UNLOCKING THE BIOGAS POTENTIAL OF LIVESTOCK FARMING

D2.5

ALFA Market Uptake Support Measures – Interim Version

SIE

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ABBREVIATIONS

AB	Advisory Board
ARC	Awareness Raising Campaign
CAPEX	Capital Expenditure
C&D	Communication and Dissemination
CCWs	Co-creation Workshops
DoA	Description of Action
DST	Decision Support Tool
ESG	Environmental, Social and Governance
GA	Grant Agreement
IRR	Internal Nate of Return
KPI	Key Performance Indicator
LCA	Lifecycle Assessment

M	Project month
NPV	Net Present Value
OPEX	Operating Expenditure
ROI	Return on Investment
ToR	Terms of Reference
WP	Work Package

Executive Summary

This report, ***D2.5 – ALFA market uptake support measures – interim version***, describes all the actions performed by the ALFA consortium to fine-tune the strategy and planning of the support services, capacity building and awareness raising campaigns and their updated second version for the 2nd open call, in the context of *Task 2.4: Iterative development of the ALFA market uptake support measures (M10-M33).*

The objective of this task is to develop and refine all the necessary materials and tools to deliver the ALFA solutions via two iterative rounds, taking into consideration previous activities and recommendations, especially the inputs obtained through numerous project activities, such as co-creation workshops and validation workshop with the advisory board (AB), in addition to the consortium's continuous feedback.

The update of this report focuses on outlining:

1) The second version of the business, financial and technical support services, drafted in collaboration with the ALFA Hubs, which includes the fine-tuned service summaries, its features and functions, resources, and materials (questionnaires, templates, etc) required for the deployment, and definition of the general service process if they have been modified or if a new service has been created.
2) The second version of the capacity building programme, drafted with support from all partners, considering the project developments for drafting an updated plan for content distribution and timing of the programmes, including the update of materials like PPTs, best practice guides.
3) The second version of the planning and strategy of the awareness raising campaigns (ARC), drafted also in collaboration with the ALFA Hubs, including the changes in the general strategy and also specific inputs for each region, considering their specific barriers and gaps identified during the first round.

This deliverable describes the interim version of the definition of the ALFA support measures, incorporating the feedback gathered during the 1st round from Advisory Board Members, applicants, awardees, stakeholders and consortium partners to polish the offerings and strategies presented in this deliverable.

The major changes of this document in relation to its first version (D2.4) can be found in:

- Section 2.2: Lessons learnt from support services provision, including challenges identified and mitigation actions applied and/or proposed for the 2nd Open Call.
- Section 2.3: Update of the support services, taking into consideration the lessons learnt and including one new service (S11).
- Section 3.1: Lessons learnt from the capacity building activities, considering the experience from the webinar and seminar held to date.
- Section 3.2: Update of the capacity building programme with updated dates and topics.
- Section 4.1: Lessons learnt from the 1st round of ARC.
- Section 4.2: Update of ARC considering the activities carried and the overall impressions from the campaigns.

Minor updates are indicated in green in the sections below to facilitate identifying the changes.

1. Introduction

The aim of task 2.4 is the iterative development of the ALFA market uptake support measures, running from M10-M33. In the first version of this deliverable (D2.4), a first version was developed of the ALFA support services, including the definition of each service, the process to apply them, scope and materials for implementation, as well as for the capacity building programmes, that include webinars and seminars, and finally, for the awareness raising campaigns.

After the conclusion of the 1st round, it was necessary to evaluate the performance of the support measures to fine-tune ALFA's offerings. This was done via several mechanisms to ensure a holistic approach:

- Surveys were designed to gather anonymous feedback from service awardees and capacity building activities attendees (WP4, task 4.1).
- An internal excel feedback file was created to gather service providers feedback towards the support services implementation (WP2, T2.4).
- A google form was created to gather the input from the webinar and seminars' organizers regarding each event (WP3, T3.4)
- Meetings were organized internally with the ALFA Hub and service providers in order to analyse the deployment of the support services and propose updates (WP2, task 2.4) and to pre-identify the challenges to be discussed with the Advisory Board (AB) later on regarding the services. Input for the capacity building and ARC were gathered via each ALFA Hub.
- An external validation workshop with the Advisory Board was carried out to discuss solutions to the main challenges encountered (WP4, task 4.1).

More details on the validation with the AB, evaluation framework, and how the feedback was gathered can be found in ***D4.1 – Report on evaluation of market uptake support measures – First Round***.

More details about the Open Call, services implemented, capacity building sessions, ARC and operational details can be found in ***D3.2 – Report on deployment of ALFA Support Measures – First Round*** and ***D3.3 – ALFA Operational Plans for the deployment of support services – Final Version***, both due in M23.

2. ALFA Support Services

As part of the market support measures, the ALFA support services were defined in a first initial approach in D2.4. From the launch of the Open Call to the end of service provision, many discussions happened within the consortium as the services were being implemented, identified challenges or specific improvements in a continuous manner. After the closing of the 1st Open Call, potential updates were discussed, considering each of the service providers experience, the feedback gathered from awardees and applicants, and the feedback provided in the interactive workshop with the AB.

Regarding the feedback session held within the consortium, the service providers were asked to list the most challenging parts of the service provision, and then rank how hard or easy it was for them to implement it considering the materials prepared in task 2.4. When asked how accurate the service planning was to the actual implementation, most partners voted that the definition of the support services had been accurate and that the materials were relevant to the scope and objectives of the project.

Two internal feedback sessions were necessary, one to focus on the business and access to finance services, and another one dedicated to the technical services. Changes were proposed during the sessions and via an excel file created by SIE to gather all consortium's feedback.

2.2. Lessons learnt from 1st round

After the sessions for internal and external validation, when analysing the first round's performance in more detail, the main challenges identified for the service provision were:

1) **Awardees had more needs than initially expected:** During the provision of the services, the general perception from the consortium's perspective was that most of the awardees required support in more than one area, so they were interested in more than one service. During the first-contact phase, the ALFA Hubs representatives explained more in detail to the participants that only one service per applicant would be possible due to the resources available in the consortium. To compromise between the project's scope but also provide a valuable service, all the service providers (when possible) looked for other alternatives in order to offer the best support possible, among them:

    a. Service providers looked for punctual ways of supporting or guiding the awardees with the other needs that were not covered by the assigned service, gathering and adding valuable information provided by our external stakeholders (e.g. national biogas associations, advisory board members, etc), like for example providing a list of potential consultancies that could help them move to the next stage, sharing project reports relevant for them, pointing them to materials or support relevant in their countries, and also showcasing how the ALFA tools could support them in certain aspects.

    b. Partners collaborated in many cases to join expertise to provide a deeper assessment when needed, offering a more holistic view and better guidance for next steps.

    c. Service providers noted down requests for gaps between the awardees' needs and the ALFA offerings, and even created a new service (service #11) to cover the need of several cases for a catalogue of technologies.

2) **Some awardees were not aware of their specific needs:** Several awardees applied for support in initial stages of their projects, so they needed advice on where to go from their current situation. The ALFA consortium tackled this challenge by relying on the ALFA Hubs representative's expertise to also act as advisors, in this way it was possible to get to know each case better and to decide the best course of action together with the service provider, ALFA Hub representative and awardee.

3) **Long response time during service provision from the awardee's side:** In some cases, the provision of services was slower than intended due to some awardees taking too long to provide the required input. ALFA Hubs and service providers worked together to jointly follow-up with awardees, having extra calls when necessary to clarify any questions in case they were hesitant due of lack of time, and this proved to work well. For the 2nd round it is suggested to further clarify beforehand how much involvement is expected from applicants, even when this was done for the 1st round, but it will be highlighted for the 2nd one as well.

