ESSRG
Environmental
Social Science
Research Group

DIGITAL PROOF

EDUCATIONAL MODULE

Systems Thinking for Food System Sustainability

In a nutshell

The course aims to spread food system thinking and encourage participants to approach the food system holistically and critically and with multiple perspectives in mind,
while taking responsibility for their own actions as a member of the system.

Food 2030 focus

What for?

- To explore and understand the food system
- To work with my community on transforming the food system
- To train or educate people on food system transformation

For whom?

Facilitators, Educators, NGOs & CSOs and Researchers can use this tool with university students, early career professionals and high school students

How long?

16 - 19 hours for the main sessions
(+10 -15 hours of additional homework)

Created by

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Something to share?

Leave us a comment about this tool on the FIT4FOOD2030 Knowledge Hub.
You can also contact Diana Szakál at szakal.diana@essrg.hu or https://www.linkedin.com/in/dianaszakal/
This tool was developed as part of the FIT4FOOD2030 project; find this tool and many more on the FIT4FOOD2030 Knowledge Hub.

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How to cite?

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What will you gain from this?

As a facilitator, you can use this module to introduce the systems thinking, to help students discover how the different aspects of the food system influence one another and how a system itself is affected by its context. Besides developing food systems thinking, you can use this activity to support the development of various competencies, such as oral presentation, sense making, self-awareness, (transdisciplinary) collaboration, navigating complexity or wickedness, pro-activity, participatory ability, analytical and ethical thinking, among others.

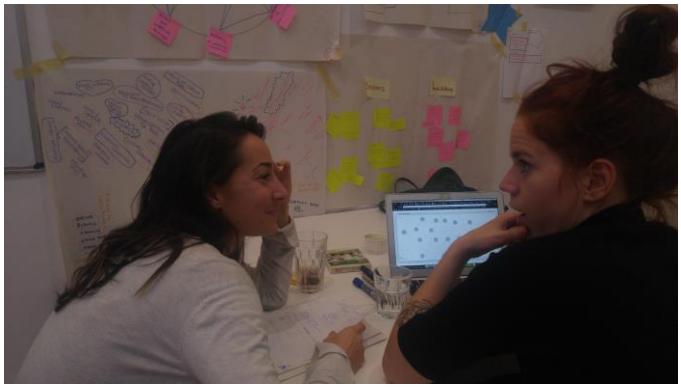
After the successful completion of this course participants will:

- have experience in applying a systemic approach to a given problem or challenge;
- have practiced various systems thinking tools and methods that can support them in navigating complexity;
- have reflected on their role and responsibility as a member of the food system and identified action steps for developing even more sustainable habits;
- be able to point out some of the key challenges and controversies that exist within the food system;

SYSTEMS THINKING FOR FOOD SYSTEM SUSTAINABILITY

The course aims to spread food system thinking and encourage participants to approach the food system holistically and critically and with multiple perspectives in mind, while taking responsibility for their own actions as a member of the system. It offers a blended approach incorporating (offline) facilitated sessions, stakeholder consultations, individual and group home study, as well as an online learning platform.

As a facilitator, you will guide participants (in teams) through a process of understanding the systemic forces connected to a challenge present in their local food system. Through this process they will experiment with various tools and develop their systems thinking competencies. Your role will be to encourage participants to think deeply about many of the different ways food impacts the health of the population, society at large and our natural environment. By the end of the course, participants will visualize their mental representations of the food system in small groups and develop various competencies.



Participants co-creating systems maps – during the piloting of the module

SUGGESTED SCENARIO OF IMPLEMENTATION

We tested the module with university students and young professionals with diverse backgrounds and is well suitable to be offered as an open course for adult learners.
The module was designed to be implemented as an evening course over the course of several weeks. However, it is also suitable for a university setting or it can be rolled out in a modified format for high school students.

Thematic area

Systems thinking, systems practice, food systems

Target audience

University students, early career professionals, can also be tailored to high school students

Age of participants

16+

Number of participants

12 – 20

Number of facilitators

One or two depending on group size

Prior knowledge required for participation

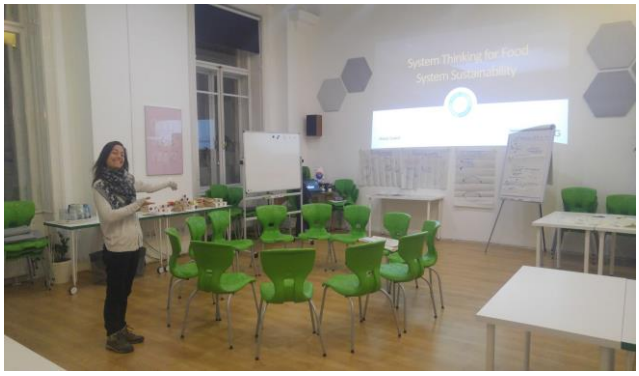
There are no prerequisites – it is possible to join from any disciplines and fields. The quality of the workshop is enhanced by bringing together different perspectives.

GETTING PREPARED

Set the scene

It is ideal if you can prepare a space, where you are able to both come together and engage in a group discussion (for this, the best is to arrange chairs in a *circle, see picture below*) and easily create small workstations where teams of 3 – 5 people can engage in the mapping process together. It is great if you can start and end each session together, with a check-in and a closing circle, and you can also use this setting for discussing new concepts together or explaining exercises. Most of the exercises, however, are designed to be carried out at the team tables, which needs to be large enough for them to sit around and work on developing concept maps. It is also ideal if you have a big enough room where the teams do not disturb each other. You also need large empty spaces (wall, boards, etc.) where in the later stages of the process, the teams can put up their drawings from the exercises so that they can easily refer to them while putting together their final maps.

You can decide whether you would like to use presentation slides, flipchart papers, whiteboard, etc. to share information. We recommend a mixed approach. While for most parts slides work very well, it can support learning to have some information constantly visually available. For example, we recommend that the agenda of each workshop, as well as the instructions for some exercises are pre-written on a flipchart or board.



Setting the scene before participants arrive

Format

The module is built up of 5 main sessions that can be spread out in a 5 to 10-week period (You can decide to hold a session each week or every second week, scheduling an extra session where only participants meet to work on their projects). Out of the 5 main sessions, Workshop 1, 2, 3 and 5 are facilitated sessions where you need to be there, providing guidance for participants. Workshop 4, however, is designated for engaging local stakeholders. In addition, the course is complemented with an online e-learning platform for additional support *(see the below box for more information on this*).

All the offline sessions are highly interactive, with most of the learning exercises centred around co-creation and collaboration. All sessions are based on the principles and methodology of experiential learning, including activities that support participants in each stage of the learning cycle, and paying special attention to both active experimentation and conscious reflection.

TIPS & TRICKS

An online version of this module was also developed. The *Systems Thinking for Food System Sustainability* online course can be accessed at: https://courses.essrg.hu/.

The online version can support you in various ways:

1. As a resource for individual study that your students can access on their own.
2. As an additional support that complements this guide if you would like to learn more about systems thinking and food systems as a facilitator.
3. Complimented with a software to facilitate discussions (such as Zoom or Microsoft Teams) you can facilitate the complete training course (with slight modifications/adaptations) in the online space. Please contact the module developers if you are interested in this option and would like to use the online platform as an instructor.

   The e-learning platform of the course includes weekly readings, videos, individual and collaborative exercises and a database of additional resources, articles, videos, and stories from the field. You can also find additional resources and all the references that were incorporated in developing this module in the "References" section of the online learning support.

The activities and reflections of the course aim to support participants in first recognizing and then increasing their sphere of influence and finding their own ways to creating positive impact in the food system, let it be via their individual behaviour, small communities, or respective organizations.

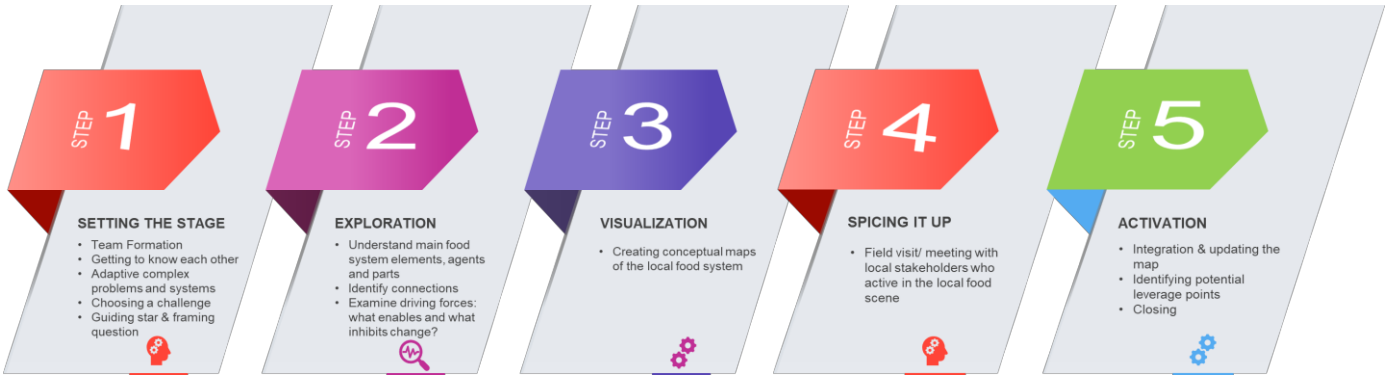


Figure 1. Course outline. Source: Own design.

OUTLINE OF THE MODULE

WORKSHOP 1 – SETTING THE STAGE

WORKSHOP 2 – EXPLORATION

WORKSHOP 3 – VISUALIZATION & DEVELOPING THE STORY OF THE SYSTEM

WORKSHOP 4 – SPICING IT UP

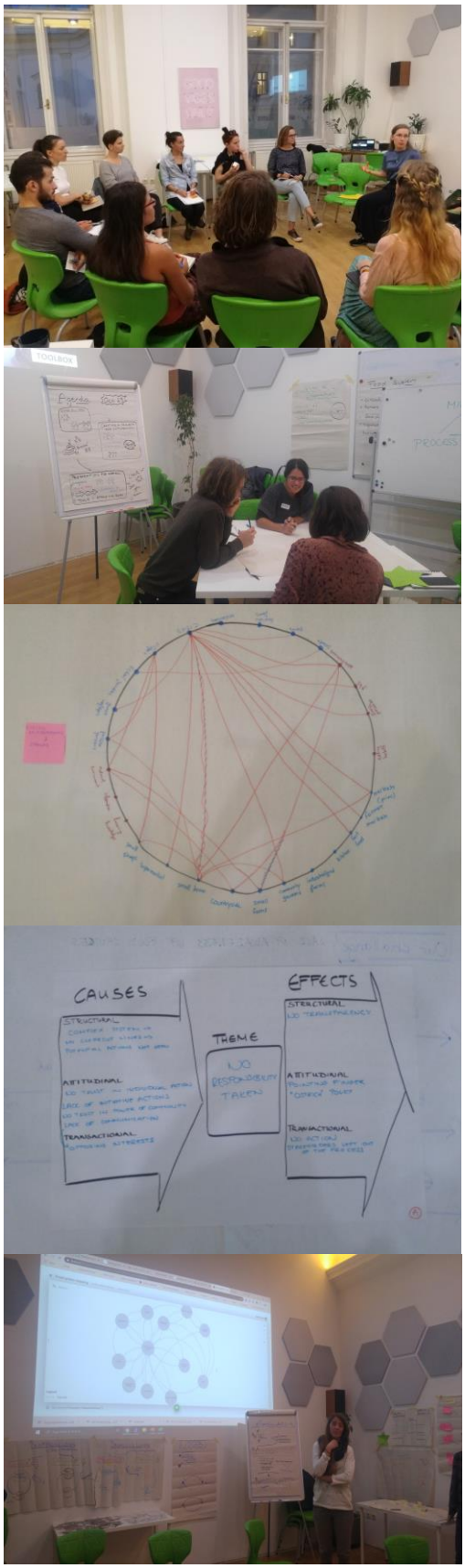
WORKSHOP 5 – ACTIVATION & INTEGRATION

FACILITATOR TIPS

In order to keep the focus and also help the participants feel relaxed, it is important to discuss the framework of the course and the expectations of the participants in the beginning. In addition to dedicating time for this during the first session, it is advisable to include a brief recap in each workshop during the check-in process that details the aims, the planned timeline (including breaks, etc.) and the guidelines of cooperation. This is an **iterative, organic and co-creative process**, so for instance, guidelines can be adapted (e.g. asking participants to stop talking when somebody puts their hand in the air and follow the example, until the whole room is silent is an easy and relaxed way to get back the focus after team work, and was introduced during the first pilot of the course by one of the participants), or participants can be reminded of the agreement that the group collectively made during the first session.

