

Towards integration of research information: the SK CRIS system as part of research infrastructures

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SK CRIS – Integration of Research Information

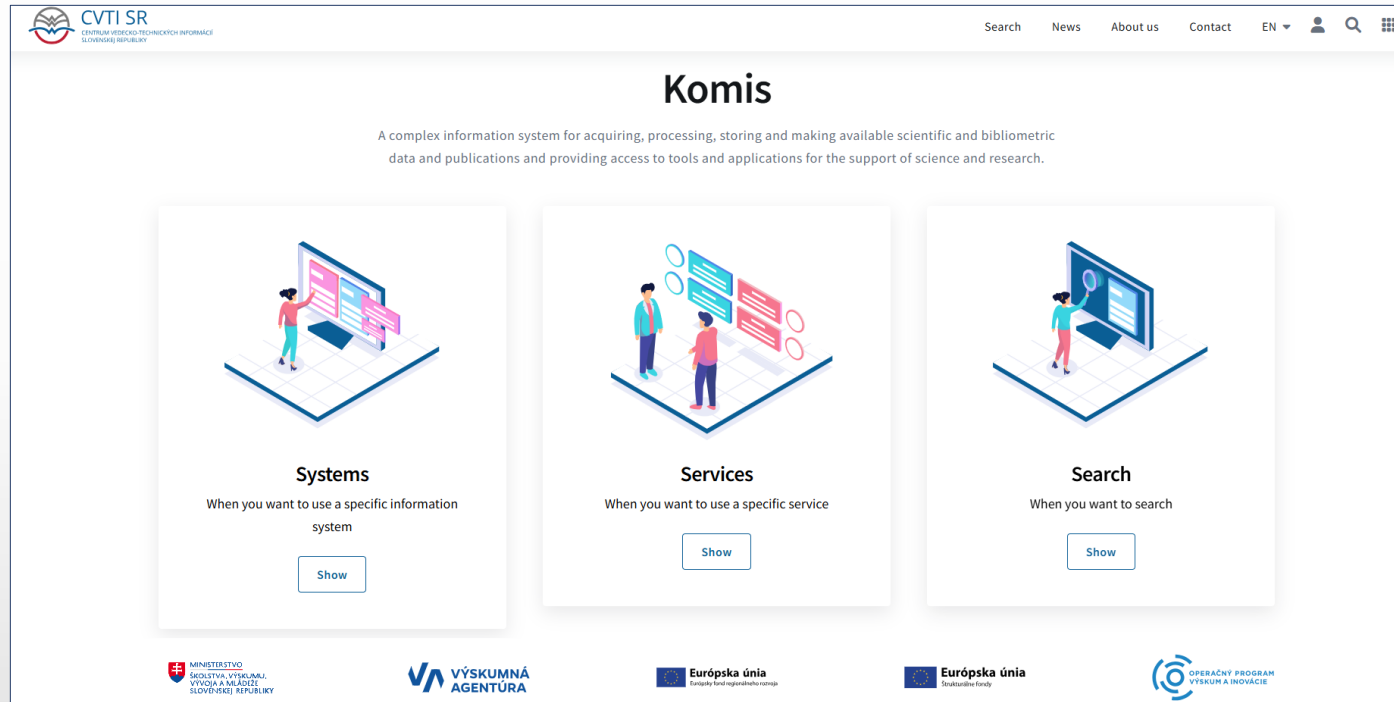


Three achievements: new SK CRIS, integrating solution KOMIS and SCSTI as EOSC Node.

The enabling conditions are:

- EU standards, CERIF
- Open Science and FAIR principles
- Implementation of unique identifiers
- Data management and metadata quality control
- Integration of various data sources into larger whole

KOMIS – Integrated system supporting science



The SK CRIS development was part of a larger project, within which SCSTI created a **Comprehensive Information System for Acquiring, Processing, Storing and Making Available Scientific and Bibliometric Data and Publications and Ensuring Access to Tools and Applications for Supporting Science and Research** (abbreviated KOMIS).

KOMIS - Modules

- Systems
- Services
- Search

The created national research infrastructure aggregates science support systems operated by SCSTI and makes available the services of the Data Centre for Research and Development (DC VaV).

KOMIS is currently in pilot operation and its beta version does not yet enable full operation of all functionalities.

