

# WROCLAW UNIVERSITY OF TECHNOLOGY KNOWLEDGE REPOSITORY – PROJECT OBJECTIVES

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## Abstract

Knowledge Repository is a project created in the Library and Scientific Information Centre of Wroclaw University of Technology (WrUT). Its main task will be collecting, sharing, and promoting scientific publications of researchers, postgraduates and students of WrUT. It will be also used for bibliometric analysis and reporting research output of WrUT scientific community. Knowledge Repository will closely cooperate with other databases and information services created in WrUT, for example: Research offer, Key equipment, Projects and Inventions. The repository will also be a solution supporting communication between researchers and a platform for cooperation between science and business, based on the formula of social media. This paper presents the idea of creating a repository and its operation within the information system of WrUT. It also describes the implementation of open access policy at WrUT.

**Keywords:** Open Access, Institutional Repository, Wroclaw University of Technology, Center for Scientific and Technical Information

Development of the Wroclaw University of Technology Knowledge Repository (WrUTKR) began in June 2013. At that time, the Main Library of Wroclaw University of Technology (WrUT) established a new department responsible for preparing a concept and functions of a modern Knowledge Repository, serving the entire University. In the forthcoming months, Library employees participated in conferences, seminars and trainings devoted to open access to research results. They were becoming familiarized with software used for developing repositories at other universities and academic centers. What was particularly valuable and relevant was a study-visit to CERN in Switzerland. Employees of the Main Library spent several days learning about INVENIO<sup>1</sup> software used at CERN to run a number of repository projects. Last but not least, they got to know essential and organizational matters regarding open repositories of scientific publications and research data.

On January 1st 2014, Wroclaw University of Technology established the Center for Scientific and Technical Information. It is a unit serving the whole WrUT. It performs scientific, research and service tasks. Center structure includes the Traditional and Electronic Library. Both libraries have been created as a result of transforming former Main Library. One of the key tasks of the new Center has been developing the Knowledge Repository. Repository tasks embrace collecting, archiving and disseminating publications, scientific dissertations, diploma theses, as well as scientific documentation, reports and raw research data<sup>2</sup>.

Wroclaw University of Technology Knowledge Repository is a project of an archive of scientific publications, scientific documentation, research data, scientific dissertations, as well as other documents and sources, created as a result of scientific experiments and other research and

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<sup>1</sup> About Invenio. (n.d.). Retrieved May 3, 2014, from <http://invenio-software.org/>

<sup>2</sup> Walek, A. (2014). Center for Scientific and Technical Information – Library Services for Business and Science at Wroclaw University of Technology. In *EKNOW 2014 : The Sixth International Conference on Information, Process, and Knowledge Management, March 23-27, 2014, Barcelona, Spain* (pp. 93-97). Wilmington, DE, USA: IARIA.

development work conducted at the University. Moreover, it is meant to be an innovative project.

WrUTKR will perform functions typical for an institutional repository such as collecting, archiving and exposing scientific output of Wrocław University of Technology employees. Furthermore, the Repository will have a number of additional functions, thus becoming a multifunction platform enabling contacts between representatives for science, business and economy.

Employees, PhD students and degree students conducting research will be able to deposit the results of their research work in the repository. The repository is going to be a platform for promoting their research as well as free, open exposure to wide group of interested recipients, in particular recipients from the area of Innovative Economy.

Exposing scientific publications in the Open Access model will result in an increase in the visibility of research conducted at Wrocław University of Technology. It will also have positive influence on the citation level of publications made accessible through the Knowledge Repository<sup>3</sup>.

In principle, the repository is meant to be a database, where users find information on research and projects ongoing at the university, and their final publications. Moreover, it shall provide users with research data necessary to verify research results, along with such information as e.g. laboratory and equipment name used for experiments.

