National Student Enrollment Registry
(Romanian Case)

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Specific Needs identified

• A real image of the human capital developed through higher education (number of participants and graduates, population enrolled in higher education, level and domain of study, performance and funding of educational programme)

• More centralized information to establish development strategies (integrating data on the number and the specialized students and graduates, by gender, year of study, regions and cities of residency, private and public universities etc.)

• Increased visibility of information on higher education (and more transparent correlation with the use of allocated public funds)

• Consistent data at central level (similar reports and statistics from different public institution with the same data)

• Reliable data regarding students’ enrollment and graduates (discouraging “diploma meal”, students’ financial status, students’ mobility and practice)

• Synthetic national indicators (for the assessment and traceability of potential workforce, represented by future graduates)
The objective expected for the national registry system

• An integrated system at national level *(that covers a set of relevant information of the current and future participants in Romanian higher education)*

• **Unique data transfer / reporting system** *(between universities and from universities to central institutions / public institutions)*

• Providing confidence in the accuracy and consistency of data

• Providing national and institutional statistics and reports *(for central/public institutions and universities)*

• Providing real-time information and results *(to the policy makers and other persons and institutions interested, related to their access level)*

• Interconnection and interoperability with other existing systems

• Generating the synthetic national indicators

• A practical and durable "product" that provide transparency and efficiency *(An important instrument for the management and quality assurance in higher education)*
Starting point

Development of the RMU system (National Student Enrollment Registry)

• within the project ”National Student Enrollment Registry”
  implemented by the Executive Agency for Higher Education, Research, Development and Innovation Funding
  co-funded through European Social Funds by POSDRU 2007-2013
• by system developer – Assosiation between S.C. CCT S.R.L. şi S.C. Indaco Systems S.R.L

Correlation with the Law of National Education: ”It is constituted the National Enrolment Registry of the universities from Romania - RMUR. The Enrolment Registries of the universities are becoming part of RMUR, ensuring a rigorous control of the university degrees.”
(Chapter X, 2nd Section, Art. 201, paragraph 1)
Steps in developing the RMU system

• Analysis of the current procedures of student enrollment  
  (aimed at establishing the optimal strategy for developing and implementing the integrated IT system, at national level)
  - at national institutional level (a questionnaire-based survey for 70 public and private universities)
  - at international level (The best practice examples at the international level - Clearing House, USA; HESA, UK; SIMS, Czech Republic)
  - at national central level (Interaction with the representative persons from Ministry of National Education and National Institute of Statistics and other central/public institution)

• Establishing a first set of data (to be used by the integrated IT system)

• Designing the architecture models and the functionalities

• RMU system development (under a contract with the software developer)

• Training of users and administrators of RMU system (training sessions for the experts of universities, IT specialists and chief secretaries, and of central level)

• RMU system installation and testing (at local level and central level of RMU)

• Extend the basic functions and the access to the registry
RMU’ s principal beneficiaries

- Policy makers from national and institutional level
- People in management, monitoring, evaluation and control positions in higher education from national or universities level
- Students, future students and graduates
- Public and private companies

Main Users

- University
  - university manager
  - university operators
  - student
- Central institutions
- Public user
- System Administrator
RMU’s Set of Data

The data collection process – through classified lists including:

- Personal data
- Data regarding the period of study
- Graduation data
- Previous tertiary education data
- Administrative data
- Secondary education data
RMU operation

Integrated RMU System

Local RMU Component
At university level

Taking over new versions
Taking over student data

Signaling errors at central level

Case I
Local RMU client application
Local RMU database

Case II
Local RMU client application
Direct operation with central level instance

Central RMU application

Central RMU component

Data export

Import data to local RMU application (XML format)

Export local data and nomenclatures (XML format)

The university’s own student data management application

Publish data in the Portal

Real-time replication

Local RMU database instance installed at central level

Central RMU data storage

RMU data base

RMU Portal

RMU Portal

Univ1

Univn

Real time RMU storage

Strategic projects
for Higher Education

National Student Enrollment Registry
Components of RMU system

- **Local component** (*RMU application for the university level*)
  - extracts the information from the local databases and provides a tool to correct and fill in the data, if necessary (for universities having their own information system)
  - introduce the students’ information (for the universities that do not have an information system)

- **Central component** (*central RMU application*)
  - receives the data from universities and collaborates with them for the data update
  - analyses the data at system level and provides full reports regarding the students enrolled in the Registry
Local Components of RMU

University

University Data Base

Direct input of student data

Import XML

RMU Local Server

Local Application

Export XML

RMU Central System

Students from the University Data Base

Generating XML file from the University Data Base

Direct input of student data in local application of RMU

Import of XML file in local application of RMU

Validation Report Builder

Data Correction

Export in RMU Central System

Export confirmation
Data Flow at university level

Local level

Local Level

Central Level

Export application
Data base
Existing information system
Intermediary XML file
User
Manual data input
Validations at university level
Internal procedures specificity
Local reports
Local data base
Storage and Query

Export data
Import

Preliminary validations

Periodic reporting
University users and operations allowed

At university level:
- Update data related to a student
- Transfer student from previous year
- Access previous year
- Open new academic year
- Delete previous academic year already imported to the central RMU server
- Import / Export data, including correction reporting conducted by the central RMU server
- Introduction schooling number for first year
- Set university
- Update nomenclatures
- User management
- Modify data related to a student

Restricted at university level:
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Central Components of RMU

RMU Central System

Portal Database

Central Data Storage

Business Intelligence

RMU Central Server
Web component of RMU (portal like)

„Gateway” to central data storage

• **Public section**
  • accessible to any user
  • *contains specific information organized in different categories*
  • *allows the download of particular documents/reports*
  • *access to the restricted section*

• **Restricted section**
  • accessible only to registered users (*based on an user account with username and password*)
  • *contains specific information for each type of users*
  • *type of users: students, universities, central/public institution*
Restricted sections

Student area
  • presents general information regarding the login student
  • allows students to: modify their data, to give permission to other (to see their data - institutions or employees; to use/import their data – universities)

University area – accounts: university manager, university operator
  • presents information of interest for the university and general data regarding the university (address, reported data)
  • allow users to search students, check the diplomas’ validity, send messages
  • create the account for other operators in the university

Administration area – allows the management and administration of the public and restricted sections
Topics in discussion…

1. Necessary steps to transform an electronic database (RMU) into a fully functional institution (RMUR).

2. Needs to fully implement the RMU system

3. Cooperation with other public institutions for the prospective implementation of the e-governance.

4. Possible future developments of the system’s functions.