FuturEnzyme Technologies of the FUTURe for low-cost ENZYMEs for environment-friendly products



Consortium meeting, Hamburg









The Objectives

- > To **communicate the need** for bio-economy research to be proactive and to stay at the cutting edge of new technologies to keep Europe competitive and to create new, high-skilled jobs in this domain;
- ➤ To communicate the social, economic and environmental impacts of the project and role of EU funding schemes in promoting research that helps reaching the climate neutrality goal, by engaging multiple actors to ensure the dialogue between Science, Stakeholders, and Society;
- > To disseminate FuturEnzyme results and relevant information to stakeholders, academia, consumers, and policymakers/actors and to other consortia:
- > To exploit FuturEnzyme business potential to possible licensees and create the basis for the longterm impacts of the project by a multi-channel platform
- To exploit innovation, **industrial implementation and market uptake** considering gender, rights and ethical issues inside and outside the consortium.







Summary of already achieved targets

Name of activity	Achievement (%)	Status
1 Dissemination and Communication Plan	100%	Completed
1 Project Website	100%	Completed
1 On-line meeting platform	100%	Completed
1 Logo	100%	Completed
1 Exploitation and Innovation Plan	100%	Completed
1 Data Management Plan	100%	Completed
5 Visual identity elements	100%	Completed
Templates for presentations, posters, and reports	100%	Completed
2 Articles in non-scientific magazines	150% (3)	Ongoing
2 Inter-consortia networks events organized	300% (6)	Ongoing
Deliverables (8, at M24)*	89%	Ongoing
Milestones (2, at M24)	100%	Ongoing

^{*}D8.12, delayed until July, PO acknowledged.







Summary of ongoing quantitative targets

Name of activity	Achievement (%)	Status
2 Film, film footage	45	Ongoing
1000 Social media notes	97	Ongoing
40 Newspapers/Radio/TV appearances	28	Ongoing
100 Scientific publications & research datasets	30	Ongoing
3 Patents	0	Ongoing
5 Policy, technical, briefings, leaflets, brochures	80	Ongoing
3 Consumer-oriented briefings, survey, product tests	20	Ongoing
167 participations in events with actors	35.9	Ongoing
20 events organized	50	Ongoing
4 Exploitation workshops organized	50	Ongoing







Task 8.1: Communication and Dissemination Plan

<u>Main output</u>: "Plan for using, communicating and disseminating project information and knowledge" (**D8.3**) submitted at M3, defining: objectives, target audiences, tools, channels and metrics for measuring the impact of this activities.

It represents the main management tool of WP8 together with the Exploitation Plan.

It was checked for effectiveness at M12 and M18. According to some points that were discussed with the Project Officer during the meeting in Brussels, our idea is to update it in the upcoming months. Decide who is going to do it and when to start writing the first updated version.







Task 8.2: FuturEnzyme Website and strong on-line meeting platform www.futurenzyme.eu

Effectiveness of the action:

➤ Users: 1100

Visits per user: 3.4

Average interaction time: 1 min 15 sec

> Click: 514

➤ Downloads: 13

➤ Main country: Germany (174 users)

> Acquisition of users: Organic search (50.6%); Direct search (32.8%)

Most visited sections: Partners and WorkPlan

Period of the analysis: January 2023 to June 2023. Google Analytics

Total number of

➤ Home visitors: 38,791

Visits to any section: 136,449

Period of the analysis: July 2021 to June 2023. Website counter plug-in (Google Analytics started in September 2022)



Germany	174
Spain	157
Jnited States	111
taly	80
Jnited Kingdom	58
Switzerland	45
France	42



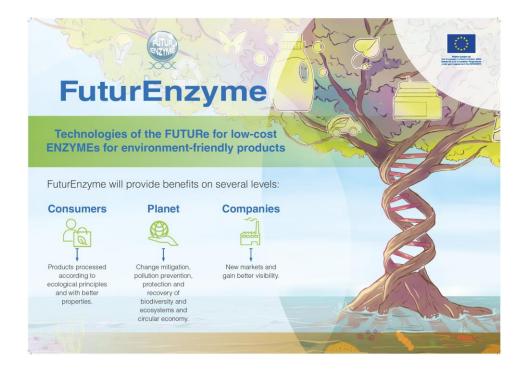


Update of the offline communication tools

Roll-up: prepared in February 2023 for CLIB; available for everyone. You can request size modifications to be compliant with your country standards



<u>Poster:</u> summarizing the main concept of the project; available since May 2023 (prepared for a BSC's event)









Average

JRC/2021:

6.612

7 publications

with IF >9

Max

JRC/2021:

