

Project partners:

1. **A4F, Algafuel, SA (A4F)**
2. **Mikrobiologicky Ustav AV CR V.V.I (IMIC)**
3. **Forfarmers Corporate Services BV (FF)**
4. **Instituto de Biologia Experimental e Tecnológica (IBET)**
5. **International Flavors and Fragrances IFF (Nederland) BV (IFF)**
6. **Laboratorio Nacional de Energia e Geologia I.P. (LNEG)**
7. **Phycom BV (PHY)**
8. **Upfield Research and Development B.V. (UPF)**

MULTI-STR3AM

A sustainable multi-strain, multi-method, multi-product microalgae biorefinery integrating industrial side streams to create high-value products for food, feed and fragrance

BBI-2019-SO1-D2 - Produce components for various materials, including for food and feed, from microalgae

Collaborative project

Start date of the project: 01/05/2020

Duration: 60 months

Deliverable 6.18

Communication Plan [update 3]

WP	6	Communication and dissemination
Task	6.2	Development and implementation of a communication plan

Dissemination level ¹	PU	Due delivery date	30/04/2024
Nature ²	R	Actual delivery date	30/04/2024

Lead beneficiary	A4F
Contributing beneficiaries	IMIC, FF, IBET, IFF NL, LNEG, PHY, UpF

¹ Dissemination level: **PU** = Public, **CO** = Confidential, only for members of the consortium (including the BBI), **CI** = Classified, information as referred to in Commission Decision 2001/844/EC.

² Nature of the deliverable: **R**: Document, report (excluding the periodic and final reports), **DEM**: Demonstrator, pilot, prototype, plan designs, **DEC**: Websites, patents filing, press & media actions, videos, etc., **OTHER**: Software, technical diagram, etc.

WP 6:	A4F	Author
	A4F	Approval by WP leader
	A4F	Approval by coordinator

Document Version	Date	Partner	Comments ³
V0	10/03/2024	Mariana Doria/ A4F	Creation
V1	09/04/2024	Anneke Roes/ PHY	Modification
V2	22/04/2024	Richard Lhosky/ IMIC	Modification
V3	23/04/2024	Mariana Doria/ A4F	Final version for evaluation
V4	29/04/2024	Mariana Doria/ A4F	Final

³ Creation, modification, final version for evaluation, revised version following evaluation, final

Deliverable abstract

This deliverable is an update of the communication plan of MULTI-STR3AM project developed under Task 6.2. The goal of the update is to evaluate the results of the communication activities and to ensure the maximisation of the impact of the MULTI-STR3AM communication. For that, the definition of the target audiences, key messages, communication channels and implementation plan of the communication activities was revised. Additionally, the evaluation metrics were updated and adjusted to better evaluate these activities and ensure the boost of the project's communication.

This deliverable presents the communication strategy of the project and gives an overview of the communication activities planned for the following 12 months of the project, until M48.

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1 Objectives of the Communication Plan

The objectives of the communication activities are twofold, as they a) relate to increasing the visibility of the project itself and b) to raising awareness and interest for the findings resulting from the project.

This plan is conceived as a practical tool to be used by all partners to develop their individual and collective communication activities efficiently and contribute to the overall impact of the project. It has been developed following the guidance for project participants on communication about EU research and innovation projects⁴.

1.1 Specific objectives of the communication plan

This communication plan provides overall guidelines to increase the impact and outreach of the project. To do so, the communication plan aims to:

1. Create a visible and recognizable visual identity for the project, to establish a “project brand” on the market and track activities performed within MULTI-STR3AM.
2. Clarify the ambitions and define key performance indicators against which the communication activities will be evaluated in terms of impact and outreach.
3. Create an action plan and communication log to coordinate and keep track of communication activities, but also ensure that communication activities are deployed in a coherent and continuous fashion. This will support the consortium in reaching the expected impact of the project.
4. Coordinate with other stakeholders, such as other Horizon 2020 or BBI funded projects, for the co-organisation of events or publications of results to cluster results and maximise impact.
5. Follow up on activities performed during the project to evaluate the efficiency of measures taken and take corrective measures should the impact be below expectations set in the communication plan.

1.2 Guiding principles

Communication activities are envisaged with the following considerations in mind:

1. A strict commitment to quality principles and a strategic take on communication to ensure that activities are planned strategically, implemented in a timely fashion, and evaluated continuously to take corrective measures
2. A clear commitment to use a coherent visual identity across all communication materials to establish a strong brand. All partners commit to following the design standards established, review procedures as well as inform the rest of the consortium of communication activities.
3. A timely roll-out of communication activities to build a solid presence within identified target audiences and focus increasingly on communicating about the findings of the project to nurture interest

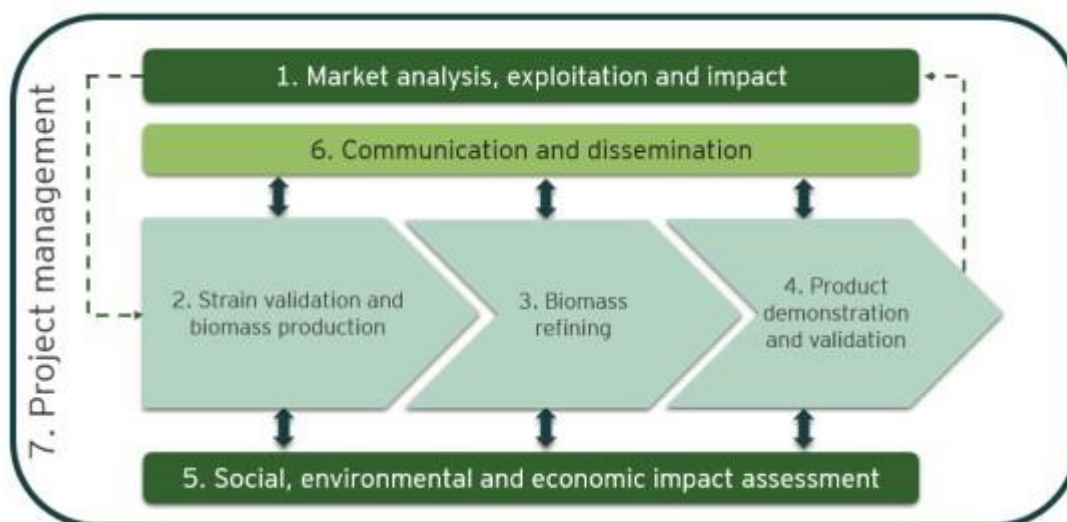
⁴ https://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020-guide-comm_en.pdf

4. A balance between activities targeting stakeholders at local, national, and European levels to secure buy-in from stakeholders across geographies and industries
5. A focus given to audiences that will help pave the way towards the societal acceptance of microalgae in novel application areas
6. A focus on monitoring, especially in the uncertain COVID-19 context, to ensure the consortium can react quickly to reach communication targets.

