Guide to Creating and Using Scenario Vignettes in Workshop Design

Nancy Murphy and Brie Linkenhoker, Worldview Studio

WORLD
ECONOMIC
FORUM

TABLE OF CONTENTS

INTRODUCTION

Since the beginning of time, humans have told stories: to teach, to entertain, to influence, to control, to inspire. Our brains are hard-wired for narrative; it's how we make sense of the world, communicate that understanding to others and interpret new events.

This "Guide to Creating and Using Scenario Vignettes" is designed to tap into the power of story as a way to improve policies in development by stress-testing foundational elements and policy approaches against a range of potential futures. Using scenario vignettes in this way builds upon our collective experience (40+ years) at Global Business Network, a pioneering scenario planning consultancy, followed by The Monitor Group, Stanford University, and Worldview Studio, where we continue to evolve our practice.

This guide also builds on our recent experience working with the Precision Medicine Team of the World Economic Forum, which used scenario vignettes at a one-day workshop to socialize and strengthen the genomic data policy frameworks the team had built over the course of the project as well as in co-facilitated exploratory workshops with government partners.

Therefore, the guide addresses ways to integrate vignettes into a workshop using the Precision Medicine Team's experience as a primary example. Topics include encouraging a future-oriented mindset among participants, designing breakout group exercises and templates to explore the vignettes and facilitating plenary discussions to extract and synthesize insights. It is important to stress that any workshop must be customized for context, audience and cultural and social norms. In particular, the examples provided here (agendas, vignettes, templates, questions) are not intended as a "one-size-fits-all" workshop design.

The guide is not a primer on scenario planning, the methodology associated with developing and applying scenarios as part of ongoing strategic planning processes. If you are interested in learning more about scenario planning, we have included a list of resources at the end of this document (see Appendix C).

EXPLORING THE FUTURE WITH SCENARIOS: WHY A FUTURE FOCUS?

Why focus on the future? The answers are two-fold: one philosophical and the other practical.

First, the future is uncertain and unpredictable, and yet, barring a civilization-ending catastrophe, we can be fairly certain that:

• The future will continue to unfold (in fact, that is happening right now)

• The future will be different from the past and the present in both big and small ways

• The forces shaping the future will emerge unevenly across geographies, industries and populations

• The decisions we make today will play out in the future – and not always as intended – in a world that is complex, diverse and dynamic

The bottom line is this: We all have a stake in the future – and anyone who plays a role in making or shaping policy has a responsibility to take multiple futures into account. This can be a challenge, as policy-makers (like many of us) are often rushing to figure out "How do I do this?" rather than taking the time to think and talk about "What should we be doing?" Your role as a designer and facilitator is to get policy-makers and other stakeholders included in this space to slow down and be thoughtful about "What are the right things to do?", not just today, but for tomorrow.

On a more tactical level, when we are making decisions – such as developing policies that could affect thousands of people and set the stage for policies to come – adopting a future focus is sensible. This can enable us to:

• Think from the outside-in to understand the forces – social, technological, economic, environmental and political (STEEP) – that are driving change and are outside our control

• Adopt a long view by moving beyond the present – and the constraints of our assumptions, priorities, and biases – that narrow and shorten our frame of focus

- Embrace multiple perspectives and possibilities, since none of us knows what the future will hold

Scenario planning is a proven methodology that adds rigour and structure to the exercise of imagining the future. Since the U.S. Department of Defense pioneered scenario planning in the Cold War period to "think the unthinkable", it has been widely used by companies, governments and non-profits to develop strategies and spark innovation. A highly collaborative process, scenario planning often leads to breakthrough insights, options and actions that help organizations make more confident decisions amidst uncertainty and move boldly into the future.

WHAT ARE SCENARIOS?

Scenarios are stories about how the future might unfold for an organization, a community, a nation or even the world. Scenarios are anchored by an important exploratory or strategic question (e.g. What is the future of AI? Should we build a manufacturing plant in Kenya?). Scenarios are created and used in sets of three or four to express a range of future possibilities, undergirded by major uncertainties that are critical to the focal question. Good scenarios are both provocative and plausible. They are hypotheses, not predictions. They stretch our thinking because they are divergent: good and bad, expected and surprising, with a range of winners and losers. Ultimately scenarios enable us to inhabit and rehearse different futures so that we can understand and weigh the threats and opportunities that might arise in the near and long terms.

