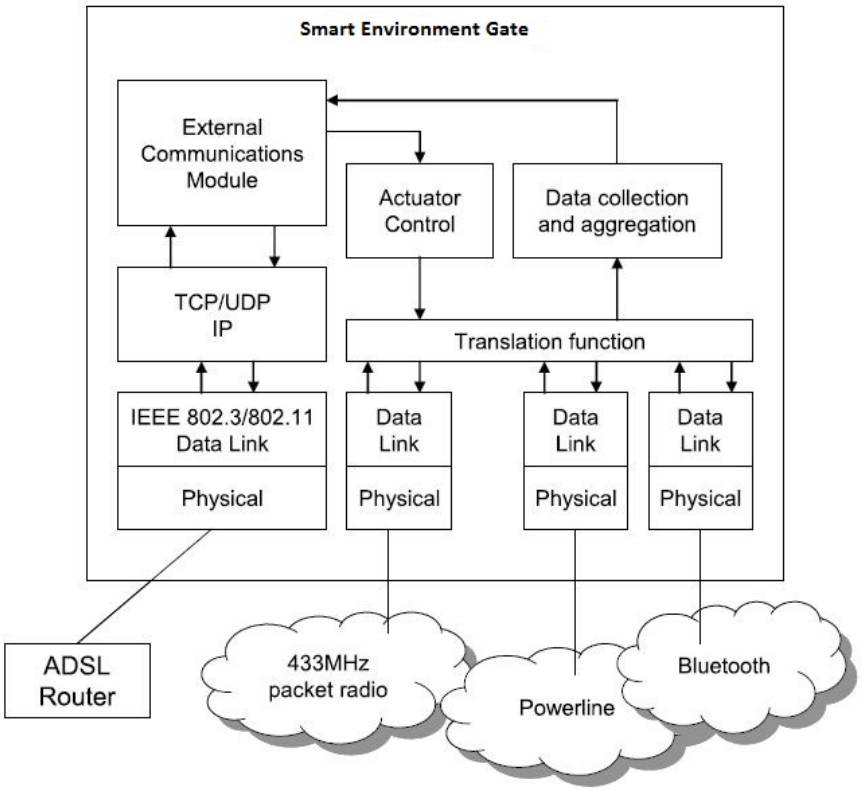



**Figure 8: Smart Environment Gateway**

# 4 Stakeholder Workshops

One of the major objectives of the stakeholder workshops, apart from the presentation of the pilot applications, was the discussion on a common questionnaire that was created in order to be used as a guideline for collecting the user requirements. This questionnaire was the result of all discussions that took place from the beginning of this WP between all technical partners, pilot application developers and city administrators. Its major part was populated during a brainstorm session at Gent's meeting, on December 17, 2010. At this meeting, the participating partners were categorized in three focus groups: city administrators, application developers and a third group, generally named "integrators", which was consisted of the technical partners whose task is to develop the EPIC platform and integrate the existing applications there. During this session, all queries about this new platform were recorded at various "post-it" notes, and then initially discussed between the members of each focus group and in a second phase among between all participants. The result of this session was a list of questions that formulated the initial draft of the questionnaire. The latter was extended with additional input coming from the following iterations of this process via online meetings or by the mailing lists of the project.

The questionnaire was divided into two sections: the administrative and the technical part. The necessity for this division was the diversity of the target groups that the questions addressed. For this reason, the administrative part is focused on the city administrators and the application developers, and it addresses business oriented aspects, trying to define the general vision of the relevant stakeholders regarding the use of the EPIC platform. The outcomes of this part will be valuable for the development of the EPIC's road map, as defined in WP6. Moreover, the technical part of the questionnaire is mainly focused on the application developers and the technical partners of the project. This section consists of technical oriented questions, which aim to define the general user requirements of the platform. This will provide valuable input for the D2.3.




**Figure 9: Brainstorming at Gent General Assembly**

## 4.1 Brussels – Relocation Service

An informed account of the current status of the relocation market in Brussels is important for ensuring that the results of this project are assessed and applied in ways that are enabling and responsive to the varied corporate, private and policy stakeholders. Therefore, a workshop and qualitative interviews with several key informants that, in various capacities, work with experts were organized in March and April.

