Domain Mapping Exercise #1 – Facilitator's Guide

OBJECTIVE: TO CLARIFY WHAT IS IN (AND WHAT IS OUT OF) THE SCOPE OF A FORESIGHT STUDY.

This is the first exercise of two for developing a domain map, a simple representation of a system. It helps participants develop a shared mental model of their subject and delineate the boundaries of their study. In this activity, several groups generate domain maps to be compared and used to develop a final domain map. The exercise could also be delivered as a large group exercise (resulting in a single map), or in a small group as an individual exercise, with participants each developing their own maps for comparison.

People:
1 facilitator
4–25 participants
(divided into groups of 4–7)
1 assistant (optional)

Materials:
- Whiteboard, smartboard or flipchart for each group
- Suitable markers for each group
- Projector/computer (optional)
- Sticky notes for each group, in various colours

Post on the wall:
- 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 large whiteboard (or several flipcharts). Seating for all, conducive to both hearing other participants and seeing the whiteboard. Use breakout rooms for group work if available.

Agenda at a Glance

| TIME	ACTIVITY
5 minutes	1. General meeting introductions (if needed)
50 minutes	2. Give context for the domain map exercise (3 minutes) 3. Provide activity instructions (2 minutes) 4. Activity: create domain maps (30 minutes) 5. Review participants' domain maps (10 minutes) 6. Summarize points of domain maps (5 minutes)
10 minutes	7. Reflect on and/or evaluate the exercise (10 minutes)
EST. TOTAL TIME: 65 minutes	

BEFORE THE MEETING: WHAT KIND OF DOMAIN MAP PROCESS DO YOU NEED?

In this exercise, participants draw their mental models, as individuals or as groups, to generate several different domain maps for comparison. The domain maps focus on major elements of the subject under study, only including minor elements where necessary. The facilitator should decide in advance if a final domain map will be drawn based on the individual maps, who will draw it and how will it be agreed on. Do all participants need to be included in the decision, or can some project leaders develop the group map on their behalf?

This domain map exercise is a good choice when the domain topic is relatively simple for participants to define. Perhaps it is a topic that has been well-defined by others, or the study participants can draw on a working concept based on past discussion. For instance, when Horizons explored the domain of biotechnology and genomics, it was relatively straightforward to define by existing disciplines of study. In such cases, a useful starting point may be to scan for popular/expert definitions of the domain and represent them in the form of a mind map. Sometimes, there may be an existing domain map (Example A). Another approach is to draw a domain map from a facilitated conversation with experts (Example B). When several domain maps of a subject are compared, it may be clear that they are similar in structure, barring some additions and omissions (Example C). Taking these maps as inspiration, the group can then consider: what are the relevant domain elements for this study (Example D)?

