eCensus 2011 first stage of the 17th Population and Housing Census in Bulgaria

Public institution responsible for the case:
National Statistical Institute of the Republic of Bulgaria (www.nsi.bg)
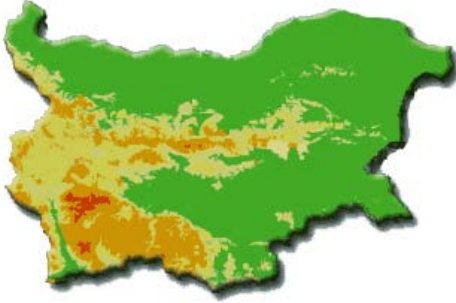
Case Website: http://www.nsi.bg/eCensus2011

eCensus 2011 in Bulgaria:

· **excellent eGovernment real service in action**
· **cutting edge eGovernment innovation**
· **41% enumerated - incredible success**

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Bulgaria is located in Europe, in the Eastern part of the Balkan Peninsula with an area of more than 110 thousand km2, and a population of 7,4 million people. It is a parliamentary republic and a full member of the European Union since the year of 2007.

The National Statistical Institute of Bulgaria (BNSI) is a government agency directly subordinated to the Council of Ministers, whose main activities are collecting, analyzing and disseminating accurate statistical information about the social and economic status and development of the country.

Business Needs

Under EU census regulation, all EU Member States are obliged to conduct a Population and Housing Censuses in the year 2011.

Bulgaria was the first European Union Member State conducted a population count in 2011.

In the period 1-28 February 2011, the 17th census in the demographic history of the Republic of Bulgaria was successfully carried out.

For the first time the Census was done by eGovernent service – electronic enumeration via Internet (eCensus– web-based application), for the period February 1st – 9th., and from February 10th until the 28th - through face-to-face interview with enumerators.

Main Results and Impacts

The eCensus (Government-to-Citizens service) was accepted with a great interest and an extremely high participation rate was observed. The total number of persons enumerated through the eCensus was 3,100,023 that represent 41.2% of the total number of persons living in Bulgaria. This is an extremely high result as the expectations for the EU Member States are 20% on average. On average 300 000 people were enumerated a day, and in the last day – more than half a million.

This exceptional high activity was due to the innovation of eGovernment service (eCensus), which was proposed by BNSI, up to date and in accordance to the expectations of the society.

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Innovation Solution

The eCensus web application was developed to handle the huge loads expected during the period of electronic enumeration.

Its architecture consisted of the following main layers:

•	Load balancing layer – A hardware load balancer that distributed the requests to the web servers.

•	Presentation layer – A web farm consisting of 6 Windows Server 2008 R2 EE application servers each running ASP.NET MVC 2.0 web applications hosted on Internet Information Services 7.5.

•	Database layer - A dedicated SQL Server 2008 R2 EE.

The eCensus system proved to be very scalable and reliable: during the peak load of the system 72,000 concurrent users working and entering data into it, the SQL Server Database handled successfully more than 2,700 batch requests per second.

It was the national scale innovativeness (technological) with a huge load without any interruption of services or bad response time.

Along with eCensus, a cross border eGovernment service – Census Hub, was successfully implemented. The European Census Hub is a conceptually new system to achieve the dissemination of the 2011 Census data via the Eurostat website. It is based on the concept of data sharing, where a group of partners agree on providing access to their data according to standard processes, formats and technology. The Census HUB system is European scale innovativeness (technological) for the transmission and dissemination of census data.

Benefits

The main advantages of eCensus:
• Increased convenience, accessibility and usability of use (24-hour availability and possibility for the users to terminate/continue their work at any time; well-designed interfaces that increase legibility and accessibility, increase usability by providing additional guidance and contextual help);
• High data quality (data entering was facilitated with built in rules for edits/logic, automatic error-checking);
• Possibility for one user to count more than one dwelling and persons living there (e.g. his/her parents);
• Strong security (the same level of security as bank transactions);
• Green Census (saving paper and protecting the environment);
• Reduced costs for data collection (for enumerators, processing costs, and follow-up costs);
• Create innovative image of the National Statistical Institute as a Government Agency by implementing eGovernment services in action.

The main advantage of the implemented eGovernment service is the maximum user facilitation in accordance with the priorities of the European eGovernment Action Plan 2011-2015.

The success of the electronic enumeration is a big and irreversible step towards confirmation of the eGovernment services in Bulgaria
in line with
"The European eGovernment Action Plan 2011-2015"