

ICT - BIOCHAIN

Deliverable 5.3. E-Learning materials for the DIHs replication

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1. Executive Summary

This document describes the development of the ICT-BIOCHAIN project e-learning materials, deliverable 5.3 of the GA 792221, led by Sustainable Innovations Europe (SIE) and created to facilitate the DIHs replication across the EU Bioeconomy regions as well as to share the knowledge generated throughout the project. The materials have been developed between Month 18 and Month 21 and they provide a user friendly and visual introduction to engage the target audience and encourage the DIHs replication. This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 792221.

1.1. Context of WP5

The objectives of this WP are:

- To document the methodology for establishing DIH's for biomass mobilisation in a user-friendly roadmap.
- To ensure that the methodology followed for the establishment of DIH's for biomass mobilisation can be transferred to external partners through the roadmap generated and diverse online and offline tools.
- To create interlinkages and knowledge transfer between bioeconomy regions around the EU
- To identify transferrable ICT/IoT and Industry 4.0 technologies for biomass mobilisation "feedstock similar" regions
- To enhance the replicability across the European bioeconomy regions applying diverse training and support methods.

1.2. Objective of Task 5.3

This task includes the development of a suite of e-learning training methods to facilitate further innovation through interconnecting the technology and bioeconomy sectors.

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2. Acronyms and abbreviations

SIE	Sustainable Innovations Europe
DIH	Digital Innovation Hub
CAGPDS	Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible
CTA	Corporación Tecnológica de Andalucía
IBF	Irish Bioeconomy Foundation
VTT	Technical Research Centre of Finland
IBioIC	Industrial Biotechnology Innovation Centre
ICT	Information and communications technology

3. Introduction

To facilitate further innovation through interconnecting the technology and bioeconomy sectors, a suite of e-Learning training methods has been developed and made available on the project website arranged in modules.

The main goal is to transfer the knowledge generated during the ICT-BIOCHAIN project in an attractive, accessible, easy-to-use multi-media format. These materials will provide key information to the regions interested in replicating a Digital Innovation Hub.

4. E-Learning materials

Choice of material type

In order to decide the final e-learning materials, a survey (Annex I) was circulated among the partners, so they could provide their opinion on what type and length of materials they would prefer. SIE took the opportunity of the M18 consortium meeting in Seville to gather their answers.

Most of the partners voted for videos, storymaps and social media posts as their preferred type of e-learning materials. The length that most of them preferred was around 2 minutes for videos, and less than 5 minutes of reading for storymaps.

The leaders of the Andalusian Hub and Irish Hub offered themselves for a video recording. One was recorded in situ and the other one through a videoconference.

Material dissemination

All the materials have been collected and gathered on the project website under a new tab named “E-LEARNING MATERIALS”: <https://ictbiochain.eu/e-learning-materials/>

They have also been promoted on the Twitter and LinkedIn accounts of the project, and will be disseminated on the next newsletter.



Image 1. ICT-BIOCHAIN homepage

Types of materials

There are different types of materials elaborated to make the learning more dynamic:

- Two training videos to support remote learning and capacity building based on the ICTBIOCHAIN Roadmap. They are available on the project website and cover a range of content including; (1) The description of DIH structure and essential stakeholders; (2) Steps to establishing a DIH, (3) First recommendations for DIH mobilisation activities and (4) Funding and financing possibilities etc. One of the videos is based on the experience of the Andalusian DIH and the other one on the knowledge from the Irish knowledge hub.
- Five storymaps introducing the roadmap for DIH replications in the EU Bioeconomy regions and tips about different topics, such as mobilization, funding and stakeholders' involvement. These storymaps were produced instead of PowerPoint presentations, as they are a more dynamic presenting material. The content was compiled with the help of the partners and retrieved from deliverables such as D4.2 - Report on Two Digital Innovation Hub ICT Demonstration Days; and on D5.1 - Roadmap Report for DIHs replication in the European Bioeconomy regions.
- A webinar organized by CTA as part of their Investment Day, has also be included in the e-learning materials section of the website.
- A social media kit with several posts to do a strategic dissemination of these e-learning materials has also been prepared. This kit is still subject to changes, as it should be a living plan that will be duly updated and shared on the project Twitter and LinkedIn accounts. The living document and pictures can be found here: <https://drive.google.com/open?id=1J-UI35Ilp6IDHL6RT83kiclwfj5Add9X>

