TEMPLATE

Output factsheet: Tools

Version 1

Project index number and acronym	CE 1125 CIRCE2020
Lead partner	ARPAV Venetto: Regional Agency for Environmental Prevention and Protection
Output number and title	OT2.1 e-cloud
Responsible partner (PP name and number)	AM Trans Progres – AMTP - PP3
Project website	https://www.interreg-central.eu/Content.Node/CIRCE2020.html circe2020.eu circe2020-wiki.eu
Delivery date	03.2019

Summary description of the key features of the tool (developed and/or implemented)

Due to increasing level of waste production, treatment of waste has become very important for the environment. To make the first step and ease waste and recycling technology knowledge sharing, we participated in project based on creating web portal where both parties could meet.

Our team created e-Cloud service, accessible online on any device connected to the Internet, containing global database with waste treatment technology classified by EWC.

We built "Portal Wymiany Technologii- Technology Exchange Portal" as an innovative online system. Database connected to the Portal is based on acknowledged database server – Microsoft SQL Server. To provide adequate efficiency, functionality and security, platform and database meets the high requirements (hardware and software). The Portal collects companies information as well as waste treatment technologies shared by them.

The e-Cloud Service, in addition to the application source code, plays role as knowledge base containing valuable technologies, data, classified trading information and technical patents, therefore it is adequately protected against unauthorized access. In the same time, service allows fast and easy access for many users around the world via the Internet. The platform meets the requirements of EU GDPR.

All servers are up to date and are strictly monitored against efficiency and security issues.

NUTS region(s) where the tool has been developed and/or implemented (relevant NUTS level)

The displayed language on the Portal circe2020.eu is English, but programmers provided the possibility to add other translations for later use.

The project involves three different types of users – non-logged from Europe and other regions of the world, project partner from PL, IT, HU, CH, AU and admin.

Expected impact and benefits of the tool for the concerned territories and target groups

During the code creation process, search engine optimization (SEO) has been taken into account, as well as web content semantics. In order to ensure effective positioning of webpage, programming code is written in accordance to best practices. Due to page loading time is crucial nowadays, adequate server resources are provided to meet current standards and ensure the best user experience.

We provide specific help as well as the Portal and e-Cloud service maintenance through help desk department. Users can report issues concerning content and features of the Portal, e-Cloud service and database server administration. Flexible server resources are provided and ready for extension if needed.

Sustainability of the tool and its transferability to other territories and stakeholders

System is produced in ASP.NET with MVC model in order to provide application scalability for future growing requirements. Set of technologies provided by Microsoft are used to design highly scalable web applications running through Microsoft Server. MVC model separates the application logic layer from presentation layer. In order to provide consistency of application, O/RM Entity Framework is used for mapping objects to Microsoft SQL Database using Code-First approach. Front-end part is written in Razor syntax, allowing to use .NET and HTML syntax in one file with „.cshtml" extension. Razor syntax provides opportunity for creating optimized, extension friendly and legible code. System access is designed using role-based access control (RBAC) approach to restrict access to authorized users only. In RBAC model, permissions are assigned to roles and roles are assigned to users for easy maintenance of authorization levels.

Lessons learned from the development/implementation process of the tool and added value of transnational cooperation

The Portal matches both parties on recycling market – waste treatment technology holders looking for waste and entities possessing waste which can be recycled. Thanks to it, significant amount of waste can be re-used instead of being utilized. Portal contains waste database in accordance with European Waste Catalogue (EWC) classification. AM Trans Progres acts as a middleman, bringing together waste-oriented entities on the Portal. Official website (circe2020.eu) is used for Microsoft SQL server data presentation purposes and AM Trans is responsible for accuracy of the data.

References to relevant deliverables and web-links
If applicable, pictures or images to be provided as annex

Portal development
Due to the ASP.NET and MVC programming model, system is very extendable, not only to new features but also additional waste attributes and more detailed information about waste treatment technology.

- https://www.interreg-central.eu/Content.Node/CIRCE2020.html
- https://www.circe2020-wiki.eu/home
- https://circe2020.eu/