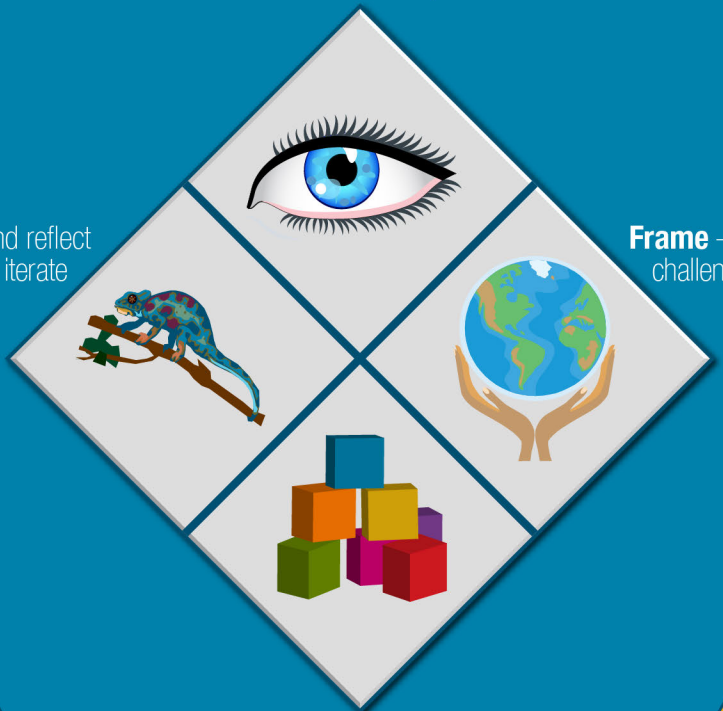
Methods

Methods are intended to guide collaborative work during four phases of a systemic design and/or foresight project

Look – Scan the environment and organization for information and experience

Adapt – Evaluate and reflect on action to learn and iterate



Frame – Build a shared map of challenges and actions

Generate – Create and enact prototypes to improve the situation

Systemic Design Methods

Systemic design methods are intended to guide collaborative work during four phases of a systemic design project

Look – Scan the environment and organization for information and experience

Frame – Build a shared map of challenges and actions

Generate – Create and enact prototypes to improve the situation

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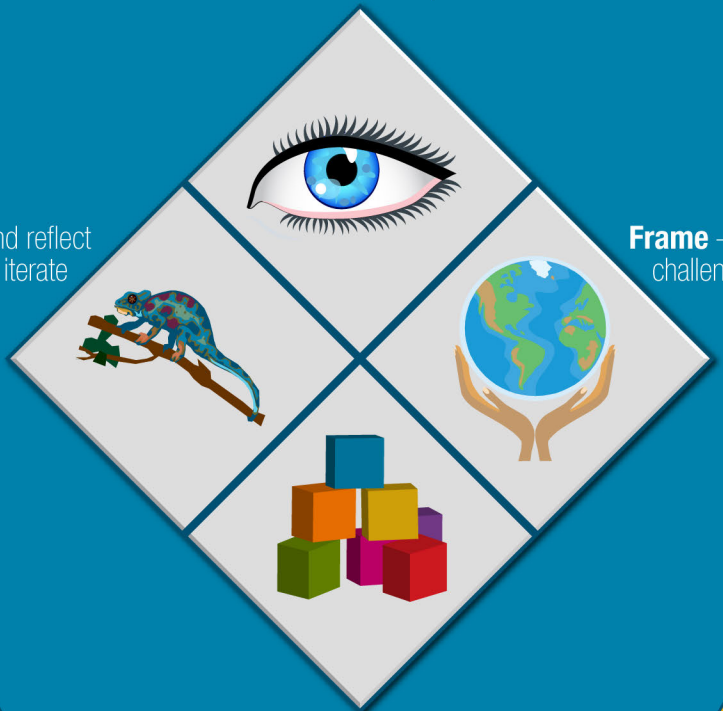
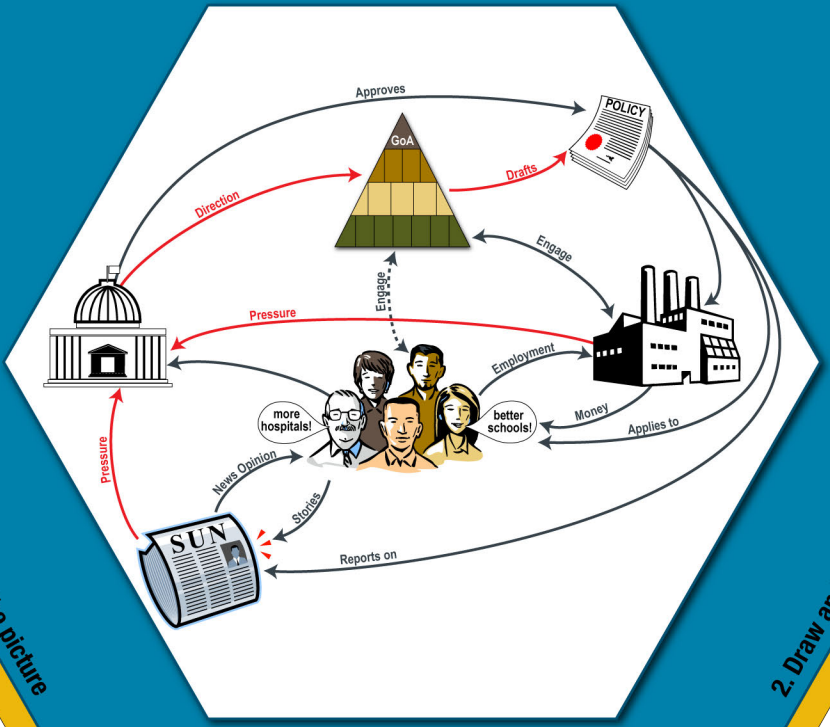