Within the platform it is going to be possible to create researcher profiles and entrepreneur representative profiles. Such profiles shall facilitate finding experts and partners in particular areas (expert database and business partners database). The institutional repository of WrUT is going to be integrated with other systems and services provided and implemented at the University, such as bibliographic database of scientific input–DONA, information system on planned and underway projects, programs and grants where employees, PhD students and degree students of WrUT are involved, as well as information system on key equipment at the University<sup>4</sup>.

The repository project is also a response to European Commission requirements obliging grant recipients to make full text of the results of their research work available through a commonly available repository with no time or geographic limits.

The above requirements have been taken into consideration in the rules for participation in the Seventh Framework Programme (in such areas as: health protection, power sector, environment protection, information and communication technology, research infrastructure, social sciences and humanities, as well as social research). The above mentioned requirements are also present in the principles of Horizon 2020 Programme (making the research results accessible will be obligatory for all grants in all areas when receiving funding from Horizon 2020)<sup>5</sup>.

The European Commission states that access to scientific resources funded by the European Union, which is free-of-charge, shall facilitate the use of research results financed from the public funds. Moreover, it will cause an increase in the innovative capacity of Europe. The project of WrUTKR provides tools for beneficiaries in the EU framework programmes from Wrocław University of Technology. Secondly, it influences the prestige of the university as an institution, which takes into consideration and implements the European Union scientific policy requirements.

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<sup>3</sup> Wałek, A. (2014). Repozytorium Wiedzy Politechniki Wrocławskiej na potrzeby Innowacyjnej Gospodarki. Wizja i cele projektu. In D. Dudziak, M. Ziółek (Eds.), *IV Wrocławskie Spotkania Bibliotekarzy* (pp. 87). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved May 3, 2014, from <http://www.dbc.wroc.pl/dlibra/docmetadata?id=24643>

<sup>4</sup> Wałek, A. (2014). Repozytorium Wiedzy Politechniki Wrocławskiej na potrzeby Innowacyjnej Gospodarki. Wizja i cele projektu. In D. Dudziak, M. Ziółek (Eds.), *IV Wrocławskie Spotkania Bibliotekarzy* (pp. 87). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved May 3, 2014, from <http://www.dbc.wroc.pl/dlibra/docmetadata?id=24643>

<sup>5</sup> Spichtinger, D. (n.d.). Open Access in Horizon 2020 and the European Research Area. Retrieved March 2, 2014, from [http://www.scienceurope.org/uploads/GRC/Open Access/2\\_Daniel Spichtinger.pdf](http://www.scienceurope.org/uploads/GRC/Open%20Access/2_Daniel%20Spichtinger.pdf)



## Knowledge Commercialization and Technology Transfer

Within frames of the Center operate also the units dedicated for cooperation of science with the economy such as the Center for Scientific Cooperation with Economy. Its activity is focused on tasks supporting and initiating undertakings of all types in cooperation with representatives of business environment. The Center is running also a Contact Point for Technology Transfer. By creating a network of mutual relations with business and industry representatives it identifies individual needs of enterprises in innovation, enabling that way development of solutions facilitating functioning of mechanisms of knowledge commercialization and widely understood cooperation of the University with businesses.

The Repository is expected to become a platform for promoting scientific output of the University. Its role will also include supporting knowledge commercialization and technology transfer between the university and the economy through disseminating information on research and technologies developed at WrUT<sup>6</sup>.

## Openness of resources

According to project assumptions, all scientific publications written by the employees, PhD students and degree students of Wrocław University of Technology are going to be deposited in the Knowledge Repository. It is necessary to prepare and put into force appropriate legal regulations in this area in the form of new resolutions and recommendations of the Rector of Wrocław University of Technology (regarding the obligation to archive doctoral dissertations in the Knowledge Repository, among others). It is also vital to modify the existing resolutions and documents (e.g. *The Internal Resolution 18/2008 dated 28<sup>th</sup> March, 2008 regarding documenting and disseminating research results of the employees of Wrocław University of Technology*, as well as the *Principles for the use of intellectual property of Wrocław University of Technology*).

Both published and unpublished literary output is going to be archived in the Knowledge Repository. Works published both on paper, on electronic storage media as well as papers available online, e.g. articles published in e-journals are going to be registered, too.

