Modernizing data collection preparation, management, data correction. Integration of data collection infrastructures and technologies to optimize processes and resources
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Abstract

Data collection environment VVIS is a universal system for data collection for all social surveys conducted by Statistics Estonia (SE), including the 2011 Census of Population and Housing. The VVIS environment is used for the preparation of data collection, to carry out the data collection and for primary processing of data. VVIS has been developed following international recommendations for conducting social surveys and the needs of the SE. Information system is designed to support the whole data collection process, including survey description, sample import from statistical registers, pre-filling of data from external sources, web for web-based surveys, field work preparation, communication with respondents and helpdesk functionality, field work/data collection (CAWI-CATI-CAPI), field work management, primary data correction after field work (during the field work period), export of data into external databases for data processing.

Mentioned functionality is implemented with following independent applications:

- Form definition module - desktop application used for definition of object model and creation of questionnaires.
- Field work application - used by the interviewers only. Installed on the laptops of interviewers, follows high security demands. Exchanges data with the managements system over an encrypted channel via GPRS, Wi-Fi, or CDMA.
- Field work management system - used by field work managers (fieldwork manager, supervisors, survey managers) help desk, statisticians, data quality specialists. It is web based, possible to use from any office of the Statistics Estonia or over the internet.
- Public e-survey system - secure web application, which allows individuals to submit data over the internet (CAWI).

VVIS is integrated with other external systems as:
- Metadata system iMeta - survey, classifications, variables, periods etc
- Questionnaires designing module KDM for VVIS
- Statistical database
- Authentication system e.g. Active Directory
GIS database

The system ensures the operational management of the fieldwork on entire territory of Estonia. Actual overview of the status of work allows immediate intervention in case of performance problems. All employees participating in the data collection and initial processing are connected to the single information system. This will enable to monitor all process in every stadium and, if necessary, to redistribute resources.