Grant Agreement
N° 887227

Project partners:

1. A4F, Algafuel, SA (A4F)
2. Mikrobioloogicky 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

Start date of the project: 01/05/2020
Duration: 48 months

Deliverable 7.1
Project Handbook

WP	7	Project Management
Task	7.1	Coordination and Progress Monitoring

Dissemination level[1]	PU	Due delivery date	30/06/2020
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Contributing beneficiaries	IMIC, FF, IBET, IFF, 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 *7*:	A4F	Author
	A4F	Approval by WP leader
	A4F	Approval by coordinator

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[3] Creation, modification, final version for submission, revised version following evaluation, final

Deliverable Executive Summary

This deliverable presents the key aspects of the Multi-Str3am project relative to its organization, procedures and governance. It is divided in 5 main parts and annexes at the end. It intends to be a simple and practical guide to support project partners in the successful execution of the project tasks.

The first section highlights the objectives of this Deliverable and provides a global overview of the Project's work package structure and subdivision into technical, knowledge systematization and management and exploitation. It further details the project timeline.

The second section lays out the management structure of the project and responsibilities and roles of the partners. This section is based on the consortium and grant agreements, but constitutes a practical day to day guide to partners of the governing bodies, their functions, and responsibilities.

The third section defines the internal routes of communication between project partners and practical aspects of the several tools existing for effective transfer of information.

The fourth section details the methods and tools for effective reporting of the project results and progress. Several reporting instruments exist and their layout, construction responsibilities, approval methodologies are defined.

The fifth and final section specifies the methods to host and share files in a secure way among project partners. Furthermore, the visual identity of the project is detailed by its logo.

In the annex section, templates and the lists of relevant information are set forth.

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1 Introduction

1.1Objectives of the Project Handbook

The objective of this Project Handbook is to offer reliable guidelines for the members of the MULTI-STR3AM project in order to facilitate purposeful collaboration throughout the project period. As such, this document defines the general approach to and the procedures to be followed for the most important aspects of the project, including management structures, partner communication, project reporting, working practices and risk management. It is designed to provide a common framework for effective management, communication, documentation, deviation identification and correction throughout the course of the project. While certain issues are elaborated upon in further detail in the Grant Agreement and Consortium Agreement, the main goals of this report are:

- The establishment of documentation, reporting and communication procedures to be followed by all members of the Consortium
- To facilitate knowledge exchange and production
- To support Consortium partners in being aware of how their activities relate to the work done by others
- To provide support in monitoring the progress of the project, including the production of deliverables on time and specification in accordance with work packages
- To facilitate identification of deviations and taking necessary remedial actions as soon as possible

1.2Overview of project structure

The project will last 48 months: from 1 May 2020 – 30 April 2024.

As for structure, the project comprises seven work packages (WPs) grouped into three categories:

1. Establishing new value chain from biomass to products: The technical WPs (WP2-4) cover the process of transformation of microalgae biomass to valuable compounds. Each WP feeds into and provides insights to optimise processes in the others: WP2 covers strain selection and improvement as well as cultivation and harvesting of biomass for refining in WP3; WP3 covers biomass refining and WP4 covers product demonstration and validation. These WPs draw insights from WP1 and will provide insights for WP5 and 6 on assessments and communication.

2. Guiding and assessing value creation: WP1 focuses on value definition, scoping the project's efforts and defining the market strategy. WP5 assesses the social, environmental and economic impact of developed products, technologies and value chains. Both WPs continually feed back into and inform decisions taken in WP2-4.

3. Managing value creation and exploitation: WP 7 ensures effective administrative, financial and technical project management as well as innovation management and quality assurance. WP1 and 6 facilitate communication, dissemination and exploitation of project results on a strategic and operational level.