Structurally, scenarios usually tell a story looking back from some point in the future – most often 10 years out. Scenarios can be descriptive or character-driven. As a set, the scenarios describe how and why particular futures have unfolded in ways that are meaningfully different from one another.

THE MONT FLEUR SCENARIOS

One of the most famous examples of scenarios comes from the Mont Fleur Project in South Africa during the early 1990s. Developed soon after the release of Nelson Mandela as the country prepared for its first all-race elections, the scenarios presented four visions for South Africa's 10-year future:

OSTRICH

In which a negotiated settlement to the crisis in South Africa is not achieved, and the country's government continues to be non-representative

LAME DUCK

In which a settlement is achieved but the transition to a new dispensation is slow and indecisive

ICARUS

In which transition is rapid but the new government unwisely pursues unsustainable, populist economic policies

FLIGHT OF THE FLAMINGOS

In which the government's policies are sustainable and the country takes a path of inclusive growth and democracy

The team produced a 14- page report, which was distributed as an insert in a national newspaper, as well as a 30-minute video featuring cartoons and commentary by team members. The team presented and discussed the scenarios with more than 50 groups, including political parties, companies, academics, trade unions and civic organizations.

The scenarios and the events through which they were communicated created shared understanding and networks of collaboration across the country. Prominent leaders developed a shared language for complex concepts and dynamics, which set the stage for more successful constitutional negotiations.

To learn more, read *Learning from Experience: The Mont Fleur Scenario Exercise* by Adam Kahane at www.reospartners.com/learning-from-experience-the-mont-fleur-scenario-exercise/

WHAT ARE SCENARIO VIGNETTES, AND HOW DO YOU USE THEM?

Scenario planning is often an intensive, multi-month effort. But here's the good news: You can develop and use short scenario stories – what we call "vignettes" – in a more limited time frame and tightly structured context.

Within the policy context, scenario vignettes are an excellent tool for shaping and refining options that have already been identified so that they address a broad set of important issues and stakeholder concerns. In addition, scenario vignettes are valuable for stress-testing or "wind-tunneling" policy frameworks, by which we mean the structure or key elements of a policy or policy approach, in order to improve them so they are as robust as possible across different situations, audiences and contexts. Because policies directly affect many people and can be difficult to change once enacted, it is very important to refine, test and improve them before they are ratified.

This guide is designed to help you create compelling scenario vignettes and use them with your colleagues, partners and stakeholders to inform and test emerging policy frameworks. By making the future central to your policy conversations, you can shape it wisely for us all.

WHEN TO USE SCENARIO VIGNETTES

It is best to build a workshop around scenario vignettes **after** you have developed a draft policy framework that addresses:

The purpose of the policy, including the:

- Behaviours, actions or applications the policy is designed to influence

- Outcomes the policy is designed to produce

- Policy's underlying philosophy (e.g. setting standards, achieving equity, protecting the vulnerable, maintaining safety, etc.)

- The key elements of the policy and why they matter

- The needs and concerns of different stakeholders who will administer and be affected by the policy

- The tradeoffs inherent in managing different stakeholder needs and concerns

- The functional requirements/roadmap to execute the policy

Scenario vignettes can also be useful in validating a policy framework or informing a corresponding set of policy guidelines, principles or goals. Even so, the elements identified above, short of functional requirements, should still be well thought out and articulated, if not fully drafted.

Do **not** use scenario vignettes:

- To develop a policy before you have done the work of really understanding the larger context, stakeholders, challenges, and opportunities. While thinking with scenarios can be very useful in the early stages of policy formulation, using vignettes introduces a level of specificity that can narrow the focus in ways that may lead to significant gaps and a less robust policy.

- After you have enacted a policy. At that stage, you need to pay attention to the actual (not imagined) consequences, both positive and negative, by monitoring predetermined metrics and actively seeking feedback.

FEATURES OF GOOD SCENARIO VIGNETTES

Scenario vignettes are best used as part of a set of three or four different stories that are:

☐ Set immersively in the future, preferably five to 10 years out, depending on how soon the policy will be enacted and/or how long it will take for its impacts to be felt

☐ Short (preferably one page; no more than two pages)

☐ Culturally and socially appropriate and sensitive (e.g. characters/ situations avoid caricatures that build on stereotypes; vignette stories and language are checked for bias)

☐ Character-driven, with the actors drawn from different stakeholder groups. The details should be clear, if only briefly alluded to in the vignette itself:

▶ Who are they?

