



D02.2 – ARQUS PARTNERING PLATFORM

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INTRODUCTION

The **Arqus Partnering Platform**, a central feature of the Arqus Plaza, is designed to foster collaboration and innovation by bringing together calls, expertise, facilities, ideas, people, and consortia. This interactive web environment aims to enable internal and external groups to connect on an activity-related basis, promoting targeted partnerships, multidisciplinary and international cooperation. By focusing on facilitating connections between diverse stakeholders, the Partnering Platform plays a crucial role in driving engagement across various sectors. The following outlines the key features the Partnering Platform should contain.

KEY FEATURES

1. Partnering Platform

- a. The Platform is centered around the concept of partnership and collaboration. It allows users to create profiles tailored to their specific roles, expertise, and collaborative interests, enabling targeted connections.

2. Profile Creation and Management

- a. Users can create personalized profiles that detail their roles (e.g. PhD student, researcher, external stakeholder), areas of expertise, and specific interests. Group profiles are also available for institutions such as departments, faculties, or research groups.
- b. Profile types: individual profiles vary based on roles, such as students, teachers, researchers, administrative staff, alumni and external stakeholders. Group profiles for faculties, departments, or research groups will emphasize the collective expertise and infrastructure offered.

3. Research and Collaboration Opportunities

- a. Users can indicate their openness to joint projects, PhD collaborations, postdoc positions, or internships. Profiles will also showcase fields of research and potential scientific partnerships, facilitating collaboration across disciplines.
- b. For those conducting research, the system supports sharing information about ongoing projects and infrastructure availability, offering an ideal environment for matchmaking between users looking for or offering resources.

4. Teaching and Educational Opportunities:

- a. Profiles may also include a teaching section, where users can outline their teaching activities, express interest in joint programs, and indicate readiness to participate in Erasmus+ teaching exchanges or blended intensive programs (BIPs).

5. Interactive Features:

- a. A forum will be available for sharing announcements, discussing calls, and exchanging project ideas. Each user will have the ability to post, comment, and discuss within the community.

- b. The platform will include a search engine tailored to the needs of its users, allowing searches across profiles, calls, projects, and collaboration opportunities, ensuring users can efficiently connect with relevant partners. For instance, the partnering platform should allow searches for scientific area, keywords, names, university.

6. Resource Sharing and Communication:

- a. The platform enables users to share links to external resources such as files, documents, websites, and calls for participation in various activities, further enhancing connectivity and collaboration.

EXAMPLES

The **Personal Profile** section on the Arqus Plaza will allow users to showcase their roles, expertise, and interests in various fields. Key options include:

Personal Profile						
Open to collaboration in the field of:						
<ul style="list-style-type: none"> ● <i>Climate Change & Sustainability</i> ● <i>European Identity & Heritage</i> ● <i>AI & Digital Transformation</i> ● ... 						
Researcher/ Scientist	Teacher	Student	PhD	External Stakeholder	Admin Staff	Group Profile of Faculty/ Department/ Research Group...
Short bio						
Affiliation						
Contact details/ email address						
Field of expertise in Keywords						

The **Research Profile** section on the Arqus Plaza will focus on facilitating research collaborations by offering the following options:

Research Profile
Conducting Research in the Field
Looking for Scientific Collaboration in the Field

Open to Joint Scientific Projects
I will share the infrastructure
Looking for the infrastructure
Looking for Joint PhD
Looking for Post-Doc Positions
Offering Post-Doc Positions
Offering Scientific Internships
Looking for Scientific Internship

The **Teaching Profile** section on the Arqus Plaza will help educators outline their teaching roles and collaboration opportunities with the following options:

Teaching Profile
My Teaching Activities
Ready for New teaching Activities
Would like to join Erasmus+ Teaching
Ready to be involved in Joint Programs
Organizing a BIP (Blended Intensive Program)
Looking for Collaboration for BIP
Organizing Microcredentials
Looking for Collaboration for Microcredentials

The platform will also include additional features to support external engagement and resource sharing:

- **External Stakeholders:** A dedicated space for external partners to connect and collaborate with internal users.
- **Erasmus+ Training:** Opportunities to participate in or organize Erasmus+ training programs.
- **Resource Sharing:** A space to upload and share files, documents, and calls, as well as links to relevant external sources, enhancing communication and collaboration.

