Bringing utilisation-focused evaluation into effect in virtual workshops

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Abstract. Travel restrictions due to the COVID-19 pandemic forced many collaboration activities online, requiring creative approaches to make these interactions work in the virtual world. This paper introduces an alternative approach to support multi-disciplinary research, when travel is out of the question. A utilisation-focused evaluation framework was used to track the success of two semi-virtual workshops held across four locations. An important feature of the approach was the regular evaluation touchpoints that provided flexibility to update workshop design. Feedback is incredibly important in virtual settings where tone and body language are largely absent, and the 'successes' of workshop activities are difficult to gauge. Incorporating these principles did not require a significant amount of time in terms of implementation but did require a commitment to the process by the programme lead and evaluator. This paper provides recommendations for people setting up a similar process.

Keywords: semi-virtual workshops, evaluation, feedback, circularity.

Introduction

Effective collaboration is vital to multi-disciplinary research domains like the circular economy, that includes social, environmental and economic dimensions. The COVID-19 pandemic made collaboration more difficult, with in-person meetings shifted to online platforms due to travel restrictions. Even before the pandemic, virtual teams were known to experience difficulties with collaboration, communication and engagement (Dulebohn & Hoch 2017). However, the move online has produced a variety of benefits such as greater accessibility, lower travel costs and lower carbon footprint (Remmel 2021). The benefits of working in this way will remain even when COVID-19 has passed, due to the recognition of their role and value.

The primary objective of this paper is to describe an alternative approach to support multi-disciplinary collaboration, when travel is out of the question. A key feature of this approach is inclusion of a robust evaluation framework, which allows iterative improvement of collaborative processes. The framework is discussed in the context of a case study focused on the circular principle of reducing waste through system re-design. The paper provides several recommendations for researchers setting up a similar process.

Methods

Utilisation-focused evaluation framework

In April and May 2021, the AgResearch Circular Bioeconomy programme hosted two workshops (referred to as design workshops hereafter) to explore how we might "close the loop" and eliminate waste by developing innovative cascading techniques to convert secondary organic waste streams into a safe, manageable resource to regenerate natural systems and replace unsustainable fertiliser and feed inputs. The deliverable from this process was to be at least one innovative cascading process that could be used in future with the Circular Bioeconomy programme, along with people keen to pursue it.

Due to COVID-19 travel restrictions, a semi-virtual approach was trialled for the design workshops. This hybrid approach made use of face-to-face interactions for participants based at the same campus and virtual interactions for competency-based sub-groups and whole group discussions. These physical and virtual sessions alternated throughout morning and afternoon sessions of the workshops.

In order to track the success of the workshops and to have the ability to make changes throughout the process, a utilisation-focused evaluation (UFE) framework was adopted. Patton's (2008) UFE framework provides steps for designing and conducting an evaluation with a focus on ensuring that the evaluation information is actively used by the project team. What is the point of engaging in an evaluation that nobody intends to use?

A UFE should always focus on the needs of identified users. The job of the evaluator is to facilitate the evaluation in such a way as to best meet the needs of identified users, in this case the programme lead and workshop participants and to engage them throughout the process. This assumes that the intended users of any evaluation are more likely to use the findings if they feel ownership of the evaluation process and if they have been actively involved from the start (Patton 2008).

It is important to provide participants with results of the evaluation throughout the workshop process and demonstrate how the results of the feedback are incorporated into workshop design.

How it works in practice

There are two key questions to ask at the beginning of any UFE,

1. Who is going to use the evaluation?
   a. Identify the primary intended users of the evaluation
2. What needs to be done to make it as useful for them as possible?
   a. This information should drive all other decisions when planning and implementing the evaluation
   b. Involve programme lead and workshop participants from the start of the evaluation process. This will allow them to explain how they intend to use the evaluation findings before any key decisions are made, such as designing evaluation questions or adopting data collection methodologies (Patton 2008).

A UFE works in the same way as any other evaluation. There are no specific tools or methodologies and no particular ways of analysing or disseminating information. Most of the additional tasks of a UFE come either at the design stage, or through regular engagement with the intended users throughout the implementation period. There may also be some additional work at the end of an evaluation to support the primary intended users to understand and use any findings or recommendations (Patton 2008).

Challenges

Although in theory a UFE is an approach that should be adopted in almost any evaluation, in practice there are some challenges that may limit the extent to which a UFE can be applied including the following:

- May need more flexibility and more time to fully engage with different users at different stages compared to other approaches.
- The timing of a UFE is important and should be planned to fit in with existing decision-making cycles.
- Requires good relationships to be developed between the evaluating team and the programme lead, as well as the primary intended users (if different). This means that evaluators need to be skilled at building and maintaining relationships, as well as having good facilitation skills.
- The primary intended users need to be ready, willing and able to engage with the evaluator/s. They need to be willing to learn and to make decisions based on the findings emerging from the evaluation (Patton 2008).

