



JINR Digital Ecosystem: project status and perspectives

Sergey Belov

Mesheryakov Laboratory of information Technologies

Joint Institute for Nuclear Research

belov@jinr.ru

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From the **Strategical plan** of the JINR's long term development for the period up to 2030 and further

- **Digital transformation**
 - Integration of **digital technologies** into all all aspects of **management activities**
 - Replacing traditional **processes of interaction** with the services with **digital** ones, minimizing the number of documents
 - Standardization of routine **approval processes**
- Creation of a single **information system** of the Institute
- Flexible management and control of **access to information**
- Employee **feedback system** with administrative and management structures

From the **7-years plan** of the JINR development for the years 2024 – 2030

- Creation of the JINR **Institute-wide digital platform** "JINR Digital Ecosystem".
- Organization of a **single digital space**
- **Integration of existing and prospective services** to support scientific, administrative and social activities, as well as support for engineering and IT infrastructures of the Institute.

Digitalization and digital transformation

- **Digitailzation:** integration of digital technologies into existing business processes.
- **Digital transformation:** rethinking the way employees work, business models, and operations. The search for new ways to create value and increase efficiency.

The path is determined by the goals of the process. Many researchers, under the digital transition for science, assume something in between digitalization and digital transformation.

The goals of creating a JINR Digital Ecosystem

- Improving the effectiveness of scientific activities
 - Infrastructure for access to resources – information, computing, administrative, organizational
 - Digitization of part of administrative, technical, and scientific processes
 - Support for making optimal scientific and managerial decisions based on data
- Development of the attractiveness of the institute as an international research center
 - Availability of scientific data and information, opportunities for knowledge exchange
 - The digital environment as a factor in attracting young people

Ecosystem, platform, services

- *Service* - a system that the supplier has provided to the consumer for use, or actions ("services") that the supplier performs in the interests or at the request of the consumer, or such a system and such actions ("services") together.
- *The platform* is an interaction model that allows consumers and suppliers to connect online to exchange products, services and information (digital services), including the provision of products/services/information. Implements a set of end-to-end technological solutions with the unification of interaction mechanisms and information security.
- A *digital ecosystem* is a network of interconnected digital technologies, platforms and services that interact with each other to create value for businesses and consumers. a seamless digital environment in which the company's own and partner services are presented

Fields of activity

- Development of a *policy* for working with users, scientific collaborations and structural units, creation of regulatory and technical documentation
- Creation, development and support of the *basic hardware and software infrastructure* (the core of the system)
- Development and integration of *application services*
- Ensuring the *safe sharing of reliable data* of various natures

The main groups of digital services

- Core services and infrastructure (MLIT)
 - Computing and network infrastructure
 - System infrastructure of the Ecosystem
- Services for end-users
 - Administrative (Department for the digital services development, MLIT)
 - Scientific (MLIT, laboratories, collaborations)



Services for end-users

- Digital JINR web portal — unified personal cabinet
- Administrative services
- Scientific services
- Analytics



Core services

- Data warehouse and access
- Notification system
- Monitoring
- Feedback



Infrastructure

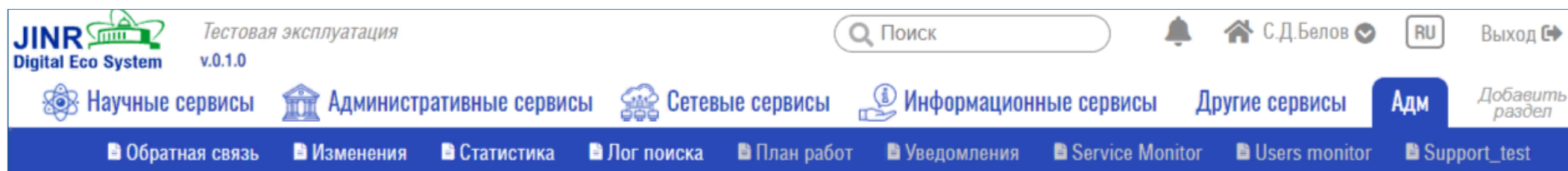
- Network services
- IT infrastructure automation
- Authentication
- Data bus and interaction
- Security

Platform and services (overview)

- **Digital infrastructure**
 - Authorization and access control, security
 - Data storage and access, data description and catalogs
 - Service interaction mechanisms (bus)
- **Core services**
 - Catalog and data warehouse, interaction of services
 - Expansion of the information security system
 - Automation of the OT infrastructure
 - Network services
- **Unified personal cabinet**
 - Seamless integration of services
 - Personal Data Showcase
 - Integration of notifications
 - Customizable catalog of services
 - Feedback
- **Additional services**
 - Database of scientific and technical documentation, database of publications
 - Universal Support Service (Service Desk)
 - Collaboration with documents, forms, surveys
 - Hosting as a service
 - Analytics as a service
- **Development instruments**
 - Administrative services (personnel, financial and business activities)
 - Technical planning and project support
 - Technology and Competence navigator, internal personnel reserve
 - Analysis of the digital footprint of scientific projects

