**Project Acronym:** STORM CLOUDS

**Grant Agreement number:** 621089

**Project Title:** STORM CLOUDS – Surfing Towards the Opportunity of Real Migration to CLOUD-based public Services

# Deliverable 1.2

# Compilation of available services and applications susceptible to being cloudified

**Work Package:** WP1

**Version:** 1.2

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**Status:** Project Coordinator Accepted

**Dissemination Level:** Internal

## Authoring

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## Version Control

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## Project Presentation

Surfing Towards the Opportunity of Real Migration to Cloud-based public Services (STORM CLOUDS) is a project partially funded by the European Commission within the 7th Framework Program in the context of the Capital Improvement Plan (CIP) project (Grant Agreement No. 621089).

The project has the objective of exploring the shift to a cloud-based paradigm for deploying services that Public Authorities (PAs) currently provide using more traditional Information Technology (IT) deployment models. In this context, the term "services" refers to applications, usually made available through Internet, that citizens and/or public servants use for accomplishing some valuable task.

The project aims to define useful guidelines on how to implement the process of moving application to cloud computing and is based on direct experimentation with pilot projects conducted in, at least, the cities participating to the consortium.

STORM CLOUDS will also deliver a consolidated a portfolio of cloud-based services validated by citizens and Public Authorities in different cities and, at the same time, general and interoperable enough to be transferred and deployed in other European cities not taking part in the project. This portfolio will be mainly created from applications and technologies delivered by other CIP Policy Support Program (CIP-PSP) and Framework Program 7 (FP7) projects, as well as resulting from innovation efforts from Small and Medium Enterprises (SMEs).

The project is composed by the following consortium:

| Member | Role/Responsibilities | Short Name | Country |
|---|---|---|---|
| Ariadna Servicios Informáticos, S.L. | Co-ordinator | ASI | Spain |
| Hewlett Packard Italiana S.r.l. | Participant | HP | Italy |
| EUROPEAN DYNAMICS Advanced Systems of Telecommunications, Informatics and Telematics | Participant | ED | Greece |
| Research, Technology Development and Innovation, S.L | Participant | RTDI | Spain |
| Aristotelio Panepistimio Thessaloniki | Participant | AUTH | Greece |
| Alfamicro Sistemas de Computadores LDA | Participant | Alfamicro | Portugal |
| Manchester City Council | Participant | Manchester | United Kingdom |
| Ayuntamiento de Valladolid | Participant | Valladolid | Spain |
| City of Thessaloniki | Participant | Thessaloniki | Greece |
| Câmara Municipal de Águeda | Participant | Águeda | Portugal |

For more information on the scope and objectives of the project, please refer to the Description of Work (DoW) of the project [1].

# Executive Summary

This document summarises the work done in Task 1.2 within WP1 that is in charge of the selection of services to be migrated to the cloud; process supported by a open innovation user driven methodology.

In this context, the project will involve a number of stakeholders to participate in the selection of services that will be migrated to the cloud. However, as the migration to the cloud is a rather technical issue, it has been considered appropriate to carry out a pre-selection process. This way the stakeholders that will be involved in the selection process will work on a limited number of applications.

This pre-selection work documented in these pages includes the creation of a criteria for the selection. These criteria are:

- They represent the existing systems in the Municipality.

- The complexity of the application is bounded, so the process can fit the planning defined for the project.

- The applications are relevant for the user – i.e. the citizen – or they cover a service that is useful for the city.

- Applications belong to the Municipality and/or they are Open Source Software.

- Applications will not involve developing additional infrastructure in the city.

Using this criteria we have created a table where all the applications provided by the project partners (see section 3 for the detail of these applications) are scored. Three applications have been discarded and all the rest will undergo the selection process itself driven by the user considerations.

# Table of Contents

## Abbreviations

| Acronym | Description |
|---------|-------------|
| API | Application Programming Interface |
| GIS | Geographic Information System |
| GTFS | General Transit Feed Specification |
| KML | Keyhole Mark-up Language |
| IT | Information Technology |
| REST | Representational State Transfer |
| RSS | Really Simple Syndication |

# 1    Introduction

The purpose of this document is to present the work carried out in Task 1.2: Compilation of available services and applications.

The objective of this task is to compile all the candidate applications to become selected for latter migration to the cloud of the project. This initial set of applications is to be selected by the Municipality personal before the work with stakeholders is launched (Task 1.3).

