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Progress Report on Best practices and Innovations

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CHANGE CONTROL

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Table of contents

1	Objectives and overview of progress	4
2	Screening of solutions and BP&I in EU regions	5
2.1	Definitions and classifications	5
2.1.1	<i>Best practices and innovations</i>	5
2.1.2	<i>Domains</i>	5
2.1.3	<i>Types of solutions</i>	6
2.1.4	Challenges for wood mobilisation	6
2.2	Survey, data collection and raw database	6
2.3	Overview and first results of the BP&I collection	7
2.3.1	Hubs and countries	7
2.3.2	Domains	9
2.3.3	Types of solutions	10
3	Selection of BP&I and Preparation of Dissemination Material	11
3.1	Knowledge repository	11
3.1.1	Objective and concept	11
3.1.2	BP&I common factsheet template	13
3.1.3	Frontend for end-users	13
3.1.4	Multilingual access	14
3.1.5	Editorial process and data management	14
3.1.6	Implementation of the knowledge platform (beta version)	15
3.1.7	Long term vision of the knowledge platform	16
3.2	Preparation of Dissemination Materials	16
3.2.1	Collection of BP&I abstracts	16
3.2.2	Creation of short videos	16
4	Clustering and Validation of BP&I between regions	18
4.1	Validation of BP&I	18
4.1.1	Selection and prioritisation	18
4.1.2	Validation workshops with stakeholders	18
4.2	Synergies for knowledge exchange between Regional Hubs	20
5	Annex	22
5.1	Annex I: BP&I collection long list	22
5.2	Annex II: BP&I factsheet template for Hub partners	45
5.3	Annex III: Guidelines for video production	46
5.4	Annex IV: Impressions from validation workshops	48

Abstract

The D1.2 report documents the Rosewood4.0 partners' progress and outcomes to collect, select and validate a set of relevant Best practices and Innovations (BP&I) in digitally supported forestry and wood mobilisation solutions. It describes the common survey of data collection and assessment and the results. The knowledge repository including the common factsheet definition, the editorial process and the multilingual access, and the implementation of the beta version of the online platform are described. The series of Regional Hub validation workshops together with experts and stakeholders are documented, which contributed to the selection of BP&I and stimulated further networking and knowledge exchange between the five Hubs. The analysis of their distribution across the Hubs allows to pinpoint different groups of priority. The report includes the full list of the 457 Best practices and innovations identified during the survey, which includes the data collected during both projects: Rosewood (2018-2020) and Rosewood4.0 (2020-2022).

Deviation

Justification for the delay of the submission of the deliverable report: Following the restrictions imposed by the COVID-19 pandemic, the Hub workshops meetings could not be organized as physical meetings and had to be held to a large extent online. This needed more communication between Hub leaders, partners, and external stakeholders. It thus required more time to review the large, collected list of best practice and innovations and complete the joint assessment. However, the deviation is not critical, because the results are convincing, and the implementation of the knowledge platform shows good progress.

1 Objectives and overview of progress

A main aim of the ROSEWOOD4.0 project is to collect suitable content about Best practices and Innovations (BP&I) in the field of sustainable wood mobilisation and digitalisation. The main objective is to speed up cross-regional learning and fertilisation about best practices and latest managerial, social and technological innovations, especially digital solutions facilitating the sustainable wood mobilisation.

InnovaWood (IW) and European Forest Institute (EFI) together with the consortium partners led a joint team effort to carry out a broad collection of BP&I and build up a knowledge base to make the content widely accessible through an online platform and aligned dissemination and communication activities. CESEFOR contributed to the technical realization of the knowledge repository, while SIG/S2i supports the management. All other project beneficiaries participated, in their roles as Hub Leaders and regional partners, to the collection, description and assessment of BP&I.

The main activities implemented comprised the following tasks, which are reported in the following:

- Screening of solutions and best practices implemented in EU regions
- Selection of relevant best practices & preparation of dissemination materials
- Clustering and validation of best practices selection between regions

The previous deliverable report D1.1 “Concept note Best practices and Innovations” elaborated the methodological guideline for the Hubs in the collection of BP&I. It defined the common approach for selection and validation of the BP&I including survey steps, definitions, and classifications, required parameters and key information for documentation of the BP&I, and proposed steps for the validation in participatory workshops with stakeholders. It also contains a first concept of the knowledge repository and a work plan for the implementation of the task activities.

This deliverable report D1.2 documents the accomplished collection, selection and validation of BP&I carried out jointly by the five Regional Hubs. The coordinated team effort together with external stakeholders in the validation workshops succeeded in an impressive collection of **457 BP&I** in total, with the majority coming from the Northern, Central-Western and South-Western Hubs. The four largest groups of BP&I belong to the domains “forest inventory, assessment, monitoring”, “harvesting, logistics, transport, safety”, “ownership, cooperation”, and “education, research, knowledge transfer”.

The first batch of **50 BP&I factsheets** of high priority to the Hubs has been completed and documented in the separate report D1.3. They contain short abstracts, visual materials and links to contacts and additional resources. In addition, a series of **26 short video clips** of BP showcases will be prepared. Currently, 15 short videos have already been created by the Hub partners and are used in the project dissemination.

All these results are now published online and made accessible in the **Rosewood4.0 knowledge platform** forestinnovationhubs.rosewood-network.eu (beta version online since Sep 2021). The platform has been tested by the consortium partners and is currently being presented to various external stakeholders in view of broad dissemination in the European forestry and wood industry community.

2 Screening of solutions and BP&I in EU regions

2.1 Definitions and classifications

2.1.1 Best practices and innovations

A **‘best practice’** (BP) can be defined as an effective, superior technological or social solution to a typical common problem or barrier. A BP can consist of a specific improved product, tool, or process (e.g. a machine or a technique), but it can also represent a more complex system solution (e.g. a sophisticated information system, a management system, or a legal or governance process or multi-actor initiative). A BP is a state-of-the-art implementation of a solution with latest (digital) technology, that has a representative character.

A specific implementation of a BP in a local context can be called a **‘best practice case’**. For example, a lot of quite similar digital management platforms for private owners exist in different countries, which can be all considered as different cases of the same BP. These will also be selected, and the best ones presented to the other Hubs. Main aim is here to improve collaboration and knowledge exchanges between the different tools.

In contrast, an **‘innovation’** is defined as a very novel solution that has been developed and tested so far only in an experiment, pilot or a demonstration project, but which is usually not yet implemented on a larger scale or under real market conditions. The level of maturity of an innovation is usually assessed by the Technology Readiness Level (TRL). Innovations are also relevant in knowledge transfer projects such as ROSEWOOD4.0, because they go beyond the current state-of-the-art and provide new impulses for local solutions.

Note that innovation does not only refer to the advancement of a technology or system, but also to the wider adoption of an existing, proven technology or system in another context, e.g., another sector or country (this can also be described as **‘social innovation’**).

Several **classifications** are applied to categorize the BP&I dataset in an effective manner. The final version of descriptors will be a result of the further analysis and validation of the collected BP&I in WP1.

2.1.2 Domains

A **classification of domains** is used to organize the collection of BP&I, which also provides an effective structure for the repository. The domains correspond to main parts or activities along the forest-wood value chain from management of the forest ecosystem to final products and markets. The focus of ROSEWOOD4.0 lies on the forestry and raw material supply side, but BP&I of end uses are also considered in the sense that they can create higher demand for mobilisation of wood.

The domain classes include:

- 1 Inventory, assessment, monitoring
- 2 Ownership, cooperation
- 3 Forest management, ecosystem services, resilience
- 4 Forest disturbances, risks, disaster response
- 5 Harvesting, logistics, transport, safety
- 6 Products, markets, trade
- 7 Forest-based industries, bio/circular economy, value chain
- 8 Education, research, knowledge transfer (transversal)
- 9 Innovation management, digital hubs, clusters, exploitation
- 10 Financing, funding schemes

2.1.3 Types of solutions

BP&I will also be grouped into different **types of solutions**. Because ROSEWOOD4.0 focuses on digital solutions, this will allow to group together similar technological concepts and systems. These groups are used for characterization of the BP&I and offer another filter possibility in the repository. The types of solutions include:

- 1 Sensors, measurement equipment
- 2 Data standards
- 3 Data platforms, data hubs, open data
- 4 Modelling, DSS, simulation, optimization
- 5 Advisory and services tools for forest owners
- 6 Awareness, info portals, educational campaigns
- 7 Smart machinery, equipment
- 8 Operations optimization
- 9 Collaboration platforms, logistical hubs
- 10 Traceability tools
- 11 Joint forest management
- 12 Marketing platforms
- 13 Sustainable, bio-based, circular products, smart materials
- 14 Cooperative initiatives, networks, clusters
- 15 Smart biotechnologies
- 16 R&D platforms, testbeds, co-creation initiatives
- 17 Training, education, eLearning
- 18 Funding schemes, grants
- 19 Innovation contests
- 20 Other

2.1.4 Challenges for wood mobilisation

Based on the regional roadmaps, a list of common groups of challenges for wood mobilisation was specified. These correspond to typical barriers or issues encountered by stakeholders in their regional contexts. The BP&I were attributed as potential solutions to one or several challenges, which allows users to be easily directed towards them in the repository. The challenges are specified as follows:

- 1 Improve forest resilience and adaptation to climate change
- 2 Improve infrastructures and capacities of public actors
- 3 Activate private forest owners and cooperative forest management
- 4 Ensure a well-trained workforce through attractive skills development and education
- 5 Enhance economic and environmental performance of forest supply chains
- 6 Grow the forest-based bioeconomy through circular use and value-added products
- 7 Raise public awareness, social acceptance and political support for forestry
- 8 Other

2.2 Survey, data collection and raw database

Following the common approach, project partners have carried out a broad screening and collection of European best practices and innovations (BP&I) in their respective Regional Hubs. The survey included the following main steps:

1. During the survey, various sources were considered, e.g. successful initiatives and ongoing projects inside the Hubs, project reports and surveys, scientific literature, and checked for relevant BP&I.

2. Each Hub team compiled a long list of potentially interesting BP&I. At first, the partners had only to provide an initial list with some basic info about the BPI, e.g. titles, keywords, website, contacts.
3. The long list was collected in the form of a raw database, which is accessible as online shared document to all project partners. The advantage is that all partners have direct access to the latest update version and can immediately read and consider the BP&I also from the other Hubs. This practical solution was chosen, because the survey could start even without the real knowledge base being yet operational.
4. The collection of BP&I was developed by Hub partners with close feedback from other regional partners and experts. This interaction took place in the series of validation workshops and further bilateral exchange. The selection and validation step is described in detail in chapter 4.
5. The partners were then in charge to complete the documentation of BP&I as far as possible in the shared raw database, following the common format and pre-defined classifications. This step is the initial preparation of the factsheet information to be included in the knowledge platform.
6. InnovaWood cross-checked the data and ensured the consistency of the dataset and documented the progress in this report.

A major part of the survey was carried out during the first nine months of the project by all five Hubs and related project partners, where the first full initial list of more than 300 BP&I related to digitalisation was completed. Note that as a rule, the survey phase remains open, so that also newly announced or recently identified BP&I can be added continuously to the database by the partners. Thus, another 50 BP&I were identified later as a result from the continuous exchange with Hub experts and other regional initiatives.

2.3 Overview and first results of the BP&I collection

2.3.1 Hubs and countries

The current long list comprises in total **457 identified BP&I** entries from 24 countries (cf. Annex I, last version as of 1 November 2021). This includes **150** BP&I collected in the scope of the Rosewood 1 project (2018-2020) and **307** BP&I collected during the Rosewood4.0 project. The collected BP&I are distributed unevenly across the Hubs (Figure 1 & 2). The majority of BP&I were identified in the Northern Europe (NE), the Central-Western Europe (CWE) and the South-Western Europe (SWE) Hubs (339, 74% of total). The reason is that these represent the largest Hubs in terms of number and size of countries, plus these are the technologically most advanced countries in the domain.

Nevertheless, also the other Hubs (SWE South-Western Europe, CEE Central-Eastern Europe, SEE South-Eastern Europe) identified a large set of very relevant BP&I, so this survey confirms the truly European coverage of the ROSEWOOD4.0 project. In addition, several European-level BP&I (in most cases European funded-projects) as well as a few international examples were identified.

The collection includes national BP&I from 21 countries in Europe, with a focus on the countries represented in the consortium (Figure 3). The largest sets of cases are identified in Germany (DE, 79) and Finland (FI, 59), followed by Spain (ES, 40) Sweden (SE, 29), Austria (AT, 29), and France (PL, 28). One reason for this distribution that those countries participated in both EU projects, while the other countries joined only later for the second project Rosewood 4.0.

In the CWE Hub, a few BP&I from neighbouring countries not represented in the partnership were included. The collection includes also 17 EU-level project consortia, 3 from Canada (CA) and 1 international project.

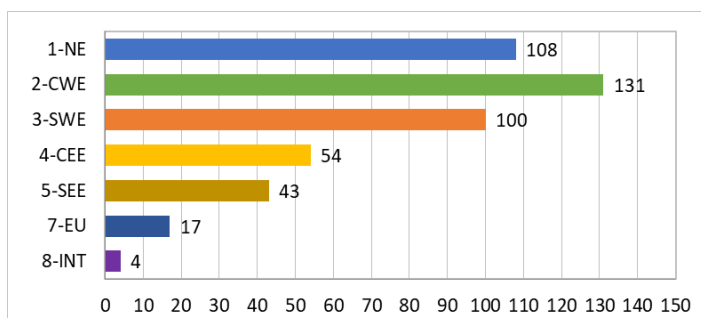


Figure 1 Number of collected BP&I in total per Hub (n = 457)

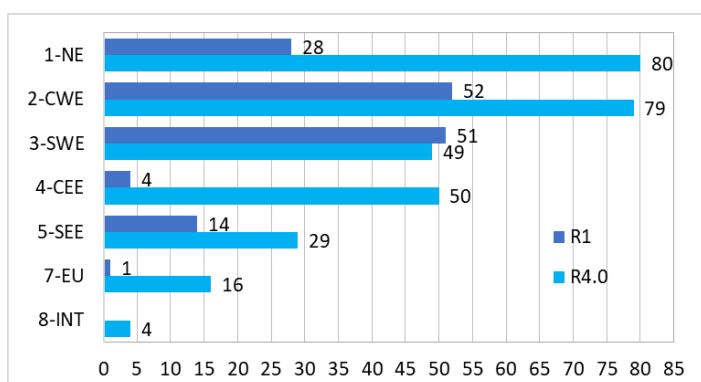


Figure 2 Number of collected BP&I in total per EU project (R1: Rosewood, R4.0: Rosewood 4.0; n = 457)

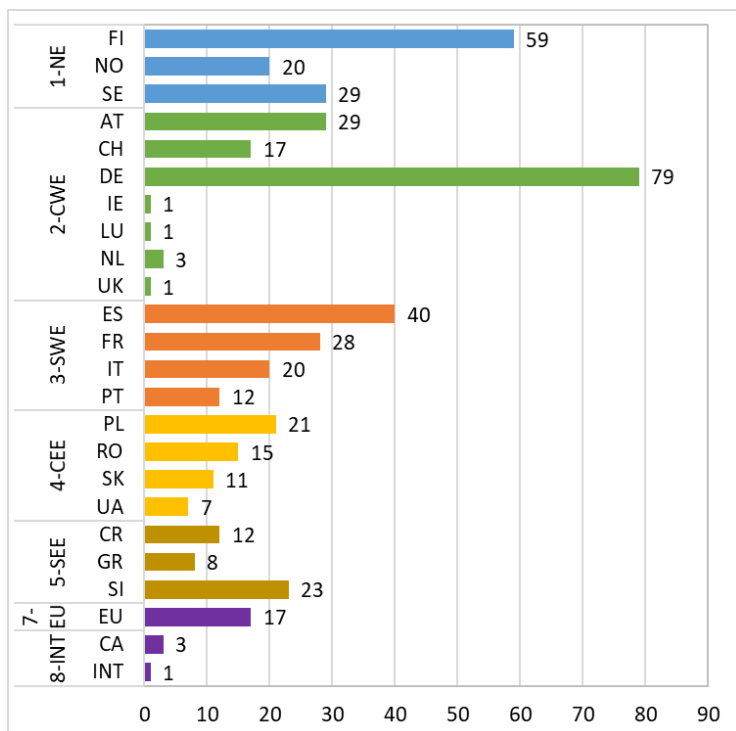


Figure 3 Number of collected BP&I in total per Country (n = 457)