1.3 Links with other tasks and WPs

The communication plan is linked to the following tasks and deliverables in MULTI-STR3AM:

- **Task 6.1 Dissemination Plan (M1-M60):** The deliverable is due in M6, M24, M36 and M48, and aims to ensure the results are made accessible to relevant stakeholder groups for further exploitation. The Communication Plan will focus on both the project's progress and high-level communication about the results achieved, whereas dissemination activities will complement and deepen information sharing to favour knowledge sharing and exploitation by stakeholders not directly involved in the consortium.
- **All work packages:** Communication activities will span across the whole project to communicate on the progress achieved by the consortium as a whole and results obtained in the various work packages. As part of WP6, communication activities will interact and receive input from all other work packages in the project, as illustrated in the graphical representation below:



2 Stakeholder analysis and target groups

Project communication will extend from the most technical and experienced experts to the overall public. In the draft dissemination and communication plan, the consortium mapped stakeholders as follows:

- Industry; divided into exploiting (algae producers) and processing (end-users) industry
- Academia
- Policy makers and NGO's
- General public

	Who?	Why?	How?
Industry	<ul style="list-style-type: none"> • Feed sector; Aqua feed sector for live algae (shells, clamps, rotifers); Pet food sector • Producers of alternatives to meat and fish; Food manufacturers (pigments, flavour and fragrance enhancers, thickening agents); beverage manufacturers • Relevant industry associations such as European Algae Biomass Association (EABA), EFSA, OPNV, AP-BIO (PT), ZLTO (NL) European Industrial Bioenergy Initiative (EIBI) and farmer's organisations. • Microalgae biomass producers • Microalgae cultivation and processing technology providers 	<ul style="list-style-type: none"> • Achieve buy-in from new end-users • Secure interest in the methods and products developed in the project • Advance state-of-the-art within microalgae cultivation and processing • Disseminate new business models addressing economic viability issues encountered in the industry • Contribute to enhancing innovation height, competitiveness, and growth of companies in the European bio-based industry • Engage with potential stakeholders likely to replicate the model developed in the MULTI-biorefinery 	<ul style="list-style-type: none"> • Publication of articles in industrial news outlets • Participation in relevant conferences, trade shows and events • Updates on project's website and social media, supported by coverage in the project's partners own websites and online communication channels
Academia	<ul style="list-style-type: none"> • Universities and associated national European organisations, e.g., the European Universities Association • National science academies, e.g., European Academy of Sciences, the Czech Academy of Sciences 	<ul style="list-style-type: none"> • Boost awareness of new methods, practices and concepts developed in the project, contributing to advancing the state-of-the-art in microalgae technology • Spark new collaborations and cross-sector connections • Contribute to the education of university students • Improve commercialisation activities of public research institutions 	<ul style="list-style-type: none"> • Publications in peered reviewed journals • Participation in conferences • Participation in research projects and open discussions with other ongoing projects in the field
Policy makers	<ul style="list-style-type: none"> • CEN Technical Committee 454 on Algae and Algae Products • Portuguese Ministry of Environment and Energy Transition • Portuguese Ministry of Sea • Secure feed/ GMP+ (certifying) organisations needed to approve use of products resulting from this project. • Local and national government • European and national regulatory authorities • Funding authorities responsible for defining R&D priorities in Europe 	<ul style="list-style-type: none"> • Ensure understanding of key stakeholders at local, national, and European levels of the potential of microalgae as a source of ingredients in food, feed and other industries • Encourage the design of framework conditions to support the growth, innovativeness, and competitiveness of the industries at stake • Create an attractive legislative framework to enhance the development of microalgae-based bio-based industries (biorefineries) • Support the approval of currently non-approved microalgae species/strains by regulatory bodies 	<ul style="list-style-type: none"> • Participation in key events such as conferences, policy discussions • Organisation of tours and open days of the biorefinery site • Networking, e.g., through LNEG, responsible for the implementation of the Portuguese National Plan for the Promotion of Biorefineries
General	<ul style="list-style-type: none"> • Consumers • Environment and health-conscious citizens • General Public, citizens 	<ul style="list-style-type: none"> • Raise awareness of EU-funded research, and scientific/technological challenges tackled by the project 	<ul style="list-style-type: none"> • Traditional printed or electronic media outlets • Online presence (website, social media)

	<ul style="list-style-type: none"> • Increase societal acceptance of microalgae as an ingredient • Increase understanding of the bio-based economy and its social, environmental, and economic impact • Raise awareness of research/ industrial partners themselves (sort of PR) 	<ul style="list-style-type: none"> • Tours and open days in the biorefinery
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Among the different categories, the consortium distinguishes between primary (*those that benefit directly from the project results*) and secondary (*those that benefit indirectly from the results*) targets. Stakeholders are segmented by partner country (The Netherlands, Czech Republic, Portugal).