Adopting a UFE framework for the design workshops

To make sure the UFE framework was incorporated throughout the design workshops, the programme lead and evaluator met to discuss the key outcomes of the evaluation. The programme lead and evaluator made a commitment to meet for 30 minutes once a week to discuss the development of the evaluation questions, feedback from participants and how to incorporate their feedback into the workshop structure. A key consideration of the UFE framework is to involve the programme lead in question design, to make sure the questions will provide useful information.

At the first meeting it was decided that regular short touchpoints with participants would be important. Regular feedback from participants meant the programme lead could be proactive and make changes throughout the workshop process. To make sure participants understood that participating in the four evaluations was as important as attending the workshops, it was included in the Terms of Reference (ToR) sent prior to people accepting the workshop requests. To ensure that the evaluation was seen as valuable and not burdensome to participants, interactions were kept to a minimum. There was recognition by the programme lead and evaluator that participants were busy people who had other competing commitments.

Figure 1 illustrates the evaluation timeline and time commitment required by participants throughout the workshop series. During the first phone or face-to-face interview, participants were provided with an explanation of why the evaluation was taking place and an opportunity to ask any questions about the evaluation process. The pre-workshop 1 interviews were no more than 12 minutes and covered expectations of the workshops and experience and knowledge on the topic.

To make sure the evaluation requirements were not too onerous, the online survey questions were very targeted and took approximately 6 minutes to complete. The post workshop 1 survey questions focussed on the participants' understanding of the topic and their assessment of the effectiveness of the workshop structure (Figure 1). The pre workshop 2 survey focussed on collaboration challenges and usefulness of the homework given.

It was important that participants saw the value in the feedback they provided and how the programme lead incorporated the feedback into a revised agenda and workshop structure. Therefore, the evaluator provided a short summary at the start of each workshop outlining a) why getting feedback was important, b) how it was used and c) results from the wider group. It was also an opportunity for participants to hear how other participants responded to the questions.

Figure 1. Evaluation activity timeline
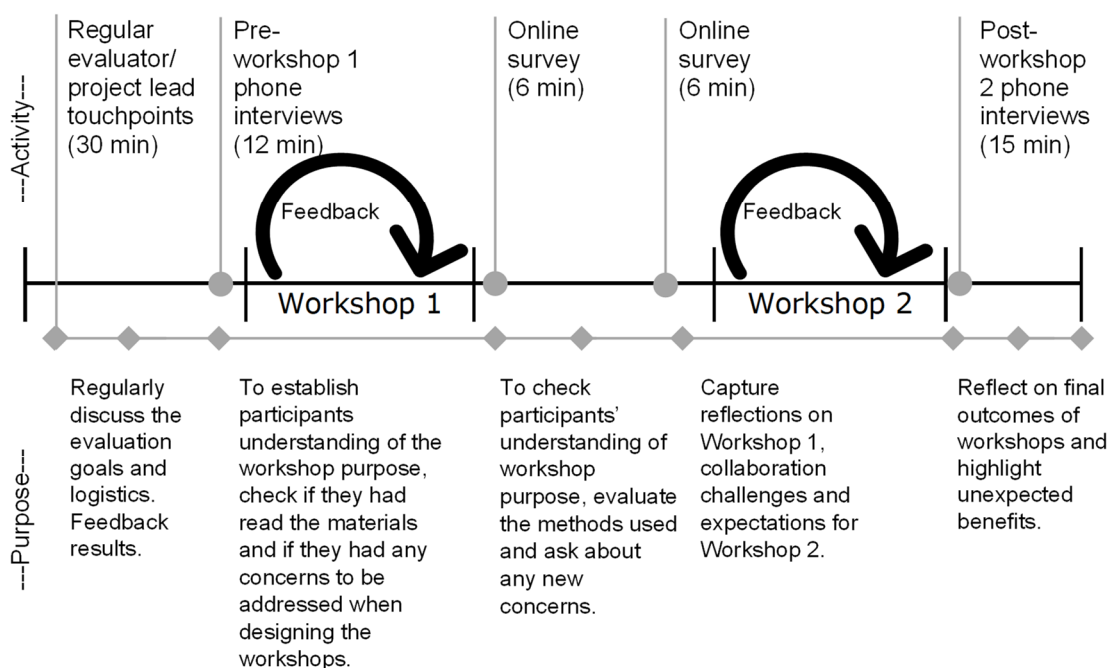
Results and Discussion

This section explores the results from participants' feedback throughout the workshop process.