These consulting meetings were kicked off by the workshop that took place on Tuesday, 22nd March 2011, at the IBBT/SMIT offices in Brussels. The workshop started at 9 am and lasted till 6 pm. The morning session was mostly a gathering of consortium partners, with 3 stakeholders from Brussels also present, to discuss the technology underpinning the relocation application. The starting point of the discussion was a short presentation of the application's general architecture. In the afternoon the discussion focused on the sets of administrative and business questions developed by NTUA. By the end of the day, we did succeed to satisfyingly answer all these questions in the context of the application (see Chapter 5).

In order to gain more in-depth insight into various elements involved in relocating to Brussels, several exploratory interviews were conducted with: Association of Belgium Relocation Agents, Brussels Business Flats, City of Brussels (Departments of Demography and Organisation), Deloitte, ING (Expatriates & Non-residents), and Verbingsbureau Brussel-Europa. The interviews focused on the roles of

stakeholders in relocation practices, challenges involved in relocating, the functionalities and limitations of the current application and how each stakeholder could envision how to make use of the application (via the EPIC platform) and integrate (and update) it into their current activities.

## 4.2 Issy-Les-Moulineaux - Urban Planning Service

The workshop took place on Friday, 24th March 2011, at the Urban Planning and Sustainable Development Centre in Issy-les-Moulineaux.

The meeting brought together 10 stakeholders from Issy-les-Moulineaux and the Urban Community of Greater Paris Seine West, all directly concerned by the Urban Planning Application ISSY 3D.

The workshop started at 10 am and ended at 1.30 pm and was held in French language. After a short presentation of the application and an overview of the EPIC project, the discussions were launched. They focused mainly on how the application is currently developed and delivered, what the limitations, key features and challenges are, and how the EPIC platform can be integrated into the existing processes.

The debates were based on the questionnaire developed and provided by NTUA.

Due to the short duration of the meeting, there were questions that couldn't be analysed and other issues that arose along the way. Therefore, the pilot lead decided jointly with all participants to repeat the experience and meet another time for a more detailed analysis of the application's needs and future functionalities. The meeting was scheduled for Tuesday, 3rd May at Issy Média.

## 4.3 Manchester - Smart Environment Service

Manchester (UK) workshop took place on Tuesday 29 March 2011, at the Manchester Digital Development Agency (MDDA) premises. Invitations were sent out to a number of local stakeholder groups representing Manchester's decision making bodies. Additional input was provided from the Manchester partner MDDA, which gave useful examples of application and services a Smart Environment Service within the Manchester context. This in turn helped to generate insightful comments and recommendations for going forward.

An external facilitator was used during the workshop sessions to ensure consistency of responses and a focus on the task at hand. Additionally, the workshop was recorded to provide an audio record of the event and support the data gathering at the end of the event. The questions being answered by the focus group were based on the User Requirements Questionnaire developed by partners NTUA.

The outputs from the focus group are listed below. Given the shortage of time the technical questions were sent directly to our partners based in London for further explanation – this was an agreed next step.

The opening question for the focus group was not from the listed options: ***What is a Smart City?***

- The meaning of a "smart city" does not only refer to changing the infrastructures but also changing the citizen's attitude.
- Smart energy patterns
- Improved quality of life
- Encourage citizens to contribute
- Implementation of new technologies
- Advanced/smart information flow
- New opportunities for the citizens, the city administration

This was used to set a general level of understanding and help clarify meaning amongst participants. For more information please see section 5.

# 5 User Requirement's Results

In the frame of WP2, three workshops took place at the relevant pilot cities. The main objective of these workshops was the discussion of a common questionnaire. The latter was divided into two parts: the administrative part which contains questions addressed mainly to the city administrators and application developers, and a technical part with questions addressed mainly to the application developers and the technical partners of the project. The answers of this questionnaire are gathered in this section, in a categorised and summarised way.

## 5.1 Administrative Questions

This section presents the results and answers of the administrative part of the questionnaire. The questions that are contained here generally refer to the city administrators and the pilot labs and will be used mainly for the creation of the EPIC's road map. However, interesting user requirements regarding the development of the platform can be defined here.