2.3.2 Domains

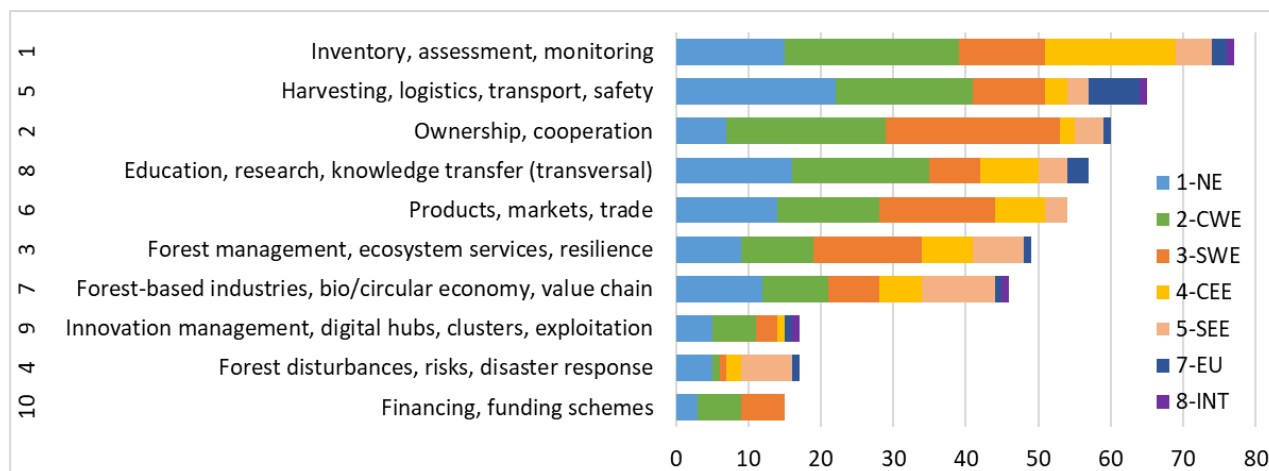


Figure 4 Number of collected BP&I in total per Domain (n = 457)

The BP&I collection covers a range of different Domains – i.e. themes and business areas – in forest management and forest-based industries (Figure 4).

- The largest group are BP&I in the domain of “Inventory, assessment, monitoring” (77, 17%). This is not a surprise, because most digital innovations in forestry occur in this field and are essential as they represent the groundwork to provide detailed, high-resolution data for innovative application.
- The second position are BP&I in the domain of “Harvesting, logistics, transport, safety” (65, 14%), which also show equally rapid development in recent years, and the third position is “Ownership, cooperation” (60, 12%), which includes many BP&I from the first Rosewood project.
- The fourth largest group is – interestingly – the important area of “education, research, knowledge transfer” (57, 12%). This result underlines the importance of digital solutions for transversal actions to strengthen knowhow and readiness to adopt innovative solutions.
- Other important groups that relate to the core of forestry are “forest management, ecosystem services, resilience” (49, 11%), and “forest disturbances, risks, disaster response” (17, 4%).
- Another quite significant group of BP&I represents “Products, markets, trade” (54, 12%), as well as the subsequent downstream “forest-based industries, circular economy, value chain” (46, 10%).
- Finally, two specific groups with an important supporting role represent “innovation management, digital hubs, clusters, exploitation” (17, 4%) and “financing, funding schemes” (15, 3%).

The identified BP&I according to the domains are also distributed in a balanced way across the different Hubs.

2.3.3 Types of solutions



Figure 5 Number of collected BP&I in total per Solution types (n = 457)

The collection of BP&I was also classified according to different “Types of solutions”, which represent similar groups of technological solutions and applications (Figure 5).

- “Advisory and service tools for forest owners” (51, 11 %) is the largest type of collected BP&I. This group comprises the range of information systems that are designed as decision-support tools for individual forest owners and managers, including practical planning and simulation tools. More and more of these tools come as apps that can be used on any mobile device.
- “Sensors, measurement equipment” (45, 10%). This represents the second largest group and it includes all sorts of enhanced data capture and measurement technologies, e.g. remote sensing-based systems such as satellite image analysis to drones, scanner and sensor systems for machines, monitoring solutions, etc. All represent key enabling technologies for the digitalization of the complex supply chains from forest ecosystem management to finished products.
- “Modelling, DSS, simulation, optimization” (41, 9%) and “Data platforms, data hubs, open data” (32, 7%): third and fourth main groups including more sophisticated information systems that cover a whole country or region or focus on a complex topic or offer a centralised data infrastructure.
- “Awareness, info portals, educational campaigns” (36, 8%): Tools aimed more to the general public or lay persons to provide better understanding and knowledge about forest use and products.
- “Data platforms, data hubs, open data, data standards” (34, 7%): databases to provide wide access
- “Sustainable, bio-based, circular products, smart materials” (33, 7%): (novel) products that can add high value to forest products, e.g. in paper industries or construction
- “Joint forest management” (29, 6%): forest owner associations, local/regional cooperative groups, etc

- “Smart machinery, equipment” (28, 6%): advanced harvesting or processing equipment
- “Collaboration platforms, logistical hubs” (28, 6%): specific tools to connect supply chain actors
- “Marketing platforms” (22, 5%): online portals for trade of forest products
- “Training, education, eLearning” (19, 4%): systems to support knowledge transfer to practitioners
- “Traceability tools” (18, 4%): specific solutions to trace timber through the supply chain
- “R&D platforms, testbeds, co-creation initiatives” (17, 4%): specific funded projects and partnerships
- “Funding schemes, grants” (15, 3%): financial support schemes targeted at forest digitalization
- “Operations optimization” (8, 2%): tools that increase performance of typical operations
- “Cooperative initiatives, networks, clusters” (5, 1%): cross-disciplinary partnerships or projects
- “Smart biotechnologies” (4, 1%): biorefinery, high end applications
- “Innovation contests” (3, 1%): hackathons, prize competitions
- “Other” (21, 5%): other wood mobilisation solutions, not necessarily using digital approaches

The diverse solutions were grouped according to their main purpose, but their functionalities and applications are often overlapping. This assessment shows the range of digital-supported technological solutions and applications that exist in the forest sector, and portrays to some extent the trends in current development.

The long list of collected BP&I is the basis for the selection and validation of suitable BP&I to overcome regional barriers in the Hubs (chapter 4). The full list can be reviewed in Annex I.

3 Selection of BP&I and Preparation of Dissemination Material

3.1 Knowledge repository

3.1.1 Objective and concept

A main goal of the ROSEWOOD4.0 project is to develop and set up an open online knowledge repository that is widely accessible, easy to read and understandable by the target groups in the forest sector.

The main purpose is to provide **easy access** to useful information about practices and solutions that have proven as relevant and innovative to overcome common barriers and foster sustainable management and mobilisation of forest resources in the different climatic and socio-economic contexts of European forest regions. A focus are novel **digital solutions** and smart systems.

The **target groups** of the repository include mainly practitioners such as forest owners, forest managers, technicians and any other professional in the forestry and forest-based industries, but also people from other related industries as well as the public.

The final platform will serve as an **open repository**, which means that any stakeholder can access the information and submit new BP&I to be published on the platform via an online upload form. Such external submissions will be reviewed and approved before publication by an editorial team, which includes experts from the five Hubs and related partners, to cover a vast range of countries and topics.

The repository supports **multi-lingual access**, both in view of the included content and the search functions.

IW, EFI and SIG jointly developed the concept and implementation plan for the knowledge platform. The platform builds on the initial database and map viewer of the previous ROSEWOOD project, which are expanded and enhanced in their functionalities.

Knowledge Base for Best Practices and Innovations in Sustainable Wood Mobilisation

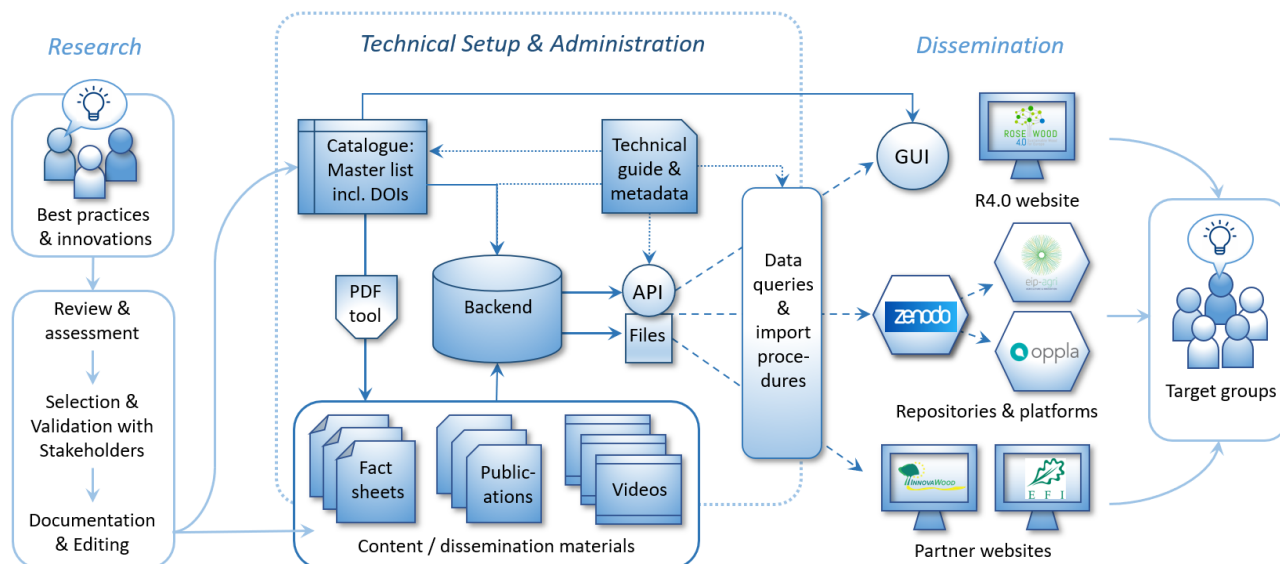


Figure 6 Graphic concept scheme of the Rosewood 4.0 knowledge repository

The knowledge repository comprises the following key components and features (Figure 5):

1. A central **backend database** collects the various contents in a structured way. The BP&I are collected in a catalogue which includes all collected descriptive data of the BP&I, images plus various references to additional contents in the form of publications, videos and external materials or websites.
2. The technical guide lays out the internal structure and metadata of the repository. It notably builds on the structure of a **BP&I factsheet dataset** with defined fields that contain all essential descriptors, classification codes and references (cf. Annex II). The factsheets exist both as HTML pages and as exportable PDF files that can be generated on the fly. Additional references use DOIs and active links.
3. The repository builds on the **research phase**, where Hub partners identify, select and document BP&I. It involves the assessment and editorial process to feed the data in the correct format into the repository. This is the collaborative process that is being trialled and demonstrated in WP1.
4. The **main frontend** graphic user interface (GUI) is the ROSEWOOD4.0 website, which provides open access to the repository to the various target groups. The GUI enables any user to query the database using various search and filter functions to rapidly explore the information contained in the repository. The repository supports multilingual content.
5. The repository structure allows also make the data accessible for **other platforms** or partner websites, for example through import procedures or API queries. These can include specific thematic platforms (e.g. nature-based solutions, circular economy) maintained by certain R&D communities, networks, industry groups or initiatives with a specific regional focus.
6. Specific final outputs of the ROSEWOOD4.0 (e.g. final reports, presentations, dissemination materials, videos) will also be stored on the **Zenodo.org** open access repository, developed under the European OpenAIRE program and operated by CERN, to ensure long-term access of all main results.

The backend and frontend have been programmed and installed on the web (CESEFOR, EFI, IW).

3.1.2 BP&I common factsheet template

A detailed factsheet template (cf. Annex II) was defined as part of the repository development. This common factsheet defines the agreed contents to be completed for every BP&I before publication in the knowledge repository. It expands the initial dataset of the raw data collection during the screening phase (cf. chapter 2.1) and defines all necessary items to ensure full contents, functionality, and consistency of the repository.

The template includes the following sections and elements:

- Internal code and date of entry of BP&I
- Language of content (multilingual versions of BP&I)
- Main factsheet contents:
 - titles, teaser statement, keywords
 - geographical and temporal references
 - domain and solution type classifications
 - abstract text, including assessment e.g. cost/benefit analysis
- Contact data:
 - lead owner/author of BP&I
 - intermediary project partner (reporter)
 - consent for publication
- Resources and references: DOIs and URLs
- Additional optional features: further classification parameters
- Picture materials: visuals, logos, photos, copyright info, descriptive captions

To ensure that many BP&I can be processed, and that the repository can be easily appended further by external partners and in the future, the documentation should be as easy as possible. The main idea is to provide an **efficient tool** that collects only a **concise description** about a BP&I solution and **guides** the interested reader to further accessible content and sources.

The template structure is consistent with the **EIP-AGRI common format for practice abstracts**¹. Although the ROSEWOOD4.0 template is more complex for the purpose of the repository, it allows to extract the key info BP&I in a correct manner that is consistent with the EIP-AGRI format. It is thus ensured that the final BP&I collection can simultaneously feed into the EIP-AGRI knowledge database.

To start the collection and documentation of BP&I, an Excel file was created for partners to save the data of the factsheets while the online database is not operative yet. Once operative, the data file is transferred to the database of the knowledge platform, the usage of this Excel file will be discontinued, and authors of factsheets will be requested to enter and edit new factsheets directly in the online frontend.

3.1.3 Frontend for end-users

The new frontend of the repository is redesigned to match ROSEWOOD4.0 visual identity, which applies both to the webpage and the factsheets.

- **Enhanced search functions** and visualisation of results to allow for more query options and an attractive user experience.
- **Good readability** of contents in the search tools and factsheet viewer that are well designed and aligned with various visual elements such as photos, graphics, videos, and logos.

¹ <https://ec.europa.eu/eip/agriculture/en/eip-agri-common-format>
https://ec.europa.eu/eip/agriculture/sites/default/files/annex_to_eip_guidelines_on_eip_common_format_-_16_march_2016_0.pdf

- **Interactive map viewer** to display location of and statistics about the BP&I identified in a query result. The viewer allows to zoom into results and depicts contextual geoinformation.
- BP&I having received **higher interest** from users will be highlighted in the search results. A “Like” button is the most simple, straightforward solution to rank results based on collected user feedback.

Because the frontend is still under development, all further features will be described in detail in the Technical note of the repository (deliverable report D1.7).

3.1.4 Multilingual access

The frontend includes a **fully-fledged multilingual functionality**, in order to ensure a widest possible access to the content by national target groups. Because forestry is still a quite traditional and rural profession, information that is only accessible in English can hardly be disseminated successfully with wider impact. The project team decided therefore to undertake a main effort to implement a multilingual repository.

English is the compulsory main language in which all BP&I must be documented by the editorial team comprised of Hub members. The repository is however able to incorporate **all other main European national languages**. Therefore, the responsible editorial partner is asked to provide at least one national translation of each BP&I, if not more. In fact, any BP&I factsheet can be stored in many language versions, and the frontend interface can be accessed in any national language chosen by the user.

Matching results	English	Spanish	German	Danish
1				
2				N.A.
3			N.A.	N.A.

Figure 7 Example of multilingual access of an end-user that can read English, German and Danish

The interface supports even **simultaneous searches in multiple languages**. When performing a query, besides the selected main language, the end-user will be able to select other languages that he/she can read. The query returns the matching results in the following order of priority:

- Matching results in selected main language,
- Matching results in other languages that the end-user can read (from top to bottom priority),
- Matching results in English (even if not selected in other languages that the end-user can read).