Participant expectations

Prior to workshop 1 the programme lead sent out a ToR providing background information, an outline of the purpose of the workshops and what was expected of participants. This included an explanation of the evaluation and what was required of participants.

To make sure participants were comfortable with the workshops, they were asked if they had any questions and/or concerns they wanted addressed during the workshop introduction. Most participants were comfortable with the level of information provided in the ToR and workshop invitation. A few wanted more information on the "scope of what we are trying to achieve". Interestingly, this information had already been provided in the ToR.

In total, 14 participants agreed to be part of the workshops. Even though all participants had received the ToR which outlined the purpose of the workshops, half of the participants were not 100% confident that they knew the purpose and outputs of them (Table 1). From the programme leader's viewpoint there was not a shared understanding of what the aim of the workshop process was. As a result, during the introduction of workshop 1, slides were included outlining the purpose of the workshops and proposed outputs. There was also the opportunity to ask questions.

The programme lead and evaluator thought it would be interesting to see if there was a shared understanding of the workshop purpose and outputs after workshop 1. These had been outlined in the ToR sent to participants and were:

- The primary focus will be to develop processes that generate products to displace unsustainable production inputs.
- Expected outputs include at least one innovative cascading process designed that we can move forward and a list of additional bio-waste refining and funding opportunities.

Nearly three quarters (69%) believed they had a better understanding of what the workshops were hoping to achieve than before workshop 1, with the rest only having a partially better understanding. In the post workshop 1 online survey, participants were asked again to explain, in their own words, what the workshops were hoping to achieve. There was considerable variation to responses. Based on these findings, workshop 2 included a recap of the workshop purpose and proposed outputs. During the final interview, participants were asked again about the purpose of the workshops. Interestingly although participants had a clearer idea, there still was not a shared understanding of the purpose and outputs (Table 1).

Table 1. Comparison of the stated purpose* and outputs of the workshops with participants' views prior to and post the workshops

Prior to Workshop 1	Post Workshop 1	Post Workshop 2
New ideas "strategies to deal with waste and reduce inputs on farm" "ideation workshop"	Bringing people together "identify AgResearch's capability" "bring together people interested in circular bioeconomy"	New ways of working "new ways of thinking and how can we apply this into other fields"
Create a plan "map out a plan for one or more research projects"	New ideas / ideation workshop "ideate some possible direction for future work" "finding new uses for wastes generated along the food production pipeline"	Refine ideas "opportunity to test some of the ideas" "find out what peoples thinking was and channel it to a common purpose"
	Added value "finding untapped value from co-product streams"	New ideas "getting people together with multi-disciplinaries, new ideas would be created" "try to get many heads together and come up with big ideas"
	Understanding "to develop mutual understandings of terminology and relationships among variables" "understanding the bigger picture on how to fit in AgResearch's best teams into the bigger project"	

* Workshop purpose in ToR: Primary focus will be to develop processes that generate products to displace unsustainable production inputs. Expected outputs include at least one innovative cascading process designed that we can move forward and a list of additional bio-waste refining and funding opportunities.

Enablers of collaboration

There is an abundance of literature on enablers of collaboration (Edmondson and Roloff 2017; Gabriel-Petit 2017; Hansen 2009; Hocevar, Jansen & Thomas 2004). This section explores some key enablers of collaboration that we noticed throughout the design workshops.

Workshop participants

There was high engagement with the topic "adding value to waste", both from a professional and personal viewpoint. In fact, "it's my passion" was a phrase mentioned by over a third of participants when asked why they agreed to participate in the workshops. The high-level of engagement in the evaluation activities, even though the workshops were held at a busy time of year when participants had many competing demands, is another signal of interest in the topic. At the commencement of workshop 2, all participants noted that they would participate in this type of process again because it "was fun", "atypical" and "got out of my normal square of work and think about other things and how it fits together".

The diverse range of expertise amongst participants meant the experience of the topic was wide and varied, with many people discussing the links the workshop topic had with other projects they had or were currently working on. Participants spanned early career researchers to senior scientists, with many years of institutional knowledge. For some, they were actively looking for "research links with the Circular Bioeconomy concept" and "looking for connections between this project and other projects I'm in".

Although many participants were not confident when asked what the purpose of the workshops was, they agreed to participate as they were interested in the topic and saw it as an "important topic for my area of research". Many had previous involvement in the wider programme. The topic of waste, and more generally Circular Bioeconomy, related to what participants were currently researching in other projects, from greenhouse gas emissions, to Māori agribusiness and pastoral biorefineries.