Rich Picture

1 Hour | 1 - 10 People | Frame



1. Sketch actors and elements

2. Draw and label relationships

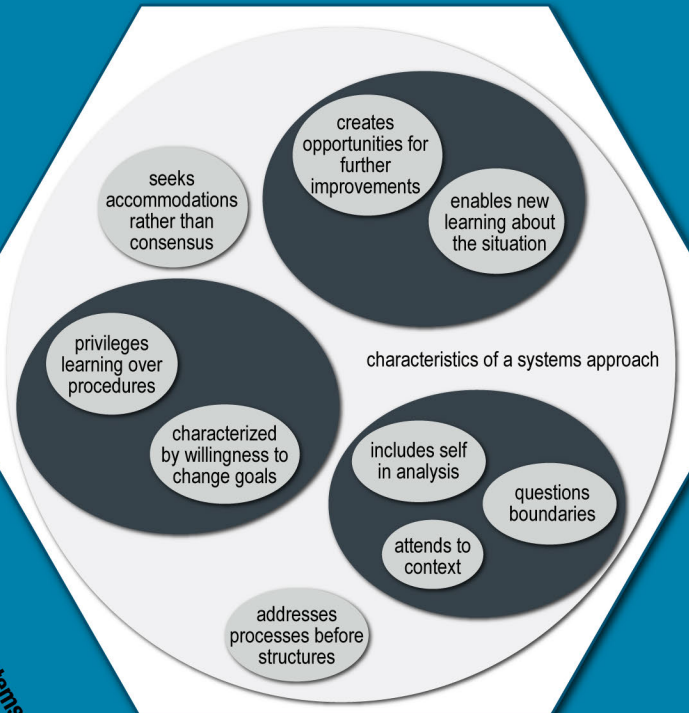
3. Show abstract ideas metaphorically

4. Include yourself in the picture

5. Tell the story

Systems Map

30 Min | 1 - 5 People | Frame



1. Blob lines represent boundaries

2. Every system and subsystem has a name

3. Important influences on the main system are shown outside the main system boundary

4. Blobs within the system are subsystems; they may themselves have subsystems

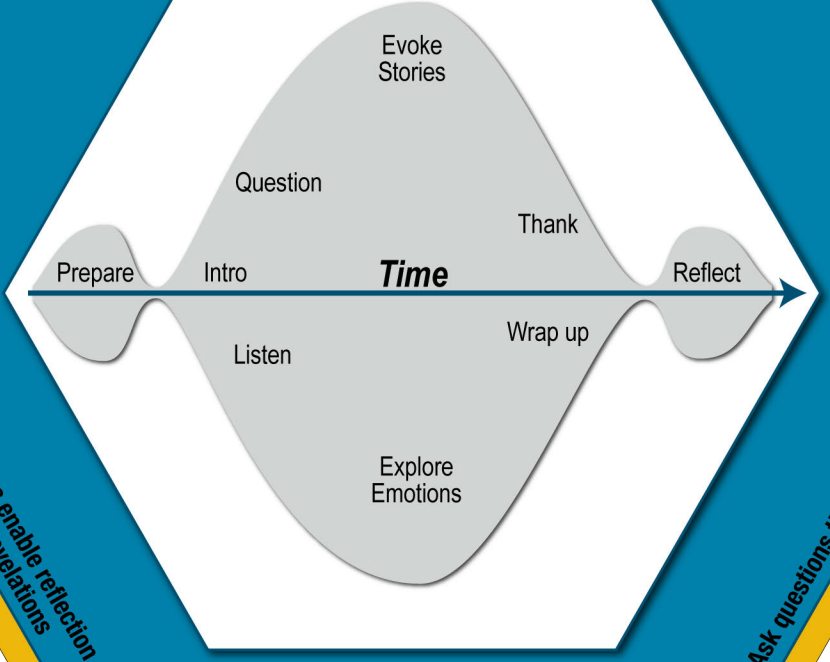
5. Blobs may overlap only if they're common to both subsystems

Interview for Empathy

20 Min

2 People

Look



1. Prepare open-ended questions

2. Ask questions that encourage story telling

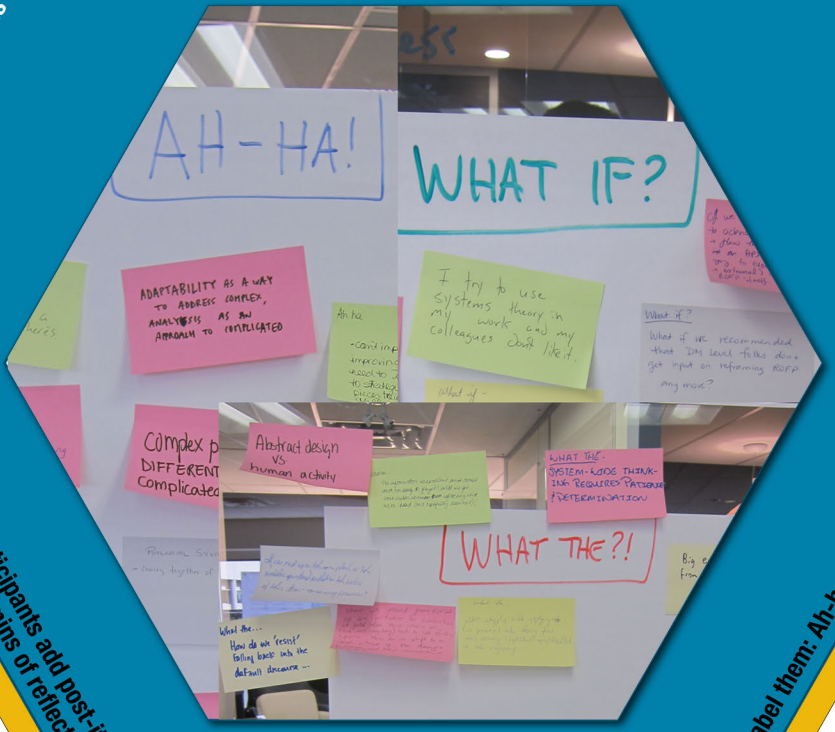
3. Listen for suprises. What differences and inconsistencies are revealed?