3.1.5 Editorial process and data management

To ensure that information to be included in the knowledge repository is consistent, complete, and correct, a peer review procedure will be implemented by an **editorial team**. The editorial team comprises a group of nominated persons (reviewers) from the Hubs who oversee performing a crosscheck and approval of the BP&I factsheets, before they are published openly in the knowledge repository. The editorial team meets on a regular basis (i.e. once per quarter) to review progress of new content to be published in the repository. The editorial team is chaired by EFI and IW.



- **Reviewers** will take over assignments to review sets of factsheets and the annexed additional reference materials, propose necessary corrections or revisions to the authors of a factsheet if necessary, and approve the material when it has been finalized accordingly. The main aspects are that the factsheets contain complete content and useful pictures, that the text is readable and informative, that some references and additional material are included, and that the consent by the BPI owner/author has been provided accordingly. Currently, the reviewers are represented by staff members of the Regional Hub Lead partner organisations (NE: LUAS, CWE: HCS, SWE: CESEFOR, CEE: FORZA, SEE: CEKOM). They can assign tasks to prepare or review factsheets to other members in their regional hubs as well as national editors.
- **National editors** have a supporting role to check the national language versions, which are usually translations from the original BPI abstract in English. Here more reference persons become involved who can read and check the texts in specific language, in case that the reviewer cannot do it. This job can also be given to professional translators. The editorial team maintains the list of persons nominated as national editors.

Registered access to the knowledge repository is granted to Hub members and reviewers, so they are allowed to edit and process data directly in the repository via the online interface. Many persons can work on the data in the repository remotely and simultaneously, which makes the editorial process very efficient. The editorial team decides and oversees the access rights.

External users usually own the collected BP&I, i.e. the knowhow, the product, the tool, the patent, or simply the content of a publication that is used as reference material. Therefore, the **consent of the owner or main author** needs to be obtained prior to the publication of a factsheet. They can give their consent directly in the knowledge repository (YES/NO tick boxes the factsheet form sent as a special website link to them for confirmation) or in written form (e-mail, letter). Hub partners are responsible to contact the concerned organisations or persons and collect their approval.

In short, the consent of publication comprises the following terms:

- I am the owner/author/partner of the BP and am in an eligible position to provide this confirmation.
- I am just an intermediate. The owner provides the written consent to the Terms by e-mail.
- Any public funding or IPR has been duly acknowledged (e.g. EU projects, trademarks, ...)
- I give consent to the privacy terms/GDPR, Cookies, Google Analytics etc. (for internal usage).
- I confirm that my contact (name and e-mail) can be published in the factsheet. YES/NO.

External users are **explicitly invited to contribute** as well to the platform, because the goal is to establish a fully open platform. Any external users can view and query the information in the ROSEWOOD 4.0 platform, but they are not foreseen to register in the platform, and so they are not allowed to edit the data directly.

To make their contribution as easy as possible, an external user can also submit BP&I factsheets to the repository via an open online form of the common factsheet template. Their contribution can be considered for publication by the editors, provided that they communicate personal contact data (name and e-mail) and confirm their approval of the terms and conditions of the knowledge repository (compulsory).

3.1.6 Implementation of the knowledge platform (beta version)

The first beta version of the online platform was launched on 10 Sep 2021. The web interface was designed and programmed by EFI and CESEFOR based on a Wordpress platform. It is accessible under the weblink: <https://www.forestinnovationhubs.rosewood-network.eu/en/>

- *Main page:* the main interface consists of the query box and the preview list. The query allows to search for keywords or any term (text string) and apply filters on the main category fields (country, type, language, domain, challenge, etc). The result of a search is a list of relevant selected BPI which are presented in a

mosaic or a list view. Each mosaic tile includes the BPI title, short description, a thumbnail picture, main keywords, the available languages, and links to websites and resources (videos, downloads).

- *Factsheet public view*: Each factsheet can be opened by the user through simple click. The factsheet view provides the full abstract, all visual items, and the detailed additional information (categories, contacts, references, additional resources).
- *Factsheet edit mode*: Project partners and stakeholders (reviewers, editors, expert) obtain an own user account with secure login. They can then directly add, edit, and publish factsheets. The edit form gives them direct access to revise texts, classify the categories and edit all items.
- *Factsheet language versions*: The translation view is a special edit function, where the editor creates a copy of an existing factsheet and then translates it into the new language.

The useability of the query form is still being tested and several adjustments are foreseen. All consortium partners were given the opportunity to provide feedback on the layout (two dedicated meetings were held for that purpose). The external Advisory Board members provided also useful feedback. The adjustments are being implemented directly, so the platform remains permanently accessible online.

3.1.7 Long term vision of the knowledge platform

IW, EFI and SIG will decide before the end of the project on a **long-term agreement** to maintain the knowledge platform. It will ensure that all results remain accessible for at least 5 years beyond the project lifetime (to be detailed in deliverable report D1.7). The platform shall be linked with various other platforms e.g. EIP-AGRI, ERIAFF, FTP, SCAR, EFI's Bioregions Facility, etc. As an open tool, the ROSEWOOD 4.0 platform will be continued as channel for dissemination and business exploitation of the Hubs and other regional initiatives in the forest-based sector. All main functionalities and essential curation of contents will be ensured. It is also an option to include the platform in further projects e.g. under Horizon Europe or regional funds.

3.2 Preparation of Dissemination Materials

3.2.1 Collection of BP&I abstracts

The Hub partners are working to complete the BP&I factsheet collection using the agreed common format. The focus is on those BP&I factsheets that have been selected as priority for the Hubs (cf. chapter 4).

Currently the platform contains 271 BPI (1 November 2021). The editing and proofreading of the first batch of 50 BPI factsheets which were identified as first priority for the Hubs has been completed (see D1.3). Besides English, translated texts in at least one national language were completed.

The second batch of another 50 BPI is still work in progress. The list of selected BPI has been agreed and the factsheets in the platform are to be completed by the editors until end of December 2021.

EFI has developed a corporate identity and first general dissemination material (cf. D4.1 – D4.4). These provide a common basis for informing about the project and its objectives and are used during the communication of Hub members with external experts and stakeholders and the wider dissemination started during the last months. The ongoing activities can be followed on <https://rosewood-network.eu>.

3.2.2 Creation of short videos

A key output for ROSEWOOD 4.0 dissemination will be a **series of short video clips** realized by the Regional Hubs. The aim is to develop attractive, informative audio-visual film material to present a selected group of BP&I to a wide audience. Hub partners are in charge to realize the videos with support from local film crews or journalists as service providers.

To ensure consistent quality, a set of **guidelines for video production** was provided to partners by EFI (cf. Annex III). It was decided to produce short films of 3-5 min length that portray a specific BP&I using interviews/short statements from practitioners and visual footage of the BP&I “in action”. The video shootings and editing of clips are work are ongoing. More than half of the videos have been completed (Table 1).

The **selected BP&I** for the videos are considered by the Hubs as highly promising solutions to overcome typical regional barriers for wood mobilization using digitalization, smart technology, and collaborative approaches. The following selection list is a result of the validation process (cf. chapter 4).

Table 1 BP&I selection for video clip production per Regional Hubs (work progress status 1 Nov 2021)

Hub	No.	Best practice	Country	Partner	Status
NE	1.	Virtual Forest / Virtuaalimetsä 2.0	FI	LUAS	Video
	2.	Joint wood terminals	FI	LUAS	Video
	3.	FeltGIS Ltd	NO	Tretorget	In prep.
	4.	Use of drones in vocational education	NO	Tretorget	In prep.
	5.	Arboair - Detecting bark beetles with AI	SE	Paper Prov.	Video
	6.	HighVision - Virtual reality support for crane operators	SE	Paper Prov.	Video
CWE	7.	KWH4.0 - Center of Excellence Forest and Timber 4.0	DE	FBZ	Video
	8.	Kollegenschutz4.0 - Work safety improvement system for forest operations	CH	BFH	In prep.
	9.	FORSITE - dynamic forest site classification to support adaptive forest management	AT	HCS	In prep.
	10.	Joint video: <i>Role of the private forest owner association in for mobilization, climate change adaption, digitalization</i>	FR, DE, CH, AT	HCS	In prep.
SWE	11.	La forêt bouge (The forest moves)	FR	CNPF	Video
	12.	Climafor – Carbon accounting tool	FR	CNPF	Video
	13.	Forest Area Aggregation (Areas Florestais Agrupadas)	PT	ISA	Video
	14.	SISREP - Afforestation information system	ES	CESEFOR	In prep.
	15.	Forest LIDARioja	ES	CESEFOR	In prep.
	16.	LegnOK	IT	AIEL	In prep.
CEE	17.	Forest Data Bank	PL	ITD	Video
	18.	TimFlow – Wood Tracking	RO	ProWood	Video
	19.	LignoSilva INFRA - 3D CT scanner	SK	NLC	In prep.
	20.	Electronic Timber Tracking	UA	FORZA	In prep.
	21.	Joint video: tbd			In prep.
SEE	22.	MojGozdar (MyForester)	SI	SFI	Video
	23.	SecureChain – Bioenergy system for wood industry	GR	CLUBE	Video
	24.	CIA2SFM - Cooperation in forest management training	HR	CEKOM	Video
	25.	RecAPpture - mobile app for collection of used wood	SI	SFI	Video
	26.	Public data of forests	HR	CEKOM	Video

Notes: Regional Hub abbreviations - NE Northern Europe / CWE Central-Western Europe / SWE South-Western Europe / CEE Central-Eastern Europe / SEE South-Eastern Europe

4 Clustering and Validation of BP&I between regions

4.1 Validation of BP&I

4.1.1 Selection and prioritisation

ROSEWOOD4.0 accomplishes a two-level validation: a) **EU level / whole project**, and b) **Hub level**. A validation served to review the selection results carried out in the Hubs, to review the dissemination material under preparation, to collect comments for clarification and improvement, and to approve the final BP selection, the final dissemination materials, and further related activities (e.g. training actions). A main purpose has been to align the Hub priorities and to steer the selection towards the most impactful results for the whole project.

In the validation step, **BP&I selections, and rankings** of different Hubs were compared, and common priorities and interests of different regions as developed in the Regional Roadmaps under WP2 were identified. For this, the results of the SWOTs were used and BP&I were matched against the regional needs identified. By doing this, BP&Is of the longlist were prioritised according to the regional priorities in terms of knowledge transfer between Hubs.

To produce a **global priority list** for the whole project, BP&I across all regions were analysed. Regions with common interest were paired to work jointly on the elaboration of BP&I documentation and develop mutually beneficial knowledge exchange and training activities.

The European-level validation helped to analyse the prioritised BP&I and collect additional evidence or arguments to describe the high relevance of the selected BP. For example, this took a closer look at Technology Readiness levels (TRL), cost/benefit analysis, practical benefits for a region and the Hub stakeholders, measures to address bottlenecks for implementation, and/or consider policy impacts and other cross-regional priorities.

4.1.2 Validation workshops with stakeholders

To validate the BP&Is selected as well as the materials, a series of **3 workshops per Hub** was implemented, involving project partners within the 5 Hubs and interested invited experts and stakeholders. The content of the workshops had been designed to also allow some time to validate the results of other WPs, in order to not involve experts in too many workshops.

The 3 workshops are organised in the following order and logic of contents:

- 1) **First workshop**
 - a. validation of SWOT from WP2 (prioritisation of needs)
 - b. selection / pre-assessment of Hub BPs
 - c. selection of Hub BPs for videos
- 2) **Second workshop**
 - a. validation of BPs selection and first materials
 - b. prioritisation of other Hub BPs (to cover needs of the Hub)
 - c. directions of Hubs Roadmaps and implementation steps (e.g. new initiatives)
- 3) **Third workshop**
 - a. draft knowledge platform, needs of practitioners, validation
 - b. presentation of training course concept from WP3
 - c. validation of 2nd batch materials
 - d. follow up on Hub Roadmaps and implementation steps (WP2)

Regarding the preparation of dissemination materials and the validation, best practices owners were involved, as far as they were willing to support. The selection and the involvement process of these external contributors has been described in D6.1, relating ethical issues of the process.

Owing to the restrictions of the COVID-19 pandemic, most workshops so far needed to be carried out by partners as **online web conference meetings**. The team thus needed a bit more time for adaptation of the procedure and the preparation of the workshops.

Although this has been challenging, partners are now confident with the good results obtained. A positive aspect that has been recognized is that it has turned out quite easy to involve experts from other countries in these online meetings, which enabled for **direct exchange between Hubs** and regions already during the second round of validation workshops.

The following validation workshops have been accomplished until Nov 2021 (Table 2). The participants, main contents and outcomes of the workshops are documented in internal Minutes reports to the Steering Committee.

Table 2 *Regional Hubs validation workshops for BP&I assessment and Roadmaps*

Hub	Lead organizer	WS no.	Date	Number of participants		
				Partners	Stakeholders	Total
1-NE	LUAS, Paper Province, LUKE	WS1a	10/06/2020	10	5	15
		WS1b	23/09/2020	9	5	14
		WS2	17/02/2021	10	5	15
		WS3	21/09/2021	10	5	15
2-CWE	HCS, FBZ, CNPF	WS1	17/09/2020	8	3	11
		WS2	03/03/2021	13	49	62
		WS3	22-23/09/2021	11	4	15
3-SWE	Cesefor, AIEL, ISA, CNPF	WS1	24/06/2020	11	14	25
		WS2	03/12/2020	12	10	22
		WS3	26/04/2021	7	9	16
4-CEE	FORZA, ITD, PROWOOD, NFC	WS1	25/09/2020	13	21	34
		WS2	18/11/2020	17	14	31
		WS3	25/10/2021	13	24	37
5-SEE	CEKOM, SFI, CluBE	WS1	18/06/2020	12	15	27
		WS2	28/09/2020	7	27	34
		WS3	17/03/2021	15	29	44

The validation workshops have been useful ‘soundboards’ as a means to obtain feedback and suggestions of external stakeholders regarding the project results. The stakeholders comprised practitioners and experts that are very experienced and familiar with the local conditions of their region or country inside the Regional Hub. Most of the stakeholders (40%) represented research organisations or academia, followed by providers of

transversal services (26%; ICT companies, trans-sectorial clusters, development agencies, etc.). This trend was shared by all hubs except in NE Hub, where it was inverted. Forest policymaking and forest managers represented 9% and 8% of the stakeholders, respectively. Lower shares (between 1% and 3%) were for forest owners associations, wood harvesting and logistics companies, wood processing industries, pulp and paper industries, machinery manufacturers and companies consuming wood-based products (e.g. furniture manufacturers, construction companies, printers, etc.).

This over-representation of stakeholders from research and academia in this kind of events is very common in thematic networks and it is due to the work flexibility of these professionals. It may not be negative *per se*, as researchers can play the role of “honest broker” of best practices and innovations. The considerable number of providers of transversal services is due to 1) the large spectrum of this category, and 2) the fact that many of these providers are companies developing industry 4.0 innovations that can be features as ROSEWOOD4.0 factsheets.

Finally, on-line workshops allowed a higher number of attendees and reached the same objectives, when compared to the in-person ones.

4.2 Synergies for knowledge exchange between Regional Hubs

Each Regional Hub developed a **shortlist of priority BP&I**, which were selected as a result of the exchange with regional experts during the road mapping process and the discussions in the validation workshops. The results from the workshops and roadmaps of different Hubs were combined and analysed by WP leader IW in view of common interests and complementarities. The Hub shortlist include a) BP&I from the own Hub and b) BP&I from other Hubs. The following matrix tables provide the detailed overview of the BP&I distribution corresponding to the priorities of each Hub (Table 3 & 4).

In total, 171 BP&I were shortlisted by the Hubs as potentially relevant for their needs, of which 79 BP&I originate from within the own Hub, and a total of 92 BP&I from other Hubs. The SWE Hub selected only 19 BP&I, because their first focus was on exchange between the partner countries inside the Hub. In contrast, the SEE Hub selected a total of 56 BP&I, which of 32 are BP&I from other Hubs.

