FarmDemo: Valorize expertise through a joint 'visionary framework' for two H2020 projects

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Abstract: Two projects have been granted to the same call in the EU Horizon 2020 programme, notably AgriDemoF2F and PLAID. They have separate conceptual work packages and deliverables, but have agreed to work closely together to reach maximum impact and delivering of joint outputs under the name FarmDemo.To realise these objectives, the projects decided to valorize the rich pool of experts' experience, network, knowledge and vision in the consortia at the start of the projects to enrich impact. The expert team members combined their visions in a framework: a set of operational signposts, that can serve as a point of reference for research and dissemination activities for the joint efforts from the two co-operating projects.

This paper describes the two projects working together at their start to design outputs tailored to the end users' needs. This 'two project' approach of not just co-operating and sharing but actually working together to produce useful results with collective ownership from the start is unusual.

A small expert team of five partners form both projects with experience in on-farm demonstration activities developed the visionary framework. The objective was to develop a practical and shared basis for early reflection on results from questionnaires, visit reports etc. Such early reflections on the conclusions of separate work packages improve the quality of the synthesis and thus make results of the projects more attractive for the target groups.

The visionary framework helps to develop a focus on end users: farmers, organisers, teachers and researchers, visitors, financers of demonstrations. The three key elements of the framework are 1) to give answers to end user's needs and questions, 2) to make communication products attractive, easy to use and easily accessible, and 3) to suggest communication channels to optimally reach the target. For each of these three elements of impact, various 'checkpoints' were defined as practical suggestions to encourage maximum impact.

Development of this visionary framework should not only serve to direct joint output from the two projects towards the needs of the end-users, but, based on our experience, the process to develop the framework also was a productive means to encourage the expert team consisting of partners from the two projects to work together effectively and develop a useful common ground for research and dissemination activities.

Keywords: Visionary framework, collaboration, realising project impact

Introduction

Two projects were selected for funding under the same EU Horizon 2020 call RUR11. The central topic of this call is to analyse the role that on-farm demonstrations (also addressed as 'farmer-to-farmer' (F2F) or 'peer-to-peer' (P2P) learning) play in making European agriculture more sustainable. Although the two awarded projects, 727388-PLAID and 728061-AgriDemo-F2F, have separate conceptual work packages and deliverables, they have collaborated to work closely together in order to reach maximum impact. For example, t

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avoid confusion by using two 'brand' names, the two project names, for joint project outputs, the two projects have decided to brand all joint activities under a common name: 'FarmDemo'. For example, the "FarmDemo Hub": a website with a clickable map that gives an overview of farm demonstration activities across Europe. By clicking each of these farms, the user can obtain more specific information on a demo, including the organiser, farming sector, demonstration topic, etc.

The two projects are multi actor projects, meaning that they have both scientific as well as practitioner partners within their respective consortium. The – in some cases more than 20 years - experience, network, knowledge and vision of these partners on demonstration activities is key input to deliver the planned outputs. In both project plans, this experts input was foreseen in different steps throughout the project period. To align this input, the proposal was done to combine experts' visions from the start mainly to frame the coherence between these visions. We felt this as a necessity since both project have somewhat different approaches to reach their somewhat different goals, however we address the same endusers. Furthermore, we wanted to grasp and valorize the available expertise to enrich impact. Five experienced experts were inspired to take this challenge. Based on the experts' shared vision, the framework subsequently specifies a set of operational signposts to guide the research and dissemination activities in both projects.

The framework does not pretend to make the comprehensive observations, analysis and conclusions of the discriminated WPs in the projects; it does serve as a point of reference for this. It also does not intend to produce a complete vision on how to organise demonstrations, it is an overview of experts knowledge and experience on demonstrations.

We used the naming 'visionary framework' at the start of the process. The name helped to inspire partners to join the expert team and bring forward their vision and experience. In this paper we maintain this name, because it worked well in the process to develop these signposts.

Why build a visionary framework?

FarmDemo's two constituting projects, AgriDemo-F2F and PLAID, each plan to produce their final results after setting up an analytical framework, inventory, study of best practices, reflection, conclusions and discussion. The project partners responsible for the final syntheses in both projects reasoned that it would be good to develop some 'signposts' early on to facilitate a continuous reflection on whether the two projects' activities would remain on track to achieve their expected impacts.

