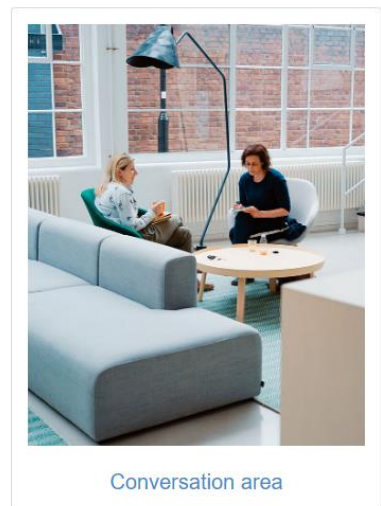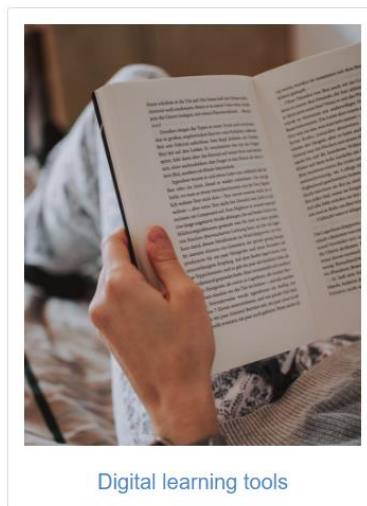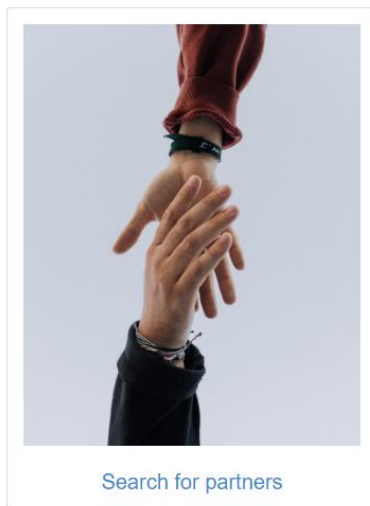# Report

# Design of the Rural 3.0 Hub

This report elaborates on the design of the Rural 3.0 virtual collaborative hub, that will be implemented on DATE. The hub will bridge the existing gap in the rural networks and aims to connect rural entities with higher education institutes to improve rural development through service learning courses. The hub connects students, faculty and local communities.

This Hub will allow all registered users to list their needs, describe their projects for potential collaborators, and offer their expertise. They will be able to browse the database of collaborators and the database of projects with a specific set of keywords. The content of the Hub will be dynamically updatable by partners and registered users.

The backend of our Hub is implemented in the ASP.Net MVC technology and written in C# programming language. It uses SQL Server database and Entity Framework for its access. Graphical user interface is rendered using Razor views and partially uses Boostrap, Jquery and Toastr frameworks. It can be accessed on the following address: http://hub.rural.ffzg.unizg.hr.



*Figure 1: Home page of the hub*

The Hub contains 5 parts:

1. Project area
2. Matchmaking domain

3. Open conversation areas
4. Digital learning tools
5. International module on rural Service-Learning and Social Entrepreneurship

**Project area** presents information about Rural 3.0 project and its progress. It contains basic information about partners, methodology and impact, useful and relevant links, as well as project mission and vision. It is regularly updated with project outputs and publications, as specified in the project application. The project area is also accessible directly on the following address: https://rural.ffzg.unizg.hr.

**Matchmaking domain** serves as a place where rural organizations seek solutions, knowledge and skills with universities across different disciplines. The domain remains open for registration for both rural organizations and academic experts, that can join and collaborate, whether offering their expertise to an existing project, browse the repository of best practices or find the expert in their field.

The users are provided with keywords to identify _Field(s) of education of students_, which is useful for academic teachers offering service-learning to the local community, but also for the community organizations to find the academic partner that could respond to their needs in the most professional way.

The following Erasmus+ ISCED fields of education can be used as matchmaking keywords:

Accounting and taxation

Architecture and town planning

Audio-visual techniques and media production

Biochemistry

Biology

Building and civil engineering

Business administration

Chemical engineering and processes

Chemistry

Community sanitation

Computer use

Crop and livestock production

Database and network design and administration

Dental studies

Domestic services

Earth sciences

Economics

Education science

Electricity and energy

Electronics and automation

Environmental protection technology

Environmental sciences

Fashion, interior and industrial design

Finance, banking and insurance

Fine arts

Fisheries

Food processing

Forestry

Hair and beauty services

Handicrafts

History and archaeology

Horticulture

Hotel, restaurants and catering

Journalism and reporting

Language acquisition

Law

Library, information and archival studies

Literature and linguistics

Management and administration

Marketing and advertising

Materials (glass, paper, plastic and wood)

Mathematics

Mechanics and metal trades

Medical diagnostic and treatment technology

Medicine

Military and defence

Mining and extraction

Motor vehicles, ships and aircraft

Music and performing arts

Natural environments and wildlife

Nursing and midwifery

Occupational health and safety

Pharmacy

Philosophy and ethics

Physics

Political sciences and civics

Protection of persons and property

Psychology

Religion and theology

Secretarial and office work

Sociology and cultural studies

Software & applications development and analysis

Sports

Statistics

Teacher training with subject specialisation

Teacher training without subject specialisation

Textiles (clothes, footwear and leather)

Therapy and rehabilitation

Traditional & complementary medicine & therapy

Training for pre-school teachers

Transport services

Travel, tourism and leisure

Veterinary

Wholesale and retail sales

Work skills

Furthermore**,** users of the **Matchmaking domain** can use the keywords that represent the _Focus area(s) of the rural development_ that they would like to work on in rural service-learning. These areas are defined by European Network for Rural Development (ENRD).