The document presents the following sections:

- Introduction, the current section.

- Service selection criteria. This section contains the conditions taken into account in order to select the services or applications that will be migrated to the cloud-platform.

- Services Proposed. This section includes a broad list of services available that the project partners propose for being used in the project for migration purposes. Some of them belong to the Municipalities, some other to project partners that provide to the project for free during the project duration and some other are Open Source..

- Finally, the list of services and their scoring towards the criteria defined in section 2 is included. From this table some services are already discarded. The accepted ones will undergo the selection process itself with the participation of stakeholders.

Throughout this document, the IT systems to be migrated to the cloud will be referred both as "services" or "applications".

# 2 Criteria for application selection

The process of migration to the cloud starts by the selection of the most suitable services for being migrated. For this selection we will use a User-driven process that involves the stakeholders for the application migration.

However, an initial step is to be carried out. Stakeholders will not be faced with a huge list of applications. Applications will be filtered previously in order to select a group of them with the following characteristics:

- They represent a broad panorama of the existing systems in a Municipality.

- The complexity of the application is bounded, so the process can fit the working cycles of STORM CLOUDS.

- The applications are relevant for the user, i.e. the citizen.

With these initial criteria, the applications to be pre-selected in the framework of T1.2 fit perfectly the objectives of the task.

In addition, there are some other criteria for pre-selection, these are:

- Applications belong to the Municipality and/or they are Open Source Software.

- Applications will not involve developing additional infrastructure in the city.

- Applications implement a service that covers a necessity in the city. They will provide some valuable functions to users and/or public servants. In addition, services might interoperate each other.

Using this criteria, we have created the table in section 4 where the most suitable applications for cloudification will be those covering the criteria as:

- Representative of the city: If the application represents how applications in the city are, this is interesting to become selected for the experimentation in the project.

- Complexity: High complex applications may impact negatively the migration process.

- Relevance: This is the most important criteria: the relevance for the citizen

- Available: Also important criteria, if the application belongs to a third party and has to be bought, this is a barrier for the project.

- Additional Infrastructure: Also if sensors or any other infrastructure is required, this represents an extra cost with no added value for the project.

# 3     Services Proposed

This section is a compilation of services and applications that has been proposed by Storm Clouds Project Partners. They were told to propose a group of services or applications regarding Public Authorities and taking most in account which have been previously implemented, as least a prototype. The point of the project is to implement a cloud-platform and develop a Portfolio for moving any public service to it, not to develop the services.

## 3.1   Municipio de Águeda

### 3.1.1 Emissão de Plantas de Localização

*Emissão de Plantas de Localização* is a local map management system implementing visualization, design, search, and print of local maps. It is used by citizens, community groups, technicians and public entities in general. The application manages sensitive information like name.

The application is currently released as a prototype (v. 2.0) available online: http://softwarelivre.cm-agueda.pt/maria/plantaslocalizacao.html.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
| --- | --- |
| Operating Systems | Ubuntu |
| Programming Languages | Javascript, PHP, Java |
| Databases | PostgreSQL, PostGIS |
| Web/Application Servers | Tomcat, Apache, Geoserver |
| Frameworks | ExtJS, NodeJS |
| Application Lifecycle Tools | **IDE**: Eclipse <br> **Version Control**: git <br> **Build Management: –** |
| Open Source Code Repository | N/A |

### 3.1.2 Plano Director Municipal

*Plano Director Municipal* is an application that manages municipal maps. Users visualize maps, search point of interests and export map data in KML format. KML format is used to display geographic data in Earth browsers such as Google Earth, Google Maps, and Google Maps for mobile. Users are citizens, community groups, technicians and city hall administrators.