Note: This analysis is based on the initial BPI long list (April 2021). BP&I that were added later are not included.

Table 3 BP&I selection: overview statistics per Hub

Hub	Total BP&I own Hub	Total BP&I other Hubs	1-NE	2-CWE	3-SWE	4-CEE	5-SEE	7-EU & 8-INT	Total BP&I selected
1-NE	16	10	16	6	2	2	-	-	26
2-CWE	18	21	13	18	5	-	1	2	39
3-SWE	17	2	-	2	17	-	-	-	19
4-CEE	4	27	8	11	3	4	4	1	31
5-SEE	24	32	9	15	2	5	24	1	56
Total	79	92	46	52	29	11	29	3	171

Note: The total figures per other Hubs include double counting of BP&I selected simultaneously by several Hubs

The ranking according to the declared interest of Hubs allows to further refine the selection (Table 4). A majority of a total 106 BP&I were chosen by only one Hub. However, a total of 30 BP&I were picked to be relevant to

several Hubs. These include 23 BP&I with interest from two Hubs and 7 BP&I with interest from 3 or more Hubs. They also show a fair balance of BP&I from all Hubs.

Table 4 *BP&I selection : ranking of possible synergies per Hubs*

<i>Number of Hubs with declared interest</i>	<i>Total BP&I count</i>	<i>1-NE</i>	<i>2-CWE</i>	<i>3-SWE</i>	<i>4-CEE</i>	<i>5-SEE</i>
1 (Hub internal)	106	17	23	16	22	28
2 (Hub bilateral)	23	13	13	1	10	9
3 or more (multi Hub)	7	3	4	2	5	7
Total	136	33	40	19	37	44

Note: The total figures include double counting of BP&I selected simultaneously by several Hubs

The following main conclusions can be drawn from this analysis:

1. The selection confirms the high potential for cross-regional exchange and knowledge transfer between the Hubs. The selection differs between Hubs and shows different strategies, but they reveal a strong interest in innovations from outside the region. The highest interest according to this count attracted BP&I from the CWE Hub; but all other Hubs gained mutual interest for their BP&I.
2. The total number of 171 BP&I covers a broad range of solutions. Overall, the selection is sufficiently balanced and represents a sound basis to match priority BP&I with several Hubs and topics.
3. Regarding the majority of the Hub-internal group, the further analysis and dissemination of these BP&I is mostly of an internal interest that will be handled inside the particular Hub, or as a bilateral activity between the interested party and the BP owner/author.
4. The group of 30 BP&I of interest for several Hubs is clearly relevant for a wider European community. They will be the focus to start initiating joint bilateral and multi-lateral dissemination and transfer actions that will be fostered by the ROSEWOOD4.0 project.

5 Annex

5.1 Annex I: BP&I collection long list

Total list of **457** collected BP&I as of 1 November 2021.

Regional Hub abbreviations: NE Northern Europe / CWE Central-Western Europe / SWE South-Western Europe / CEE Central-Eastern Europe / SEE South-Eastern Europe / EU whole EU / INT international

Origin: R1 Rosewood (2018-2020), R4.0 Rosewood 4.0 (2020-2021). *Batch:* A = first batch.

Note: The *No.* is used as internal ID and does not correspond to a count (record duplicates were erased). List in chronological survey order.

No.	Title	Country	Hub	Origin	Batch	Web1Main
1	SiWaWA 2.0 - Forest growth simulation modell	CH	2-CWE	R1	-	www.siwawa.org
2	Moti.ch - Mobile Timber Cruise - Smartphone tool for forest inventory	CH	2-CWE	R1	-	http://moti.ch/
3	DroneMapper - High-resolution drone imagery for timely information about impacts and forest dynamics.	DE	2-CWE	R4.0	-	https://openforests.com/drone-mapper/
4	Virtueller Wald - Virtual Forest	DE	2-CWE	R1	A	http://www.virtueller-wald.de/
5	ForestMap - Calculate your forest inventory online	ES	3-SWE	R1	-	https://forestmap.es/en/
6	Biomassa-atlas - Biomass atlas	FI	1-NE	R1	A	https://www.luke.fi/biomassa-atlas/en/
7	Mellävä - Tool for forest fire forecasting- Innovation	FI	1-NE	R4.0	-	https://www.arbonaut.com/en/about-us/granted-projects
8	Virtuaalimetsä 2.0 - Virtual Forest 2.0 Innovation	FI	1-NE	R1	A	https://virtualforest2.wordpress.com/home/
9	Forest HQ Treemetrics - Central platform to help improve operational performance and optimise log production	IE	3-SWE	R4.0	-	http://www.treemetrics.com/
10	Atlas of forest pests	SK	4-CEE	R4.0	-	
11	Community Forest Act of NRW	DE	2-CWE	R4.0	-	https://www.wald-und-holz.nrw.de/wald-in-nrw/gemeinschaftswald
12	ForestManager - Forest administration app	DE	2-CWE	R1	-	https://forestmanager.de/
13	Forest Association South West	DE	2-CWE	R1	-	https://www.waldgenossenschaft-suedwest.de/start.html
14	Wald-wird-mobil.de - Forest becomes mobile initiative	DE	2-CWE	R1	Ax	www.wald-wird-mobil.de
15	Forest cooperative societies: land consolidation of jointly owned community forests in NRW, Germany	DE	2-CWE	R4.0	A	http://bit.ly/kies2017

No.	Title	Country	Hub	Origin	Batch	Web1Main
16	TREEO - Free app for smallholder farmers in developing countries	DE	2-CWE	R4.0	B	https://fairventures.org/en/our-work/treeo/
17	Wood chain Black Forest	DE	2-CWE	R1	-	https://www.holzkette.de/
18	FVS - Woodland owners community	DE	2-CWE	R4.0	-	https://fvs-eg.de/
19	FAFCYCLE - Regional Forestry owners association Castilla and Leon	ES	3-SWE	R4.0	-	https://www.fafcycle.es/
20	SIMWOOD - Sustainable Mobilisation of Wood	EU	7-EU	R4.0	-	http://simwood.efi.int
21	Metsään.fi - eServices for Forest Owners and Service providers	FI	1-NE	R1	A	www.metsaan.fi
22	Holzbaukarte - Wood construction map	AT	2-CWE	R4.0	-	https://holzbaukarte.at/
23	Kuutio.fi - Kuutio.fi	FI	1-NE	R1	-	www.kuutio.fi
24	Wuudis - Wuudis	FI	1-NE	R1	-	https://www.wuudis.com/en/
25	The forest moves	FR	3-SWE	R1	A	https://www.laforetbouge.fr/
26	HOMED - HOListic Management of Emerging forest pests and Diseases	EU	7-EU	R4.0	-	www.homed-project.eu
27	Forestry 4.0 Initiative	CA	8-INT	R4.0	-	https://web.fpinnovations.ca/forest-operations/forestry-4-0
28	SorSim - Bucking simulator	CH	2-CWE	R1	-	https://www.researchgate.net/publication/275918188_Bessere_Produktions-_und_Nutzungsentscheide_mit_dem_Sortierungssimulator_SorSim
29	HeProMo - Productivity models for harvesting processes	CH	2-CWE	R1	-	https://www.waldwissen.net/technik/holzernte/kalkulation/wsl_hepromo/index_EN
30	GeProOpt_Holz - Link collection to forestry apps and software	DE	2-CWE	R4.0	-	www.lwk-niedersachsen.de/index.cfm/portal/geproopt_holz.html
31	Holzlogistik WBV GmbH - Wood logistics company co-owned by forest owner associations	DE	2-CWE	R4.0	-	https://www.holzlogistik-wbv.eu/
32	ChainWood - Blockchain for Immutable Timber	ES	3-SWE	R4.0	A	www.chainwood.eu
33	AVATAR - Advanced Virtual Aptitude and Training Application in Real Time	DE	2-CWE	R4.0	A	https://www.fnr.de/index.php?id=11150&fkz=2219NR032
34	BIOMOB - Biomass Mobilisation	EU	7-EU	R4.0	-	
35	SILVISMART - Efficiency portal	EU	7-EU	R4.0	-	http://www.tech4effect.eu/efficiency-portal
36	GreenLane - Fast-tracking value and resilience for industrial wood supply	EU	7-EU	R4.0	-	www.vinnova.se/en/p/greenlane--fast-tracking-value-and-resilience-in-industrial-wood-supply
37	FLEXWOOD - Flexible Wood Supply Chain	EU	7-EU	R4.0	-	
38	Forwarder2020 - Smart Forwarder for sustainable and efficient forest operation and management	EU	7-EU	R1	-	www.forwarder2020-project.eu
39	T4E Bucking App	EU	7-EU	R4.0	-	http://www.tech4effect.eu/results/bucking-app/

No.	Title	Country	Hub	Origin	Batch	Web1Main
40	TECH4EFFECT - Techniques and Technologies for Effective Wood Procurement	EU	7-EU	R4.0	-	www.tech4effect.eu
41	Ponsse Fox - A lightly moving thinning machine	FI	1-NE	R4.0	-	https://www.ponsse.com/products/harvesters/product/-/p/fox#/
42	ForOps - Digitally Connected Forest Operation Value Chain- Innovation	FI	1-NE	R4.0	B	https://www.arbonaut.com/en/about-us/granted-projects#inline-10
43	CFHarvest (WoodForce) - Forestry software for harvesting	FI	1-NE	R1	-	https://forestry.trimble.com/solutions/cfharvest/
44	HCT Lorries - HCT Lorries(High capacity transport)	FI	1-NE	R1	-	https://www.metsa.fi/documents/10727/0/104+tn+puutavara-auton+esittelyn+media-aineistot/9f073fa8-8f04-4abc-8544-64716330f1e6
45	Joint wood terminals	FI	1-NE	R1	A	
46	LogForce - CFLogistics (LogForce)	FI	1-NE	R1	-	https://forestry.trimble.com/solutions/cflogistics/
47	Maastotaulukot - Terrain Tables mobile application	FI	1-NE	R4.0	-	https://tapio.fi/kauppa/maastotaulukot
48	Mistra Digital Forest	SE	1-NE	R4.0	B?	https://www.mistradigitalforest.se/
49	MojGozdar - MyForester - Quality assessment of forestry contractors	SI	5-SEE	R1	A	https://www.mojgozdar.si
50	WCM - WoodChainManager	SI	5-SEE	R1	-	http://wcm.gozdis.si/en
51	RFIDdirect - RFID wood products tracking solution	UK	2-CWE	R4.0	-	https://www.rfidirect.eu/
52	Woodvetia - Swiss national wood promotion programme	CH	2-CWE	R1	A	https://www.holz-bois-legno.ch/
53	Forest stock market	DE	2-CWE	R4.0	-	https://www.wald-boerse.de/
54	E-MONTE - Timber trade platform	ES	3-SWE	R1	-	https://emonte.es/
55	Motti - Firewood trading website	FI	1-NE	R1	-	www.motti.fi
56	Industry4.0 - Open Source Wood Initiative	FI	1-NE	R4.0	-	https://opensourcewood.com/
57	APP ins Holz -	AT	2-CWE	R4.0	-	https://www.proholz-stmk.at/proholzakademie/meldungen/weitere-meldungen/proholz-steiermark-bietet-kostenlose-unterrichtsmaterialien-und-lern-app/
58	KLAR - Climate change adaptation modell regions	AT	2-CWE	R4.0	-	https://klar-anpassungsregionen.at/videos
59	Martelosopes - Silvicultural didactic tool	CH	2-CWE	R1	-	http://www.integrateplus.org/Demo-Sites/What-is-a-Martelosope.html

No.	Title	Country	Hub	Origin	Batch	Web1Main
60	KomSilva - Training and public relations materials for activation of private forest owners	DE	2-CWE	R1	A	www.komsilva.de
61	EIP-AGRI FG24 - Focus group 'Forest practices and climate change'	EU	7-EU	R4.0	-	https://ec.europa.eu/eip/agriculture/en/content/focus-groups/new-forest-practices-and-tools-adaptation-and
62	EIP-AGRI FG20 - Focus group 'Sustainable mobilization of forest biomass'	EU	7-EU	R4.0	-	https://ec.europa.eu/eip/agriculture/en/focus-groups/sustainable-mobilisation-forest-biomass
63	ArboEdu - Finnish education technology going global	FI	1-NE	R4.0	-	https://proms.arbonaut.com/
64	WH40 - Forest & Wood 4.0 initiative	CH	2-CWE	R4.0	-	www.wh40.ch
65	KWH4.0 - Center of Excellence Forest and Timber 4.0	DE	2-CWE	R4.0	A	www.kwh40.de
66	Programme 'Rural areas' in NRW	DE	2-CWE	R4.0	-	
67	KEMERA - Financing of Sustainable Forestry	FI	1-NE	R1	A	http://www.metla.fi/metinfo/sustainability/SF-2-financial-instruments.htm
68	CIFA - Forest insurance investment account	FR	3-SWE	R4.0	B	http://draaf.grand-est.agriculture.gouv.fr/Compte-d-investissement-forestier
69	CE LignoSilva - Centre of Excellence of Forest-based Industries	SK	4-CEE	R4.0	-	www.lignosilva.nlcsk.org
70	ForLog - Forêt Logistique Conseil	FR	3-SWE	R1	-	https://www.foretlogistique.eu/
71	ExploTIC - ExploTIC System	FR	3-SWE	R4.0	-	https://www.fcba.fr/catalogue/1ere-transformation-approvisionnement/actions-collectives/explotic-les-technologies-de-linformation-et-de-la-communication-au-service-de-lexploitation
72	FORETDATA -	FR	3-SWE	R1	B	https://www.gipatgeri.fr/foretdata
73	NEOSYLVAQ - Project NEOSYLVAQ	FR	3-SWE	R1	B	http://www.cabinet-coudert.com/documents/La%20Montagne%20Ventes%20bois%20version%20numerique%20CABINET%20COUDERT%204juil18.pdf
74	eMoBois -	FR	3-SWE	R1	B	https://emobois.fr/
75	MOFOB - Forest Wood module	FR	3-SWE	R1	-	https://observatoire-biomasse.franceagrimer.fr/app.php/accueil-mofob
76	EXTRAFOR - Project "Exoskeleton for forest work"	FR	3-SWE	R4.0	-	
77	SecureChain - Small and medium enterprises securing future-proof bioenergy chains	GR	5-SEE	R4.0	A	http://www.securechain.eu/

No.	Title	Country	Hub	Origin	Batch	Web1Main
78	Timtrace - Forensic tracing of tropical timber: delivering an operational service	INT	8-INT	R4.0	-	https://www.wur.nl/en/show/TIMTRACE.htm
79	Simulation-based design for off-road driving and driverless machines	SE	1-NE	R4.0	-	https://www.mistradigitalforest.se/nyheter/simuleringsbaserad-design-utvecklar-terrangkorning/
80	SmartAgriHubs - Connecting the dots to unleash the innovation potential for digital transformation of the European agri-food sector	EU	7-EU	R4.0	-	https://smartagrihubs.eu/
81	HolzmobRegio	AT	2-CWE	R4.0	A	https://www.waldverband-stmk.at/holzmobregio/
82	Festmeter	AT	2-CWE	R4.0	B	https://www.festmeter.at/
83	Forest mapping management tool	AT	2-CWE	R4.0	-	https://www.fmm.at/
84	Woodlogistic Data Plattform	AT	2-CWE	R4.0	B	https://www.holzcluster-steiermark.at/
85	FelixForst	AT	2-CWE	R4.0	B	www.felixsystems.at
86	Netbee	AT	2-CWE	R4.0	-	https://www.netbee.cloud
87	Evergreen Innovation Camp - Hackathon	AT	2-CWE	R4.0	A	https://www.evergreen-innovationcamp.io/
88	DeepDigitalForest	AT	2-CWE	R4.0	-	https://projekte.ffg.at/projekt/3335094
89	Forest-IMate	AT	2-CWE	R4.0	B	https://forest.aau.at/
90	NETGEN	AT	2-CWE	R4.0	-	https://www.netgen.or.at/
91	FORSITE	AT	2-CWE	R4.0	B?	https://forschung.boku.ac.at/fis/suchen.projekt_uebersicht?sprache_in=de&menue_id_in=300&id_in=12683
92	Application of drones for seedling transport in steep terrains /mountainous areas	AT	2-CWE	R4.0	Ax	
93	BioRES - Biomass trading centres calculation tool	AT	2-CWE	R4.0	A	www.waldverband-steiermark.at
94	Smart GigaWood	AT	2-CWE	R4.0	-	https://www.innofreight.com/
95	Image Matching	AT	2-CWE	R4.0	-	https://bfw.ac.at/rz/bfwcms.web?dok=10490
96	EKOFOLIO - Expanding Key Opportunities in FOrEst Investments: Liquidity, Impact and Ownership through Blockchain	LU	2-CWE	R4.0	-	https://cordis.europa.eu/project/id/876676
97	FHPDat	AT	2-CWE	R4.0	-	https://www.forstholzpapier.at/index.php/fhpdat
98	Calculation of wood fuel parameters	AT	2-CWE	R4.0	-	https://www.klimaaktiv.at/erneuerbare/energieholz/werkzeuge-und-hilfsmittel/kenndatenkalkulation.html
99	Forest women network	AT	2-CWE	R4.0	-	https://www.forstfrauen.at/en/
100	QGIS - Forest	AT	2-CWE	R4.0	-	http://www.steirischerwald.at/netautor/napro4/appl/na_professional/par

