

Integrated Statistical Information System

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IT infrastructure

- Past: parallel platforms for statistical processing, many different solutions (old and new technologies), "stove-pipe" systems, resources not shared
- Many specialized tools (SAS, Demetra, PC-Axis, etc.)

Statistical processes

- Many statistical activities
- New demands from international and domestic organizations and users
- Change of business processes (e.g. data collection more administrative sources, web questionnaires)



Integrated Statistical Information System

Goals

- Standardization and harmonisation of metadata and business processes
- New tools for survey processing replacing old technology
- Faster survey development (from 3 months down to few days)
- Less tailor-made programming more service-oriented solutions
- Moving control over processing from IT to statisticians
- Reducing costs
- Idea: not all functionalities in one system, but integrate functionalities from different tools and systems



ISIS Development

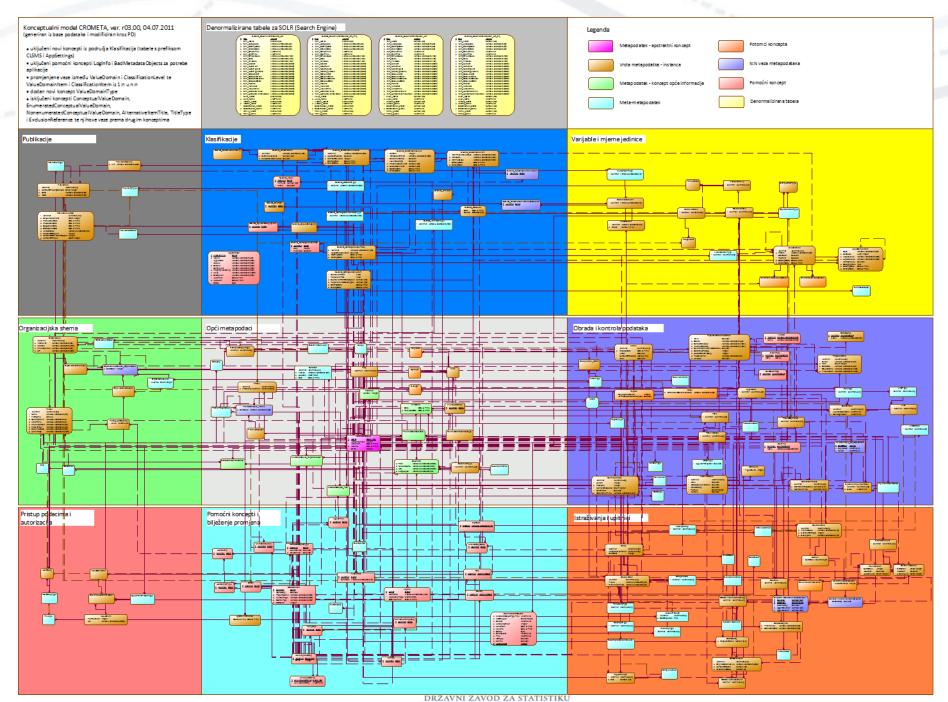
- 2002 Contract on Technical Cooperation with SIDA and Statistics Sweden
- 2004 2007
 - Two-phased project, main outcomes:
 - Central metadata repository CROMETA
 - Metadata-driven tool for survey processing
- 2008 Today
 - CROMETA model and developed tools updated and maintained by CBS
 - Several new components developed by CBS or outsourced
 - Other solutions integrated with ISIS



CROMETA Model

- Central metadata repository = core of the ISIS
- Based on Reference ModelTM (METANET project, Eurostat 2000-2003)
 - additional concepts from metadata inventory and PC-Axis
- Metadata sections:
 - studies and questionnaires,
 - classifications,
 - variables and measurements,
 - authorization and access,
 - organizational structure, etc.