4. Allow silences. Silences enable reflection and may lead to deeper revelations

5. Limit questions to ten words

Reflection on Action Space

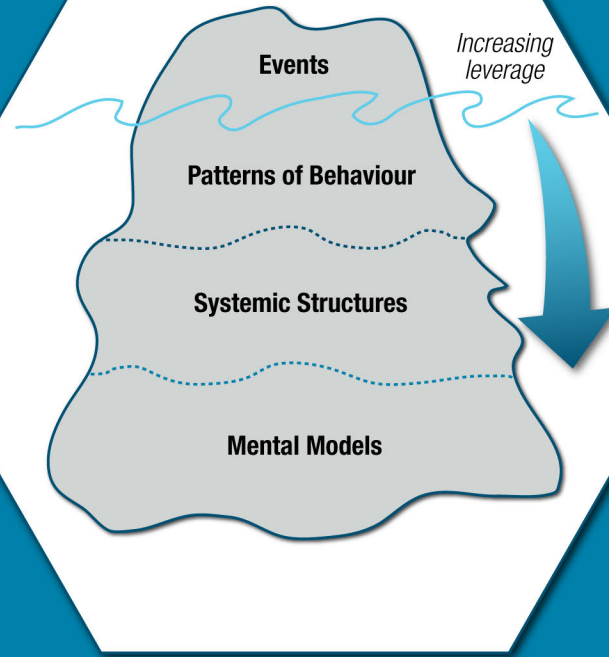
30 Min | 5 - 20 People | Adapt



1. Place 3 sheets of butcher paper on the wall at eye level
2. Label them: Ah-ha!; What the?!; and What if?
3. Explain the purpose of each category to the group
4. Explain the rules, let participants add post-it notes at any time and allow 10 mins of reflection
5. As facilitator cluster post-it notes into themes and discuss

Iceberg Diagram

1 Hour | 5 - 9 People | Frame



1. Brainstorm events (what has happened?)

2. Identify pattens (what continues to happen?)

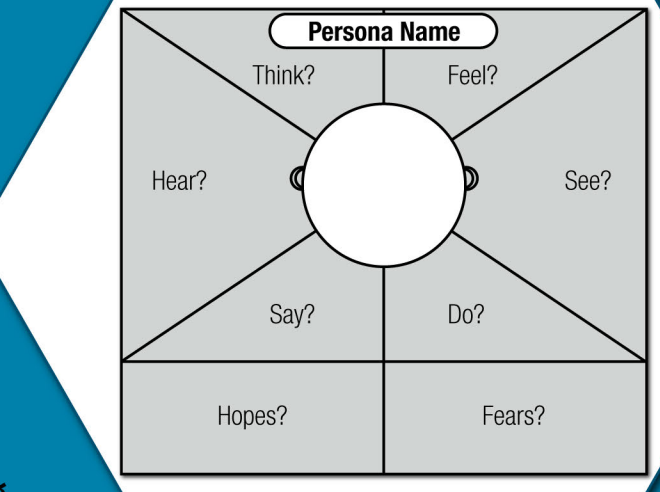
3. Recognize structures (what maintains the pattern?)

4. Surface mental models (what assumptions and beliefs created the structures?)

5. Where are the leverage points for system improvement?

Empathy Map

30 Min | 1 - 2 People | Look



1. Give your persona a name

2. Make sure they are complex and flawed, not stereotypes

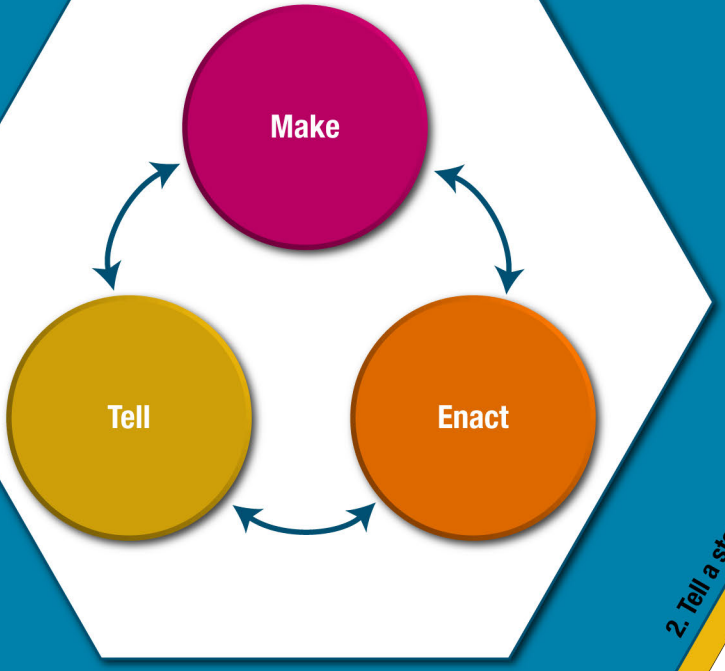
3. Fill in each box using a combination of evidence and imagination

4. Draw a facial expression showing how your persona feels

5. Summarize a top 3 list for your persona: "I need..."

Participatory Prototyping

1 Hour | 3 - 6 People | Generate



1. Create a physical prototype of your idea
2. Tell a story about your idea
3. Enact a scenario that brings your idea to life
4. Combine your physical props, stories and scenarios
5. Present to users and listen non-defensively for feedback

Causal Loop Diagram

1 Hour | 1 - 5 People | Frame

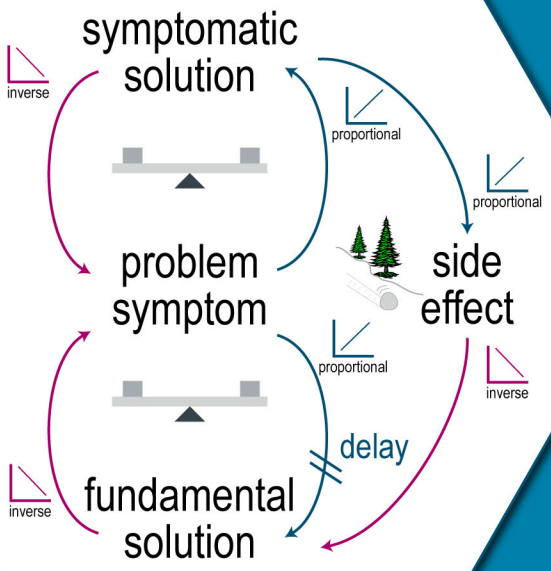
1. Write key variables and show influences with arrows