No.	Title	Country	Hub	Origin	Batch	Web1Main
						se.php?mlay_id=20000&xmlval_ID_DOC%5b0%5d=5013224
101	PROZEL - Forecasting threats to forest ecosystems through the implementation of an innovative electronic system for the recognition of odors	PL	4-CEE	R4.0	A	http://proz.el.fizyka.pw.edu.pl/
102	eLMapa - Forest Numerical Map Browser	PL	4-CEE	R4.0	-	https://www.buligl.pl/web/poznan/eLmapa
103	BDL - Forest Data Bank	PL	4-CEE	R4.0	A	https://www.bdl.lasy.gov.pl/portal/en
104	SAT4EST - Earth observation based service supporting local administration in non-state forest management	PL	4-CEE	R4.0	-	http://www.sat4est.pl/
105	mHabitax	PL	4-CEE	R4.0	-	https://www.taxusit.com.pl/en/mHabitax
106	TIS - Timber Inventory System	PL	4-CEE	R4.0	-	http://tis-group.eu/
107	Sudety-Beskidy - Development of an information system for Sudety and Beskidy mountains' forest monitoring and assessment	PL	4-CEE	R4.0	-	http://www.monitoringgor.pl/
108	LasInfo	PL	4-CEE	R4.0	-	https://www.taxusit.com.pl/en/Lasinfo
109	CROPTech - Intelligent systems for breeding and cultivation of wheat, maize and poplar for optimized biomass production, biofuels and modified wood	PL	4-CEE	R4.0	-	https://www.itd.poznan.pl/en/events/project-croptech
110	Taksator	PL	4-CEE	R4.0	-	https://www.taxusit.com.pl/SmokeDetection
111	Smoke Detection - Automatic wildfire detection system for effective nature protection	PL	4-CEE	R4.0	-	https://www.smokedetectionsystem.com/
112	SUSTREE - Conservation and sustainable utilization of forest tree diversity in climate change	EU	7-EU	R4.0	-	https://www.interreg-central.eu/Content.Node/SUSTREE.html
113	ForBioSensing - Comprehensive monitoring of stand dynamics in Białowieża Forest supported with remote sensing techniques	PL	4-CEE	R4.0	-	http://www.forbiosensing.pl/
114	KORA - Dendrometric repository, modelling of bark thickness along tree stems and development of volume formulas for stacked cut-to-length sawmill logs and pulp wood (Kora = Bark)	PL	4-CEE	R4.0	-	-
115	Forest stock market e-drewno.pl	PL	4-CEE	R4.0	A	https://www.e-drewno.pl/
116	Forest-wood portal	PL	4-CEE	R4.0	-	http://drewno.zilp.lasy.gov.pl/
117	ReGaP - Recycling of used wood in Germany and Poland	PL	4-CEE	R4.0	B	https://www.itd.poznan.pl/en/events/project-recycling-of-used-wood-in-germany-and-poland-regap

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118	Opti_wood - The improvement of process and material effectiveness in wood processing industry	PL	4-CEE	R4.0	-	https://optiwood.eu/
119	Kostrzyca Forest Gene Bank	PL	4-CEE	R4.0	-	http://www.lbg.lasy.gov.pl/
120	Threats to forest ecosystems - natural disasters and prevention	PL	4-CEE	R4.0	-	https://zagrozenia.ibles.waw.pl/
121	Private forests - opportunities, problems, solutions	PL	4-CEE	R4.0	-	https://lasy-prywatne.pl/
122	Forests of Ukraine, Geoportal	UA	4-CEE	R4.0	-	https://forestry.org.ua/webmap/public/0/ ; https://forestry.org.ua/BVV/public_fire/ ; https://forestry.org.ua/offer/pub21/uk-1/
123	WebULR	UA	4-CEE	R4.0	-	http://www.lisproekt.gov.ua/webulr
124	Smallforest	UA	4-CEE	R4.0	-	http://www.lisovporyadnyk.org.ua/prognams/lisovporyadnyk/
125	ProZorro. Sale.Timber	UA	4-CEE	R4.0	-	https://sale.uub.com.ua/filter/wood?promo_code=0040
126	Electronic timber tracking	UA	4-CEE	R4.0	A	https://open.ukrforest.com/
127	Database of MUC maps	EU	7-EU	R4.0	-	https://bioplat.eu/
128	Forest in the smartphone	UA	4-CEE	R4.0	-	
129	Re-Leaf - Re-Leaf	UA	4-CEE	R4.0	-	https://news.agro-center.com.ua/en/eco-farming-en/a-ukrainian-student-makes-paper-from-fallen-leaves.html
130	TimFlow - TimFlow - WoodTracking	RO	4-CEE	R1	A	https://www.timflow.com/
131	Cluj Future of Work	RO	4-CEE	R4.0	-	https://diviziadeinovare.ro/future-of-work/
132	SUMAL 2.0 - Digital Wood Tracking	RO	4-CEE	R4.0	-	https://www.sts.ro/
133	CNC4AXIS - Mechatronic System with four axes for the wood industry	RO	4-CEE	R4.0	-	https://mdm.utcluj.ro/cecuri-de-inovare/cnc4axis/index.html?fbclid=IwAR3YGGGngZ11vNpQoAe5FI6Y1A9AmwMAX8YZHnf5CHMBkbwSBZZto8pqmxU#
134	NFI - National Forest Inventory of Romania	RO	4-CEE	R4.0	-	https://roifn.ro/site/en/
135	SuperMarket of Woods - SuperMarket of Woods	RO	4-CEE	R4.0	-	https://lemnsupermarket.ro/
136	Build-in-Wood - Build-In-Wood, The eco-benefits of building with wood	RO	4-CEE	R4.0	Ax	www.build-in-wood.eu
137	Fordaq - Fordaq Wood Market	RO	4-CEE	R4.0	-	fordaq.com
138	Expowood4iTech - Expowood4iTech	RO	4-CEE	R4.0	-	https://www.expowood.ro/
139	CAD - Cabinet Vision CAD Software for Design	RO	4-CEE	R4.0	-	https://nikautilaje.ro/
140	Power WIN - Software for design doors and windows	RO	4-CEE	R4.0	-	https://nikautilaje.ro/

No.	Title	Country	Hub	Origin	Batch	Web1Main
141	APPR - Romanian Forest Owners Association	RO	4-CEE	R4.0	-	http://www.appr.org.ro/en/associati-on.htm
142	ATBIOMAP - Advanced Techniques for Biomass mapping in Abandoned Agriculture Land using Novel Combination of Optical and Radar Remote Sensing Sensors	SK	4-CEE	R4.0	-	http://atbiomap.nlcsk.org/index.php/2-uncategorised/113-na-hlavnej
143	e-LOS - Interactive atlas of biotic agents affecting forest tree health	SK	4-CEE	R4.0	-	www.e-los-sk
144	reFlex - Remote Forest Land Explorer	SK	4-CEE	R4.0	-	http://www.forestportal.sk/projekt-monitoring/konferencia/Documents/Sa%C4%8Dkov_DPZ_aSW_reFlex.pdf
145	Models of forest adaptation to climate change	SK	4-CEE	R4.0	-	
146	Demonstration of economic and ecological value of managed forest	SK	4-CEE	R4.0	-	
147	STALES - Web information system on forest condition	SK	4-CEE	R4.0	-	http://www.nlcsk/stales
148	LignoSilva INFRA - 3D CT scanner for wood fault detection	SK	4-CEE	R4.0	A	http://lignosilva.nlcsk.org/files/LignoSilva_brochure.pdf
149	Web LES - On-line information system	SK	4-CEE	R4.0	-	https://intranet.lesy.sk/forest/weble_s
150	GIS LSR - Geographic Information System of Forests of the Slovak Republic	SK	4-CEE	R4.0	-	
151	REMBIOFOR - Remote sensing based assessment of woody biomass and carbon storage in forests	PL	4-CEE	R4.0	-	http://rembiofor.pl/en/
152	WoodChain - WoodChain, blockchain applied to PEFC c.o.c.	IT	3-SWE	R4.0	-	https://www.blockchain4innovation.it/esperti/blockchain-perche-e-cosi-importante/
153	C.A.F.E - Carbon, Aqua, Fire & Eco-resilience DSS	ES	3-SWE	R4.0	A	https://www.resilientforest.eu/resources/
154	WOODMAN™ system	CA	8-INT	R4.0	-	http://www.halcosoftware.com/software-5-woodman
155	National Forest Inventory of Norway	NO	1-NE	R4.0	-	https://www.nibio.no/en/about-eng/our-divisions/division-of-forestry-and-forest-resources/national-forest-inventory
156	Norwegian Moss Products - Remote Sensing	NO	1-NE	R4.0	-	www.mose.no
157	FeltGIS Ltd	NO	1-NE	R4.0	B?	www.feltgis.no
158	ALLMA - Digital forestry plan by Glommen Mjøsen	NO	1-NE	R4.0	-	https://www.glommen-mjosen.no/tommer-og-skogtjenester/skogbruksplan--allma/
159	Owren cable crane	NO	1-NE	R4.0	-	https://owren.no/produktliste/spesia-lprodukter-kabelkran/owren-400#om-maskinen

No.	Title	Country	Hub	Origin	Batch	Web1Main
160	Skisporet.no	NO	1-NE	R4.0	-	www.skisporet.no
161	School of forestry	NO	1-NE	R4.0	B?	https://www.skogkurs.no/kunnskaps-skogen/artikkel.cfm?id_art=20341
162	Skogkurs - Forestry Extension Institute	NO	1-NE	R4.0	A	https://www.youtube.com/user/skogkurs/playlists
163	Ydalir district	NO	1-NE	R4.0	B?	https://fmezen.no/
164	Glulam construction - buildings / bridges	NO	1-NE	R4.0	-	https://www.moelven.com/com/glulam---eco-friendly-strong-and-with-wide-possibilities/glulam/
165	TIMTRACE - Forensic tracing of tropical timber: delivering an operational service	NL	2-CWE	R4.0	-	
166	Use of drones in vocational education	NO	1-NE	R4.0	A	https://www.soloer.vgs.no/hovedmeny/utdanningsprogram/naturbruk/
167	Cross-Forest - Digital Service Infrastructures to integrate models supporting forest management and forest protection	ES	3-SWE	R4.0	A	https://crossforest.eu/
168	What Wood You Do?	SE	1-NE	R4.0	Ax	https://whatwoodyoudo.eu/
169	Arboair - Detecting bark beetles with AI	SE	1-NE	R4.0	A	https://www.arboair.com/
170	Nordluft - Forestry And Agriculture Spreading Systems	SE	1-NE	R4.0	-	http://www.nordluftautomation.com/
171	ForestLiDARioja - Updating and enhancement of forest information in La Rioja obtained from remote sensors: LiDAR and satellite data	ES	3-SWE	R4.0	A	https://www.forest-lidarioja.info/
172	Trestima - Trestima Forest inventory system	FI	1-NE	R4.0	B?	https://www.trestima.com/w/en/
173	Metsäinen - Metsäinen	FI	1-NE	R4.0	-	https://www.metsakeskus.fi/uutiset/uusi-mobiilisovellus-vie-metsatiedon-pariin
174	Peatland simulator SUSI	FI	1-NE	R4.0	-	https://www.luke.fi/en/expert-services/does-remedial-ditching-produce-benefits-let-lukes-peatland-simulator-find-out/
175	The online Forest Indicator Tool	FI	1-NE	R4.0	-	https://www.luke.fi/en/news/forest-indicator-biodiversity-ecosystem-services-and-timber-production-in-one-figure/
176	Ash in forest road maintenance	FI	1-NE	R1	-	https://tapio.fi/kauppa/tuhkan-tienrakennuksen-materiaalina/
177	Drones in forestry planning	FI	1-NE	R1	-	https://www.metsaforest.com/fi/Yritys/Tiedotteet/Pages/Tiedote.aspx?EncryptedId=D4A1DE7C0E797C64&Title=MetsaGroup:Drone-metsasuunnitelmahaastaaperinteisenmetsasuunnittelun
178	Pilke Science Centre - Pilke Science Centre, wooden column-beam building	FI	1-NE	R4.0	-	https://www.tiedekeskus-pilke.fi/en/
179	Working life exchange	FI	1-NE	R4.0	-	https://www.facebook.com/METKO-Mets%C3%A4koulutuksen-

No.	Title	Country	Hub	Origin	Batch	Web1Main
						osaamisen-kehitt%C3%A4minen-Pohjois-Suomessa-563092557533401/?ref=bookmarks
180	Harvesting studies for LUAS	FI	1-NE	R4.0	-	
181	Climate Smart Forestry - Climate Smart Forestry- Innovation	FI	1-NE	R4.0	Ax	http://www.e-julkaisu.fi/metsahallitus/Climate_Smart_Forestry/mobile.html#pid=2
182	CLT Access Matting-Innovation	FI	1-NE	R4.0	-	Programmes (digipolis.fi)
183	UPM My Forest Mobile application	FI	1-NE	R4.0	-	https://www.upmmetsa.fi/testit-jalaskurit/upm-metsa-sovellus/
184	Online network for machinery transfer	FI	1-NE	R4.0	-	https://siirrot.fi/
185	TimberMatic Maps - TimberMatic Maps	FI	1-NE	R4.0	-	https://www.deere.fi/fi/mets%C3%A4koneet/timbermatic-kartat-timbermanager/timbermatic-kartat/
186	Harvesting capacity maps - Harvesting capacity maps	FI	1-NE	R1	-	https://www.metsakeskus.fi/korjuukelpoisuuskartat
187	Simulators in forest machine education	Fi	1-NE	R4.0	-	
188	Ground laser measurement -innovation	FI	1-NE	R4.0	-	https://www.luke.fi/uutinen/puiden-tilavuuden-laskentaan-tarvitaan-uudet-mallit/
189	National Forest Inventory, NFI	FI	1-NE	R4.0	-	http://www.metla.fi/ohjelma/vmi/info-en.htm
190	Metsäverkko	FI	1-NE	R4.0	-	https://www.metsaverkko.fi/fi/Sivut/default.aspx
191	Drones in forestry for single tree detection	CH	2-CWE	R4.0	-	https://www.youtube.com/watch?v=UXHud1SZSj0
192	DetectIT - Detectit - save our forests	CR	5-SEE	R4.0	A	http://gimnazija-velika-gorica.skole.hr/
193	Green City cadastre - Green City cadastre – application	CR	5-SEE	R4.0	-	https://gis.zrinjevac.hr/ http://zelenikatastar.osijek.hr/zelenikatastar/Default.aspx
194	Public data of forests	CR	5-SEE	R4.0	A	http://javni-podaci.hrsume.hr/
195	Digitalized Groundwater Measuring Station System	CR	5-SEE	R4.0	-	https://ec.europa.eu/regional_policy/en/projects/hungary/protecting-the-english-oak-in-the-hungary-croatia-cross-border-region
196	WAVE ŠŠ - „WAVE ŠŠ“ Web application for managing data about forests and forest owners	CR	5-SEE	R4.0	-	https://www.savjetodavna.hr/wp-content/uploads/publikacije/4Bilten1862018l.pdf
197	Online database of wood processing and furniture producers in Croatia	CR	5-SEE	R4.0	-	http://drvna.mps.hr/ords/f?p=MPS_UPITNIK:NASLOVNICA
198	DigiWood - Digital sawmill	SE	1-NE	R4.0	A	https://www.moelven.com/se/digitala-sagverket/
199	Ash - Ash as construction material on roads/surfaces at industries	SE	1-NE	R4.0	-	https://econova.se/atervinning/konstruktion/hardgjordaytor/3464519.3478358.3547025a
200	BioAM - The Wood Region	SE	1-NE	R4.0	-	www.thewoodregion.se