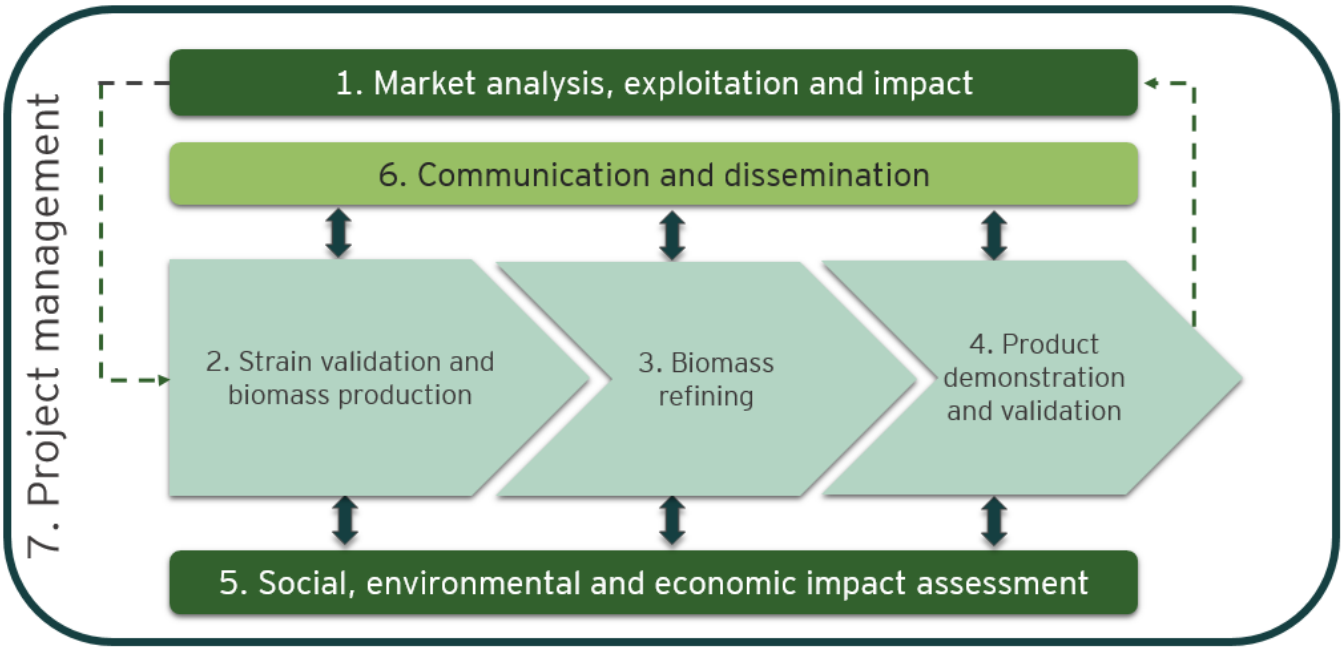

Figure 1: Graphic presentation of work package interlinkages

1.3Overview of project timeline

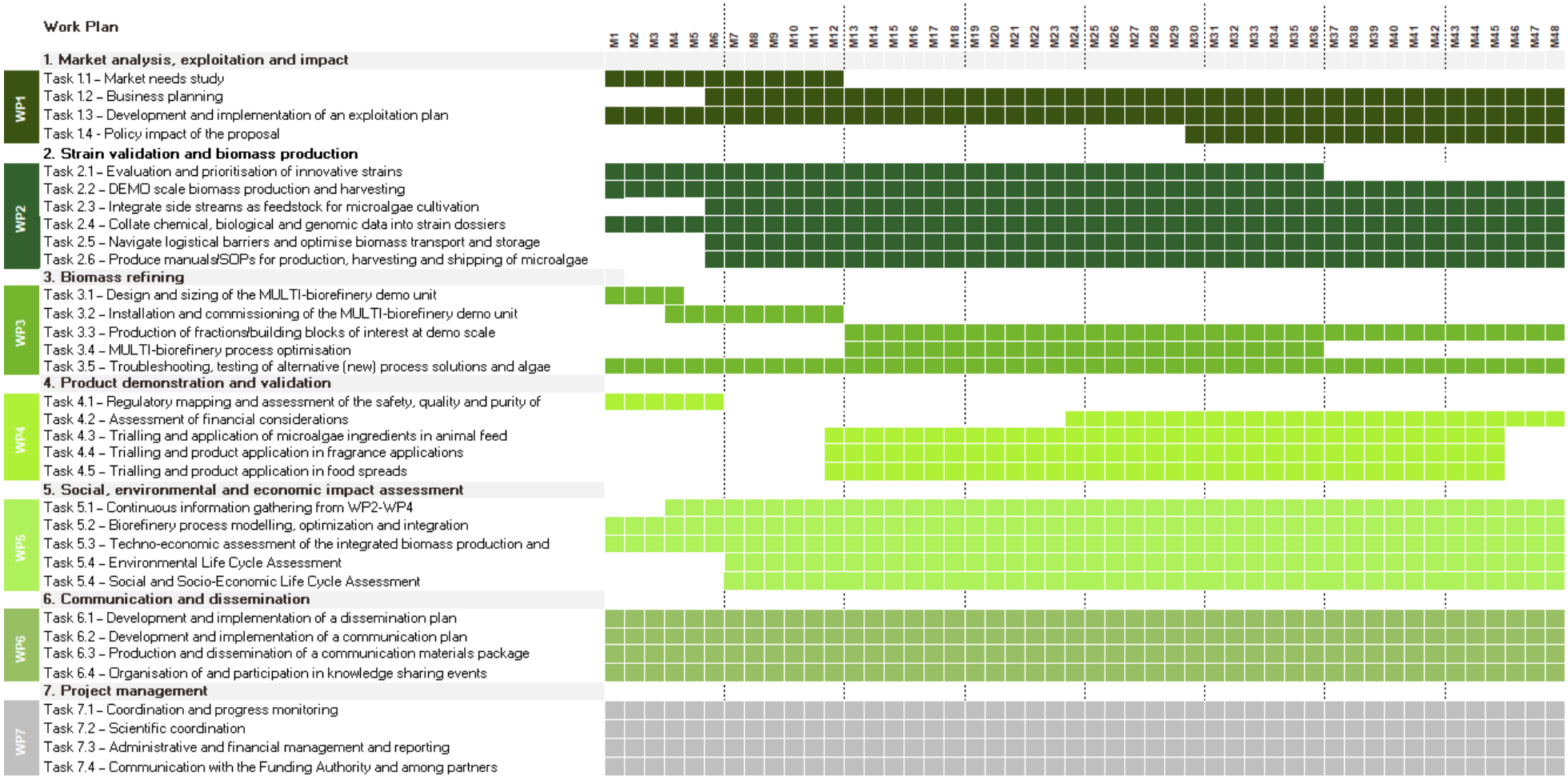

Figure 2: GANTT chart for MULTI-STR3AM

2 Project management structure, responsibilities and roles

This section sets out the management structure, organizational bodies and functions as well as decision-making mechanisms adopted by the consortium, as based upon knowledge of best practices obtained through participation in past and ongoing projects. The division of beneficiaries' roles and responsibilities are further laid out in Article 41 of the Grant Agreement. This Article sets out the specific responsibilities of each beneficiary as well as of the coordinator. The responsibilities of parties are further elaborated upon in Section 4 and 5 of the Consortium Agreement.

2.1General principles

As stated in Section 4.1. of the Consortium Agreement, each beneficiary undertakes to take part in the efficient implementation of the project and to cooperate, perform and fulfil, promptly and on time, all of its obligations under the Grant and Consortium Agreements, as may be reasonably required from it and in a manner of good faith as prescribed by Belgian law. This involves notifying promptly and in accordance with the governance structure of the project any significant information, fact, problem or delay likely to affect the project. Each party is also obliged to take the reasonable measures needed to ensure the accuracy of any information or materials supplied to other parties. The management structure described below is designed to effectively coordinate the organisation of the project as to:

- The interaction between the European Commission and the project
- The collaboration between the project partners
- The coordination and monitoring of the daily work by means of mechanisms for financial, risk, communication and innovation management.

Detailed procedures for meetings, agendas and voting can be found in Section 4.2 of the Consortium Agreement and are therefore not laid out in this handbook.

