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Final on-line version of the knowledge platform

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	



CHANGE CONTROL

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Abstract

The *Knowledge platform for regional forest innovation* (<https://forestinnovationhubs.rosewood-network.eu/>, launched on 22 September 2021) has been developed by Cesefor and EFI to host the collection factsheets summarising best practices and innovations for wood mobilisation in Europe (presented in D1.3 and D1.5). Moreover, this knowledge platform replaces the platform Map Viewer (created by the ROSEWOOD project) with new functionalities while curating the factsheets that it contained.

This new knowledge platform allows ROSEWOOD4.0 consortium members as well as external users to enter all the data of each factsheet through an on-line form, save it, send to a national editor to review the content, and publish it as HTML and PDF. Moreover, the factsheets can be translated and read in the national languages of the ROSEWOOD4.0 consortium members.

Users can access factsheets in two exploratory ways and one query consultation way. The two exploratory ways are a map with the geographical location (by countries) of the source of information of the factsheets, and the list of the whole factsheets collection. The collection can be filtered through the search engine, which allows to perform free text search in free text fields and filter according to fields with finite values.

The maintenance, hosting and URL are guaranteed to be maintained at least until 30 June 2025. Before of after this date, part or the whole collection of factsheets could be copied to other hosting services provided by EFI's Bioregions Facility, to continue the curation of the content.

The content published in the knowledge platform is self-archived. Therefore, the factsheets can be considered having green open access. Factsheets are published under Creative Commons Attribution 4.0 International license. Before the end of the project, the content will be uploaded as a CSV file into Zenodo repository, with its respective metadata and instructions to read and interpret the file, respect the FAIR principles.

Purpose

This document describes the aim of the on-line knowledge platform, the reasoning supporting the selection of the platform where it has been developed, and its structure. It also includes the long-term sustainability plan and how open access and FAIR principles are respected.

The following topics are out of the scope of this deliverable:

- the workflow to develop, write, edit, and upload data (in form of factsheets) in the knowledge platform (this is explained in D1.1 and D1.2),
- the content of the collection of knowledge (the collection of factsheets; this is presented in D1.3 and D1.5).

1. Aim and requirements

The aim of the knowledge platform is to be the knowledge repository hosting the output of D1.3 *Digital innovations and best practices for sustainable wood mobilisation - First batch (target of 50 best practice abstracts completed and delivered to EIP-AGRI)* and D1.5 *Digital innovations and best practices for sustainable wood mobilisation - Second batch (target of 50 best practice abstracts completed and delivered to EIP-AGRI)*. This output is a collection of at least 100 factsheets summarising and collecting digital innovations and best practices for sustainable wood mobilisation. For more details on the factsheets, please, consult D1.3 and D1.5.

The main requirements for the web-based knowledge platform were:

1.1 Back-end requirements

- the storage of the information of the collection in an on-line database, accessible to all ROSEWOOD4.0 partners,
- the automatic generation of the factsheets in HTML and PDF (downloadable and printer-friendly) formats from the on-line database,
- the application of a workflow to upload, review, edit, monitor and curate the information directly in the on-line platform,
- the management of the different roles for selected project partners to generate, review and edit the content of the factsheets,
- the possibility to manage, review, edit and publish factsheets generated by external users,
- the creation of multilingual factsheets by ROSEWOOD4.0 partners using the same platform,
- the possibility to easily export the content of this database to make it findable, accessible, interoperable and reusable from other repositories (e.g. Zenodo),

1.2 Front-end requirements

- the absence of need of registration to access the knowledge platform content,
- the end-users' capacity to access the factsheets through exploratory ways (browsing a map or simply browsing the list of factsheets) and through a query (a search engine with multiple fields),
- an easy and intuitive access to the multilingual content of the factsheets,
- the possibility for external users to generate factsheets in their own language without having to create an account,
- a front-end design respecting the visual identification of the ROSEWOOD4.0 project.

2. Integration with the Map Viewer from ROSEWOOD project

ROSEWOOD project (funded from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776754, finished in December 2019) collected 836 factsheets and made it accessible from the ad-hoc developed and stand-alone platform known as Map Viewer (<https://rosewood.cesefor.com/>) "a platform for knowledge exchange and dissemination, serving the forestry and wood community" under the topic of sustainable wood mobilisation. This collection of factsheets was divided in three groups: best practices and innovations, financial resources, and educational opportunities.

ROSEWOOD4.0's factsheets on digital innovations and best practices for sustainable wood mobilisation (D1.3 and D1.5) were conceived to be part of this collection and to be integrated in the group of "best practiced and innovations" of the Map Viewer. Therefore, ROSEWOOD4.0's factsheets were an enhanced version of the ROSEWOOD ones, respecting their structure but incorporating extra fields.