**Table 25: Question A1**

| **ID** | **A1** | | |
|---|---|---|---|
| **Description** | **What is the purpose of making a city smart?** | | |
| **Scope** | We aren't looking for a typical definition of a smart city, but rather record city council's vision about it (good policy guidelines, save council money, more jobs etc.) | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | City Administrators, Application Developers | City Administrators | City Administrators |
| **Response** | To make a city smart, some of the following issues should be provided:<br>• Situational awareness about the city's operational status<br>• Dashboards for decision and policy makers<br>• Business process support<br>• Integrated knowledge base<br>• Seamless integration<br>• Security and privacy | A 'Smart city' should have more efficient services for citizens, better communication between citizens & local administration & enterprises, and better access to information | A 'Smart City' should have smart services for transportation, better communication between citizens, reduced cost, allowing (inclusive) access to information and enabling the information to be delivered. In this context SMEs/Third parties/other will develop the required applications. |

| | | | |
|---|---|---|---|
| | compliance<br>• Low latency<br>However, there's no need for additional public services. We should concentrate on the ability to find the information and bypass bureaucracy issues. We should also focus on getting data from city administrators. | | |

**Table 26: Question A2**

| **ID** | **A2** | | |
|---|---|---|---|
| **Description** | **What business model is used for offering the application?** | | |
| **Scope** | There is the need to define the business model only (free, subscription, etc.), and not technical issues related with the corresponding model. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | City Administrators | Application Developers |
| **Response** | There is a triple win condition: city, providers, and citizens/enterprises. An e-Identity management is required, while security, privacy and trust must be provided. In this context, license agreements are necessary. The application is offered free for everyone. There is a need for license agreement for cartographic data. | Today the application is offered by an annual licence & fees for Services, expected subscriptions & SaaS for some categories of customers. However it's free for citizens. | This issue will be clarified later. |

**Table 27: Question A3**

| **ID** | **A3** | | |
|---|---|---|---|
| **Description** | **How many end-users do you have? Are there different categories of end-users?** | | |
| **Scope** | We need to identify the number of users that are involved in the application and their categories. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | Application Developers | Application Developers |
| **Response** | There are a couple of thousands of end-users. All end-users (citizens) have the same rights and permissions. | There are 20 users "on-site", and 100 users on-line. There are also different categories of citizens: inhabitants, delegations, associations, students and children. | Currently there are 250 users (196 online) who could be separated in: data producers, data consumers, service/data aggregators, authenticators. |

**Table 28: Question A4**

| **ID** | **A4** | | |
|---|---|---|---|
| **Description** | **Are end-users trained on the use of a particular Smart product or service application?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | City Administrators,<br>Application Developers | Application Developers,<br>City Administrators |
| **Response** | No particular training is required. | No particular training is required. The application is user-friendly. | In this kind of applications, training should not be required. The applications should be very easy to be used by anyone. |

**Table 29: Question A5**

| **ID** | **A5** | | |
|---|---|---|---|
| **Description** | **Do your end-users provide or share information and feedback on these applications?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | City Administrators | City Administrators | City Administrators, Application Developers |
| **Response** | There is no need for such functionality. | There is no mean of data collection/feedback from the users at the moment. | Feedback should be provided in a standardized way, for instance, through a module in the portal, through the appstore etc. |

**Table 30: Question A6**

| **ID** | **A6** | | |
|---|---|---|---|
| **Description** | **Who is the most important end-user and how will they benefit?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | City Administrators, Application Developers | City Administrators | City Administrators, Application Developers |
| **Response** | Irrelevant question. | The most important end-users are the citizens of Issy-les-Moulineaux. Citizens can access any information communicated by the City administration. | The important in this application is not how to acquire the data or how accurate the data are.<br>The real value of the application is the visualization of the data and the real information that can be extracted from them. For instance:<br>To identify the appliance that consumes more;<br>To identify abnormal energy consumption |

| | | | |
|---|---|---|---|
| | | | peaks;<br>To identify and resolve failures (e.g. "I forgot to turn of the heater" or "the refrigerator is disconnected…"). |