16.823

Offline communication tools

Scientific publications

- 23 scientific peer-reviewed articles in specialized journals
- 2 book chapters
- 2 reviews
- 2 scientific articles, 1 review, and 1 book chapter under review/late stages of preparation

Contributions for the general audience

- 3. Fantastic enzymes: Where and how to find them. Molina Espeja, Patricia; Daniotti, Sara; Müller, Markus; Ferrer, Manuel. FEBS Network, October 28th, 2022. https://network.febs.org/posts/fantastic-enzymes-where-and-how-to-find-them
- 2. Se buscan enzimas, razón: el medio ambiente. Ferrer, Manuel; Coscolín Galán, Cristina; Molina-Espeja, Patricia. The conversation, October 12th, 2021. https://theconversation.com/se-buscan-enzimas-razon-el-medio-ambiente-169685. 10.5281/zenodo.5566131.
- **1.** El uso de enzimas para conseguir productos de consumo diario más sostenibles. Ferrer, Manuel; Molina-Espeja, Patricia; Peñalver, Carolina. https://sites.google.com/gl.miteco.gob.es/revistaambienta2/revista-128/innovaci%C3%B3n-128-enzimas-productos. Ambienta Journal, 10.5281/zenodo.5384608

ZENODO: https://zenodo.org/communities/futurenzyme/?page=1&size=20 ALL OPEN ACCESS (EXCEPT FOR BOOKS)







➤ Online communication tools

Social media



https://www.linkedin.com/company/futurenzyme/

UPDATE	POSTS	FOLLOWERS	LIKES	SHARES	IMPRESSIONS	ENGAGEMENTS AV.	PROFILE VISITS
Mid January - Mid June 2023	23	475	365	37	13738	7,48%	507



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UPDATE	POSTS	FOLLOWERS	LIKES	SHARES	IMPRESSIONS	ENGAGEMENTS AV.	PROFILE VISITS
Mid January - Mid June 2023	20	781	92	25	6041	3,2%	169







> Online communication tools

Newsletter Linkedin editorials/articles

- Newsletter not very effective due to the low number of subscribers
- Already joining efforts with other consortia in the "The active site" newsletter -> avoid overlapping
- Updating the tool of the newsletter in LinkedIn editorials



Medium-length articles (3000-4000 characters) on enzymes/project-related topics to be published every month/month and a half. They can be used to promote an event on a certain topic or to disseminate some published scientific articles in a simplified version

Topic	Partner
Implementing RRI in funded research projects (leveraging on the outcomes of the RRI workshop)	CSIC
Are consumers really becoming more sustainable in their purchases? (leveraging on the article we are going to publish)	ITB









Task 8.4: Education and training

Latest events (M22-M24):

Event number	Event name	Due Date (month)	Where	Audience (number/type)	Date	Comments
4	Workshop, "Summer School on Metagenomics 2021"	12 (postponed to month 24)	Hamburg	25-30/1	03-04/07/2023	Within 5 th ESSIB (Lab course: Hands on Metagenomics; Lab course: Hands on Metagenomics /computational tools)
6	Workshop: Your impact on environment and society: Workshop on Responsible Research & Innovation	24	Online	40-50/2	21/06/2023	Online
7	A theoretical-experimental course on "Engineering enzymes for consumer products of higher environmental quality"	24	Barcelona	20-30/1	22-23/05/2023	Prepared by BSC, with CSIC's help. Joint course with sister project OXIPRO
9	Managing data and resources: practical examples in research projects focused on consumer products, climate change and zero pollution	24	To be defined	20-40/4	09/06/2023	Online
14	4° ESO+Company (2 in total)	48 (forwarded to month 23)	Madrid	2/1	12-14/04/2023	ICP-CSIC
18	Intra-consortium exploitation workshop	24	Hamburg	16-40/4	07/07/2023	Within 24M FE meeting





Task 8.4: Education and training

Upcoming events (until M30):

Event number	Event name	Due Date (month)	Where	Audience (number/type)	Date	Comments
17	Online webinar, "Enzymes for more environment- friendly consumer products" via online tools	24	Online	10-25/1	To be defined	Around December
8	Workshop and roundtable on "How to find enzymes that will serve the present and future industrial and consumer demands and habits"	24	Madrid	40-50/2	To be defined	ICP-CSIC/hybrid







Task 8.5: Maximising exploitation of project enzymes, products, and knowledge

Main output:

- > Exploitation workshop presented during the KOM
- > Preliminary Exploitation Plan (M12 D8.6) and final document to be submitted at M48
- First Exploitation Workshop during the second General Assembly (M12) to present the Preliminary Exploitation Plan and identify targets, content and channels for distribution of questionnaires on the industrial application and acceptance of enzyme assisted production of consumer products. At least 1 person per each partner took part in the workshop



be aware of the tracking of a commercialization of an enzyme



one contact per partner will be named for the follow up of information and activities



different questionnaires (general public, interested companies, internal) will be produced, and results discussed in next workshops



exploitation of the project products and cross-sector interconnections still need to be established