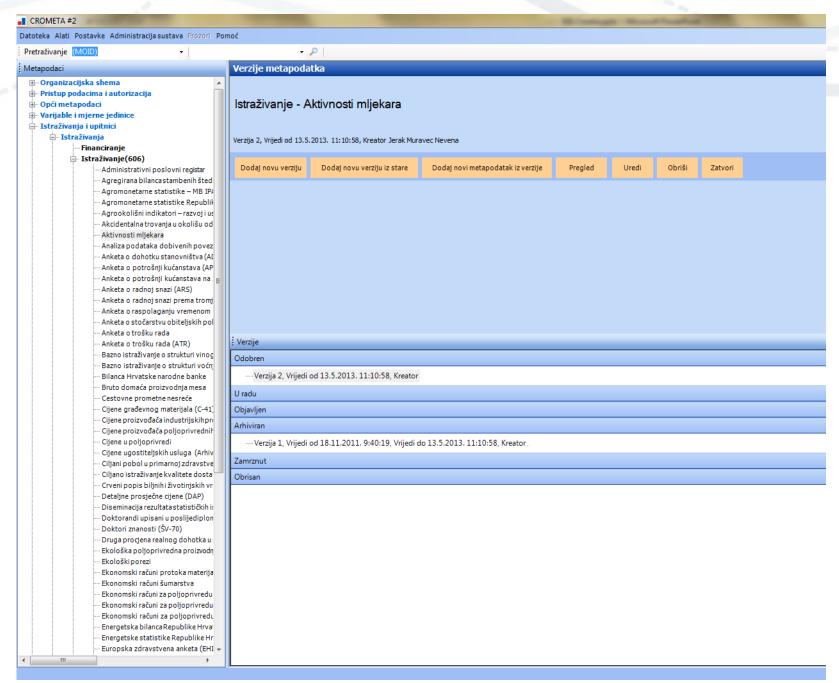


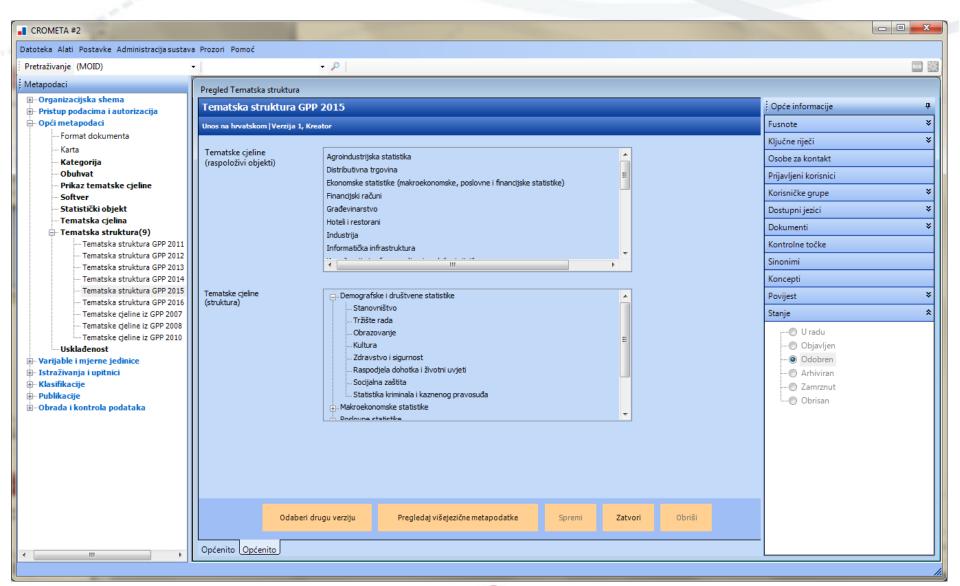
Metadata Manager – metadata maintenance tool













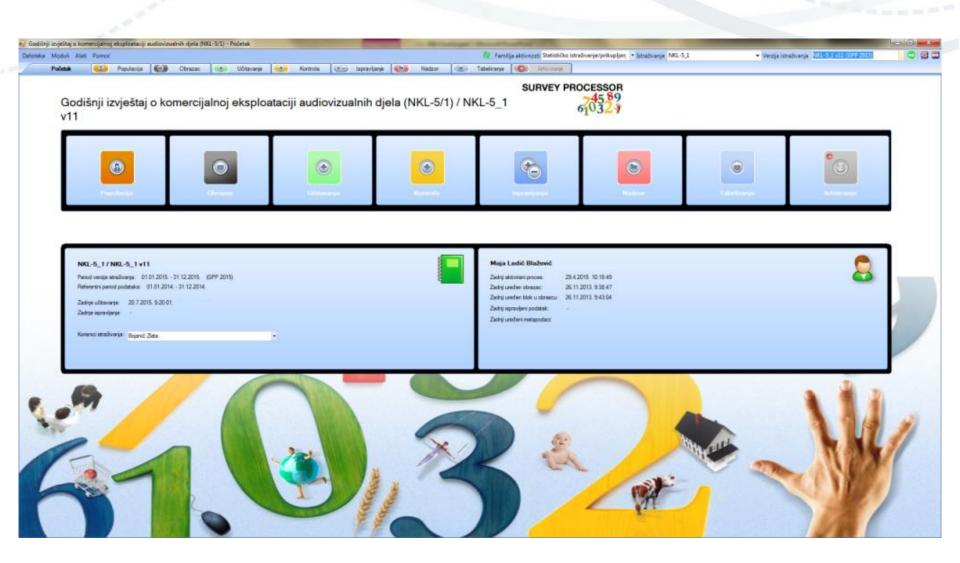


Survey Processor – survey processing tool
Warehouse Browser – data browsing and tabulation