Primary stakeholders – The Netherlands

Name	Impact	Influence	What is important to the stakeholder?	Strategy for engaging the stakeholder
PHY				
(Aqua) Feed sector for live algae (shells, clams, rotifers) - Aqua Valley consortium (NL)	High	medium	Securing the availability of non-animal sourcing to promote aqua feed cultures independent of natural resources. Securing competitive advantage towards Asian import.	Involving end-users at an early stage to gather valuable information about the industrial use of microalgae.
Pet food sector	High	medium	The applicability of microalgae and its effect in pet food. The use of high-quality safe ingredients for pet food.	Involving end-users at an early stage to gather valuable information about the industrial use of microalgae. Participation in relevant conferences, trade shows and events (e.g. Nordic Pet Food Conference & Exhibition, Interzoo, Zoomark, VIV Europe, etc.).
Food sector: Producers of alternatives to meat and fish; Manufacturers (pigments, flavour and fragrance enhancers, thickening agents); beverage manufacturers	High	High (Increased visibility of microalgae products for the overall public)	The market applicability of the algae; Sustainable ingredients ensuring sustainable product development.	Production of engaging promotional videos; high-end B2B exhibitions such as FiE, Vitafoods attendance.
End-users for all sectors	Medium	High	Use of high-quality safe ingredients for food & feed (alleviate worry on inferior quality of algae products).	Clear communication and transparent composition analysis reporting.
Certifying bodies	Medium	High	Securing safe manners of operation for food & feed.	Early-on involvement of GFSI-certified bodies ensuring market applicable standards.
FF				
Farmers	High	Low	Economic and safe feed material	Included in normal comms activity.

FF Account Managers	High	Low	Benefits of algae as a feed material	Internal briefing and training
DML Suppliers	High	Medium	Liquid feed materials could be a substrate	Direct B2B comms
Processors/Retailers	Medium	Low	Alternative to soy	General comms and B2B briefing. Development of specific supply chain concepts

UpF

Consumers	High	Low	Price and plant-based, safe, sustainable products	Included in normal communication activities.
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IFF

Consumer goods industry	high	low	more sustainable, high performing fragrance ingredients	internal supplier-customer interactions
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Secondary stakeholders – The Netherlands

Name	Impact	Influence	What is important to the stakeholder?	Strategy for engaging the stakeholder
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PHY

Governmental organisations (e.g., Ministry of Economic Affairs, Climate Policy; Ministry of Agriculture, Nature and Food Quality)	Medium	Low	Ensuring a vibrant and innovative economic landscape.	Actively contributing to regional and national policymakers' requests for innovation. Showcasing the importance of microalgae via communication channels (e.g., interviews, blog, articles).
General public: Consumers (Environment and health-conscious citizens)	Low	Low	Increase societal acceptance of microalgae as an ingredient.	Establishing online presence: Hosting lectures, website launch, etc.
EFSA	Medium	High	Safety of food & feed algae products.	Linking with NGO's and other partners to adapt to the conclusive list in the Food Innovation Portal early-on
Sustainability agency (NL) (Schuttelaar & partners)	Medium	Medium	Promoting a common European regulatory/ legal framework for microalgae products through international collaborations.	Present MULTI-STR3AM information.

FF

NGOs	Medium	Low	Alternative feed materials which replace soy and therefore reduces potential risk of deforestation	Press/ media/ Annual Report
Policy Makers	Medium	Med	Ensure supportive legislative and policy environment	Primarily through feed industry trade associations and national and EU level

UpF

NGOs	Medium	Low	Alternative and sustainable plant-based oils which	Press/media/Annual Report
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Secondary stakeholders – The Netherlands

			reduces potential risk of deforestation	
Policy makers	Medium	Med	Ensure supportive legislative and policy environment	Primarily through food industry trade associations and national and EU level
IFF				
Consumers	Low	Low	Increase understanding of the bio-based economy and its social, environmental and economic impact	Online presence (website, social media)

Primary stakeholders – Czech Republic

Name	Impact	Influence	What is important to the stakeholder?	Strategy for engaging the stakeholder
IMIC				
Commercial partners of IMIC	High	Low	IMIC shows its abilities to do research in algal biotechnology	Information about project on our web pages, leaflets

Secondary stakeholders – Czech Republic

Name	Impact	Influence	What is important to the stakeholder?	Strategy for engaging the stakeholder
IMIC				
Academy of sciences of the Czech Republic	High	High	IMIC presents its results, public funds are e.g., based on IF of research publications	Publishing research results
Decision makers (authorities, funds, Academy of sciences)	High	High	Awareness of algal research in IMIC	PR activities
Public	High	Low	Public awareness of algal biotechnology and research in IMIC	PR activities Participation in National Project of Strategy AV21 – Potraviny pro budoucnost (Food for future) e.g., Scientific fairs, Nights of Science, Media presentation

Primary stakeholders – Portugal

Name	Impact	Influence	What is important to the stakeholder?	Strategy for engaging the stakeholder
LNEG, A4F, iBET				

Primary stakeholders – Portugal				
Name	Impact	Influence	What is important to the stakeholder?	Strategy for engaging the stakeholder
Policy makers: <ul style="list-style-type: none"> • APA • ASAE • DGAV • DGRM 	High	Medium	Ensure the project delivers consumers safe products and supports the Government to reach environmental goals. Ensure supportive legislative and policy environment. Ensuring a vibrant and innovative economic landscape.	PR activities. Actively contributing to regional and national policy makers request for information.
Industry: <ul style="list-style-type: none"> • Macroalgae and microalgae producers • Consumer goods industry 	Low	High	Acknowledge new business opportunities regarding algae sector. Diversification of products and markets. Plant-based, safe, sustainable products.	Information sharing and dissemination activities: website, events participation, and organization, press releases, videos, among others.
General Public: <ul style="list-style-type: none"> • Certification bodies • Environmental NGOs • End Consumers 	Medium	Low	Public awareness of algal biotechnology, sustainability benefits (environmental & economical).	Information sharing and dissemination activities: website, events participation and organization, press releases, videos, among others.
Academia	Low	Medium	Increase funds for R&D&. Technology transfer from academia to industry.	Publishing research results.

3 Key messages

The nature of the messages will be focused on the major assets of the project and targeted to the different audiences identified in Section 2.