This new "merged" collection would benefit from a new platform that would have more functionalities than the Map Viewer (see requirements in section 1; only the first back-end requirement and the first, second and fifth front-end requirements were provided by the Map Viewer). For this reason, ROSEWOOD4.0 consortium decided to use CeseFor's experience in developing the Map Viewer to develop another platform that would contain both collections (the one from ROSEWOOD and the one from ROSEWOOD4.0) while providing the new requirements that would ease all the editorial process and provide a richer user experience.

3. Access and web hosting of the knowledge platform

The title of the knowledge platform is *Knowledge platform for regional forest innovation*

It is accessible from the URL: <https://forestinnovationhubs.rosewood-network.eu/>

All the knowledge platform is hosted in CeseFor's servers. The URL is a subdomain belonging to the domain of the project website (<https://rosewood-network.eu/>) managed by EFI as part of WP4 *Communication, dissemination, exploitation and collaboration with other initiatives to maximise impact*: D4.3 ROSEWOOD4.0 Project website, where there is a link that redirects to the *Knowledge platform for regional forest innovation*.

Release date of the database (back-end; to ROSEWOOD4.0 consortium members): 31 August 2021.

Release date of the website (front-end): 22 September 2021.

Testing period: 22 September 2021 to 22 December 2021.

Testing period aims at improving user interface (front-end) and minor back-end adjustments.

4. Structure and functionalities

4.1 Back-end

The back-end structure is composed of three main elements:

On-line database

The on-line database is where all data of the factsheets is stored. It can be accessed by all project partners after registering into the knowledge platform, and by external users (or guests). Factsheets creators upload information in this database through an online form, containing all the fields of the factsheets, mainly text but also images and hyperlinks.

The knowledge platform uses the data in this database to automatically generate the visual version of the factsheets, in HTML and PDF, based on layout designed by EFI. Only published factsheets are visible in the front-end website, this allowing factsheet creators to save uncompleted factsheets or hold factsheets pending of revision and preventing them to be visible by end-users. For a complete description of the fields contained in the factsheets, please, consult D1.3 *Digital innovations and best practices for sustainable wood mobilisation - First batch (target of 50 best practice abstracts completed and delivered to EIP-AGRI)*.

Content management system

It allows administrators to edit content in the web pages visible in the front-end (except the pages of the factsheets themselves).

The translation tool

The translation tool allows any consortium member to translate factsheets to any available language (see list in section 4.4, below). The values of fields that are a finite list of possible values (e.g., the list of countries of origin, the list of challenges addresses, the list of types of solution, etc.) have already been previously translated, therefore only free text fields need translation.

4.2 Front-end

The front-end structure of the website is composed of six pages:

Homepage: Best practices and innovations

<https://www.forestinnovationhubs.rosewood-network.eu/>

This is the core page of the knowledge platform. It allows users to access factsheets in two exploratory ways and one query consultation way. The two exploratory ways are:

- a map with the geographical location (by countries) of the source of information of the factsheets, and
- the list of the whole factsheets collection, shown either as mosaic or as list. This list is reset to show the results when query is performed.

To perform a query, the search engine allows to perform:

- free text search in free text fields,
- filter according to finite values:
 - country of origin of the best practice or innovation,
 - language of the factsheet,
 - type of best practice or innovation,
 - domain of the best practice or innovation,
 - scale of application of the best practice or innovation,
 - challenge addressed by the best practice or innovation.

When accessing a factsheet, an HTML file is automatically generated, containing all visible fields of the database (some fields are only for internal usage). All factsheets have the same visible fields and structure, but the base colour is different according to the challenge they address.

Add best practice or innovation

<https://www.forestinnovationhubs.rosewood-network.eu/en/content/add-new-best-practice>

This is the entry point for ROSEWOOD4.0 consortium members as well as for external users to write a new factsheet for a best practice or innovation. The first choice is the language in which the factsheet will be initially created (later translation is possible). Then, the user is directed to the on-line form (appearing in the selected language) listing all the fields to be filled, with short instructions for each one. The work can be saved and recovered later before being sent to the editor (see section 4.3, below).

Financial resources

(Definitive URL not available at the moment of writing this document)

It allows to perform a similar query to the collection of factsheets from ROSEWOOD project dealing with financial resources for wood mobilisation. This collection is not enhanced by ROSEWOOD4.0 project.

Educational opportunities

(Definitive URL not available at the moment of writing this document)

It allows to perform a similar query to the collection of factsheets from ROSEWOOD project dealing with educational opportunities that can stimulate wood mobilisation. This collection is not enhanced by ROSEWOOD4.0 project.

About

<https://www.forestinnovationhubs.rosewood-network.eu/en/content/about>

This page describes what can be found in the knowledge platform, the different ways to search for factsheets or to browse through the collection, how end-users can get more detailed information related to a factsheet's content and who are the ROSEWOOD4.0 project partners and the national editors of the factsheets.