2.2Management structure

The management structure is designed to strike the right balance between coordination, reporting and action. The key pillars of the organizational framework are to ensure clear responsibilities and a transparent decision-making process that fosters collaboration in order to achieve maximum value during the project. It is based on differentiated levels of action and responsibilities:

- The strategic level is the responsibility of the General Assembly
- The tactical level is the responsibility of the Steering Committee
- The operational level is the responsibility of the Project Management Office

The management structure, together with the project governance procedures, including representation, meeting organisation, minutes, voting, quorum and veto rules will be based on the DESCA model and are further described in detail in Section 6.2 and 6.3 of the Consortium Agreement.

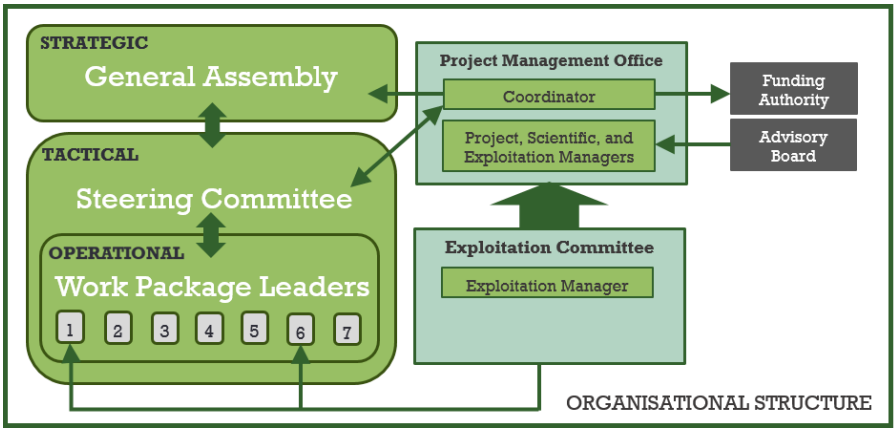

Figure 3: Organisational structure of the MULTI-STR3AM project

2.2.1 Project Coordinator

The Project Coordinator (PC) is the legal entity responsible for leading the project and acts as the intermediary and point of contact between the partners and the BBI-JU and EC. A4F will designate an employee act as Project Coordinator as laid out in Section 6 of the Consortium Agreement. It will maintain regular contact with the partners through the Steering Committee to ensure progress as well as hold regular meetings with all work package leaders. It is A4F's responsibility to try to solve any problem arising in the project by redirecting resources, calling for additional meetings, or reporting to the General Assembly and the Funding Authority when relevant.

2.2.2 General Assembly

The General Assembly (GA) is the highest decision-making body for the project. It is composed of one representative from each partner and is chaired by A4F, who is responsible for organizing eight GA meetings during the project, as well as any additional extraordinary meetings (if requested by min. three partners). The role and responsibility of the GA is to discuss and decide on issues that cannot or have not been dealt with by the SC; including strategic (e.g. implementation of contingency plans or potential entry of new partners/termination of existing underperforming partners), administrative or contractual issues. To ensure transparent and fair decision-making procedures, each representative has one vote and the GA must reach a qualified majority of min. 62.5 % in order to pass a decision with exceptions defined in article 6.2.3.4 of de Consortium agreement. All partners must have one representative present during meetings – either physically or via teleconference.

2.2.3 Steering Committee

The Steering Committee (SC) is the technical oversight body that ensures that the tactical level of the project is handled efficiently. It is chaired by A4F as Coordinator and includes all WP leaders and one representative of each End User. Its main function is to ensure coordination and transfer of information between the seven WPs, and to guarantee the quality of the work done in the project. The SC reports to the GA on project progress and results as well as any risks and their appropriate mitigation measures arising during the project. It also supervises the data management, knowledge creation and management activities.

2.2.4 Project Management Office

The Project Management Office (PMO) will be located at the premises of A4F and will include the Project Manager (Tiago Guerra), the Scientific Manager (Luís Costa), the Exploitation Manager (Sara Badenes), a Dissemination Manager (Melissa Fernandes), a Data Management Officer (new hire) and an Administrative Officer (Bruno Melo). The office will carry out the daily project management activities incl. administrative, financial, legal and contractual management. It is responsible for compliance with the Grant Agreement and Consortium Agreement, IP management, data management, reporting, innovation management and budgets (incl. deviations) as well as updating the project website and other internal communication materials. The PMO is also responsible for all communication with the EC. It will further assist the project coordinator in preparing reports (data requests and consolidation), organizing and chairing meetings by:

- Sending invitations, practical information, agenda, templates, attendance lists, etc. in connection with each meeting as well as meeting minutes including list of decisions, actions and participant lists to the partners
- Organizing rehearsal review with partners in the case of EC reviews
- Facilitating meetings, including presentation of administrative and financial content to the partners.

2.2.5 Exploitation Committee

The Exploitation Committee (ExC) is chaired by the Exploitation Manager (EM). It will consist of representatives from each partner dealing with legal issues such as IPR, licensing, publications, etc. The ExC will supervise the exploitation and dissemination activities in WP1 and WP6 and the EM will stay in close contact with the WPLs. The ExC will reflect upon its discussions and conclusions with the SC. A key task for the ExC is to support the Coordinator and PMO in implementing the IP strategy, and the Data Management Officer in implementing the data management plan. The EM will act as the main contact person for external stakeholders interested in further exploiting and commercialising the project results, and will bring all new opportunities to the ExC for further discussion.

2.3Work package management

2.3.1 Work-package leaders

The work packages (WP) are led by WP leaders (WPL) who are individuals from the partners designated as responsible for a WP. These, coordinate, supervise and contribute to the specific activities within their assigned WPs. Each WPL is in charge of their own WP, incl. coordinating and keeping close contact with each Task Leader, identifying possible risks, and facilitating intra-consortium communication. The WPLs are part of the SC and will ensure a high quality of the individual deliverables, achievement of milestones, delivery and coordination with tasks in other WPs. The main tasks of the WPL are to:

- Check that the quality and results of each task in their WP is consistent with the project objectives
- Ensure that the deliverables are of high quality and fulfil the defined requirements
- Monitor risks and inform the SC of any deviations in order to trigger contingency plans/mitigation measures
- Assure the flow of information among WPs for timely and effective coordinated work at project level