If project participants are unlikely to share a similar understanding of the domain and/or it is a challenging topic to scope (broad and complex, few to no existing definitions or maps in existence), domain exercise #2 is a better method to establish the domain.
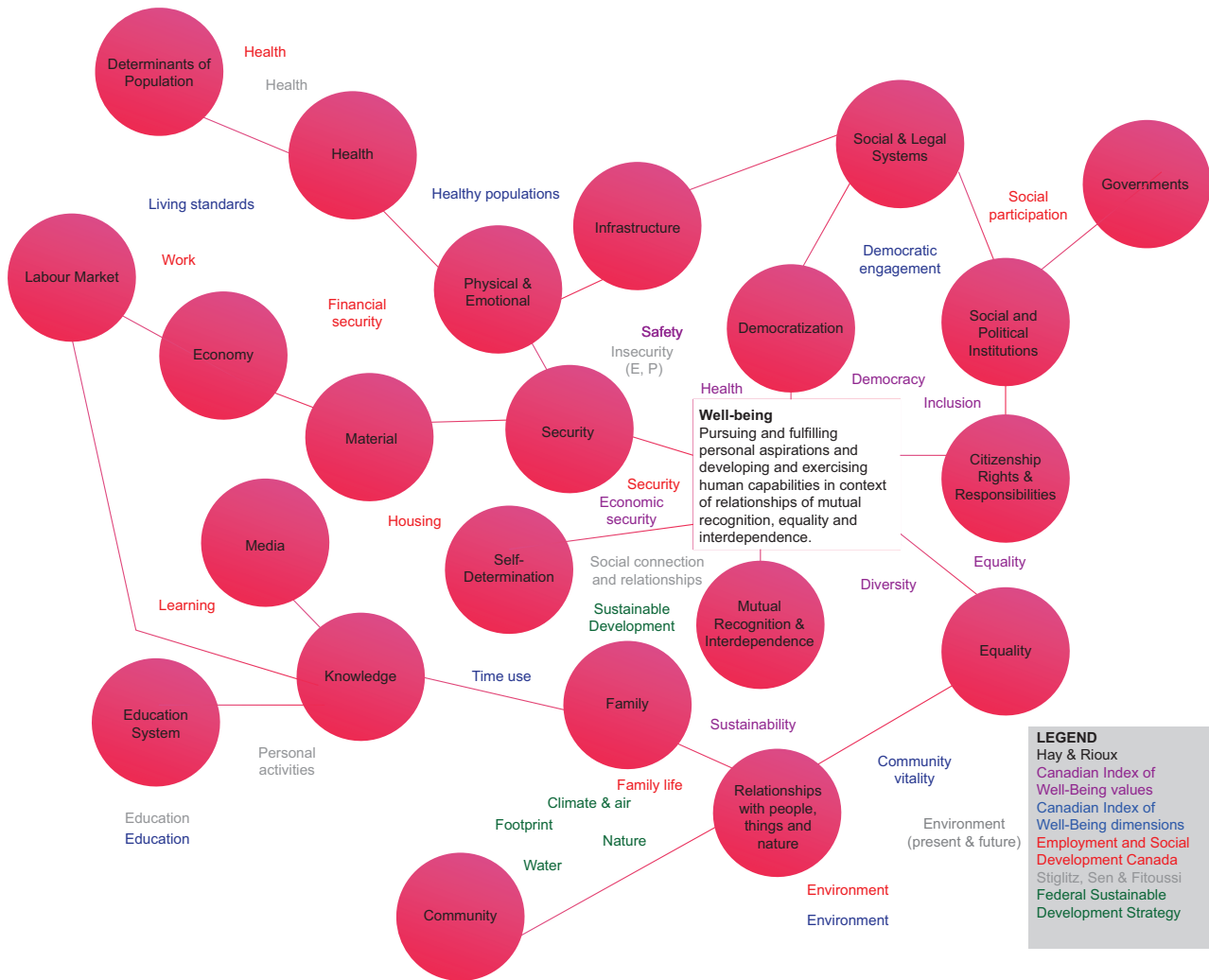
Example A: In defining the domain for Horizons' study on wellbeing indicators, the domain map below from the department of Employment and Social Development Canada was one of several maps studied for comparison.
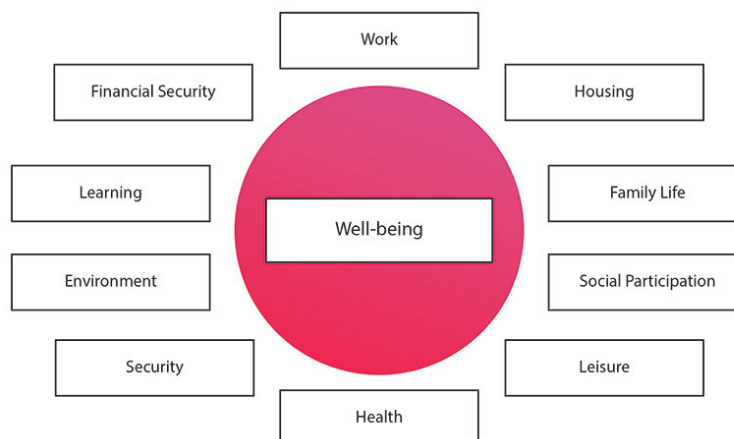
Example B: Drawing a domain map on the subject of biotechnology and genomics with a group of experts.
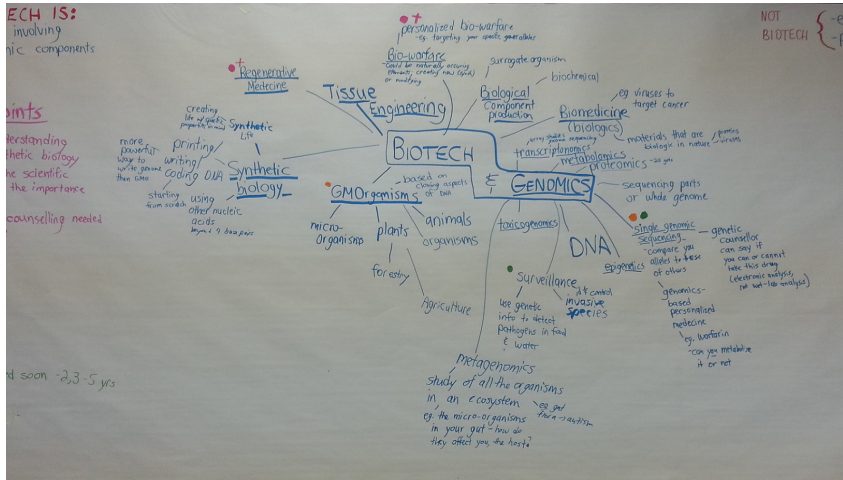
Example C: For the same well-being study, Horizons compared six different definitions to understand the domain.