As a facilitator you will need several skills and competences, such as verbal and non-verbal skills, negotiating skills, flexibility, and leadership. You will need to create an environment in which all participants feel secure, are able to speak up and give their perspective on issues being discussed. This means that you may have to stimulate some participants to speak more often, while you may have to prevent other participants to speak too often or too long. It also means that you will need to avoid discussions on issues that are not directly relevant. A brief guide with facilitation tips are provided in this address:
https://knowledgehub.fit4food2030.eu/facilitatorstips

Besides facilitation skills and group management, you will also need to have at least a general knowledge of the main dynamics, challenges and opportunities of the food system and understand the approach of systems thinking. The online version of the course can help you prepare, and it also has a list with links to additional resources (e.g.: books, videos) to help you deepen your understanding of the topic.



Creating a safe learning space (WS1), Brainstorming (WS2), Connection circle diagram (WS2), Analyzing causes and effects, Presenting systems maps (WS5)

TIPS & TRICKS

The workshops detailed in this guide are mostly focused on systems thinking and how it can be used for collaboration and working towards positive social change. If your target group needs more food system specific information, you can either lengthen the workshops, schedule additional sessions in-between the workshops, or invite your participants to study specific aspects individually in-between the workshops. In this case, you can guide them to the online version of the course. The "***B" section of each chapter*** of the online version focuses on examining the food system from different perspectives and on providing addition background information to the exploration process.

WORKSHOP 1 - SETTING THE STAGE

3.5 - 4 hours

The main aim during the first learning workshop is to set the scene by creating a *safe and inviting learning environment* and to *introduce the main framework* and what participants can expect during the course. During this introductory session, you lead participants through a set of exercises that facilitate getting to know each other, forming teams, as well as, defining the challenge in the local food system that they would like to focus on during the course. The exercises also invite them to reflect on their individual motivations for choosing the specific challenge they would like to tackle. This is also the time to introduce participants to the concept of food systems and the approach of systems thinking. Here you can also start a discussion about the characteristics of complex, adaptive systems and the advantages and disadvantages of a systemic approach.

Objectives of the session

- team formation
- support participants in getting to know each other
- initiate the group development process
- understand why systems thinking is valuable for food system transformation
- general introduction about systems & the food system
- channel the previous knowledge and experience of participants
- each team chooses a challenge
- support participants in getting comfortable with the process
- create an environment conducive to learning

Prework

You also have the option here to ask participants to study some parts of the online version of *Systems Thinking for Food Systems Sustainability* as preparation for the work you will be doing together. Here we suggest the section of "Week 1.A" for a general introduction into the world of systems and systems thinking and the section of "Week 1.B", particularly from Lesson 1 to Lesson 6 for a short introduction to the food system topic.

Outline of the workshop

Duration	Activity	Brief description of activity	Materials needed
	Introduction	• Introduce yourself and the context of the course • Introduce the general aims of the course • Talk about why food systems thinking and systems thinking in general are important	Presentation slides or pre-drawn flipcharts. You can find inspiration for your presentation in Appendix A – Workshop 1.

15 minutes		• Describe the process and the journey you are going to take together • Briefly explain the agenda of the workshop and what they can expect • Talk about the practical framework (bathroom, policy about being late, food & drinks during the sessions etc.)	
10 minutes	***Check-in & Icebreaker***	**Version A)** Participants stand in a circle. Each of them introduces themselves together with a "signature movement". The name together with the movement is repeated by the whole group. **Version B)** Gift Circle Exercise: Participants stand in a circle; one person says their name and gives an imagined gift to the one on the left of her/him. The receiving person thanks the giver (also saying their name and what they imagine they received. E.g. "Thank you, Carla, for this beautiful apple". Then say her/his name and gives a gift to the next person. (It is not important to name what the giver imagined giving.)	
10 minutes	***Understanding Expectations***	Give participants around 3 – 5 minutes to write down their answers individually to the following questions and put them up on a wall: • *"When will I feel that it was worth for me to participate in this course?"* • *"What am I willing to give/contribute in order for the course to be successful?"* (What can you bring for your team?) • *"What will help me to learn and in bringing in my talents and gifts"?* (What do you ask from others?) Group the post-its and reflect on them in the plenary. Highlight all the resources that participants mentioned that they are bringing to the course. If appropriate, you can mention the unique possibility to network with all other participants. Finally, reflect on their expectations: what are the aspects that can be realistically covered by the course and what are the aspects that fall out of its scope.	Post-its in 3 different colours for each question. 3 big sheets on the wall with the questions written on them.
10 minutes	***Setting Guidelines***	Ask participants to reflect on what guidelines they think could help the cooperation and mutual learning during the course. Create a common document based on expectations, participant reflections, and own suggestions	Big sheet with "Guidelines of Cooperation" written on it.

TIPS & TRICKS

Sharing a personal story about your connection to the course and the topic can support engagement in the beginning.

TIPS & TRICKS

It is important to manage expectations! For instance, if you are only following this guide and not giving additional information, remind attendees that the course is centred around systems thinking, with the food system as an example case.

		(punctuality, telephone use, being present, giving feedback, etc.) Bring this sheet for each consecutive session and place it in a visible area.	
20 minutes	***The Systems Game***	Systems practice exercise that supports participants gaining embodied experience about the common mechanisms of systems. You can find a version developed by REOS here.	Large empty space.
25 minutes	***Introduction to systems thinking and the food system***	• Invite participants to reflect on why the systems approach can be valuable. • After listening, introduce systems thinking and also reflect on the question. You can use the video: Why is systems thinking important and when can it help us? as support or inspiration. • Then ask participants how they know whether they are looking at a system. Bring in images of systems and collections and ask for each of them what the group thinks (you can find an example slide for this in Appendix A). You can also use the video: What is a system? as support or inspiration. • Afterwards ask participants reflect on the question: *What do we mean by the food system?* Collect associations from the participants. Here you can also discuss what they believe is the *purpose of our food system*.	Presentation slides or pre-drawn flipcharts. You can find inspiration for your presentation in Appendix A – Workshop 1.
30 minutes	**BREAK**		
10 minutes	***Guided visualization***	• Invite participants to find a comfortable seat and then read the script of the guided visualization or play the audio file from the online version of the course (Week 1.A, Lesson 3). • Distribute papers, post-its and markers • Ask participants to create a schematic drawing of their ideal food system they had envisioned during the guided visualization process. • Explain that they do not need to share this drawing in plenary, but they will be able to leverage it when defining their shared vision as a team.	• Paper to draw on • Colourful markers • Text of the visualization printed, for detailed script see Appendix B. Or audio file prepared to play.
30 minutes	***Individual Reflection & Team formation***	• You can introduce the next exercise by the following question: To achieve the vision that you imagined during the guided visualization, is there anything that needs to change in the current food system? Explain that now they will work individually and then present	• post-its • glue/tape/pins to put up answers on a board or wall

		their ideas to the whole group afterwards. • Ask participants to write down their answer to the following question (approx. 3 - 5 minutes): • **What is a challenge that you personally feel motivated to solve? What part of the food system you feel personally called to change/work on?** • When you confirmed that everyone is ready, invite each person to come up and briefly explain their *personal motivation* (their relationship to the food system) and *the challenge that they feel called to work on*. Then ask them to place their answers on the wall. • When the next person comes up and explains their motivation ask them whether they see some similarities and would like to join a previously defined challenge or start a new one. (*Can you connect to any of the previous challenges or would you like to start a new group?)* • Share that the aim of this process is to form teams. • When everybody has told their story, see whether participants are equally distributed according to the "challenge clusters" that had been created on the board/wall.	
50 minutes	***Refining the challenge***	Ask the newly formed teams to come together and agree on the challenge that they want to tackle. Support them in choosing a challenge that is complex enough that it requires a systems approach, but not too complex, so that they would not be able to address it in the short timeframe of the course. Example questions that you can use during facilitation: *How well does the team understand the nature of the challenge? Does it target a short-term fix or long term, sustainable change?* Ask them to also define a long-term shared vision that they aim towards. Ask teams to also agree on the communication channels they want to use (The platform of the online version is also able to host group communication).	Sheets for writing out their vision and milestone.
10 minutes	***Check out***	Before closing, ask whether anybody has questions or comments that they would like to share in plenary and offer the	Prepared feedback wall, post its, blue tech.

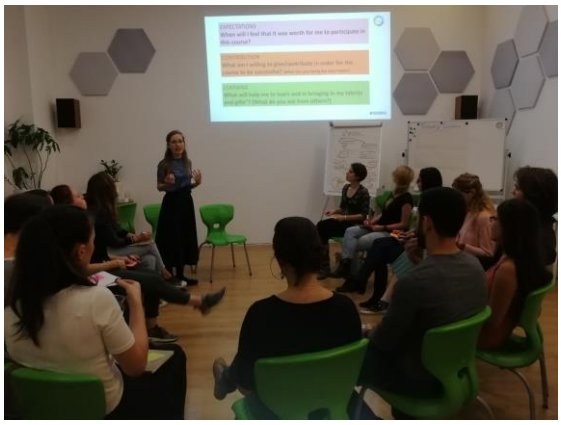
		possibility to write down their feedback and/questions on post-its and leave them on a designated area ("Feedback wall"). Share any information that you feel relevant for them to be able to come for the next session and share with them their homework. Ask everyone to stand in a circle and say 1 word/sentence that sums up their experience of the first session.	
30 minutes	***Optional: Networking time***	Based on our experience, if participants come from diverse places and background, a scheduled time for networking can greatly enhance their experience. Notify them in advance if you decide to offer this opportunity. (Offering healthy and environmentally friendly snacks for this part can also help to create an even more inviting space.)	

Homework

Ask participants to discuss with their teams their answers to the following questions before the next meeting:

1. Who can be an interesting stakeholder to connect with during the "Spicing it Up" session of the course?
2. Which actor from the local food system could support your team in deepening your understanding from the perspective of your chosen challenge?

You also have the option here to ask participants to study some parts of the online course. Here we suggest the section of "2.B" to gain a deeper understanding of the mainstream food system paradigm.