**Table 31: Question A7**

| **ID** | **A7** | | |
|---|---|---|---|
| **Description** | **Is there a potential audience, which is not being reached currently?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | City Administrators | City Administrators | City Administrators,<br>Application Developers |
| **Response** | Citizens who do not have internet access; people with a handicap. | The companies in Issy-les-Moulineaux should have been reached. | By analysing data and exploiting other visualization techniques, the usage of the application could be extended. The need for real-time data delivery is very important. |

**Table 32: Question A8**

| **ID** | **A8** | | |
|---|---|---|---|
| **Description** | **Who is the application provider? Is it the same entity that hosts the application? Do you plan to change this exploiting EPIC?** | | |
| **Scope** | There is a specific need to define the business model but not the technical issues related with the deployment of the application in different cities. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | Application Developers | Application Developers |
| **Response** | The application provider is IBBT. The application uses data from external providers: Immoweb and | The application provider is Navidis. Different from the entity that hosts the application and data | The application provider is Hildebrand. |

| | | | |
|---|---|---|---|
| | CIBG. | bases. Decision to move to EPIC will depend on cost, security, access rights, performance, TCO, etc. | |

**Table 33: Question A9**

| **ID** | **A9** | | |
|---|---|---|---|
| **Description** | **Who develops the application?** | | |
| **Scope** | We should define who actually develops the application. Is it an external company who offers it to a city council, is it among the LLs? LLs who contribute to the process of the application development or do they only provide the necessary feedback from end-users? | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | Application Developers | Application Developers |
| **Response** | The application is being developed by IBBT in collaboration with project partners. | The application is developed by Navidis. | The application is developed by Hildebrand. |

**Table 34: Question A10**

| **ID** | **A10** | | |
|---|---|---|---|
| **Description** | **Which is the most important usability factor for the application front-end (fast communication of public information to/from citizens, access to disabled people etc)** | | |
| **Scope** | We should not focus on accurate metrics or mechanisms, but rather on general descriptions concerning the required usage of the application. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers, City Administrators | City Administrators | City Administrators |
| **Response** | There is the need for W3C recommendations if the city would buy this application. We also need ease of use, | The front-end should have the following characteristics: | The front-end should have the following characteristics: |

| | | | |
|---|---|---|---|
| | shared, creative, conversational, compact, easy, cheap, intangible, and multi-platform/device & the consumption and user engagement process is process-oriented, challenge-inspired and quality-driven. | • Usability<br>• Interactivity<br>• Availability<br>• Attractive Interface<br>• Design for Identity | • Usability<br>• Accessibility<br>• Attractive interface<br>• High availability |

**Table 35: Question A11**

| **ID** | **A11** | | |
|---|---|---|---|
| **Description** | **In case of special devices, who owns the device and the data being produced by it?** | | |
| **Scope** | We should focus only on the business model and not on technical issues concerning the connectivity and interoperability of those devices | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | Irrelevant question | Irrelevant question | Irrelevant question |

**Table 36: Question A12**

| **ID** | **A12** | | |
|---|---|---|---|
| **Description** | **Who defines the data access policies?** | | |
| **Scope** | We should not focus on technical issues concerning data access policies | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers, city administrators | City administrators | City administrators |
| **Response** | The owner of the data, who is the government, due to the fact that the data are public in this scenario. | The owner of the data. (We are still not in Open Data agreement). | The city hall and city administrators manage the data access policies which are defined by the Data Protection Act 1998 and the Privacy and Electronic |

| | | | |
|---|---|---|---|
| | | | Communications (EC Directive) Regulations 2003 |

**Table 37: Question A13**

| **ID** | **A13** | | |
|---|---|---|---|
| **Description** | **What do you think are the current limitations in your application?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | City administrators | City administrators |
| **Response** | Using EPIC we can decouple applications/ functionalities from data using web services. The current risk is not taking into account (i.e. not knowing enough) the end-user, i.e. the citizen/expat and his/her everyday life while focusing too much on tech aspects/requirements | The current limitations are:<br>• Lack of interactivity with the user, feedback form<br>• Statistics tool not at the required level<br>• We cannot see the actual number of visits on the site<br>• Internet version of the application not fluid enough (3D requires High Speed Internet) | There is no identified limitation at the moment. There might be issues in different countries regarding access and privacy issues. |