By identifying, analysing and understanding these challenges, some details of the existing services had to be modified, little aspects like for example some reporting templates, among other minor details. However, there were also big changes, like the incorporation of a new technical service, which will be described in the sections below as service #11. In the table below is the updated distribution of service managers and service providers for the 2nd round.

Table 1: Updated list of services with managers and providers list

Type of service	Service #	Service name	Service manager	First proposal of service providers							
				QPL	FBCD	APRE	PED	WR	SIE	CERTH	A0CO2
Business & access to finance	1	Market research	SIE	X	X	X	X	X	X		
	2	Business modelling and planning	SIE	X	X	X	X	X	X		
	3	Access to finance support	PEDAL	X	X	X	X	X	X		
	4	Corporate and sustainable finance	QPL	X	X	X	X	X	X		
	5	Farmer-to-farmer advice	QPL	X	X	X	X	X	X		
Technical support	6	Concept design and development of biogas systems	FBCD		X					X	X
	7	Evaluation of biogas potential based on preliminary calculations	FBCD		X					X	X
	8	Energy and environmental analyses assessing the energy and carbon footprint across the lifecycle	CERTH							X	
	9	Consultancy on the implementation and monitoring of biogas solutions	CERTH							X	
	10	Technical support for farmers in the evaluation and comparison of plant suppliers' quotes	A0CO2		X					X	X
	11	Technology catalogue: features of cleaning and upgrading equipment	A0CO2								X

The same as for the initial version of this report, the service managers participated actively in the update of all the services and materials in collaboration with SIE.

2.3. Update on the ALFA business, finance and technical services

The overall feedback obtained of the services was very positive, both coming from awardees and from the service providers, so the consortium considers that the planning was successfully aligned with the deployment of the 1st Open Call. Of course, some tweaks were necessary, to facilitate pinpointing the main changes in the services description, they are summarised below:

Business and access to finance

- **Services 1 & 3**: Potential collaborations with externals can be sought to provide a more complete analysis (optional, depending on the specific case and availability). Experience gained during the 1st round will be used as basis to improve the approach for the 2nd round. For service 3, an excel file was created to serve as a repository for European Calls in the biogas and biomethane topics, to serve as support for other partners when looking for financing opportunities at European level.
- **Service 4**: Incorporation of use of Decision Support Tool (DST) when relevant.
- **Service 5**: Extending the service definition so experts can also be considered as mentors for farmers. Incorporation of Terms of Refence (ToR) form which described the role of the mentor in the project context.

Technical development

- **Service 8**: Addition of a section to report regarding recommendation of conditions for optimizing biogas solutions. And, if relevant, providing instructions for the farmers on the best combination of types of feedstocks in order to get closer to their biogas production goals.
- **Service 11**: New service, technology catalogue developed to fulfil needs identified in the 1st round (described in detailed below).

Other services have minor updates, which are indicated in green in the sections below to facilitate identifying the changes.

2.3.1. Service 1: Market research

Service summary

The objective of the market analysis is to help the awardee understand the market and how it behaves (segments, trends, growth), the demand and offer for a certain product/service, to evaluate competition and define the value the new product/service is bringing to the market, among other things, in order to mitigate risks and guide decisions for the development of a business.

In the context of the ALFA project, the service will include four stages to explore the different sides and features of the biogas and biomethane market, tailoring the research specifically for each awardee. With this, the awardee will have an overview of the available market opportunities in their country, will be able to identify target customers and collaborators, as well as will be presented with a description of the market environment, trends, size, growth and competitors, as well as ideas on how to move forward in the process.

Service features

This service will have four stages for the analysis:

1) Target market identification: market segmentation, identification of potential customer segments, market trends, both globally and regionally.
2) External environment analysis: Identification of PESTLE (political, economic, social, technological, legal and environmental) factors (some work has been done already in the desk research phase, so the consortium can take that as base and then customize and polish the information for each case).
3) Market environment analysis: qualitative assessment (state-of-the-art, competitive landscape, quantitative assessment (market value and size, market growth, potential addressable market).
4) Market attractiveness: how easy it is to enter the market, market consolidation.

*This service can be limited due to the information available for each region in market reports, and these features are flexible, meaning that the service provider will use this as baseline but can deepen or focus the analysis wherever necessary depending on the specific case.

Resources required

The resources used will be:

1) ALFA personnel: 1 or 2 dedicated team members to perform the service from each Hub.
2) Previous desk research performed by the Hubs for WP1 activities and also relevant information from interviews and success cases, market reports, and market trends.
3) Extra desk research for relevant reports and related market information available on the internet.
4) As an addition and if possible, collaboration from externals (collaborating biogas or farmer associations, technology providers, etc) is possible to offer a more targeted report. Of course, this will be done under the same conditions as the support services, which is at no cost for the awardee.

Service process

The service process will be:

1) First meeting with the awardee to understand specific needs and to shape strategy.
2) Questionnaire to gather more information about their ambitions and how they conduct their business.
3) Service provider performs the analysis considering the 4 stages defined above.
4) Short report (2-3 pages recommended but can vary depending on the case) is produced with the information gathered and short analysis for the 4 stages, the section market attractiveness will be the conclusion with recommendations for the specific case (entering the market, introducing a new solution, identifying customer segments, etc). This report will be sent to the awardee and stored in the project Google Drive repository for future reference.

If more information is required that is not foreseen at this stage, the awardee could be contacted for extra meetings or asked to complete this additional information as the service provider sees fit. The Slovak and Belgian ALFA Hubs have gathered information of the deployment of the 1st round due to implementing this service, so they will use this know-how and previous work to guide the 2nd round.

Materials required for the delivery

The materials required to deploy the service are:

1) Initial questionnaire guide to explore needs (service providers can add or remove questions to better fit each case).
2) Reporting template for delivery to the awardee.
3) If needed/relevant, excel spreadsheet template for market analysis of feedstock for biogas plant.

2.3.2. Service 2: Business modelling and planning

Service summary

The objective of business modelling and planning is to create a representation of its key components, processes and operations to achieve the goals set, and also to identify and mitigate potential challenges that can hinder the development and successful operation of the business.

In the ALFA context, business modelling and planning will take into consideration classic definitions and concepts such as value proposition, key partnerships, customer segments, among others, but it will also bring in the know-how specific for each of the ALFA countries to provide recommendations relevant to the country's business environment and market development levels.

No changes implemented.

Service features

This service's features will consider:

1) Definition of value proposition, key resources and activities, key partnerships, customer segments (only short identification, for more detail, the market research service would deepen this analysis), as well as costs and revenue structures.
2) SWOT analysis.
3) Next steps and opportunities on how to move forward to enter the biogas/biomethane market or how to upgrade the technology, presenting how the awardee's current situation can fit business models more frequently used in each region.

Resources required

The resources required will be:

1) ALFA personnel: 1 or 2 dedicated team members to perform the service from each Hub.
2) Previous desk research performed by the Hubs for WP1 activities and also relevant information from interviews and success cases.
3) Extra desk research for relevant information.

Service process

1) First meeting with the awardee to understand specific needs and to shape strategy.
2) Questionnaire to gather more information about the current state of the business planning, identifying shortcomings and strong points (if they have already developed one component, the service provider can put more effort into the weakest components).
3) Service provider performs the analysis considering the features defined above.

4) Short report (2-3 pages maximum) is produced with the information gathered and short analysis highlighting the strong points and the components of the business plan that need more work, including the analysis done by ALFA and the recommended next steps. This report will be sent to the awardee and stored in the project Google Drive repository for future reference.

If more information is required that is not foreseen at this stage, the awardee could be contacted for extra meetings or asked to complete this additional information as the service provider sees fit.

Materials required for the delivery

The materials required to deploy the service are:

1) Initial questionnaire guide to explore needs (service providers can add or remove questions to better fit each case).
2) Reporting template for delivery to the awardee.