Structure of the workshops

The structure of a workshop can both enable collaboration and create barriers. Participants were given the opportunity to provide feedback and recommendations on the workshop structure before and after workshop 1 and before workshop 2 (Figure 1). These recommendations were incorporated into the workshop structure. The specific changes made based on participant feedback was shared with the workshop group during workshop 1 and 2.

Participant feedback, after workshop 1, on how useful or effective a list of factors in achieving a good workshop outcome was sought. Figure 2 illustrates the practical factors that participants were asked to provide feedback on.

Figure 2. Factors to achieve a good workshop outcome from workshop 1.
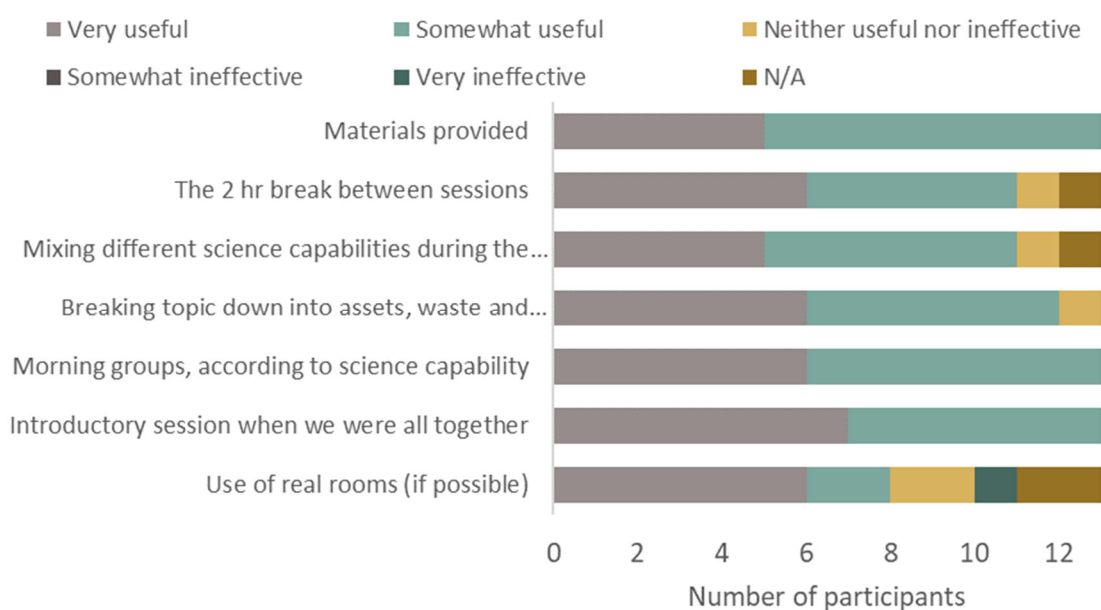
When asked to identify one thing they would change about workshop 1, participants noted that "in a perfect world we would be meeting together at one site" while for others "discussion in one room for each location" and "having someone to guide the conversation when the group was divided".

Two weeks after workshop 1 participants were asked what they would like to see in workshop 2. Recommendations included having a clear agenda outlining the key deliverables of the day and what the next steps were going to be. Participants also noted that they would like the breakouts groups to be larger and have more time to further refine project ideas. The programme lead took these recommendations and the responses from the workshop 1 post survey into consideration when designing the run sheet for workshop 2. This was done by (i) outlining the key deliverables for the day at the start of the workshop; (ii) re-shuffling participants into larger groups – two campus-based and one virtual; (iii) spending an hour trialling three different "stretching" exercises to develop the ideas further; (iv) including group discussion and reflection at the end to identify next steps and clarify who wanted to be part of further development of each project idea.

Generally, participants agreed that having a defined case study to focus on helped unlock more holistic and integrated solutions. It helped to keep the small groups focused as opposed to "being all over the place". For those who disagreed, it was because they believed focusing on one case study didn't help participants think broadly enough.

At the conclusion of workshop 2, participants were asked to reflect on the workshop process and what the group had accomplished. Generally, participants found the experience interesting and they "learnt a lot of things". While some were comfortable with where the group got to, others noted that it was an ongoing process. Some participants found workshop 2 more productive but felt workshop 1 was needed to achieve the required outcomes. The ToR identified next steps and the programme lead reiterated these at each workshop, therefore when asked, most participants were comfortable with the next steps even if they were not involved in developing any of the ideas further.

