

# Towards an Integrated e-Infrastructure for Digital Humanities in Poland: Opportunities and Challenges

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# Challenges: e-Infrastructure for the Arts and Digital Humanities

<http://dariah.eu/activities/e-infrastructure.html>

„Among our main goals is the availability of infrastructure services for as many researchers in the A+H disciplines as possible (...). This includes e.g.

- local data stores for the trustworthy management of research data: large national data archives as well as smaller specialised collections,
- digital scholarly tools: infrastructure components as well as digital research environments and
- standards to ensure interoperability across different locations, different disciplines, different scholarly and cultural traditions as well as different languages.”

# Challenges: Data in the Arts and Digital Humanities

<http://dariah.eu/about.html>

„The **grand vision** for the Digital Research Infrastructure for the Arts and Humanities (**DARIAH**)

**is to facilitate**

long-term access to, and use of, all European Arts and Humanities (A+H) digital research data.”

# Challenges: e-Infrastructure for Digital Humanities in Poland

- Awareness:
  - beyond a direct mapping from existing communication forms
  - to digitally born expression
- Need for new legislative frames:
  - towards open models of communication and sharing
- Need for interdisciplinary collaboration

# New models in scholarly communication

- Openness as a manifestation of the removal of limitations and economic, political and administrative barriers
- Transparency as democracy driver
- Legal norms of the electronic communication age: changes down to fundamental paradigms
- New technologies for *born digital* content and other data resources

# Opportunities: Polish National Roadmap of the National Research Infrastructure, August 5, 2014

- **OSIRIS:** [Distributed, scalable e-infrastructure for data-driven open science](#)
- National research e-infrastructure coordinated by ICM
- Core: ICM's **OCEAN** competence center and integrated infrastructure for data science, processing and services:
  - Complete chain of e-infrastructure layers:
    - Storage and retrieval services
    - High Performance Data Analytics facility
    - Big data based HPC
- Integrating role of the competence centers:
  - operations
  - development of the technology and solutions
  - consulting, research and education



# OSIRIS: Opportunities

- **Academia:**

- ✓ Data science programs
- ✓ Open science models
- ✓ **Special focus: digital humanities and social sciences**
- ✓ Partnerships with public sector and industry

- **Non-academic partners:**

- ✓ government agencies, public administration
- ✓ business and industry
- ✓ NGOs
- ✓ .....



# Opportunities: Open Science

- Open Science: concept of early 2000s
- Open Access in Horizon 2020
- Polish and European Open Access Infrastructure - concertation
- The importance of openness of cultural heritage, scientific literature and data for digital humanities
- Beyond Open Access: digital humanities and new forms of scientific communication
- SYNAT project: INFONA e-infrastructure



# OCEAN center of competence: Opportunities

- ***Center for Data, their Analysis and Computational Modelling***
- Core component of the OSIRIS roadmap research infrastructure:
  - ✓ Research: INFONA integrated platform
  - ✓ Government: CRIP public data platform
- High Performance data analytics:
  - ✓ large-scale data-sets
  - ✓ time-critical dependable services
  - ✓ development of specialized solutions and infrastructure for big-data analytics



# Open Science: attributes

- ❑ Openness and transparency of scholarly communication system (publications and all other documentation forms)
- ❑ Openness and re-use possibility for research data
- ❑ Internet-based facilitation mechanisms for research collaboration
- ❑ Research publicly funded ↔ knowledge representing common public good (ref.: Joseph Stiglitz)

# EU Opportunities: OpenAIRE2020

- Open and sustainable scholarly communication infrastructure:
  - responsible for the overall management, analysis, manipulation, provision, monitoring and cross-linking of all research outcomes (publications, related datasets, software and services) across existing, planned and future repositories
- Promoting the discoverability and reuse of data-driven research results, across scientific disciplines and thematic domains
- Implementation: Horizon 2020, [www.openaire.eu](http://www.openaire.eu)
- ICM – one of principal technology partners