WP No.	WP Title	WPL partner	Name of WPL
WP1	Market analysis, exploitation and impact	A4F	Tiago Guerra
WP2	Strain validation and biomass production	PHY	Erwin Houtzager
WP3	Biomass refining	A4F	Luis Costa
WP4	Product demonstration and validation	iBET	Teresa Crespo
WP5	Social, environmental and economic impact assessment	LNEG	Tiago Lopes
WP6	Communication and dissemination	A4F	Tiago Guerra
WP7	Project management	A4F	Tiago Guerra

2.4Project meetings

The GA will hold meetings twice a year, with extraordinary meetings via teleconference or presential at any time upon written request from a minimum of 3 partners. The SC meets every three months via teleconference, with extraordinary meetings via teleconference or presential at any time upon written request from the SC. The ExC meets twice per year in coordination with the GA, with extraordinary meetings via teleconference or presential at any time upon written request from any of the members of the ExC. Finally, the Advisory Board meets once per year via teleconference as well as at the Kick-off, midterm and final project meetings. This ensures that all partners will meet the advisors throughout the project and that they are fully integrated. Extraordinary meetings are held at any time upon request by the GA or the SC.

The chairperson of a Consortium body must give notice in writing of a meeting to each member of that Consortium Body as soon as possible and no later than the minimum number of days as indicated in Section 6.2 of the Consortium Agreement (30 calendar days for ordinary meetings and 15 calendar days for extraordinary meetings for the GA, SC and AB; 14 calendar days for ordinary meetings and 7 calendar days for ordinary meetings for the ExC). The members of a Consortium Body could convene, by unanimous decision to have extraordinary meetings within a shorter previous notice. Details as to the preparation and organisation of meetings (deadlines for convening meetings, sending the agenda, adding agenda items, decision rules, voting rules and quorum, veto rights, and how to keep minutes of meetings) are further laid out in Section 6.2 of the Consortium Agreement.

Note that due to COVID-19, the first General Assembly meeting will take place in September or October 2020 in Lisbon. A virtual kick-off meeting will take place on July 9 2020.

2.5Management procedures

2.5.1 Risk management

The core task of risk management is to be aware of and uncover any risks before they materialise and negatively affect the project's progress. The risks identified by the partner in the project proposal have

therefore been converted into a risk register (see Appendix of this Handbook) and will be updated throughout the project as an iterative process connected to all work packages. Any new risks or risks with an increased likelihood of occurring will be escalated to the SC and finally to the GA, if sufficient solutions are not found at the operational and tactical levels. All partners have been, and will continue to be, involved in the identification of risks and developing of mitigation measures. A risk registry and update tool will be created and will be available for editing online, allowing the constant up to date monitoring. In addition, the management structure ensures clear lines of communication as well as frequent forums to raise any issues related to risk, and it is there that the WPLs will take any issues if deemed necessary. This ensures that all potential risks are dealt with quickly and efficiently.

2.5.2 Innovation Management

The focus of the project is to develop innovative products at the scale and costs demanded by end users, and to create long-lasting and strong cross-sector interconnections in the microalgae economy. The main challenge facing the microalgae industry in recent years has been production of microalgae components at the required scale and with a competitive price. This can only be overcome by establishing strong linkages between players in academia, microalgae frontrunners and large end users, which is what this project aims to achieve. The microalgae production partners have observed a growing demand for their products, but are at the same time aware that, unless they are able to fulfil all specifications from industry, there is no hope that they can compete with traditional ingredients and compounds. In this light, it is precisely the inclusion of three large end users, each a leader in its respective industry and with global market shares, that defines and sets this project apart. This project creates a forum and an innovation platform for all partners and, having already designed the backbone of the project (WP1-WP7), all agree that the objectives of this project are truly reachable. Based on the strong market pull from the three included end users and beyond, the consortium seeks to address the gap and design the most efficient and optimal solutions for satisfying the needs from both a market and a technical point of view. This is done by:

- Performing a SWOT analysis, identifying the strengths and weaknesses of the consortium and scanning the operating environment for opportunities and threats, as well as charting the external political, economic, social and technological (PEST) conditions;
- Selecting which of these to respond to and how, based on technical and financial viability, sustainability and marketability. The SWOT will help identify the categories of products and product combinations that are optimal for market penetration. Products with higher weaknesses or threats will require additional efforts, during and after the project. The SWOT may also change depending on PEST conditions, which will guide the decision-making in the consortium.

Participation of industry, academia and non-profit organisations will help foster creativity, innovation with state-of-the-art knowledge and exploitation capacity. Innovation management is an integrated part of the Exploitation Manager's work (feeding into Exploitation Plan (D1.3)) and takes the form of:

- Inward-focused innovation: to ensure that innovation comes from WP and partner synergies, and from a high level of autonomy at the WP level. Any new initiatives and/or ideas deriving from the project work are shared across all WPs with the rest of the consortium.
- Outward-focused innovation: by monitoring new opportunities and threats rising from other projects and/or the market) innovation

2.5.3 IPR handling procedures

Green open access will be the preferred model of publishing to allow online access to the peer-reviewed scientific publications originating from the project. To enable access to research data that is not confidential or otherwise sensitive to the widest possible audience, the OpenAire repository will be used and all partners will make the publications available in their public repositories and websites. Knowledge management and protection encompasses the use and sharing of the background information as well as IPR for the use, the dissemination and the exploitation of the project results. Key results of the project will be protected by patents, copyright or trade secrets and therefore may only be disseminated with due care. The partners declare to use knowledge, which is not under infringement procedures, and agree to respect individual IPRs. The exploitation manager will be responsible for the IPR aspects within the Consortium. IPR issues will be discussed at dedicated sessions during the yearly project meetings. For the success of the project, it is essential that all project partners agree on IP ownership explicit rules before the project starts. All these issues are defined in detail within the Consortium Agreement, where the partners have agreed:

- To prepare a register of pre-existing knowledge (background): The different partners have been invited, in the consortium agreement, to declare their pre-existing knowledge and to specify if they intent to invoke excluding any part of it from the obligation to grant access rights to the rest of the consortium.
- To include a clause in the Consortium Agreement for specifying the obligation of partners to reach agreements of knowledge property and confidentiality with their employees involved in the project in order to avoid incompatibilities between employees' rights and contractor's obligation under the EC Contract
- For the cases in which several beneficiaries have carried out work and generated Results, they will have joint ownership of such Result. They will establish an agreement regarding the allocation and terms of exercising that joint ownership addressing the following questions: i) assignation of share of rights; ii)who will file for protection; iii) cost sharing (costs of documentary research preliminary to filing of an application, translation costs); iv) responsibilities for obtaining and maintaining patents and distribution of fees for registration and maintenance; responsibilities for detecting and taking civil and criminal action against third parties that in any way injure the rights conferred by the industrial property rights;
- Conditions for licensing to third parties to use the invention. The actions of this strategy will help partners to have a clear view of: i) essential pre-existing knowledge that they bring to the project; ii) what the expected outcomes will be benefits that will obtain their organizations.