KOMIS - Systems



The **CREPC** system serves to record and evaluate publication activity, prepare statistics for state subsidies to public universities, as a basis for accreditation of universities, periodic evaluation of research, development, artistic and other creative activities of universities, and introduce performance contracts for universities in Slovakia. It is fully integrated with **CREUC**.

The **CRZP** is a repository of electronic versions of final and qualification theses of higher education institutions in Slovakia. The role of ANTIPLAG in the register is to compare and verify final and qualification theses together with internet sources, detect plagiarism and collect protocols on originality control.

The **SK CRIS** contains a database on research projects carried out by Slovak organisations, their results, a map of research infrastructure, as well as a register of research and development organizations and a personnel database of researchers.

The **CIPVVI** is a web portal focused on state policy in the field of research and development. It serves to provide information on research and development: on programs, activities and results of projects in the field of science, research and innovation supported by public funds.

KOMIS - Services

The services includes storage capacity, data processing and the use of various installed software (Software as a Service - SaaS) mainly from the fields of mathematics, statistics and bioinformatics.

The screenshot displays the web interface of the Integrated System of Services of the Center for Scientific and Technical Information in SR (ISS CVTI SR). The header includes the organization's name, logo, and a search bar. A navigation bar at the top contains links for 'Domov', 'Aktuality', and 'Dokumenty'. A left sidebar menu lists categories such as 'O portáli', 'Poskytované služby' (with sub-items like 'Konzultačné a informačné služby', 'Služby ukladania a spracovania dát', 'Softvérové a odborné služby', and 'Zmeny poskytnutých služieb'), and 'Stránky služieb'. The main content area features a red warning message about user authentication, a description of the system's purpose, and a section titled 'Softvérové a odborné služby'. This section includes a table listing available software services.

Názov služby	Opis
Systém Consol	Kooperatívny analytický softvér určený na analýzu dát metódou konečných prvkov, na modelovanie a simulácie zložitých fyzikálnych dejov. Systém Consol pozostáva z viacerých licencovaných komponentov.
Systém MATLAB	Výpočtový systém určený pre vedecko-technické výpočty a simulácie najmä v oblasti vedy a výskumu.
Systém SPSS	Statistics Package for the Social Sciences (SPSS)

KOMIS - Search

The screenshot displays the KOMIS search interface. At the top, there is a header with the CVTI SR logo and navigation links: NOVÉ VYHLADÁVANIE, ZNAČKY, VYHLADAŤ ČASOPIS, and VYBRAŤ DOKUMENT. A search bar contains the query "sk cris" with a microphone icon and a search button. To the right of the search bar are links for POKROČILÉ VYHLADÁVANIE and NÁJST DATABÁZY. Below the search bar, a yellow banner provides a message: "Ak chcete získať kompletne výsledky a požiadať o dokumenty, prihláste sa" with links for Prihlásiť sa and ODMIETNUŤ.

The main content area shows search results for "sk cris". On the left, there is a sidebar with filters: "upraviť moje výsledky" (with a toggle for "Zobraziť aj články bez plného textu"), "zotriediť podľa" (with a dropdown for "relevancia"), "Dostupnosť" (with links for "Online zdroje (6)", "Otvorený prístup/Open access", and "Recenzované časopisy (5)"), "Typ zdroja" (with a link for "Články (5)"), "Dátum vydania/vytvorenia" (with a date range from 2011 to 2022 and a link for "Upresniť"), "Tematika" (with links for "Science & Technology (5)", "Technology (5)", "Computer Science (5)", and "Computer Science, Information Systems (4)"), and "E-zdroje" (with a link for "Current Research Information System (3)" and a link for "zobraziť viac").