Target audience	Key messages
Policy makers	<ul style="list-style-type: none"> • The development and production of microalgae in MULTI-STR3AM contributes to major Sustainable Development Goals enhancing EU's global position. • The inclusion of microalgae (and the project-defined strains) in the future Food Innovation Portal (which will replace the Novel Food Catalogue). • Algae have enormous potential and the reduction of barriers to its industrialisation should be incentivised by biobased policies. Regulations must be made to include these raw materials. Collaboration between the academic and commercial world can bring new and innovative ideas and public investment returns to taxpayers.
Industry	<ul style="list-style-type: none"> • Sustainable Investments towards growth and scale economies must be made to bring algae as a sustainable replacement of other raw materials for several industries, for example displacing petrol-based material with bio-based, biodegradable materials for consumer fragrance ingredients and encapsulation. • Microalgae are natural and sustainable ingredients that, thanks to their nutritional and functional properties, hold opportunities for innovative product development. • MULTI-STR3AM works with and for industry with ready knowledge on product development for direct market application of algae. • For the food and feed industry algae enrich and enable future consumer products to be more sustainable. • Algae offers a solution to the imminent gap of food quality and food availability.
General public	<ul style="list-style-type: none"> • Algae based products are good sources of nutrition and are adequate for vegan consumers, replacing, with success, nutrients and ingredients commonly found in meat and/or fish sources. Algae are a sustainable food source that can increase health by reducing intake of salt, sugar, and harmful fatty acids without compromising taste. • The overall public must be made aware of these viable alternatives (generalisation of consumption).
Academia	<ul style="list-style-type: none"> • Further research targeted at better control of production, higher productivities and reduced costs must be prioritized.

4 Communication channels, tools, and activities

The various methods below were identified as the most effective communication channels to ensure the project reaches the right target audiences:

Channels	Targets	Objectives	Supporting means
Official project website	At least 5,000 unique visitors per year with geographical representation	Present the project objectives, activities Give an overview on all outputs and deliverables Update event calendar	Visual identity kit, project videos, links to partners' websites
Project video materials	At least 1,000 views in total (all videos) Publish at least 4 videos during the project duration	Present the project concept, partners, and activity plan Provide updates in an engaging manner	Publication of videos online, e.g., YouTube
Social media	Publish at least once a month	Reach a broad audience, cutting across both industry professionals and the overall public	Publication of videos, news, events, milestones on the partners' social media profiles and on Multi-Str3am LinkedIn page.
Media coverage	At least 1 news article and 2 interviews a year	Science communication articles for technical magazines and online outlets	Technical magazines, online outlets, national and regional public newspapers, journals
Newsletters/ email lists	At least 500 subscribers in 48 months	Raise awareness on the project and facilitate collaborations	Send Newsletters to mail lists, e.g., MailChimp
MULTI-STR3AM interpretation centre	At least 1,000 visits in total	Involve the local community	Organized visits for individuals/groups with interest
Workshops, conferences, fairs, seminars, etc.	At least 50 events in total (online and offline)	Involve industry and academic audiences	

NB. More detailed information on some of the following sub-sections can be found in the annexes at the end.

4.1 Project website

The project website www.multi-str3am.com started running at 4th of May 2021, serving as a primary source of information regarding the project's objectives, progress, and outcomes with the aim of organising the project information as a unified source of visitor's knowledge. The content of the website is updated continuously by the consortium and distributed by the following pages:

- Project

- Partners
- Press & News
- Results
- Contact Us
- Events



multi-str3am | info@multi-str3am.com | +351 218 796 239

SUBSCRIBE TO NEWSLETTER

The Project page is divided in Introduction, About, Overview and Structure, giving a project overview, highlighting the motivation, background, objectives, the technical content and structure of the project, and the composition of the Advisory Board. Page Partners describes all the partners of the consortium while the Press&News is continuously updated with published press releases of the project. The Results page allows all visitors to see presentations performed online and access to the MULTI-STR3AM public deliverables, as well as the publications performed within the scope of the project. The Contact Us page gives the opportunity to any visitor to reach out to the coordinator of

the project. The Events page gives an updated list of the most interesting conferences, fairs, and other events in the sector of algae, biorefinery, biomass valorisation and blue bioeconomy that will happen soon.

The website is aimed to reach all audiences of the project, identified in section 3. It will:

- Provide relevant and current information to a wide audience, in an accessible and usable manner;
- Be a common documentation base for all partners, containing the main project documentation and public deliverables;
- Be an information database of all activities and public deliverables carried out by the project and consortium partners.

The maintenance of the website is the responsibility of A4F, whilst all the consortium members are required to provide information and documentation to feed on the website.

The website is compliant with GDPR rules on data collection and processing.

4.2 Project video materials

Project videos (either professional or amateur) will be filmed and edited to present the project concept, partners, and activities. They will be used for promotional activities, uploaded to YouTube and shown by partners at relevant conferences.

The project video is being created to be launched in the Q4 of 2023. The MULTI-STR3AM video will present the problem the project addresses and the main goals and activities that the project is focus on implementing to achieve the solution and desired algal products. The video will be published on the YouTube channel of the coordinator and partners and other social media, with the goal to achieve 6,000 views.

4.3 Social media

Social media profiles from all partners are used for the dissemination of the project's activities. All interactions about the project resulting from these publications must be communicated to all partners. The main social media focus will be on LinkedIn, Twitter, Facebook and YouTube. These will be used to reach a broad audience, cutting across both industry professionals and the overall public. Content will focus on the potential of microalgae as a sustainable source of ingredients for food, feed, and fragrance, as well as highlight new technologies and processes developed during the project.

The LinkedIn Page created for the MULTI-STR3AM project (<https://www.linkedin.com/company/multi-str3am/>) is a periodical source of information of the

project's progress, sharing results obtained by all partners. The LinkedIn Page has now 904 followers, increasing every week.

For all social media accounts, posts will be made monthly or bi-weekly and include content such as partners participation in events, achievement of project milestones, video demonstrations of microalgae production technology. Account administrators will engage actively with users to ensure effective two-ways communication.

4.4 Media coverage

Articles will be prepared for publications in outlets such as technical magazines, online outlets, national and regional public newspapers, journals etc. both in print and online. Several press releases are planned to publicize the most important milestones and achievements of the project. They will be prepared by all the partners to cover a broad geographical area. Under media coverage, the consortium also aims to publish non-scientific and non-peer-reviewed publications such as publications with a general description of the project and the targets achieved.