The application is currently released as prototype (v. 1.0) available online: http://softwarelivre.cm-agueda.pt/parnet/visualgeo.html.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
| --- | --- |
| Operating Systems | Ubuntu |
| Programming Languages | Javascript, PHP, Java |

| Type | Technologies |
|---|---|
| Databases | PostgreSQL, PostGIS |
| Web/Application Servers | Apache, Tomcat, Geoserver |
| Frameworks | ExtJS, NodeJS |
| Application Lifecycle Tools | **IDE**: Eclipse<br>**Version Control**: git<br>**Build Management: –** |
| Open Source Code Repository | N/A |

### 3.1.3 HotSpot CMA

*HotSpot CMA* is a project that allows access to information and communication technologies as a form of democratization. The project has implemented hotspots located in the city area and a captive portal through which users (i.e. citizens) access Internet services. The system requires a domain name: *agueda.pt.*

The application candidate to be ported to cloud is the captive portal that implements a web based authentication interface. It is currently in testing phase (v 1.4) and a demo is available at http://www.agueda.pt/Agueda.pt/Inicio.html

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu |
| Programming Languages | Javascript, PHP |
| Databases | MySQL |
| Web/Application Servers | nginx |
| Frameworks | ExtJS, JQuery |
| Application Lifecycle Tools | **IDE**: NetBeans, Aptana Studio<br>**Version Control**: svn<br>**Build Management: –** |
| Open Source Code Repository | N/A |

### 3.1.4 Lime Survey

*Lime Survey* is an online portal where users can publish and collect responses from questionnaires; it can be used by local authorities to collect feedback from citizens about proposals, events, etc. The application let users to invite group of people to participate in research, keep track of what the survey found, and ensure that each person can only enter once. The application also keeps tracks of participants who has not yet responded, and send them reminder email. Administrator can import lists of names and email addresses and generate a unique token number for each participant.

The interest in the migration to the project cloud comes from the need to have more control on the security and privacy information of the citizens kept in the application. Although it is normally only the email, the Municipality of Agueda wants to stress the privacy of this information

The application is currently in testing (v. 2.05) and a demo is available at https://survey.limesurvey.org/index.php?sid=78184&lang=en. It manages sensitive information like users' names and address.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Linux (generic) |
| Programming Languages | Javascript, PHP, Perl |
| Databases | PostgreSQL / MS SQL |
| Web/Application Servers | Apache |
| Frameworks | – |
| Application Lifecycle Tools | **IDE**: – <br> **Version Control**: git <br> **Build Management: –** |
| Open Source Code Repository | https://github.com/trougakoss/LimeSurvey |

## 3.2 Ariadna Servicios Informáticos

### 3.2.1 Co-Labora

*Co-Labora* is a workflow management application that citizens and city hall employees can use for collaborating, for example for reporting and managing urban incidents.

The application is under development. It manages sensitive data like citizens' location.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Linux (generic), Win Server 2008 |
| Programming Languages | PHP |
| Databases | MySQL |
| Web/Application Servers | Apache |
| Frameworks | Drupal |
| Application Lifecycle Tools | **IDE**: N/A <br> **Version Control**: svn <br> **Build Management: –** |
| Open Source Code Repository | N/A |

### 3.2.2 SEDOC

*SEDOC* is an application managing and tracking physical and digital documents. It's available in the form of web user interface, Windows Phone Application and Windows desktop application.

The application is currently under development (v. 0.91). It manages confidential information regarding financial-related contracts of the municipalities.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu |
| Programming Languages | PHP, Java, C# |
| Databases | MySQL, SQLite |
| Web/Application Servers | Tomcat |
| Frameworks | Drupal, NodeJS, Puppet, Vagrant |
| Application Lifecycle Tools | **IDE**: Eclipse, Visual Studio<br>**Version Control**: svn<br>**Build Management:** Maven, Jenkins |
| Open Source Code Repository | N/A |

### 3.2.3 SIMPLEXT

*SIMPLEXT* is a text simplification tool for Spanish language that simplifies text from RSS sources and also during the web navigation. It is intended for people with intellectual disabilities and for intensive news consumers.

The application is currently released as a prototype available http://www.simplext.net/ (subject to a previous access request).

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu |
| Programming Languages | Java |
| Databases | N/A |
| Web/Application Servers | Tomcat, Apache |
| Frameworks | – |
| Application Lifecycle Tools | **IDE**: Eclipse<br>**Version Control**: svn<br>**Build Management: –** |
| Open Source Code Repository | N/A |

The application requires a public domain (*www.simplext.net*) and it is integrated with third-party open source components like GATE, Freeling, MATETools, OpenNLP and LexSis.

## 3.3   Manchester City Council

### 3.3.1  City Navigator

*City Navigator* is a fully Open Source, mobile HTML5 public transport journey planner and navigation application for on-the-go use. It leverages data from multiple sources including OpenStreetMap, TfGM, Manchester City Council, and CitySDK. The goal is to take unpredictability

away from public transportation and make it more accessible. It is used by people using or plannning to use the public transportation of the city of Manchester.

