

Example of detailed agendas for co-creation events

This document provides two examples of proposed detailed agendas/programme for co-creation events – one for the **citizen workshops** and another the first round of **stakeholder workshops** in the GoNano co-creation process.

Proposed detailed agenda for the citizen workshops

INTRODUCTION: 20 min

Intro and welcome and trust building (in the process)

This part serves to familiarise participants with the event:

- What is the goal of the GoNano project, what is your role, how will the results be used (how can you stay involved)?
- How can you access the results in future (online consultations, rapporteurs for stakeholder workshops)?
- What are the three fields we are carrying out research in? What will you focus on?
- Informed consent, recording of the meetings, anonymizing data
- Get to know people at your table

TECHNOLOGY DISCUSSIONS IN SMALL GROUPS (A): 120 min

Getting acquainted with nanotechnology within the national area (food, health or energy) & finding out critical and beneficial aspects, and deliberating on them

Three technology-focused deliberation rounds of 40 minutes: They are based upon input from the information material (at best: scenarios or technology application examples).

The list of questions is not mandatory: Participants don't need to discuss all these questions in depth in each round. Rather, they serve as a kind of guideline for the facilitator to make sure that over the three rounds all aspects are touched upon.

Part 1: Information, stimulation from PPT and facilitator (10 min)

Part 2: Discussion and deliberation on pros and cons and future roles (30 min)

First proposals of questions as trigger:

- What do you think about this example? What are your first thoughts on this?
- What do you like about it? Why?
- What may turn out to be difficult? Why?
- For whom is it relevant or critical (gender, specially affected groups)?

During the process, the facilitator has the role to identify dilemmas, point them out and clarify them as soon as they appear in the discussion.

However, if he/she feels it is right for the group, he/she could also trigger this discussion:

- What kind of dilemmas do you see?
- Are there any trade-offs/ options to weigh?
- What do the dilemmas mean to you?
- Can you think of alternative areas or topics for research?

REFLECTING ON TECHNOLOGIES (B): 60 min (working lunch part)

Breaking it down to the most important aspects in relation to the three discussion rounds

Every table should at least formulate 1 to 2 concerns AND at least 1 to 2 wishes (8-16 wishes altogether) about these technology examples/applications or wishes in terms of a concrete innovative technology in written form. Please use the template provided for this. Please write (a) whole sentences so that the full meaning of your input may be grasped. Each template carries the table number and number of wish and/or concern for identification.

If participants wish, they can also formulate more general concerns and wishes or create their ideal nano product/application (as a wish).

Working lunch: During this session, working lunch will be provided. People are free to wander around and take a break or discuss at the table their take-away messages from part A. The end of this session should be indicated 15 minutes before to make sure that everyone has their templates finalised for the next part.

BROADENING THE VIEW (C): 45 min

What do the others think and how do I think about it?

In this session, the whole group works together. Here, concerns and wishes are presented and shared. Subsequently, people will have the chance to prioritize the most important wishes/concerns for them.

The sharing session can be done using EngageSuite or it can be done the “old-fashioned” way (sheets pinned on the wall and prioritization by voting via points: Participants will share their table’s concerns and wishes with everyone at the workshop (not only at their table) since they should be free to choose among the whole variety of input in the next step (“make it known to the world”).

So, using EngageSuite, each person will present his/her concerns and wishes to the rest of the group while a facilitator writes them directly into EngageSuite as voting options. The screen is being projected so everyone can see the list. Whenever similar wishes/concerns show, the facilitator asks if this is already covered by the existing voting option or whether the two can be grouped in some way to form one voting option. If this is not possible, the facilitator makes sure the difference between the two options is clear to everyone. The facilitators are well prepared and thoroughly trained for their tasks.

When the list completed, people vote individually at the tables (one computer per table - the table facilitator mentions one voting option at a time, counts the votes and enters the number in EngageSuite).

It needs to be clear, that one person cannot have more than five “votes” altogether. Given the number of possibly formulated options (either 8 or 16, see above), this seems a suitable number to allow for prioritizing – participants really have to decide which of these options they do value. Having five votes will allow people to weigh their priorities. However, we allow for people to have more than one vote per option, e.g. one person could vote three times for option A and twice for option B but, will then have to skip options C to G as a result.

