

E-conversation #1: Small-scale producers co-designing digital solutions. A myth or a reality?

During the 1st e-conversation we asked members of the D4Ag community to reflect on a potential cliché related to the involvement of small-scale producers (SSPs) in the co-design of digital solutions.

Stats at a Glance

Dates		27	17	60	17%
Starting	Closing	Number of posts	Unique contributors	New members	Of the unique contributors were Developers of digital solutions
27/02/2023	06/03/2023				

Main considerations

Inclusion and participation

- Involving potential users in the design of a digital solution is a necessity. The involvement must be iterative from conceptualisation to launch and further improvement / tailoring. Iteration never ends but just changes. The more the product is spread the more feedback can be collected. Starting with some testers feedback, to few customers' feedback until the product market fit is well defined. Thereafter it is possible to crowdsource digital solution's feedback that flows quantitatively through monitoring systems the service provider has to establish.
- There is the need for developers to establish an iterative feedback loop with farmers throughout the design process until launch and beyond. Start-ups are by essence iterating on a daily basis on the field with farmers because they need to achieve a market-fit product, otherwise they close down.
- 'Discursive participation' is generally less effective than 'performative' or 'embodied'

participation. In other words, insights from talking about a solution are less reliable than insights from interacting with a digital solution.

Human-centred design

- Understanding the challenges, bottlenecks and pain points of the potential users is a fundamental requirement. This is best done by a business analyst (or equivalent). The challenge (read failure) happens when the analyst approaches the problem with a programmer/ app developer mentality.
- Non-young SSPs generally struggle with digital technologies. There is the need for segmenting SSPs since some of them have no technical knowledge of digital innovations to better contribute at the start of design but can provide feedback as these services are deployed with them.

Business development

- Co-designing with potential users implies advancing capital (e.g. design workshops with SSPs, etc.) which may be challenging for early start-ups. Co-design brings additional value. Co-design is meant to produce mutual benefit. Interpreting a

dialogue with the potential customer base as an additional cost is a very "classic economy" mindset.

- Compensation can shape people's motivation to participate. Compensation with money will mobilize people's extrinsic motivation (driven by a financial reward to use the solution). But adoption and sustainable use of the solution requires intrinsic motivation (driven by conviction or enjoyment to use the solution). So, giving a reward in the form of money can create a mismatch in motivation between the test context and the final use context. SSPs may be participating in testing a prototype but may not make the link with their own future use of it, as they frame their activity as "helping the designers in their job". Fortunately, not all extrinsic motivators undermine intrinsic motivation. Aligning extrinsic motivation with intrinsic motivation is possible. As an example, if we design an app which is aiming at providing advice, we could offer as a reward a farm visit from an extension agent with free technical advice. Both the app use and the reward would aim at SSP's motivation to get better at farming.
- A favourable situation occurs when Farmers' Organisations (FOs) which are genuine brokers of their members' interests takes the lead in the design of a digital solution (e.g. e-granary).

Challenges

- Several posts called for a clear definition of the meaning and implications of SSPs' co-design. For a business, co-design does not mean that users are co-creators (hence ownership rights) of the product. Let's say that the word "co-design" is not appropriate for all cases.

- Designers can end up paying people for their time driven by a concern for fairness. But fairness is not just about time and money. It is equally unfair to reduce SSP's input to the category of casual labour in a design process, and not recognizing them as professionals in their own right. We should consider fairness from several dimensions, including cognitive justice.
- Concerning FO's, are these a valid reference / lead in the development of digital solutions, or are there cases when they are too politicized and distanced from farmers ? Are FO's deserving some targeted support actions when design of digital solution is at stake?

Shared resources

- Steinke, J., Ortiz-Crespo, B., van Etten, J. and Müller, A., 2022. Participatory design of digital innovation in agricultural research-for-development: insights from practice. *Agricultural Systems*, 195, p.103313. <https://doi.org/10.1016/j.agsy.2021.103313>
- Beza, E., Steinke, J., Van Etten, J., Reidsma, P., Fadda, C., Mitra, S., Mathur, P. and Kooistra, L., 2017. What are the prospects for citizen science in agriculture? Evidence from three continents on motivation and mobile telephone use of resource-poor farmers. *PloS one*, 12(5), p.e0175700. <https://www.doi.org/10.1371/JOURNAL.PONE.0175700>
- mAgri Design Toolkit. User-centered design for mobile agriculture. The mAgri Design Toolkit is a collection of instructions, tools, and stories to help develop and scale mobile agriculture products by applying a user-centered design approach. <https://tinyurl.com/2lhqvt9t>