To identify these signposts, we built on the expertise in on farm demonstrations of various project participants. To this end, a small expert team of 5 project participants was established to develop a draft visionary framework. The intention was *not* to compete with the balanced and well-stated conclusions that the design of the project guarantees but to ensure the work accurately reflects this design. The intention was to have a *practical and shared basis for early reflection on results* from questionnaires, visit reports etc., that are often fragmented at the beginning of a project. These early reflections on well-stated conclusions of separate work packages should improve the quality of the synthesis and thus make results of the projects more tuned to the needs of the targeted users of the project outcomes. The following sets of key users were identified: farmers, organisers, teachers, researchers, visitors, and financers of demonstrations. A main objective for both projects was to realise impacts for each of these end users. Below we describe how this was operationalised through the visionary framework.

Producing and implementing the visionary framework

After the kick-off of both projects, the expert team took 4 months to develop a draft of the visionary framework. Each of the team members took the lead on a task, like organising the

meetings, elaborating the conceptual approach, reporting on the proceedings, summarizing in tables.

We used the outcomes of several reflexive exercises, for example, on defining our target groups, on searching for motivations for demonstration activities, on the look and feel of the FarmDemo Hub etc. These exercises were organised during the kick off meeting and attended by all project members. The expert team tried to translate this input into operational signposts and checklist to enrich the impact of the project outputs. The result was presented to all partners at the 2nd joint project meeting to stimulate an early reflection on the signposts and encourage diverse feedback. Results from this discussion were subsequently processed by the expert team to develop the final version of the framework. Feedback from the partners was very useful in identifying some aspects that were overlooked and to ensure that the 'signposts' identified were practically useful for the various project partners who would have to use them in their work in the various relevant work packages.

Development of this visionary framework should not only serve to direct joint outputs from the two projects towards the needs of the end-users, but based on our experience, the process to develop the framework was a productive method to encourage consortium the expert team consisting of partners from the two projects to work together effectively by developing a common ground for research and dissemination activities.

Visionary framework: overviews and checkpoints supporting impact

End users (farmers, organisers and facilitators of demonstrations)often asked project partners from the two projects: what will the project do for us? Our general answer was that we sought to empower them with project outputs that would be tuned to their needs. The first step to develop the right outputs was to ensure that we asked the right and most important questions. To this end, the expert team developed some tables that specified the needs of the various targeted users. These served as a starting point for further systematic inventories, and for the framework to analyse the results.

Producing high quality outputs is one thing but to ensure that these outputs have the targeted impacts poses a number of additional challenges. The three most important of these are:

- Demand oriented: make sure that any info provided addresses the needs of envisaged users:
- Effective communication: make all outputs attractive, easy to use and easy to access for the end users.
- Promotion: Make the products widely known among targeted audiences.

For each of these three aspects of impact, we developed a checklist with practical suggestions to raise and enrich impact. These are briefly described below.

Challenge 1. Tune info to user needs

We have developed a checklist that gives an overview of the user-needs of various types of users of the FarmDemo project results. The checklist addresses the following aspects:

- Type of user
- Type of role: e.g. whether the user is an organiser or a visitor of a demo
- Type of demo
- · Objective of demo

For each of these, we distinguished a number of potentially relevant categories. However, this resulted in a four-dimensional matrix that was far too

Five main types of users were distinguished by the project members, each of which could play several roles as indicated below:

- Farmers: organiser/ host/ visitor/ informer
- Education: visitor (by students)/ informer (by teachers)/ organiser
- Advisors: organiser/ informer/ visitor
- Policy makers: co-organiser/ funder/ regulator/ visitor
- Farmers organization: organizer/ informer/ visitor/ funder

Next to these five, several other types of actors may also be important as users of our project results. The 'long list' also includes:

- Farming press: Visitor, reporter
- Stakeholders from the agro-food chain: (co-)organizer/ demonstrator (exhibition)/ informant/ funder
- Researchers informer/ analyst
- Regional stakeholders ('direct environment'): visitor/ informer
- General public: visitor

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complicated to be useful as a checking tool. We then developed a more limited set of categories for each of these aspects as is discussed below. A final section summarises the preceding sections into the overall 'user-needs checking tool'.

Type of users and their roles

At the projects' kick-off meeting, project members identified five types of users that are the most important: (see table 2 and the box above). Each of these users, however, can play various roles that influence their requirements in connection to our project outputs. For the projects outputs, we have chosen to focus on these five, although, as the box shows, other users may also be relevant. To acknowledge this, the projects will assess findings from the case-studies that indicate that some actors from the longer list also play key roles in certain situations.

To develop a practical approach for the checklists, we have chosen to distinguish two general types of users:

- **demonstrators**: people contributing to organising demonstrations (organisers, hosting farmers, financers);
- visitors: farmers and others (e.g. researchers) who attend a demonstration.