2. Label the influences as proportional or inverse

3. Mark time delays with parallel lines

4. Count the number of inverse relationships in each loop

5. Draw either a balance (even) or snowball (odd) icon in the loop

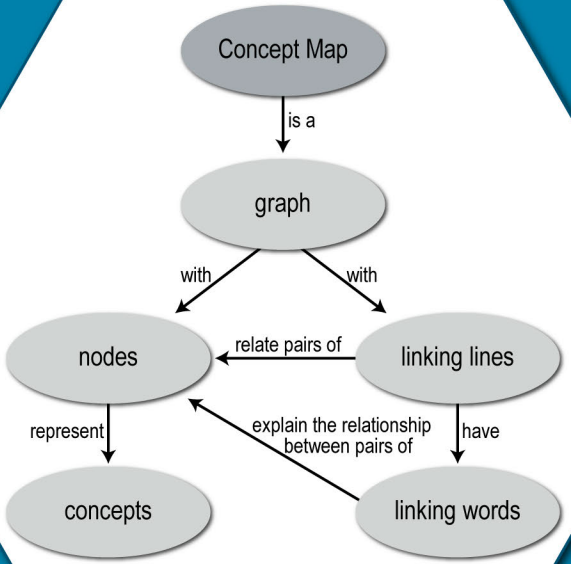


Concept Map

30 Min

1 - 5 People

Frame



1. Brainstorm a list of key concepts (nouns)

2. Put the most important concept in the middle of your map

3. Add new concepts as they link to existing concepts on the map

4. Draw arrows and include 1-2 words to create a sentence linking the concepts

5. Tell the story of what your map means

Keep Asking Why

10 Min | 2 - 20 People | Look

1. Identify an issue you need to understand more deeply

2. Ask 'why?' The purpose in asking why is to determine the respondent's depth of understanding

3. Consider the response. Ensure you understand what you are being told before asking 'why?' again

4. Ask 'why?' again. Always ask from the perspective of helping you to understand

5. Repeat steps 3 and 4 until possible 'root' causes surface

Why 1?.....Symptom

↓

Why 2?.....Symptom

↓

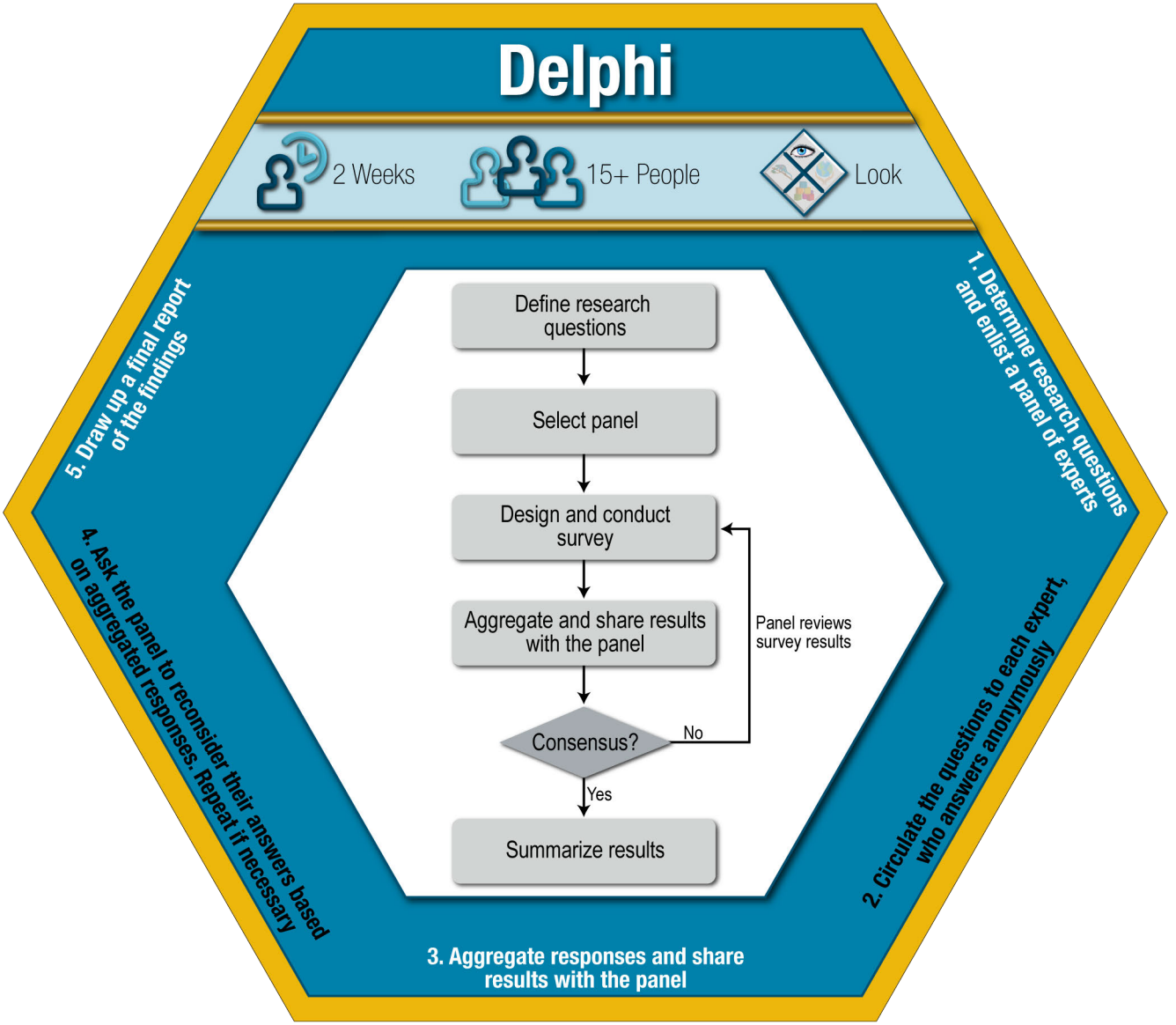
Why 3?.....Symptom

↓

Why 4?.....Symptom

↓

Why 5?.....**Root Causes**


Delphi
2 Weeks
15+ People
Look
Define research questions
Select panel
Design and conduct survey
Aggregate and share results with the panel
Consensus?
No
Yes
Panel reviews survey results
Summarize results
1. Determine research questions and enlist a panel of experts
2. Circulate the questions to each expert, who answers anonymously
3. Aggregate responses and share results with the panel
4. Ask the panel to reconsider their answers based on aggregated responses. Repeat if necessary
5. Draw up a final report of the findings

Six Thinking Hats

30 Min | 5 - 30 People | Frame

Blue Hat thinking considers the process of thinking and the use of the other hats

White Hat thinking considers information requirements (facts and figures) without judgment

Yellow Hat thinking considers positive implications – what is good, useful, correct

Green Hat thinking calls for creativity in ideas, concepts and approaches

Red Hat thinking considers emotions, feelings, and impressions, without judgment

Black Hat thinking considers negative implications – what is wrong, incorrect, in error