**Table 38: Question A14**

| **ID** | **A14** | | |
|---|---|---|---|
| **Description** | **Are you interested to have EPIC exploit a pan-European version of your application?** | | |
| **Scope** | We should focus only on the business models here, and not on technical aspects, as the latter have already been analysed previously. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | City administrators | City administrators | City administrators |
| **Response** | Yes | Yes | Yes |

**Table 39: Question A15**

| | | | |
|---|---|---|---|
| **ID** | **A15** | | |
| **Description** | **Are there legal constraints in one or several countries that would be likely to impede the implementation of the application?** | | |
| **Scope** | Regarding the technical requirements, we should focus primary on the data manipulation. Regarding EPIC's Roadmap, we should consider the custom-directed application adaptations for each city, so as to avoid all legal constraints. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | City administrators | City administrators | City administrators |
| **Response** | This is not clear at the current phase of the application development. | There is no constraint outside "owner of data" and "privacy policy". | There is no constraint outside "owner of data" and "privacy policy". |

**Table 40: Question A16**

| | | | |
|---|---|---|---|
| **ID** | **A16** | | |
| **Description** | **Who has the rights and responsibilities of use? Who has the rights of the application service when deployed to another city?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | Application Developers | Application Developers |
| **Response** | Out of scope | Navidis for ICE CUBE Platform Application and services. | Out of scope |

## 5.2 Technical Questions

This section contains the results and answers to the technical part of the questionnaire, which is mainly referred to the application developers. The results of this part came from extended discussions between the latter and the technical partners of WP2. The outcomes will be used to define the general user requirements of the EPIC platform.

**Table 41: Question T1**

| **ID** | **T1** | | |
|---|---|---|---|
| **Description** | **How will you offer the application? (technical perspective)** | | |
| **Scope** | For example, via a web browser, a mobile device etc. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | Application Developers | Application Developers |
| **Response** | The application consists of 2 parts:<br>1. Web-based client (Non-mobile): a website, targeting devices which have more advanced computing ability (PC/Notebook/iPad/etc). Through the website, city areas with interesting points of interest (POIs) which match the user's profile can be identified and stored.<br>2. Smartphone client (Mobile): app for mobile devices using the latest technologies (GPS,compass, camera,etc), running iOS (iPhone) or Android. The mobile app is able to show the results (stored by the PC client) on a map, in a list view or in an augmented reality (AR) browser. The app can be downloaded directly to the target device from the Apple App Store or the Android Market. | There is a middle war with different level of services.<br>1. Web based client with 3D engine player for displaying the city and services in 3D.<br>2. Web based client and smartphone client for publishing contents into the 3D model of the city.<br>3. Web based client for the city (administration tool) for managing the contents. | The application is offered via a web browser. |

**Table 42: Question T2**

| **ID** | **T2** | | |
|---|---|---|---|
| **Description** | **Which are the most important platform services the application requires?** | | |
| **Scope** | This requirement should not focus on how the services are implemented, but should record all necessary services. It should also focus on the services required by the end-users, and not the core services required by the platform. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | The application definitely requires a well-defined data model for CIBG and ImmoWeb to provide the external data needed by the application and a single sign on. There is also the need for geolocation services and external data services. External data can be provided by CIBG or Google maps. | The most important platform services are:<br>• Customer Management System<br>• Security | Database Service |

**Table 43: Question T3**

| **ID** | **T3** | | |
|---|---|---|---|
| **Description** | **Is your application open source?** | | |
| **Scope** | We should identify all open source components that are used by the application. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | No, it's not. It will be based on a comprehensive business process management and SOA reference architecture commercial software stack of IBM – implementing and supporting open web | No, it's not. It will be based on a comprehensive business process management and SOA reference architecture commercial software stack of IBM – implementing and supporting open web | No it is not. Is based partially on OS, partially on commercial software and also contains some pure Hilderand IP and Informix IDS . |