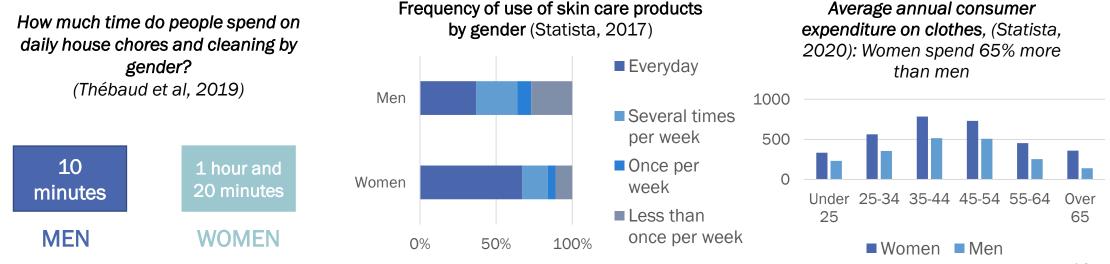




Task 8.5: Maximising exploitation of project enzymes, products, and knowledge

Consumer task force:

- Analysis of the state-of-the-art of the Choice Experiment model to identify a workflow of actions to analyze the WTP for consumer products with sustainable features for the planned consumer survey.
- > Background analysis of consumers purchase behavior towards targeted products by gender
- One paper to be published (waiting for the consortium approval)









Task 8.6: Maximising data management

Main output:

- ➤ Event 6: Workshop "Your impact on environment and society: Workshop on Responsible Research & Innovation". One activity was dedicated to Open Access/Open Science with Babette Regierer (SB-Science Management) as expert.
- ➤ Event 9: Inter-consortia workshop to support good practices exchange between participants Webinar "Managing data & resources: examples in research projects". Together with OxiPro, EnXylaScope (Cluster Enzymes for Greener Products) and Nymphe.
- ➤ Keep on updating Zenodo with as much information as any partner think of value for Open Science (not only publications, but datasets, posters, etc.).
- ➤ Using the website intranet, where all relevant info is available for consortium members; it can also serve to save data in a private manner (*Private data storage* section).
- Data Management Plan to be updated it in the upcoming months.











Task 8.7: Maximising synergies with other consortia

Main output:

Joint events

Several events have been organized together with other consortia/partners from other consortia have participate, including from a different call, such as Nymphe:

- ➤ Event 6: Workshop "Your impact on environment and society: Workshop on Responsible Research & Innovation". OxiPro coordinator actively participated. OxiPro's partner, SB Science Management, was involved as expert.
- ➤ Event 9: Inter-consortia workshop to support good practices exchange between participants Webinar "Managing data & resources: examples in research projects". Speakers representing OxiPro, EnXylaScope -Cluster Enzymes for Greener Products- and Nymphe.
- ➤ Policy working group: <u>First Policy Brief published</u>, Policy Brief #2 in preparation, focus will be set on the results and expected impacts as well as on challenges and barriers.







Task 8.7: Maximising synergies with other consortia

Main output:

Joint newsletter

- All the latest information about enzymes and enzymology research for greener products, aimed at researchers and the industry.
- RadicalZ lead
- Every 3 months
- Five issues already sent (the last one on 18 May 2023. The issue on gender equality in issue 4, February 2023, was written by FuturEnzyme)

Subscribers

166 (Jan 2023) 215 (June 2023) Average open rate

48.15%

Click through rate

13.5%









Other issues (from AB/RP1)

- > Prepared book chapters will be public
- > A more strategic approach for the next period is expected to target better scientific and also industrial audience
- > IP protection issues are expected for next reporting periods
- Exploitation Plan: revise the publication of the data included in theses. Make sure that PhD students do not disseminate confidential information (signing NDA?)
- Importance of adequate labelling of the final products: more sustainable and eco-friendlier. Consumers, consumers' organisations and regulatory organisms demand access to as much information of the formulations of the products as possible to exert their market surveillance activity. Green claims must be substantiated by facts and figures. Information of the list of ingredients available is essential for increasing transparency and avoiding greenwashing.
- Make clear to the consumers the impact of their decisions when choosing what they purchase. Messages such as "repair instead of buying again; wear a garment longer is greener; recycle, etc." can be included in divulgative articles.
- Article related to our project and the new innovations we plan to make in daily-use products with a green vision in Euroconsumers Consumer's Rights Organisation (Only in Italy, we can gain a reach of around 300 000 consumers plus the website visitors (around 40 million per year)

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Next action (6 months)