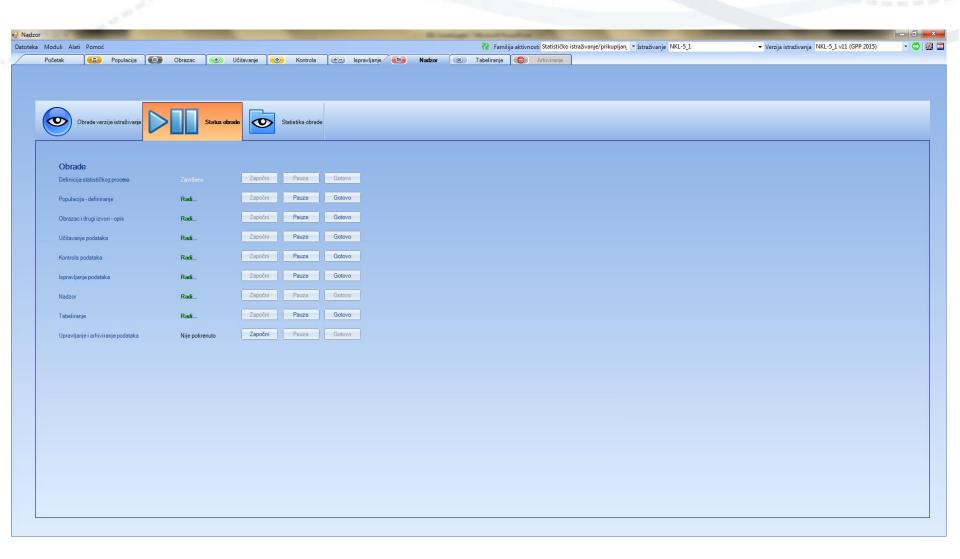




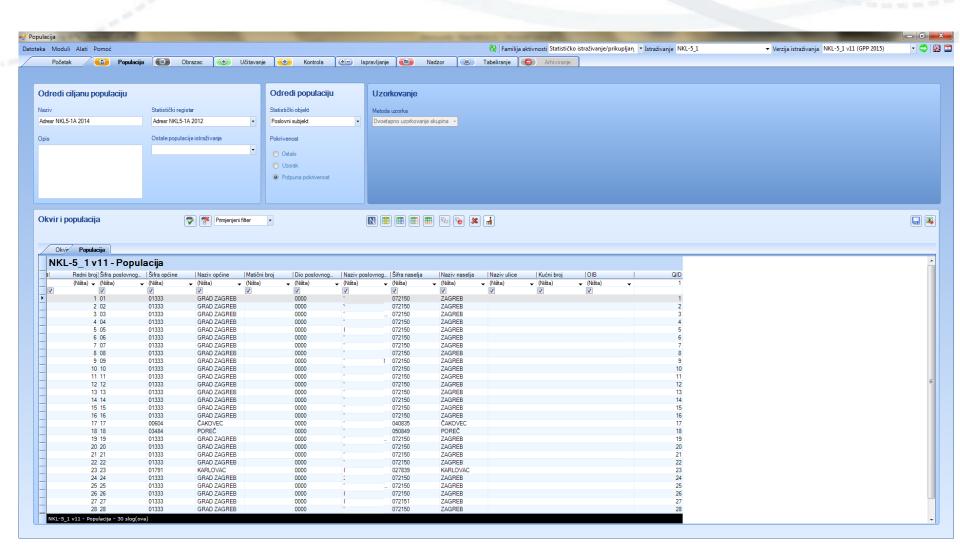




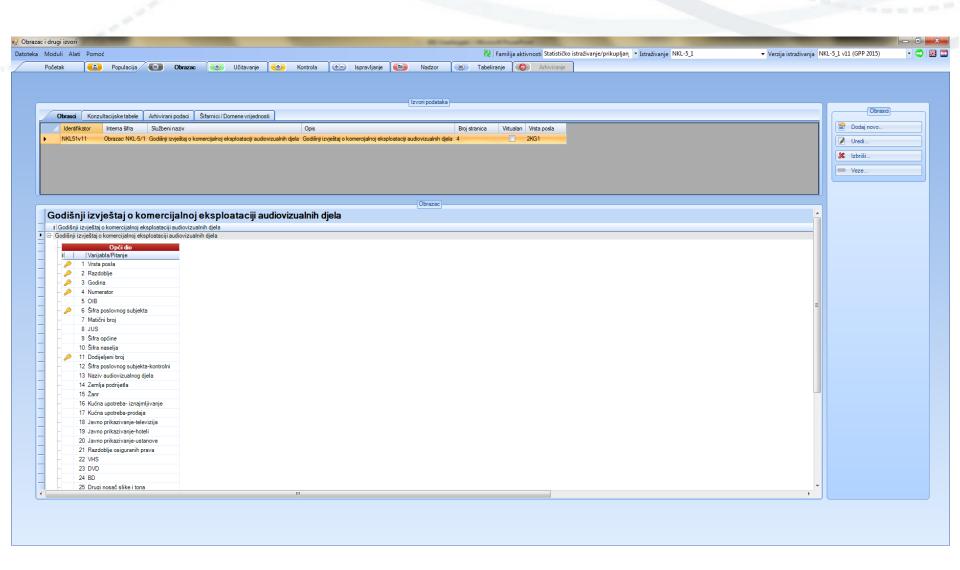