2.3.3. Service 3: Access to finance support

Service summary

The objective of the access to finance support is to provide guidance for businesses, in this case farmers, agricultural cooperatives, biogas/biomethane plant owners or biogas technology providers, in the different stages of business planning, to access funding to kick-start or upgrade their products or services. Successful operation in the market requires continuous innovation of products and technologies, and investments for innovation tend to be very costly.

In the context of the ALFA support services, this service will provide a general overview of potential funding opportunities for the interested party, including key information such as the source of funding, conditions how to access funding, maximum grant/loan, requisites for application (helping beneficiaries navigate the application process), deadlines and next steps, including the list of recommended external consultancy companies that can continue the process of securing the funding.

Service features

This service will have the following two features:

1) Mapping of European financing opportunities: general list/overview relevant opportunities at European level (including the SEIFA project). The goal is to offer a general understanding of the European financing landscape, enabling quick access to the sources identified. This includes:
    a. Brief description of the funding source.
    b. Specific calls for proposals, grants and loans.
    c. Access links for further information and application procedures.
    d. Deadline information for application submissions.
    e. Specific requirements and eligibility criteria.

*This service can be limited due to the current number of published open calls at European level.

2) Mapping of regional financing opportunities: general overview/list of relevant opportunities at national and regional level:
    a. Brief description of grant/loan.
    b. Accessible web links for additional details and application guidelines.
    c. Clearly defined deadlines for application submission (if applicable).
    d. Specific requirements for eligibility.

*This service can be limited due to the current number of published open calls for e.g. state grants or bank offers for each region.

3) Recommendation of two to three regional consultancies that can further help them in securing the funding.
4) Step-by-step with directions on how to secure financing including information on national subsidies.

Resources required

1) ALFA personnel: 1 or 2 dedicated team members to perform the service from each Hub.
2) Previous desk research performed by the Hubs for WP1 activities and relevant information from interviews and success cases.
3) Extra desk research for relevant information publications and reports regarding financing opportunities via the internet and open access sources.
4) Additionally, when feasible, collaboration with external partners (such as biogas or farmer associations etc.) can be incorporated to provide a more comprehensive report (i.e. list of potential networking opportunities etc.). This collaboration will be offered under the same terms as the support services, meaning it will be at no cost to the awardee.

Service process

The service process will be:

1) Assessment and need analysis (including the identification of financial challenges they face):
    a. First meeting with the awardee to understand the specific needs:
        - Personal interview, either online or onsite meeting,
        - A questionnaire can be included during the meeting or sent afterwards, with more detailed information required (e.g. information about their ambitions, what they need financing for, what type of funding they are looking for, what kind of sources they consider etc.).
2) Service provider performs the analysis considering the features mentioned above.
3) Shaping and delivering a tailored-made overview of financial support services available for a specific awardee via:
        - Personal interview (optional), and/or
        - A written report (maximum may vary depending on opportunities) produced with the information gathered from the opportunities that better fit each specific case. This report will be sent to the awardee and stored internally for future reference.

If more information is required that is not foreseen at this stage, the awardee could be contacted for extra meetings or asked to complete this additional information as the service provider sees fit.

Materials required for the delivery

The materials required to deploy the service are:

1) Initial questionnaire guide to explore needs (service providers can add or remove questions to fit each case).
2) Reporting template for delivery to the awardee (step-by-step guide with information gathered).
3) Excel contains all European calls identified by partners, which has been populated for the 1st round and will continue to be completed for the 2nd round to help service providers have a baseline for the analysis.

2.3.4. Service 4: Corporate and sustainable business finance

Service summary

The Corporate and Sustainable Finance service provided by ALFA aims at assisting livestock farmers and stakeholders in evaluating the investment in biogas solutions. This service encompasses two primary aspects:

1) Corporate Financial Evaluation: Analysing financial components, such as Capital Expenditure (CAPEX) and Operating Expenditure (OPEX) and assessing the effectiveness of the investment through indicators like payback period, Net Present Value (NPV), Internal Rate of Return (IRR), and Return on Investment (ROI).

2) Sustainability Evaluation: Utilising Environmental, Social, and Governance (ESG) metrics to light up the sustainability of the investment. ESG metrics help identify potential risks and growth opportunities, providing incentives for such investments and prospects for long-term sustainability.

Overall, this service will help stakeholders gain insights into their project's overall sustainability performance, including its environmental impact, social responsibility, and governance practices. This assessment is valuable for farmers and investors, regulators, and the public in making informed decisions and promoting responsible and sustainable business practices.

Service features

This service will have 5 stages for the analysis:

1) Definition of financial goals and the objectives of the project (farm/biogas plant).
2) Estimation of the total expenses and potential revenues of its activities, along with the calculations of the cash flows and the investment evaluation indicators to provide valuable feedback into the feasibility phase of such a project. Calculations include CAPEX, OPEX, based on a financial provision of five years, and utilizing the ALFA Decision Support Tool (DST), when appropriate.

3) In-depth financial analysis for the investment evaluation, including criteria such payback period, NPV, IRR, and ROI assessments. Thus, financial risks are identified (such risks are unexpected cost overruns, projections on exceeding operational expenses).
4) Evaluation of sustainability through ESG metrics including environmental factors (e.g., calculation of CO_2 emissions avoided and biowaste management), social factors (e.g., new jobs created), and governance factors (e.g., number of women on project management, reporting transparency).
5) Customised financial and sustainability reports, with recommendations for optimising biogas investments.

Resources required

The resources used will be:

1) ALFA personnel: 1 or 2 team members to perform the service from each Hub.
2) Data on the biogas project and financial information from the stakeholders.
3) Utilisation of the ALFA DST for initial calculations, if appropriate.
4) Access to financial and ESG modelling tools.

Service process

The service process will be:

1) Initial Consultation: Meeting with the beneficiary (supported case) to gather project details and understand stakeholders needs and objectives.
2) Questionnaire for data collection to acquire financial and sustainability data.
3) Service provider performs financial analysis, evaluate CAPEX, OPEX, NPV, IRR, ROI, and sustainability assessment using ESG aspects for sustainability evaluation (incl. carbon emission, waste management, labour practices, diversity inclusions, board of directors' composition, reporting transparency etc.).
4) Short report (2-3 pages maximum) will be produced with the information gathered and short analysis highlighting, with recommendations for the specific case (incentives for such investments and prospects for long term sustainability). This report will be sent to the beneficiary (supported case) and will be stored in partner's (project partner) file repository for purposes of reporting.

If more information is required that is not foreseen at this stage, the awardee could be contacted for extra meetings or asked to complete this additional information as the service provider sees fit.

Materials required for the delivery

The materials required to deploy the service are:

1) Initial questionnaire guide to explore needs (service providers can add or remove questions to better fit each case).
2) Financial and sustainability assessment modelling templates and guidelines, slightly modified to facilitate reporting.
3) Customized financial and sustainability report templates, slightly modified to facilitate reporting.

2.3.5. Service 5: Farmer/expert to farmer advice

Service summary

The Farmer/Expert-to-farmer advice service facilitates mentorship and knowledge exchange from farmers and biogas experts (who already have been incorporated biogas solutions on their premises) among livestock farmers who are interested in such an activity (supported cases). This service is designed to support and empower farmers by connecting them with experienced peers who can provide guidance, advice, and mentorship in:

1) The initial phase of the design, e.g., by helping put together a team, finding additional providers of raw materials and facilitating stakeholder involvement, or even a storytelling from their point of view, regarding the success factor and, issues to be avoided.

2) The implementation and operation phase, for exchanging ideas, insights, best practices, techniques, skills development, advice, and guidance on problem solving.