1. Explain the meaning of each of the six hats

2. Go through each of the thinking styles with the participants

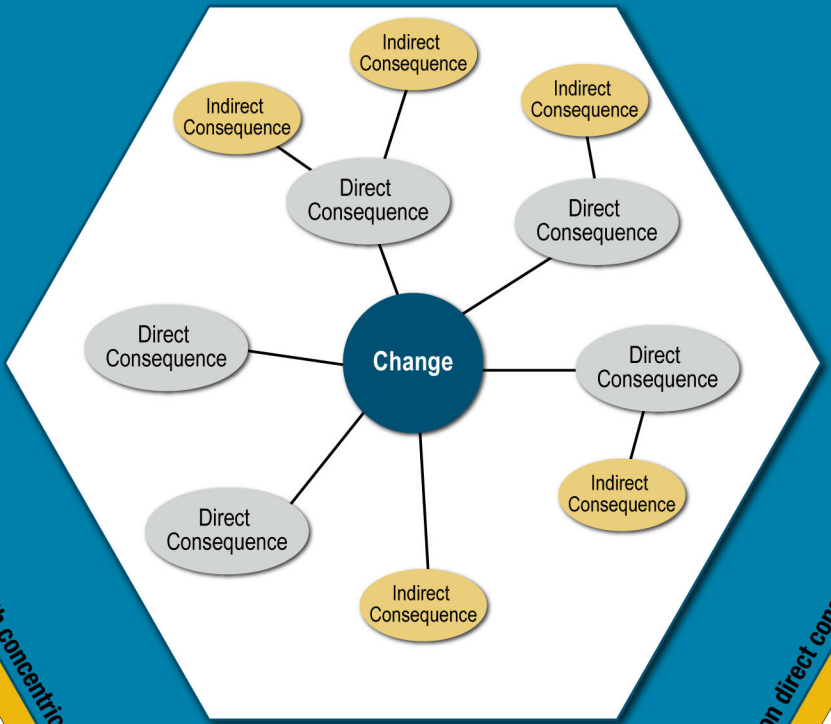
3. Capture the comments that are being raised on flip chart paper

4. Summarize the session using the blue hat 'thinking about thinking'

5. Capture issues / tensions and identify next steps

Future Wheel

30 Min | 2 - 8 People | Look



1. Identify the change and place it at the center of the stage

2. Position direct consequences outside of the change

3. Brainstorm and position indirect consequences resulting from the direct consequences

4. Mark these different levels with concentric circles

5. Connect the consequences in a tree or spider web

SWOT Analysis

30 Min

1 - 20 People

Adapt

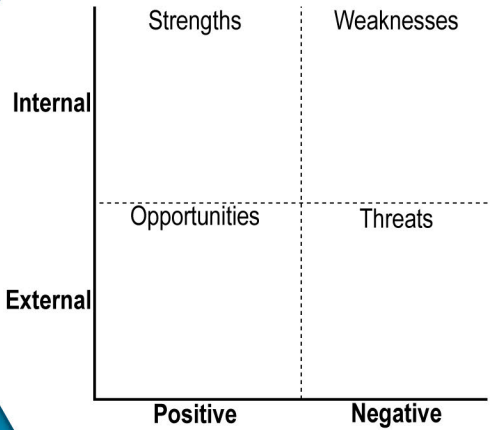
1. Define your objective

2. Identify strengths, weaknesses, opportunities, and threats

3. Organize into a 2x2 matrix

4. Review, discuss and analyze matrix

5. Determine the relationships between the quadrants



Speed Dating

30 Min | 6 - 20 People | Frame

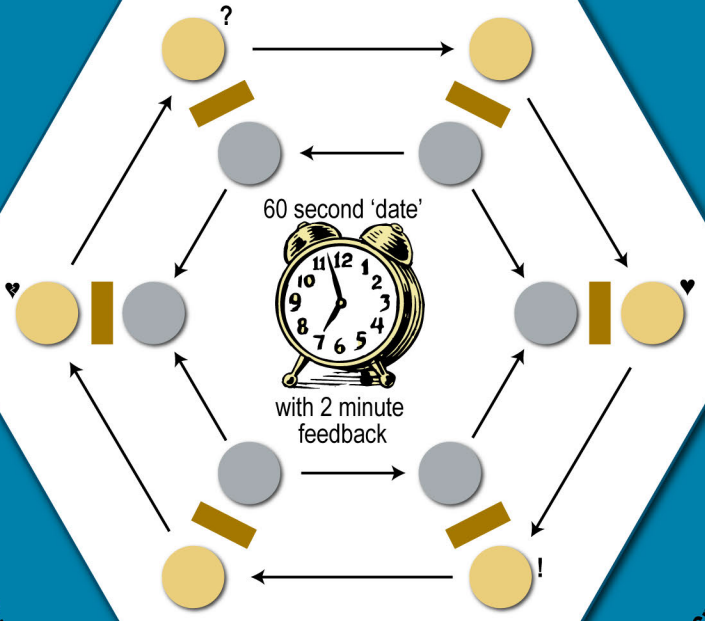
1. Start with a list of ideas you need feedback on

2. Create storyboards for each idea showing how it works over time

3. In concentric circles, explain storyboards in 60 seconds to elicit 2 minute feedback

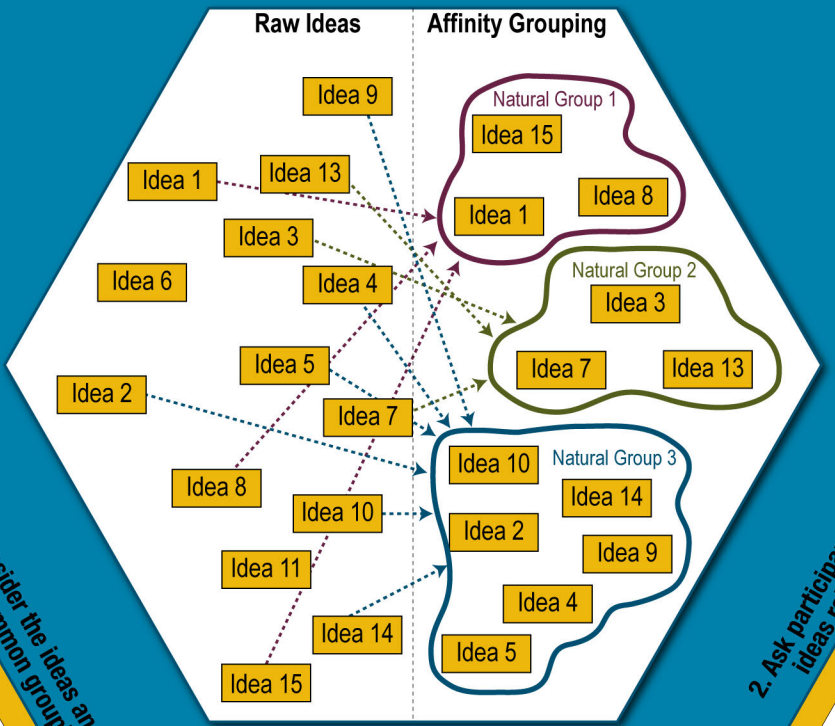
4. Rotate the inner circle to perform the next speed date