Well-being
Pursuing and fulfilling personal aspirations and developing and exercising human capabilities in context of relationships of mutual recognition, equality and interdependence.

LEGEND
Hay & Rioux
Canadian Index of Well-Being values
Canadian Index of Well-Being dimensions
Employment and Social Development Canada
Stiglitz, Sen & Fitoussi
Federal Sustainable Development Strategy

Example D: Simple domain map of biotechnology and genomics, adopted by Horizons as a study framework after consulting various sources and mapping the domain with experts.
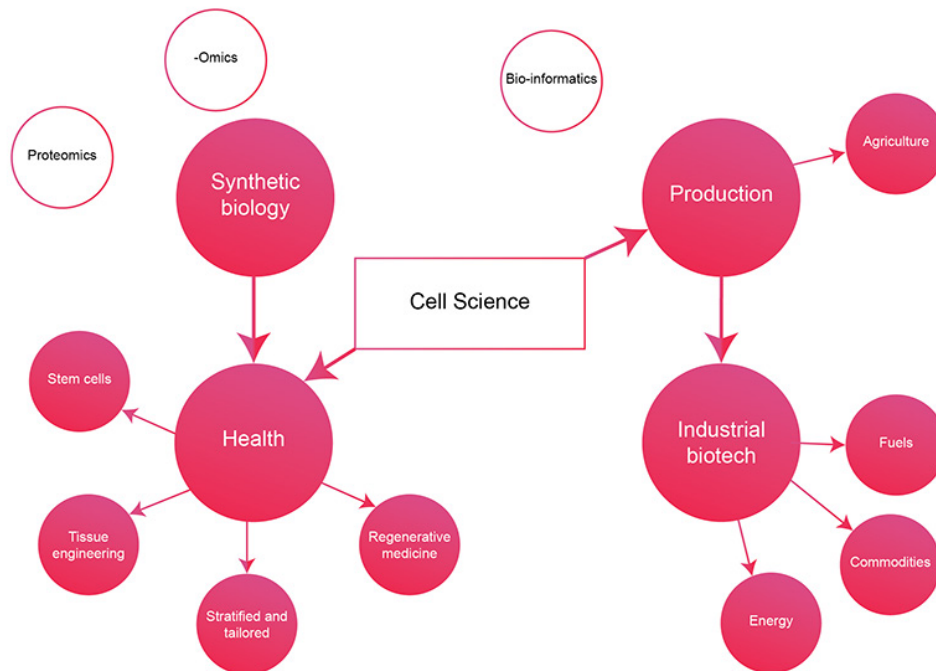
Build your own domain map

It is a good idea for the facilitator to have prepared a preliminary domain map on the chosen topic before the workshop, for their "back pocket." This helps the facilitator to anticipate what topics are likely to arise and what challenges participants may encounter.

Prepare the room for the activity

- Each participant will need a chair, writing surface and a clear sightline to the wall/white board/flipchart where the domain maps will be created. If possible, allow breakout groups to go into separate rooms so they can talk without distraction.
- If the breakout groups will be self-facilitating, be prepared to assign a domain mapping recorder for each team to guide the activity. It is helpful to have one participant per team function as the discussion leader and recorder while the rest brainstorm. If the team is large enough, a second participant can be assigned to be the recorder.
- A lead facilitator and an assistant can circulate among the groups to provide support.
- Post in the room any visual aids that will be referred to during the meeting.

ANNOTATED AGENDA

TIME	ACTIVITY	NOTES

5 minutes	**1. General meeting introductions (if needed)**
	• 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:
	   ° build rapport through an [ice-breaker activity](#)
	   ° review or develop a list of ground rules on the wall
		• 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.

3 minutes	**2. Give context for the domain map exercise**
	• Why and when we use domain maps:
	   ° Very useful in building a common mental model of the domain.
	   ° Helpful for framing and focusing a foresight exercise (what's in, what's out).
	   ° Best used early in the process as it sets the stage for subsequent work (knowing where to scan, ensuring coverage of certain topics, etc.).
	   ° Useful first step before developing a more complex system map where we explore the relationships between elements.
	   ° Knowing the key elements of the domain is also necessary for developing scenarios later.	

	• Consider providing an example of this type of domain map (on a different topic):
	  ° E.g. In understanding the domain of genomics and biotechnology (Example D), Horizons identified that there are major elements such as:
	    - Various "-omics" fields: genomics, proteomics, epigenomics
	    - Stem cells research
	    - Tailored medicine
	    - Synthetic biology
	    - Regenerative medicine and tissue engineering
	  ° And developments in these fields have applications in health, agriculture and industry (fuels, commodities, energy).	

