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# A metropolis of ubiquitous services



User-friendly creation tools in the mobile, optimised execution environment, a model for knowledge warehouse, a proposed specific searching engine and a set of business models for users, for service providers and for third parties. This is m:Ciudad's scope.

## At a Glance

### Project:

The final goal of the project is to set up the basis for the engineering of a complete new service infrastructure, a metropolis of true ubiquitous services, with the mobile as a service platform, the "user adds value" paradigm and the "very Long Tail" business model as the three main pillars.

### Project coordinator

TECNALIA (E)

### Partners from:

TELEFÓNICA I+D (E), ALCATEL-LUCENT (F), UNIVERSITY OF SURREY (UK), VTT (FI), YDREAMS (PT), FTW. (A) and DFKI-IWI (D).

### Duration:

36 months (1/12/2007 – 30/11/2010)

### Total cost:

4.009.412,00 €

### Programme:

FP7-ICT-2007-1. Objective 1.2

### Further information:

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## Service creation on the move, with the mobile device, for mobile users.

Imagine what kind of applications become possible when our mobile devices do not only present data but provide valuable information to other users. Suppose that you are able to create instant services with information, contents and knowledge with your mobile device and in your mobile device. And suppose that this knowledge can be used remotely by other users in a simple way, with their mobile devices. And now, imagine the amount of available knowledge of those services. Millions or perhaps billions of potential sources with valuable information: constantly updated, relevant to our instant interests and still context aware.

## m:Ciudad, a service infrastructure

So, what are the required tools to let each user to become a service provider with a mobile device? In which way should the mobile platform behave to make it simple to use and efficient? How to reach this type of distributed, volatile services and their associated knowledge or information? And how to exploit the business opportunities that this new scenario brings about?

m:Ciudad faces and answers these questions providing user-friendly creation tools in the mobile, an optimised execution environment, a model for knowledge warehouse, a proposed specific searching engine and a set of business models for users, for service providers and for third parties, mainly SMEs.

m:Ciudad is a service architecture, a set of mobile tools and a platform to allow users to create focused, knowledge-based mobile micro-services, which are called m:Ciudad U+ Services.

### m:Ciudad micro-services, or “U+ services”

U+ services are small, sharply focused applications with their own graphical user interface, which allow users to obtain and provide information –like opinions, recommendation, location or speed– to fellow users. U+ services are fully running on the end-user mobile terminal and they are created and consumed by end users using only also their own mobile terminals, encouraging spontaneous and inspired on-the-go creation. U+ services are shareable and downloadable in order to allow every end user – with a potential for SMEs to act as such– to become a U+ service generator and provider. Therefore, flexible business models are implemented to reward U+ service generators and users who provide valuable information using U+ services.

### User Generated Content and the Service Prosumer role of mobile users within m:Ciudad

What is the difference between services and contents? If we see content as a picture, a video or audio clip, a piece of information, we can clearly distinguish content from a U+ service. A U+ service is an application that displays and disseminates knowledge (in any format, including contents) under some rules. Therefore, a single picture is a piece of content; an application that prompts the user to take a picture and disseminates it amongst followers at a given interval is an example of a simple U+ service.

Then, what does the user create in m:Ciudad? The m:Ciudad environment allows users to define and create their own U+ services. This can be done from scratch or by modifying an existing U+ service. Of course, when a user runs a U+ service in his/her mobile terminal, he/she becomes a provider (and receiver) of knowledge (and contents) through that U+ service. In that way, a user also creates knowledge in the m:Ciudad framework.

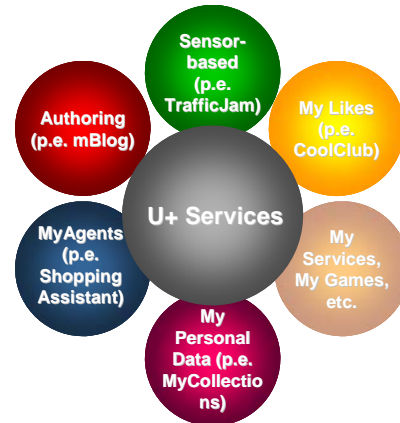
Some sample U+ services are:

**Traffic Jam Killer:** users publish their location, time and speed at given intervals during their car trip.

**CoolClub:** users publish their location, time and a comment on the night club they are at.

**My Big Brother:** a user publishes personal details like location at a given time, status and some personal contents at rather regular intervals.

**Collections and Personal Advertisement:** users store collections of things on the move of particular interest.



### Innovation vectors

While most of new successful Internet services offer User Generated Content, m:Ciudad proposes an advance beyond that, providing User Generated Knowledge exchange in a mobile environment. The main innovations are:

- A new flexible service description for mobile micro services.
- A new creation and editing method to create new U+ services from the mobile device, encouraging user-generated-services.
- A new point of view for knowledge provision and service creation based on the *prosumer* (producer+consumer) concept.
- A new embedded execution platform for mobile devices, to execute U+ services.
- An optimised searching environment to locate and access relevant services providing relevant knowledge.

### For further information:

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