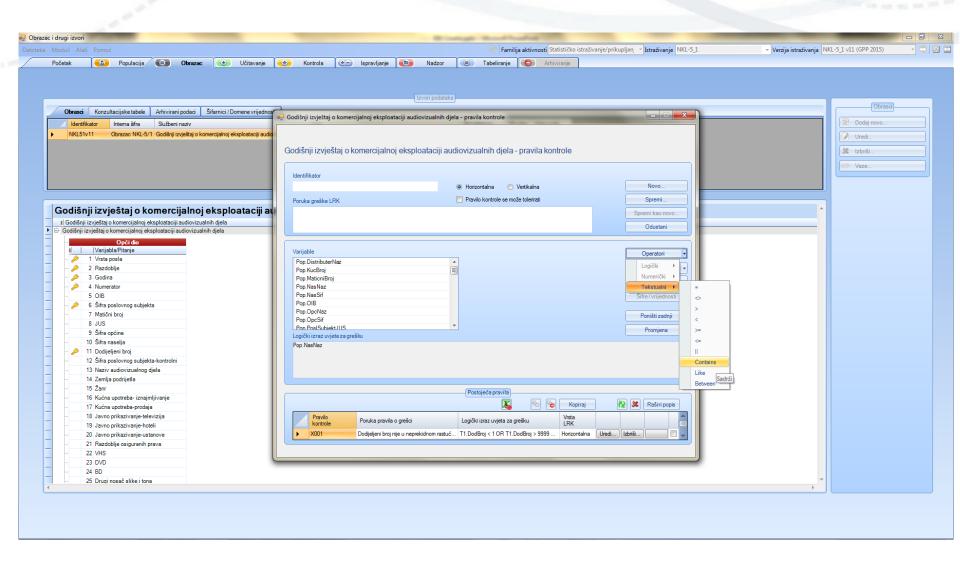




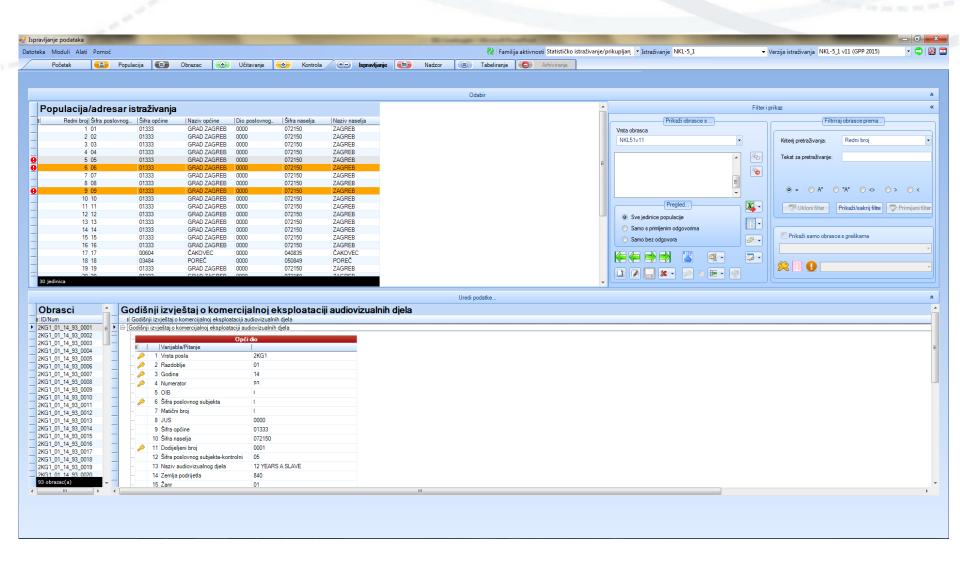




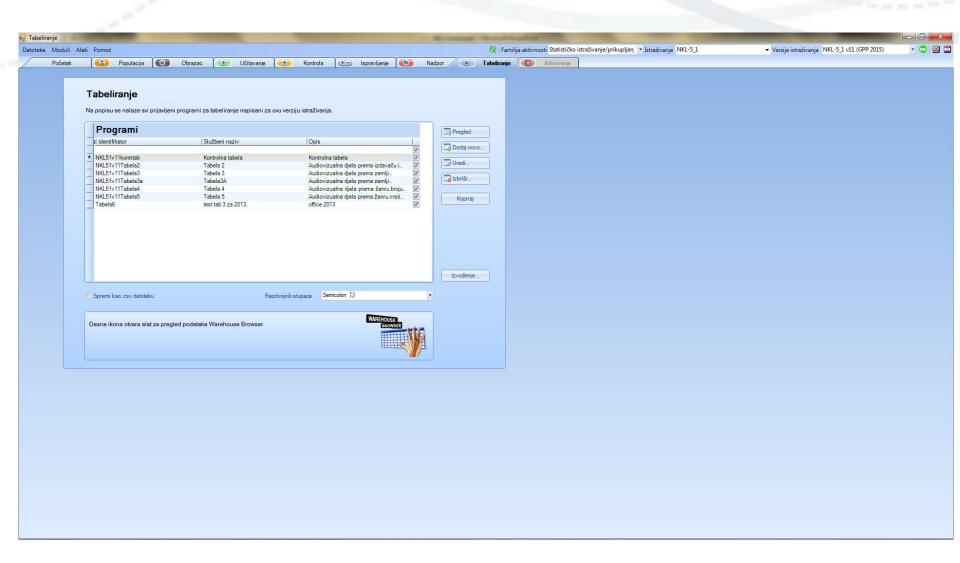








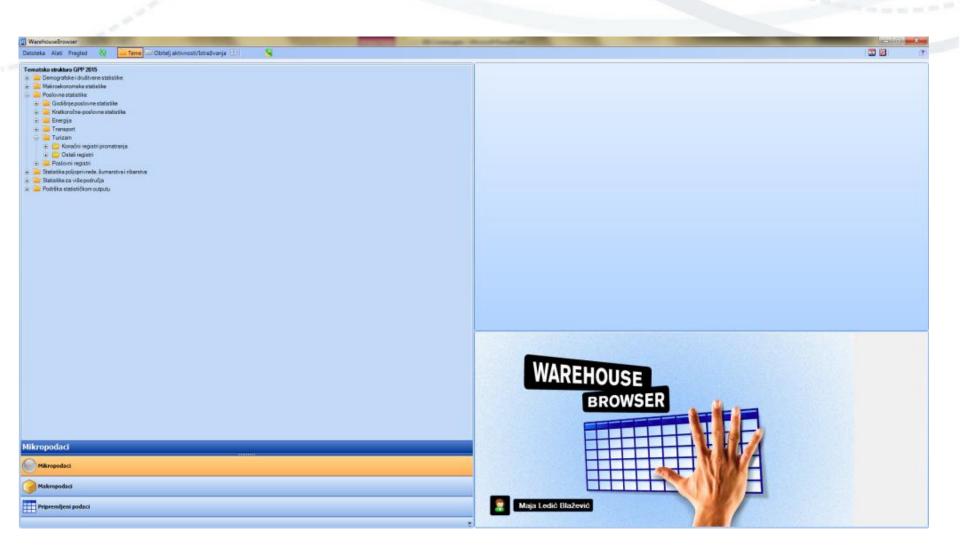