Inviting the group to share their expectations and think about how they can contribute to the shared learning journey

Introducing the course & what participants can expect

WORKSHOP 2 - EXPLORATION

3.5 - 4 hours

During the second workshop, you will guide participants through a set of exercises that will help them explore the dynamics and basic causal relationships present in their chosen system. Your role will be to support them, while they identify the main elements, actors, institutions present. (Their focus, meaning the part of the food system that each team will explore, will be defined by their chosen challenges.) Then, you will ask participants to identify relationships and make connections among these elements. At this stage of the process, it is important that you encourage participants to explore without zooming in on any focal point. During the exploratory phase, the aim is to understand the main forces that contribute to the system behaving in a certain way, in other words, the main forces that contribute to the challenge that they had chosen. Reinforce that at this stage we are curious explorers and do not aim to come up with solutions just yet. In the second half of the workshop, you will support participants while they start to examine the system from the perspective of the desired change, they defined in the first workshop and work toward identifying elements and processes that either hinder or support the transformation of the system towards the desired direction.

While they define system boundaries at a local level, you can encourage them to also look at the broader context and how the small system they are analysing connects into the larger context of our food system. (You can also refer to the online materials if you think it best.)

Before the workshop, arrange the tables in a way that allows each team (formed during the first workshop) to sit around their separate workspaces where they can easily collaborate.

Objectives of the session

- provide specific tools for deepening systems understanding
- develop systems thinking, divergent thinking, collaboration
- support participants in gaining a deeper understanding of the part of the food system they had chosen to explore and prepare them for the mapping phase by facilitating the processes of:
    - identifying the main elements, parts, and agents of their chosen system
    - identifying connections among them
    - identifying the main driving forces within the system

Outline of the workshop

Duration	Activity	Brief description of activity	Materials needed
10 minutes	**Alternative use game**	Ask participants to gather in their small teams. Give each team one reusable drinking bottle (empty)/ or a glass jar. Ask participants to pass it around, while each person says a different thing that the bottle/jar could be used for. The aim is to make the round as quick as possible and go for the numbers. After 4-5 minutes stop the game and ask each team to share in plenary some of the most creative, unusual, or weird ideas that came up.	Bottle/jar for each team.

15 minutes	**Starting presentation - check in**	Remind the group once again, where you are in the process. Introduce participants to the aims and goals of the session: e.g.: exploration, experimenting with different system thinking tools. Highlight that the aim of this workshop is not to find a solution yet! Introduce the cluster mapping or free association mapping exercise (see the description in the next row).	Presentation slides or pre-drawn flipcharts. You can find inspiration for your presentation in Appendix A – Workshop 2.
25 minutes	**Free association Mapping**	1. Based on their chosen challenge, ask participants to decide on the boundaries of the system that they are working with. (About goal setting and defining system boundaries, you can find more information in the *"How to define the scope of your systems exploration?"* of the online version.) 2. Give each team a large piece of paper and some markers/pens and post-its 3. Ask them to write their challenge in the middle of the sheet 4. Ask them to write down everything that relates to the arena they are exploring, engaging in free brainwriting process and placing down all their associations about the system 5. Then ask them to start to connect and cluster the ideas that are related.	Large sheets, pens, post - its.
30 minutes	**Connected Circles map**	This exercise can be used in various ways, in order to understand and explore the team's chosen systems deeper. Ask participants to place the main elements or nodes of the system that they identified along a circle. These elements can be members of the system, such as specific people or institutions, but can also be more abstract, such as "level of trust" or "the amount of available produce". The previous Free association mapping exercise will help the team to identify what part of the system they would like to gain more clarity on. Present various possibilities for using this exercise, depending on what the team considers important. Then invite them to start to connect the nodes on the circle. They can also decide to map more than one type of relationship of flow, using different colours. Some examples: 1. Connecting various actors	Large sheets with pre-dawn circles, pens, post - its.

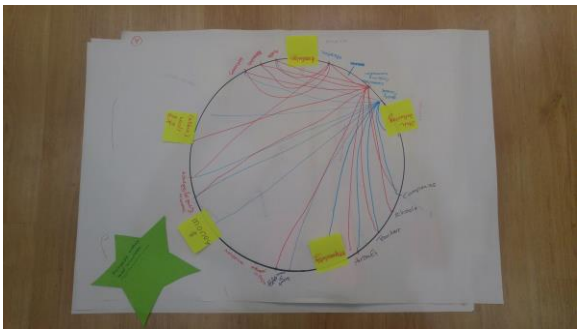
		2. Focusing on variables of the system 3. Examining the flows of e.g. information, material, etc.	
30 minutes	**BREAK**		
30 minutes	**Driving forces**	First, ask teams to get back to the vision of the healthy system that they started to develop during the first session. Give them some time to get clear on their shared vision. Afterwards, ask them to start to look at the driving forces within the system. Explain that for the sake of this exercise we differentiate between too types of forces: *Enablers* and *Inhibitors*. Ask: ***What are the forces that support transformation towards a healthier system and what are the forces that inhibit change?*** Team members brainstorm enablers and inhibitors on two different coloured post-its. Encourage them to write as many as they can.	Post-its in two different colors.
20 minutes		When you see that the teams have finished, ask them to cluster the post-its into themes.	Two big sheets/team with Enablers and Inhibitors written on them.
20 minutes	**Causes and effects**	Ask the teams to choose the most important clusters to continue to work with. For these 2-3 clusters or main themes they start to list various causes that lead to a certain system variable to manifest. Then they also list what kind of consequences it has for the overall functioning of the system.	Prepared sheets for causes and effects. See Appendix A, Workshop 2
15 minutes	**Next steps and homework"**	Discuss with participants the potential stakeholders that they identified as their homework from the previous session. Ask whether someone needs support in contacting the stakeholder and arranging a meeting for the 4th (or 7-8th) week of the course. (Depending on the circumstances, you can ask participants to arrange their own meetings or, schedule a session where you invite various local stakeholders to discuss the maps of participants.)	
10 minutes	**Check out**	Each person sums up the experience in two words. You can use the following guiding questions to ask about their experience: *1: How do you feel now? 2: What was the most important learning point from today? /What are you taking home?*	
30 minutes	***Optional: Networking time***	Based on our experience, if participants come from diverse places and background, a scheduled time for networking can greatly enhance their experience. Notify them in advance if you decide to offer this opportunity. (Offering healthy and environmentally friendly snacks for this	

		part can also help to create an even more inviting space.)	

Homework

After brainstorming and exploring the system, the teams will have discovered some areas that they feel they would need to know more information about. Ask them to identify what kind of information would be the most useful for deepening their understanding of the local system and to choose the relevant research methods to learn about them. Realistically, these methods should not be too time consuming so they would be able to carry out their research until the following session.

You also have the option here to ask participants to study some parts of the online course. Here we suggest the section of " 3.B".



Connected circles map example

Free Association mapping example

WORKSHOP 3 - VISUALIZATION & DEVELOPING THE STORY OF THE SYSTEM

3.5 - 4 hours

Based on the exploratory work of the previous weeks, you will guide participants in the process of creating a visual representation of the local food system that captures important actors, activities and the dynamics of various pressures and responses. Building on the previously identified elements and processes of the system, the aim is to identify and make the underlying dynamics of the system visible.

This map will constitute as the base of further exploration, and a tool for identifying potential leverage points for intervening in the system for increasing its overall health and sustainability.

Objectives of the session

- Learning about feedback loops
- Familiarizing themselves with online tools, such as "Kumu" for systems mapping
- Putting the parts of the exploration together and creating a complex system map
- Provide space for feedback and reflection
- Support participants in their preparation for the stakeholder visit

Outline of the workshop

Duration	***Activity***	***Brief description of activity***	***Materials needed***
10 minutes	***Systems thinking embodied***	Ask participants to share some concepts and abstract ideas about systems. Put them all up on a board/flipchart. Examples: interconnectedness, emergence, dynamic, flexibility, circular, shared responsibility, complexity, curiosity, etc. Then ask them to create statues or moving constellations as a group that represent one concept. (Can be repeated a couple times.	Prepared concepts written down
5 minutes	***Introduction to the session***	Briefly explain the framework and agenda for the day.	Agenda prepared on flipchart.
30 minutes	***Feedback Loops***	Ask the groups to trace back where they left off with their system analyses at the previous workshop, paying special attention to their main question. Then introduce them to the concept of feedback loops and how they can create vicious, virtuous cycles, as well as act as forces that drive a system towards stabilizing or stagnation. Here you can use the Videos about *Reinforcing loops* and *Balancing loops* that can be find in the online version	

		of the course. While they are working on their loops, walk around to see if any of them needs help in the process.	
00:30:00	***The relationships of loops***	Now ask teams to rearrange their developed loops, looking at how they might connect and intend to understand the underlying dynamics that drive their chosen system.	
30 minutes	***Putting it all together***	Bringing together the results of all their previous exploration, ask teams to create a visual representation of their chosen system (see reference to the stage of the process and example maps in Appendix A, Workshop 3). For this, they can decide to work on paper with pens and post-its, or to already start transferring their maps into an online format. For these maps, you can also show some examples, such as this one about a Rural Community Food System.	Large space, post its, tape, pens.
30 minutes	**BREAK**		
30 minutes	***Preparation for short presentation***	Tell the teams, that they will have 30 minutes more to work on their maps before presenting them to the whole group for feedback. You can also share with them, that they are not expected to be finished with their maps. This is an opportunity to share and iterate, to learn from each other.	
20 minutes	***Mini presentations and feedback***	Each group has two minutes to present their key insights and then 3 minutes to receive questions, as well as comments and feedback from the other teams.	Timer, cards to signal how much time they have left.
20 minutes	***Preparation for the study visit***	This is a space for discussion about the stakeholder meetings the following weeks. Present the guidelines for the stakeholder meetings (example slides for this can be found in Appendix A, Workshop 3). Share that the main aim of the stakeholder meeting is to iterate their systems maps and receive feedback from the relevant members of the system.	
10 minutes	***Check out***	Ask participant how they are feeling and if there is anything that they would like to focus on during the last session after iterating their maps with the stakeholders. Ask if anybody has further questions, feedback that concerns the whole group.	

Homework

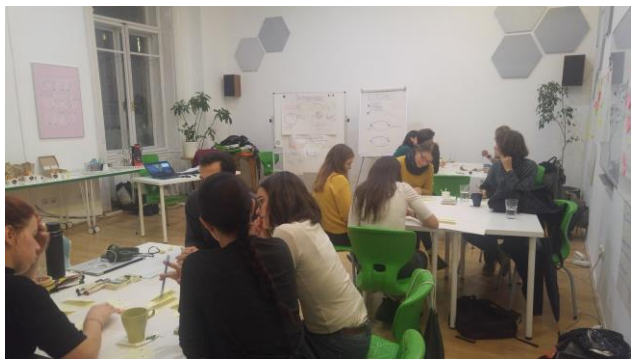
The main homework after this session will be to continue working on their maps and bring them into a format that they can present during the stakeholder visits.

You also have the option here to ask participants to study some parts of the online course. Here we suggest the section of " 4.B".

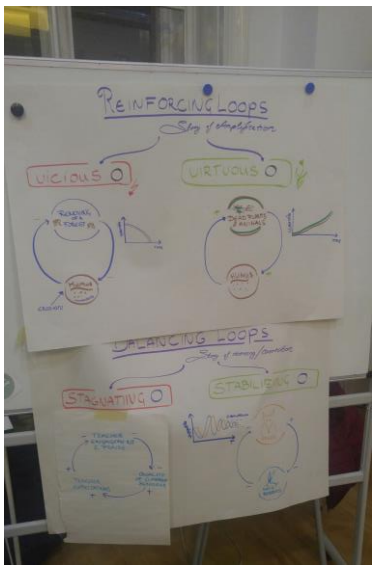
Initial concept map draft - example

"Giga-mapping" to support the co-creation process

Presentation



Teamwork



Feedback loops

WORKSHOP 4 - SPICING IT UP

2 - 3 hours

Based on the themes and challenges that the participants identify during the first workshop as the focus of their work and learning, they will need to organize a stakeholder meeting for the 4th week (or if you decide for the longer version: the 7th or 8th week) of the course. The aim of the meeting is to re-iterate their prepared systems maps and ask for the feedback of the relevant local food system actor.

