use-me.gov

USability-drivEn open platform for MobilE GOVernment

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- **USE-ME.GOV validation**
- **Main results and conclusions**

Getting public administrations, Information and Communication Technologies companies and universities to cooperate and implement new e-government services, allowing them to access at any time and anywhere through the use of mobile communications and Internet technologies, has been the main mission of the IST project USE-ME.GOV.

The official end of the project has been an appropriate occasion to organize and host an international workshop, in which all the participants have been provided with the main results of the project, as well as many other tools to analyze and share e-government and e-governance themes.

The workshop, entitled 'Mobile services for citizens: m-Government and the USE-ME.GOV Project Perspective', has taken place in Lisbon on March, 22. A special session of the event has been dedicated to live demonstration of pilot services validated during the project.

For those who did not have the possibility to attend the workshop, this final issue of the USE-ME.GOV Newsletter will provide a short description of the activities performed during the validation phase, and a summary of main results and conclusions emerged from validation. More information will be available soon on our website, including a new special section dedicated to the project's final results.

Go to our website – www.usemegov.org

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USE-ME.GOV validation

USE-ME.GOV system validation activities have been carried out on 5 components: platform technology, usability, platform usability, service deployment and exploitation and business models.

- Platform validation covered the validation of functional and non-functional user requirements of the USE-ME.GOV system.

- Operational service deployment and platform exploitation placed the focus on operational management and related aspects of service deployment and exploitation.

- Core objective of the validation of the **business model** was the evaluation of business options for the sustainable operation of the offered USE-ME.GOV service.

- Usability validation covered the validation of intuitive application interfaces and was based on the selection of external users representing different target groups (age, educational background, interests, geographical area with social-economical particularities etc.).

- Finally, **platform usability validation** covered platform installation, configuration, integration, operation and maintenance validation

The **Platform validation** focused on two different aspects:
- Functional operation of the integrated platform under operational conditions. As regards this point, the platform has been validated under the particular conditions given by the field trials, i.e. for each

particular pilot service in the respective country and place, and taking into account possible constraints with regard to the technical integration.

- Non-functional requirements (interoperability, openness, etc) and achievement of design goals concerning the platform architecture. As regards these aspects, non-functional requirements are associated with constraints on the attributes of the functions or services the system must support.

The **Operational service deployment and platform exploitation** validation focussed on two fundamental issues:

- Prioritization and Interest in Public Mobile Services

    The objective was to validate the general interest and priorities with respect to mobile services, from the perspectives of the public administration as provider and the citizen as service user.

    Indicators have been structured around the following areas:

    - o General IST strategy
    - o Impact on Work Organisation
    - o Service Quality and Efficiency expected from mobile services deployment

- Service Specific Operational Aspects

    The objective was to assess the (expected) impact of platform and service deployment at the operational level.

    Indicators have been structured around the following areas:

    - o Impact on Work Organisation
    - o Service Efficiency
    - o Service Quality

The **Business models** validation mainly focused on the validation of business model specific questions which should finally give a recommendation which options of business model might be feasible, advisable and of course also possible concerning acceptance, regulations, as well as pros and cons. Core objective of the validation of the business model has been the evaluation of business options for the sustainable operation of the offered USE-ME.GOV service. This included:

- the end-user acceptance of options (price, operation, offer bundling, etc.)
- the authorities point of view about sharing of services, price, partnerships, etc.
- as well as opinions and advises from other departments, authorities and external contacts opinion about possibilities and success of these options.

The **Usability validation** mainly focused on the usability testing activities applied on the design of the 4 pilot services for USE-ME.GOV: the Healthcare pilot in Poland, the News Broadcast pilot in Italy, the Mobile Student pilot in Spain and the Complaints pilot in Portugal. Usability validation results summarizes both specific results for each application tested, as well as more general conclusions that can be taken from all these user interaction studies.

The **Platform usability validation** mainly focused on the evaluation of the answers to a set of questionnaires posed to development teams that covered areas such as platform installation and configuration, adding new operators, integration and operation and maintenance.