The application is currently released as a prototype. At the time being, the application doesn't manage sensitive information but in future it could be personalised with social media data.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | N/A |
| Programming Languages | Python |
| Databases | N/A |
| Web/Application Servers | N/A |
| Frameworks | NodeJS, JQuery Mobile, Leaftlet, Faye |
| Application Lifecycle Tools | **IDE**: N/A<br>**Version Control**: git<br>**Build Management: –** |
| Open Source Code Repository | https://github.com/codeforeurope/tfgm |

The web application requires a public domain.

## 3.4   Ayuntamiento de Valladolid

### 3.4.1  Blue Parking Valladolid

*Blue Parking Valladolid* is an application that implements an intelligent parking system for the city of Valladolid. The application doesn't require sensors or other infrastructure because information on the available parking spaces is implicitly provided by the users via their mobile devices. Users find a car park and pay directly from smart-phone while inspectors use a specific version of the application to validate the park.

The application is delivered (v. 1.0) and available online at https://www.blueparkingvall.com/.  The application manages sensitive data and uses domain name *blueparkingvall.com*.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | CentOS, Windows Server 2008 Sp2 |
| Programming Languages | Javascript, Java, Python, PL/SQL |
| Databases | MongoDB, Oracle SEO |
| Web/Application Servers | Tomcat |
| Frameworks | NodeJS, socket.io, mongojs, redis, poolee |
| Application Lifecycle Tools | **IDE**: Eclipse, Jdeveloper, Xcode<br>**Version Control**: git, svn<br>**Build Management: –** |
| Open Source Code Repository | N/A |

## 3.4.2 Ideol-Innobarómetro

*Ideol-Innobarómetro* is an application that allows users to visualize innovative companies. It shows the location where the companies are located within the city area.

The application in currently under development and a prototype (v. 1.0) is available http://valladolid.iver.es/. The application manages sensitive data like the name of the responsible of the company. It requires a public domain name.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu |
| Programming Languages | Javascript, Java, Python, PHP |
| Databases | PostgreSQL, PostGIS, MySQL |
| Web/Application Servers | Tomcat, GeoServer, MapServer |
| Frameworks | OpenLayers |
| Application Lifecycle Tools | **IDE**: Eclipse<br>**Version Control**: svn<br>**Build Management: –** |
| Open Source Code Repository | N/A |


## 3.4.3 LocalGIS

*LocalGIS* is a tterritorial information system for local governments that facilitates municipal management in a georeferenced way, and offers advanced on-line information services to citizens using the cartography of the municipality. The application manages sensitive data like personal information of citizens, including cadastre information.

The application does not require a domain name but it's recommended for publishing information to citizens using Web Map Services. It implements on-line web mapping services, for citizens and city council users and advanced desktop functions for public servants like urban planning, cadastre, inventory, public transportation information, routing, infrastructures, concessions, construction licenses, etc.

The application is delivered (v. 2.1) and available at:
https://www.planavanza.es/avanzalocal/Soluciones/AL_GIS/Paginas/Index.aspx.

It's based on Open GIS technologies (Open Geographic Information Systems).

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu, CentOS, WinServ 2008 |
| Programming Languages | JavaSript, Java |
| Databases | PostgreSQL, PostGIS |
| Web/Applicatio | Tomcat, Jetty, MapServer, GeoServer |

| n Servers | |
|---|---|
| Frameworks | – |
| Application Lifecycle Tools | **IDE**: Eclipse<br>**Version Control**: git, svn<br>**Build Management:** Jenkins |
| Open Source Code Repository | https://www.planavanza.es/avanzalocal/Soluciones/AL_GIS/Paginas/Descargas.aspx |

### 3.4.4 Urbanismo en Red (UeR)

*Urbanismo en Red (UeR)* is created with the purpose of publishing the municipal development plans, across Internet, enabling citizens to access them easily. It is designed for increasing and enhancing transparency in public management of urban sectors. Moreover it provides full interoperability between the various authorities and stakeholders, through electronic services that enable the provision of information of urban planning, to be used by different stakeholders. The application is used by end users (public), operators (GIS technicians) and administrators.