For these meetings to go successfully, make it clear for participants during the first session that it is their task to find an interviewee. Keep close communication with them and remind them often that local actors are busy and need to be contacted in advance.

In addition, you can offer them your help in connecting with actors from your network. A great way to ensure that each team will find at least one relevant actor to talk with is to already connect with a diverse set of actors from the local food system and agree with them about their potential involvement in the course.

Besides sharing their experience and knowledge in the framework of individual meetings with participants, stakeholders can play a crucial role in the activity in the following ways: 1) You can invite them as guest lecturers during the facilitated sessions, 2) Ask them to become partners in organizing field trips and visits to their respective organizations, 3) They can also provide cases for participants to work on.

Homework

At this stage of the process there are several important tasks for participants:

- *Finalize the first version of their maps, derive the main story of their system and prepare for their stakeholder meeting(s);*
- *Meet their chosen stakeholder(s) and validate their maps*
- *Incorporate the feedback they received and prepare their map for the final session*

You also have the option here to ask participants to study some parts of the online course. Here we suggest the section of " 5.B".

"I have realized that I started to think differently in everyday situations. I do not jump to conclusions and rushed solutions immediately, the way I usually did before. I could say that my flexibility and adaptability in difficult situations increased."

/one of the participants after the first round of implementing the module/

Immersed in one of the ice-breaking exercises

Teamwork

WORKSHOP 5 - ACTIVATION & INTEGRATION

3.5 - 4 hours

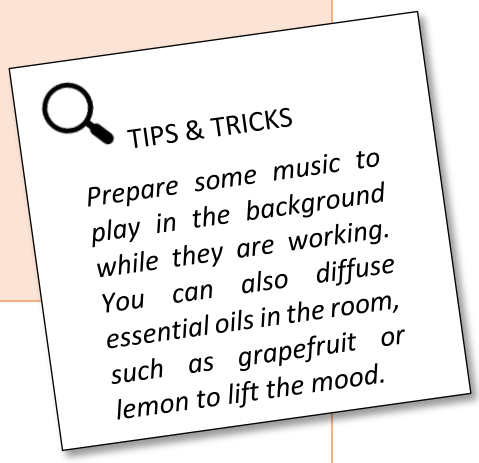
During the last facilitated session, you will help participants finalize their systems maps, reflect on their learning process and the next steps they want to take. Each team presents their narrative to the group and receives feedback and questions from other teams.

Objectives of the session

- Integration and bringing everything together
- updating the systems maps based on the stakeholder visit experience

Outline of the workshop

Duration	***Activity***	***Brief description of activity***	***Materials needed***
15 minutes	***Check in***	Opening Circle where each person shares how they are and what was the most significant learning point for them from the field visit.	
5 minutes	***Introduction***	Share the agenda for today's session	Agenda on flipchart
40 minutes	***Integration and updating the maps.***	The teams update their maps and integrate the new information that they have learned during their field visits, (and if applicable, from reading the "B" chapters of the online course). Ask them to focus on deriving the key insights from the process and develop the story or narrative of their system and prepare for the final presentation of their map. Make sure to check in with each team regularly and support them in their process. This time is available for them to go deeper into exercises that they felt they would have needed more time for and also transfer their map into KUMU if they had not done so before their stakeholder visit.	All materials that teams have created in the previous session.
40 minutes		Now that the team have a deeper understanding about how their chosen system works and what are the main dynamics that influence its operations, they can start to ideate about potential solutions. Ask teams to identify one delegate. This person will go to the next table to help the ideation process of that team. Make sure to explain that the main aim of this exercise is to gather inspiration and ideas about how they could help the chosen system towards a healthier state. In	



		other words, besides presenting their systems maps, the teams will also present some potential intervention points that they identified.	
30 minutes	***BREAK***		
52 minutes	***Presentation of maps and narratives***	Each team has 5 minutes to present and then 6 minutes for feedback and questions.	
20 minutes	***Closing circle***	Stand in a circle, take a bowl of yarn and throw it to one person. Ask how the course experience for them was and what they take with them. Then ask them to throw the ball to the next person, while holding on to the yarn. Go around this way until the ball gets back to you. Share your reflections, thank the group for their participation. If you feel like you can also reflect on how this web that the group created is connected to systems and system thinking.	Yarn
30 minutes	***Optional: Networking time***	Based on our experience, if participants come from diverse places and background, a scheduled time for networking can greatly enhance their experience. Notify them in advance if you decide to offer this opportunity. (Offering healthy and environmentally friendly snacks for this part can also help to create an even more inviting space.)	

APPENDIX A – ADDITIONAL MATERIALS

Workshop 1

1. **Introductory presentation slides**

Our learning journey

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EXPECTATIONS

When will I feel that it was worth for me to participate in this course?

CONTRIBUTION

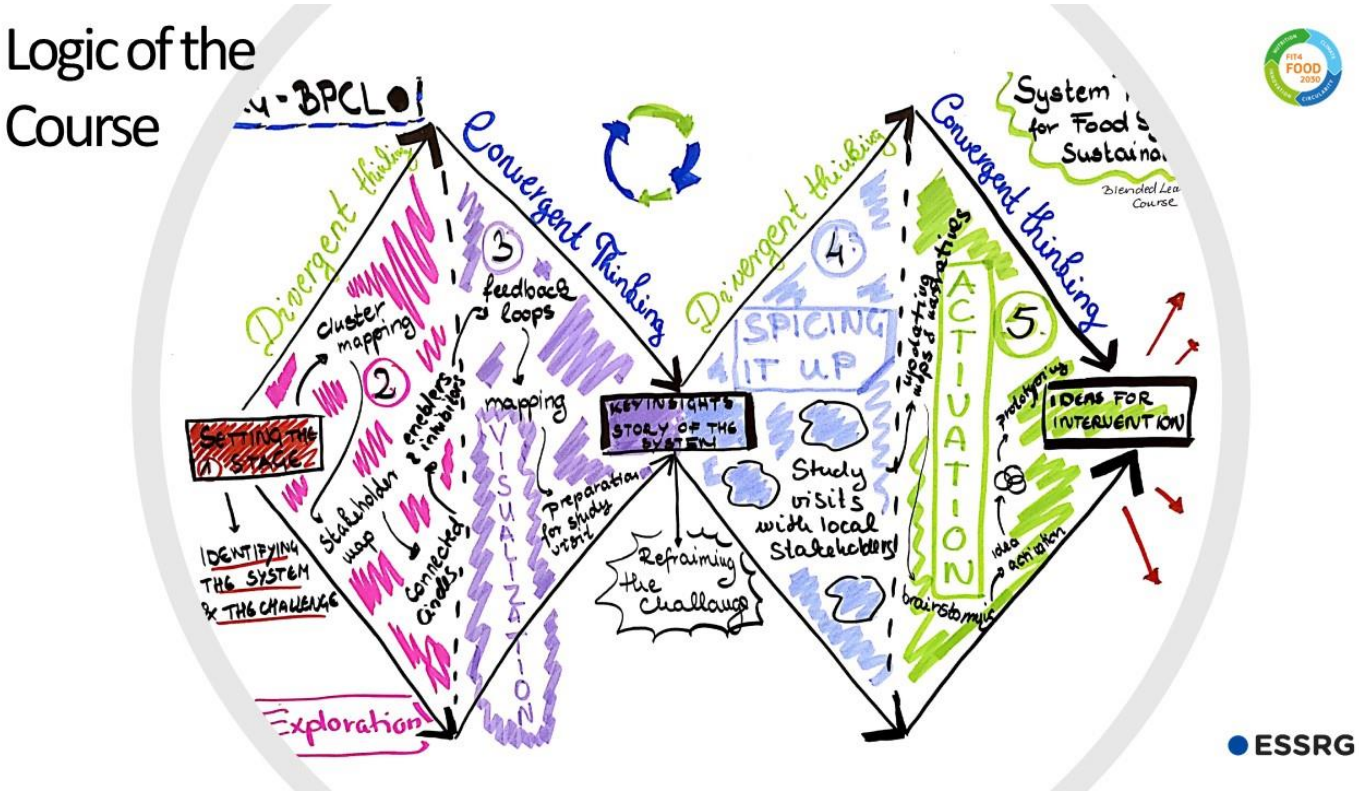
What am I willing to give/contribute in order for the course to be successful? What can you bring for your team?

LEARNING

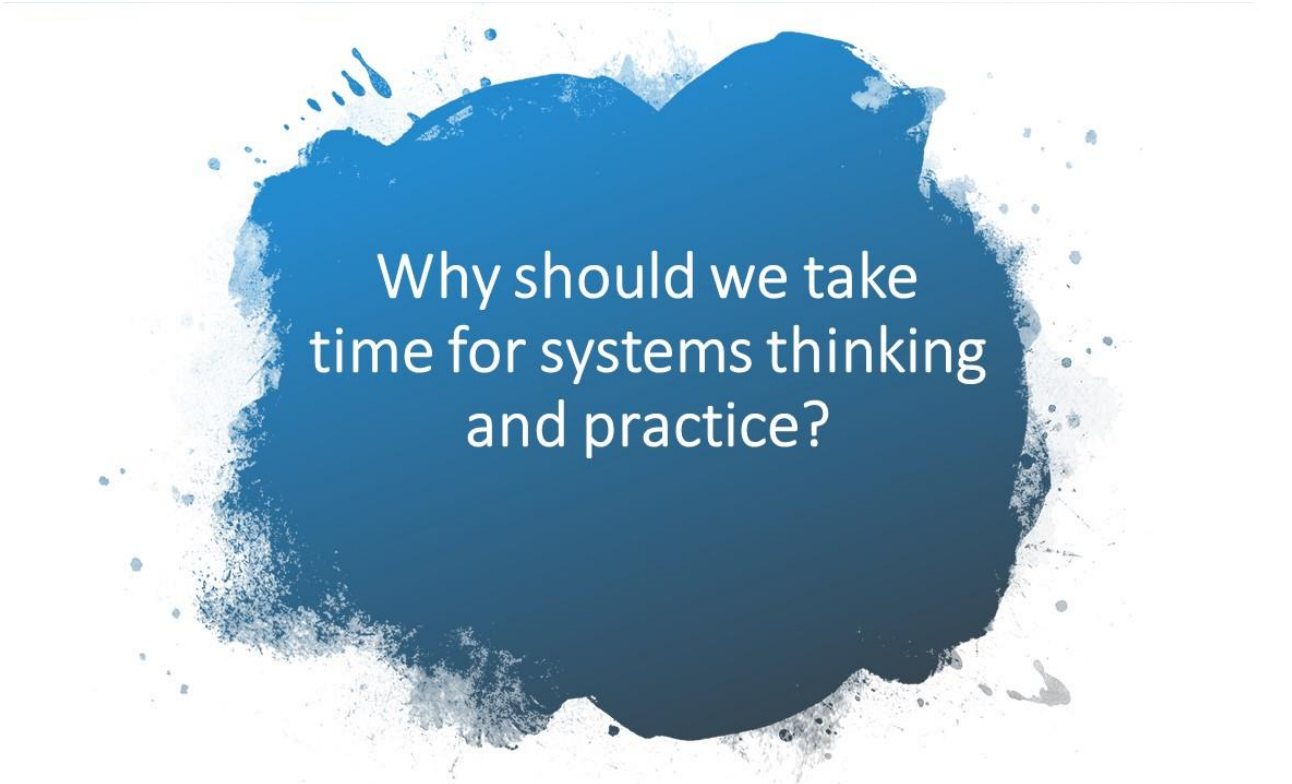
What will help me to learn and in bringing in my talents and gifts"? (What do you ask from others?)