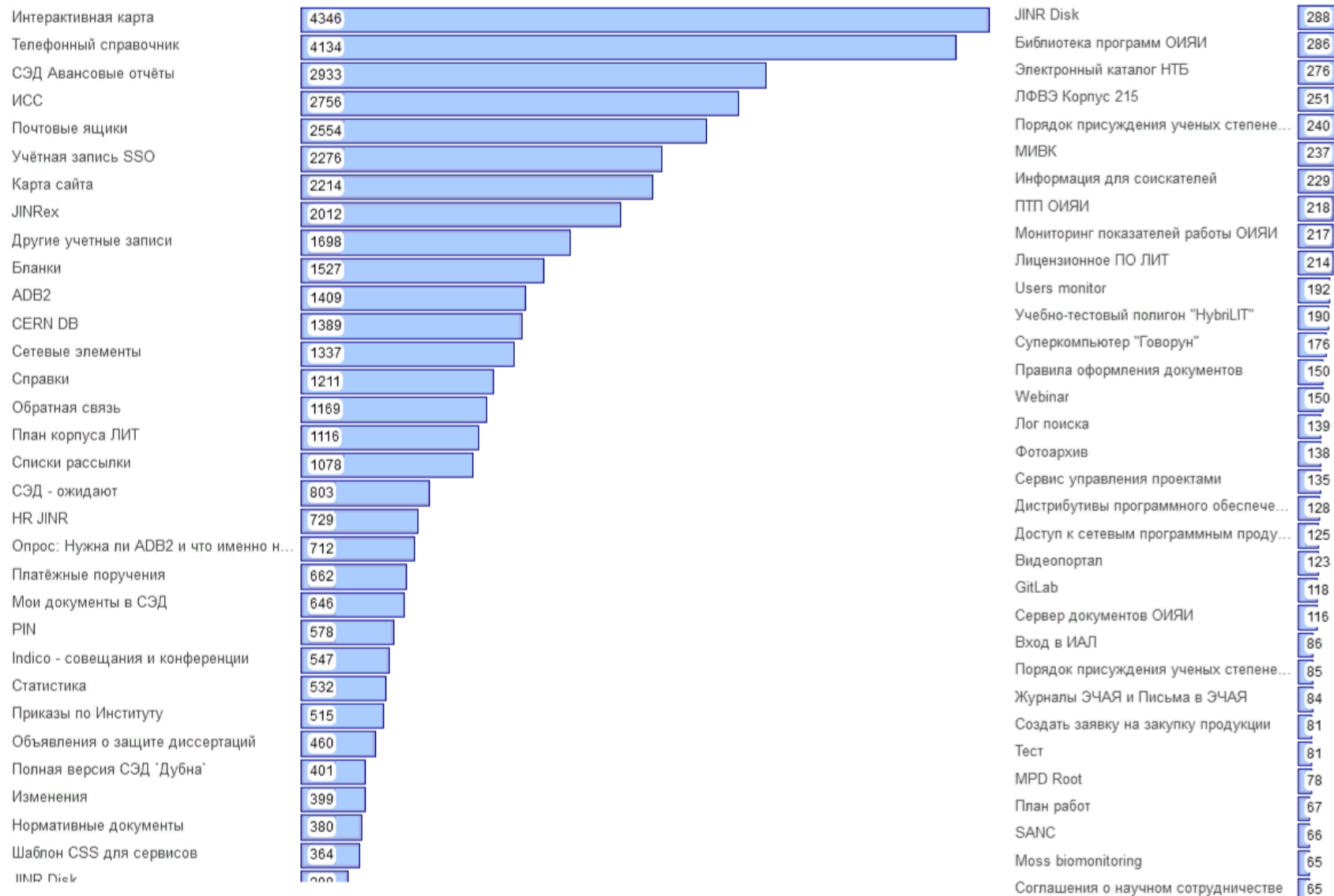
Main results of the last year

- The regulatory framework for the development of the CES has been developed
- 5 main groups of application and system services have been put into test operation
 - Single access point
 - End-to-end authorization



- Based on the results of the test operation, methodological recommendations for the inclusion of CES services have been prepared

Usage statistics of <https://digital.jinr.ru>



- 47 services
- 6 system and core services
- 22 services are included and are in development stage.
- 817 users passed the cybersecurity exam
- 198 feedback messages for the services and the system

Ongoing work

- Support for collaborations and research groups
 - Document databases, electronic work logs
 - User registration
- Working with publications
 - Institutional repository: content
- Electronic document management (EDS)
 - Purchases, approvals, new documents, advanced functionality, including for analysis
- Geographic information system: content
 - Engineering, social infrastructure, building plans and employee accommodation
- Software License Management
- System services
 - Management of network services, electronic certificates, management of roles and rights of users and services

Long-term plans

Basic services

- Catalog and data warehouse, interaction of services
- Expansion of the information security system
- Automation of the IT infrastructure

Additional services

- Collaboration with documents, voting, surveys
- Analytics as a service
- Universal Support Service (Service Desk)

Unified personal account

- Seamless integration of services and notifications
- Data storefronts – as an additional value for the user

Development tools

- Technical planning and project support
- Analysis of the digital footprint of scientific projects
- Technology and Competence navigator, internal personnel reserve

Preparing to transfer the functionality of outdated administrative services to the RCB

Interaction with laboratories and collaborations

Further successful development of the CES is possible only with the involvement of laboratories and collaborations.

To do this, it is necessary:

- To identify those **responsible for digitalization** in the departments in order to coordinate joint work
- Advance **planning** of needs
- The provision on **"external" users** of information and computing resources for JINR

Collaborations members are invited to register as an associate members of JINR personnel to have an access to the digital services

Thank you for your attention!