

Deliverable Summary

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Context and Purpose

The objective of this measure is to implement an SMS (Short Message Service) based messaging service oriented towards municipalities/towns, providing traffic related information to drivers and citizens in general.

Measure FUN 8.1 will create a new service to support mobility by recurring to telecommunication networks and infrastructures.

The service will be subscription based and will provide on-time / ahead useful information to drivers via SMS broadcasts, namely information related to traffic (ex. accidents; closed roads/streets; road repairing; related construction affecting specific points; congestion problems; etc).

In a broader scope, such a system may also integrate in the future information services for tourism, health, civil protection, events and others (i.e., the system must be scalable and expandable).

“Mobility Services – SMS” is a measure to be carried out integrated in a broader initiative, which will be implemented in different phases in Funchal city, namely the creation of the “Urban Mobility Control and Monitoring Centre (Measure FUN 8.3)” for Funchal.

The innovative aspects of the measure are:

- Use of new technology/ITS: Introduction/creation of an SMS based broadcast information system (as described in this document). Currently there is no such service available in Madeira.
- Targeting specific user groups: Mainly car drivers, but also all the citizens in general.

The introduction of a SMS broadcast based service for alerts and information on traffic is an innovative feature of this measure at regional level.

Summary Contents

The situation before

There's no such service available in Madeira and hence the situation before CIVITAS was that no such service was available.

The idea behind this initiative is supported by the fact that SMS is nowadays an efficient and generally accepted mean of communication, used by 100% (even more than that) of the population in Madeira. On the other hand, SMS is the "de facto" form of sending written messages of all kinds among all levels/ages of citizens.

Currently, most of the alerts and information provided by the municipality of Funchal to its citizens are still paper based and don't reach a wide audience in useful timings. SMS based service for information on traffic and public transports services is not used yet in Funchal (currently, SMS is used by the municipality of Funchal only for a very small/restricted number of services, particularly related to licensing in construction with no integration at all with related areas and no real-time inputs).

Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Analysis and definition of requirements for services and the supporting technological solution/platform (Feb 2009 – Sept 2009 and Apr 2010 – May 2010 (*)) –

- Work carried under this measure during this period consisted in the analysis and definition of requirements for services and the supporting technological platform to be implemented;
- (*) Because of the dependence of measure M8.1 on M8.3 and considering that the first (draft) version of requirements for M8.3 become available only in April 2010, implementation of this measure registered a postponement;

Stage 2 Design of an appropriate solution (Apr 2010 – May 2010): Following the conclusion of a first version of the analysis /definition of requirements, a suitable solution was designed, taking a "technology specifics independence" approach;

- The actual physical location of the main platform will be at CMF facilities, at the Urban Mobility Control and Monitoring Centre. This part integrates with M8.3 Implementation & demonstration work (Centre Installation).