MAKE IT KNOWN TO THE WORLD (D): 40 min

Who should act in what way?

Each table then considers the whole list of wishes/concerns presented before (their prioritization based on the voting is not important here). They formulate a concrete message in their own words based on one of the wishes or concerns. The messages can also be cross-cutting concerns and wishes and/or be based upon several wishes. When they choose the wish/concern, they are asked to also consider those not developed by their table so that they engage with opinions of other participants as well (see co-creation aspects below). Participants must indicate to which wish or concern their message relates (number), as well as to whom their message is addressed.

For example, the original concern “I am concerned about the environmental safety of nanomaterials from food packaging because it will end up in the ocean like microplastics” could contain one message to decision-makers (“Make sure that waste disposal regulation prevents this.”) and one message to researchers (“Work on nanomaterials in food packaging that are biodegradable”).

If is enough time left, opportunity should be given for participants that feel like working individually and more creatively (e.g. illustrating their idea of a prototype they have formulated in written form as a wish). Participants will find modelling material and paper at a table where they can help themselves. If participants choose this option, the organisers will ask to shortly describe their object in written form and in the end take pictures of it to make sure it is preserved for further analysis and communication.

PRESENTATION & FAREWELL: 35 min

- Presentation of messages to the group (20 min)
- Feedback and farewell (15 min)

Please make sure that there is a bit of time left for the evaluation procedure.

- After the final farewell:
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SELECTED PREPARATION OF CITIZENS

To ensure coherence between the citizens’ ideas and to provide a good basis for co-creation, 1 to 2 citizens per stakeholder table (self-selection on a voluntary basis) will participate in the stakeholder workshop. These citizens will be given access to all of the messages and outcomes of the citizen workshop to be able to represent the whole group.

Proposed overall structure of programme for the first round of stakeholder workshops

Overall structure

The programme is structured in five sessions: a general introduction, followed by four interrelated co-creation sessions:

- Session A: **Exploration**, where participants get to know each other and their work and explore the wishes, needs and values and messages expressed by the citizens as well as their own needs and interests.
- Session B: **Ideation**, where participants imagine and co-create responses to the wishes, needs and values and messages expressed by the citizens by imagining revisions/adaptations of ongoing research and innovation trajectories, building on the varied expertise around the table.
- Session C: **Prototyping**, where participants generate a storyboard that visualizes how the resulting research lines and product suggestions are modified in relation to the wishes, needs and values and messages expressed by the citizens and suggests concrete actions to be taken by the stakeholders present to realise this vision.
- Session D: **Reflection**, where participants present and reframe their storyboards, reflect on the ways in which the citizen's needs have shaped the storyboards, identify actions to be taken in preparation for the next workshop and reflect back on the overall workshop objectives.

Introduction

(plenary session, 30 min or so)

The purpose of this session is for participants to become familiar with each other and settle in, and to introduce the objectives of GoNano.

There are many ways to introduce participants: participants could form pairs and introduce themselves to their partner, and subsequently ask each of the participants to introduce their partner to the rest of the table (10 minutes or so). Partners could also respond to trigger questions like: "what do you think you might need from the people in the room today?", or "What would you like to know from your neighbour?"

The introduction to GoNano probably requires a brief plenary presentation (10 minutes or so), followed by Q&A. Importantly, by the end of the session participants should have an idea of what the GoNano project is about (aim of the workshop, where we are now, what went on before (including the citizen workshops), and what will happen next), and especially what *this workshop* is about: the main hypothesis of GoNano is that the productive integration of societal considerations can add value to research and innovation. We are here today to test that hypothesis: we will explore to what extent the incorporation of the wishes, needs and values and messages expressed by citizens might lead to new insights and ideas for your own work. Please note that this is an *experiment*: we don't know whether this is at all feasible or what will come out: we merely aim to test our hypothesis. We will revisit the hypothesis towards the end of the meeting.