# Europe: 2020 Digital Agenda

17/7/2012: Recommendation of the European Commission on access to the content and research data – breakthrough

Horizon 2020: obligatory open mandate for publications

Tests and demonstrators: open research data

ALERT: the very concept of research data

## ZALECENIE KOMISJI

z dnia 17 lipca 2012 r.

w sprawie dostępu do informacji naukowej oraz jej ochrony

(2012/417/UE)

NINIEJSZYM ZALECA, ABY PAŃSTWA CZŁONKOWSKIE:

### Otwarty dostęp do publikacji naukowych

1. określiły jasne strategie rozpowszechniania i otwartego dostępu do publikacji naukowych, które powstają w wyniku badań finansowanych ze środków publicznych. Strategie te powinny uwzględniać:

- konkretne cele i wskaźniki osiągniętych postępów,
- plany wdrażania, w tym podział kompetencji,
- odpowiednie plany finansowania.

# Repositories: Challenges

- Consolidation of the role of institutional repositories in scholarly communication (the challenge of **green** Open Access)
- Shaping common vision for resource visibility, positioning, interoperability and development trends of the repositorial e-infrastructure worldwide
- Setting up and sharing common standards on open data

# New e-infrastructures for research: impact

## Large research infrastructures:

- ❑ International programs(ESFRI, ESA, FP UE)
- ❑ National level (US, GB, Germany, ... , Poland)

## Revolution of the e-infrastructures:

- ❑ Transformation of the entire scholarly communication system
- ❑ New range of non-institutionalized collaborations facilitated
- ❑ **Technology: paradigms revolution for computing and data processing**

# Center for Open Science (CeON) Repository

- [otwartanauka.pl](http://otwartanauka.pl)
- Simple and fast Open Access publishing facilitated
- To date nearly **3300 authors** who provided Open Access to over 4.5K publications, among others:
  - **3.4K+ papers,**
  - **nearly 700 books.**
- Effects: higher visibility, easier retrieval, more readers and citations



The screenshot shows the homepage of the CeON Repository. At the top, there is a blue header with the CeON logo and the word 'REPOZYTORIUM' in large white letters. Below the header, the text 'Strona główna repozytorium' is visible. The main content area is titled 'Repozytorium Centrum Otwartej Nauki' and includes a welcome message in Polish. There are sections for 'Kolekcje w repozytorium' (Collections in the repository) and 'Zbiory w repozytorium' (Sets in the repository), each with a list of categories. On the right side, there is a search bar with the text 'Szukaj w repozytorium' and a magnifying glass icon. Below the search bar, there are links for 'Szukanie zaawansowane' (Advanced search), 'Przełączaj' (Switch), 'Moje konto' (My account), and 'Statystyki' (Statistics). The 'Przełączaj' section lists various filters like 'Zbiory i kolekcje', 'Daty wydania', 'Autorzy', 'Tytuły', 'Tematy', and 'Afilacje'. The 'Moje konto' section has links for 'Zaloguj' (Log in) and 'Zarejestruj' (Register). The 'Statystyki' section is currently empty.



# Legal Assistant of the Open Science Platform

- Interactive toolset
- Structured to authors, publishers, research institutions and research funding agencies
- Supply of individually tuned recommendations for users

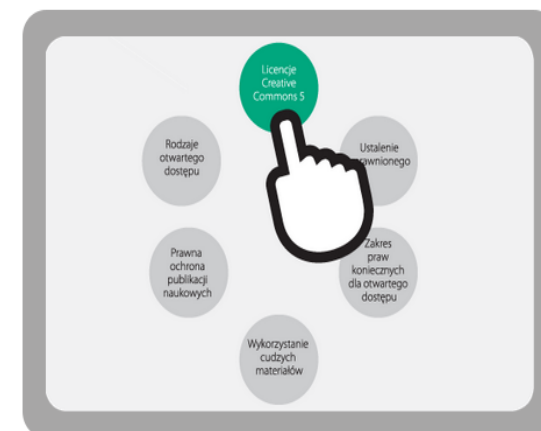
Start

## POMOCNIK **PRAWNY**

### Jak to działa

Pomocnik Prawny [Platformy Otwartej Nauki](#) umożliwia łatwe uzyskanie podstawowej wiedzy o prawnych aspektach otwartego dostępu, przydatnej dla autorów, wydawców, jednostek naukowych oraz instytucji finansujących badania.