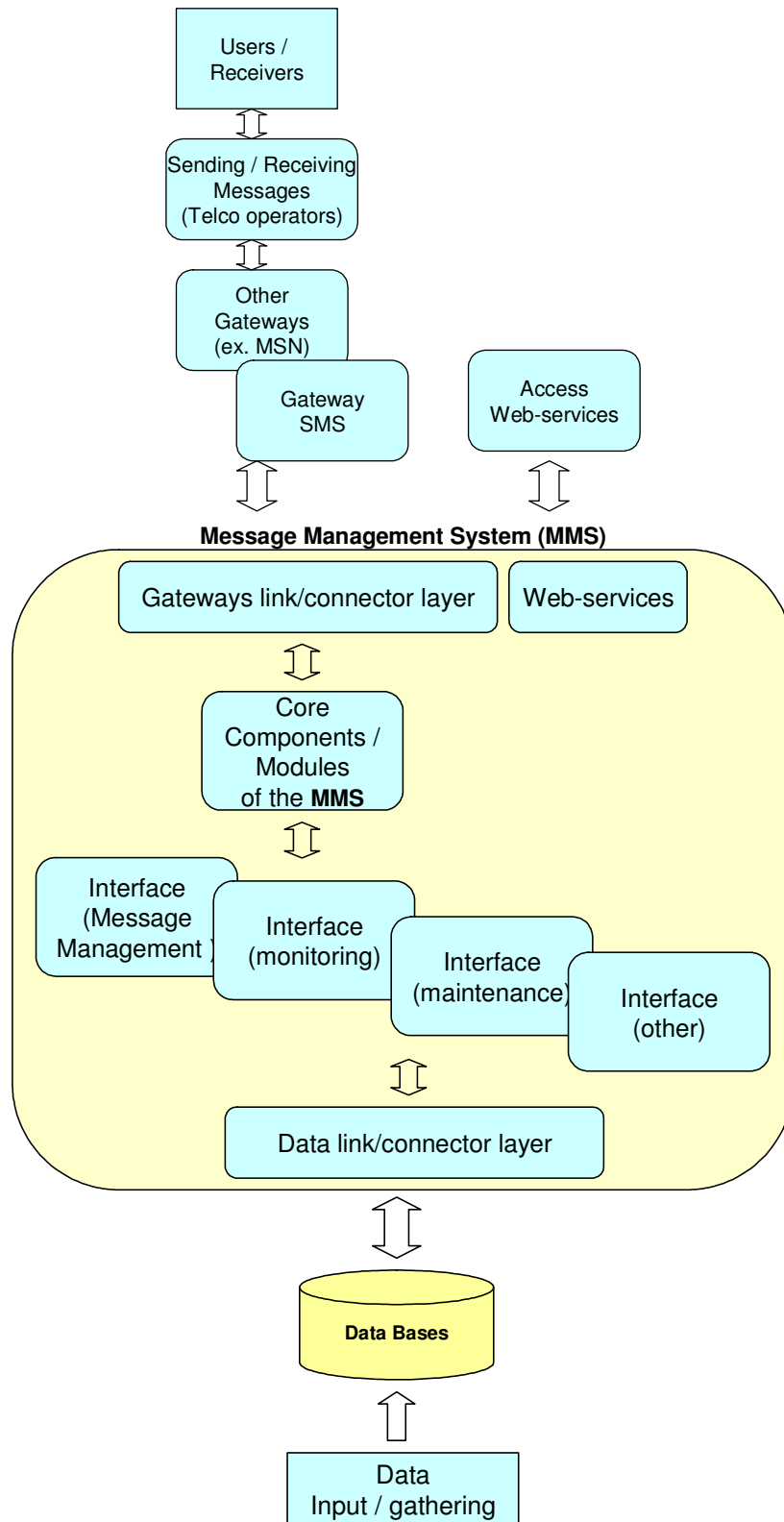


Figure 1 - Architectural view of the MMS system / platform. The diagram of Figure 1 shows / illustrates a generic functional view of the Message Management System (MMS) to be implemented

Stage 3: Writing a request for proposals (*Jun 2010 – Jul 2010*): Writing of a comprehensive and specific request for proposals (related documents are available), with a clear definition of objectives and requirements.

NOTES:

- Equipment (software and hardware) for this measure will be purchased only after the analysis of requirements for related Measure FUN 8.3 is concluded. It makes no sense to buy equipment before that phase is concluded. For that reason, software and hardware wasn't purchased yet, as it was planned initially.
- Launch of a call for tender and selection of subcontractor for main system development and implementation is also dependent on conclusion of analysis of requirements for related Measure FUN 8.3. The solution shall consist of acquiring a proven existing system and tailoring / extending it to the specific needs of Funchal and CIVITAS as defined by Measure FUN 8.1.

Contributions of the platform/system – main outputs

High level objectives:

- Provide on-time / ahead useful information to drivers via SMS broadcasts;
- Optimize traffic flow, thus reducing congestion with all the associated benefits;

Specific measure objectives:

- Provide SMS based services and functionalities related to traffic (ex. accidents; closed roads/streets; road repairing; related construction affecting specific points; congestion problems; etc);
- Provide public transports (PT) related information (ex. temporary route alternatives);

This will be a totally new service being introduced by CIVITAS-MIMOSA in Funchal. With the creation of the “Urban Mobility Control and Monitoring Centre” (M8.3) and the SMS Mobility Services for Transports (M8.1), a new level of traffic flow control and real-time information to drivers will become feasible.

Inter-relationships with other measures

The measure is related to other measures as follows:

- **Measure M8.3** – The MMS (Message Management System) platform to implement under Measure FUN M8.1 is to be fully integrated (both logically as well as physically) with the municipality “Mobility Control and Monitoring Centre” to be created under Measure FUN M8.3. The data-level integration with the broader CMF service for communication with the citizens is an important base requirement in the sense that the system must be able to retrieve data/information becoming available at the centre (ex. using web-services or similar protocols).

Deviations from the original plan

The deviations from the original plan comprised:

- **Deviation 1: Implementation/development delay** – There was a significant delay over the initial schedule of this measure implementation calendar. One of the reasons for

this delay is related with the corresponding delay on the implementation of related measure FUN M8.3 ("Urban Mobility Control and Monitoring Centre), on which Measure FUN 8.1 is dependent.

Functional Use

The main objective of this measure is to implement an SMS (Short Message Service) based messaging service oriented towards municipalities/towns, providing traffic related information to drivers and citizens in general. To pursue this goal, we consider the following success factors:

- **Provision of Real Time Information:** The provision of on-time / ahead useful information to drivers via SMS broadcasts, either before they begin their journey (usually this will be the case) or while on the road to their destination. It will mainly consist on information related to traffic (ex. accidents; closed roads/streets; road repairing; related construction affecting specific points; congestion problems; etc);
- **Optimization of traffic flow** (strategic level/planning): By means of providing on-time / ahead information to drivers via SMS broadcasts, this will generate an optimization of traffic flow, thus reducing congestion with all the associated benefits (e.g. lower travelling durations, lower accidents rates, lower pollution levels, etc).

Lessons learned

Until this point of implementation and because this service is not yet being used (not yet accessible to drivers) it is not practicable to reason out on relevant lessons learned.

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