| | | | |
|---|---|---|---|
| | service standards. | service standards. | |

**Table 44: Question T4**

| **ID** | **T4** | | |
|---|---|---|---|
| **Description** | **What external information does the application require? Who is the information provider? How do you use this information?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application Developers | Application developers | Application developers |
| **Response** | Immoweb will provide data regarding the renting houses and CIBG will provide public data and city maps. All information being consumed is external; the application does not have data. Web services will access the data, and a metadata model to give context. Platform will access the data sources, and provide the data to the application service in order to visualize the results. Other external services of the public administration may become necessary depending on the degree of automatic interaction between the EPIC platform and the IT infrastructure of the public administration. | City (or other) should provide GIS with Topographic Data, Social and Economic data required to be displayed by the application. | The data providers should define access policies to their data which should be enforced by the platform. The key characteristic of this is that the policies can be only applied to future data and not to the existing/past data which were already available. Therefore a data provider can only publish data but not un-publish them. |

**Table 45: Question T5**

| **ID** | **T5** | | |
|---|---|---|---|
| **Description** | **What technology is used to implement the User Interface (web based, windows, only text, etc.)?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | The UI will be making use of the IBM portal (Java). The Non-mobile app will use web-based programming languages. For the mobile part of the application we'll make use of iOS and Android. For the AR-part we're planning to develop the application on top of Layar and WikiTude with the help of the iPhone and Android SDK. | The UI is making use of web based programming languages (HTML/PHP) and the Virtools player (DS 3DVIA). | The UI is making use of the worldweatheronline free api [2] . |

**Table 46: Question T6**

| **ID** | **T6** | | |
|---|---|---|---|
| **Description** | **On which platform/technologies do you rely?** | | |
| **Scope** | J2EE, MS Visual studio etc. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | Data will be stored at the IBM's platform DB. The application is developed based on the J2EE platform. Regarding the front-end there are two options:<br>• Non-mobile: client (HTML/web application framework like RoR, Django | Data should move from MySQL, PostgreSQL to IBM DB2. | The application relies on php, perl, MySQL, linux , Informix IDS. |

| | | | |
|---|---|---|---|
| | (Python), etc.) and SOAP and REST services<br>• Mobile: iPhone and Android SDK and technologies which provide an augmented reality platform like Layar and WikiTude. | | |

**Table 47: Question T7**

| **ID** | **T7** | | |
|---|---|---|---|
| **Description** | **What standards are used in your application?** | | |
| **Scope** | It is more important to record the non-standardized processes than the actual standardized. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | The application is making use of XML, SOAP messages, JSON objects, Layar, WikiTude. | The application is making use of XML. | Out of scope |

**Table 48: Question T8**

| **ID** | **T8** | | |
|---|---|---|---|
| **Description** | **Do you use any special hardware (equipment/devices) for the application?** | | |
| **Scope** | We should not only just record all the special equipment, but also to see if these are standardized and can be used in different cities. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | Irrelevant question. | Graphic Board is required for running the 3D application (delivered in std PC now). | We make use of sensors for collecting the user data. |

**Table 49: Question T9**

| **ID** | **T9** | | |
|---|---|---|---|
| **Description** | **What kind of resources is required by your application (storage, computational, networking etc.)?** | | |
| **Scope** | We must identify the resources needed by the end-user to run the application and the resources needed by the platform to host the application. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | A Database Service is required as there are objects that need to be stored, like user profiles, user query results, points-of-interest (POIs), real estate objects and related information. There is no special need for increased streaming or computation, and there is no high volume data. | As the application manipulates rich medias, it means significant storage is required. This could be around some hundreds of MB per layer, when we can have 10 layers per city. | A Database Service is required. No special computational or networking requirements. |

**Table 50: Question T10**

| **ID** | **T10** | | |
|---|---|---|---|
| **Description** | **What is the minimum level of performance expected for the application (e.g. 5msec response time)?** | | |
| **Scope** | This should define the acceptable levels of performance for the application, so that the EPIC platform can host it. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | There are no restrictions yet, a few seconds response time is acceptable. | Even though the most important is the bandwidth on internet for citizen, the platform should be able to perform in time transfer. | Mobile hardware, web-based application, broadband connectivity, multilingual platforms, multi-platform. The application consumes one data set, per |

| | | | |
|---|---|---|---|
| | | | household per minute. We need real-time display. |