The obligation to record scientific achievements in the Knowledge Repository is going to cover all PhD students and workers of Wrocław University of Technology employed full- or part-time, irrespective of WrUT being their first or subsequent employer, in case a publication is affiliated to the University. On request, the Knowledge Repository is going to provide opportunities to archive works of degree students, retired employees of the University, as well as other people willing to make their achievements accessible through the Knowledge Repository (e.g. employees of other scientific and research institutions, entrepreneur employees and local self-government units).

The Knowledge Repository is going to archive all works produced during employment period at Wrocław University of Technology and, in case of PhD students, during their doctoral studies and doctoral thesis. On request, works which had been produced before the employment period or doctoral studies shall be deposited as well.

All works archived in the Knowledge Repository are going to be exposed in an open way, based on the license granted by authors to the University. It will not apply to cases where authors submit a written request to block the access to some publications, due to some legal obstacles (e.g. no consent of the copyright owner, classified content or content for official or internal use only)<sup>7</sup>.

The authors will be able to declare a period after which (counting from the moment of depositing their work in the Repository) their paper is going to be made accessible to the public (instant exposure, after 1, 6 or 12 months from the moment of archiving their work in the Repository).

## Cooperation with DONA Scientific Output Information System

The Center for Scientific and Technical Information of Wrocław University of Technology collects and disseminates information on publishing output of the University employees with

<sup>6</sup> Walek, A. (2014). Center for Scientific and Technical Information – Library Services for Business and Science at Wrocław University of Technology. In *EKNOW 2014 : The Sixth International Conference on Information, Process, and Knowledge Management, March 23-27, 2014, Barcelona, Spain* (pp. 97). Wilmington, DE, USA: IARIA.

<sup>7</sup> Walek, A. (2014). Repozytorium Wiedzy Politechniki Wrocławskiej na potrzeby Innowacyjnej Gospodarki. Wzija i cele projektu. In D. Dudziak, M. Ziótek (Eds.), *IV Wrocławskie Spotkania Bibliotekarzy* (pp. 88-89). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved May 3, 2014, from <http://www.dbc.wroc.pl/dlibra/docmetadata?id=24643>



DONA database, managed by the Scientific Output Analysis Section. Scientific output information system has been present at Wrocław University of Technology since 1969. A computer system which facilitates entering data into the database in the digital form was developed at WrUT Library in 1972. Since then, University authorities have adopted a number of resolutions and regulations obliging authors and university units to timely document scientific work. They have also regulated the manner of submitting data to the library and the exposure principles. The first resolution, adopted in 1969, secured the flow of data to the library, which has become the basis for organizing and operating the scientific output information system. In 1992 the database was made accessible through the local university network. Since 1996 it has been commonly available in the Internet [8]<sup>8</sup>.

Documenting scientific output in DONA database is obligatory. Thus, it is a perfect source of information on the potential resources of the Knowledge Repository.

Bibliographic description, as well as information on full-text availability in digital resources, are generated by LinkSolver linking tool. They are going to be used to create publication records archived in the repository.

### Cooperation with Lower Silesian Digital Library

Current scientific publications have been made accessible via Lower Silesian Digital Library (DBC) since 2004. Among the collections exposed by Wrocław University of Technology one can find historic collections, items published by Wrocław University of Technology Publishing House, text books, readers, academic journals and dissertations. Dissertations and other publications of WrUT employees and PhD students are stored in Lower Silesian Digital Library on the basis of agreements and non-exclusive licenses. Authors are not obliged to store their works in DBC. They have the freedom to choose. As a result, the number of publications of WrUT Publishing House archived in DBC constitutes only several percent of total WrUT publishing products. Similarly, the number of dissertations which have been defended at the University within last several years and stored at DBC is insignificant<sup>9</sup>.