USER JOURNEY & USE CASES

The **Arqus Partnering Platform** enables various users—such as PhD students, researchers, faculty, and external stakeholders—to interact in meaningful ways by leveraging its features for collaboration and resource-sharing. Below are examples illustrating how different users might engage with the platform:

1. PhD Student Seeking Collaboration:

A PhD student researching a specific area creates a detailed personal profile, highlighting their field of study and collaboration needs. By using the platform's search capabilities, they identify a researcher working on a related project at another institution. They establish a connection, exchange research insights, and agree to collaborate on a joint project. This partnership evolves into further cooperation through participation in a Blended Intensive Program (BIP) or Erasmus+ exchange.

2. Researcher Looking for a Joint PhD Opportunity:

A researcher with expertise in AI and digital transformation creates a research profile and signals their openness to joint PhD collaborations. The platform facilitates a connection with a department that offers the necessary infrastructure and expertise in a complementary field. Together, they develop a joint PhD program, which attracts students from multiple institutions, providing shared research opportunities and supervision.

3. External Stakeholder Interested in Erasmus+ Collaboration:

An external stakeholder, such as a representative from an NGO or private company, creates a profile to explore collaboration opportunities. By connecting with university faculties via the platform, they engage in organizing a Blended Intensive Program (BIP) on a topic aligned with their organization's mission. This collaboration enriches the program by integrating real-world perspectives into academic learning.

4. Faculty Organizing a Microcredentials Program:

A faculty group planning a microcredentials program uses the Partnering Platform to share program details and calls for participation. Through the platform's resource-sharing and communication tools, they connect with external partners or other academic institutions interested in co-developing or supporting the program, ultimately expanding its reach and impact.

These use cases demonstrate the versatility of the Arqus Partnering Platform in fostering collaboration, facilitating joint projects, and enhancing knowledge exchange across academic and professional sectors.

CONCLUSION

In conclusion, the **Arqus Partnering Platform**, a core component of the Arqus Plaza, is specifically designed to foster collaboration and innovation by enabling users to connect on an activity-related basis. With its focus on partnership, the platform allows for customizable profiles, research and teaching collaborations, and interactive features that enhance connectivity between both internal and external stakeholders. By centering on the Partnering Platform's ability to bring together expertise, resources, and ideas, it serves as a key tool for promoting multidisciplinary cooperation across diverse fields and sectors.

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TECHNICAL ANNEX

Plaza and Partnering Platform Application overview

The application serves as a communication and exchange hub for academic, research and community-related data and activity, primarily focusing on facilitating collaboration between universities, researchers and any member of Arqus community.

The whole Digital Arqus (Plaza) architecture is designed to deliver different, specialized web services, while sharing some basic components. Thus it is a **modular web application**. It is built on the Django framework and PostgreSQL database. All components are being hosted on University of Wrocław IT infrastructure, with secured data access and secure dual back-up systems.