5. Collate the feedback from all speed dates for each idea



Affinity Diagram

30 Min | 1 - 20 People | Frame



1. Explain the topic or issue to participants

2. Ask participants to brainstorm ideas related to the topic

3. Have participants write ideas on post-it notes and place them randomly on a blank surface

4. Participants should consider the ideas and then sort them into themes / common groupings

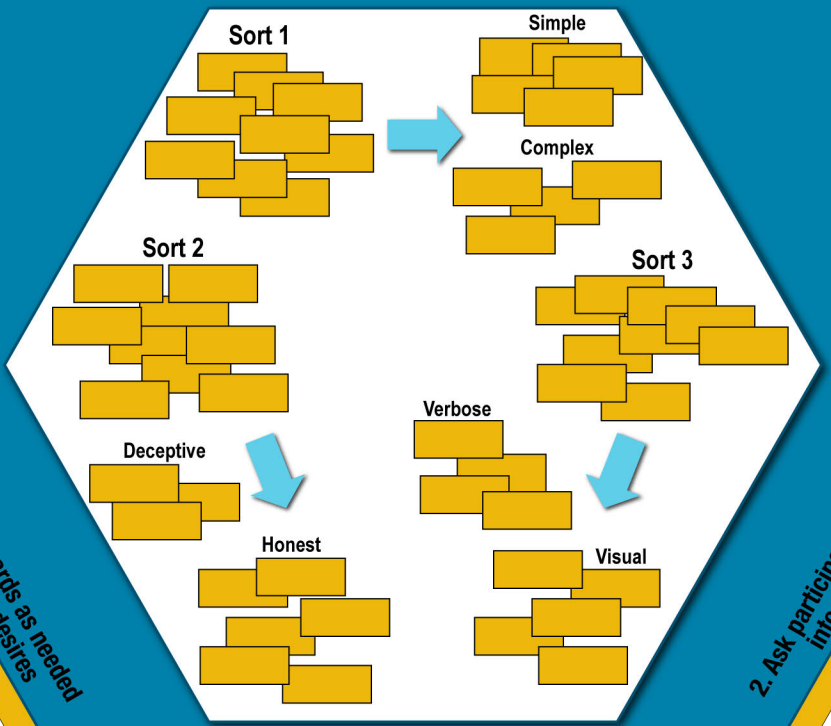
5. Agree to a title for each natural theme

Card Sort

30 Min

1 - 5 People

Frame



1. Show participants a random set of cards

2. Ask participants to sort cards into natural themes

3. Ask them to speak out loud while they work to understand their thought process

4. Add or eliminate cards as needed to satisfy participant desires

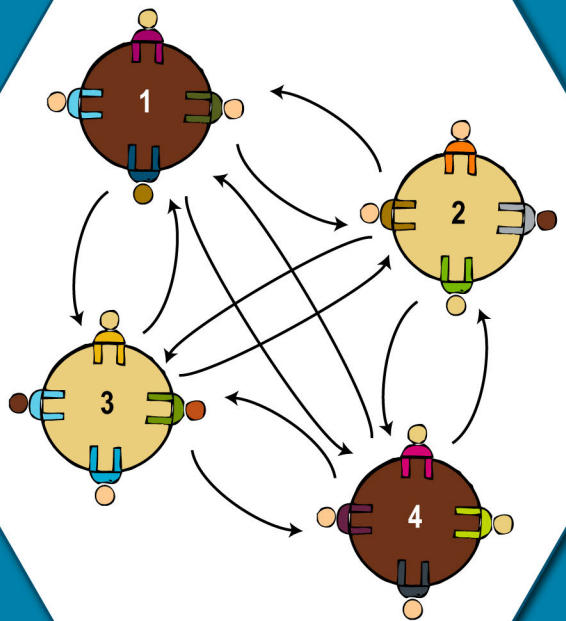
5. Ask participants to name each category

World Cafe

2 Hours

10 - 30 People

Frame



1. Seat people at tables to discuss a topic

2. Have one participant stay at their table and rotate the other participants

3. Ask participants to provide additional input / feedback on their new topic

4. Repeat steps 2 and 3 as many times as possible

5. Cross-brief / report back on completion

Dotmocracy

1 Hour | 2 - 50 People | Generate

1. Brainstorm ideas / options and post ideas up on a wall

2. Give each participant a set number of dots (2 - 6)

3. Ask participants to place dots next to ideas / options they prefer

4. Use number and distribution of dots to create a prioritized list

5. Discuss priority list to validate results

Ethnographic Research

1 Hour

1 - 50 People

Look

1. Define the focus of the interview and develop the interview list

2. Select the interview setting and seek necessary approvals / permissions

3. Conduct the interview in pairs (one interviewer and one recorder)

4. Debrief on interview process and content and synthesize information

5. Prepare information and insights for use in a workshop

Wind Tunneling

4 Hours | 2 - 20 People | Adapt

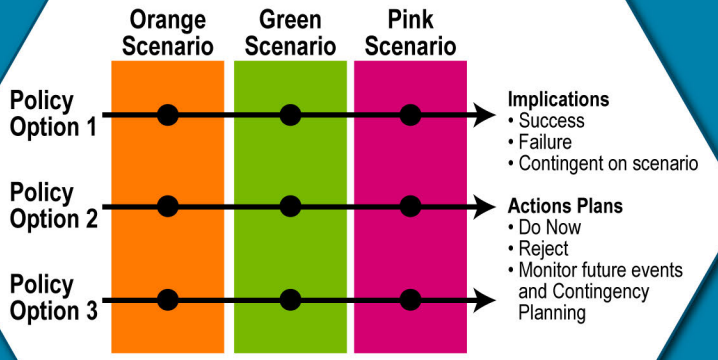
1. Break participants into small groups and develop scenarios