The obligatory measures in terms of IPR management are further laid out in Article 23a and Article 27 of the Grant Agreement.

2.6Conflict resolution procedures

Beneficiaries are obliged to take all measures to prevent any situation where the implementation of the action is compromised because of a conflict of interest, as laid out in Article 35 of the Grant Agreement. The BBI JU must without delay be formally notified of any situation likely to lead to a conflict of interest, and project partners must immediately take all the necessary steps to rectify the situation.

Parties shall endeavor to settle their disputes amicably, for instance via discussions at the appropriate level. If the concerned parties are unable to reach an agreement, the parties will have to refer the matter to their higher management, who are at least authorized representatives to execute the Consortium or

Grant Agreement. These will meet and negotiate in good faith in an effort to resolve the dispute or controversy.

In accordance with Section 11.9 of the Consortium Agreement, all disputes arising out of or in connection with the Agreement, which cannot be solved amicably, shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The place of arbitration shall be Brussels if not otherwise agreed by the conflicting Parties, and the language of the arbitration shall be English. Nothing in the Consortium Agreement shall limit the parties' right to seek injunctive relief in any applicable competent court.

3 Internal communication

Section 10 of the Consortium Agreement specifies parties' responsibilities in relation to non-disclosure of information (specificities of confidential information, recipients' responsibilities, extension to recipients linked parts, conditions for exclusion, degree of care, unauthorized disclosure, and lawful disclosure). Section 11 of the Consortium Agreement moreover specifies the details as to notices and other communication, as well as the management of access to the Electronic Exchange System.

3.1Project Data repository

A secure Data Repository space for the exclusive use of the project partners will be set up. This tool will allow partners to share data with each other and make it available. Unique access credentials will be created for each partner assigned personnel. The server will respect the necessities and policies of the partners in terms of location and accessibility. A navigation and folder manual with instructions for file nomenclature will be drawn and distributed to the partners.

3.2Mailing lists

The primary means of communication between project partners is e-mail. Mailing lists (see Appendix) will therefore be set up for the partners to cover different content related communications about the project activities as well as inter-personal e-mail exchange.

3.2.1 Administrative mailing list

The administrative mailing list will be used by the Coordinator for the purpose of communicating important administrative matters, such as financial issues or reporting. It will contain of at least one scientific contact as well as administrative and legal contacts per consortium partner.

3.2.2 Work package related mailing list

The work package mailing lists are created to facilitate the sharing of information among relevant partners involved. Work package related communications will be performed via these lists, which contain the work package leaders plus one or more contacts for each member involved in the work package.

3.2.3 Deliverable related mailing list

Dedicated mailing lists for each deliverable will be created. These include the work package leader, deliverable responsible as well as internal reviewers.

4 Reporting and deliverables

4.1Project-internal progress monitoring

In order for the project coordinator to track efforts and expenditures against the plan and detect potential deviations as early as possible, core partners which lead work packages will be asked to provide updates per task and an overview of the status of the deliverables and milestones. In addition to the below described periodic and final reports to the EC, internal progress monitoring will be carried out via internal reports, including:

- Written reports on the activities of each partner per work package
- Updates on deliverables, risks, other problems and planned activities
- Summaries of meetings attended
- The staff effort expended in the preceding 6 months
- Summaries of personal costs
- Summaries of non-staff costs such as travel, workshop costs and other relevant costs.

4.2Deliverable and milestone production and review

In accordance with Article 19 of the Grant Agreement, the Coordinator must submit deliverables in accordance with the timing and conditions set out in Annex 1 of the Agreement. The Grant Agreement moreover defines the project's milestones, which mark the completion of significant activities in the project and therefore are of importance to report in a timely fashion.

4.2.1 Definition of responsibilities

A deliverable template will be provided by the PMO to the responsible partner for each deliverable. This partner will:

- Supervise and coordinate the production of the deliverable and define its content;
- Circulate the document among the contributors using the secure, online communication platform;
- Ensure that documents are sent for review in due time.

The PMO will remind the partner one month before the official due date about the production and review processes and timelines for the successful delivery of each deliverable.

It is the responsibility of WPLs to report to the project coordinator on the achievement when these become due.

4.2.2 Process for deliverables review

The respective WPL will be responsible for managing the process of deliverable production and for initial quality control. The WPL will pass the deliverable to one more person who was involved in the production of the deliverable, who thereafter sends the deliverable on to the project coordinator for formal internal review. Thereafter, the partner responsible for the deliverable performs the revision. The final version is submitted to the EC by the project coordinator.

Responsible	Activity	Actions
Deliverable lead	Write	Plan and prepare draft deliverables with contributions from project partners
Work package lead (WPL)	Check and pass on	Carry out quality checks as well as send full draft version of deliverables to the internal reviewer
Project coordinator	Check and pass on	Check draft version as well as pass on to deliverable lead for any revisions
Deliverable lead	Revise	Revise deliverable according to feedback from the project coordinator
Project coordinator	Edit and submit	Perform last editorial checks as well as submit deliverable to the EC

4.3Reporting

The beneficiaries have a general obligation to inform and to provide information upon request during implementation of the action or afterwards. Any information may be requested as to verify eligibility of costs, proper implementation of the action and compliance with any other obligation under the Grant Agreement. Likewise, the beneficiaries are obliged to keep information up to date and to inform about events or circumstances that are likely to affect the Grant Agreement. The nature and scope of these obligations are further laid out in Article 17 of the Grant Agreement.