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Main results and conclusions

Operational Service Deployment and Platform Exploitation

The validation revealed that authorities have serious interests in the provision of mobile service, mainly from the perspective of multi-channel service delivery, prioritizing the enlarged and instant access to already existing services. Other advantages such as a positive impact on work organisation and increased efficiency in service provision are also perceived, but are not necessarily the main driver for mobile services provision. The general positive attitude towards the potential of mobile services is also confirmed by the consideration of these services in the strategic plans for e-services of the respective organisations. This is further matched by the interest that a representative number of interviewed citizens manifested to have in mobile services provided by public administration.

There is also a real interest in the sharing of resources and even joint service provision. In fact, the possible motivations seem to be at hand (cost efficiency, financial capability and handling of technical complexity), however, these have not been investigated further by the validation activities. For IST and e-services in general, and mobile services in particular, the underlying concepts of infra-structure sharing and joined provision of services must be pursued further.

Authorities, however, do also perceive some serious constraints: about half of the authorities see either legislative / regulator barriers for mobile service provision in general or simply procedural obstacles when it comes to institutional cooperation. These aspects must be properly addressed at the political and regulatory level. The fact that the reorganisation of administrative processes is not in itself a driver for e-services is an identified adoption barrier.

On the other hand, there is some contradiction between the identified potential for service efficiency and the general perception (and possibly psychological barrier) that the inclusion of the mobile channel into the service portfolio would result in an increase in the need for technical and human resources. Already from this point of view, the advantages of organisational networking and true integration of e-services into administrative processes should be particularly addressed by governmental policy makers.

Business Models

Summarising all results of the business model validation it can be stated that:
-   Advertising is not very well accepted esp. from the non-citizen side, but possible as financial support for the service and should therefore be chosen with controlled content and frequency. Sponsoring might be an option for the very *sceptic countries*.
-   Payment by citizens is more accepted by citizens than by non-citizen. This shows that the citizen do not always expect to get services for free especially if the service provides a real added value for them.
-   In general, there are more pessimistic views from authorities on options like advertisement and payment. Before excluding such financial support and – even worse - not providing the service, interviews with citizens to evaluate the real acceptance should be made.
-   Mobile operator costs are named as very high for some countries. Mobile operators should rethink their pricing policy to foster the take-up of mobile services in the respective countries. They might

also actively pursue special public-private-partnership offers for authorities for the sake of citizens, authorities and of course the private market.

- Citizens in most countries prefer to get more such services from their government. A sharing of services between esp. smaller authorities can financially support them and such enable more mobile services. In contrary to that, 50 % of all interviewed citizens do not think that such service will be successful / accepted due to country specific habits.
- Payment by phone bill and pay per call is preferred by all.

Usability

Comparing most usability variables in such different applications with different user profiles (country, gender, and experience) has not a high degree of relevance. Usability tests and activities are focused on generating recommendations for application improvement. Nevertheless some common problems and solutions can be summarized after analysing all this devices in all those different user groups and situations.

The level of usability was not homogenous between applications; there were some of them with clearly more problems than others (health care application, and non expert user group from the City Information Broadcasting Service).
Some general usability problems also arose from most tests. A help section was missed by the users, at least on their first interaction.

There were significant translation and naming problems throughout the applications. On mostly text based interactions that occur in these types of applications, labelling and translation should be taken with significant care.

Another basic problem for users on these types of devices is to understand clearly the order of tasks and steps inside tasks. Therefore link order is paramount (i.e. if we put the registration page link after the log in page link, it should be expected that a significant number of users will try to log in without registering).

On these mobile applications, the learning curve is very important. Therefore the first tasks should be very simple to execute (i.e. registration), more complex tasks and interaction should be presented after a certain degree of experience is already acquired by the user.
One should remember that the percentage of inexperienced users on mobile applications is still very low, and that the convergence of experience from a desktop web application to a mobile web application is very doubtful if not almost irrelevant.

Text insertion by users is also very problematic in these types of devices, therefore it is recommended that text insertion is kept to a minimum, (i.e. don't make users digitize URL's use shortcuts, links or favourites).
Language throughout these applications should be kept very simple and to the point, of the action taking place. This is especially important on these devices where screen real estate is premium, as these devices have very small screens, and space for content and functionality is very limited.