Service features

This service will have four stages for the analysis:

1) Identification of suitable farmers/biogas experienced persons, creating a pool of farmer/expert mentors, utilising the ALFA Engagement Platform.
2) Mentor – Mentee Matching: Pairing experienced farmers/biogas experts with beneficiaries (supported case) seeking guidance.
3) Consultation: Scheduled one-on-one session for knowledge transfer, either online or physical.
4) Knowledge Sharing: Best practices, techniques, and insights, with the goal to address specific challenges faced by farmers

Resources required

The resources used will be a database of experienced farmers willing to mentor, available in the ALFA Engagement Platform, while a dedicated file with the role of the mentor is described in Terms of Reference.

Service process

The service process will be:

1) Stakeholder Enrolment: Identify farmers seeking mentorship and those willing to mentor.
2) Matching: Pair mentors and mentees based on their needs and expertise.
3) Mentorship Sessions: Service manager schedules a meeting for knowledge exchange.
4) Short report (1-2 pages max) is produced with the information gathered and short analysis highlighting, with recommendations for the specific case This report will be sent to the beneficiary (supported case) and will be stored in partner's (project partner) file repository for purposes of reporting to European Commission.

Materials required for the delivery

The materials required to deploy the service are:

1) Communication platform (online or offline) for mentor-mentee interactions.
2) Customized mentoring report templates.

2.3.6. Service 6: Concept design and development of biogas systems

Service summary

The purpose is to give the individual farmer an initial understanding of the size and types of facilities that may be possible to establish in connection with the case in question.

Based on information and calculations made with the ALFA support tool, an assessment will be made of which technology may be advisable in the specific case. An assessment will be provided on which design of facilities may be appropriate at the location in question, including a brief explanation on how biogas production can be adapted to the individual farm's consumption of electricity and heat and the handling of livestock manure and residual flows on the farm.

No updates needed.

Service features

This service will have three features:

1) When using the ALFA support tool, an initial calculation is made of the expected biogas production at the location in question.
2) By comparing the information provided about the individual farm with its location and the existing consumption on the farm, an initial assessment is given of which facilities can be appropriately established on the property.
3) Recommendation of 2-3 regional consultancies that can further help them in planning and design of a plant.

Resources required

Resources required:

1) ALFA personnel: 1-2 dedicated team members from the technical partner providing the service (service lead), and 1 member from the corresponding ALFA Hub for any support needed to communicate with the awardee, to gather the needed information and to translate the materials.
2) Use of the ALFA decision support tool.
3) Previous desk research performed by the Hubs for WP1 activities and also relevant information from interviews and success cases.
4) Extra desk research for relevant information of local conditions as electricity supply, water supply, connection options for gas, use of degassed biomass, storage facilities etc.

Service process

The service process will be:

1) First meeting with awardee (meeting to be carried out by corresponding ALFA Hub with indications of technical service provider). During this meeting, it is recommended that the initial questionnaire is answered to avoid having to translate back and forth between English and the regional language, however it is not mandatory. The questionnaire can also be sent in an extra step, and its objective is to gather more information about regional conditions and conditions locally on the farm.
2) ALFA Hub sends questionnaire back to technical service provider, which will be the input from use of ALFA decision support tool.

3) Technical service provider performs an evaluation considering the features mentioned above.
4) A short report (2 pages maximum) is produced by service provider with the information gathered from the ALFA support tool, questionnaire and initial meeting. This report will be sent to the awardee and stored in the project Google Drive repository for future reference.
5) ALFA Hub will translate and send the report to the beneficiary of the service.

Materials required for the delivery

The materials required to deploy the service are:

1) Initial information and calculations from use of ALFA decision support tool.
2) Additional questionnaire guide to determine regional and local conditions on the farm.
3) Reporting template for delivery to the awardee.

2.3.7. Service 7: Evaluation of biogas potential based on preliminary calculations

Service summary

This service will give the farmer the opportunity to get a first estimate of how much biogas it is possible to produce from the biomass he has available. Biomass can be animal manure, residual products from the farm, or residual products that can be obtained locally.

The result can be used to assess whether it is possible to establish a biogas production or to clarify how much value the biomass can have as a commodity vis-à-vis to other stakeholders. Due to its characteristics, it can be used together with other services to serve as a base for other calculations and analysis, or to verify data.

Service features

This service will have four features:

1) When using the ALFA decision support tool and other proprietary tools developed by the technical partners, an initial calculation will be made of the expected biogas production based on updated information on livestock production and other available biomass.
2) Online studies of the biogas potential for special biomass types, if applicable.
3) The estimates are reviewed by one of the technical ALFA partners.
4) Recommendations on the best possible use of biogas will be given in the form of a short note/list.

Resources required

Resources required:

1) ALFA personnel: 1 dedicated team member from the technical partner providing the service (service lead), and 1 member from the corresponding ALFA Hub for any support needed to communicate with the awardee, to gather the needed information and to translate the materials.
2) Use of the ALFA decision support tool, and other previously existing calculation tools customized for ALFA to quantify and evaluate specific plant features.

3) Previous desk research performed by the Hubs for WP1 activities and also relevant information from interviews and success cases.
4) Extra desk research for relevant information.

Service process

The service process will be:

1) First meeting with awardee (meeting to be carried out by corresponding ALFA Hub with indications of technical service provider). During this meeting, it is recommended that the initial questionnaire is answered to avoid having to translate back and forth between English and the regional language, however it is not mandatory. The questionnaire can also be sent as an extra step, and its objective is to gather more information about regional conditions and conditions locally on the farm.
2) ALFA Hub sends questionnaire back to technical service provider, which will be the input from use of ALFA decision support tool and/or any additional calculation tools developed by partners and tailored for this purpose.
3) ALFA Hub to send/have 2nd questionnaire/interview to gather more information about specific biomass, if applicable (technical service provider will specify the information needed).
4) Technical service provider performs a verification of the estimate.
5) Technical service provider will produce a short note/list (1 page) with the information gathered from the ALFA support tool and questions. This note will be sent to the awardee and stored in the project Google Drive repository for future reference.
6) ALFA Hub will translate and send the report to the beneficiary of the service.

If more information is required that is not foreseen at this stage, the awardee will be contacted for extra meetings or asked to complete this additional information as the service provider sees fit.

Materials required for the delivery

The materials required to deploy the service are:

1) Initial information and calculations from use of ALFA support tool.
2) Additional questions on specific biomasses.
3) Note template for delivery to the awardee.

2.3.8. Service 8: Energy and environmental analyses assessing the energy and carbon footprint across the life cycle

Service summary

The objective of Life Cycle Analysis is to inform farmers regarding the environmental impact of their agricultural processes in the context of biogas production, and to identify potential environmental hotspots and areas for improvement. The implementation of a “cradle-to-grave” approach aims at assessing the entire life cycle, including feedstock production, biogas generation and the use and disposal of potential byproducts.

In the framework of the ALFA project, farmers will: have an in-depth analysis of the carbon footprint arising from each process; identify resource-efficient practices within their biogas/biomethane production processes as well as the most environmentally friendly feedstock sources and transportation methods. In this way, farmers can make informed choices about feedstock selection, digester technology, energy utilization, and byproduct management by considering the environmental implications of different options.

No updates needed.

Service features

A Life Cycle Assessment (LCA) service typically encompasses a range of features and components to provide a comprehensive analysis of the environmental impact of a process. In general, the features of the service will consist of the following aspects:

1) Scope definition: The service begins by defining the scope and boundaries of the LCA, including the system to be assessed, the life cycle stages to be included, and the environmental impact categories to be evaluated.
2) Inventory analysis: Data is collected from various sources, including primary data (e.g., from the farmers' operations), secondary data (e.g., databases), and literature reviews. Data may include energy consumption, material inputs, emissions, and waste generation.
3) Impact Assessment: LCA services assess the potential environmental impacts associated with the processes, such as greenhouse gas emissions, water consumption, land use, and toxicity. Different impact assessment methods (e.g., ReCiPe, Impact World+, CML) may be used to quantify and aggregate these impacts.
4) Interpretation of results: Interpretation of LCA results involves analysing and communicating the findings to the farmers. This includes identifying hotspots (life cycle stages with significant impacts), making recommendations for improvement, and discussing the implications of the assessment.