4.5 Newsletters

Electronic newsletters will be prepared for distribution to business partners and network contacts to raise awareness of the project and facilitate potential collaborations, with a sign-up option on the website. Advertisement of the newsletters will be given on social media to increase the interest of the overall public to details of the project. Old newsletters will be available at the website of the project once the most recent has been sent to the subscribers.

4.6 MULTI-STR3AM interpretation centre

A permanent display will be installed by M60 on the Riverside Walkway at ALGATEC to communicate visually about the project's key concepts, potential and achievements to pedestrians.

4.7 Workshops, conferences, and fairs

The focus will be on online events such as webinars and online fairs, in consideration with COVID-19 restrictions. In the case of eased regulations due to wide delivery of vaccines or the like, events with physical attendance will be organised and held.

4.7.1 Partners websites

To increase the impact among the specialised audience, all the consortium members will be asked to include a reference to the project and their participation on their organisation website.

Partner	Website with mention of MULTI-STR3AM
A4F	www.a4f.pt
IMIC	www.alga.cz – Czech and English
FF	www.forfarmersgroup.eu/en/
iBET	www.ibet.pt Webpage link with iBET participation in MULTI-STR3AM project: www.ibet.pt/projecto/a-sustainable-multi-strain-multi-method-multi-product-microalgae-biorefinery-integrating-industrial-side-streams-to-create-high-value-products-for-food-feed-and-fragrance/
IFF	www.iff.com
LNEG	www.lneg.pt
PHY	www.phycom.eu/multi-str3am https://phycom.eu/about-phycom/announcements/phycom-partners-in-multi-str3am
UPF	www.upfield.com

4.7.2 Partners social media

Partner	Facebook	LinkedIn	Twitter	YouTube	Instagram
A4F	-	A4F-Algae for Future	-	A4F - Algae for Future	-
IMIC	@MikrobiologickyUstavAvCrTrebo n	@ALGATEC H Centre - Inst. Microbiol. Czech Acad. Sci.	@AlgatechTrebo n - Centrum ALGATECH Třeboň	Centrum ALGATECH Třeboň - MBÚ AV ČR	Mikrobiologick ý ústav AV ČR - Centrum Algatech Třeboň
FF	@ForFarmers	ForFarmers	@forfarmers	ForFarmersNL	-
iBET	@iBETportugal	iBET - Instituto de Biologia Experimenta le Tecnológica	@iBET_Portugal	iBET Portugal	-

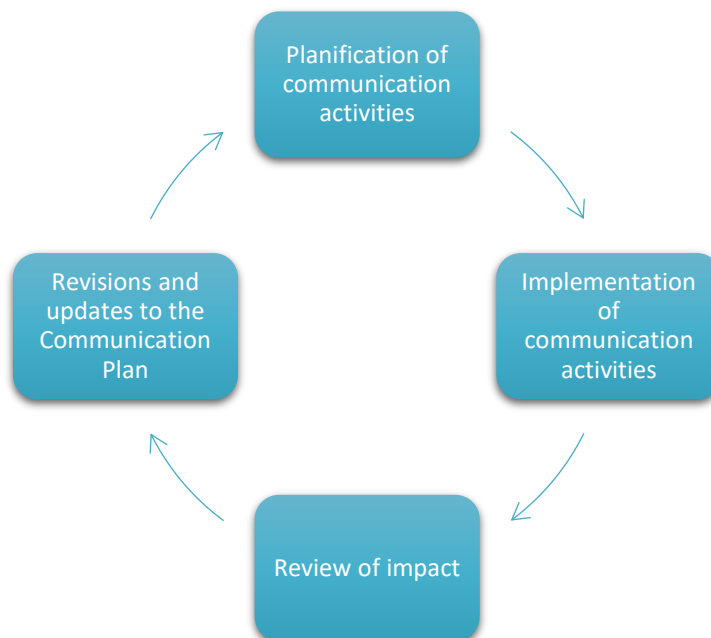
IFF	@InternationalFlavorsandFragrances	International Flavors & Fragrances	-	International Flavors & Fragrances Inc.	-
LNEG	@LNEGPortugal	LNEG	@LNEG_PT	-	-
PHY	@Phycom Microalgae	Phycom	@PhycomNL	-	-
UPF	-	<u>Upfield</u>	@upfieldglobal	Upfield Global	-

4.7.3 EC's media channels

Media	Description
Horizon Magazine http://horizonmagazine.eu/	HORIZON is the EU Research & Innovation e-magazine. It covers the latest developments in EU funded research and innovation, communicating the priorities and achievements of EU-funded research, its impact on citizens' lives and its contribution to the EU goals of smart and sustainable growth.
Newsletters www.ec.europa.eu/research/index.cfm?pg=publications&lg=en	Newsletters are published by the European Commission for different research areas. MULTI-STR3AM will contact this media to reach a wider audience.
Conferences and events organised by the European Commission	The European Commission co-organizes a variety of conferences. These may include exhibition areas or sessions.

5 Monitoring of communication activities and impact assessment

The goal with monitoring is to ensure a high-quality communication strategy implementation. This will be performed in a continuous basis to ensure an effective impact assessment and the consortium’s ability to react on time to maximise impact.



All partners must register the activities in the communication log (see Annex) and save evidence of the activities conducted. This will enable the consortium to assess which activities have the biggest impact both in quantitative and qualitative terms. Conclusions derived from the communication log will be added to the communication plan updates.

The impact of the communication activities is measured through indicators for each category of activity. The goals defined at M24 are summarised in the table below:

Indicator	May 2023 (following M36)	May 2024 (following M48)	Source and methodology
Number of visits on project website	2000	5000	Website count. Google analytics report on May 1 st
Accumulated number of views on videos published	700	1000	YouTube. Sum of views in the different YouTube channels, from project participants, where the videos were published.
Accumulated number of subscribers to the newsletter	100	300	Download of the list of subscribers from the project’s website.

Accumulated number of press releases	7	9	All press releases are published at the project's website.
Accumulated number of articles published on external media	7	10	Communication & Dissemination log.
Accumulated number of relevant events in which the consortium participates	5	10	Communication & Dissemination log.
Accumulated number of events in which the consortium organises	4	6	Communication & Dissemination log.