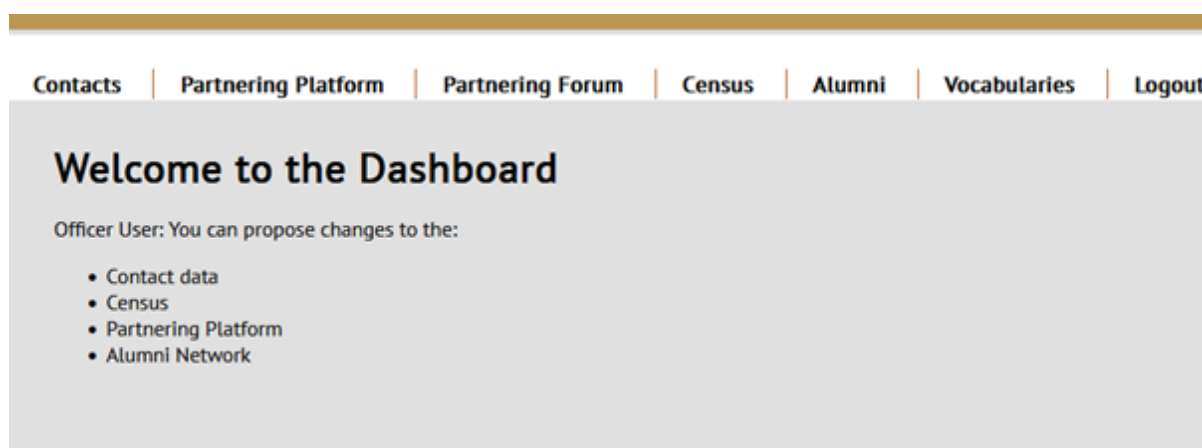


Figure 1. print screen of landing page for logged-in privileged officer user

The application components consists of few web apps, each managing distinct aspects of user data, academic partnerships, and collaborative research efforts. The application provides following key functionalities:

1. Plaza, the heart of Arqus web apps – handling basic identification and contact data, handling controlled vocabularies :

- **User Management (implemented according CRUD paradigm):** Stores and manages details of university-affiliated individuals such as first name, surname, email, and associated institutions.
- **Affiliation Data:** Users are aligned to universities and departments, with fields capturing faculty, institute, unit, and roles within the university.
- **Filtering and Search:** Provides filtering and search functionalities to locate individuals by their roles or affiliations within a university.
- **User Access Control:** Access to administrative actions (e.g., editing or deleting contact or partner data) is restricted to users who belong to specific groups (e.g., “Officer”), ensuring that only authorized personnel can modify data.
- However, full managing access of individual records is also granted to individual users. A temporary link, with temporary upgraded privileges, is automatically generated and send to a provided e-mail.



Given e-mail is verified with specific user e-mail in contact database and only if there is a match, temporary link is generated and temporary editing/deleting access is granted.

Contacts | Partnering Platform | Partnering Forum | Census | Alumni | Vocabularies | Logout

Admin panel for managing Plaza Contacts

First Name	Last Name	e-mail [work]	title	university	faculty	institute	unit	Role in Uni	User type	Actions
Justyna	X	justyna.x@arqus.org	Dr.	UGr	Faculty of Law, Administration and Economy	None	Zakład Ekonomii Innowacji i Rozwoju	researcher	Partnering	Edit Delete
Aleksandra	X	oaLx@arqus.org	Dr.	UWr	Faculty of History and Pedagogical	None	Zakład Historii Gospodarczej	researcher	Partnering Alumni	Edit Delete

Figure 2. list of contacts - basic data of registered users

Filling new user record or editing existing user record, the officer user may check membership alignment:

Census Member:

Partnering:

Alumni:

[Back to list](#)

Figure 3. indicating membership of a user

Each indication will take you to the next data form, gathering information on the selected profile section, one of which is the Partnering Platform, described in the next section.

2. Partnering Platform (Partnering App)

- **Partnership Data Management** - managing partnership data between researchers, universities, and research fields.
- Each **partner** record is associated with a **contact** and includes details about research interests, keywords, areas of expertise (e.g., **Arts, Humanities, Life Sciences, and Physical Sciences**), and digital identifiers like ORCID and Google Scholar links.
- **Partner Areas of Expertise:**
 - Partners can provide descriptive summary of their expertise as well as provide Keywords facilitating cross-search functionality.
 - Partners can specify their areas of research using the categories: **Arts, Life Sciences, and Physical Sciences and Engineering.**