ESSRG

2. Introduction to systems thinking and the food system

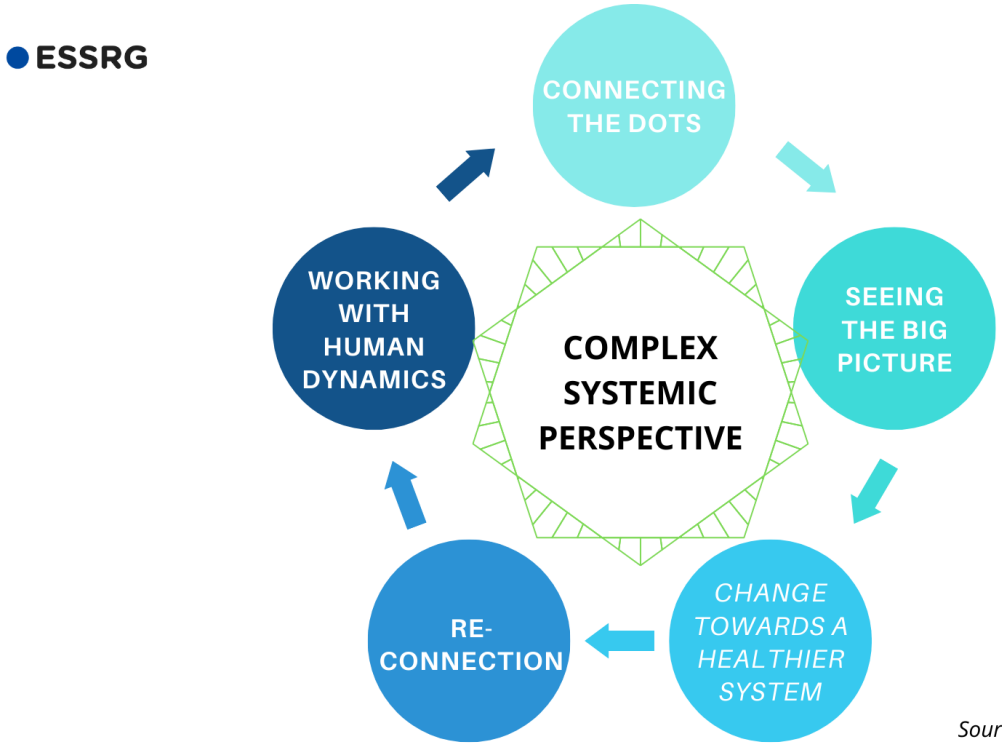


You can reassure participants by explaining that it is a natural part of the system exploration process to feel lost or unsure sometimes. To leverage the diverse perspectives that are simultaneously present and to engage with the complexity of the system, it can help to follow the Double Diamond approach of Design Thinking. Thismeans alternating between *divergent thinking* that fosters exploration and inclusion and *convergent thinking* that supports deriving insights and finding solutions. You can also explain that today's session is about practising divergent thinking.



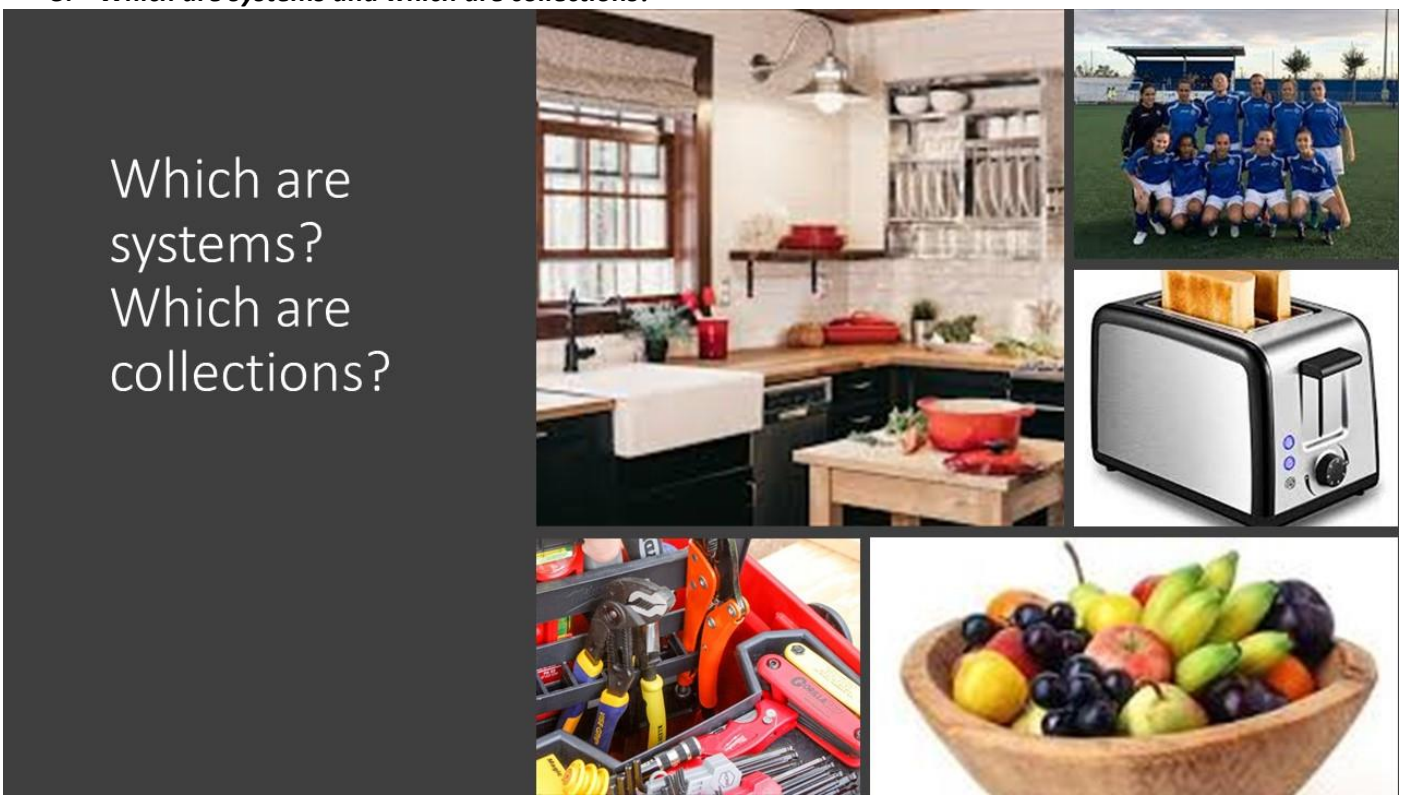
Examples of possible answers:

- Addressing complex and messy social, political, and environmental problems
- We can become better leaders
- Helps to unlock creativity – seeing problems as opportunities for change
- Taking responsibility while not wasting energy on casting the blame



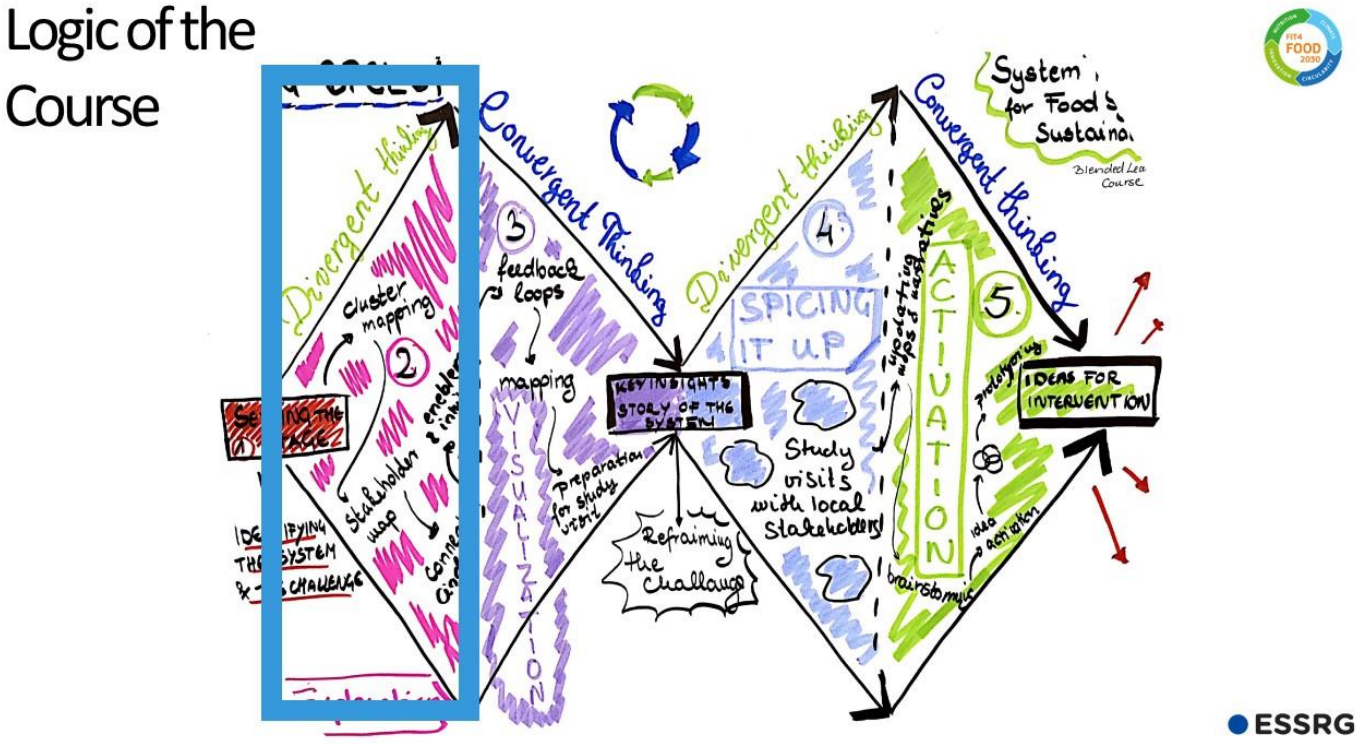
Source: Diana Szakál, own diagram.