▶ Where do they live and work?

▶ What do they believe and why?

▶ How are their lives affected by this policy and/or the issues the policy aims to address?

☐ Defined by tension or conflict that arises from forces or situations we can see evolving today

☐ Built around a specific event or development that brings the central tension or conflict into focus and demands a response or action

☐ Crafted to include in the narrative:

▶ Trade-offs and conflicts

▶ Potential unanticipated consequences

▶ Roadblocks and barriers

▶ Underexplored domains in which the policy could have important consequences

DEVELOPING SCENARIO VIGNETTES

Vignettes can be created from the bottom up, starting with questions about the issues, themes or known challenges that need to be explored in the story you will create, or from the top down, in which you might adapt a story from recent head-lines or another context or industry to provide a structure for embedding the issues you want to explore.

For example, if biometric data privacy is an issue that matters to you, you might imagine what

privacy concerns might look like 10 years from now as current tech-nologies advance and attitudes evolve. Or you might take a recent headline from another sector, such as the fight for the right to be for-gotten in internet searches, and ask what a similar legal battle might look like in the realm of biological data.

Whatever your starting point, you will need to make decisions about:

☐ **Themes**
Have no more than one or two key dilemmas or themes (per vignette) that you want to test or explore further

☐ **Time frame**
When in the future are the vignettes set? This should be consistent with when you think the policy might go into effect, and ideally five to 10 years out. Generally speaking, going out more than 10 years is difficult for many people to imagine, especially given the broader STEEP uncertainties. On the other hand, positioning the vignettes just a couple of years out doesn't encourage people to use their imaginations and think more creatively about what might happen. In our experience, we often *overestimate* the time it takes for major developments to occur, so that scenarios designed along a 10-year time horizon actually come to pass in three to five years.

☐ **Characters and the constituencies they represent**
These may be drawn from known stakeholder groups or from communities that have not been widely included to date in policy-making but who could well be affected by the policies you are developing. Be as specific as you can: Give your characters personas, with names, titles and organizational affiliations (fictional, but plausible), back stories, personalities, valid perspectives (even if you don't go into this level of detail). Try to make sure no one is perceived as entirely bad or good, but rather make the motivations, concerns and actions of your characters believable.

☐ **Setting and context**
Where is your vignette set? What has happened in the recent past? Has your policy just been implemented? Is it more or less successful than expected? Have recent discoveries, events or developments fundamentally altered the context from the one in which the policy was originally developed?

☐ **Conflict**
What is the tension, conflict or galvanizing event at the core of your vignette? Some key stakeholders may be on opposite sides of the policy in general; more often, they prioritize distinctly different considerations or outcomes.

☐ **Form**
How will you tell your story succinctly? Good stories can stand on their own. But if you want to be more creative, you can use a number of possible devices that highlight the juxtaposition of different perspectives, including:

► A newscast in which two people with different perspectives are interviewed

► A news report about notable protests, new data, technological advances, legislative actions, etc.

► Conference panellists discussing what's happened since the policy was enacted

► An approaching summit, hearing or conference to make a critical decision

► Testimony before a panel

☐ **Variety and consistency**
You will want to vary characters, situations and storytelling devices across your set of vignettes, but you should try to balance them for emotional intensity and magnitude of outcomes

☐ **Engagement**
Will you ask your participants to take on a single perspective/persona from which they should explore the vignette, or ask them to analyse multiple perspectives as a third party?

Appendix D includes three templates you can use to help you define concepts, clarify conflicts and draft scenario vignettes.

EXAMPLE: PRECISION MEDICINE PROJECT VIGNETTES

After developing four foundational elements for their policy framework, the Precision Medicine Project Team decided to structure their vignettes around these elements (in bold below). The team developed one vignette per issue, with each vignette presenting the divergent points of view of two specific personas. These are fictionalized people and, in most cases, organizations. Two small groups of participants worked on each vignette, with each group asked to assume the perspective of one of the two personas in each vignette. Complete vignettes are included in Appendix A.