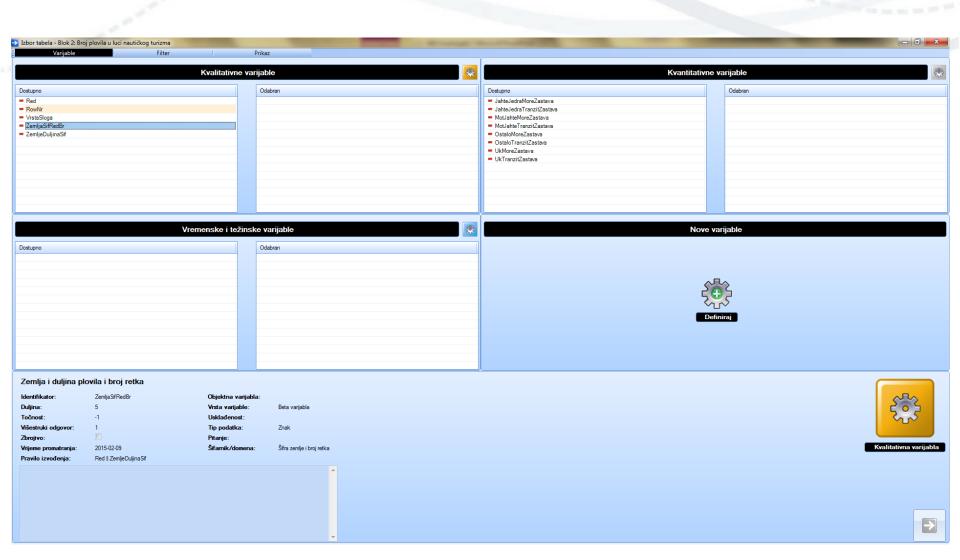


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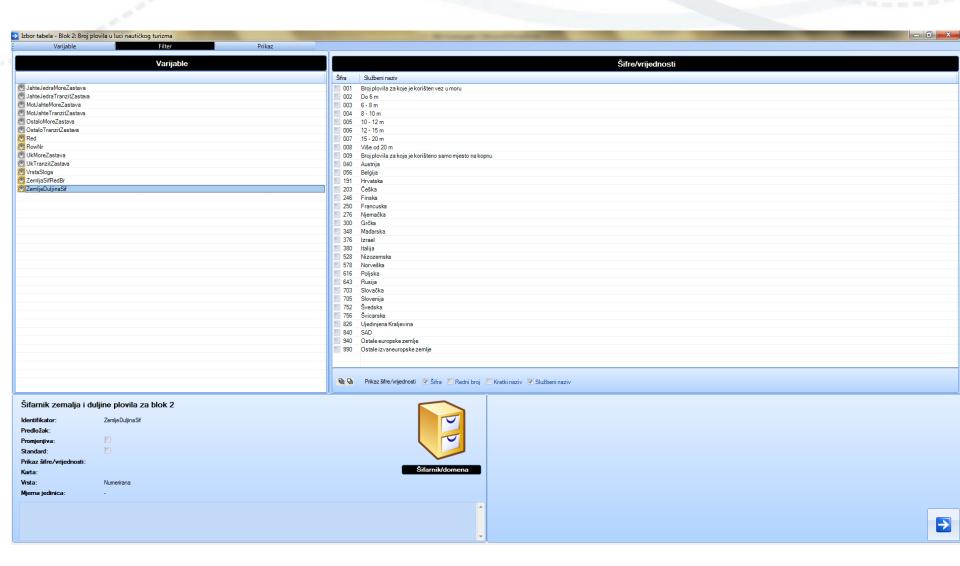