Expected result for the next session:

- participants are settled in and familiar with each other's backgrounds
- participants know what to expect today
- informed consent forms signed by all participants

Expected output for the report:

- participants and their backgrounds should be documented for the report, as this will have a significant impact on the discussions and outcomes.
 - (details on group composition is also needed to reflect on the inclusivity dimension later on: to what extent might group composition (gender, but also age, socio-economic background, etc., have influenced the discussion?)
- It would be nice to document telling quotes from participants on their expectations from the day.

Session A: Exploration

(match-making session, 60 min or so)

In this session, participants first need to get to know each other and their work a bit better. Subsequently, they explore the wishes, needs and values and messages expressed by the citizens and combine it with their own needs and interests.

All participants are asked to write 1) their background and expertise and 2) a specific knowledge need or interest that requires the expertise of another type of stakeholder *[related to the objective of the day! For instance: "I am a chemist, and I need to talk to a policy maker on substance regulation"; or: "I am a producer, and I need a material scientist to talk about vapor deposition"]* on a post-it note. Brief pitches on the state-of-art of the technology could form part of this introductory session. Participants read the post-its on the wall, mingle first to discuss their background, expertise, needs and interests, and then form groups based on matching or complementary expertise (i.e. they feel that they have something useful to exchange). Subgroup size for example 4 or 5, depending on group size. Importantly subgroups have to be as diverse as possible (i.e. equal spread of expertise)! *(total 20 min or so to form groups)*

Subsequently, the subgroups are introduced to the messages from the citizens workshops. This could be done by presenting statements on a screen, handing out cards with the citizens messages or referring to the posters (as much supporting material from the citizen workshops as possible should be used: text, posters, videoclips, even the 'demonstrators' if possible).

[Remember that this step will require the 'translation' of the various wishes, needs and values and messages from citizens into coherent and concise messages that stakeholders can understand.]

Subgroups are asked to familiarize themselves with these ideas, and then to select one idea that (somehow) connects to the expertise of the subgroup members and the reasons for them forming a group. They will work on this idea in the following session *(total 30 min or so to learn about ideas and select one)*.

Expected result for the next session:

- subgroups of stakeholders with complementary expertise
- specific citizen message selected

Expected output for the report:

- Evidence of how the groups were formed (who matches who, and why? What sorts of needs/interests are expressed by stakeholders?) Photos of combined post-its or groups, telling quotes with reasons why.
- Capture initial responses to citizen messages and reasons for selecting 'their' (through quotes, post-its, etc). Do they see the relevance? Does it inspire? Does it match their interests? Or not?

Session B: Ideation

(subgroup work followed by a brief plenary, 60 min or so)

Purpose: In this section, participants imagine and co-create responses to the wishes, needs and values and messages expressed by the citizens by imagining revisions/adaptations of ongoing research and innovation trajectories, building on the varied expertise around the table.

First, one of the subgroup members tries to explain to the others how the message from the citizens might impact their own work (this can be as 'open' and creative as possible: ranging from "we should explain citizens better, because they haven't understood" (which is to be expected) to "I am going to create the product in my factory tomorrow" and everything in between) and adds a description of this 'impact' on a sheet of paper directly below the original citizens message (could be in words or in a drawing). What is important, though, is that the others still recognize the original citizens message somehow), and that the suggested action or recommendation is directly related to this participant's own work!

Then, another subgroup member does the same: explaining how the message might impact their own work. This could *either* be a completely different suggestion (related to this participants' own work!), *or* it could add to the earlier suggestion (building on the expertise-matching above). This 'impact' is again added to the sheet.

All subgroup members should have *the opportunity* to propose an impact on their own work. This means that the mind map (see template) may initially have several main branches (possibly with further branches for some ideas). At some point during the session however, participants should select one idea to work on in the next session (i.e. one main branch); they could consider things like popularity, originality, feasibility, and the available expertise within the group when deciding on the ideas they want to develop further. All subgroup members subsequently *have to* include a suggestion how their specific expertise might strengthen that particular impact (i.e. they each add a sub-branches to the main branch that was ultimately chosen).

This session concludes with a brief plenary session, where the subgroups pitch their ideas in one minute to the whole group, explaining why they think it is worth developing further.

Expected result for the next session:

- one main idea from each subgroup that describes a possible impact of the citizens message on the work of the stakeholder (the main branch of the mind map), along with how the expertise of the other subgroup members contributes to this impact (subbranches in the mind map).