The application is already released (v. 2.0) and is available online: http://www10.ava.es/Visor.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu |
| Programming Languages | Java |
| Databases | PostgreSQL, PostGIS |
| Web/Application Servers | JBoss |
| Frameworks | N/A |
| Application Lifecycle Tools | **IDE**: N/A<br>**Version Control**: svn<br>**Build Management:** – |
| Open Source Code Repository | http://www.urbanismoenred.es/urbanismoenred/content/herramientas-software-urbanismo-en-red-y-documentaci%C3%B3n-asociada-0 |

## 3.5 URENIO

### 3.5.1 Virtual City Tour

*Virtual City Tour* creates an engaging, interactive community map of local sights and attractions. It allows people to discover, in a geographical way, point of interests. For each attraction, it shows a description with useful information and gives the possibility to do a virtual tour to discover in advance the particular point of interest.

The application is delivered (v. 2.0) and available online at the next address: https://smartcity.thermi.gov.gr/improve/el/virtualcitytour.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|------|-------------|
| Operating Systems | Ubuntu, Linux (generic) |
| Programming Languages | Javascript, PHP |
| Databases | MySQL |
| Web/Application Servers | Apache |
| Frameworks | JQuery, Joomla, Google Maps |
| Application Lifecycle Tools | **IDE**: Eclipse<br>**Version Control**: git<br>**Build Management:** |
| Open Source Code Repository | https://github.com/icos-urenio/Virtual-City-Tour-360 |

## 3.5.2 Virtual City Marketplace

*Virtual City Marketplace* enables the creation of a smart marketplace managed by the local shopping community. It empowers the city local market by bringing together customers and merchants. Local shops are showed inside a local map, along with consumer reviews and promotional offers.

The application is delivered (v. 1.0b) and available at http://smartcity.thermi.gov.gr/market/.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|------|-------------|
| Operating Systems | Ubuntu, Linux (generic) |
| Programming Languages | Javascript, PHP |
| Databases | MySQL |
| Web/Application Servers | Apache |
| Frameworks | Google Maps |
| Application Lifecycle Tools | **IDE**: Eclipse<br>**Version Control**: git<br>**Build Management: –** |
| Open Source Code Repository | https://github.com/icos-urenio/virtual-city-market |

## 3.5.3 Improve My City

*Improve My City* enables citizens to report local problems such as potholes, illegal trash dumping, faulty street lights, and broken tiles on sidewalks and illegal advertising boards. The submitted issues are displayed on the city map. Users may add photos and comments. Moreover, they can suggest solutions for improving the environment of their neighbourhood. The application is also

available as a mobile app for Android and iPhone devices. The mobile app is fully interconnected with the web platform and supports the full range of the aforementioned features adding some extra functionality based on the capabilities of modern smartphones.

The application is delivered (v. 2.5.7) and available https://smartcity.thermi.gov.gr/improve/.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu, Linux (generic) |
| Programming Languages | Javascript, PHP |
| Databases | MySQL |
| Web/Application Servers | Apache |
| Frameworks | JQuery, Joomla, Google Maps |
| Application Lifecycle Tools | **IDE**: Eclipse <br> **Version Control**: git <br> **Build Management: –** |
| Open Source Code Repository | https://github.com/icos-urenio/Improve-my-city |


## 3.5.4 Sense the City

*Sense the City* is an open source web application that receives and visualizes air pollution data from sensors around the city. It currently supports Libelium devices (see http://www.libelium.com), giving the possibility to interfaces with a large amount of sensor device models.

The application is delivered (v. 1) and available online at: https://smartcity.thermi.gov.gr/improve/el/sensethecity.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu, Linux (generic) |
| Programming Languages | Javascript, PHP |
| Databases | MySQL |
| Web/Application Servers | Apache |
| Frameworks | JQuery, Joomla, Google Maps, NodeJS |
| Application Lifecycle Tools | **IDE**: Eclipse <br> **Version Control**: git <br> **Build Management:** |
| Open Source Code Repository | https://github.com/icos-urenio/SenseTheCity |

### 3.5.5 OpenTripPlanner

*OpenTripPlanner* is an open source multi-modal trip planner. It depends on open data in open standard file formats (GTFS and OpenStreetMap), and includes a REST API for journey planning as well as several map-based Javascript clients. OpenTripPlanner can also create travel time contour visualizations and compute accessibility indicators for planning and research applications.