Most users can play various roles. The most important ones are: organiser, visitor, host, funder, informer, demonstrator and analyst. These are represented as two tabs in the 'checking tool' that we have developed. Some actors are listed more than once if they play various roles.

Objectives and types of demonstrations

Organisers and visitors have different objectives to organise or visit a demo. The project members distinguished:

- Awareness building;
- Technology promotion;
- Knowledge enhancement;
- Innovation uptake:
- Facilitating networking / local community relations;
- Facilitating feedback from farmers.

For the purpose of the checklist, we again clustered them into two objectives that largely determine how a demo is set up, e.g.:

- Commercially oriented demonstrations are more on technology promotion, innovation uptake and facilitating feedback.
- Public good oriented demonstrations facilitate awareness building (e.g. on environmental issues), knowledge enhancement and facilitating of networking.

Resulting checklists

The consortium of both projects consists of both research organisations and organisations from agricultural practice. Especially agricultural advisory organisations and farmers' organisations provided important input to assess the needs of the various stakeholders. Deliberately, we took these practitioners' views as a starting point, rather than what is known from research, as our overall objective was so satisfy the needs of the envisaged end users. The two constituting projects (AgriDemo F2F and PLAID) will each decide which part of this input is useful in the further assessment and compare what we will thus learn with what is known in the literature.

Table 1: User needs checklist: (as demonstrator and as visitor) © Projects AgriDemo-F2F and PLAID

Type of user: Demonstrator			
Needs Actors	Commercial oriented needs	Public good oriented needs	General needs
Farmers as organiser	What commercial message is sent? What's exceptional in my brand? Will it add value to my product?	What sustainable message is sent? How else can I be sustainable?	How do I promote what is a realistic business model / sharing of costs for a demo? How to involve /strengthen my network?
Farmers as host	What's proper compensation (experience of others)? Will the innovation increase my profit? Can I diversify?	How much is compensation and subsidy (experience of others)?> Will it increase my standing in the community? Can I diversify and increase the sustainability of my operation?	Regulations for safety and hygiene? How to combine commercial and public funding?
College teachers	How to establish connections to business? What message is relevant for my students? Are there experience opportunities for students? Can we get sponsorship?	How to fit demos in curriculum? Will it increase the college and the students profile in the community?	
Advisors	How to get/keep clients: how to organise that farmers visit follow up?How make sure clients see I'm specialist?	How to get subsidy for events?What sustainability messages fit to my advice?	How to involve others (like commercial firms)? How to involve commercial firms without losing neutrality? How to get suggestions for improvement?how to get feedback?
Policy makers as (co-)organiser	What kind of activities can you expect from commerce in demos with public message?	Acceptance of subjects in sustainability? Stage of awareness in the region/group?	
Policy makers as funder	What is easier organised by business?	Are funding rules fit for demos? What are risks of proper spending?	
Farmers organization as organiser	How to speed up the total network in organising demos? (work = get involved)	How to lobby effective for demo finance? How to get subsidy for events? What issues fit to my members actions?	
Agro-food chain stakeholders as organiser or demonstrator	What messages can best be sent in demo's?	How to get subsidy for events? What sustainability messages fit to my business?	Business model
Researchers as informant	Financial planning	How to deal with double public role: funding research and demo?	How to convert message to demo?
Regional stakeholders as informant	?	= policy as co-organiser	
Needs general			what, how, where, when, who

Type of user: Visitor			
Needs	Commercial oriented needs	Public good oriented needs	General needs
Actors			
Visitor-farmers	Is message true? What will be the costs/profit? How will this help me to farm?	Does message fit for me? What will be the costs/profit?	Can i trust the message
Students	Who can I contact for study or job or work experience? Do I want to work in this field of agriculture	What developments do I expect?	How do I organise demo and experiments?
Advisors	From what chance do I develop advice?	For what restrictions do I develop advice? Are there opportunities for which I can develop advice?	
Policy makers	What is commercial state-of-the-play?	What do other public bodies communicate?	
Farmers Organization	What is commercial state-of-the-play?	How to work with new societal challenges?	
Farming press	Where can we get hot news?	Where to get public developments?	
Agro-food chain stakeholders	What's the story of colleagues?	What can we expect from government?	
Researchers	What is commercial state-of- the-play? How to get contacts?	How to propose research for new societal challenges?	
Regional stakeholders	Does it stimulate regional (economic) development?	Does it contribute to regional sustainability?	
General public	What s farming in practice?	What is the relation to what I think is needed?	
needs general			state-of-the-play

Checkpoints based on visionary framework

On the basis of the considerations above, we have specified the following checkpoints for FarmDemo activities and outputs related to user-needs:

Vision-based checkpoints related to user-needs

- For all FarmDemo outputs, be specific on who the envisaged users are.
- Check whether the range of outputs address all users that are considered relevant.
- Check whether the content addresses the needs of those users, by using the 'User-Needs checklist' (a separate excel file).
- Engage envisaged users in a validation process for the most critical outputs, i.e. implement the 'multi-actor approach' that the H2020 work programme and the RUR 11 Call asks for.