Expected output for the report:

- A selection of ideas, demonstrating the possible impacts of the citizen messages on the work of the stakeholders (take pictures of the sheets);
- A sense of the atmosphere during subgroup discussions (pictures of the subgroups, of drawings, telling quotes you overheard); note down quotes from the plenary pitches at the end
 - *[Please note that these reporting tasks require skilled rapporteurs, who should be carefully instructed with respect to the expected outcomes!]*

Session C: Prototyping

(subgroup work followed by brief plenary session, 60 min or so)

In this session, participants generate a storyboard that visualizes the possible impact defined in the previous session. It should express how the work of the stakeholder is modified in relation to the wishes, needs and values and messages expressed by the citizens. The storyboards should show three perspectives on the impact: impact from the perspective of the researcher; from the perspective of the citizen; from the perspective of one of the other stakeholders. The storyboard should also show concrete actions to be taken by these stakeholders to realize this vision.

[Several copies of the first page of the template for session C can be printed out: subgroup members can work out specific elements of the storyboard, focusing on one of the perspectives, or perhaps one of the branches of the mindmap. Importantly however, the different pictures should combine to create a coherent storyboard (i.e. a single story, not 6 unconnected drawings); please see pages 2 of the template for some examples of how this might look]]

Expected result for the next session:

- Storyboards with one main idea for each subgroup, describing a possible impact of the citizens message on the work of the stakeholder, along with how the expertise of the other subgroup members contributes to achieving this impact.

Expected output for the report:

- Storyboards [combining expected outcomes #2: Concrete design suggestions which relate to the research and innovation at hand; and #3: Responsiveness of the design suggestions to societal needs and values]. Please note that these storyboards will play an essential role in further communication and dissemination in GoNano: in the ideal case, they immediately make it clear to all future viewers / readers that the workshops led to enhanced responsiveness of research and innovation trajectories to societal considerations, and explain how this is achieved (i.e. what concrete changes in practice will be / have been induced).
- To get as close to this ideal situation as possible, the storyboards should be visually attractive, intuitive, clear and compelling. This will require careful attention from both table facilitators and rapporteurs: is it clear what the storyboards intend to express? Are they concrete enough to inspire action? Is it clear what needs to happen? Is it clear how the original message is incorporated, and what effect it has had?

Session D: Reflection

(plenary session, 60 min or so)

In this closing session, subgroups present their storyboards in plenary, highlighting both the idea and the actions to be taken by the stakeholders, followed by reactions from the audience. This session could be used by the subgroup to reframe their storyboard and or actions.

Presentations are followed by a discussion of steps to be taken in the run-up to the next workshop:

- What do we want to do at the second workshop? Ideas for the programme?
- Who will do what in preparation for that meeting?
- Do you have specific questions related to your storyboard to ask citizens and other stakeholders and experts in the upcoming online consultation?

Towards the end of this session, we should also reflect back on the initial hypothesis with participants: *did* the incorporation of the wishes, needs and values and messages expressed by citizens lead to new insights and ideas for your own work? Was it feasible? Was it realistic to expect this? Too optimistic? Any other suggestions on how to encourage reflection on societal perspectives in nanotechnologies?

This discussion can give us some insights for expected outcome #1: *do stakeholders see the relevance of citizen perspectives and multi-stakeholder engagement?* and expected outcome #4: *willingness of stakeholders to continue* before and after the workshop.

The question of inclusivity could be revisited here as well: how did the group composition affect outcomes?

To wrap-up this session and the workshop, moderators can discuss next steps: what's next in the GoNano project? How will we stay in touch in the coming months: can we call you? Email you? Facilitate interactions between you? Can we help you realise the plans in your storyboards in the meantime? Share the results of the citizen consultation with you?

Expected output for the report:

- Overview of final presentations by the subgroups and responses from the audience (picture / quotes)
- Overview of participants' responses to the aims of the workshop / hypothesis of GoNano.
Insights in expected outcome #1: *Do stakeholders see the relevance of citizen perspectives and multi-stakeholder engagement?* before and after the workshop.
- Expected outcome #5: *Questions for the online consultation*
Reflections on inclusivity considerations.