The application is delivered (v. 0.9.1) and available at: http://ride.trimet.org/.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | N/A |
| Programming Languages | Java |
| Databases | N/A |
| Web/Application Servers | Tomcat, Geoserver |
| Frameworks | – |
| Application Lifecycle Tools | **IDE**: Eclipse, NetBeans<br>**Version Control**: git<br>**Build Management:** N/A |
| Open Source Code Repository | https://github.com/opentripplanner/OpenTripPlanner |

### 3.5.6 Crowdtilt

*Crowdtilt* is a full-featured, open-source, customizable crowd-funding tool that allows anyone to launch their own campaign. It is a powerful and flexible crowd-funding solution for brands, businesses and organizations.

The application is delivered (v. 2.0) and available at https://open.crowdtilt.com/.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | N/A |
| Programming Languages | Ruby |
| Databases | PostgreSQL |
| Web/Application Servers | Apache, nginx |
| Frameworks | RubyOnRails, ImageMagick |
| Application Lifecycle Tools | **IDE**: N/A<br>**Version Control**: git<br>**Build Management:** N/A |
| Open Source Code Repository | https://github.com/crowdtilt/crowdtiltopen |

### 3.5.7 LocalWiki

*LocalWiki* is tool for collaborating in local, geographic communities. It supports a grassroots effort to collect, share and open the world's local knowledge.

The application is released (v. 0.5.5) and available at: http://localwiki.net/santacruz/.

**Technical Information**

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu, CentOS |
| Programming Languages | Python |
| Databases | PostgreSQL, PostGIS |
| Web/Application Servers | Apache |
| Frameworks | Django, Cloudmade |
| Application Lifecycle Tools | **IDE**: <br> **Version Control**: git <br> **Build Management:** N/A |
| Open Source Code Repository | https://github.com/localwiki/localwiki |


### 3.5.8 OpenCivic

*OpenCivic* is a distribution of Drupal (https://drupal.org/) designed to support communities of software developers in creating, cataloguing and sharing software applications. It is based on Code for America's Civic Commons project, which was created as a platform for sharing information specifically about "civic software" used by governments and nonprofit organizations to provide public services. The main goal of this distribution is to help build websites that enable people to share information about software applications.

The application is released and accessible http://commons.codeforamerica.org/

**Technical Information**

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu, Linux (generic) |
| Programming Languages | Javasrcipt, PHP |
| Databases | MySQL |
| Web/Application Servers | Apache, nginx |
| Frameworks | Drupal |
| Application Lifecycle Tools | **IDE**: N/A <br> **Version Control**: git <br> **Build Management:** N/A |
| Open Source Code Repository | https://github.com/civic-commons/opencivic |

### 3.5.9 We The People Petitions

*We The People Petitions* gives citizens a way to create and sign petitions on a range of issues affecting their city. It is a Drupal 7 code base used to build an application that lets users create

and sign petitions. It's based on an initiative of President Obama's government  to create the most open and participatory government of US history, and this petitioning platform is a key part of that initiative. Site visitors can create a user account, log in, and create petitions. Petition creators can share the URL for their petition to generate signatures. When the petition crosses a certain threshold, the petition becomes "public" and is listed as an open petition on the site's "open petitions" page. Visitors can sign petitions. Petitions that receive a designated number of signatures (at the White House the number is 100,000 in one month) get a response.

The application is released (v. 2.0) and available https://petitions.whitehouse.gov/.

### Technical Information

The application is implemented using the following technologies:

| Type | Technologies |
|---|---|
| Operating Systems | Ubuntu |
| Programming Languages | Javasrcipt, PHP |
| Databases | MySQL, MongoDB |
| Web/Application Servers | N/A |
| Frameworks | Drupal |
| Application Lifecycle Tools | **IDE**: N/A<br>**Version Control**: git<br>**Build Management:** N/A |
| Open Source Code Repository | https://github.com/WhiteHouse/petitions |

# 4      Classification of services

According to criteria defined in section 2, we include hereafter the classification of services. The table includes all services described in section 3 and how they compare to the criteria.