Challenge 2. Make communication effective

To make communication effective requires making all products (FarmDemo Hub, abstracts, briefs) (1) attractive, (2) easy to use and (3) easily accessible. Each of these three requirements is briefly elaborated below.

Attractiveness

The FarmDemo Hub and other outlets should have a variety of features that make it 'fun' to work with. These features may include:

- Videos
- Queries: Asking the user questions to answer to see what s/he knows about demos. Give 'rewards' for good answers.

Ease of use

Users may have a broad variety of specific questions and / or less defined information needs. The FarmDemo Hub and other outlets should be structured such that users can easily find answers to their questions and interests.

- For 'structured' information needs, the FarmDemo Hub should have an advanced search function that is tuned to the needs of users and a good assessment of user needs to be able to anticipate them to inform the design of the search functions.
- For less defined information needs, the FarmDemo Hub should have a structure that provides info in a form that explains the main issues in connection with demos in a way that it may be expected that a wide variety of users find this useful. Again, a good assessment of user needs is required to deliver this successfully.

Ease of access

All information should be easy to access for users. For web-based outputs, this requires a close tuning between user needs, the information that is provided and the way in which the information is provided.

The table below provides a number of criteria that are used as a checklist for the main categories of users concerning attractiveness, ease of use and info access.

Table 2: Checklist for FarmDemo outputs on attractiveness, ease of use and info access

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.User	Attractiveness	Ease of use	Information access
Farmer	Agricultural references Accessible information Uncluttered Recognised logo Translation	Responsive to devices e.g. smart phone/ipad/pc One click information Available with limited signal (small download size)	Videos Information sheets Inventory - commercial Links Self registration
Educationist	Academic references Relevant information Academic partners Social media links Project information	Search functions Contact information Accessible data	Webinars Downloads Inventory - Research farms
Advisor	Access to different production types Directory Searchable lists Promotion tool	Interactive Geo referenced map Responsive to various devices Links	Regional information Latest news Events Discussion forums Inventory complete
Policy Maker	Clear information Relevant information Social media links Project information	Searchable Clear indexing	News Inventory Budgeting tool
Farmers Organization	Searchable filter functions Funding sources Contact details	Interactive Geo referenced map Searchable information	Contact input function Complete inventory Budgeting tool
Funder	Clear information Relevant information	Searchable Contact information Accessible data	Complete inventory Budgeting tool

Checkpoints on communication

On the basis of the considerations above, we define the following checkpoints for FarmDemo activities and outputs:

Vision-based checkpoints related to effectiveness of communication

- For all outputs (web, paper, video, etc.), make sure they look attractive in the eyes of the envisaged users.
- For (web-based) outputs use the table above as a checklist.
- Provide web-based info in such a way that a browsing user (who is not specifically searching for something) would first see the information that can be expected to be most 'important' to her/him. This may vary across types of users and the way the info is provided should take this into account.
- Make all paper outputs (also) available on the web.

Challenge 3. Make products widely known among targeted audiences

Making all information available on the web does not necessarily mean that the envisaged users will see it. Explicit efforts have to be made to inform these users that there is info available that may be relevant to them. To achieve this wide level of promotion, we will use a broad 'dissemination strategy to reach a variety of potential users, including:

- 'Directly inform' the most important users, partially by involving a selection of them in both projects' activities;
- Inform a broad variety of farming advice organisations;
- Develop and take activities to reach envisaged users who are not reached by the FarmDemo Hub;
- Inform agricultural press;

A general strategy is to ask users to provide feedback and use this to improve the FarmDemo Hub that will provide an on-line inventory of demonstration activities across Europe.

Checkpoints on promotion

On the basis of the considerations above, we have defined the following checkpoints for FarmDemo activities and outputs:

Vision-based checkpoints related to 'promotion'

- Assess for various outputs how targeted users can be optimally reached;
- Develop and implement promotion activities to reach envisaged key users;
- Develop and implement promotion activities to reach users that may not be reached via the previous point;
- Provide a means for users to give feedback and implement a way to process this feedback:
- Develop a database of email addresses of users interested in project results; maintain this list; provide a channel for users to sign up;
- Develop a strategy to inform people on this email list on 'news', seeking to strike a
 balance between optimal information and preventing overloading them with information on
 'minor' issues;
- Make optimal use of the agricultural press.

