

Cross-Impact Exercise – Facilitator’s guide

OBJECTIVE: TO EXPLORE CROSS-IMPACTS BETWEEN CHANGE DRIVERS.

This cross-impact matrix exercise is an analytic technique used in foresight to explore how different change drivers may interact in the future, considering two change drivers at a time. The results of the exercise are used to help build scenarios. It takes approximately 60 minutes to discuss four cross-impacts. This is a scalable activity, however, in that it can be conducted in a large group, sub-groups or pairs. For a large list of change drivers, it may be necessary to divide the work up for simultaneous sessions of small groups or pairs.

People:

- 1 facilitator
- 15–25 participants
- 1–2 runners (optional)
- 1 notetaker (optional)

Materials:

- Pens for each participant
- Cross-impact sheets (see example)

Post on the wall:

- Poster with cross-impact questions (optional)
- A visual agenda (optional)
- Rules of engagement (optional)
- 2 headings on sticky notes (optional):
What worked? What could be better?

Meeting Space:

- A large room with a computer, projector and screen to work through the cross-impact matrix.
- Seating for all conducive to both hearing other participants and seeing the screen.

Agenda at a Glance

TIME	ACTIVITY
5 minutes	1. General meeting introductions (if needed)
70 minutes	2. Give context for the cross-impact matrix exercise (5 minutes) 3. Provide instructions for the exercise (4 minutes) 4. Exercise: complete cross-impact matrix (60 minutes) 5. Summarize points of cross-impact exercise (1 minute)
20 minutes	6. Report back from breakout sessions (optional)
10 minutes	7. Reflect on and/or evaluate the exercise
EST. TOTAL TIME: 105 minutes	

BEFORE THE MEETING: PLAN THE ACTIVITY

The facilitation team will need to do some math to figure out how many cross-impact discussions could happen and how long this will take. For instance, for four change drivers there are six interactions possible (at 15 minutes each, that's approximately 1½ hours of discussion). The number of interactions rises exponentially as the number of change drivers grows (e.g. five drivers have 10 interactions, six drivers have 15 interactions, 10 drivers have 45 interactions, and so on). To figure out how many interactions are possible for N number of drivers, use this formula: $\text{Interactions} = N \times (N-1) / 2$

The team might consider whether some change drivers can be omitted from the discussion (see [How to evaluate change drivers](#) for how to reduce the number of cross-impact discussions needed). Breaking up participants into small groups or pairs is also helpful.

This guide assumes that a facilitator will lead a group discussion on each cross-impact interaction. Alternatively, the guide notes how the exercise could be run in self-facilitating groups or pairs. If simultaneous discussions and self-facilitation are involved, the facilitation team will need to think through the logistics of how many cross-impacts will be done, who will do them and how they will be assigned. (E.g. will the drivers be written on handouts in advance or listed on a wall?)

Prepare the room

- Each participant will need a chair, writing surface and a copy of the cross-impact matrix handout. For a larger group (e.g. 25), seat participants facing each other so that all are seen and heard. Also ensure that participants can see the front of the room to be able to see the screen/display of the cross-impact matrix being recorded during the discussion.
- If breakout-groups or pairs are being used, ensure that seating is conducive to spreading out into smaller group discussions. Post on the wall any visual aids that will be referred to during the meeting.

ANNOTATED AGENDA

TIME	ACTIVITY	NOTES
5 minutes	<p>1. General meeting introductions (if needed)</p> <ul style="list-style-type: none"> • Introduce facilitators • Provide context for the session (why are we here?) • Allow participant introductions if they are unacquainted • Consider adding a few minutes to the agenda to: <ul style="list-style-type: none"> ◦ build rapport through an ice-breaker activity ◦ review or develop a list of ground rules on the wall 	<ul style="list-style-type: none"> • If this is one of several activities, consider using a visual agenda to situate this activity within the day's events. • A list of rules of engagement posted in the room during the meeting is a visual reminder of the group's commitment to support a good discussion.
5 minutes	<p>2. Give context for the cross-impact exercise</p> <ul style="list-style-type: none"> • “In the context of foresight, the cross-impact exercise is an analytic technique that allows us to explore how different change drivers may interact in the future.” • “We use the cross-impact matrix after we've explored the plausible impacts of each change driver acting on its own (through cascade diagrams).” • “In cross-impact we consider the interaction of just two drivers at a time. This step helps us to be more prepared to think through the interaction of many changes at once during the scenario stage.” • “As with every step, this is another tool to better understand potential policy challenges and prepare for uncertainty about the future.” 	<ul style="list-style-type: none"> • To ensure participants are clear on relevant outcomes of a cross-impact exercise, provide an example of what you are looking for.

	<ul style="list-style-type: none"> • Provide an example of a cross-impact interaction. <ul style="list-style-type: none"> ◦ For example: if we consider the interaction of two change drivers, such as “the digitization of the economy” and “growing inequality,” we may come up with an idea that “the Internet may become a basic human right” in the future, as more and more people rely on the Internet for education, jobs, services, etc. • “There are challenges to undertaking a cross-impact analysis, especially when dealing with complex issues. These include: <ul style="list-style-type: none"> ◦ Keeping the matrix simple ◦ Setting the parameters for the drivers being used in the matrix ◦ Achieving a good enough understanding of the change drivers to effectively consider their interactions ◦ Foreseeing the complexity of the future with the interactions of only a few key change drivers” • “The result of the cross-impact matrix is not an end in itself, but a tool we can use to develop ideas about the future to help with scenario building.” 	
4 minutes	<p>3. Provide activity instructions</p> <ul style="list-style-type: none"> • “We have provided you with a matrix of change drivers of interest to this study. The matrix has change drivers placed horizontally across the top and vertically on the left side.” (See here for a blank cross-impact matrix template and slide 15 in the Change Drivers presentation (Module 5) for an example). 	<ul style="list-style-type: none"> • This module includes a cross-impact matrix template for the facilitator to use or hand to participants if they are working in self-facilitating groups or pairs.