- Expertise is displayed in a visually structured format, showing relevant fields for each partner.
- **University Affiliation:**
 - Each partner is associated with a university (using the contacts app's data).
- **Search and Filter:**
 - Full-text search capabilities are available for filtering partners based on their university affiliation, research interests, keywords, and areas of expertise.
- **Partner Management:**
 - Allows for creating, updating, and deleting partner records. This includes managing only the **partnering-specific** data without affecting the underlying contact information.
 - There are safeguards implemented to ensure that deleting a partner record does not inadvertently delete related contact data, as the same person may share few roles within Arqus alliance structures.
- **Detail View & Navigation:**
 - The platform allows users to navigate through individual partner records, viewing detailed information about their research interests, affiliations, and contact information.
- **Collaboration forum:**
 - place for users to indicate availability / searching for collaboration within given areas: Research / Project / Facility sharing. Any other category is easy to be implemented.
 - Full-text search capabilities are available for filtering posts based on their category, subject, cooperation type. Provide full-text search capabilities.

The screenshot shows a web interface with a navigation bar at the top containing links for Contacts, Partnering Platform, Partnering Forum, Census, Alumni, Vocabularies, and Logout. Below the navigation bar is the 'Partners List' section. It features search filters for University, Interests, Keywords, and Areas of Expertise, each with a corresponding search input field. A 'Search' button is located below the filters. Below the search filters, the text 'Available partners:' is followed by a table with the following data:

Person	University	Interests	Actions
Piotr Malak, Dr.	UWr - Uniwersytet Wrocławski	GenAI, IR, NLP, ML, IA	View Details Edit Delete
Justyna X, Dr.	Lyon1 - Université Claude Bernard Lyon 1	My research interests include the sharing and subscription economy, alternative business financing, and the impact of modern technology on marketing and strategic business decision-making. I have been successfully teaching Decision-making in Business and Administration, Marketing Management, Strategic Management, and Subscription Economy (BBA, MME program) in English for several years. For the past two years, I have served as a seminar supervisor.	View Details Edit Delete
	UWr -	My research focuses mainly on the Issues related to party fights in the Polish-Lithuanian Commonwealth,	View

Figure 4. list of available partners with search functionalities

data

Aleksandra X, Dr.

University: UWr

Faculty: Faculty of History and Pedagogical Sciences

Institute: None

Unit: Zakład Historii Gospodarczej

Role in Uni.:

Unit Role:

Email: oa1.x@arqus.org

Research Interests: My research focuses mainly on the issues related to party fights in the Polish-Lithuanian Commonwealth, political attitudes of nobility, history of travels of Polish and Lithuanian elites, as well as on the activities of English envoys in the Republic of Poland in the 17th century. My research is also related to witch hunts in the Grand Duchy of Lithuania in the 17th century.

Keywords: party fights in the Polish-Lithuanian Commonwealth, political attitudes of nobility, history of travels of Polish and Lithuanian elites, as well as on the activities of English envoys in the Republic of Poland in the 17th century

Profile URL: <https://wroc.academia.edu/AleksandraX>

ORCID: Not provided

Google Scholar: Not provided

Areas of Expertise:

1. Arts, Humanities and Social Sciences

Figure 5. Individual partner record example

Forum Categories

Browse posts from a category, or [create New Post](#)

- [research collaboration](#)
- [project collaboration](#)
- [facility sharing](#)

Figure 6. Entering page of Partnering Forum

System Architecture:

1. Modular Architecture:

- **Monolithic Core:** The project runs as a unified application where all components (plaza, partnering, alumni, census) are tightly integrated under a single Django project.
- **Modular Apps:** The project is logically divided into apps (plaza, partnering, alumni, census), each representing different functional areas. This modular structure makes the codebase easier to maintain and scale.
- **Shared Database:** All apps use the same database, with foreign key relationships between models such as e.g. **contact** and **partners**. This allows seamless integration of partner and contact data. Each distinct category of data is stored in individual, independent table. Data management is available only to privileged users, via web interfaces, with security options in the back-end.
- **Object-Relational Model (ORM):** allows developers to interact with databases using Python code, abstracting away SQL queries by mapping database tables to Python classes. It enables efficient querying, creation, updating, and deletion of records while maintaining a clean and readable syntax through the use of models and queriesets. ORM provides security advantages by mitigating the risk of SQL injection attacks reducing the likelihood of malicious SQL code being executed against the database.