**Table 51: Question T11**

| **ID** | **T11** | | |
|---|---|---|---|
| **Description** | **What security does the application provide and requires from the platform?** | | |
| **Scope** | This refers from one hand to the mechanisms required by the application and from the other hand to the technologies used by the application to identify if the latter can be migrated to the EPIC platform. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | The platform must provide functionalities like user authentication and authorization, and cryptography as the data being exchanged are very sensitive. | Security is required for sensitive and private data. Some services will require Data Customer Management. | As above |

**Table 52: Question T12**

| **ID** | **T12** | | |
|---|---|---|---|
| **Description** | **Is the application multilanguage?** | | |
| **Scope** | One of the purposes of EPIC project is to provide common applications in different cities across Europe. The objective here is to figure out how the mechanisms used by the application to provide a multilanguage environment can be replaced to make use of the semantics technology. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | Yes | Some Services will be language sensitive meaning language selection is required. | Not at this point, but it should be. |

**Table 53: Question T13**

| | | | |
|---|---|---|---|
| **ID** | **T13** | | |
| **Description** | **How will the multicurrency, the time zones etc. are treated by the application?** | | |
| **Scope** | We should figure out which mechanisms must be developed in order to solve this issue and if there is sense in making use of the semantics technology. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | There is no need for multicurrency or different timezones. | Some Services will be time sensitive meaning time zone management is required. | There is no need for multicurrency or different timezones. |

**Table 54: Question T14**

| | | | |
|---|---|---|---|
| **ID** | **T14** | | |
| **Description** | **Will the deployment in a different city require the development of additional components? Who will be responsible of doing so and how is the ownership of the application service distributed among all parties?** | | |
| **Scope** | The term 'additional component' refers to 3rd party's software components (i.e. special city maps) or services providing city specific data. We shouldn't focus on technical aspects here, as they have already analysed previously. We must highlight on business models here regarding the development of the Roadmap. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | Out of scope | There will be the necessity for language support | No, there is not such a need |

**Table 55: Question T15**

| | | | |
|---|---|---|---|
| **ID** | **T15** | | |
| **Description** | **Are there legal constraints in one or several countries that would be likely to impede the implementation of the application?** | | |
| **Scope** | Regarding the technical requirements, we should focus primary on the data manipulation. Regarding EPIC's Roadmap, we should consider the existence of different application versions for each city, so as to avoid all legal constraints. | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers | Application developers | Application developers |
| **Response** | Out of scope | There is the constraint of data Privacy | Out of scope |

**Table 56: Question T16**

| | | | |
|---|---|---|---|
| **ID** | **T16** | | |
| **Description** | **Who has the rights and responsibilities of use? Who has the rights of the application service when deployed to another city?** | | |
| **Actors** | **Relocation Service** | **Urban Planning Service** | **Smart Environment Service** |
| | Application developers, city administrators | Application developers, city administrators | Application developers, city administrators |
| **Response** | Out of scope | Navidis for application and additional services developed on the middleware | Out of scope |

# 6 Conclusions

This report “Stakeholder (User) Workshops' Results” presents the results of the work carried out in the scope of T2.2 “Stakeholder Requirements/Workshops” of EPIC project.

Initially, in this report we provided the overview of the three pilot applications that will be adapted and integrated in the EPIC platform, highlighting the complete list of the use cases, along with a generic architecture diagram. The use cases show all interacting actors, while the architecture diagram focuses on the key software components of the applications, aiming to identify all external data providers that needed to be invited to the workshops.

Furthermore, we provided a short description of the organisation of the workshops, followed by a complete list of answers which was acquired there. This list is based on a common questionnaire that was created as a result of the discussions between all technical and non-technical partners involved in WP2 that took place from the beginning of this WP until the organisation of the workshops.

It is expected that this report will provide useful input for the whole project, considering the fact that it will be used as the basis for the creation of the user requirements of the EPIC platform. The results coming from the realisation of the workshops will provide valuable input to the remaining tasks of the current WP and more precisely to T2.4 "Technical Requirements Creation".

# 7 References

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