Resources required

1) ALFA personnel: 2-3 dedicated team members from the technical partner providing the service (service lead), and 1 member from the corresponding ALFA Hub for any support needed to communicate with the awardee, to gather the needed information and to translate the materials.
2) A licensed LCA software is required to perform the life cycle assessment as well as the prerequisite licenses for its operation. CERTH has access to SimaPro, which is one of the most widely employed LCA software.
3) Extra desk research for relevant publications and reports regarding the sustainability assessment of biogas/biomethane units.

Service process

1) First meeting with the awardee to explain the process and generate a basic overview of the farm and its operations will be done by the respective ALFA Hub in regional language, if possible a questionnaire to gather more information regarding the farm that will be used as input in the LCA analysis, such as energy/water consumption, type and mass of feedstock used, transport distances, etc., will be fulfilled during the meeting, but it can also be completed as an extra step. ALFA Hub is responsible of sending the completed questionnaire to the technical service provider.

2) Technical service provider performs the analysis considering the features mentioned above.
3) Technical service providers produce a short report (2 pages maximum) is produced summarizing the findings of the analysis, providing a general overview regarding the environmental impact of each process and recommendations for improvement.
4) ALFA Hub will translate the report to be sent to the beneficiary of the service.

If more information is required that is not foreseen at this stage, the awardee will be contacted for extra meetings or asked to complete this additional information as the service provider sees fit.

Materials required for the delivery

1) A questionnaire to gather more information regarding the farm that will be used as input in the LCA analysis.
2) Reporting template for delivery to the awardee.

2.3.9. Service 9: Consultancy on the implementation and monitoring of biogas solutions

Service summary

Selecting the corresponding technology and components according to the sizing of the plant is a critical stage of the biogas/biomethane plant development. The identification and collaboration with suitable constructors can pave the way for the establishment of the optimal plant in compliance with farmers' needs and possibilities.

In the context of ALFA, the offered service aims to provide guidance to farmers, whether they have prior experience or are newcomers to biogas/biomethane plant operations. This includes assistance in technology selection, identification of suitable components, and recommendation of trusted constructors.

Service features

1) Technology Assessment: Evaluating various biogas and biomethane production technologies to determine the most suitable options based on factors set by the farmer.
2) Component Selection: Recommending the necessary components and equipment for biogas/biomethane production.
3) Constructor Collaboration: Facilitating connections with trusted constructors or contractors who can build and install the biogas plant components according to recommended specification.
4) Recommendation of conditions for optimizing biogas solutions.
5) If relevant, provide instructions for the farmers on the best combination of types of feedstocks in order to get closer to their goals.

Resources required

1) ALFA personnel: 2-3 dedicated team members from the technical partner providing the service (service lead), and one member from the corresponding ALFA Hub for any support needed to communicate with the awardee, to gather the needed information and to translate the materials.

2) Extra desk research for relevant information.

Service process

1) First meeting with the awardee to explain the process and generate a basic overview of the plant, its operations and the beneficiary' needs, which will be carried out by the ALFA Hub in parallel with completing the corresponding questionnaire to gather the necessary technical parameters of the farm, which can be done during the interview or in a subsequent step.
2) The technical service provider will receive the questionnaire and carry out in-depth research to meticulously select the most suitable technology and components that align precisely with the needs and preferences of the awardee.
3) The technical service provider will make recommendations accordingly to the beneficiary, either by delivering a small report or through a meeting (ALFA Hub will translate the report/or carry out this interview, when necessary, with indications of service provider).

Materials required for the delivery

1) A questionnaire to gather more information regarding the technical specifications of the farm.
2) Reporting template for delivery to the awardee if needed.

2.3.10. Service 10: Technical support for farmers in the evaluation and comparison of plant suppliers' quotes

Service summary

The aim is to steer farmers in the choice of optimal technical solution for biogas and biomethane production in their farm. Thus, the service is devoted to farmers who have already undertaken the whole process and have already asked and obtained some quotes from technology providers or designers. To this end, it's necessary to have at least two quotes and technical specifications about the planting solutions, and it's essential to know the customers' needs.

Based on the information gathered, an assessment will be provided of the strengths and weaknesses of each quote. A short report whose purpose is to guide the farmer toward an informed and aware choice will be produced and delivered. This report will be tailor-made considering all aspects highlighted in the preliminary phase. It may also contain suggestions and tips for optimized management of the plant, manure and residual flows.

Service features

This service will have three features:

1) Identification of all the sections of the plant and components quoted.
2) Comparison between quotes with identification of the main differences in the processes and technologies proposed. In order to assess correctly, it is possible that service 7 is also applied in order to have access to quick calculations.
3) Description of strengths and weaknesses. Depending on the quotes features this description may consider: several equipment/components, completeness of the quote,

appropriateness with farm characteristics, correspondence with farmer needs, costs, O&M effort etc.

Resources required

Resources required:

1) ALFA personnel: 1-2 dedicated team members from the technical partner providing the service (service lead), and 1 member from the corresponding ALFA Hub for any support needed to communicate with the awardee, to gather the needed information and to translate the materials.
2) Previous desk research performed by the Hubs for WP1 activities and relevant information from interviews and success cases.
3) Extra desk research specific for each case about relevant information of technological alternatives, equipment features and local conditions as electricity supply, water supply, connection options for gas.

Service process

The service process will be:

1) First meeting with awardee (meeting to be carried out by corresponding ALFA Hub with indications of technical service provider). During this meeting, it is recommended that the customer brings with him: the quotes, and all the technical information they have on the plant/equipment quoted.

2) The ALFA Hub sends the translation in English of the quotes and of the technical documents back to technical service provider, which will be the input for the service

3) Technical service provider performs an evaluation considering the features mentioned above.

4) A short report (2 pages max) showing the strengths and weaknesses of each quote is produced by the service provider based on the information gathered. This report will be sent to the awardee and stored in the project Google Drive repository for future reference.

5) ALFA Hub will translate and send the report to the beneficiary of the service.

Materials required for the delivery

The materials required to deploy the service are:

1) At list two quotes referred to installation of a biogas or biomethane plant in the customer's farm.
2) The quotes have to include basic technical features of the plant.
3) Additional questionnaire to probe customer needs/preferences.
4) Reporting template for delivery to the awardee.

2.3.11. Service 11: Technology catalogue – features of cleaning and upgrading equipment (new service)

Service summary

The objective of this service is to provide information on the different existing technologies for purifying and upgrading the gas produced by anaerobic digesters. For both processes,

the description of the various technologies is complemented by a table to facilitate comparison and selection based on the general characteristics of the rest of the plant and the type of gas end use. The concept is that with this information makes it easier for users to choose the type of equipment best suited to their needs.

Service features

The features vary slightly depending on the awardee receiving the service:

1) For those who have an anaerobic digestion plant and want to convert it to biomethane production: they will obtain information on processes compatible with the already existing plant and needs.
2) For those who already have an anaerobic digestion plant and want to improve purification phase: they will obtain information directed towards maintenance and operations.
3) For those building a new plant from scratch: assistance and guidance in identifying the most suitable technological solutions (and list of providers) for the size, location, and final use of the gas.

Resources required

1) ALFA personnel: 1-2 dedicated team members from the technical partner providing the service (service lead), and one member from the corresponding ALFA Hub for any support needed to communicate with the awardee, to gather the needed information and to translate the materials.
2) Previous desk research performed by the Hubs as part of WP1 activities, and relevant information from interviews and successful cases.
3) Extra desk research information on specific technologies and their diffusion in the plant area.
4) In case of existing plants, additional information from the awardee to evaluate the compatibility of equipment.

