

Research infrastructure in Poland: evolution from dispersed data to e-service platform

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Historically, information regarding Poland's research infrastructure, which was funded by numerous projects and investment grants, was highly dispersed. This fragmentation, a common challenge when managing national research assets, made it difficult to obtain a comprehensive overview and carry out nationwide analyses. Without a holistic view, the effective allocation of public funds was difficult, and there was a risk of resource duplication and suboptimal utilisation. In response to this, the Ministry of Science and Higher Education and the National Information Processing Institute (OPI PIB) launched several initiatives to centralise and publicise data. These efforts are now converging towards strategic integration, with the aim of building a nationwide digital hub that supports innovation and maximises the return on investment in Polish science.

The process of collecting data on research infrastructure began in 2014 with the launch of the central POL-on system. This system collects mandatory data from all scientific and higher education institutions in Poland. The 'Investments' module specifically collects data on scientific and research equipment within its 22 modules. The OSF (Funding Stream Support) system is a primary source for this module, as it manages the application process for investment grants.

Initially, the data within the 'Investments' module of the POL-on system — collecting basic information such as the name, value and funding source of equipment — was not publicly available. It served as an internal tool for the Ministry of Science and Higher Education to supervise institutions and allocate funds. This limited its potential for broader use within the scientific community and by external partners.

A significant step towards transparency was taken in 2020 with the development of the RAD-on system (<https://radon.nauka.gov.pl/>). This platform made non-sensitive POL-on data publicly accessible for the first time, including the contents of the Investments module. For the first time, RAD-on allowed anyone to view the research equipment of

Polish scientific institutions and universities, marking a shift from internal administrative use to public information.

This evolution continued in 2026 with the launch of the new nationwide research infrastructure database (aparatura-badawcza.nauka.gov.pl). This platform is not just designed as a registry, but as a foundational component of a much larger strategic vision: increasing interoperability within all the services developed by the National Information Processing Institute. Its primary objective is to integrate with the 'Innovation Portal' currently under development as part of the 'Science 4 Business' project, combining the infrastructure database with a directory of research services. The goal is to transition from a passive directory of information to an active e-service platform. This will allow businesses and industries to order services, such as commissioned research and expert analyses, directly from the scientists operating the equipment, thus bridging the gap between science and the marketplace.

Conclusions

In Poland, integrated systems such as POL-on, RAD-on, OSF, play a pivotal role in advancing data-driven and evidence-based policymaking in higher education and science. The POL-on system serves as a comprehensive repository of data on scientific institutions, personnel, and activities, enabling central authorities to analyse trends and formulate evidence-based policies that optimize public expenditure. Complementing this, RAD-on provides open access to analytical reports and datasets, grounded in open government data (OGD) and FAIR principles, facilitating transparent, participatory decision-making in research funding and innovation strategies.

Data on research equipment has been collected in Poland for over a decade. Initially, the data was collected solely to meet the requirements of the Ministry of Science and Higher Education, but it was later made available to the public. However, simply making the data available does not solve the problem of facilitating access to research equipment. The next step is to attempt to build a portfolio of e-services that can be implemented on the existing infrastructure. This presents a significant challenge, primarily in organisational terms, as the owners of the equipment — namely, scientific institutions and universities — must implement the necessary legal and organisational solutions to provide these services.