Modules

The materials have been arranged according to modules that follow a linear learning path.

- Module 1: Opportunities for ICT in the Biomass sector
The first module provides an overview through a webinar where some of the project partners discuss the main benefits of applying ICT technologies in the biomass sector. This webinar, aimed at startups, SMEs and the academic sector involved in ICT sector. IT was moderated by CTA and taught by the Technical Research Centre of Finland VTT and the Industrial Biotechnology Innovation Centre IBioIC. It was livestreamed on February 14th and the entire session was recorded so that it could be included on the e-learning materials and shared on social media, maximising its reach and impact.

Module 1 – Webinar: Opportunities for ICT in the Biomass sector



Image 2: Module 1: Opportunities for ICT in the Biomass sector
http://bit.ly/ICT-BIOCHAIN_module1

- Module 2 – DIH structure and stakeholders to be involved

The next module provides an overview of the structure of a DIH and the stakeholders that need to be involved. This information is key in a preliminary stage, so that someone who is considering establishing a DIH can first understand who they should approach and ask for involvement.

Module 2 – DIH structure and stakeholders to be involved



Image 3: Module 2 – DIH structure and stakeholders to be involved
http://bit.ly/ICT-BIOCHAIN_module2

- Module 3 – Key steps to establishing a Digital Innovation Hub

After the learner understands the benefits of ICT technologies for the biomass sector and the stakeholders that should be involved in a DIH, the third module explains the key steps to establishing a DIH. This includes, among other steps, analysing the regional baseline, barriers mitigation, and DIH shaping considering previously existing DIHs or other stakeholder groups.

Once these three modules have been finished the learner can assess if is able to establish a DIH or not. The following ones focus on ensuring its success.

Module 3 – Key steps to establishing a Digital Innovation Hub



Image 4: Module 3 – Key steps to establishing a Digital Innovation Hub
http://bit.ly/ICT-BIOCHAIN_module3

- Module 4 – Funding and financing possibilities

Module 4 explores different funding and financing paths for DIHs and highlights that there are different business models, combining public funds, membership fees, and commercial incomes, that could apply.

Module 4 – Funding and financing possibilities



Image 5: Module 4 – Funding and financing possibilities

http://bit.ly/ICT-BIOCHAIN_module4

- Module 5 – Recommendations for Digital Innovation Hubs mobilisation
This module explores different mobilisation and engagement strategies and provides key advices on how to arrange different events such as Launch, Knowledge Transfer, Demonstration, Value Chains and Investment Days. It presents potential barriers and mitigation strategies to reduce them.

Module 5 – Recommendations for Digital Innovation Hubs mobilisation



Image 6: Module 5 – Recommendations for Digital Innovation Hubs mobilisation

http://bit.ly/ICT-BIOCHAIN_module5

- Module 6 – ICT-BIOCHAIN Demo Days

This module explores deeper the two Demo Days organized in Ireland and Andalusia, presenting all the actions and activities carried out in detail and including a section of lessons learned from them.

Module 6 – ICT-BIOCHAIN Demo Days



Image 7: Module 6 – ICT-BIOCHAIN Demo Days
http://bit.ly/ICT-BIOCHAIN_module6

- Module 7 – Video with tips from the Andalusian DIH

This module gathers in a video tips from the Andalusian DIH regarding different topics already treated in the former modules, such as financing, key steps and stakeholders. It is a summary presented in a personalised format. The video shows real people talking about their real experiences in a DIH, hence it increases the credibility. This format also allows the learner to identify better with the trainers, as it's putting a face to them.