Pomocnik ułatwia usuwanie ograniczeń prawnych stojących na drodze do udostępniania publikacji naukowych w sposób otwarty.



Wybierz tematy, które są dla Ciebie interesujące



# Open Science in Poland: Challenges

- Coherent common vision of the openness model, supported by enabling e-infrastructures
- Active involvement of the academic community fostering open solutions and standards
- Convincing funding bodies and agencies that openness stimulates better research funds use

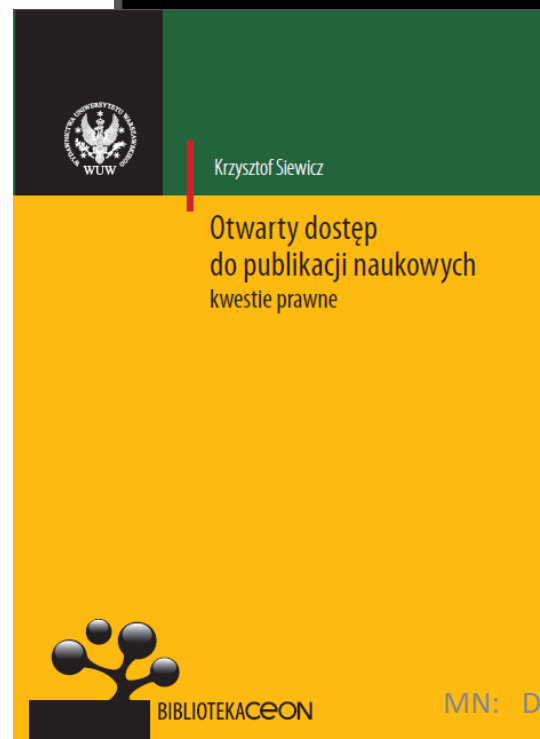
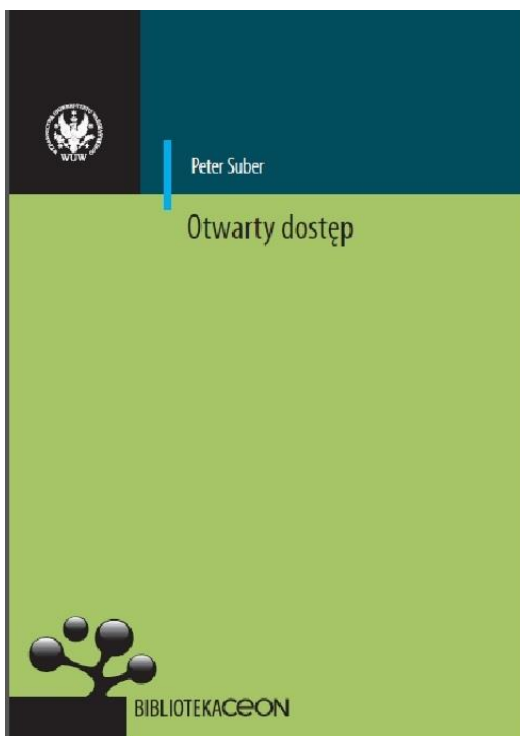
# Recent references from ICM:

## Otwarta nauka w Polsce 2014

Diagnoza

Bo-Christer Björk, Wojtek Sylwestrzak, Jakub Szprot

Analysis of Economic Issues Related to Open Access to Scientific Publications



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