

Notes about Objective ICT-2009.6.2: ICT for Mobility of the Future

Francesco Furfari and Francesco Potortì

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This document focuses on Target b) of this objective. Here are the funding scheme and the text of the Target:

b) ICT-based systems and services for Smart Urban Mobility and new Mobility Concepts to address the environmental footprint and safety of mobility, while fostering economic growth. This includes innovative new tools, services and methods for demand management, moving from restrictive to permissive systems; ICT tools and services for logistics optimised for urban environments; use of ICT for replacing mobility (virtual mobility, telepresence); and new, multi-modal urban mobility concepts.

Funding schemes a): IP, STREP, CSA; b): STREP; c), d): CSA
Indicative budget distribution - IP/STREP: EUR 32 million; the objective is to support at least 2 IPs to be funded under a) in addition to STREPs - CSA: EUR 5 million

Call: ICT call 6

In the following, we try to analyse the significant topics of the Target.

- ICT based systems and services for Smart Urban Mobility
 - *perfectly centered*
 - One keyword we can invent to summarise some of the aspects of the proposal is **M-SOHO** for Mobile-SOHO
- new Mobility Concepts to address the environmental footprint
 - *weak coverage*

- We have nothing substantial to say here. All we can do is to highlight the indirect advantages that our proposal could bring in terms of more comfortable public transportation usage and consequently lessened usage of private transportation: less cars on the roads and generally on land, less inefficient small private vehicles in favour of bigger public vehicles (both from a pollution standpoint and a long-term fleet management standpoint), less stressful and time-consuming drive time for passengers and similar issues.
- new Mobility Concepts to address safety of mobility
 - *questionable coverage*
 - There is no direct impact on drivers' or pedestrians' security. Similarly to the above point, we can claim an indirect impact on people's safety if the success of the system leads to an increased usage of public transportation and thus to a lesser number of unprofessional drivers and consequently less road accidents. In fact, we can make another point, which has a more direct impact on safety, but is not certainly a "new concept", that is, we can exploit the Smartbus distributed communication network to monitor the road conditions for quick and continuous road quality assessment (identification of obstacles, breakage and generally danger conditions) and possibly also for monitoring, identifying and reporting bad driver behaviour.
- fostering economic growth
 - *possibly strong coverage*
 - Here we can identify two issues. The first one is that by using the smart buses one encourages bus fleet renewal and thus provides an advantage to the automotive industry, which sees a new market; however, this point of view can be seen as opposite to maintaining a low environmental footprint and so it is maybe weak. The second issue is best detailed below, where the **multi-modal** point is discussed, and if accurately presented can be a strong point.
- innovative new tools, services and methods for demand management, moving from restrictive to permissive systems
 - *possibly strong coverage*

- Here we need someone who fully understands what is **demand management**. Generally speaking, it should be a set of incentives and penalties that indirectly steer people’s behaviour in some desired direction. Here we are in fact trying to encourage people to use public transportation in place of private cars, so maybe the Smartbus is a good fit for this point.
- ICT tools and services for logistics optimised for urban environments
 - *strong coverage*
 - This is one of the two main strong points; it is linked to the other one (which is the next one), to the point that they are not clearly separated. It is strong in the sense that it is important in a system integration sense and should bring advantages, but there is no innovation apart from the system integration. This means that the Smartbus would probably be a better fit for an IP than for a STREP. One significant issue is on-demand management of bus transportation service requests. This is probably particularly significant in off-peak hours, where providing a good coverage implies a very low efficiency without on-demand management: for example nocturnal services and remote area services could be a perfect test bed. Logistics can also be involved for integrating bus location knowledge with real-time information sent to personal devices such as PDAs.
- use of ICT for replacing mobility (virtual mobility, telepresence)
 - *nonexistent coverage*
 - This is the opposite of what we want to to accomplish, so this point is not covered at all.
- new, multimodal urban mobility concepts
 - *strong coverage*
 - This is probably the main point. We can provide integrated multimodal logistics using a multi-tiered approach. We have a stable network core formed by public transportation, i.e. bus fleet, ambulance fleet and generally all public vehicles. The core can be extended to private but controlled fleets such as taxi fleets. This core provides an open interface to other transportation means and to end users. End users can thus profit from a system that integrates various (multimodal) transportation means and thus create their

itinerary on the fly, without fear of last-minute problems. Transportation means include extraurban routes such as trains, planes, ships and intercity buses; but most interestingly they can include several sorts of urban fleets. Urban fleets can satisfy a wide range of diverse needs. Examples are office colleagues that coordinate to share cars when going to work; voluntary associations for sharing cars based on points mechanisms or simply for getting to know new people; shared cars businesses; bus or van services for urban or interurban mobility: there is no conceptual limit to the kind of networks that could interact with the Smartbus core network.