Module 7 – Video with tips from the Andalusian DIH



Image 8: Module 7 – Video with tips from the Andalusian DIH
http://bit.ly/ICT-BIOCHAIN_module7

- Module 8 – Video with tips from the Irish DIH
This module, as the previous one, gathers tips in a video format, in this case from the Irish DIH.

Module 8 – Video with tips from the Irish DIH



Image 9: Module 8 – Video with tips from the Irish DIH
http://bit.ly/ICT-BIOCHAIN_module8

- Module 9 – Tutorial on how to use the platform
This module will include a video tutorial illustrating how the ICT-BIOCHAIN platform can be used, as soon as it's up and running.

Module 9 – Tutorial on how to use the platform



Image 10: Module 9 – Tutorial on how to use the platform

Final Roadmap

A Roadmap laying out the motivations, advantages and methodology for the establishment of a digital innovation hub for the biobased sector is being developed in parallel to this deliverable. The roadmap will allow the DiH approach for digitizing the biobased economy, to be replicated in the other EU Model Demonstrator Regions. The Roadmap will be disseminated to participating hub regions via a “train the trainer” workshop organized by Model Demonstrator Regions in conjunction with consortia partners, to transfer outcomes and methodology to other high potential bioeconomy regions. To ensure greater accessibility this roadmap will also be made available through the project website on the publications section: <https://ictbiochain.eu/publications/>

Quality Monitoring and Improvement

SIE created a survey (Annex II) on Survey Monkey to gather users’ feedback on the e-learning materials. This survey was linked through a pop up that appears when accessing the e-learning materials section of the website calling for people’s participation in a survey to provide feedback (Annex II). Thus, the users can evaluate the e-Learning modules and they will be improved and upgraded with new information accordingly.

Future actions

- As already mentioned, a video-tutorial will be created as soon as the platform is operative, showing how it is used.
- The roadmap will be uploaded to the publications section of the project website: <https://ictbiochain.eu/publications/> In addition, it will be disseminated on social media in order to maximise its impact.
- The e-learning materials section on the website will be alive and updated with new contents that are found of interest. They will be available at this link <https://ictbiochain.eu/e-learning-materials/> and they will continue to be promoted and disseminated during the two years following the project completion.
- SIE will coordinate with a DIH Information Centre with the support of the consortium in the two years following project completion to provide support continuity and opportunities for further innovation beyond the lifetime of the project.

ANEX I

REPLICATION SURVEY: ELABORATION OF THE E-LEARNING MATERIALS

Please, mark the 4 type of materials that you find more appealing to share the DIH experience.

- Videos
- Storymaps
- Social media posts
- Blog posts
- PPTs
- Webinars
- Prezzys or other kind of presentations
- Quizzes

What would be the ideal length of the materials for you? Please, reply only to the ones you marked above.

- Videos
- Storymaps
- Social media posts
- Blog posts
- PPTs
- Webinars
- Prezzys or other kind of presentations
- Quizzes

Could you contribute with a short video?

What other kind of content could you contribute within the context of “Roadmap for DIH implementation”?

ANNEX II

QUALITY MONITORING AND IMPROVEMENT SURVEY

Please, take one minute to fill out this survey and help us improve!

1. How would you rate ICT-BIOCHAIN e-learning materials overall?

Very good

Good

Average

Bad

Very bad

2. How would you rate the contents?

Very good

Good

Average

Bad

Very bad

3. How would you rate the length?

It's perfect as it is

I would like them a bit shorter

I would like them a bit longer

4. What e-learning materials did you like the most?

Storymaps

Webinar

Videos

5. Would you recommend these materials to a colleague?

Yes

No

6. Do you have any comments on how we could improve these materials?