5.1 Evaluation of the impact of communication activities in M1-M48

During the 48 months of the project, the consortium was actively involved in different communication activities to boost the awareness of the target audiences towards the project. In this period, according to the communication's log, the consortium has implemented:

- 3 Communication campaigned by Radio (IMIC)
- 9 Non-scientific publications (FF, LNEG, IMIC, A4F)
- 6 Scientific peer-reviewed publication (IBET, A4F, LNEG, IMIC)
- 6 Participation in activities organized jointly with other EU project(s) (A4F, IMIC)
- 26 Participation in Conferences (A4F, IMIC, LNEG, iBET, PHY)
- 8 Training activities (IMIC, LNEG, iBET)
- 7 Press releases (A4F, IMIC)
- 78 Social Media contents (A4F, FF, iBET, IFF, LNEG, IMIC, PHY)
- 15 Website content (A4F, PHY, FF, iBET, IFF, IMIC)

Further detail on the activities performed between M37-M48 is described in the deliverable D6.15 *Report on participation in knowledge-sharing events for year 4*, showing the great efforts of the consortium on the communication of the project, further evaluated in the following section.

Until now, the communication plan has been followed by the entire consortium, respecting the definition of the objectives, visual identity of the project, stakeholders' analysis and target groups, key messages and communication channels, tools, and foreseen activities. In the table below, it is clear the good results the MULTI-STR3AM communication as reached during these 48 months

Indicators		Source and Methodology	Results by M48
Designation	M48 target		
Number of visits on project website	4000	Website count. Google analytics report on May 1 st	
Accumulated number of views on videos published	700	YouTube. Sum of views in the different YouTube channels, from project participants, where the videos were published.	701
Accumulated number of subscribers to the newsletter	300	Download of the list of subscribers from the project's website.	102 ⁵
Accumulated number of press releases	8	All press releases are published at the project's website.	7
Accumulated number of articles published on external media	17	Communication & Dissemination log.	15
Accumulated number of relevant events in which the consortium participates	35	Communication & Dissemination log.	57 ⁶
Accumulated number of events in which the consortium organises	4	Communication & Dissemination log.	5 ⁷

According to the communication KPIs obtained so far (M48), the general evaluation of the communication activities is good. Nevertheless, there are some activities that must be boosted in this last 12 months of MULTI-STR3AM. They are:

- The number of video visualizations.
- The number of subscribers to the newsletter must be increased in the following period, given that the targeted numbers could not be reached. For that improvement, the consortium will make an extra reinforcement on the advertisement of the newsletters on the social media and events.
- The number of press releases so far is 7, but these must be important mechanisms of communication for overall interested stakeholders and needs to be enhanced to also boost other communication activities. More press releases are expected now regarding results from the MULTI-biorefinery and its fractions under development.

The accumulated number of articles published on external media has surpassed the KPI established in M36, with 14 articles published. However, this growth has not continued in the same path with only one more publication by M48. It is expected that by the last 12 months of project there will be

⁵ For a typo, the previous deliverable (D6.13) informed just 47 subscribers to the newsletter. This was corrected in the review report submitted in July, 2023.

⁶ Considering conferences, workshops, exhibitions, pitch events, trade fairs, and training activities.

⁷ Including round-table during COST event in 2023.

more communication activities and this kind of articles published with the announcement of the results of the project.

The accumulated number of relevant events in which the consortium has participated in these 48 months was 56, surpassing the expected KPI. However, it is expected that the consortium will focus this year on the organisation of events, with special attention to activities associated with other R&D&I projects in the EU. Such seminars and workshops are already being planned for 2024 and 2025.

5.2 Updated Communication Metrics

According to the results obtained so far and the communication goals by the end of the project, the consortium established communication goals for M60 in the following table, with some adjustments regarding the focus needed for the last 12 months of work.

Indicator	May 2025 (following M60)	Source and methodology
Number of visits on project website	4500	Website count. Google analytics report on April 30 th (or May 1 st)
Accumulated number of views on videos published	800	YouTube. Sum of views in the different YouTube channels, from project participants, where the videos were published.
Accumulated number of subscribers to the newsletter	150	Download of the list of subscribers from the project's website.
Accumulated number of press releases	10	All press releases are published at the project's website.
Accumulated number of articles published on external media	18	Communication & Dissemination log.
Accumulated number of relevant events in which the consortium participates	65	Communication & Dissemination log.
Accumulated number of events in which the consortium organises	6	Communication & Dissemination log.

Thus, the metrics for number of subscribers of the newsletter was reduced. All others are expected to increase in the following months. However, the important focus will be made to press release, participation, and organization of events.


6 Annexes: Dissemination and Communication Log

The dissemination and communication log of the MULTI-STR3AM project from M37 to M48, with 46 new activities, is described below.

Partner	Activity/ Means of Dissemination	Description	Day	Month	Year	Online/ Offline	Means of verification, References & Links
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "The new press release of MULTI-STR3AM is now available on the project's website"	2	May	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7059098508070461440
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "Can microalgae help us overcome the reduction of arable land and protein shortage worldwide due to global warming?"	9	May	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7061686654557667330
A4F	Participation to a Workshop	From Ulva aquaculture to food and feed production (including presentation)	23	May	2023	Offline	https://seawheatcost.haifa.ac.il/
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "On the 16th and 17th of May, the MULTI-STR3AM Consortium has reunited in Lisbon, Portugal..."	24	May	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7067053258808147969
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "The MULTI-STR3AM Consortium meeting has reunited all the project's partners in Lisbon, Portugal..."	1	Jun	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7070064275997741056
PHY	Social Media	post on Phycom's LinkedIn page: "We were invited to Lisbon as part of the MultiStr3am Project. It was a great stay, and so nice to meet everyone in person again!"	2	Jun	2023	Online	https://www.linkedin.com/posts/phycom_multistr3am-project-consortiummeeting-activity-7070286456543436801-qdaC?utm_source=share&utm_medium=member_desktop
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "On the 23rd of May, MULTI-STR3AM has organised a round-table event on biorefining "Multi-perspective on biorefineries for micro- and macroalgae" within the Seawheat - COST Action workshop, held in Lisbon, Portugal."	5	Jun	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7071406618235592704
IMIC	Organisation of a Workshop	Workshop for Princeton University (including presentation)	6	Jun	2023	Offline	ND
A4F	Other	MULTI-STR3AM Newsletter #4	6	Jun	2023	Online	https://www.multi-str3am.com/en/press-news?news
A4F	Participation to a Conference	International Conference on Algae Extracts (including presentation)	7	Jun	2023	online	https://icae.extratoteca.pt/
IMIC	Organisation of a Workshop	Talent Academy for southbohemian students (including presentation)	12	Jun	2023	Offline	https://jindrichohradecky.denik.cz/zpravy_region/nadani-studenti-nahledli-pod-ruce-trebonskym-vedcum-zahrani-si-i-na-detektivy-20.html?fbclid=IwAR3tn2bPVII4F1emocgF-YSyKwwFWFwvVOXJbr4FzHijyvzcyRbjWBFiCg
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "On the 13th of May, iBET - Instituto de Biologia Experimental e Tecnológica has participated on the open day of ITQB NOVA, where the general	14	Jun	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7074664087300808704