4.3.1 Periodic and final reports

Periodic and Final reporting are a contractual obligation as defined in Article 20 of the Grant Agreement. The Periodic and Final Reports will follow the template provided by the EC and will be submitted by the PC within 60 days after the end of each project period (M18, M36 and M48). The PMO will request scientific and technical information from partners before the end of each period to allow the delivery of the reports in due time. The report will be circulated via email to the GA for approval before submission to the EC. Periodic reports will contain (summarized):

- A periodic technical report
  - Explanation of the work carried out
  - Overview of progress (deliverables and milestones)
  - Summary for publication
  - Plan for the dissemination and exploitation of results
  - Answers to the questionnaire
- A periodic financial report
  - Financial statement (individual and summary)
  - Explanation of the use of resources
  - Financial reports should be accompanied by audit certificates, when appropriate.

Periodic reports are submitted through the EC's web-based participant portal. In addition, a Final report will be submitted to the Commission within 60 days of the end of the project, comprising of:

- A final technical report
    - Summary for publication
    - Overview of the results and their exploitation and dissemination
- A final financial report
    - Summary financial statement
    - Certificate of financial statement, if necessary

A detailed description of the content that the Periodic and Final Reports must contain is laid out in Article 20 of the Grant Agreement. Breach of these conditions may result in a suspension of the payment deadline or in worst case a termination of the Agreement.

5 Document management

5.1Document sharing and storage

In agreement with Article 18 of the Grant Agreement, beneficiaries are obliged to keep records and other supporting documentation for a period of five years after the payment of the balance, in order to prove the proper implementation of the action and that the costs they declare are eligible. Documents must be kept in original and must be made available upon request. Details for records and other supporting documentation on the scientific and technical implementation as well as to support the costs declared are laid out in Article 18 of the Grant Agreement. If parties fail to meet these requirements, costs insufficiently substantiated will be ineligible and rejected, and the grant may be reduced.

Partners are responsible for archiving and safekeeping their own administrative and financial documentation for the legal period required. Technical documents, should be shared in the designated secure server drive, especially conceived for that purpose, in order to be accessible for collaborative work. Documents shared are owned by the partners that contributed to their contents in respective proportions.

Note that documents should be exchanged and worked on in the drive, and not be sent as attachments in e-mails.

5.1.1 Formatting

In order to facilitate the management of the information produced within the project, templates provided by the coordinator shall be used for all reports, deliverables, presentations and minutes. E.g. A4F has sent around PowerPoint® templates to be used by each partner as preparation for the kickoff meeting (KoM). Deliverables and Presentations may have a publishable version and an internal version in case some content must be excluded for confidentiality reasons. In that case which version should be clearly signaled in the document name. The following default document terminology shall be followed:

- Deliverables: DD-MM-YYYY_Multi-Str3am_DX.X_*Deliverable title*_MXX_vX
- Presentations: DD-MM-YYYY_Multi-Str3am_*EventName_Presentationname_Presenter*_vX
- Periodic Reports: DD-MM-YYYY_Multi-Str3am_Periodic Report X_vX

Within documents the following general sections should be listed with adaptations as needed:

- Executive summary
- Deliverable / Report Goals and Objectives
- Introduction / Background
- Methods / Description of work
- Results
- Discussion
- Conclusions

5.1.2 Visual identity

Section 8.4.4 of the Consortium Agreement sets out that “Nothing in this Consortium Agreement shall be construed as conferring rights to use in advertising, publicity or otherwise the name of the Parties or any of their logos or trademarks without their prior written approval”.

A4F has contracted the development of the visual identity of the project and will send around the document to partners to ensure all have the correct logo, color scheme and guidelines on when and how to use the visual identity in a correct manner. This will also be featured in the communication plan.

A logo has been developed in two designs (Horizontal and Vertical) that can be used interchangeably according to better fit the document or presentation they are being placed in.