2. Identify the policy or strategy options to be tested

3. Each group tests a policy option in their scenario

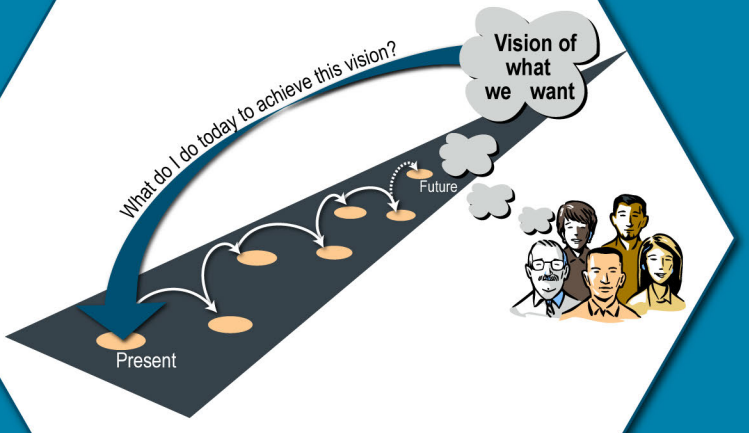
4. Groups repeat the test for each policy option

5. Use insights to adapt the options to be robust across possible futures



Back-Casting

3 Hours | 10 - 30 People | Frame



1. Set a timeline to determine how far you will project into the future

2. Baseline the current state

3. Define future visions using either scenarios or principles

4. Work backwards from the future visions, asking what would have to happen to get us there?

5. Work forwards, identifying critical actions and outcomes

Scenario Matrix

4 Hours | 5 - 20 People | Frame

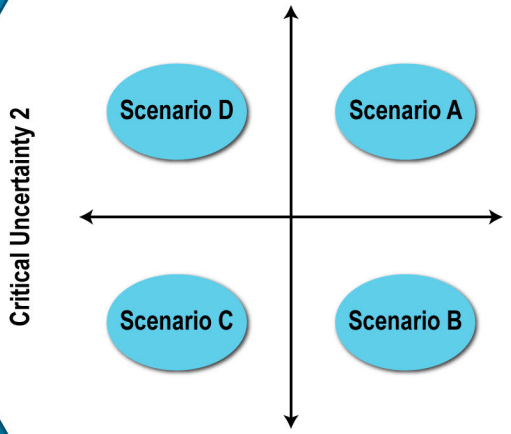
1. Create a list of future scenarios

2. Select two critical uncertainties that are most impactful and most uncertain

3. Identify plausible extremes for the future state for each critical uncertainty

4. Using the critical uncertainties as axes, plot the four possible scenarios in a 2 x 2 matrix

5. Develop narrative explanations for each scenario



Horizon Scanning

1 Month | 1 - 9 People | Look

1. Identify relevant areas to scan (e.g. Social, Economic, Political, etc)

2. Search for signals across a wide range of websites, magazines and journals

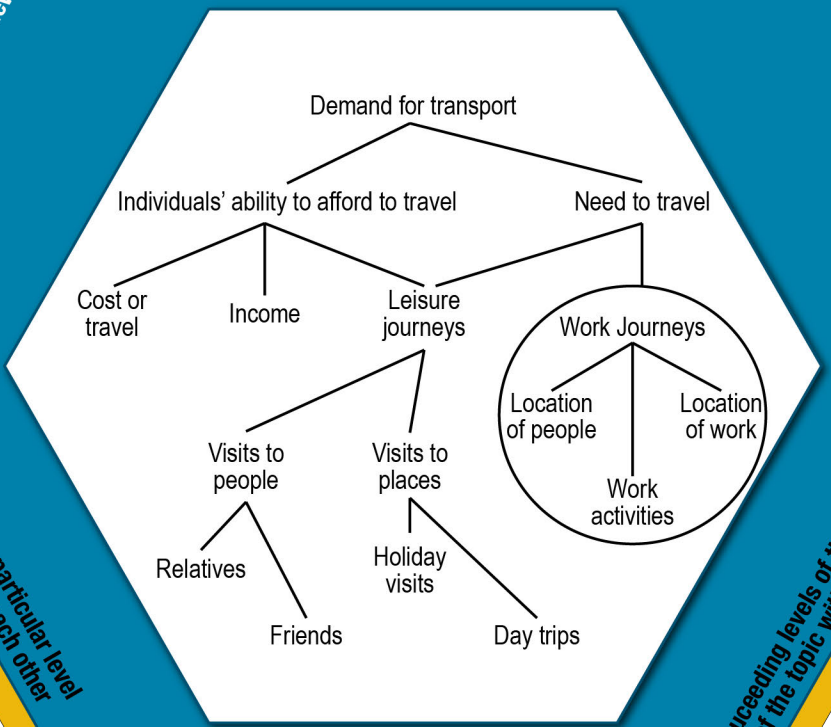
3. Discern trends among the signal indicating evidence of change

4. Identify drivers that are causing the trends to develop

5. Document strategic implications of signals, trends and drivers

Relevance Tree

30 Min | 2 - 5 People | Look



1. Identify a high level topic for analysis

2. In succeeding levels of the tree, list out components of the topic with greater degree of detail

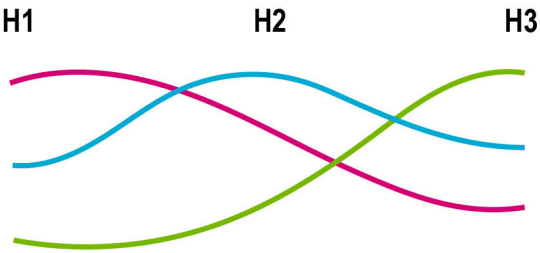
3. At each level, show how entries are connected to an item in the preceding level.