No.	Title	Country	Hub	Origin	Batch	Web1Main
201	Acosence	SE	1-NE	R4.0	-	www.acosence.com
202	Com90 - Remote controlled load securing with automatic monitoring	SE	1-NE	R4.0	-	https://www.exte.se/eng/products/com-90
203	Laser scanning forest	SE	1-NE	R4.0	-	www.skogsstyrelsen.se
204	UMV	SE	1-NE	R4.0	-	www.umv.com
205	HiVision - Virtual reality support for crane operators	SE	1-NE	R4.0	A	https://www.hiab.com/en/pages/log-lift-jonsered/hivision/
206	Bioshare	SE	1-NE	R4.0	-	www.bioshare.se
207	Rottneros	SE	1-NE	R4.0	-	www.rottnersopackaging.com
208	Sunpine	SE	1-NE	R4.0	-	www.sunpine.se
209	LitePaq	SE	1-NE	R4.0	-	www.litepaq.com
210	Cellcomb	SE	1-NE	R4.0	-	www.cellcomb.com
211	GreenAll - Biosorbe	SE	1-NE	R4.0	-	www.biosorbe.com
212	Drinor	SE	1-NE	R4.0	-	www.drinor.com
213	SweScan	SE	1-NE	R4.0	-	www.swescan.se
214	Lignocity	SE	1-NE	R4.0	-	www.lignocity.se
215	Woodtube	SE	1-NE	R4.0	-	www.woodtube.se
216	Modvion wood wind tower	SE	1-NE	R4.0	-	http://www.modvion.com/
217	Waldinfo NRW - Information platform on forests in NRW incl. interactive digital maps on forest cover, ecology, geology, types of use and calamities	DE	2-CWE	R4.0	A	https://www.waldinfo.nrw.de/
218	ELDATsmart - data standard for wood logistics	DE	2-CWE	R1	-	https://www.eldatstandard.de/oft-gefragt/
219	Hilfe im Wald App - Location-based free App for hikers etc. to support contact to paramedics in case of emergency	DE	2-CWE	R4.0	-	https://play.google.com/store/apps/details?id=de.intend.android.hilfeimwald&hl=en
220	Forstify - App for timber trading	DE	2-CWE	R4.0	-	https://forstify.de
221	Hanxleden 4.0 - Online sawmill with fully digitalized process	DE	2-CWE	R4.0	-	https://proholz.nrw/wp-content/uploads/2019/07/Hegener-Hachmann-MvW-170220.pdf
222	Wood Supply 4.0 - Smart Wood Supply Chain Management - assessment of industry 4.0 potentials in the wood supply chain	DE	2-CWE	R4.0	Ax	https://www.fnr.de/index.php?id=11150&fkz=2219NR015
223	Rescue Points - Defined Forest Rescue Points	DE	2-CWE	R4.0	-	https://www.kwf-online.de/index.php/wissenstransfer/waldarbeit/83-rettungspunkte-uebersicht
224	GEODAT - Geographic data standard for wood logistics	DE	2-CWE	R4.0	-	https://navlog.info/
225	privatwald.fnr - Webportal for funding specifically for private forest owners	DE	2-CWE	R4.0	-	https://privatwald.fnr.de/
226	Smart Forest Worker KWH4.0	DE	2-CWE	R4.0	-	www.kwh40.de

No.	Title	Country	Hub	Origin	Batch	Web1Main
227	iWald - Comparison of silvicultural concepts by simulation of growth processes in forests on the smartphone	DE	2-CWE	R4.0	A	https://www.kwf-online.de/index.php/forschungsprojekte/iwald
228	ClusterWIS - Sustainable raw material management	DE	2-CWE	R4.0	-	https://www.rif-ev.de/forschung/forstwirtschaft/clusterwis/
229	S3I - Smart Systems Service Infrastructure	DE	2-CWE	R4.0	-	https://www.kwh40.de/s3i-release/
230	GRIPS-RLP - Greater Area Inventory and Planning System	DE	2-CWE	R4.0	-	https://www.umwelt.nrw.de/fileadmin/redaktion/PDFs/wald/waldinformationssystem_grips-rlp_klimawis.nrw-fe.pdf
231	VEROSIM - Forest management software	DE	2-CWE	R4.0	-	https://www.verosim-solutions.com/en/environment/
232	easyFOREST - easyFOREST	DE	2-CWE	R4.0	-	https://www.easyforest.de/
233	ForestManager - ForestManager	DE	2-CWE	R4.0	-	https://forestmanager.de/
234	WASP - WaspWoodlogistics	DE	2-CWE	R4.0	B	https://www.wasp-logistik.de/englisch.html
235	dataholz - dataholz	AT	2-CWE	R4.0	Ax	https://www.dataholz.eu/
236	Woodpassage - Woodpassage	AT	2-CWE	R4.0	-	https://www.woodpassage.eu/
237	infoholz - infoholz	AT	2-CWE	R4.0	-	https://www.infoholz.at/
238	wooddays - woodbox and wooddays	AT	2-CWE	R4.0	-	https://www.wooddays.eu/
239	Genialer Stoff - Ingenious material	AT	2-CWE	R4.0	-	https://www.genialerstoff.at/
240	Boletus informaticus - Boletus informaticus information system	SI	5-SEE	R4.0	-	https://boletusinformaticus.si/
241	CIA2SFM - Cooperation for innovative approach in sustainable forest management training	CR	5-SEE	R4.0	-	https://e-learning.irmo.hr/
242	Invazivke - Awareness raising, training and action for invasive alien species in the forest	SI	5-SEE	R4.0	A	https://www.invazivke.si/
244	Marteloscope - Marteloscope demonstration plot Pahernik	SI	5-SEE	R4.0	-	Http://www.integrateplus.org/uploads/images/Mediacenter/20160119_Pahernik_Booklet-Final.pdf (1. 7. 2016).
245	MIGHTYFIELDS - Digitalisation of fieldwork data collection	SI	5-SEE	R4.0	-	https://mightyfields.com/
247	OSLIS - Information support for game management in Slovenia	SI	5-SEE	R4.0	-	http://oslis.gozdis.si/
248	RecAPpture - Mobile application for collection of used wood - RecAPpture	SI	5-SEE	R4.0	B?	https://www.m-sora-blog.com/single-post/2019/09/26/Oddajte-odslu%C5%BEen-les-v-krog-ponovne-uporabe
249	SciVie - Digitization of professional works in the field of forestry and ensuring their accessibility through the most institutional repository SciVie	SI	5-SEE	R4.0	-	http://eprints.gozdis.si/

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250	Timberlog - Timber log volume calculator	SI	5-SEE	R4.0	-	https://play.google.com/store/apps/details?id=timber.volume.calculator.timbervolumecalculator&hl=sl
251	Pilot forest land consolidation processes in Nieva and Aguilafuente	ES	3-SWE	R4.0	-	https://agriculturaganaderia.jcyl.es/web/jcyl/AgriculturaGanaderia/es/PIantilla100DetalleFeed/1246464862173/CPParcelaria/1284871365766/CPParcelaria
252	Forest land consolidation to sell the products jointly	ES	3-SWE	R4.0	-	
253	Management boards of member forests	ES	3-SWE	R4.0	-	http://www.montesdesocios.es/content/enido/constitucion-de-juntas-gestoras
254	SOFOR - Forestry Societies of Galicia	ES	3-SWE	R4.0	-	https://www.uxafores.com/sofor
255	CIFA - Forest Association Account	ES	3-SWE	R4.0	-	
256	PROMINIFUN - Pro small-holding task force	ES	3-SWE	R4.0	-	https://www.minifundio.es/
257	AKIS - AKIS focus group	ES	3-SWE	R4.0	-	http://www.redruralnacional.es/grupo-focal-akis
258	PopulusCyL - Poplar in Castilla y León	ES	3-SWE	R4.0	-	http://www.populuscyL.es/
259	Integrated inventory system based on LiDAR information	ES	3-SWE	R4.0	-	https://agresta.org/forestmap-como-generar-un-servicio-de-inventario-forestal-en-internet/
260	Together for the Forests	ES	3-SWE	R4.0	-	http://juntosporlosbosques.ingenierosdemontes.org/
261	MiMCYL - Castilla y León Wooden Intersectorial Table	ES	3-SWE	R4.0	-	http://www.mimcyL.es/
262	BASOA - Basque Country Wooden Intersectorial Table	ES	3-SWE	R4.0	-	http://basoa.org/es/
263	APROMA - Association for the promotion of wood in Galicia	ES	3-SWE	R4.0	-	http://hispagua.cedex.es/en/instituciones/organismo/55546
264	I'm training for my woods	FR	3-SWE	R4.0	B	https://www.jemeformepourmesbois.fr/
265	Harvester simulator	FR	3-SWE	R4.0	B	http://www.epl-bazas.fr/2019/des-simulateurs-au-lycee/
266	LogistiCIPlus -	IT	3-SWE	R4.0	-	http://logisticiplus.it/
267	IT FOR II -	IT	3-SWE	R4.0	-	
268	Skylab -	EU	7-EU	R4.0	-	www.skylabglobal.com
269	RILEGNO -	IT	3-SWE	R4.0	A	http://www.rilegno.org/
270	LegnOK -	IT	3-SWE	R4.0	A	https://www.legnokweb.it/anagrafica/user
271	Environmental Atlas	SI	5-SEE	R4.0	-	http://gis.arso.gov.si/atlasokolja/profile.aspx?id=Atlas_Okolja_AXL@Arso
272	Protection of forest against bark beetle	SI	5-SEE	R4.0	-	http://www.zgs.si/delovna_podrocja/varstvo_gozdov/varstvo_gozdov_pr_ed_podlubniki/index.html

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273	Forest data viewer	SI	5-SEE	R4.0	-	https://prostor.zgs.gov.si/pregledovalnik/
274	Biobord.eu	EU	7-EU	R4.0	-	biobord.eu
275	X-ray scanning of timber	NO	1-NE	R4.0	-	https://www.moelven.com/no/aktuelle-og-nyheter/nyhetsarkiv/2018/norges-forste-sagbruk-med-rontgensyn/
276	Forestry fund	NO	1-NE	R4.0	A	https://www.landbruksdirektoratet.no/no/eiendom-og-skog/skogfond/om-skogfond#hva-betyr-skattefordelen
277	Slovenian forests protection	SI	5-SEE	R4.0	-	https://www.zdravgozd.si/
279	LPN - Website of the special purpose state hunting grounds	SI	5-SEE	R4.0	-	https://www.lpn.si/
280	Afforestation as a climate mitigation action	NO	1-NE	R4.0	-	https://www.landbruksdirektoratet.no/no/eiendom-og-skog/om-skogbruk/skogbruk-i-norge/planting-av-skog-p%C3%A5-nye-areal-er-et-godt-klimatiltak
282	Forestry value creation fund	NO	1-NE	R4.0	-	http://verdiskapingsfondet.no/
283	Choose Forest	NO	1-NE	R4.0	-	https://www.nhomd.no/velgskog
284	Women in Forestry	NO	1-NE	R4.0	A	http://kvinneiskogbruket.no/
285	Think Tree	NO	1-NE	R4.0	B	https://www.tenktre.no/
286	Bark beetle risk map	SE	1-NE	R4.0	B	https://kartor.skogsstyrelsen.se/kartor/?startapp=skogligagrunddata
287	Forest Fire Map	SE	1-NE	R4.0	-	https://kartor.skogsstyrelsen.se/kartor/?startapp=skogligagrunddata
288	Forest Data	SE	1-NE	R4.0	-	https://kartor.skogsstyrelsen.se/kartor/?startapp=skogligagrunddata
289	CAS - CAS / Forest management and new technologies	CH	2-CWE	R4.0	-	https://www.bfh.ch/de/weiterbildung/cas/waldmanagement-neue-technologien/
290	Forwarder2020 prototypes	CH	2-CWE	R4.0	A	https://www.forwarder2020-project.eu/
291	Rolling silviculture planning	CH	2-CWE	R1	-	https://forst.bgb.bern.ch
292	Kollegenschutz4.0 - Work safety improvement system for forest operations	CH	2-CWE	R4.0	A	-
293	iFOS Roadscanner - Road condition monitoring	DE	2-CWE	R4.0	A	https://www.wald-und-holz.nrw.de/aktuelle-meldungen/2016/forstliches-bildungszentrum-von-wald-und-holz-nrw
294	SISREP - SISREP Project: Information system for the forestation of agricultural land for Castilla y León	ES	3-SWE	R4.0	B?	