Services fall into two categories:

- **Internal Services.** These services support a specific need of the Municipality although these may not be directly perceived by the citizen as a key driver for their lives. For instance, the payment system of the Municipality or an internal RRHH application. The main problem for the migration of these services to a cloud is that many of them are legacy applications implemented on proprietary systems. For these services, each City Hall will have their own internal policy about the implementation, usage of own systems, networks, etc.

- **'Smart Cities' Services.** These are the services that the citizen identified as directly related to their everyday routine and quality of life. Most of these systems are related to how public services are made available to the citizen. These services can be also classified, according the functionalities supported, as:

  o  Maps and Localization: applications with maps of the city, touristic guides, municipal maps, intelligent map guides, etc.

  o  Small and Medium Enterprises (SME): the aim of these services is to help enterprises in the city. Will be maps where citizen can localize them, and with information from other customers. In addition, will be tools to promote the companies.

  o  Management in the city:  these will be used by citizens to their normally habits within the city.

  o  Citizen opinions: with these services, citizen could interact with Public Authorities for any issue. Also they will use them as a tool to do their petitions.

  o  Infrastructure and public services: these services will be used to manage the infrastructure in the city and information from public services.

The following table comprises the services proposed with information regarding their type of services. The target of that is to help the pilots and stakeholders to decide which services will be easily activated or which one will introduce more facilities to the citizen and Public Authorities.

| TYPE | NAME | OWNER | CRITERIA (See section 2) | | | | | PRE-SELECTED |
|------|------|-------|-----------------------|---|---|---|---|--------------|
| | | | Representative of the city | Complexity | Relevance | Available | Additional Infrastructure | |
| **Internal applications** | | | | | | | | |
| City Hall Services | SEDOC | Ariadna Servicios Informáticos | NO | Medium | Low | YES | YES | NO |
| | SIMPLEXT | Ariadna Servicios Informáticos | NO | Medium | Low | YES | NO | NO |
| **Smart Cities Services** | | | | | | | | |
| Maps and Localization | Emissão de Plantas de Localização | Municipio de Águeda | YES | Low | High | YES | NO | YES |
| | Plano Director Municipal | Municipio de Águeda | YES | Medium | Medium | YES | NO | YES |
| | Virtual City Tour | URENIO | NO | Medium | Low | YES | NO | YES |
| SME | Virtual City Marketplace | URENIO | NO | Low | High | YES | NO | YES |
| | Crowdtilt | Open Source (Urenio) | NO | High | Medium | YES | NO | Yes |
| | Ideol–Innobarómetro | Ayuntamiento de Valladolid | NO | High | Medium | YES | NO | YES |
| aCity Life | LocalGIS | Ayuntamiento de Valladolid | YES | High | High | YES | NO | YES |
| | Sense the City | URENIO | NO | High | Medium | YES | YES | YES |
| | OpenTripPlanner | Open Source (Urenio) | NO | Medium | High | YES | NO | NO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | LocalWiki | Open Source (Urenio) | YES | Medium | High | YES | NO | YES |
| | OpenCivic | Open Source (Urenio) | YES | Medium | High | YES | NO | YES |
| | HotSpot CMA | Municipio de Águeda | NO | Medium | Medium | YES | NO | YES |
| Citizen Opinions | We The People Petitions | Open Source (Urenio) | YES | High | High | YES | NO | YES |
| | Urbanismo en Red – UeR | Ayuntamiento de Valladolid | YES | High | High | YES | NO | YES |
| | Improve My City | URENIO | YES | High | High | YES | NO | YES |
| | Lime Survey | Open Source (Municipio de Águeda) | NO | Medium | Medium | YES | NO | YES |
| | Co–Labora | Ariadna Servicios Informáticos | YES | Low | High | YES | NO | YES |
| Infrastructure and public services | City Navigator | Manchester City Council | YES | High | High | YES | NO | YES |
| | Blue Parking Valladolid | Ayuntamiento de Valladolid | No | Medium | High | YES | NO | YES |

Applications that have not been selected are:

- SEDOC: It is a document management application for internal usage in an organisation, therefore the direct impact in the citizen is low and hard to understand the implication of its migration. In addition, this application needs RFID or NFC hardware to operate at full level.

- SIMPLEXT is an application for text simplification for people with mental disability. The target population is low and it has been preferred to migrate applications with a broader scope.

- OpenTripPlanner scope extend the limits of a city and, therefore, it has been discarded in comparison to other applications that deal directly with urban problems.