Lessons learned in the development of the visionary framework

In developing the FarmDemo visionary framework, we sought to learn from a practical viewpoint. An important consideration was that the overall objectives of both projects and their products should be supported by the available expertise of both scientific and practitioner partners within both consortia. Our observation is that the visionary framework can enrich impact when we look at the key objectives from the projects:

• Develop a practice- and science-based conceptual framework

The checklist and checkpoints provided input in the preparation of this framework.

- Produce a geo-referenced inventory and clickable map (the FarmDemo Hub)
 The user focus of the visionary framework gives an useful insight into the content of the
 FarmDemo Hub that will best serve the many potential users.
- Identify best practices in on-farm demonstration
 A problem in committing commercial farms is to provide them with incentives to cooperate; a good set of guidelines can make such incentives more tangible
- Improve understanding of effective demonstration approaches and of the increased potential for knowledge exchange offered by farmer-to-famer learning The compact overviews and checkpoints can help in the reflection process.
- Develop recommendations to provide better access to demonstration In the checkpoints on communication, tangible suggestions are made.
- Add Value to EIP Agri and the MA approach
 In Agridemo-F2F, specific products are planned to support the Multi Actor Approach
 (MAA), a central element from the H2020 work programme. The checklist and checkpoints
 provided a good starting point to make a detailed overview on how MAA could be brought
 into practice. The tool did not supply all the relevant questions: the deeper analysis in the
 MAA work package brought forward some extra actors.

This final point illustrates how we see the additional value: not to compete with the balanced and well-stated conclusions that the design of the constituting projects guarantee, but to enhance a practical and shared basis for early reflection.

Conclusion and discussion

The overall objective in developing the joint visionary framework was to provide project partners in the two collaborating projects (Agridemo-F2F and PLAID) with a set of 'signposts' in producing inventories, analyses, conclusions and recommendations. This was realised as follows:

- At the kick-off meeting, the decision was made to prepare a 'visionary framework' at the beginning of the project and a joint team from both projects was formed to realise this. The scope of the visionary framework was to have a point of reference for the results of all other WPs: not to have the best or most balanced description, but to give basis for an early reflection on results, that are still fragmented at the start of any project.
- From the experience of the members of this team, some general characteristics of demonstrations were identified, types of involvement and roles of the different users were categorised and possible questions of users related to these roles were proposed. Background for this work was: the project has extra value by giving answers to relevant questions of users, especially farmers. The findings were summarised in an internal report with guidelines and checklists for both projects on how to enrich impact.
- This report was presented to the partners and discussed as part of a combined project meeting and the feedback of partners were incorporated in the final version.

The first results of applying this framework in the projects have been achieved as it informed the process of developing the inventory (the FarmDemo Hub), the dissemination plans of both of FarmDemo's contributing projects (AgriDemo-F2F and PLAID) and the case study methodology from the PLAID project. In the coming year we will be able to draw more specific conclusions on how this visionary framework has actually contributed to improving the impacts of the two projects, following their conclusion in June 2019.

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References

- Dockès, A-C., Tisenkopfs, T., Bock, B. 2012. The concept of agricultural knowledge and innovation systems. Chapter 3 in EU SCAR. Agricultural knowledge and innovation systems in transition a reflection paper. Brussels http://ec.europa.eu/research/bioeconomy/pdf/ki3211999enc 002.pdf.
- Klerkx, L., Van Mierlo, B., Leeuwis, C., 2012. Evolution of systems approaches to agricultural innovation: concepts, analysis and interventions, in: Darnhofer, I., Gibbon, D., Dedieu, B. (Eds.), Farming Systems Research into the 21st Century: The new dynamic. Springer Science+Business Media Dordrecht, DOI 10.1007/978-94-007-4503-2_20, pp. 457-483.
- Elzen, Boelie, Cees Leeuwis and Barbara van Mierlo, 2012. "Anchoring of Innovations: Assessing Dutch efforts to harvest energy from glasshouses". *Environmental Innovation and Societal Transitions*, 5, pp.1-18.
- Millar J, and Connell, J. 2010, Strategies for scaling out impacts from agricultural systems change: the case of forages and livestock production in Laos. *Agriculture and Human Values*. 27: 213–225.
- Wigboldus, Seerp, Laurens Klerkx, Cees Leeuwis, Marc Schut, Sander Muilerman and Henk Jochemsen, 2016. Systemic perspectives on scaling agricultural innovations. A review. Agron. Sustain. Dev. 36:46