Wrocław University of Technology Knowledge Repository, to some extent, will take over part of the current tasks of DBC. Doctoral dissertations and works published by the University Publishing House are going to be stored in the repository. Publications, which have been archived in the digital library will not be moved to the repository. However, the metadata descriptions along with a link to full-text in DBC will to be found in the repository. The repository and the digital library are going to complement each other. In accordance with its definition, the digital library is going to collect electronic library resources, both digitized and submitted in the digital form, irrespective of author's background. The repository, on the other hand, is going to archive scientific output of Wrocław University of Technology<sup>10</sup>.

The project assumes developing a platform, which will provide comprehensive information on research conducted at the University, as well as underway projects and grants, and make the results accessible in the form of various electronic documents, multimedia and plain text documents.

To make it possible, it is necessary to work closely with particular units of the Center. What is more, it is vital to cooperate with other units of Wrocław University of Technology which deal with scientific research. The repository is not going to compete with the existing databases and projects for scientific research, research results or cooperation with the economy. It is going to complement them by providing full-text of documentation and scientific publications. The Center is going to start cooperating with such units as:

- Project Management Department

<sup>8</sup> Komperda A. (2008). Rozwój systemu dokumentowania prac naukowych na Politechnice Wrocławskiej. In H. Szarski, M. Kuziela (Eds.) *Wrocławskie Spotkania Bibliotekarzy Polonijnych* (pp.193-206). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved February 11, 2014, from <http://www.dbc.wroc.pl/dlibra/doccontent?id=2233&dirids=1>

<sup>9</sup> Walek A. (2011). Biblioteka cyfrowa jako typ otwartego repozytorium (na przykładzie Dolnośląskiej Biblioteki Cyfrowej). In M. M. Górski, M. Marcinek (Eds.), *Otwarte zasoby wiedzy – nowe zadania uczelni i bibliotek w rozwoju komunikacji naukowej. Materiały konferencyjne Kraków–Zakopane, 15–17 czerwca 2011* (pp. 125-137). Kraków. Retrieved April 10, 2014, from <http://eprints.rclis.org/17300/>

<sup>10</sup> Walek, A. (2014). Repozytorium Wiedzy Politechniki Wrocławskiej na potrzeby Innowacyjnej Gospodarki. Wizja i cele projektu. In D. Dudziak, M. Ziótek (Eds.), *IV Wrocławskie Spotkania Bibliotekarzy* (pp. 88-89). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved May 3, 2014, from <http://www.dbc.wroc.pl/dlibra/docmetadata?id=24643>

- Wrocław Center of Technology Transfer
- Scientific Periodicals Department
- The Publishing House
- The Museum of Wrocław University of Technology
- The Archive
- IT Department
- Wrocław Centre for Networking and Supercomputing
- Marketing and Promotion Department
- Information and Communication Department

as well as other scientific units, research centers of Wrocław University of Technology and other institutions from the city of Wrocław and Lower Silesia region<sup>11</sup>.

Apart from the features offered by the system, WrUT Knowledge Repository assumes creating a platform for cooperation between science, industry and business. Besides exposing and promoting research results stored in the repository, some additional activities are planned such as: workshops, trainings, conferences and meetings devoted to the principles of Open Access, copyright, publishing and research use. Moreover, there are going to be meetings organized with representatives of science and business under the Repository and in cooperation with other WrUT units or institutions.

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Spichtinger, D. (n.d.). Open Access in Horizon 2020 and the European Research Area. Retrieved from [http://www.scienceurope.org/uploads/GRC/Open Access/2 Daniel Spichtinger.pdf](http://www.scienceurope.org/uploads/GRC/Open%20Access/2_Daniel_Spichtinger.pdf)

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<sup>11</sup> Wałek, A. (2014). Repozytorium Wiedzy Politechniki Wrocławskiej na potrzeby Innowacyjnej Gospodarki. Wizja i cele projektu. In D. Dudziak, M. Ziótek (Eds.), *IV Wrocławskie Spotkania Bibliotekarzy* (pp. 88-89). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved May 3, 2014, from <http://www.dbc.wroc.pl/dlibra/docmetadata?id=24643>