2. Database Models:

- **Contact Model:** Stores personal and professional information for university-affiliated individuals.
- **Partners Model:** Extends the contact model, capturing data specific to research partnerships, including areas of expertise, keywords, and external profiles like ORCID.
- **Relations:** The **partners** model is connected to the **contact** model through a foreign key, ensuring that each partner record has an associated contact profile.

3. Views and Forms:

- **Django Forms:** Partner-related forms leverage Django's form handling for creating, editing, and deleting partner data.
- **Session Management:** The Partnering Platform uses Django sessions to temporarily store data (like contact IDs) for use when adding or editing records.

4. Templates and Front-End:

- **Dynamic Data Rendering:** Templates are used to display detailed partner information in a clear, structured format, with areas of expertise, interests, and affiliations highlighted.

Key Features of the Partnering Platform:

1. **Dynamic Partner Data:**
 - Displaying comprehensive information about each partner, including name, university affiliation, areas of expertise, and research interests.
2. **CRUD Operations:**
 - Full control over partner data, allowing users to create, read, update, and delete records as necessary.
 - Partner deletion is done carefully to avoid deleting related contact information.
3. **Search & Filtering:**
 - Advanced search options allow users to filter partners by university, interests, keywords, or specific areas of expertise (e.g., Arts, Life Sciences).
4. **User Access Control:**
 - Admin-like capabilities (editing/deleting) are restricted to specific user groups, ensuring data security and integrity.
5. **Pagination & Navigation:**
 - Efficient handling of large data sets through pagination, enabling users to browse records smoothly.
6. **Integration with External Profiles:**
 - Direct links to partners' ORCID and Google Scholar profiles to facilitate networking and collaboration.

Personal Data Protection in the Partnering Platform:

The **Partnering Platform** offers several layers of personal data protection to ensure that sensitive information is managed securely and in compliance with data privacy regulations (e.g., GDPR):

1. **Access Control and User Authentication:**
 - Only authenticated users can access the platform. User roles, such as "Officer," are enforced through **group-based permissions**, restricting sensitive actions like editing or deleting records to authorized personnel.
2. **Role-Based Data Access:**
 - Different users have varying levels of access to personal data, with administrative features (such as modifying partner details) limited to specific user roles. Regular users can only view data necessary for their tasks, protecting the rest of the information from unauthorized access.
3. **Data Minimization:**
 - Only necessary personal data is collected and displayed, such as names, affiliations, research interests, and contact details. Fields that aren't essential to the core functionality, like ORCID or Google Scholar links, are optional, ensuring compliance with **data minimization** principles.
4. **Encrypted Data Transmission:**
 - The platform supports **SSL/TLS encryption** to ensure that all data transmitted between the server and clients is encrypted, protecting against eavesdropping and man-in-the-middle attacks.
5. **Secure Data Deletion:**
 - When a partnering record is deleted, the process is handled carefully to avoid unintentional removal of personal contact data, ensuring that essential records remain intact while the partnering data is securely erased.

6. Session Management:

- Sensitive information, such as contact IDs used in session-based workflows, is stored temporarily and managed securely, ensuring that data is not exposed to unauthorized access during session transfers.

These measures help ensure that personal data within the Partnering Platform is protected at all stages of data handling, from collection and storage to access and deletion, in line with best practices for privacy and security.

SUMMARY

The **Partnering Platform** within the **Arqus_app** project serves as a robust tool for managing academic partnerships, enabling users to keep track of research interests, affiliations, and collaboration opportunities. The platform is designed to be flexible, user-friendly, and secure, ensuring that only authorized personnel can manage data while providing advanced search and filtering options for easy access to important partner information.

While the project is structured as a **monolithic** Django app, its modular approach ensures that each feature is well-organized and can be expanded or refactored as needed in the future.