Potential barriers to collaboration

There are several barriers which can hinder collaboration. To make sure these potential barriers were minimised, participants were asked to comment on the collaboration challenges they faced during workshop 1.

Divergent goals

As there appeared to be no unified understanding of the overall purpose and outputs of the workshops, we wanted to understand if this impacted the sub-groups working together. Comments from participants suggested that this was not the case. Based on feedback from participants, reiterating the purpose and outputs of the workshops throughout the process helped cement these with the participants.

Workshop structure

Overall, the participants agreed that the workshop structure was not a barrier to reaching the required outcome. Workshop 1 was considered "a bit slower" than workshop 2 but this was counteracted by the argument that Workshop 1 was essential to provide background information.

Virtual meetings are now commonplace in New Zealand, with many people missing the ease of face-to-face workshops. The hybrid approach adopted for the design workshops where the wider group came together virtually and then sub-groups met face-to-face seemed to work well. Many participants noted that some people find it hard to share in a virtual setting as "things moved faster in the face-to-face context".

A recommendation was made that the workshops could have been shorter with compulsory pre-reading required. However, based on our experience, there was a lack of common understanding on the purpose and outcomes, even when providing a short ToR. Because not everyone will read materials provided, it is important to allow time to present a solid introduction session to set the scene.

Workshop participants

Participants themselves can sometimes be a barrier to collaboration. To explore this issue, we asked participants the degree to which others pushed their own research areas. Generally, participants felt it was to an appropriate degree as people had been included in the workshop as they were seen as an expert.

Having a case study to focus on helped prevent participants pushing their own research areas. Another key aspect was the programme lead's introduction slides at the start of workshop 1 and mentioning at the start of workshop 2 that it was about 'closing the loop'.

Knowledge gaps

A potential issue with any workshop is who and how many people to invite, as it is not possible nor practical to invite everyone with knowledge in that area. Participants were chosen by the programme lead but feedback was sought to identify knowledge gaps which would have helped the workshop process. A few specific examples were provided, "post farm gate focus" and "someone with a commercial bent" one participant noted that although there were knowledge gaps for them but it "didn't stop the process…not vital at the early stages".

Recommendations and conclusions

Based on participants' feedback and the evaluation results, several recommendations can be made for researchers setting up a similar virtual workshop process (Table 2). Allowing sufficient time for preparation before the workshops begins is critical for success. Preparation includes both the workshop planning and briefing workshop participants with clear expectations regarding their participation and compensation. Success was also obtained because there was a real commitment to seek meaningful and regular feedback from participants and make changes throughout the process when and where appropriate. Feedback from the regular evaluation touchpoints was incredibly important in our virtual and semi-virtual workshops where tone and body language

were difficult to gauge. Making these evaluations points short, clear and focused meant that the programme lead got what they needed, and the participants engaged with the process.

Table 2. Recommendations for virtual workshop success

Topic	Things to consider
Preparation	• Workshop structure – location, consider the benefits of face-to-face, virtual, adopting a hybrid approach where the wider group comes together virtually and breakout groups are based on physical location • Length of time participants must commit. Consider breaking the workshop/s into a morning and afternoon session with a couple of hours break in the middle. This provides a chance for participants to check emails etc. • Provide participants with compensation for their time and expertise. Recognising the value of their contribution by paying for it rather than expecting it as a freebie. • Incorporate meaningful monitoring and evaluation into your project plan • Provide a case study approach which helps create boundaries for a broad topic area. This keeps the groups to a manageable task
Participation Selection	• Having the 'right' people in the room – at the early stages of ideation, you don't need every expert in the room; you don't have to be an 'expert' but must be able to contribute something • Consider what expertise is needed • Select participants who can work in a multi-disciplinary way • Select participants who are connected and engaged with the topic • Select participants who have 'positive intent'
Clear Expectations	• Clearly outline purpose, outputs and next steps • Reiterate the purpose, outputs and next steps multiple times in multiple ways • Provide a ToR for potential participants before they commit to attending
Feedback loops	• Seek meaningful feedback from participants • Whenever feedback is collected make sure the results are shared with participants • Provide opportunities throughout the process to gather participants' feedback • Tell participants how their feedback has been incorporated • When collecting feedback frequent but short is best

While many of these seem straight forward, in our experience, they are not always adopted. More importantly incorporating these principles does not require a significant amount of time and resources, just a regular commitment by the programme lead and evaluator.

Adopting a UFE framework to evaluate the 'creative cascading of bio waste' workshops meant the evaluation was structured in a way that feedback was provided to the programme lead and change could be incorporated throughout the workshop process. Participants enjoyed the process and believed it would be worthwhile to run similar processes for other projects.

Acknowledgements

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