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295	Cross-Forest (double?) - Field control and georeferencing record in an App	ES	3-SWE	R4.0	-	https://www.tragsa.es/_layouts/GrupoTragsa/Ficha-Proyecto.aspx?param=ESP.0000000492&pi=0
296	e-globulus - Knowledge transfer platform towards sustainable forest management	PT	3-SWE	R4.0	-	https://www.e-globulus.pt/o-que-e
297	Melhor eucalipto - Better eucalypt	PT	3-SWE	R4.0	-	www.celpa.pt/melhoreucalipto/
298	Limpa e aduba - Clean and Fertilize	PT	3-SWE	R4.0	-	
299	PAI - Integrated Action Plan	PT	3-SWE	R4.0	-	
300	Replantar - Replanting	PT	3-SWE	R4.0	-	
301	Areas Florestais Agrupadas - Forest Area Aggregation	PT	3-SWE	R4.0	A	
302	SADfLOR - Forest Decision Support System	PT	3-SWE	R4.0	-	http://www.forestdss.org/wiki/index.php?title=SADfLOR_web-based#Software_identification
303	Forscope - Forest Supply Chain Optimization System	PT	3-SWE	R4.0	A	
304	Rustechworld - Increasing transparency in wood trade	PT	3-SWE	R4.0	-	pserraramos@gmail.com
305	Forest_SIM - Group Certification Management	PT	3-SWE	R4.0	-	
307	Lignum - Lignum wood industry Central Switzerland	CH	2-CWE	R4.0	A	https://lignum-zentral.ch/
308	LogBuch	DE	2-CWE	R1	A	https://logbuch.xyz/
309	FINT-CH - FINT-CH (Find Individual Trees Switzerland)	CH	2-CWE	R4.0	-	https://www.bfh.ch/hafl/en/
310	All @PPS	NL	2-CWE	R4.0	-	https://bosnatuurapps.nl/alle-apps/
311	TBN - Forestry Test Enterprise Network in Switzerland	CH	2-CWE	R1	-	https://www.bafu.admin.ch/bafu/en/home/topics/forest/publications-studies/publications/forstwirtschaftliches-testbetriebsnetz-der-schweiz-2014-2016.html
312	HewSaw - HewSaw sawing machines and sawlines	FI	1-NE	R4.0	-	https://hewsaw.com/
313	BASAJAUN - Building A Sustainable Joint Between Rural and Urban Areas Through Circular And Innovative Wood Construction Value Chains	EU	7-EU	R4.0	-	www.basajaun-horizon.eu
315	TimberFever	CA	8-INT	R4.0	-	https://www.timberfever.com/
316	Waldaktie (Forest Shares)	DE	2-CWE	R4.0	-	https://waldaktie.innoforest.eu/
317	Wood U Make It Happen?	FI	1-NE	R4.0	-	https://www.forestindustries.fi/innovation-contest-wood-u-make-it-happen/
318	AJA - Sensing nodes for real-time forest ecosystem monitoring	DE	2-CWE	R4.0	-	https://fold.ai/

No.	Title	Country	Hub	Origin	Batch	Web1Main
320	KATAM™ Forest	SE	1-NE	R4.0	Ax	https://www.katam.se/
321	ProMaterial - Digital marketing platform for materials in the building sector	DE	2-CWE	R4.0	-	https://www.promaterial.com/
321	The Norwegian Digital Learning Arena	NO	1-NE	R4.0	-	https://ndla.no/
322	Timber Base - Digital wood marketing platform	DE	2-CWE	R4.0	-	https://timberbase.com/
322	DFDE - Database on Forest Disturbances in Europe	NL	2-CWE	R4.0	-	https://dfde.efi.int/db/dfde_app.php
325	FoldAI - Forest ecosystem data logger and sensor networks	DE	2-CWE	R4.0	-	https://fold.ai/
326	GoldenEye - Advanced x-ray wood log scanning system for sawmills	IT	3-SWE	R4.0	-	http://www.microtec.eu
327	WoodEye - Log scanner for sawmill	DE	2-CWE	R4.0	-	http://www.woodeye.com
328	ChoperApp - ChoperApp: LIDAR volume estimation of poplar groves	ES	3-SWE	R4.0	-	http://lidarchoperas.agrestaweb.org/
330	ÖkoHolzBauDat 2.0 - Green house gas emission balances for wood products	DE	2-CWE	R4.0	-	thuenen.de
331	VINS 3D - Mobile 3D data acquisition for forest and wood scanning	DE	2-CWE	R4.0	-	https://www.vins3d.de/en/
332	NFI - National Forest Inventory	SI	5-SEE	R4.0	-	https://www.gozdis.si/oddelek-zanactvojanje-in-monitoring-gozdov-in-krajine/
333	SOMACYL - Public Company of Infrastructures and Environment	ES	3-SWE	R4.0	-	https://somacyl.es/
334	TAPIO - Technology platform for forest and wood industry	DE	2-CWE	R4.0	-	https://www.tapio.one/en/
335	- Best Practices for Sustainable Forest Management in Finland	FI	1-NE	R4.0	-	https://metsanhoidonsuosituksset.fi/fi
337	- Finnish Forest Association	FI	1-NE	R4.0	-	https://smy.fi/
338	- Forest Finland	FI	1-NE	R4.0	-	https://metsiensuomi.fi/
339	- EnviNavigator	FI	1-NE	R4.0	-	New Generation Forest Management Includes Satellite Monitoring (bitcomp.com)
340	PROFORBIOMED - Promotion of residual forestry biomass in the Mediterranean basin	GR	5-SEE	R4.0	-	https://www.facebook.com/proforbiomedregiondemurcia/
341	aGROWchain - Supply chain for green wastes	GR	5-SEE	R4.0	-	https://agrowchain.eu/
342	MUSIC - Market Uptake Support for Intermediate Bioenergy Carriers	GR	5-SEE	R4.0	-	https://www.music-h2020.eu
343	ForestLife - Building cooperation, developing skills and sharing knowledge for Natura 2000 forests in Greece	GR	5-SEE	R4.0	-	https://forestlife.gr
344	SAFERS - Structured Approaches for Forest Fire Emergencies in Resilient Societies	GR	5-SEE	R4.0	-	https://safers-project.eu/

No.	Title	Country	Hub	Origin	Batch	Web1Main
345	GREEN FORESEEN - GREEce: modelIng of the FOREst Sector EcoNomy	GR	5-SEE	R4.0	-	https://cordis.europa.eu/project/id/743900
346	FORCIP+ - Forest Roads for Civil Protection	GR	5-SEE	R4.0	-	http://www.forcip.eu/
347	WoodsApp - Forest Information System	FI	1-NE	R1	-	https://bitcomp.com/woodsapp/
348	Climafor® - Carbon accounting tool	FR	3-SWE	R4.0	A	https://www.foretriveefrancaise.com/publications/voir/711
349	STERES - Simulations of technical-economic feasibility of forest stands	FR	3-SWE	R4.0	B	https://franceboisforet.fr/2020/12/25/steres-pour-une-rentabilite-amelioree-des-activites-sylvicoles/
350	- Safety for Rescue	IT	3-SWE	R4.0	-	-
351	PaperChain - PaperChain - wastes to second raw materials	PT	3-SWE	R4.0	-	info@paperchain.eu
352	SIMfLOR - FCTools & SIMfLOR platform	PT	3-SWE	R4.0	-	http://www.isa.ulisboa.pt/cef/forchange/fctools/pt/PlataformasIMfLOR
353	Lindbäcks Modular Factory	SE	1-NE	R4.0	Ax	https://lindbacks.se/
354	FOVEA - Photo-optical wood pile measurement	DE	2-CWE	R4.0	Ax	https://fovea.eu/
355	Cippato Calibrato - Calibrated woodchips -new high quality woody biofuel	IT	3-SWE	R4.0	-	-
356	- Ponsse firefighting equipment for forwarders	FI	1-NE	R4.0	-	https://www.ponsse.com/company/news/-/asset_publisher/P4s3zYhpxHUQ/content/ponsse-firefighting-equipment-for-forwarders#/
357	Smart Forest - Bringing Industry 4.0 to the Norwegian forest sector	NO	1-NE	R4.0	B?	https://smartforest.no/
358	EFESC - European Forestry and Environmental Skills Council	DE	2-CWE	R1	B?	https://efesc.org/
359	Egger wood recycling	RO	4-CEE	R1	A	https://www.egger.com/
360	Edukai Remote Services - Edukai Remote Services	FI	1-NE	R4.0	0	https://www.edukairemoteservices.fi/en/ers-proedu-2/
361	NavLog -	DE	2-CWE	R1	-	https://navlog.info/
362	BayWIS - Bavarian Forest Information System	DE	2-CWE	R1	0	https://www.lwf.bayern.de/informationstechnologie/baywis/index.php
363	Forest fit for the Climate	DE	2-CWE	R1	0	www.klimafitterwald.at
364	Seven pillars of forest governance in Austria (SPFGA)	DE	2-CWE	R1	0	www.bmnt.gv.at/forst/
365	Forst und Holz Allgäu-Oberschwaben - WiR GmbH	DE	2-CWE	R1	0	https://www.forst-und-holz-allgaeu-oberschwaben.de/
366	proHolz Schwarzwald c/o Service GmbH Bau-Ausbau	DE	2-CWE	R1	0	https://www.pro-holz-schwarzwald.com
367	Holzforum Allgäu e.V.	DE	2-CWE	R1	0	http://www.holzforum-allgaeu.de/
368	INITIATIVE REGIOHOLZ	DE	2-CWE	R1	0	https://www.nordschwarzwald.de/regioholz.html
369	Flurbereinigung/Flurneuordnung	DE	2-CWE	R1	0	http://www.flurbereinigung.org/
370	Forstwirtschaftliche Vereinigung Schwarzwald eG (FVS eG)	DE	2-CWE	R1	0	https://fvs-eg.de

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371	Fairventures GmbH	DE	2-CWE	R1	0	https://fairventures.org/
372	Schönbuchturn Holzbaupark in Herrenberg	DE	2-CWE	R1	0	https://www.schoenbuch-heckengaeu.de/schoenbuchturn
373	Sustainability and success control for protecting forest's	CH	2-CWE	R1	0	https://www.bafu.admin.ch/bafu/en/home/topics/forest/publications-studies/publications/nachhaltigkeit-und-erfolgskontrolle-im-schutzwald.html
374	Wood cluster Lucerne	CH	2-CWE	R1	0	http://www.lignumluzern.ch/vereinsprojekte/holzcluster
375	Cascading use of wood	CR	5-SEE	R1	0	https://spacva.eu/
376	Wood is first- (Drvo je prvo)	CR	5-SEE	R1	0	http://www.drvojeprvo.hr/ ; https://www.hgk.hr/drvo-je-prvo-najava
377	Laboratory for the forest biomass analyses	CR	5-SEE	R1	0	http://www.sumfak.unizg.hr/hr/strucni-rad-i-usluge/laboratoriji-sumarskog-odsjeaka/laboratorij-za-sumsku-biomassu/
378	Pana d.o.o. - Cascading use of wood in production process for hard flours	CR	5-SEE	R1	0	https://www.pana.hr/en/kontakt/
379	Pana Windows (Pana prozori) - EU funded project of development energy efficient windows	CR	5-SEE	R1	0	https://www.pana.hr/pana-stolarija-eu-projekt/
380	Waldklimafond - Improvement of climate protection services of managed forests by collaborative management of small and micro private forests in North Rhine-Westphalia	DE	2-CWE	R1	0	https://www.waldklimafonds.de/fileadmin/SITE_MASTER/content/Dokumente/Projektbeschreibung/037_GemWaBewirt.pdf
381	Natural and financial indicators for the consultation of private and communal forest owners	DE	2-CWE	R1	0	https://mediatum.ub.tum.de/doc/829183/document.pdf
382	Regional forest owner days in Bavaria	DE	2-CWE	R1	0	https://mediatum.ub.tum.de/?id=1113096
383	WBV Logistics: Optimization of the timber harvest chains and mobilization in private forests – regions Holzkirchen, Rosenheim and Traunstein	DE	2-CWE	R1	0	http://www.info-holzmobilisierung.org/fileadmin/portale/allgemein/Publikationen_und_Arbeiten/2005-05_WBV-Logistik_Optimierung_der_Holzernte_ketten_Endbericht_01.pdf
384	Forest consolidation in Bavaria – a stakeholder theoretical analysis	DE	2-CWE	R1	0	https://mediatum.ub.tum.de/doc/1221658/1221658.pdf
385	Ex post evaluation of the program 'rural area' 2007 until 2013 in NRW, forestal funding (ELER-Codes 123-B, 125-B, 224 und 227)	DE	2-CWE	R1	0	https://literatur.thuenen.de
386	Community forests in NRW and legal framework	DE	2-CWE	R1	0	https://recht.nrw.de/lmi/owa/br_bes_detail?sg=0&menu=1&bes_id=3828&anw_nr=2&aufgehoben=N&det_id=148643 https://www.wald-und-holz.nrw.de/fileadmin/Publikationen/Schriftenreihe/Schriftenreihe_Heft_20.pdf

No.	Title	Country	Hub	Origin	Batch	Web1Main
387	Funding guidelines in Bavaria: FORSTZUSR 2015, FORSTWEGR 2016 and WALDFÖPR 2018	DE	2-CWE	R1	0	http://www.waldbesitzer-portal.bayern.de/048721/index.php http://www.waldbesitzer-portal.bayern.de/mam/cms01/wald/waldbesitzer/dateien/forstzusr-2015_rs-v-141203.pdf http://www.waldbesitzer-portal.bayern.de/048722/index.php http://www.gesetze-bayern.de/Co
388	Forest management contract	DE	2-CWE	R1	0	https://www.stmelf.bayern.de/wald/waldbesitzer_portal/060422/index.php
389	Bavarian School for Forest Farmers	DE	2-CWE	R1	0	http://www.waldbauernschule.bayern.de/index.php
390	Forestry Associations	DE	2-CWE	R1	0	https://www.gesetze-im-internet.de/bwaldg/index.html#BJNR010370975BJNE003000319 https://www.lwf.bayern.de/mam/cms04/service/dateien/a70-forstliche-zusammenschlusse-web.pdf
391	Information sheets LWF (Example: Supply of wood chips)	DE	2-CWE	R1	0	https://www.lwf.bayern.de/service/publikationen/012448/index.php https://www.lwf.bayern.de/mam/cms04/service/dateien/2012_mergler_schulmeyer_zormaier_h_ttl_lwf_merkblatt_10_waldhackschnitzel.pdf
392	machinery ring	DE	2-CWE	R1	0	https://www.maschinenring.de/ https://twitter.com/Maschinenring
393	Information portals and tools for private forest owners	DE	2-CWE	R1	0	https://www.sbs.sachsen.de/foerster_suche/ http://www.waldbesitzer-portal.bayern.de/025776/index.php http://mein-wald.de/ http://www.waldbesitzerportal.de/waldbesitzerportal/
394	Forest Management Contracts	ES	3-SWE	R1	0	www.agresta.org
395	Development of visual and mechanical sorting tools for the enhancement of structural sawn timber	ES	3-SWE	R1	0	www.cesefor.com
396	GOOD PRACTICES FOR PRIVATE FORESTRY MARKET MOBILIZATION. COLLECTIVE AUCTIONS OF OWNERS THROUGH FOREST ASSOCIATIONS. FAFCYL	ES	3-SWE	R1	0	www.fafcycle.es
397	Castilla y León forest resources mobilization programme	ES	3-SWE	R1	0	https://medioambiente.jcyl.es/web/jcyl/MedioAmbiente/es/Plantilla100Detalle/1246988359553/Programa/1284498656410/Comunicacion
398	Restructuring of quality timber harvesting and grading to diversify its production and improve its implementation in local markets	ES	3-SWE	R1	0	https://montnegrecolector.org/
399	Inventory and characterization of forest roads	ES	3-SWE	R1	0	www.cesefor.com

No.	Title	Country	Hub	Origin	Batch	Web1Main
400	SiGCa: Forest management systems in quality timber producing forests	ES	3-SWE	R1	0	https://www.sigcamaderadecalidad.info/
401	PASSFOR (Plan for Socioeconomic Activation of the Forest Sector)	ES	3-SWE	R1	0	http://www.mapama.gob.es/es/desarrollo-rural/temas/politica-forestal/plan-pasfor/
402	Creation of the first Guarantee Mark in the wood sector in Spain: Pino Soria Burgos	ES	3-SWE	R1	0	www.pinosoriaburgos.com
403	SAXMEL— Local-scope forest management support system	ES	3-SWE	R1	0	www.saxmel.es
404	Wood Maker Spaces	ES	3-SWE	R1	0	-
405	COOPWOOD	ES	3-SWE	R1	0	http://coopwood.eu/
406	Biochar production from waste products of wood industry	FI	1-NE	R1	0	https://noireco.fi/en/
407	Forest estate arrangements	FI	1-NE	R1	0	-
408	Forest road network	FI	1-NE	R1	0	-
409	Full forest management service for forest owners	FI	1-NE	R1	0	https://www.mhy.fi/ https://www.storaensometsa.fi/palvelut/ https://www.metsaforest.com/fi/Pages/default.aspx https://metsatunkoon.fi/metsanhoito/
410	Heat entrepreneurship cluster of South Ostrobothnia	FI	1-NE	R1	0	http://www.hecso.fi/
411	Joint ownership, forest consolidation	FI	1-NE	R1	0	-
412	Mobile applications	FI	1-NE	R1	0	For example: https://www.metsaforest.com/fi/Asiakasedut/metsaverkko-mobiili/Pages/default.aspx# https://www.storaensometsa.fi/palvelut/emetsa-mobiili/ https://www.metsaselain.fi/ http://www.upmmetsani.fi/
413	Rätt Metod (Right Method) – A harvesting method better for the soil	FI	1-NE	R1	0	http://www.storaenso.com/sustainability/stories/a-harvesting-method-better-for-the-soil
414	Ponsse Scorpion King	FI	1-NE	R1	0	https://www.ponsse.com/en/web/guest/products/harvesters/product#/scorpion_king
415	Futurobois : Interprofessional organization of the forest-wood-paper industry in Poitou-Charentes (in New-Aquitaine)	FR	3-SWE	R1	0	https://www.futurobois.net/
416	XYLOFOREST	FR	3-SWE	R1	0	http://www.xyloforest.org/
417	Groupama Forests Insurances	FR	3-SWE	R1	0	www.groupama-forets.com
418	DFCI (fire defence) forest track network	FR	3-SWE	R1	0	https://www.dfci-aquitaine.fr/qui-sommes-nous/missions/amenager