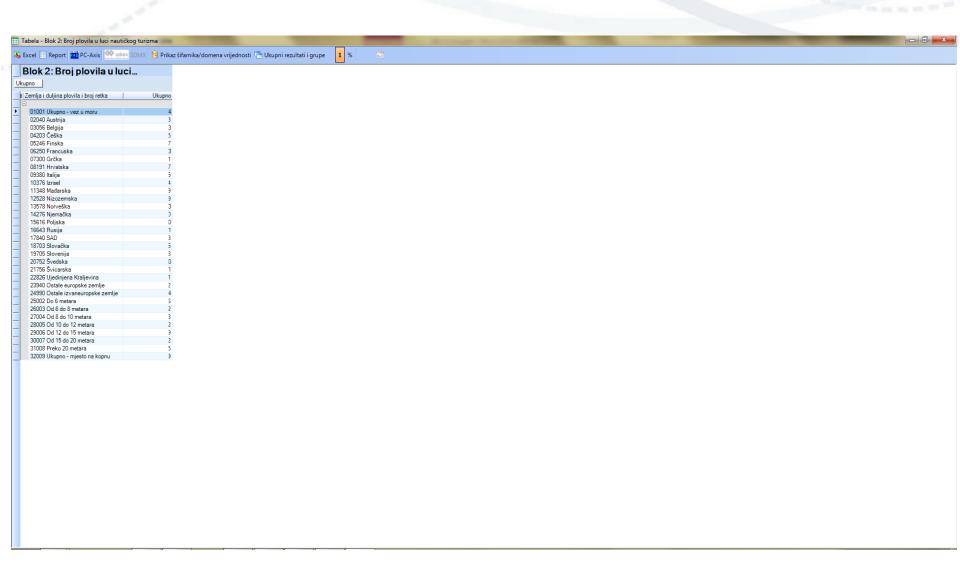












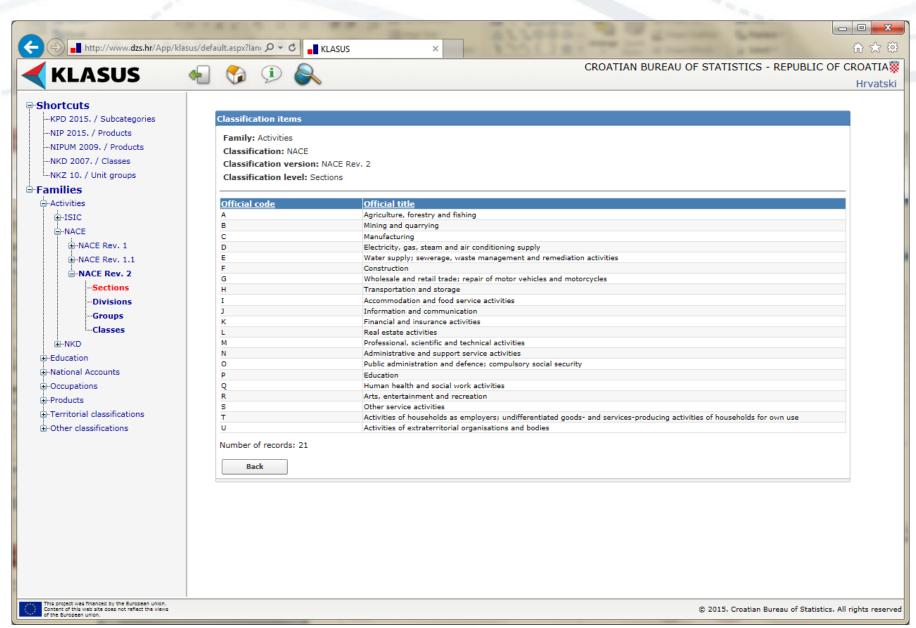




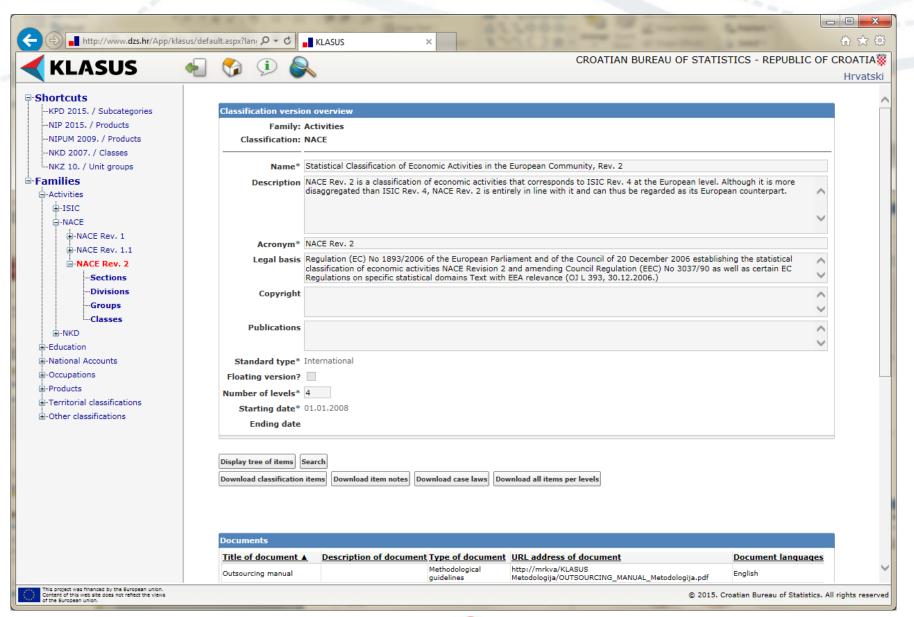
KLASUS – classifications system

GSIM Statistical Classifications Model (Neuchâtel terminology model for classification) 2015 – public http://www.dzs.hr