It also gives direct access to the creation of new factsheets.

User login

<https://www.forestinnovationhubs.rosewood-network.eu/en/user>

Allows users (ROSEWOOD4.0 consortium members as well as external users) to log in, create a new account and request a new password.

4.3 Roles and editorial process

The following roles exist:

- **Author:** can write factsheets. Is a member of ROSEWOOD4.0 consortium. Needs to register (login).
- **Guest (or external user):** can write factsheets. Is NOT a member of ROSEWOOD4.0 consortium. Needs to register providing basic professional contact information.
- **National editor:** same as Author, plus: reviews factsheets before publishing. Can send revision requests to authors/guests. Publishes/unpublished factsheets. He/she received for review factsheets where the location of the factsheet belongs to his/her country. Countries not members of the ROSEWOOD4.0 consortium may appoint a national editor or may request an existing national editor of a ROSEWOOD4.0 consortium member to act on behalf of them.
- **Review committee member:** same as editor but send revision requests to editors, not to authors/guests.
- **Administrator:** same as National editor and Review committee member, plus: administrates access rights.

The newly created factsheets are automatically sent to the respective national editor, who reviews the content. If the content is complete and appropriate, he/she publishes the factsheet. Otherwise, it is sent back to the author or guest to improve it according to the attached comments. The review committee meets periodically to ensure the homogeneity of the quality of the factsheets and take decisions on the progress of the publication (Figure 1).



Figure 1. Editorial process.

4.4 Multilingual

All the factsheets are published at least in English and in the national language of the author. National languages supported are those of the consortium members:

- Croatian
- Dutch
- Finnish
- French
- German
- Greek
- Italian
- Norwegian
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish
- Ukrainian

To simplify the development of the knowledge platform, the homepage is only available in English. This means than users need a minimum understanding of English to perform a query or to browse the list of factsheets. However, from the list of factsheets in the homepage or from the factsheet itself, users can easily access the factsheet in all the languages to which it has been translated (Figure 2).



Figure 2. Buttons to access the factsheet in different languages, from the list of factsheets in the homepage (left) and from the factsheet itself (right).

When entering data, factsheets will be written by authors in the following languages:

- If the author is a ROSEWOOD4.0 **consortium member**: English (master language) and in the national language (chosen national languages of ROSEWOOD4.0 consortium members).
- If the author an **external member** (NOT a ROSEWOOD4.0 consortium member): allow the possibility to write only in national language (but also in English if he/she can).

Translation (in one or more national languages) must be possible at the moment of writing the factsheet (before publication) as well as once the factsheet has been published, and this may be done by any member of the ROSEWOOD4.0 consortium.

5. Long-term sustainability plan

5.1 Web hosting and maintenance

EFI and Cesefor engaged to host and maintain on-line the *Knowledge platform for regional forest innovation* for at least three years after the end of the action, this is expected to be until 30 June 2025¹. Similarly, the current URL of ROSEWOOD4.0 is guaranteed to be maintained at least until 30 June 2025. Before that date, EFI and Cesefor should reach an agreement about the continuity of this domain.

In the long term, maintenance and hosting will possibly be under the responsibility of EFI's Bioregions Facility. This does not exclude that the current knowledge platform would continue to exist as it is. Part or the whole collection of factsheets could be copied to other hosting services provided by EFI's Bioregions Facility, to continue the curation of the content. The fact that the content is structured in a database makes this procedure easier.

5.2 Update of the content

During ROSEWOOD4.0 lifetime, ROSEWOOD4.0 consortium members and external users will be contributors who upload and update the content. ROSEWOOD4.0 editors are responsible to review and curate this content.

¹ At the moment of writing this document the consortium was dealing a Grant Agreement amendment to extend the action until 30 June 2022.

After the end of the action, whether the knowledge platform would still be in Cesefor's servers or copied to Bioregions Facility's ones, the managers will try keep the possibility for external users to upload new content in their national language, and this to be reviewed by a curator and translated to English.

6. Open access and FAIR principles

6.1 Open access and license

The content published in the knowledge platform is self-archived. Therefore, the factsheets can be considered having green open access (although not respecting the FAIR principles, please read the following section).

Factsheets are published under Creative Commons Attribution 4.0 International license. Copyright is maintained by the ROSEWOOD4.0 consortium, while authorship of the knowledge is recognised to the author of the factsheet.

6.2 FAIR principles

In its current form, the knowledge platform does not respect the FAIR principles. EFI, Cesefor and the project coordinator have agreed to upload the content of knowledge platform into Zenodo (<https://zenodo.org>) to allow it to be easily reused and respect the FAIR principles. The content will be uploaded as a CSV file, with its respective metadata and instructions to read and interpret the file. The same license applied to the factsheets would be used for data uploaded into Zenodo.