6 Annexes:

6.1List of deliverables

Del Rel. No	Del No	Title	Lead Beneficiary	Nature	Dissemination Level	Est. Del. Date (annex I)
D1.1	D1	Exploitation plan	A4F	Report	Confidential,	31 Oct 2020
D1.2	D2	Market needs survey report incl. specifications from end users	A4F	Report	Confidential,	30 Apr 2021
D1.3	D3	Business plans for all the validated business cases of the proposal	A4F	Report	Confidential,	30 Apr 2021
D1.4	D4	Exploitation plan [update 1]	A4F	Report	Confidential,	30 Apr 2022
D1.5	D5	Report on policy meetings and briefs	IBET	Report	Confidential,	30 Apr 2023
D1.6	D6	Business plans for all the validated business cases of the proposal [update]	A4F	Report	Confidential,	30 Apr 2024
D1.7	D7	Report on policy meetings and briefs [update]	IBET	Report	Confidential,	30 Apr 2024
D1.8	D8	Exploitation plan [update 2]	A4F	Report	Confidential,	30 Apr 2024
D2.1	D9	Portfolio of prioritised strains for large scale production and for strains undergoing phenotypic improvement	IMIC	Other	Confidential,	31 Jul 2020
D2.2	D10	Microalgae biomass from PHY to the biorefinery at A4F's site	PHY	Other	Confidential,	31 Oct 2020
D2.3	D11	Manuals/SOPs for the operation of production units at A4F and PHY	PHY	Other	Confidential,	30 Apr 2021
D2.4	D12	Portfolio of prioritised strains for large scale production and for strains undergoing phenotypic improvement [update]	IMIC	Other	Confidential,	30 Apr 2022
D2.5	D13	Report on the integration of industrial side streams as feedstock for microalgae cultivation	A4F	Report	Confidential,	31 Oct 2022
D2.6	D14	Report on the logistics of transporting and storing microalgae biomass	PHY	Report	Public	31 Oct 2022
D2.7	D15	Final strain dossiers including chemical, biological and genomic data of prioritized and improved strains	PHY	Report	Confidential,	30 Apr 2024
D2.8	D16	Report on the logistics of transporting and storing microalgae biomass [update]	PHY	Report	Public	30 Apr 2024
D2.9	D17	Report on the integration of industrial side streams as feedstock for microalgae cultivation [update]	A4F	Report	Confidential,	30 Apr 2024
D3.1	D18	MULTI-biorefinery project	A4F	Demonst	Confidential,	31 Aug 2020
D3.2	D19	Implementation and commissioning of the MULTI-biorefinery unit	A4F	Demonst	Confidential,	30 Apr 2021
D3.3	D20	Processing of 27.5 t DW biomass into the defined fractions/ingredients	A4F	Demonst	Confidential,	30 Apr 2024
D3.4	D21	Report on MULTI-biorefinery process optimisation, including troubleshooting	A4F	Report	Confidential,	30 Apr 2024
D3.5	D22	Report on innovative process solutions at lab/pilot scale	LNEG	Report	Confidential,	30 Apr 2024
D3.6	D23	Report on lab/pilot scale processing of new microalgae strains	LNEG	Report	Confidential,	30 Apr 2024
D4.1	D24	Report on the regulatory landscape for microalgae biomass valorisation across market applications	IBET	Report	Public	31 Mar 2021
D4.2	D25	Specification sheets with data on the purity, quality and safety of microalgae products	IBET	Report	Confidential,	31 Oct 2021
D4.3	D26	Report on the performance of microalgae ingredients in food applications	UpF	Report	Confidential,	31 Jan 2024
D4.4	D27	Report on the performance of microalgae ingredients in feed applications	FF	Report	Confidential,	31 Jan 2024
D4.5	D28	Report on the performance of microalgae ingredients in fragrance applications	IFF NL	Report	Confidential,	31 Jan 2024
D4.6	D29	Report on the financial feasibility of microalgae ingredients for food applications	IBET	Report	Confidential,	30 Apr 2024
D4.7	D30	Report on the financial feasibility of microalgae ingredients for feed applications	IBET	Report	Confidential,	30 Apr 2024
D4.8	D31	Report on the financial feasibility of microalgae ingredients for fragrance applications	IBET	Report	Confidential,	30 Apr 2024
D5.1	D32	Report on the process system definition	LNEG	Report	Confidential,	30 Apr 2021
D5.2	D33	Preliminary report on Process Specification and Integrated Value Chain Model	LNEG	Report	Confidential,	31 Oct 2021
D5.3	D34	Preliminary report on techno-economic analysis of the integrated biorefinery	LNEG	Report	Confidential,	30 Apr 2022
D5.4	D35	Preliminary report on social and socio-economic assessment	LNEG	Report	Confidential,	30 Apr 2023
D5.5	D36	Full report on techno-economic analysis of the microalgae based biorefinery	LNEG	Report	Confidential,	30 Apr 2024
D5.6	D37	Integrated and comprehensive LCA and benchmark analysis	LNEG	Report	Confidential,	30 Apr 2024
D6.1	D38	Dissemination plan	A4F	Report	Public	31 Oct 2020
D6.10	D47	Press release 2	A4F	Website	Public	30 Apr 2022
D6.11	D48	Report on participation in knowledge-sharing events for year 3	A4F	Report	Public	30 Apr 2023
D6.12	D49	Dissemination plan [update 2]	A4F	Website	Public	30 Apr 2023
D6.13	D50	Communication plan [update 2]	A4F	Report	Public	30 Apr 2023
D6.14	D51	Press release 3	A4F	Report	Public	30 Apr 2023
D6.15	D52	Report on participation in knowledge-sharing events for year 4	A4F	Report	Public	30 Apr 2024
D6.16	D53	Press release 4	A4F	Website	Public	30 Apr 2024
D6.2	D39	Communication plan	A4F	Report	Public	31 Oct 2020
D6.3	D40	Communication materials package	A4F	Website	Public	31 Oct 2020
D6.4	D41	Website	A4F	Website	Public	31 Oct 2020
D6.5	D42	Report on participation in knowledge-sharing events for year 1	A4F	Report	Public	30 Apr 2021
D6.6	D43	Press release 1	A4F	Website	Public	30 Apr 2021
D6.7	D44	Report on participation in knowledge-sharing events for year 2	A4F	Report	Public	30 Apr 2022
D6.8	D45	Dissemination plan [update 1]	A4F	Report	Public	30 Apr 2022
D6.9	D46	Communication plan [update 1]	A4F	Report	Public	30 Apr 2022
D7.1	D54	Project handbook	A4F	Report	Public	30 Jun 2020
D7.2	D55	Quality and Risk Management Plan	A4F	Report	Public	31 Oct 2020
D7.3	D56	Knowledge and data management plan	A4F	Report	Public	31 Oct 2020
D7.4	D57	Knowledge and data management plan [update 1]	A4F	Report	Public	30 Apr 2022
D7.5	D58	Knowledge and data management plan [update 2]	A4F	Report	Public	30 Apr 2024

6.2Deliverable template

Project partners:

1. A4F, Algafuel, SA (A4F)
2. Mikrobiologický Ústav AV CR V.V.I (IMIC)
3. Fodfarmers 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. Unfield 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

Start date of the project: 01/05/2020
Duration: 48 months

Deliverable 7.1
Project Handbook

WP	7	Project Management
Task	7.1	Coordination and Progress Monitoring

Dissemination level[1]	PU		Due delivery date	30/06/2020
Nature[2]	R		Actual delivery date	31/07/2020

Lead beneficiary	A4F
Contributing beneficiaries	IMIC, FF, IBET, IFF, 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.