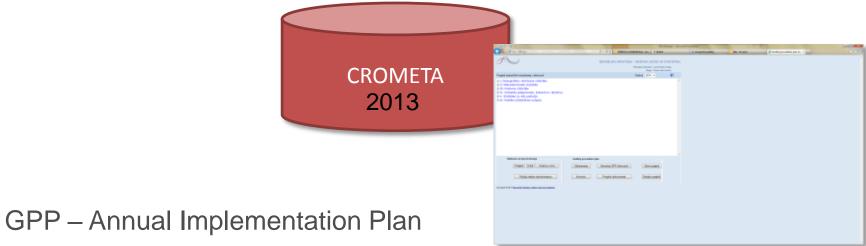






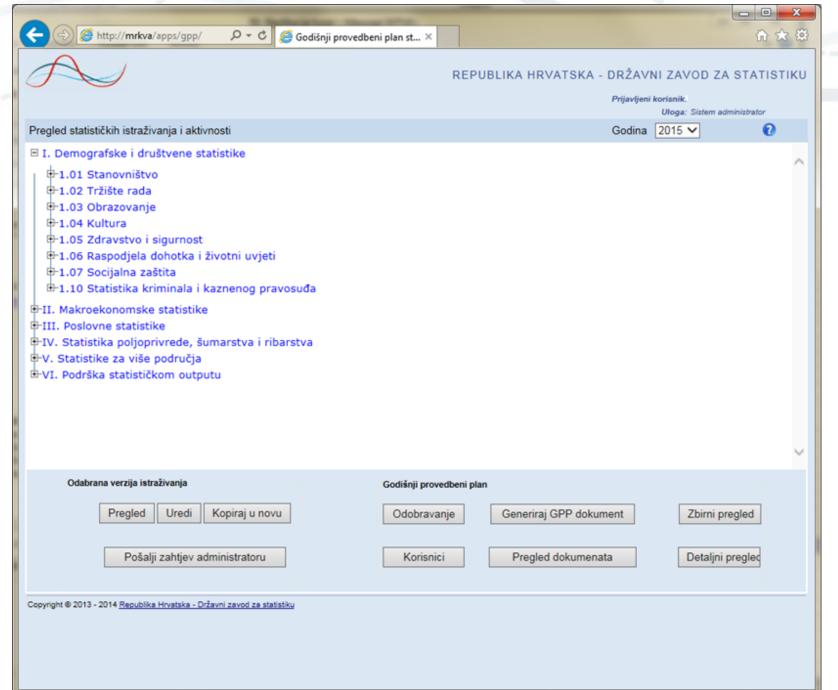


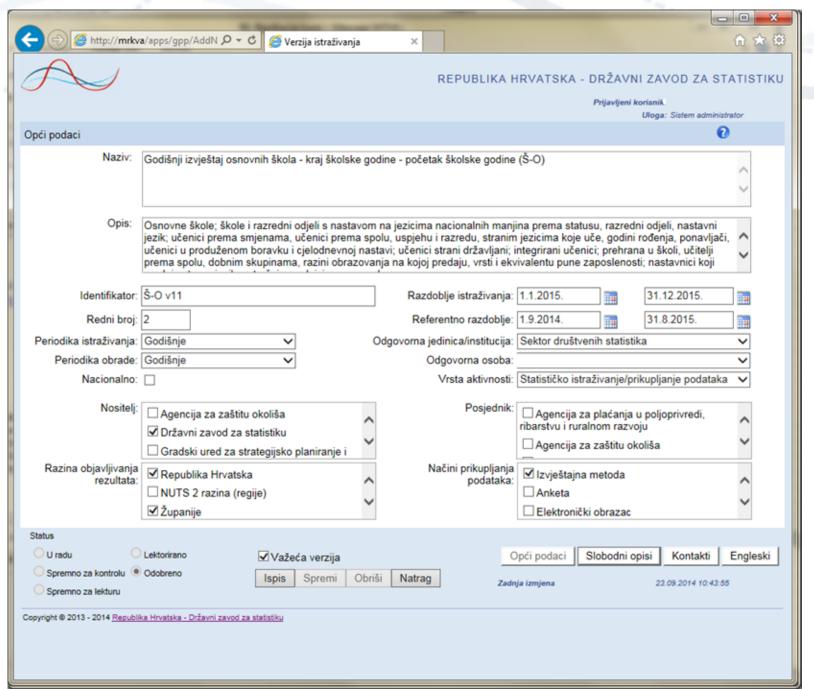


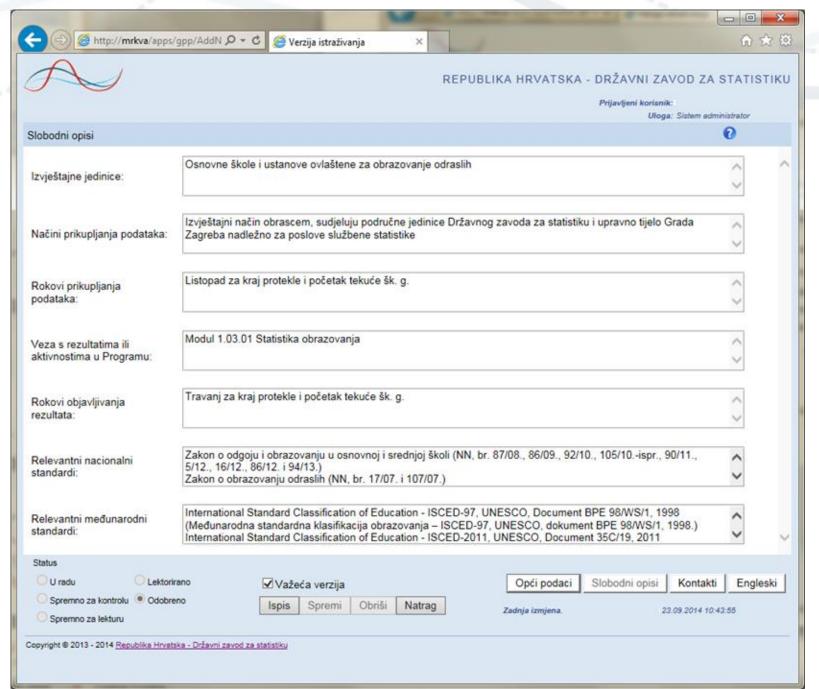


reference metadata about statistical activities







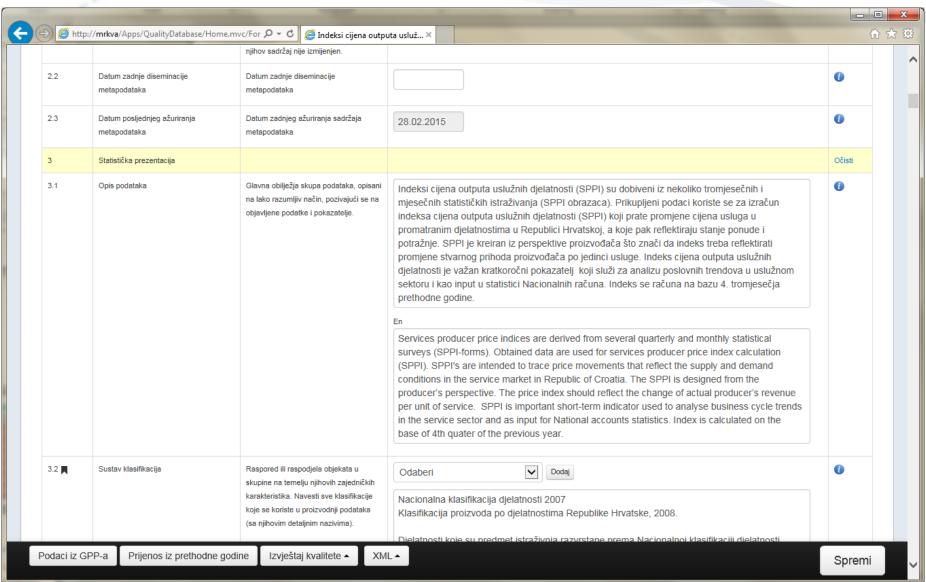




Quality Database

- ESMS (Euro-SDMX Metadata Structure)
- ESQRS (ESS Standard Quality Report Structure)



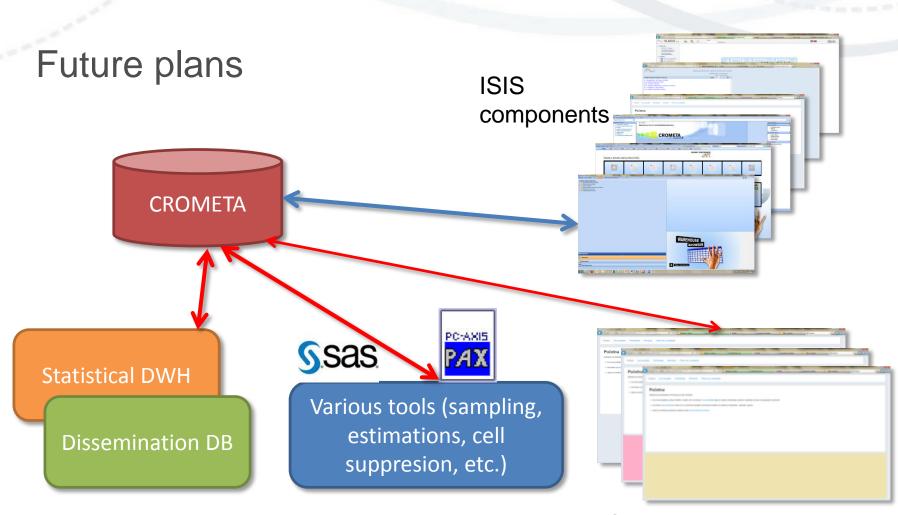




| *** | | | Quality | / Management/N | Metadata Manag | jement | | |
|----------------|---|--|---|---|--|---|--|-------------------------------------|
| ISIS Comp | 1. Specify Needs | 2. Preparation and development of statistical methodologies | 3. Build necessary instruments for enforcement | 4. Data collection | 5. Data processing | 6. Analyse | 7. Dissemination | 8. Evaluate |
| | 1.1. Determine needs for information and necessary results | 2.1. Definition and development of the methodology for collecting data and conducting survey | 3.1. Build data collection instrument | 4.1. Selection of final population/sample | 5.1. Integration of data collection | 6.1. Statistical analysis of results | 7.1. Design and production of dissemination products | 8.1. Gather evaluation inputs |
| | 1.2. Consult & confirm needs | 2.2. Defining a framework and methodology for the sample selection | 3.2. Build instruments for data collection | 4.2. Preparation of data collection | 5.2. Control, editing and data correction | 6.2. Quality control results | 7.2. Management of published disseminated products | 8.2. Conduct evaluation |
| | 1.3. Establish output objective, analysis and testing possibilities | 2.3. Development of methodology for data processing | 3.3. Configure workflows | 4.3. Primary data collection | 5.3. Imputation and weightening | 6.3. Detailed analysis and interpretation of data publishing | 7.3. Promote dissemination products | 8.3. Agree action plan |
| | | 5.4. Production of derived variables | 6.4. Protection of confidential data | 7.4. Manage user support | | | | |
| Generic Statis | tical Pr | ocess | 5.5. Calculating the aggregate | | | | | |
| Business Mod | el | | | | 5.6. Calculation of final data files | | | |
| | | 5.7. Production and updating registers | | | | | | |

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and database



Other systems for data collection, data processing, etc.





CROATIAN BUREAU OF STATISTICS

Thank you!

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