1A: Innovation & cooperation

1B: Links with research & innovation

1C: Lifelong learning & vocational training

2A: Farm's performance, restructuring & modernisation

2B: Entry of skilled/younger farmers

3A: Agri-food chain integration & quality

4A: Biodiversity restoration, preservation & enhancement

4B: Water management

4C: Soil erosion & soil management

5A: Water use efficiency

5B: Energy use efficiency

5C: Renewable sources & waste management

5E: Carbon conservation & sequestration

6A: Diversification & job creation

6B: Local development

6C: Information & communication technologies (ICT)

RURAL 3.0

Also, users can make their search for partners more specific and use the keywords that represent the *Rural development priorities* that they would like to contribute to through university-community collaboration. These priorities (RDP measures) are also defined by ENRD.

M01: Knowledge transfer and information actions

M02: Consultancy (Advisory services, farm management and farm relief services)

M03: Quality schemes for agricultural products and foodstuffs

M04: Investments in physical assets

M05: Restoring agricultural production potential damaged by natural disasters and catastrophic events and introduction of appropriate prevention actions

M06: Farm and business development

M07: Basic services and village renewal in rural areas

M08: Investments in forest area development and improvement of the viability of forests

M09: Setting up of producer groups and organisations

M10: Agri-environment-climate

M11: Organic farming

M12: Natura 2000 and Water Framework Directive payments

M13: Payments to areas facing natural or other specific constraints

M14: Animal welfare

M15: Forest-environmental and climatic services and forest conservation

M16: Co-operation

M17: Risk management

M18: Financing of complementary national direct payments

M19: Support for LEADER local development (CLLD – community led local development)

M20: Technical assistance

Finally, users can choose the *Domain(s)* that they would like to contribute to through university-community collaboration.

Elderly

Market development

Migrants

Mountain area

Natural resource

Nature conservation

Networking

Organic farming

Producer groups

Product quality

Protected areas

Public goods

Renewable energy

Renewables

Risk management

Rural business

Rural proofing

Rural services

Rural SMEs

Short supply chains & local markets

Smart Villages

Social inclusion

Social services

Soil management

Stakeholder involvement

Sustainability

# RURAL 3.0

| Tourism | Water management | Young farmers |
|---|---|---|
| Vocational training & skills acquisition | Women | Youth |

The matchmaking algorithm determines a set of common keywords between two parties, for example between an academic expert and a rural organisation member. If their intersection contains a requested keyword, the observed pair is considered for further evaluation, that includes matching based on their name or country. If both matchmaking steps are successful, the pair is added in a result set and returned to the user.

**Open conversation areas** will be implemented as a chat or forum and will provide easier and real-time communication between experts and rural organizations.

**Digital learning tools** are part of the academic module that refers to courses, videos, tutorials, and best practices in service-learning and social entrepreneurship, online World Cafe and other resources used by educators and community members.

These are currently being developed and should enable the development of the innovative multinational framework. **MOOC** is also implemented as a course within the academic module and is currently being developed.

Courses and MOOC reside on our Moodle Learning Management System.

The following courses are currently available through open guest access in Moodle:

1. Management of Communication Projects
   Teachers: Auksė Balčytienė and Natalija Mažeikienė
2. Rural Service-Learning
   Teachers: Pilar Aramburuzabala, Charo Cerrillo and Paula Lázaro
3. Service-Learning: Building bridges & Transforming Realities in Rural Community
   Teachers: Linda Saraiva, Anabela Moura, António Cardoso, Joana Padrão Almeida, Carlos Almeida and Manuela Cachadinha
4. Engaging with rural communities: students' democratic and transversal competences at stake
   Teachers: Cinzia Albanesi, Irene Barbieri and Antonella Guarino
5. Learning by Doing: Consulting to Social Entrepreneurs
   Teachers: Lucas Meijs and Philine van Overbeeke
6. Urban and Rural Service Learning
   Teacher: Nives Mikelić Preradović
7. Rural Mobility
   Teacher: Wolfgang Stark
8. Art & Diversity
   Teachers: Rolf Laven, Ingrid Salzmann-Pfleger, Alfred Strigl and Wolfgang Weinlich

Moodle is installed on the project web server and can be accessed on the following address: http://learn.rural.ffzg.unizg.hr.

*Figure 2: Moodle courses*

The Hub is currently in its beta phase and provides only a part of its target functionality. The database containing information about our users is optimized so that it supports complex operations like matchmaking using domains, focus areas, RDP measures and fields of education and training. The Hub is prepared to be fully translated to English and to languages of all project partners. It integrates project area web site and learning management system.

The functionality that must be implemented until the final phase includes:

- login and working with user accounts
- matchmaking and search tools
- translation
- performance indicators
- accessing system data