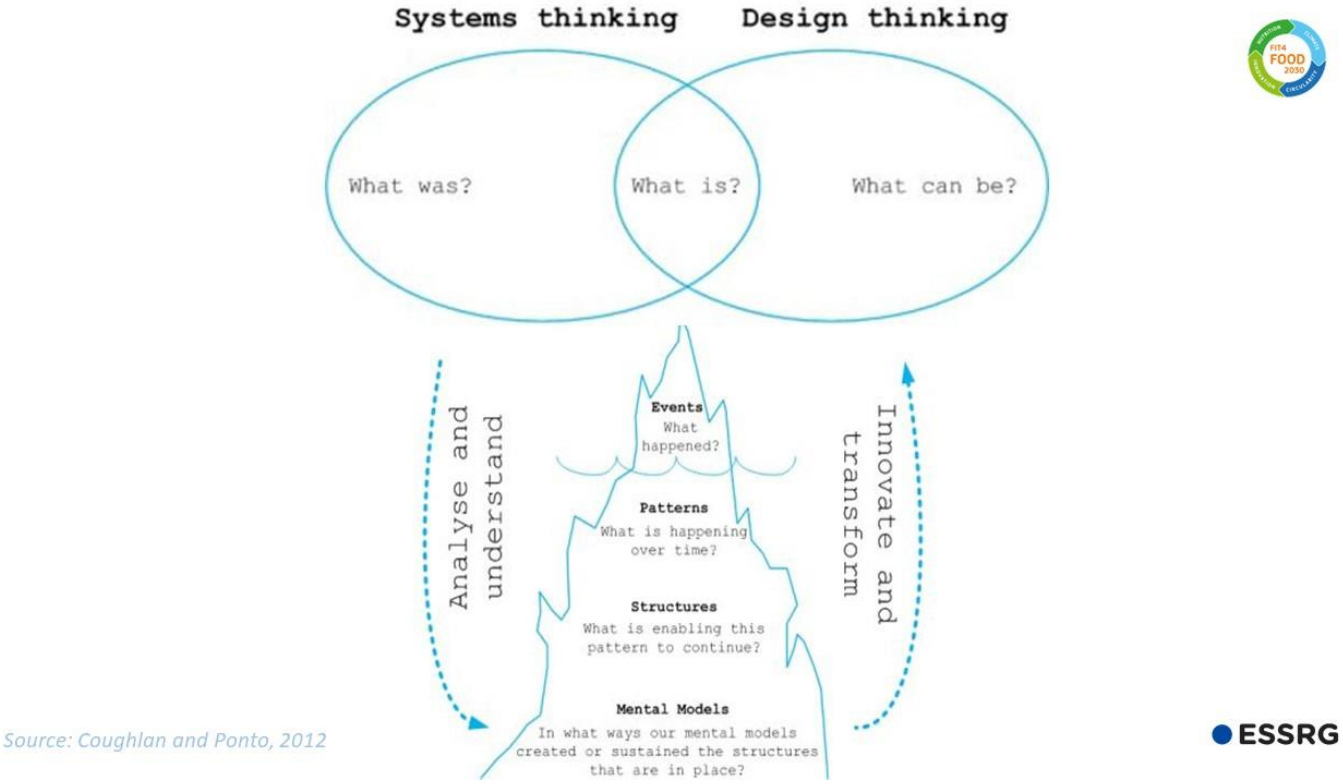
3. Which are systems and which are collections?



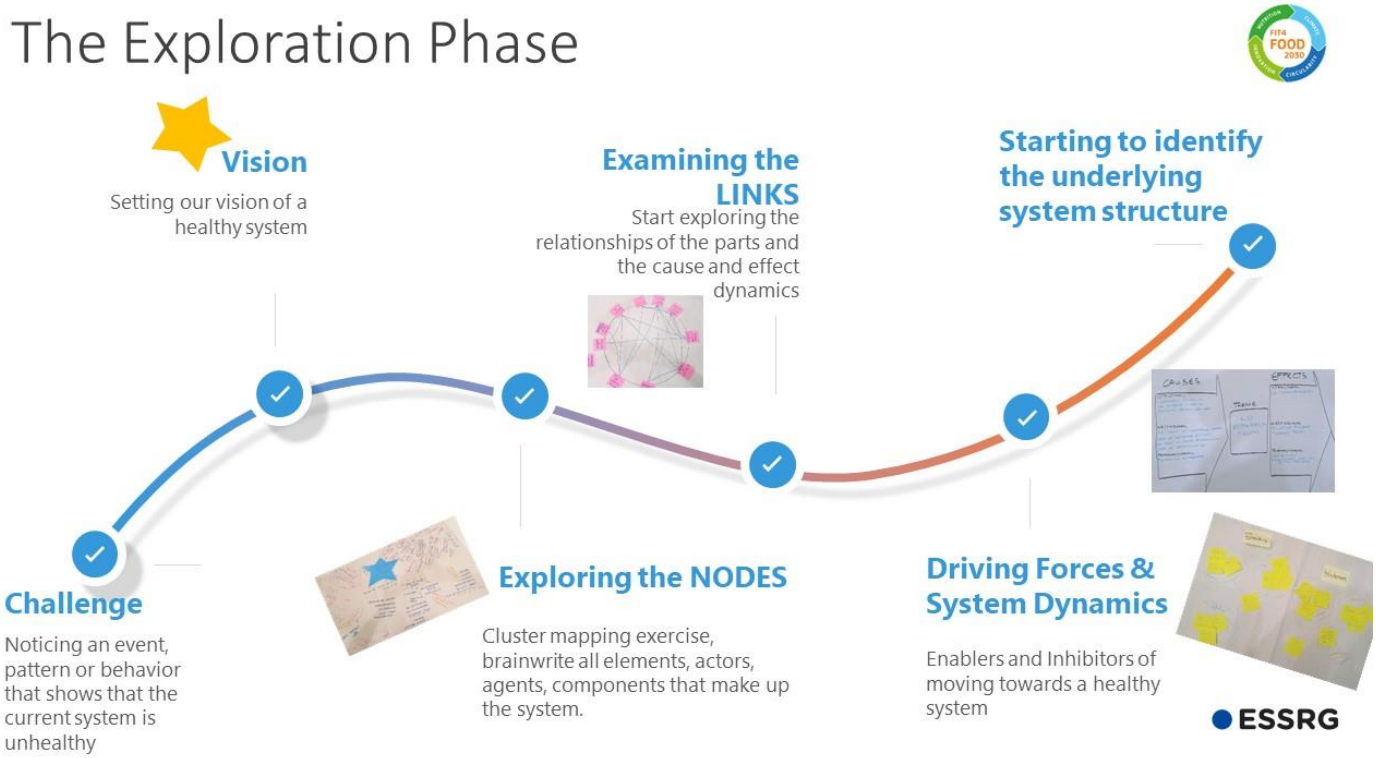
Workshop 2

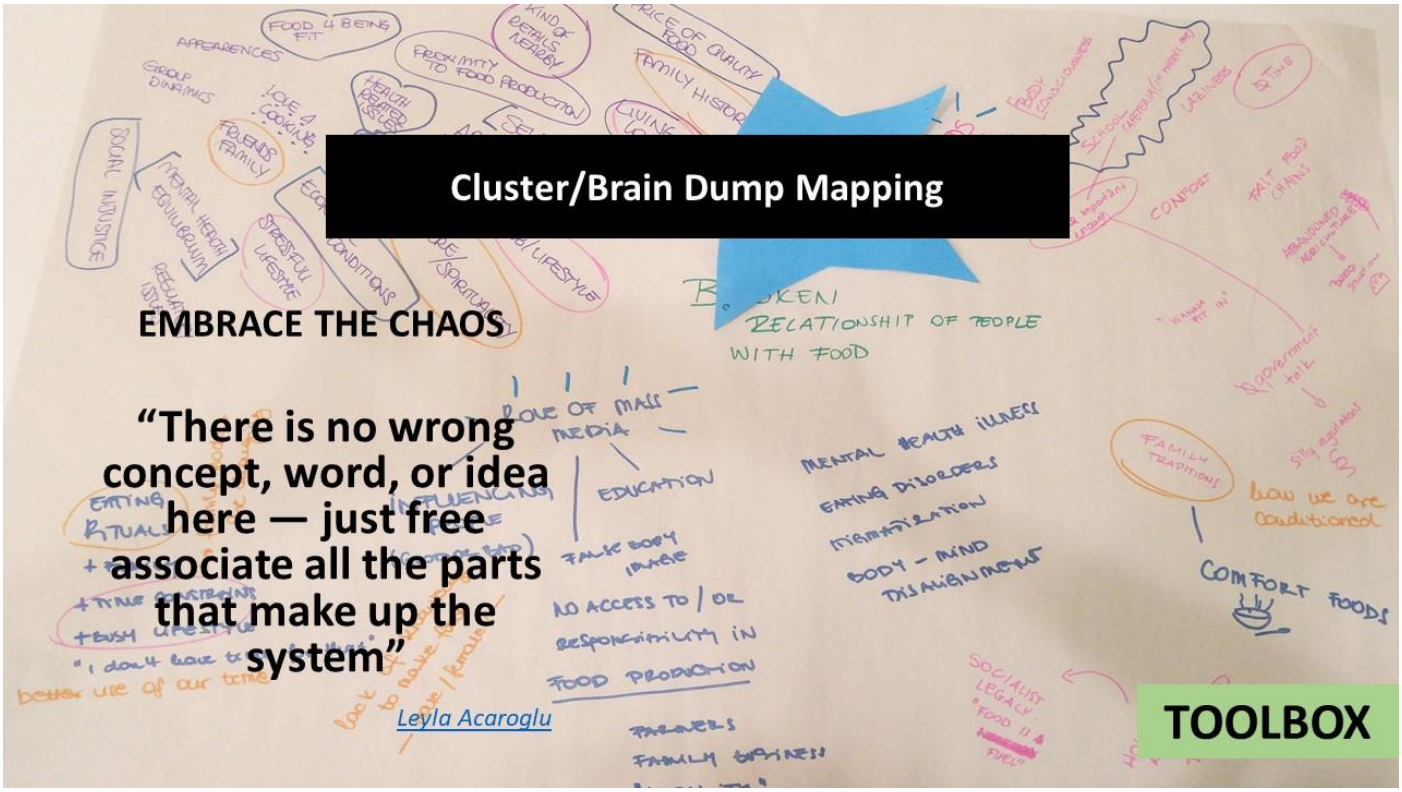
1. **Introductory presentation slides**

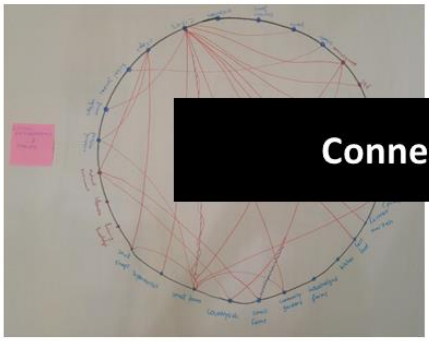




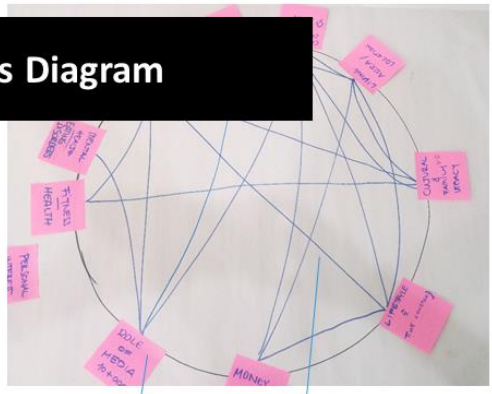
Coughlan, P., & Ponto, C. (2012). Systems Thinking + Design Thinking: Moving from What Was and What Is to What Could Be [Webinar]. USA