Service process

1) First meeting with awardee (meeting to be carried out by corresponding ALFA Hub with indications of technical service provider). The aim of the meeting is to have a better understanding of the characteristics of the produced gas and the intended end use. It is recommended that the questionnaire is answered to avoid back and forth and translating efforts.
2) Information on the technologies is adapted, if necessary, to go in line with the characteristics and needs of each case.
3) Report with the relevant information is drafted and sent to the beneficiary of the service. Translation to the national language if necessary.
4) If requested by the service beneficiary, a final meeting can be organized to discuss the results and information contained in the report.

Materials required for the delivery

1) Initial needs questionnaire to gather input.
2) Reporting template for the service beneficiary.

3. Capacity Building Programme

One of the other main objectives of task 2.4 is to serve as a starting point to support task 3.4, which consists of the proper deployment of the market uptake measures, which includes capacity-building activities. To do this, a specific plan was created by SIE for the partners to follow in the development of the activities, which aims to extend the knowledge about biogas within the project's stakeholders through specific training programmes.

As mentioned in the previous version of this deliverable (D2.4) the capacity-building activities are divided into two actions:

- **International webinars**, which are shorter sessions (one to two hours long) and are presented in English for a wider, international audience.
- **Regional seminars**, which are all-day programmes, one per hub (six in total), and are addressed to the specific stakeholders of each regional area, in the local language.

Most of the organisational work was done around M13-M15 and has been updated accordingly during the following months following the developments of the project. Topics per partner were selected, and planning drafts and best practices documents were created, all done in collaboration with the partners, and discussed through several meetings. Among the actions taken:

- Creation of an Excel document where hub managers can add their ideas and approaches about their seminars: dates, a larger event where it is taking place, place, etc.
- Restructuration of the webinars planning according to new scheduling needs of the partners.
- Creation of a feedback form for seminars, to be filled out by hub managers after the event.
- Creation of basic communication materials for the partners to use in the events.

3.1. Lessons learnt from 1st round

Although at this point only one webinar and one seminar have been deployed, but some important points to keep in mind were identified:

1) **Having a flexible approach for the planning of the sessions has been positive**: Although these programmes need organisation and preparation, the expertise and dedication of the consortium are enough to prepare the events and to ensure that relevant topics are addressed in each session, having done so in a timely and effective manner. This flexibility allows the partners responsible to prepare the webinars and seminars according to the work that they are doing now, and that is most relevant for their context. It also allows organising partners to seek opportunities to include external stakeholders to provide a better value to the participants by having control of the timing and by being able to customise the contents of each session.

2) **Feedback is obtained and incorporated continuously:** The feedback from a specific webinar or seminar will allow the consortium to improve the next ones, and not only from the deployment part but also from the planning point of view. The feedback on these sessions is obtained continuously as they happen, as partners describe their experiences during the project meetings and propose upgrades for the next events, which will be all considered for the 2nd round of the project's activities.

3.2. Update on webinar programme

The first webinar was done successfully on May 23rd (*Challenges and needs for the uptake of biogas in livestock farming in Europe*, developed by EBA and White Research with SIE's support), giving some insights that were useful to improve the organisation of the upcoming webinars.

Before this, the planning proposed at the beginning (the one showed in D2.4) was slightly modified, in line with discussions carried out with partners. One of the main things to be considered was the importance of matching the sessions with important points in the project's development, to achieve the highest impact. This is why it was considered more impactful to leave most of the sessions after the 1st call when the consortium had more time to gather the lessons learnt to truly provide the best information possible.

Table 2 below shows the updated planning, which is still subject to some modifications.

Table 2: Webinar's topic, partners in charge and suggested dates

Topic	Deployment criteria	Partner(s) in charge	Date
Challenges and needs for the uptake of biogas in livestock farming	General approach to be used as an introduction to the topic of the biogas itself.	WR & EBA	M19 (held May 23rd 2024)
ALFA support services	Is key to give a general idea of the project, and this would be very useful for a second session once we have more public. It is also useful for other tasks that imply applying those services along the project.	QPL	M24 onwards
Waste management/treatment and biogas plants	Is a more specific topic that can be used as a main argument for the biogas uptake.	PED	M25 (14th Nov 2024)
Participatory process to involve citizens and raise awareness	Should help to give clues to the participants to get other people involved in the biogas sector, this could help in the following activities by attracting more participants.	A0CO2	M26 Onwards
Review of successful cases	Can help the attendees to understand real cases of the facts explained in the previous sessions.	APRE/CERTH/SIE	M28 (February 2025)
The use of straw and grass for biogas production	These biomasses present special challenges when used in biogas plants, but there is a great gas potential in cheap materials	FBCD	TBD

Apart from this planning, some graphic materials were created to be used as a template in the different webinars, concretely a background for video calls (Figure 1), a PPT template (Figure 2) and a style for an agenda (in Figure 3, the agenda for the first webinar).

Figure 1: Background for the webinar speakers

Figure 2: PPT template for webinars

Figure 3: First webinar agenda

3.3. Update on seminars programme

Regarding the seminars, the Italian hub seminar was successfully deployed in terms of attendance and content. For the part concerning WP2 (planning), a few actions were taken to update the approach. A form was created for internal communication, where the seminar organisers (that is, the Hub managers) can fill in easily with information about the event to simplify reporting efforts (Figure 4).

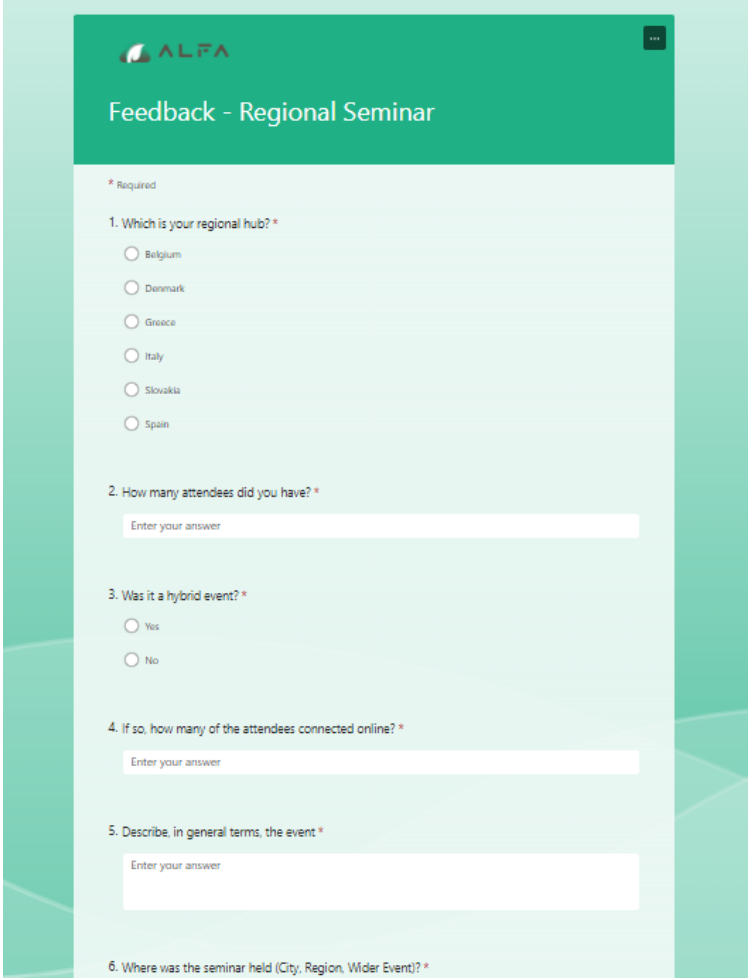

Figure 4: First questions of the feedback questionnaire for hub managers

A planning document in the form of an Excel sheet was created for the Hub managers organising every seminar for organisation purposes. There, after following the recommendations of finding a wider event about livestock farming or energy where the seminar can be a featured activity, they have detailed the selected dates and places and provided some information. A reproduction of this collaborative sheet can be seen in Table 3 below.