No.	Title	Country	Hub	Origin	Batch	Web1Main
419	MOVAPRO	FR	3-SWE	R1	0	-
420	Caisse Phyto Forêt (Forest protection and provident fund) / Traitement against fomes	FR	3-SWE	R1	0	http://www.maisondelaforet-sudouest.com/tag/caisse-phyto-foret/
421	CIFA (forest insurance investment account)	FR	3-SWE	R1	0	http://www.maisondelaforet-sudouest.com/services/cifa/
422	Handbook Praticsols	FR	3-SWE	R1	0	http://www.onf.fr/++lang++en/lire_voir_ecouter/++oid++5f39/@@display_media.html
423	ADELI (association for a balanced development of the forest in Limousin)	FR	3-SWE	R1	0	http://www.adeli-asso.com/
424	Fonds forestier en Limousin (Forest Fund in Limousin)	FR	3-SWE	R1	0	http://www.fondsforestierlimousin.fr
425	"APROFOMO" A VOLUNTEER DISCIPLINARY FOR WOOD OPERATORS	IT	3-SWE	R1	0	www.legnoforestamodello.it www.forestamodellomontagnefiorentine.org
426	Eco_Energie: the challenge of a forest company that has chosen to grow and qualify	IT	3-SWE	R1	0	www.ecoenergie.es
427	Forest Sharing	IT	3-SWE	R1	0	www.forestsharing.com
428	"FMMF IL LEGNO" Trademark	IT	3-SWE	R1	0	www.legnoforestamodello.it/
429	How to use government grants with intelligence: new machinery park and high-quality wood chips	IT	3-SWE	R1	0	-
430	Vineyard poles and energy (small wood chips)	IT	3-SWE	R1	0	-
431	Single tree silviculture (STS)	IT	3-SWE	R1	0	http://www.selvicoltura.eu/
432	Sawmill at home: a business initiative to enhance the local wood	IT	3-SWE	R1	0	www.boratt.ch
433	The "supermarket" of quality biomass	IT	3-SWE	R1	0	www.cipcalor.it
434	Turned larch and chestnut poles	IT	3-SWE	R1	0	www.casolla.com www.segheriatani.it
435	Collection an use of urban wood waste	RO	4-CEE	R1	0	http://www.tega.ro/en
436	Wood as primary construction material	RO	4-CEE	R1	0	www.hargitamegye.ro
437	ReWin	SI	5-SEE	R1	0	http://www.m-sora.si/en/ https://cordis.europa.eu/news/rcn/130475_en.html
438	Machinery ring Bled	SI	5-SEE	R1	0	http://skservis.si/
439	Open Houses Slovenia (OHS)	SI	5-SEE	R1	0	http://www.openhouseslovenia.org/festival/about-festival/
440	Forest owner cooperation Pohorje-Kozjak	SI	5-SEE	R1	0	http://www.greenpartnerships.eu/wp/sl/2014/05/29/primer-dobre-prakse-biomasni-center-pohorje-kozjak-slovenija/#top
441	»Wood is beautiful« Action plan for increasing the competitiveness of the forest-wood chain in Slovenia by 2020	SI	5-SEE	R1	0	http://www.mkgp.gov.si/fileadmin/mkgp.gov.si/pageuploads/podrocja/Gozdarstvo/Akcijski_nacrt_Les_je_lep.pdf

No.	Title	Country	Hub	Origin	Batch	Web1Main
442	Timber auction	SI	5-SEE	R1	0	https://www.gozd-les.com/novice/rezultati-12-drazbe-lesa-slovenj-gradcu-2018
443	ID:WOOD Clustering knowledge, Innovation and Design in the SEE WOOD sector	SI	5-SEE	R1	0	http://idwood.gozdis.si/
444	Targeted silviculture in Drinking Water Protection Zones (DWPZ)	AT	2-CWE	R1	0	https://boku.ac.at/wabo
445	Forest Information Standard	FI	1-NE	R1	0	http://www.metsatietostandardit.fi/metsatietostandardit/en , https://www.bitcomp.fi/metsatietostandardit/
446	ECOR	DE	2-CWE	R1	0	https://ecorglobal.com/
447	Aggerbogen	DE	2-CWE	R1	0	https://www.schaffitzel.de/unternehmen/aktuell/207-auszeichnung-holz-proklima https://www.competitionline.com/en/projects/56412 https://www.ibmiebach.de/de/projekte/holzbruecken/holz-bogenbruecke/holz-bogenbruecke-hoengesberg.html
448	waste wood	AT	2-CWE	R1	0	https://www.altholz.net/surfaces/
449	Kulturholz	DE	2-CWE	R1	0	https://www.kulturholz.net/
450	Altholz Gerstmayer	DE	2-CWE	R1	0	https://www.altholz-allgaeu.de/en/
451	Destaclean® wood stones	FI	1-NE	R1	0	http://www.destaclean.fi/english/ http://urbanmining.at/innovatives-produkt-nutzt-altholz-als-rohstoff-finnland-bauschutt-recycling/5738
452	Neues aus Altholz (reclaimed oak)	DE	2-CWE	R1	0	https://www.hugokaempfer.de/oak-wood-products/oak-antique
453	Methodology for the evaluation and standardisation of the economic - financial sustainability of the poplars plantations in Castile and León	ES	3-SWE	R1	0	www.cesefor.com
454	Essential Operative Group	ES	3-SWE	R1	0	-
455	High Efficiency Light Panel (HELP), a new wood-base panels system.	ES	3-SWE	R1	0	www.mabitat.es
456	Amatex - New modular construction system based on panels fixed to each other and pieces of heavy wooden framework.	ES	3-SWE	R1	0	www.amatex.es
457	ArboTimber	FI	1-NE	R1	0	https://www.arbotimber.com/arbotimber/?lang=en
458	Assessment method for energy wood biomass feedstock availability and transport costs at regional level	FI	1-NE	R1	0	-

No.	Title	Country	Hub	Origin	Batch	Web1Main
459	BioA refinery concept – Fertilizers from side flows of wood-based industry and ashes of wood-based power plants	FI	1-NE	R1	0	https://bioa.fi/en/
460	Project “Insense” (soil diagnosis)	FR	3-SWE	R1	0	https://www.ademe.fr/insense-indicateurs-sensibilite-ecosystemes-forestiers-soumis-a-recolte-accrue-biomasse
461	Life Forest CO2	FR	3-SWE	R1	0	http://lifeforestco2.eu/projet-life-forest-co2/?lang=fr
462	OPTIM’Indus	FR	3-SWE	R1	0	http://www.aquitaine-industrie.com/
463	RESOFOP - RESeau d’Observation économique de la FORêt Privée	FR	3-SWE	R1	0	https://www.cnpf.fr/n/resofop-enquetes/n:224
464	Thermovoltaic Biomass Dryer	FR	3-SWE	R1	0	www.base-innovation.com
465	Intelligent Bioenergy Network s.r.l. – iBioNet s.r.l.	IT	3-SWE	R1	0	www.ibionet.eu
466	VISCAN-Portable: A new grading machine for local structural timber	IT	3-SWE	R1	0	http://www.ivalsa.cnr.it

5.2 Annex II: BP&I factsheet template for Hub partners

Field descriptor	Compuls	Description of the content	Inputs in English	characters	Inputs in national language	characters
Code (automatic number)	-	generated by system				
Date of entry (automatic)	-	generated by system				
Language	Yes	Language of the content	English			
Main content and features						
Title of the factsheet	Yes	Meaningful title, avoid acronyms. Max 100		0 of 100		0 of 100
Title (national name)	No	If national name is main identity. Max 100		0 of 100		0 of 100
Title (abbreviation)	No	If specific name, brand or acronym of solution				
Teaser statement	Yes	Short descriptive text summarising the content (subtitle). Max 250 characters.		0 of 250		0 of 250
Keywords	No	Limit to 4 keywords, free of choice. Separate by				
Geographical scale	Yes	EU, cross-border/multi-lateral (several				
Geographical unit 1	Yes	Main location: country(ies) and NUTs				
Start year	Yes	Start year of development / launch				
End year	No	End year (e.g. a project). Leave empty if still				
Domain 1st (main)	Yes	Main domain. If more than one domain, name				
Domain 2nd	No	Do not repeat!				
Domain 3rd	No	Do not repeat!				
Digital solution	Yes	Is this best practice a digital solution? (Yes/No)				
Type of solution	Yes	Single choice, select the most relevant one.				
Innovation	Yes	Is the factsheet describing an innovative best				
Abstract	Yes	Should contain: context, objective, main results, lessons learned, main recommendations.		0 of 1500		0 of 1500
Contact data						
Contact lead organization	Yes	Provider/owner/author of the information of				
Contact lead person	Yes	Name of person for reference and				
Contact lead e-mail	Yes	e-Mail address (published only if consent is				
Contact lead website	No	if available				
Consent for publication	Yes	Confirmation of owner/authorship and consent				
Consent for contact details	Yes	Consent to publish contact details in factsheet				
Contact intermediary organisation	Yes	Rosewood 4.0 partner organization (for internal				
Contact intermediary person	Yes	Name of person (for internal follow-up				
Contact intermediary e-mail	Yes	e-Mail address				
Resources and references						
Main website	No	URL of the website of the best practice or its	https://		https://	
Project reference	No	Name of project, grant number and/or funding				
Project website	No	Website of project or funding	https://		https://	
Resource 1 title	No	short title for reference				
Resource 1 link	No	URL (DOI if possible)	https://		https://	
Resource 1 file upload	No	PDF for direct access, if available				
Resource 2 title	No	short title for reference				
Resource 2 link	No	URL (DOI if possible)	https://		https://	
Resource 2 file upload	No	PDF for direct access, if available				
Resource 3 title	No	short title for reference				
Resource 3 link	No	URL (DOI if possible)	https://		https://	
Resource 3 file upload	No	PDF for direct access, if available				
Additional features (optional)						
Geographical unit 2	No	Other countries/regions/localities, if				
Geographical unit 3	No	Other countries/regions/localities, if				
Geographical unit 4	No	Other countries/regions/localities, if				
Geographical unit 5	No	Other countries/regions/localities, if				
Type wood	No	Type of wood, wood/tree species, or wood				
Origin of wood	No	Source of wood, type of supplier or industry				
Mobilization potential	No	numerical (give values (in m³/ha if possible) by				
Kind of wood concerned	No	free text				
Sustainability potential	No	parameter (from 1 to 5: 1: very positive; 2:				
Impact on environment & biodiversity	No	free text				
Ease of implementation	No	parameter (from 1 to 5: 1: very easy; 2: easy; 3:				
Economic impact	No	parameter (growth of the company / turnover				
Job effect	No	free text				
Income effect	No	free text				
Specific knowledge needed	No	free text				
Costs of implementation	No	numerical (value in €) + free text				
Exploitation potential	No	free text				
Key prerequisites	No	free text				
Picture material						
Picture 1 visual	Yes	Main picture or image to illustrate the best				
Picture 1 copyright	Yes	Author / owner of picture reference (gives				
Picture 1 caption	Yes	Description/explanation of picture content				
Picture 2 logo of best practice	No	Logo of the best practice, if available. To be				
Picture 3 logo of main organization	No	Logo of main organisation/owner/author, if				
Picture 4 logo of project	No	Logo of project or funding organisation, if				
Picture 5 additional visual	No	For illustration				
Picture 6 additional visual	No	For illustration				
Picture 7 additional visual	No	For illustration				

5.3 Annex III: Guidelines for video production

Basic guidelines

Clarity - What content is expected to be included in the video? What questions should be answered?

- What new features does this best practice or innovation have? What does it offer?
- Who is the developer? Who is using it? Who is it for?
- Why is it necessary? Why is it an improvement for professionals or the sector? Benefits?
- How is it applied? How does it work and improve daily tasks? (live and on-stage demonstration)

Conciseness - Brevity with key messages (summarise the most relevant of the innovation or best practice)

- Length of video (time range): 3 - 5 minutes

Coherence - Inclusion of interviews (statements) combined with footage of best practice and innovation on the spot (forest / outdoors). At least, two different voices in the videos:

- Provider of the innovation or best practice
- Any stakeholder or practitioner who is implementing or enjoying already its benefits

Consistency - Some technical specifications must be met in all videos, as well as the implementation of the corporate visual identity of the project

Intro: ROSEWOOD logo (placed in the middle of the screen) and title of the innovation/best practice.

Body (rest of the video): Motion titles should be in font Abel Regular (main title) Calibri light (subtitle).

- Background colour of titles: Midnight blue (#1f3040 / R31 G48 B64) [next slide](#)
- Supplementary colours in titles: Colour palette used in brochure [next slide](#)

Ending: A frame showing all the logos of the project partners and the H2020 project disclaimer with the EU flag (Files will be saved in WP1 "Videos" Teams folder)

Other tech specs

- Recommended video filming format: Full HD 1920x1080
- Exported files in high and low quality in MOV and MP4 format (Youtube & social media)

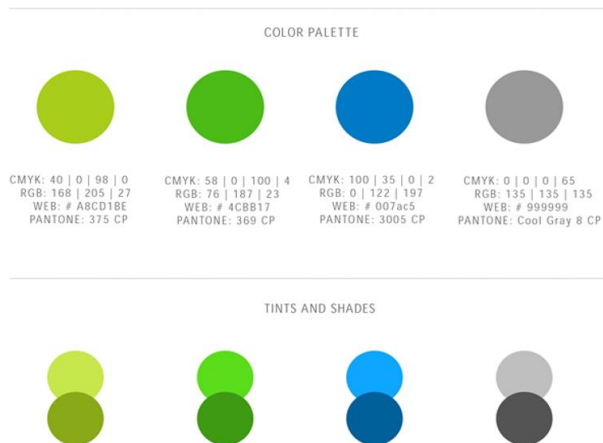
Colour scheme



Midnight colour

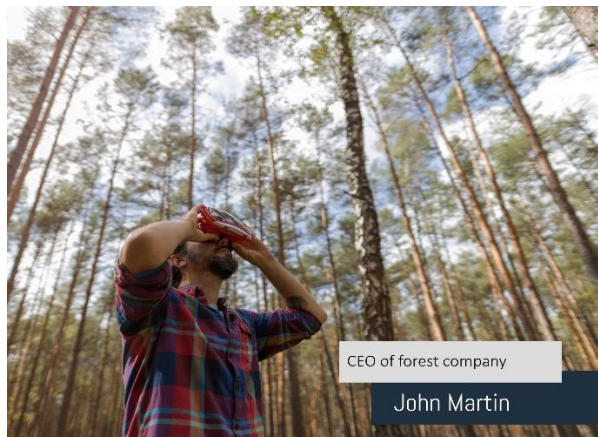
Main background colour
for motion titles

Complementary colours for other elements if needed



Example of video frame

- Motion title graphics use Abel Regular font (name) and Calibri light font (job title)
- Main background colour applied (midnight blue) and a complementary colour from the palette (grey).
- Font size in this example: 60 for main title & 40 for subtitle



Questions & Answers

Q: When do the videos have to be ready? How much time do we have to do this task?

A: According to the project plan, the videos will have to be uploaded to the Knowledge Platform in September (M21) after the 3 months extension we have (D1.4). We recommend starting the production of the videos as soon as possible between February-June. You can plan to produce one video per month or concentrate the production of the 5 videos per regional hub in a specific month. Once you have produced them, contact EFI for dissemination and communication actions (WP4).

Q: What language should the videos be in? What happens if an interviewee does not speak English? Do they have to be dubbed or subtitled?

A: The videos must be in English, but obviously if an interviewee does not speak English, it is better that they express themselves in their native language and then subtitles are added in English (not dubbing). The approach should be to prioritise English whenever possible. We recommend that subtitles should be in Calibri font and in white (more legible).

5.4 Annex IV: Impressions from validation workshops