		<i>public was invited to put the lab coat on and experiment the scientific side of things. "</i>						
IMIC	Other	<i>Public presentation "algae on a fork"</i>	16	Jun	2023	Offline	https://www.alga.cz/c-77-prednasky.html	
IMIC	Trade Fair	<i>VědaFest (Science Festival) - presentation of IMIC's research</i>	21	Jun	2023	Offline	https://www.alga.cz/p-events.html	
A4F	Social Media	<i>post on Multi-Str3am's LinkedIn page: "Don't miss this video where ALGATECH Centre - Inst. Microbiol. Czech Acad. Sci. explains its work behind heterotrophic growth of microalgae species, and the strain selection and optimization procedures to ensure the best heterotrophic growth performances, a work developed within MULTI-STR3AM project."</i>	23	Jun	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7078023290442645504	
A4F	Social Media	<i>post on Multi-Str3am's LinkedIn page: "Check this video from Phycom where the chef Joris Schildknecht explains its passion about vegan food and the advantages of microalgae for such products. Two recipes for producing vegan food products with microalgae are shown, highlighting the bright future that awaits microalgae food products. "</i>	29	Jun	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7080156243478163456	
A4F	Social Media	<i>post on Multi-Str3am's LinkedIn page: "Check this video from Phycom where the chef Bas Cloo talks about food transition and the interest of algae as a creative culinary ingredient. Bas explains how microalgae can be easily applied to food products as crackers, smoothies and for creating vegan mayonnaise. "</i>	6	Jul	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7082634860116287490	
PHY	Social Media	<i>post on Phycom's LinkedIn page: "Heerlijke recepten en genoeg inspiratie van Bas! 😊"</i>	7	Jul	2023	Online	https://www.linkedin.com/posts/phycom_bas-cloo-algae-as-creative-culinary-ingredient-activity-7082710642779901952-8rWA?utm_source=share&utm_medium=member_desktop	
IMIC	Trade Fair	<i>Výstava Země živilka (Agricultural fair) - algal biotechnology presentation</i>	25	Aug	2023	Offline	https://www.alga.cz/p-events.html	
LNEG	Participation to a Conference	<i>WASTES 2023 Conference, Coimbra, 6-8 September 2023. Oral Presentation: "EFFECT OF Nannochloropsis sp. CELL DISRUPTION ON MICROALGAE LIPID EXTRACTION YIELDS".</i>	6	Sep	2023	Offline	Abstract pdf (https://www.wastes2023.org/)	
A4F	Social Media	<i>post on Multi-Str3am's LinkedIn page: "Another summer holidays have gone by but not without the presence of algae! A4F-Algae for Future, coordinator of the MULTI-STR3AM project, has developed several summer activities for kids and adults to learn more about seaweed and microalgae! 🌊🌱 Take a look at the following activities and enjoy the ending of summer time!"</i>	7	Sep	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7105483935282835456	
A4F	Social Media	<i>post on Multi-Str3am's LinkedIn page: " 🌱 Exciting Partner News: Phycom Receives €9M Investment to Accelerate Growth 🌱"</i>	13	Sep	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7107639991287070722	
A4F	Social Media	<i>post on Multi-Str3am's LinkedIn page: "During the last 18 months, the MULTI-STR3AM project as achieved several important results:"</i>	19	Sep	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7109906736689364992	