Table 3: Seminars' organisational sheet

Hub	Event	Place & Dates	Comments
Italy	Fiera di Tarquinia https://fieraditarquinia.it/	Tarquinia (Lacio, Italy) 3rd May 2024	**Deployed.** Seminar inside a livestock and agriculture machine fair, covering authorisation processes, NIMBY opposition, best practices in Europe, new technologies, environmental and socio-economic sustainability of biogas and animal welfare.
Slovakia	Stand-alone seminar, but as a part of the European Biomethane week (PED & SBA will register our seminar	Place to be defined 15th Oct 2024	In cooperation with Slovak Biogas Association.

	as a part of this week's events		
Spain	Sepor (https://www.seporlorca.com/	Lorca (Murcia, Spain) Oct 30th 2024	Event confirmed.
Denmark	Anvendelsen af afgasset biomasse ('The use of degassed biomass')	October 2024 (exact date TBD)	Made in collaboration with the consulting company SEGES.
Greece	TBD	TBD	TBD
Belgium	TBD	TBD	TBD

Two PPT templates (one for specific speeches, shown in Figure 5, and one for the presentation of the seminar, shown in Figure 6), were also created as support material for partners to use in the events. SIE will support partners in any step of the process in an individualised way, providing more customised support for each partner and session.

Figure 5: PPT template for specific speeches in seminars

Figure 6: PPT template for the presentation of the seminars

4. Awareness Raising Campaigns - ARC

The ALFA ARC was designed to maximise the impact, visibility, and key messages of the ALFA project. The campaign's primary objectives, aimed towards the designated target groups, include:

a) increasing societal acceptance of biogas facilities by at least 25% debunking most common false myths,

b) motivating a broader group of biomass owners (mostly livestock farmers) to engage in biogas production,

c) informing policy makers around barriers and needs perceived by the aforementioned farmers, and

d) communicating to farmers financial benefits of biogas, as well as the existing possibilities of financial support for biogas implementation.

The ALFA ARC has been divided in six versions (one for each hub of the project) and has been organised into two 10-month rounds. The project completed its first round by the submission of this report, which started in M14 and ended in M23, while the second one will take place from M24 to M33.

As a preliminary step for the preparation of a general strategy, APRE collected the feedback provided during the implementation of the ALFA co-creation workshops under T2.2. Through the workshops, different stakeholders of each hub were reached to understand their needs, expectations and perceived barriers.

The ALFA ARC has its own general narrative, ad hoc claim and distinctive hashtags: those elements are common to all Hubs and served (and will keep serving for the 2nd round) as guidelines for each hub to implement their own regional ARC. The general elements provided to serve as a basis for the Hubs to build from were:

- **TITLE:** “Together for biogas: what goes around, comes around…in circular economy!”.
- **AD HOC CLAIM AND VISION BEHIND THE ARC** (to be made visual to be used, for example, in inspirational cards): “Driving clean energy to the fullest: let’s allow biogas to express its true potential!”
- **NARRATIVE**: Meeting the sustainable principle of “power from the waste, clean from the dirt”, exploiting biogas as a pivotal component of both bioeconomy and circular economy, not only at the resource level, but also on the human level (every ring of the biogas value chain matters, and every stakeholder can benefit from biogas).
- **HASHTAGS** (not to forget): #biogasbiofast; #togetherforbiogas; #powerfromwaste; #cleanfromdirt.
- **A FOUR LAYERS AWARENESS RAISING STRATEGY**: a) inform; b) support change in the framework; c) create awareness; d) drive to action.
- **INFOGRAPHIC TEMPLATES**: All the infographics used during the six versions of the ALFA ARC have been designed in accordance with the project visual identity (in particular, regarding social media) set by the ALFA Communication & Dissemination leader, WR. To this end, several PPT templates of the social cards created by WR for C&D activities have been uploaded on the project repository, for the hub managers to modify according to their needs.

In terms of **key messages**, the strategy formulated the following:

- Biogas as part of bioeconomy and circular economy, informing not only farmers and livestock farmers but also the wider community.
- Need for a clear regulatory framework.
- Problem of the lack of cooperation in the value chain (e.g., between technology providers and biogas plant producers, or between the authorisation agencies and biogas plants).
- Need to inform about existing incentives and financial support opportunities, to create new ones and to facilitate access, to combat high initial investment costs.
- Socio-economic benefits and advantages of biogas for each stakeholder in the value chain (farmers, biogas plant owners, project integrators, farmer associations, heat and electricity supplier market, and end-users).
- Promotion of the environmental benefits of biogas systems (e.g., reduced greenhouse gas emissions and sustainable waste management).
- Through biogas, progress growing hand to hand with inclusion: the role of biogas in promoting sustainable and inclusive agriculture (e.g., gender inclusive agriculture).
- United for biogas: create consortia between small companies to increase their capacities.

Regarding the format, after COVID-19 and the consequent general habit of the population to online communication, the ALFA consortium agreed that an online format would be the most effective one, as foreseen in the project methodology, also given the geographic dispersion of the target groups. Nevertheless, the online campaign has been set up to be accompanied by an offline one, as requested by numerous stakeholders during the co-creation workshops.

The online campaign was planned to be carried out through website and social media platforms, with activities including but not limited to informative videos, social media posts (including several ones showing the results of offline activities), articles on online journals and newsletters, and also interactive activities like online quizzes. The offline campaign strategy also included several types of events, like face-to-face meetings among stakeholders, local roundtables (especially to dialogue with policy makers and authorities), national/regional events with energy providers, as well as other types of events on biogas/biomethane, and on-site visits to biogas plants, especially for farmers and citizens

An online survey (carried out via social media) was conducted for the general public to act as a baseline to understand the level of acceptance of biogas before the campaign. The survey is planned to be repeated in the beginning of the 2nd round, and the final data about the KPIs achievement is planned to be collected through the survey at the end of the 2nd round.

In order to ease the monitoring process, an excel file was provided by APRE so all Hubs can keep track of the ARC progress in each country. The overview of the file template can be seen in the picture below.

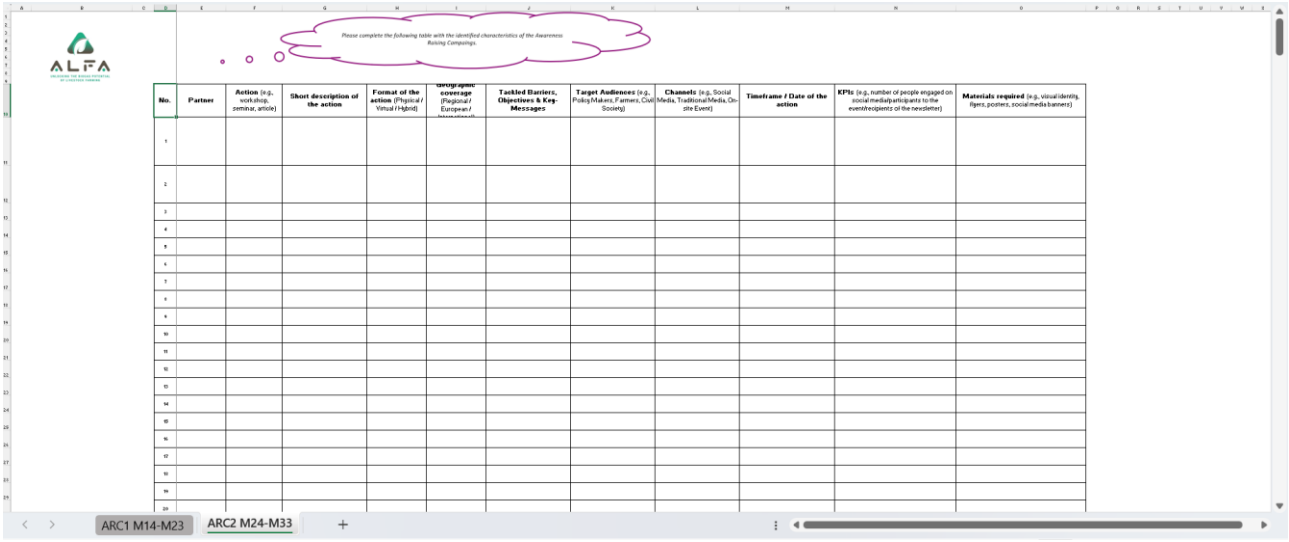

Figure 7: ARC regional monitoring file template

4.1. Lessons learnt from the 1st round

During this 1st round, some points for improvement where identified:

1) **Baseline data collection challenges:** A significant challenge encountered was the difficulty in gathering baseline data for measuring social acceptance, particularly because of the campaign's extensive and diverse audience. The varying levels of awareness, differing cultural attitudes towards biogas and renewable energy, and the geographic spread of the audience made it challenging to establish a unified baseline from which to measure changes in perceptions and behaviours. In response to this challenge, some partners implemented adaptive measures by enhancing the reach of the social media survey through relevant national channels, in order to gather a reliable baseline data. This approach leveraged the widespread use of social media across different demographics, allowing the project to reach a broader audience more efficiently. Additionally, the involvement of national channels lent credibility to the survey and helped to boost participation rates, as these channels were already trusted sources of information within their respective communities.

2) **Variation of timing in the implementation of ARC per hub:** All Hubs invested strong efforts in the campaigns, however some audiences were harder to reach than others given each country's different awareness levels. For the 2nd round, all partners will continue their activities in order to obtain a positive growth of awareness regarding biogas and biomethane solutions in each country. As initially expected, the discrepancies in terms of local conditions and stakeholders' responses involved effort from the Hubs to adapt the campaign actions to their specific implementation needs and capacities, making each campaign customised at regional level.

3) **Regional adaptation continues to be a key positive aspect:** In relation to the previous point, each hub developed its own peculiarities during the implementation of the campaign strategy: for example, some Hubs produced a series of successful high-impact infographic videos, with accurate information content, validated by biogas professionals, while others noticed a growing interest from their regional stakeholders for online informative articles, published on web magazines and not only on social media platform. The tailoring of actions to fit the specific circumstances of each hub proved to be a good approach, it reinforced the idea that harmonisation in a campaign does not necessarily require uniformity in execution, but rather a shared commitment to the campaign's goals, with the flexibility to adapt methods

according to local capabilities. This approach ultimately fed the ARC strategy update, strengthening it by ensuring that all Hubs could contribute effectively, regardless of their individual regional contexts and challenges.

4) **Reinforcing the dual-faceted approach to increase effectiveness of the campaigns:** In response to the previously anticipated challenges, APRE reemphasized the importance of a dual approach which was considered in the original version of the strategy. This approach, combining both online and offline engagement methods, was not a new addition but a further refinement of the initial plan, which the consortium had already begun implementing during the first round of activities.

4.2. Update on awareness raising campaings

With these improvement points and experience in mind, APRE worked to update some aspects of the original ARC strategy, incorporating and systematising the lessons learnt and adaptive measures from the know-how acquired. It was decided to expand the ARC strategy, in terms of format and target audience, responding to the requests of new segments of the public, foreseeing a series of follow-ups and expansions to the online activities, e.g. informative infographic videos and web articles.

For the 2nd round, it is suggested that the format of any informative articles is structured to combine informative technical information with a social perspective, both in terms of inclusiveness and gender equality in the biogas sector, in order to increase the impact of these type of materials.

In terms of establishing productive synergies with other influential and well networked national entities (ie Biogas and Livestock Farmers Associations) in conveying the campaign, the 1st round showed that one of the most effective ways of reaching out to a broader audience is targeting already existing networks that are able to reach the livestock farmers and also other stakeholders from the entire agri-food supply and value chains (e.g., the web magazine Ruminantia, that actively cooperated with the Italian Hub during the first round). Also, taking advantage of the networks of the national biogas associations (e.g., the Slovak or Spanish Biogas Association), national energy providers, government bodies, as well as big technology and biogas system producers, significantly enhanced the communication reach of the consortium, so this practice will be applied also for the 2nd round.

5. Conclusions and Next Steps

This report, ***"D2.5 – ALFA market uptake support measures – interim version"***, includes the description and update of all the activities performed under **Task 2.4 (Iterative development of the ALFA market uptake support measures)**, and it's the second version of a series of three reports that will be updated throughout the project's lifetime. The next (and final) update will come in the form of **D2.7** (due M33), which will include the final market uptake measures designed by the ALFA project, including the lessons learnt from the 1st and 2nd Open Calls to facilitate the replication and further development of the project impact even beyond its completion.

The overall design and first fine-tuning of the market uptake measures has been done successfully, with an involvement of all partners, who have collaborated in all aspects of task 2.4, including acting as ALFA Hub representatives, service providers, speakers and organisers of the webinars and seminars and/or participating in the awareness raising activities. The information included in this deliverable has been validated internally in a continuous basis via de monthly meetings, general assemblies, and numerous dedicated meetings with the partners to ensure the relevancy of the solutions proposed to the challenges encountered, and also externally via meetings with the AB and also by gathering detailed feedback from participants in order to improve the ALFA offerings.

The strategies first defined in D2.4 were used as a basis to move forward with the implementation of the ALFA market uptake measures, which will be continuously updated until M33, since the consortium will continue to refine the approach as necessary until the project end ensuring relevance and replication potential well beyond of the ALFA project

The project

ALFA has the objective to help unlock the EU's biogas production potential by fostering the adoption of technologies using manure to produce biogas, thus helping increase the adoption of renewable energy sources in the EU and helping reduce emissions from untreated animal waste. The project will identify drivers and barriers for the uptake of biogas in the EU livestock farming industry and will support farmers from 6 EU countries (Italy, Denmark, Belgium, Slovakia, Greece and Spain) through its own co-created solutions, including financial, business, and technical support services as well as capacity-building seminars. In parallel, the project will develop an Engagement Platform to host tools that facilitate collaboration and knowledge exchange among industry actors and provide credible estimations of each farm's biogas potential, prospect profits, and environmental and social impacts. Moreover, ALFA will inform all relevant stakeholders via awareness-raising campaigns and policy recommendations and will provide guidelines for replication of its results in other regions.

Coordinator: **Q-PLAN**

PARTNER		SHORT NAME
Q-PLAN INTERNATIONAL	Q-PLAN INTERNATIONAL ADVISORS PC	QPL
APRE	AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA	APRE
AzzeroCO2 climate in our hands	AZZERO CO2 SRL	A0CO2
CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS	CENTRE FOR RESEARCH & TECHNOLOGY HELLAS	CERTH
Food & Bio Cluster Denmark	FBCD AS	FBCD
Sustainable INNOVATIONS	SUSTAINABLE INNOVATIONS EUROPE SL	SIE
WHITE	WHITE RESEARCH SRL	WR
PEDAL CONSULTING	PEDAL CONSULTING SRO	PED
EUROPEAN DAIRY FARMERS	EUROPEAN DAIRY FARMERS E.V.	EDF
EBA European Biogas Association	EUROPEAN BIOGAS ASSOCIATION AISBL	EBA

CONTACT US: info@alfa-res.eu **VISIT: www.alfa-res.eu**

ALFA Project @alfa_euproject alfa-euproject @alfaprojectHE