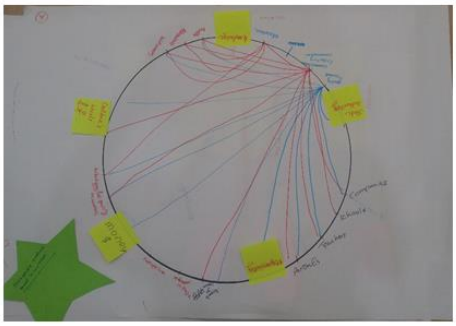






Connected Circles Diagram





NODES

LINKS

TOOLBOX

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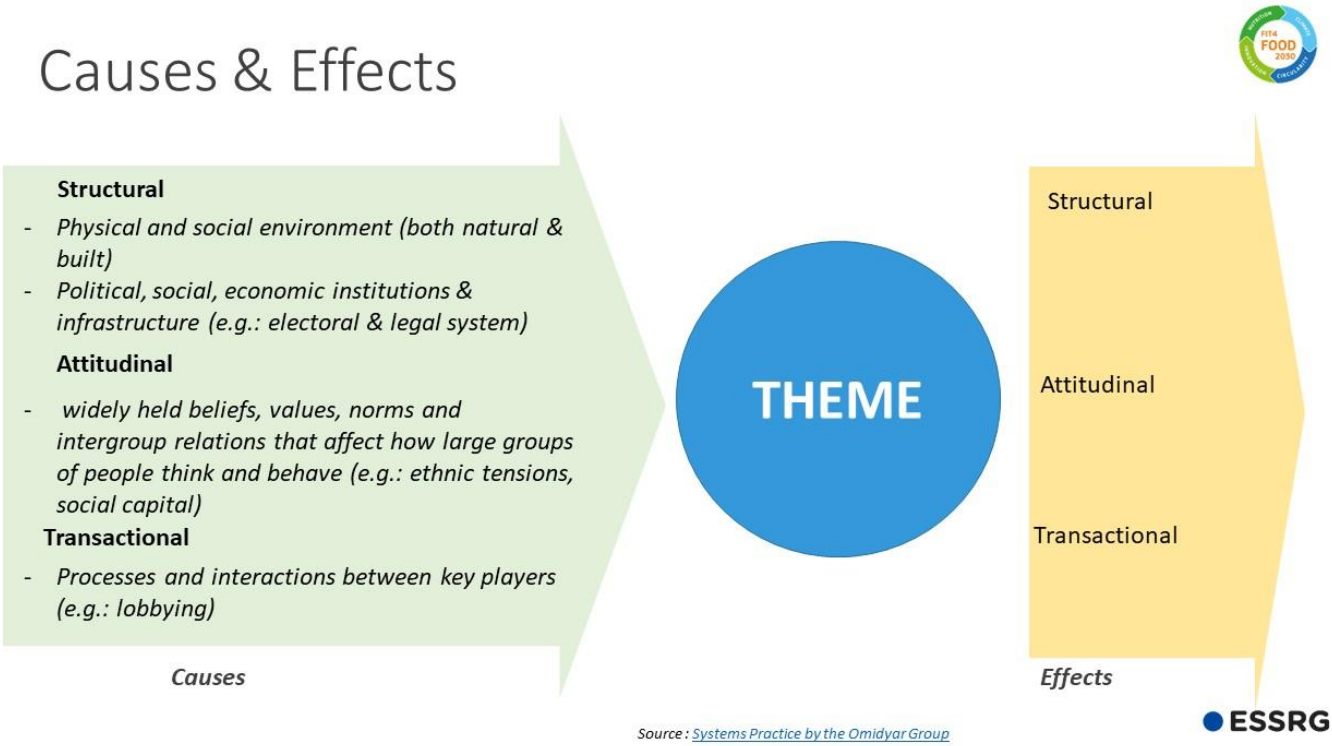
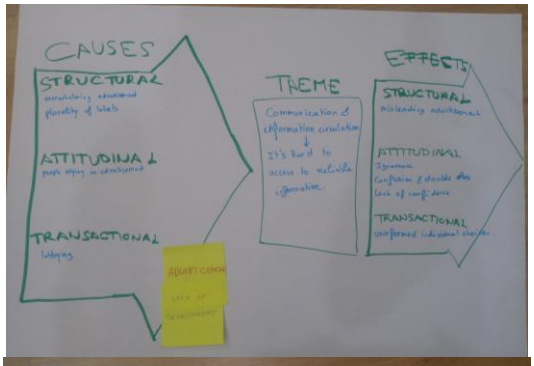
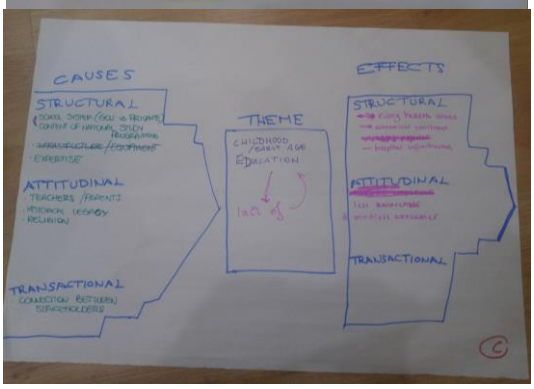
2. *Causes and effects diagram example*

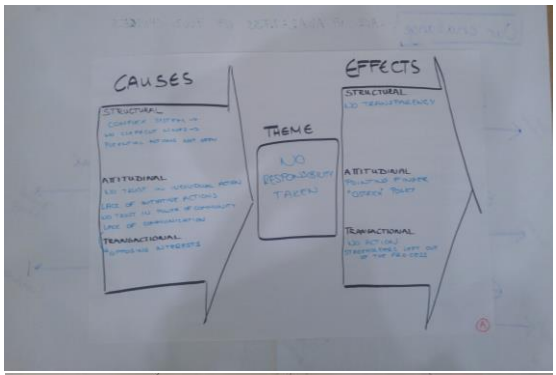


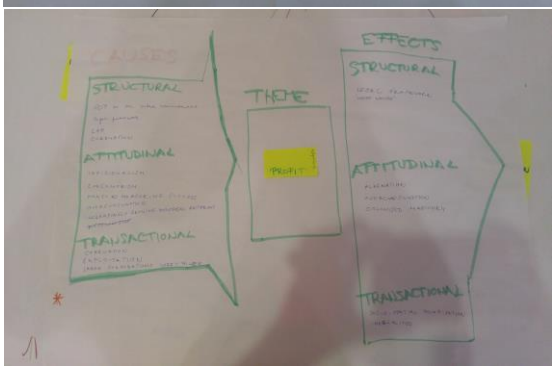
Source: Omidyar Group (2017). Systems Practice Workbook. Accessible at: https://oecd-opsi.org/toolkits/systems-practice-workbook/

Examples from the piloting of the course:



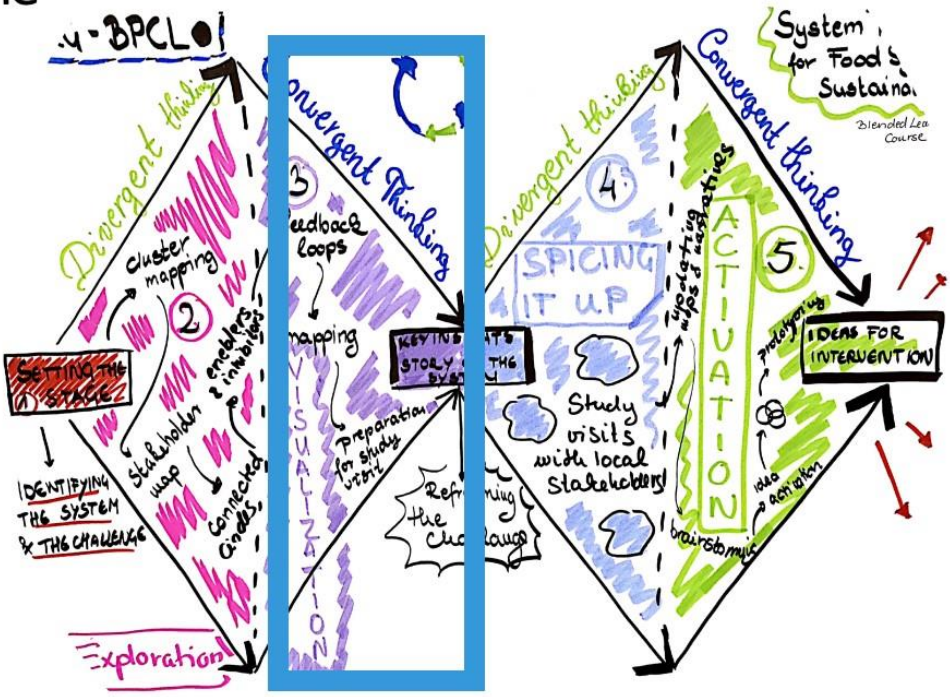






Workshop 3

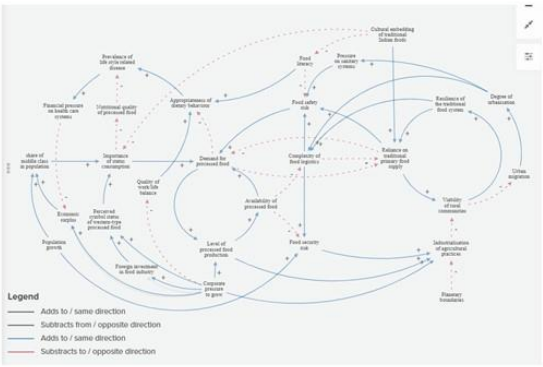
Logic of the Course



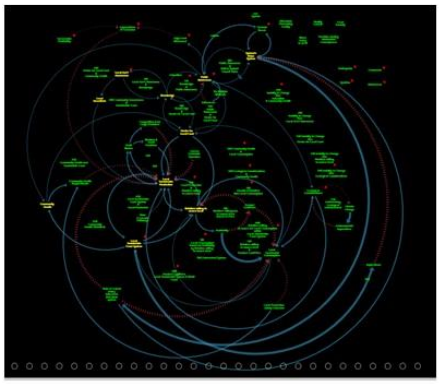
ESSRG

System Thinking Support - KUMU

India Food System



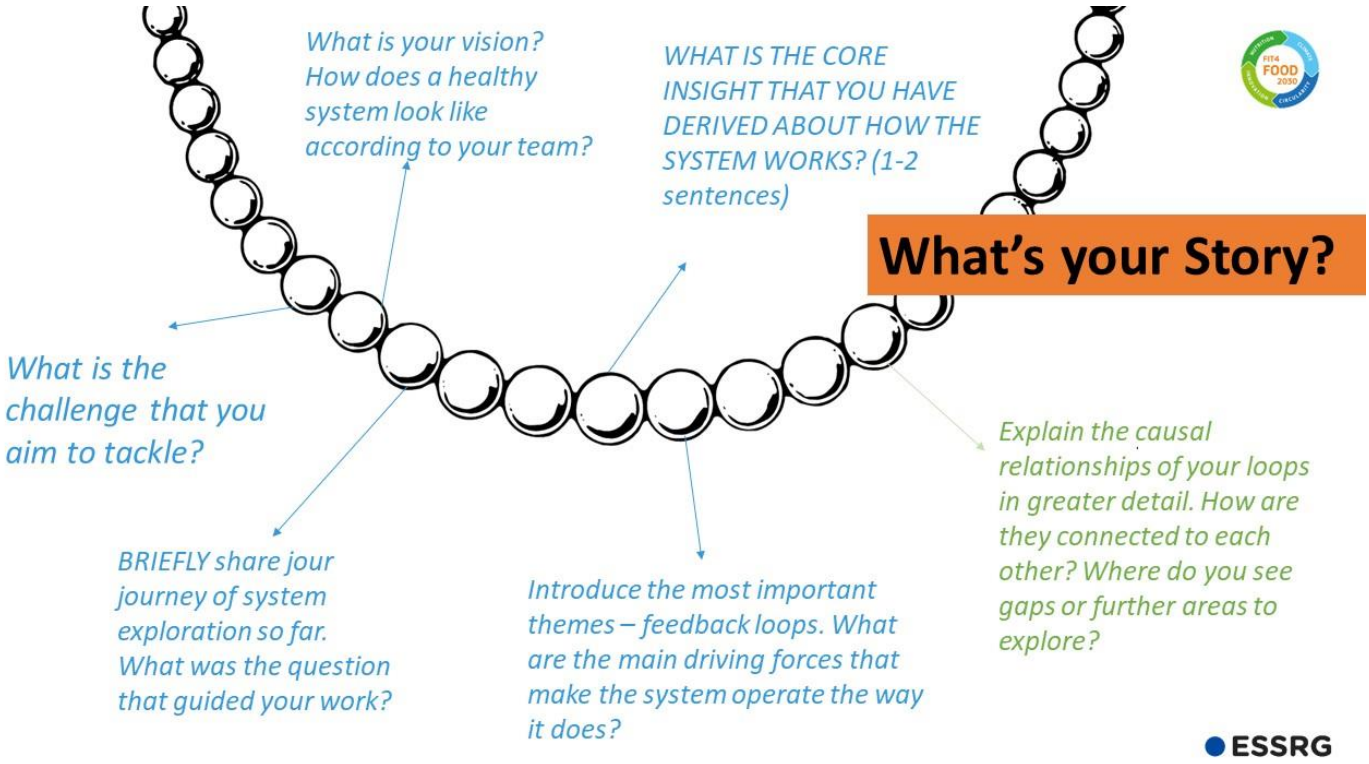
Rural Community Food System



TOOLBOX

ESSRG

1. **Preparation for the stakeholder meetings**



Stakeholder Meeting Preparation - Guidelines

PREPARATION	AT THE MEETING	AFTER THE MEETING
1) Clarify the aim of the meeting and the timeframe with your expert in advance 2) Prepare the following as a team : A) A refined version of your map that is easy to access and comment on B) The story of your system according to your current understanding C) The points or parts of the map that you feel uncertain about and definitely would like feedback on	1) Introduce the context of your map 2) Narrate the story of the system according to you (*see guidelines for Storytelling in a system context slide)* 3) Ask open questions and let your expert share and comment the map. Example questions: A)What resonates with you? B)What surprises you? C)What do you think is missing? 4) Make sure to capture her/his insights	1) Examine the feedback that you have received. 2) What new understandings and insights could you derive from the conversation? 3) What were the questions that generated the most valuable insights? 4) Adapt and update your map. 5) Bring the adapted map and any relevant materials that you have discovered to the last session.

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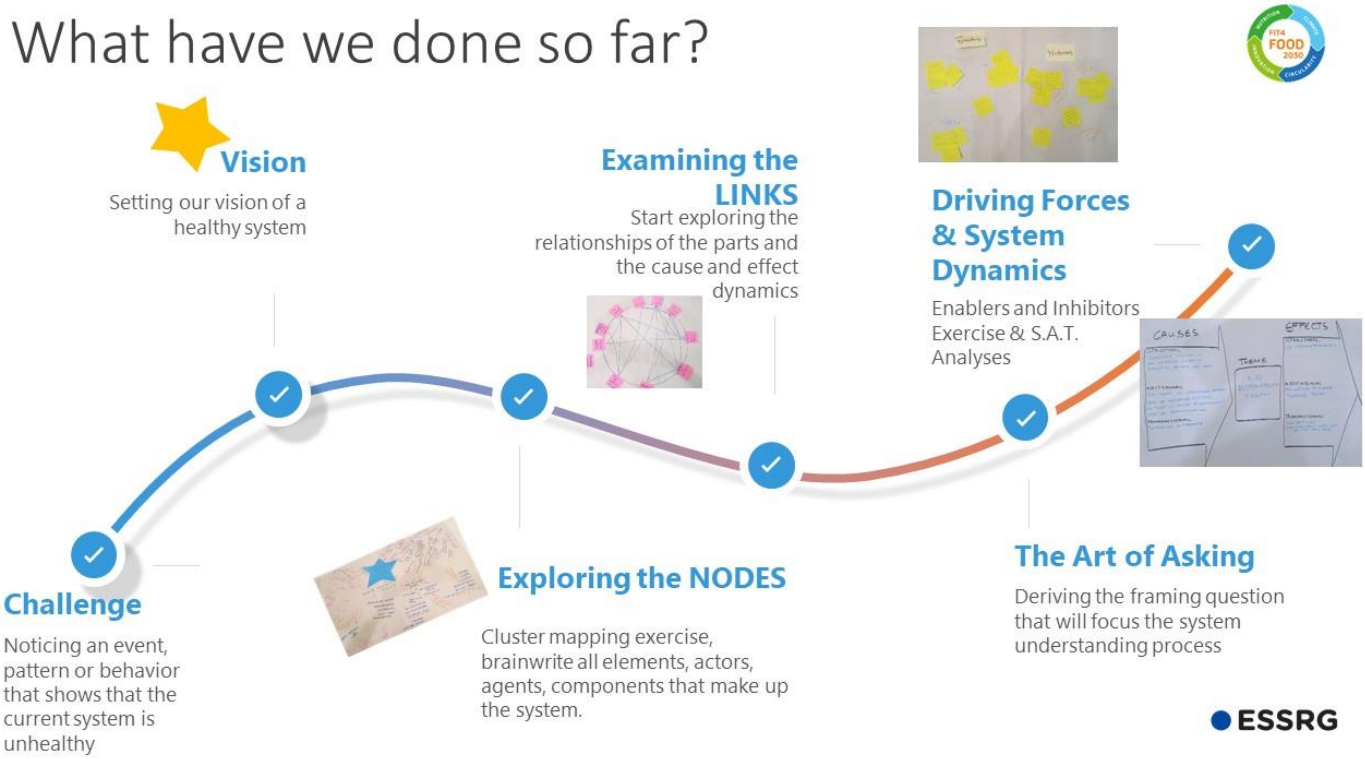
Workshop 5

1. **Looking back on the journey**



2. **Our food system as a complex, adaptive system:**
   - It is a system of subsystems.
   - It is characterized by non-linear system dynamics.
   - It is full of unpredictable, emergent properties.
   - The magnitude of the intervention does not necessarily correlate with the magnitude of the results/outcomes.
   - Complex interplay and interwovenness of system components.

- Cause and effect can be temporally and spatially distant. (“The system has a memory”1, present behaviour at one location of the system can have consequences on other locations, subsystems both in the present and in the future).
- The notion of tipping points.
- Systemic boundaries are unclear.
- Feedback loops are present in the system. (The concept of viscous and virtuous cycles).

[1] Hueston W & McLeod A. (2012)

APPENDIX B – GUIDED VISUALIZATION ABOUT OUR FUTURE FOOD SYSTEM

Please find a comfortable position to sit and a space where you will not be disturbed for the next 10 minutes. Please only do this exercise if you are safe to do so, definitely not when operating heavy machinery or driving.

Once you have found a comfortable position, please close your eyes. Notice how you are feeling in your body right now. What emotions, sensations can you notice? Do not get attached to them, simply allow them to be there. Now, start to focus on your breath. Feel the air enter your nostrils, then travels down to fill your lungs. Then follow it as it leaves your body…

Now imagine that you see a time machine in front of you. You go closer, open the door. You can see all the buttons. Now, imagine that you are travelling to a time in the future where our food system is healthy, sustainable and you are happy to be part of it. Turn the lever within the time machine to that future date. It can be 2030, 2050 or any date that feels right for you. You can hear the machine turn on and it makes all kinds of weird noises. After a little while it stops. You have arrived!

Stepping out of the time machine, turn on your senses. Look around, what do you see? It is a beautiful day. The food system is healthy and sustainable. You start walking around, run into some friendly people who invite you to have lunch with them.

Where do you go? What do you eat? How was your meal produced? Where does it come from? What kind of food is it? How does it look like? Who was connected to the production and distribution of your food? What role did you play? How do people eat? What happens with waste? Is there any? Walk around is this healthy and sustainable world. What kind of smells do you feel? Touch your surroundings. Notice anything that might strike your attention…

Slowly prepare to say goodbye. Express and feel your gratitude for having been able to experience this world and say thank you to the current generation for being able to take the necessary steps for creating it! Start walking back and step into the time machine. You push the right buttons and after a couple seconds you are back in the room where you started.

Pay attention to your body, how it touches the chair, floor where you are sitting and whenever you are ready, open your eyes!

APPENDIX C

Questions and facilitation guide for post-course feedback

- Has the way you think about the food system or its sub-systems changed and in what way?
- Has the way you see your role within the food system changed and in what way?
- How will you take your food systems practice forward?
- What is the biggest practical thing you will do differently as a result of this course?

Evaluation and Feedback Session
System Thinking for Food System Sustainability Course

INTRODUCTION - 5 min.

Facilitator introduces himself + intro to the session objective, timeframe, expected norms of behaviour
The main aim of the discussion is to receive honest feedback about both the online and the offline component of the ***System Thinking for Food System Sustainability Course****, focusing on what went well, what aspects they enjoyed, as well as, what could have been better/done differently in order to make the course even better for next time.*
Timeframe: *1.5 hours*
Guidelines to be shared with participants before the session: *there is no need to agree; listen to each other - one person talks at a time; it is going to be recorded (recording will be handled carefully, data gathered will be only used for the development of the course and stored in an anonymised format)*

GENERAL FEEDBACK - 25 min.

1. Please create a schematic drawing (e.g. timeline) about your learning experience over the past five weeks. Indicate the best parts/highlight, as well as, low points if you experienced any.
2. What are the three most important things that you have **learnt** by participating in the course? (First writing down, then sharing)

The OFFLINE Workshops - 30 min.

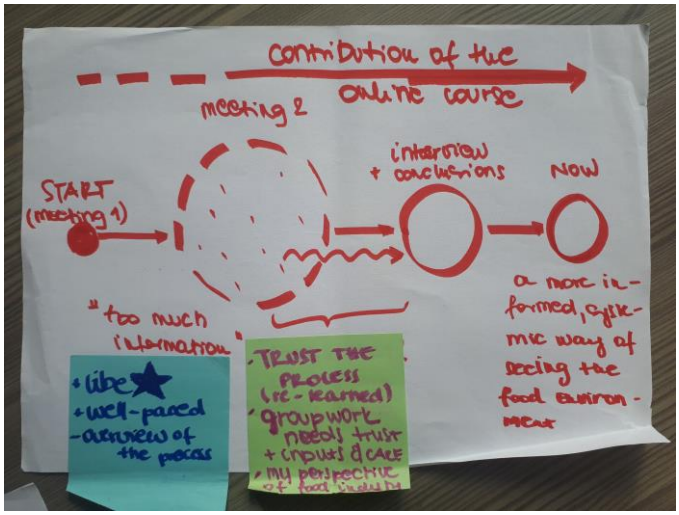
1. Please tell about your experience regarding the **facilitation** of the sessions.
    - Was the facilitator able to effectively support you on your learning journey?
    - What could she have done differently?
    - How easy was to understand, follow directions?
2. Did you find the **structure and the methodology** used conducive to your learning?

The ONLINE Component - 20 min

1. **What would you have needed to increase your engagement in the platform?**
2. ***Please share any bugs/difficulties that you might have encountered when using the system.***

Closing - 10 min

1. **What could have made the course (both online and offline components considered) even better**?



Examples of participants drawings about their experience

Coordinated by:

VU VRIJE UNIVERSITEIT AMSTERDAM

Partners

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