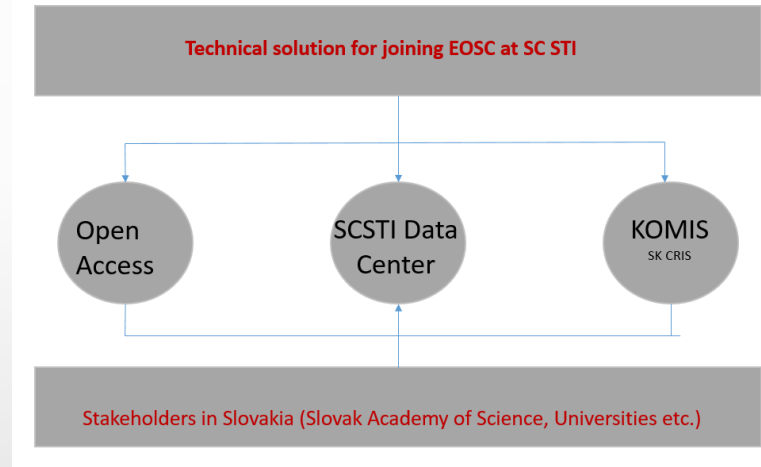
The search results are displayed in a list. The first result is an article titled "Map of Research Infrastructure as a tool of the Information System for Research, Development, and Innovation" by Zendulková, Danica; Gavurníková, Gabriela; Turňa, Ján, published in Procedia computer science, 2022, Vol.211, p.47-56. The second result is an article titled "Use of National and International Databases for Evaluation of International Project Award Potential of Slovak Research Organisations" by Shearman, Adriana; Zendulková, Danica, published in Procedia computer science, 2019, Vol.146, p.102-111. The third result is an article titled "The Assessment of Competence to Perform Research and Development by the SK CRIS: Research Organisation as an Object of Evaluation" by Danica, Zendulkova, published in Procedia computer science, 2017, Vol.106, p.196-203.

The KOMIS includes a module for searching available data and information sources.

Used Tool: Ex Libris Primo is a discovery search tool that enables you to search **most** of library's full text resources from a single search box.

EOSC at CVTI SR

The SCSTI, as the national EOSC coordinator for Slovakia, became part of the pilot consortium of European organizations that will participate in building the EOSC Federation's network of nodes.



The technical solution for joining the EOSC assumes the involvement of the KOMIS system, including the SK CRIS

SK CRIS – Latest development

- Implementation of the ID federation for researchers (ORCID, ResearcherID, SCOPUS ID, national identifier of the university teacher ID from the University employee register).
- Integration with the Register of legal entities (RPO) consists in use of PID for an organization at the national level (IČO). Integration with this register allows obtaining data on organizations into SK CRIS based on the IČO check. The "once is enough" principle is applied, the user does not have to enter data that already exists in the RPO.
- Expansion of registered data for research results with DOI and URL of the full text of the publication
- Technological upgrade, security, responsive design

SK CRIS – User interface

▼ Filter

Researcher

Organization

Enter organization's name ▼

Project name

Subject characteristics

Call ▼

Project duration from

From

01.01.2022

To

Project duration to

From

–

Clear filter

Filter

< Register of projects

SKCRIS > Register of projects

Report designer ↓

A B C D E F G H I J K L M N O P Q R S T U V X Y Z

Clear filter ×

Solution period from ×

01.01.2022 ×

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Project name ↓	Code
3D technology and machine learning methods for remote environmental monitoring and assessment of river health	APVV-23-0265
3H, 14C analyses of Red water samples, order I_O/4337	
3H, 14C and 180 analyses of Red water samples	3220003769
3Rs concepts to improve the quality of biomedical science (IMPROVE)	CA21139
6G eXperimental Research infrastructure to enable next-generation XR services	101096838
A Biomarker-Based Platform for Early Diagnosis of Chronic Liver Disease to Enable Personalized Therapy- LIVERAIM	101132901
A bipolar approach in mathematical models of decision-making processes	SK-SRB-23-0044

Extended user interface options for searching, addition of multi-criteria search, allowing simultaneous selection of multiple code list items and addition of combined search of basic objects (projects by organization and researcher). The function of Report designer allows parametrisation of report (columns, format, title etc.)

SK CRIS Outputs

During the operation of the system, central state administration bodies became familiar with the collected data and their structure. Regularly created outputs:

- Analysis of data on research projects and organizations on an annual basis as part of the government-approved document Report on the State of Science and Technology.
- Publication of additional statistical survey of research and development potential
- Analysis of the proportion of women within project teams on an annual basis and by individual scientific disciplines for the Gender Equality Plan document
- Other thematically focused output reports and analyses

SK CRIS – Next plans

- Legislative process
- Register of Research Organizations
- Register of Research Infrastructure
- Integration with national registers, researcher identification (Slovak register of natural persons)
- More widespread use of international identifiers (mainly) of researchers, than at present.



Thank you very much for your attention

<https://www.skcris.sk>

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TECHNICAL INFORMATION**