4. Ideally, entries at a particular level should not overlap with each other

5. Analyze items at the same level from the same point of view

Horizons

60 Min | 2 - 8 People | Look



1. Identify your desired future state. Write that on the far right of H3

2. On the H1 line (L to R), identify things that will need to drop to allow new things to emerge

3. On the H2 line (L to R), identify trends that you are already seeing emerge

4. On the H3 line (L to R), identify some signals that you believe are just beginning to emerge

5. Identify critical junctions, or bridges between horizon lines

Critical Uncertainties

30 Min | 2 - 8 People | Look

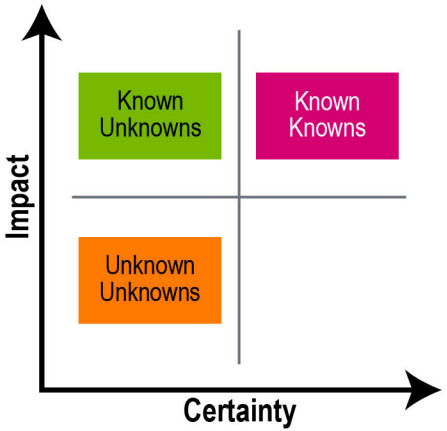
1. Draw a matrix with four quadrants

2. Label X-axis 'Certainty' and Y-axis 'Impact'

3. Label the quadrants as shown in diagram

4.For each uncertainty, determine and plot its degree of certainty and impact

5. The 'Known Unknowns' are the critical uncertainties



Cross-Impact Analysis

30 Min | 2 - 8 People | Look

1. Draw a chart with all uncertain events as shown

2. Events can be ranked from 0 (no possibility) to 3 (highly likely) or Low, Medium or High

3. In the second column, rank the initial probability these events will occur in the future

4. In the remaining columns, record likelihood of row event if column event occured

5. Assess event sensitivity and identify sets of co-occurring events

Event	Initial Probability	E1	E2	E3	E4
E1	1	X	0	2	1
E2	2	2	X	3	0
E3	3	0	3	X	2
E4	1	1	1	3	X

Cone of Plausibility

60 Min | 2 - 10 People | Look

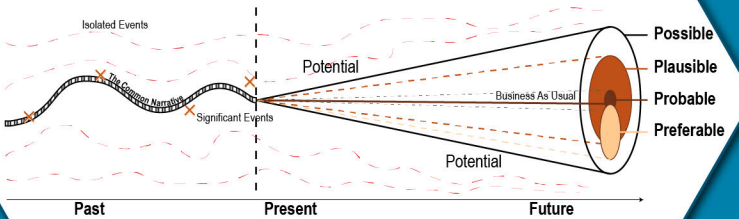
1. Begin with a list of critical uncertainties

2. Define timeline (e.g. 20-30 years) and the boundaries for the future state considered as 'possible'

3. Within those boundaries, other scenarios can exist that could be 'plausible', 'probable' or 'preferable'

4. Describe how each critical uncertainty could unfold in the future under 'business as usual' (BAU)

5. Plot how far each scenario deviates from the BAU future



Heat Map

60 Min | 2 - 10 People | Frame

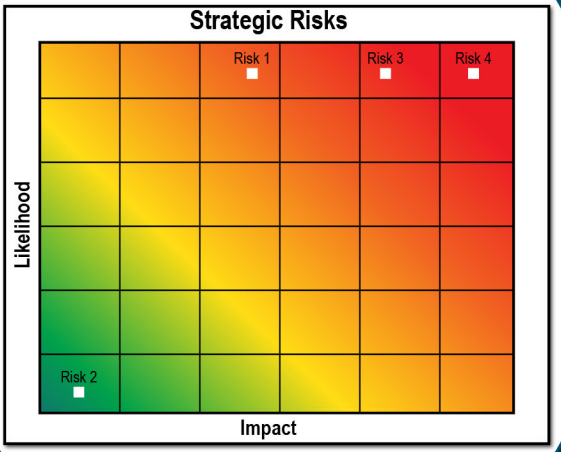
1. Identify the risks both positive and negative

2. Draw a graph with Y-axis 'Likelihood' and X-axis 'Impact'. Give each an equal scale

3. Rate each risk's likelihood of occurence and impact of occurence. Multiply the likehood by the impact

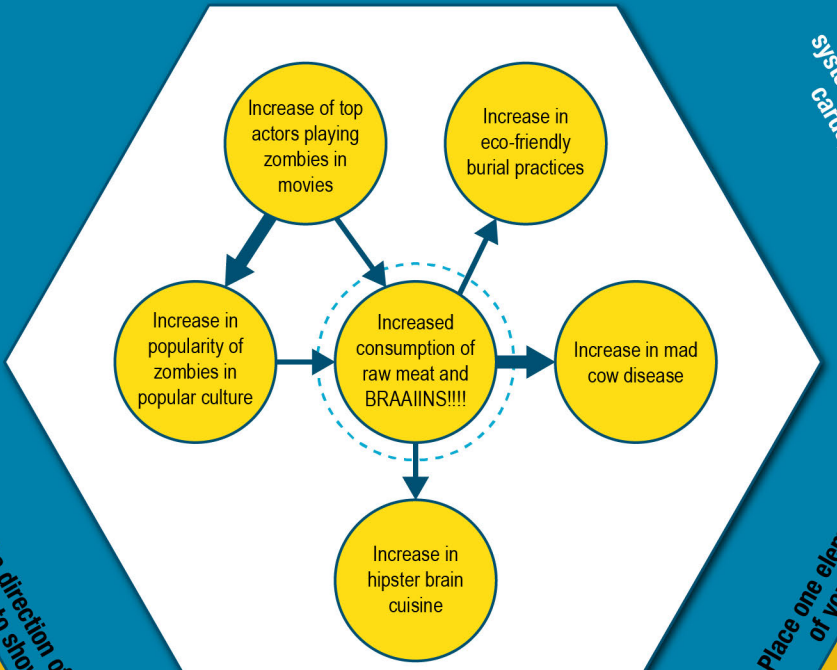
4. Plot the risks score. The higher the score, the more significant the risk

5. Assess where the main risks are and how they can be mitigated



Influence Diagram

30 - 60 Min | 1 - 8 People | Frame



1. Create a list of actors, trends, or elements in a system using sticky notes, cards, or magnets.

2. Place one element at the centre of your work space.

3. Add elements to your workspace, each time asking how it influences and is influenced by others.

4. Using arrows, indicate the direction of the flow of influence. Use line thickness to show strength.

5. When finished, circle the hubs of influence (the drivers of change).

Trend Radar

3 hours | 1 - 3 People | Frame

1. Create a radar outline with distance representing time away from the present and STEEP sections.

2. Plot each trend in its relevant category with identifying numbers along the timeline.

3. Indicate each trend's level of impact by adjusting node size.

4. Indicate themes/clusters and degree of certainty with different shapes, colours, or opacity.

5. Create a legend matching numbers to trend names.