A4F	Social Media	post on Multi-Str3am's LinkedIn page: "Joana Ortigueira presented the "Environmental assessment of an industrial-scale microalgae production system through process modelling"."	28	Sep	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7113075108591599616
IMIC	Communication Campaign (e.g. Radio, TV)	Podcast of the Faculty of fishery and water protection, Southbohemian university. Topic - microalgae	30	Sep	2023	Online	https://open.spotify.com/episode/30XZgJyr5dRTYgoeDoliwz
IMIC	Social Media	post on IMIC's LinkedIn page: "Our review Solar bioreactors used for the industrial production of microalgae is now free available for academics on ResearchGate web - https://lnkd.in/dfyju5d ."	1	Oct	2023	Online	https://www.linkedin.com/posts/algatech-biotechnology_our-review-solar-bioreactors-used-for-the-activity-7126095934727290880-5zbw?utm_source=share&utm_medium=member_desktop
IMIC	Social Media	post on IMIC's LinkedIn page: "Overview of industrial cultivation of microalgae"	2	Oct	2023	Online	https://www.linkedin.com/posts/algatech-biotechnology_microalgae-spirulina-chlorella-activity-7119943447049814016-XF80?utm_source=share&utm_medium=member_desktop
PHY	Exhibition	Future of Protein Production	11	Oct	2023	Offline	https://www.futureofproteinproduction.com/
PHY	Participation to a Conference	Future of Protein Production	11	Oct	2023	Offline	https://www.futureofproteinproduction.com/
A4F	Social Media	post on Multi-Str3am's LinkedIn page: "Happy World Algae Day!"	12	Oct	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7118272843510951936
A4F	Participation to a Conference	EFIB 2023 - European Forum for Industrial Biotechnology and the Bioeconomy	24	Oct	2023	Offline	https://efibforum.com/
IMIC	Social Media	post on IMIC's LinkedIn page: "ALGATECH Centre - Inst. Microbiol. Czech Acad. Sci. (IMIC) has successfully completed the commercialization process of its unique hashtag#microalgae strain hashtag#Parachlorella."	1	Nov	2023	Online	https://www.linkedin.com/posts/algatech-biotechnology_microalgae-parachlorella-lutein-activity-7130071098632601600-jH X?utm_source=share&utm_medium=member_desktop
IMIC	Communication Campaign (e.g. Radio, TV)	Podcast of the Academy of Sciences of the Czech Republic, including presentation of bakery products with microalgae	7	Nov	2023	Online	https://www.avcr.cz/cs/pro-verejnost/aktuality/PODCAST-LIVE-Rasy-na-taliri.-Richard-Lhotsky-predstavuje-vyzkum-mikroras-v-praxi/
PHY	Social Media	post on Phycom's LinkedIn page: "This is an excellent example of our international collaborations."	14	Nov	2023	Online	https://www.linkedin.com/feed/update/urn:li:activity:7130098309750255616
PHY	Exhibition	Food Ingredient Europe; including a stand	28	Nov	2023	Offline	https://www.figlobal.com/fieurope
PHY	Pitch Event	Presentation and visitor conference on sustainability issues related to food, packing, recycling, re-use etc.	29	Nov	2023	Offline	www.engage.ifm.eng.cam.ac.uk
IMIC	Participation to a Conference	AlgaEurope conference, Prague, 12. - 15. Dec. 2023 Poster presentation - THE EFFECTS OF CULTURE CONDITION ON GROWTH AND MYXOXANTHOPHYLL PRODUCTION OF TWO SYNECHOCYSTIS STRAINS	12	Dec	2023	Offline	Poster pdf
IMIC	Participation to a Conference	AlgaEurope conference, Prague, 12. - 15. Dec. 2023 APPLICATION OF COUNTERCURRENT CHROMATOGRAPHY FOR THE EFFICIENT RECOVERY OF DOCOSAHEXAENOIC ACID (DHA N-3) FROM MICROALGAE (including presentation)	13	Dec	2023	Offline	Abstract pdf

IMIC	Participation to a Conference	<i>AlgaEurope conference, Prague, 12. - 15. Dec. 2023 DEVELOPMENT OF THIN-LAYER CASCADES FOR MICROALGAE CULTIVATION: MILESTONES (including presentation) post on Multi-Str3am's LinkedIn page: "Check it out!"</i>	14	Dec	2023	Offline	Abstract pdf
A4F	Social Media	 <i>Results in Brief article about MULTI-STR3AM was published at CORDIS website in six languages."</i>	4	Apr	2024	Online	https://www.linkedin.com/feed/update/urn:li:activity:7181644731716624385
IMIC	Social Media	<i>post on IMIC's LinkedIn page: "Great to be part of this project."</i>	5	Apr	2024	Online	https://www.linkedin.com/posts/algatech-biotechnology_a-multi-product-microalgae-biorefinery-for-activity-7184055475808669697-IzP?utm_source=share&utm_medium=member_desktop
IMIC	Social Media	<i>post on IMIC's LinkedIn page: "V pátek 19. a v sobotu 20. dubna proběhla v Písku akce Den Země zaměřená v letošním roce na vodu. Součástí prezentací byla i mobilní laboratoř Biologické centrum AV ČR, v.v.i., ve které se prezentovaly i řasy a sinic. Na představení těchto mikroorganismů jako zdroje potravin se podílel i ALGATECH Centre - Inst. Microbiol. Czech Acad. Sci. Mladí i dospělí návštěvníci se seznámili s tím, co mikroskopické řasy vlastně jsou, jak vypadají, jak se dají pěstovat v průmyslovém měřítku, a dokonce mohli některé ochutnat – chlorelové muffiny nebo řasové pusinky. Mikrořasy v potravinách jsou tématem probíhajícího projektu hashtag#Potraviny_pro_budoucnost v rámci programu Akademie věd ČR - hashtag#Strategie_AV21 a Evropského projektu MULTI-STR3AM H2020 BBI JU."</i>	25	Apr	2024	Online	https://www.linkedin.com/posts/algatech-biotechnology_potravinyabrproabrbudoucnost-strategieabrav21-activity-7189131479715651584-ONa?utm_source=share&utm_medium=member_desktop
A4F	Social Media	<i>Repost on MULTI-Str3am LinkedIn page of CBE post "The CBE JU-funded MULTI-STR3AM project is turning an abandoned industrial site in #Portugal into a #microalgae #biorefinery".</i>	27	Apr	2024	Online	https://www.linkedin.com/feed/update/urn:li:activity:7189910548627517440
A4F	Press release	<i>Press release on "MULTI-STR3AM microalgae biorefinery project overcomes: food, feed and fragrance demanding industry tests"</i>	30	Apr	2024	Online	https://www.multi-str3am.com/en/press-news?press

Partner	Type*	Title	Authors	Title of the Journal/ Proc./ Book	Publisher	Is this a peer- reviewed publicatio n?	Date of Acceptan ce	Repository Link
IMIC	Article in Journal	Solar bioreactors used for the industrial production of microalgae	Masojídek, J., Lhotský, R., Štěřbová, K. et al.	Appl Microbiol Biotechnol	Springer	Yes	18 August 2023	https://doi.org/10.1007/s00253-023-12733-8
LNEG	Publication in Conference proceedings/ Workshop	Chapter: "Effect of Nannochloropsis sp. cell disruption on microalgae lipid extraction yields".	T. Lopes da Silva, J. Vries, A. Reis, B.P. Nobre	Book: "WASTES: Solutions, Treatments and Opportunities IV"	Taylor & Francis: CRC Press	Yes	28 July 2023	https://www.taylorfrancis.com/chapters/edit/10.1201/9781003345084-43/effect-nannochloropsis-sp-cell-disruption-microalgae-lipid-extraction-yields-lobes-da-silva-vries-reis-nobre



This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union’s Horizon 2020 research and innovation programme under grant agreement No 887227. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.