

The role of national CRIS in the quality of higher education

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The current Act on the Quality Assurance in Higher Education and Science (Official Gazette 151/2022) entered into force in January 2023 governs the internal quality assurance mechanisms of higher education institutions and research institutes in Croatia. This legislation, introduced in the Croatian legal system in 2009, also established the Agency for Science and Higher Education (ASHE) as the designated quality assurance authority for science and higher education in the country. The Agency is responsible for conducting external evaluations of higher education institutions and public research institutes through various quality assessment methods, aligning with the European Standards and Guidelines. The Agency formulates quality standards that are based on and aligned with the *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG). Furthermore, the Agency is tasked with conducting initial accreditations and regular reaccreditations of higher education institutions and research institutes, which occur every five years.

The reaccreditation of higher education institutions and research institutes is an external quality evaluation procedure required for all public and private higher education institutions and research institutes. It involves analysis and assessment of the institution's quality, conducted by an appointed expert panel following defined quality standards, which are grouped into five key assessment areas:

- Institutional management and quality assurance
- Study and lifelong learning programmes
- Student-centred learning, teaching processes, and student support
- Teaching capacities and infrastructure
- Research, artistic, and professional activities

An essential step in the reaccreditation process is the institution's self-analysis, during which tabular reports are generated for each of the assessment areas.

CroRIS, the national Current Research Information System (CRIS) in the Republic of Croatia, provides comprehensive, accurate, and reliable information on all components of the science system in Croatia. CroRIS is owned by the Ministry of Science, Education and Youth (MSEY), and developed, maintained and implemented by the University Computing Centre (SRCE) and the Ruđer Bošković Institute. It functions as a fundamental resource for evidence-based decision-making concerning science and research activities in Croatia at all levels (institutional, university, national).

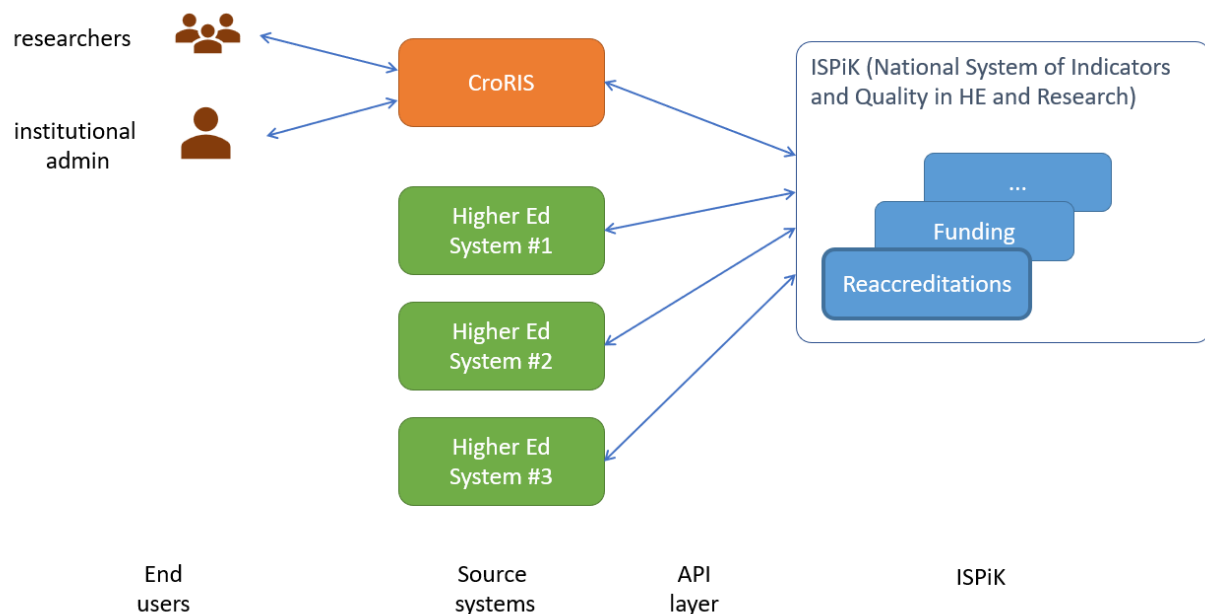
CroRIS comprises multiple modules that contain data on researchers, institutions, publications, projects, events, products, patents, equipment and its utilisation, services, and more. These modules store a significant part of the data required for the self-analysis phase of the reaccreditation process within the final two assessment areas. Specifically, ten reporting tables have been identified in the areas of

teaching capacities and infrastructure and Research, artistic, and professional activities, which can be generated in full or in part from data stored in CroRIS.

To support this process, an application within the CroRIS Reporting System that automatically generates these ten reports was developed. This development was prompted by the upcoming reaccreditation cycle scheduled to start in the autumn of 2024.

Access to these reports is granted to CroRIS administrators within the institutions. These reports are primarily intended for oversight at institutions undergoing reaccreditation.

The University Computing Centre (SRCE) is currently developing a new national information system for the Ministry of Science, Education and Youth, called ISPiK (*Information System of Indicators and Quality in Science and Higher Education*). This system will support different processes regarding quality assurance and financing of higher education and research in Croatia, the reaccreditation process being one of them. CroRIS is identified as a key data source for this process. The aforementioned tabular reports represent the output of CroRIS, which is propagated to ISPiK via REST API, along with relevant data from other sources.



Researchers are entering and maintaining the data about their scientific activity. The data is then checked and verified by the institutional editors of the respective modules. Every night, a data warehouse is generated from the transactional CroRIS system through an ETL (extract-transform-load) process, serving as the foundation for the CroRIS reporting system.

CroRIS administrators are responsible for reviewing and analysing the reporting tables. When discrepancies or incomplete data are identified, at their request the corrections and updates are made by the institutional editors. Thereby the overall quality of the reports is enhanced. This process establishes a two-way relationship between the data and the reports derived from it. On one hand, the data generates the reports; on the other, the reports contribute to the enhancement of data quality.

In response to requests from ISPiK, ten reporting tables relevant to the Institution self-analysis phase of the reaccreditation process are retrieved from CroRIS via a REST API. These tables are subsequently utilised in the evaluation process of higher education institutions. The input parameters for these requests include the institution's ID and the evaluation year corresponding to the reaccreditation cycle in question. This process facilitates the retrieval of data pertinent to both the current reaccreditation cycle and historical reaccreditation cycles for individual institutions within the ISPiK framework.