2 minutes	**3. Provide activity instructions** • Divide the group up, each with a flip chart, a pack of sticky notes, and a few markers to take to their work stations. • Assign a facilitator to each group or allow groups to self-facilitate.	• Consider in advance whether facilitators will draw domain maps on behalf of the group or whether the exercise will be self-facilitated. • For a small group, individuals could work alone to draw individual maps.

30 minutes	**4. Activity: create domain maps**
	• The key questions to ask when developing a domain map are:
	  ° What topics and issues does this domain include?
	  ° How are these elements related?
	• Final step: Label the maps with the domain subject, so they are clear to others.
	
	Suggestions:
	• It may be necessary to remind participants to stay at a strategic level, at least initially.
	• Participants do not need to initially agree on an element. A goal is to reach agreement at some point, since an important function of creating a domain map is agreeing on what's in/what's out of the domain.
		Self-facilitating options:
		
		1) Consider having the group nominate a leader to facilitate and record the domain map elements as they are discussed.
		
		2) For small groups/teams, it can be more engaging if everyone has a marker and can work on the map together.

10 minutes	**5. Review participants' domain maps** • If using breakout rooms, bring participants back to the large common room with their maps. • Ask for a representative from each group to share from their domain map (allow approximately 2 minutes per group). **Alternative:** If maps will not be reviewed again by participants, allow them some time during this meeting to walk around the room to see how other groups have described their systems. This option might require an additional 5 minutes, depending on the number of maps.	

15 minute	**6. Summarize the main elements of the domain maps**	• If time allows, consider using option A (detailed below).
	• Compare and contrast the various maps	
	• Highlight the iterative nature of this exercise—maps tend to get better over time:	
	° The involvement of subject matter experts can be helpful in refining the map.	
	° More elements can be added as understanding changes.	
	° Consensus on what is involved in the domain may evolve.	
	• Consider addressing the question of what's in/what's out of the domain.	
	° In later stages of the foresight study, it may be necessary to pare the domain map down to 5-10 elements. If it isn't difficult you may want to do this with the group in this exercise.	
	• If the map will be revisited by project leaders or the full set of participants, indicate how and when.	
	• Explain how this exercise connects to the foresight project:	
	° This domain exercise can help us decide where or what to scan for.	
	° Knowing the key elements of the domain is also necessary for developing scenarios in later stages of the foresight study.	

10 minutes	7. **Reflect on and/or evaluate the exercise**
	
	 • Give participants an opportunity to provide feedback on the exercise.
	 • This might take the form of:
	 ° Q&A discussion
	 ° Participant completion of an evaluation form
	 ° Informal evaluation—On their way out the room, participants are asked to post one comment on a sticky note for each of three wall headings:
	    - What Worked?
	    - What Could Be Better?
		• Provide evaluation forms or sticky notes as appropriate.

Add-ons/Modifications to the domain map exercise

OPTION A: After developing the map, get an early sense of the most important elements

After generating the individual/group domain maps, it is often helpful to evaluate which elements are the most critical to consider when describing plausible futures of the system. This provides an idea of where participants should focus their attention, for example when scanning. At a later stage in the process, the facilitation team will need to decide which elements (tip sheet) will be used for scenario development. This optional activity does not answer that question, but it generates early insight that may inform it.

A short voting activity could be added at the end of the group mapping activity. In that case, give each participant 3–5 votes (they can use a marker or dot stickers) to distribute among the elements on the map as they wish. To determine importance, the questions to consider are:

• Which elements do participants expect to change the most?
• Which elements would be most disruptive for policy, should they change significantly?

After voting, the facilitator can briefly highlight a few of the most popular elements and remind participants that these are good topics to monitor when looking for signs of disruptive change affecting the system. Participants also may want to divide up responsibility for scanning by element.

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 domain map exercise.

Before the exercise:

- Deliver the Systems Mapping presentation.

After the exercise:

- To emphasize the domain mapping exercise as a learning experience, consider sharing and discussing the facilitator's "back pocket" domain map. (You may need a projector, internet access, etc. arranged ahead to display your map). How did you:
  - ° create the map (Google Docs, Post-its, Insightmaker, Visio, Simplemind, Mind42, etc.);
  - ° choose the elements;
  - ° etc.
- Develop a polished version of the domain map. Print a large format, colour copy of the map. It is useful to be able to refer back to the map in subsequent sessions. Refer to the tip sheet on how to select elements for a final domain map.
- Deliver the system mapping exercise (module 4).
- Deliver the assumptions exercise (module 2).