- “Our task is to look at the different interactions between the change drivers and record our findings in the corresponding boxes.”
- “Before we start exploring an interaction, we will provide a brief summary of each of the change drivers, so you have a good sense of what they mean.”
 - Note: it is assumed that most of the participants in the room will understand the change drivers, as they would have been working with them in past sessions. If this is not the case, then a more detailed explanation and discussion may be required before exploring each interaction. Consider providing a list of change driver definitions as a handout, [see example](#).
- “We will then explore what the future may look like 10–15 years from now, when the two change drivers are both occurring at the same time and interacting. We will give you a chance to record your thoughts after we have described each change driver.”
- “After you have had a chance to record your thoughts, we will start a discussion on the interactions and write down some novel ideas that the group comes up with.”
- “At the end of the session, we will recap some of our findings.”
- Note: if the group will break out into self-facilitating groups or pairs, ensure all change drivers are presented briefly before the group divides. It will also be important to provide some time to share results at the end of the session.

60 minutes**4. Exercise: complete the cross-impact matrix**

- Present the change drivers that are being studied. If the participants do not have good knowledge of the change drivers, spend time explaining them in detail. If the participants have good knowledge of the change drivers, briefly describe them.
 - After participants are familiar with the change drivers being studied, ask them what may be the result of the interactions between them in the future. Potential questions that facilitators could ask include:
 - If change driver A meets change driver B, what will this look like in the future?
 - What challenges will arise?
 - What are some opportunities that may result?
 - What will be the news headlines?
 - Ask participants to reflect on the interactions between change drivers and write down their ideas in the boxes on the interaction sheet provided.
 - Ask participants to share their reflections with the larger group (the facilitator can go sequentially around the room or invite participants to speak up when they are ready). As each participant shares their reflections, allow other participants to piggy back on the ideas and develop them further. The facilitator ensures continuity by inviting related ideas and/or further development of similar ideas.
 - Once there is sufficient discussion around a particular idea about the interaction, summarize it and ask the note-taker to input it into the matrix on-screen.
- Consider having a notetaker type the interactions that result from the conversation. The 60-minute time allotment is based on the completion of a 2x2 matrix (four boxes). This includes a five-minute discussion of the change drivers and a 15-minute discussion of the interaction between drivers. In this case, four interactions could be completed within 60 minutes.

	<ul style="list-style-type: none"> • Once a few ideas have been developed in each interaction box, move on to the next interaction. • Continue this process until all the relevant boxes are complete. • At the end of the exercise, summarize the points that were discussed and where agreement was reached. <p>Suggestions:</p> <ul style="list-style-type: none"> • There does not need to be consensus in the group to record an interesting interaction idea. • Spend more time on the drivers with the highest interactivity. Participants may also score cells in terms of high, medium or low interactivity. • Encourage participants to record potential scenario ideas or “stories of the future” if they are inspired. • If the exercise is conducted in pairs, participants can interview each other to get a sense of their individual thoughts on interactions, then build on them together. 	
20 minutes	<p>5. Report back from breakout groups (optional)</p> <ul style="list-style-type: none"> • If this exercise is conducted in breakout groups or pairs, allow time at the end of the exercise for participants to report back. • Ask reporters from each breakout group to share the main headlines from each interaction and explain what they mean. • If an issue has already been raised, ask reporters not to spend as much time on it and to move on to issues that have not been discussed. 	

1 minute	<p>6. Summarize points of cross-impact exercise</p> <ul style="list-style-type: none"> • “The ideas that we came up with today detail possible situations that may occur in the future, and that is the main point of this exercise.” • “They give us fodder for developing scenarios and a range of plausible alternative futures.” • If appropriate, the facilitator could commit to posting the results (main headlines) of the cross-impact exercise in a shared space (e.g. a shared network folder, a workplace wall) and invite participants to continue to add ideas that come to mind over the course of the relevant project. 	
10 minutes	<p>7. Reflect on and/or evaluate the exercise</p> <ul style="list-style-type: none"> • Give participants an opportunity to provide feedback on the exercise. • This might take the form of: <ul style="list-style-type: none"> ◦ Q&A discussion ◦ Participant completion of an evaluation form ◦ Informal evaluation—On their way out of the room, participants are asked to post one comment on a sticky note for each of three wall headings: <ul style="list-style-type: none"> - What Worked? - What Could be Better? 	<ul style="list-style-type: none"> • Provide evaluation forms or sticky notes as appropriate

Building a Foresight Workshop: Complementary Activities to Consider

For facilitators with multiple objectives for a foresight workshop, below are a few suggestions for activities that would pair well with the cross-impact exercise.

Before the exercise:

- Deliver the [Change Drivers presentation](#).
- If participants have not had a chance to explore the consequences of individual change drivers before the cross-impact activity (recommended), the facilitator could develop a [cascade diagram](#) of the change drivers first. For example, participants could be divided into four breakout groups, each of which would familiarize themselves with one change driver through a cascade diagram. The participants from each change driver group could then be matched with participants from the other change driver groups to discuss the interaction.

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