6.3Agenda template

AG 9th EN July DA 2020

MULTI STR3AM

WEB KICK-OFF MEETING MULTI-STR3AM

TIME*	EVENT	PARTICIPANT
9.00-9.15	Welcome	Board A4F
9.15-10.15	General organisation of the day, **round table & introduction of participants**	Tiago Guerra (A4F) All
10.15-10.30	**Project introduction**: context (feedback GA phase, final contractual documents), consortium agreement and financial aspects.	Tiago Guerra (A4F)
10.30-11.10	**Introduction of the Project Officer** *Successful Management of the BBI JU Grant.*	Anna Michalska (BBI-JU)
11.10-11:30	Break	All
11.30-11.50	Actions in **WP7 – Management plan** **WP6 – Communication and Dissemination**	Tiago Guerra (A4F) All
11.50-12.10	General presentation of WPs & **Project Objectives**	Tiago Guerra (A4F) All
12.10-12.30	**Actions in WP1** Overview (M1-M48) Short-run (M1-M6)	Diogo Pinto (A4F) All
12.30-12.50	**Actions in WP2** Overview (M1-M48) Short Run (M1-M6)	Erwin Houtzager (PHY) A4F, IMIC, FF, IBET, IFF, LNEG

TIME*	EVENT	PARTICIPANT
12.50-13.50	Lunch	
13.50-14.10	**Actions in WP3** Overview (M1-M48) Short Run (Year 1)	Luis Costa (A4F) IMIC, IBET, LNEG, PHY
14.10-14.30	**Actions in WP4** Overview (M1-M48) Short Run (Year 1)	João Crespo (IBET) A4F, FF, IFF, PHY, UpF
14.30-14.50	**Actions in WP5** Overview (M1-M48) Short Run (Year 1)	Alberto Reis (LNEG) All
14.50-15.10	**Actions in WP6** Short Run (M1-M6)	Tiago Guerra (A4F) All
15.10-15.30	Break	
15.30-15.50	**Actions in WP7** Short Run (M1-M6)	Tiago Guerra (A4F) All
15.50-17:00	**Discussion, Questions/answers**	All
17:00	Final Remarks & End of Meeting	A4F

*All times in CET

6.4Risk registry

Risks identified in the project proposal.

Description of risk	WP	Proposed risk-mitigation measures
Insufficient information to validate business case and/or make a detailed business plan (Likelihood: Medium, Impact: Low)	WP1	Search for indirect sources of information; validate underlying assumptions through qualitative interviews with experts
New engineering solutions and designs introduced in the cultivation systems do not reduce CAPEX and/or OPEX or increase performance (Likelihood: Low, Impact: High)	WP2	A list with several engineering solutions and designs has been developed and will be updated throughout the project. If CAPEX and/or OPEX is not reduced or performance is not improved, other solutions will be tested. Partners will also participate in knowledge-sharing events on the subject of bioreactor engineering to stay abreast of potential new solutions.

One or more microalgae strains does not produce the target compounds in sufficient quantities, or is more difficult to cultivate than expected (Likelihood: Low, Impact: High)	WP2	The diversity of the six prioritised strains (all from different genera) mitigates the risk of a strain or cultivation failure and limits its impact on the project. These strains have been chosen for their composition and productivity, and most of them are well known, e.g. *Chlorella vulgaris* already produced at multi-tonne scale. Furthermore, maintaining a portfolio of strains under optimisation through non-GM strain improvement will allow partners the flexibility to pivot to a better-performing strain if needed. Lastly, risk will be mitigated at the production stage by online and at-line culture monitoring, to allow rapid adjustment of culture conditions (e.g. media components, temperate, light, aeration) if growth or production is suboptimal.
None of the shipping or storage options developed in WP2 successfully prevent degradation of the biomass after harvesting (Likelihood: Low, Impact: Moderate)	WP2	This risk is mitigated by building into the project the flexibility to perform part or all of the refining activities at the site of microalgae production, e.g. in the form of mobile downstream processing units, or full-scale refining units.
Solvay is unable to supply utilities for A4F's biomass production unit and biorefinery at discounted rates (Likelihood: Low, Impact: Low)	WP2	Renegotiation of contract for utilities supply with Solvay or procurement of alternative suppliers. Due to the existing good relationship between A4F and Solvay stemming from the ALGATEC business park, which already covers supply of utilities and infrastructure, this is only perceived as low risk.
Delays in the construction of the MULTI-biorefinery unit (Likelihood: Low, Impact: High)	WP3	From external supplier: press for results or change supplier From consortium: increase workforce and priority of the task. Monthly reviews of the process progress and early identification of delays by coordinator and WP leaders.
MULTI-biorefinery processes have low yields or poor-quality products (Likelihood: Low, Impact: High)	WP3	Optimisation is done at lab and pilot scales and should be prioritized to mitigate the issue as new strains can replace the initial ones. Specifications provided by end-users will be taken into account when designing PFDs.
MULTI-biorefinery encounters challenges in process operation (Likelihood: Medium, Impact: Medium)	WP3	Alternative technologies will be considered and partners already have experience on operating such technologies, in order to assure rapid substitution.

Products arrive at validation facilities with poor quality (Likelihood: Low; Impact: High)	WP3	Different methodologies for product packaging and storing will be tested and shelf-life assessment tests will be performed, to select the most appropriate methodologies.
Unexpected properties of the product discovered during testing that may compromise its use in the targeted applications, e.g. issues with shelf-life due to physical properties such as hygroscopicity, digestibility (Likelihood: Low, Impact: Moderate)	WP4	This will be mitigated by carrying out chemical analyses throughout the production process, to ensure that potential issues are quickly identified and addressed, as well as maintaining a library of strains under optimisation that can be brought into production if necessary. In the event that a specific group of components suffers from application incompatibilities, discarding the troublesome components is also an option on the table, depending on the impact on performance.
Delays or problems encountered upstream on the value chain can impact the rest of the value chain (Likelihood: Low; Impact: High)	WP4	Working with actors along the value chain entails a high level of interdependency between partners and WPs. If one partner cannot deliver biomass, there is no processing nor trials and tests. This risk is deemed low but should it happen, external supply of biomass will be considered.
Data not available in environmental databases (Ecoinvent, or others) (Likelihood: Low, Impact: Moderate)	WP5	Data from literature will be used as well as data from end-users for benchmarking. Specific inventories will be defined for inputs/outputs.
Limited outreach to key stakeholders through dissemination and communication (Likelihood: Medium; Impact: Moderate)	WP6	The Dissemination and Communication Plans will set guidelines with objectives to be reached throughout the project. Progress will be continuously monitored to ensure the plan is on track. If ambitions are not met or are expected not to, the strategy will be revised to consider other channels, messages or means to reach out to target audiences.
Internal communication problems, leading to delays in project progress (Likelihood: Low, Impact: Moderate)	WP7	Measures to facilitate internal communication are planned, ensuring frequent meetings and exchange, document sharing and collaboration between partners.

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