Consent

Major US corporation's Vice-President of Genomic Research
East African country's Director of National Ethics Review Committee

Data privacy

Maria, a researcher
Head of a tribal council whose people are involved in Maria's research

Data access

Minister of Health, Nigeria
Global Health and Genomic Treaty Organization's Head of Adequacy Standards

Benefit sharing

Edward, Head of Research at a European research organization
Oliana, Head of Research at the South Pacific Research Organization

---

SETTING THE STAGE FOR THE WORKSHOP

Preparing participants
Send policy framework materials, an overview of the project and its progress, participant bios and a high-level agenda to all participants ahead of time. Consider sending links to two or three thoughtful articles that foreshadow some of the issues the group will explore at the

workshop. Also consider sending a short survey to the participants to help you better understand their views, hopes and concerns about the issue.

Composing breakout groups
If you want to get real work done on testing and refining policy frameworks, you need do it in small groups, not in plenary. Plan and assign your breakout groups in advance based on who will be in the room, your objectives and the space. In general:

• Spread out any experts and people from the same organization

• Distribute core team members who can help facilitate and clarify the process

• Maximize diversity for a richer conversation: gender, age, background, country, personality (if known)

• Manage numbers: Plan for four to eight people per group (With eight people, offer the option of working in teams of four, leaving time to integrate responses)

• Assign or identify a volunteer scribe and reporter

• Stay in the same room, if at all possible, to have breakout discussions without distracting other groups. (If not, stay close.) This builds energy and reduces transition time

• Consider keeping breakout groups intact during the day so they can build on their learning

• Use templates to capture written group output (see more in Structuring the vignette exercises, below)

STRUCTURING AND FACILITATING THE WORKSHOP

With participants appropriately prepared – which should include conversations and pre-readings to ensure they understand the policy framework and its goals – an effective scenario vignette workshop can be run in a single day (see the annotated World Economic Forum agenda, Appendix B). At a high level, the workshop should include:

Introductions and relevant icebreaker
The host, or moderator, should open the workshop by welcoming the participants and then providing brief remarks about the project, where the team is in the development of its policy framework, the goals for the workshop, the ground rules for engagement, and gratitude for everyone's participation and feedback.

Then the group can move to an icebreaker activity. The icebreaker should be brief, and ideally reveal something about the diversity or alignment of participants on key issues that will play out across the vignettes. Participants can introduce themselves prior to the icebreaker or during the exercise. People can be asked to share their names and organizations, but no more than that, since their bios will have additional information.

WHERE DO YOU STAND?

- Tape a horizontal line across the front or back of the room. (Or you can identify an imaginary line anchored by chairs, windows, etc.)

- Identify one end (e.g. left) as positive and the other end (e.g. right) as negative.

- Ask all participants to line up horizontally according to whether they feel positively or negatively about the future (in 10 years) of the policy issue they have come to work on (e.g. genomic data use in low- and middle-income countries [LMICs]). Is it a story of *promise* or *peril?*

- Quickly debrief a few people at each pole and in the middle (no more than three each): Why are you standing here? You've shifted your position a few times, why?

- Now ask all participants to move vertically: forward if they believe that policy-makers (in government, international organizations, etc.) can have an impact in shaping the trajectory of the issue at hand (e.g. genomic data collection and use). Move back if they don't. Quickly debrief at the extremes and middle. What makes you feel optimistic? Pessimistic?

- If you plan to end the day with the same exercise – to see if the workshop changed how participants feel – ask them to look around and generally remember where they are standing and by whom.

Rules of engagement
Quickly share ground rules for the workshop. Examples include:

- Be present

- Participate actively

- Mute cell phones and use only at designated breaks

- No side conversations

- Listen and build. (You might encourage them to respond in terms of "Yes, and", a popular improvisational method that encourages people to build on the ideas of others ["and"] instead of adopting a more critical approach ["but"])

- Chatham House rules: Sharing ideas is fine, but no attribution without permission

Reviewing the policy framework
Review the framework as it stands using a few slides, and highlight themes, challenges, questions and concerns you hope to explore more deeply at the workshop. Keep this brief.

Priming future-oriented thinking and conversation
One of the easiest ways to encourage a "futures mindset" is to host a panel conversation with experts and provocative thinkers, some of whom are not engaged in the details of policy-making. Choose people who can bring fresh and future-oriented perspectives to the table

by virtue of their work in adjacent fields or their professional practice as futurists, technologists or thought leaders. Examples of questions to pose to the panel include:

- What are the biggest challenges in this space for which we are underprepared (as a society, or as policy-makers)?

- In what other sectors/industries/areas have you seen dynamics and challenges similar to those we are considering today?

- How should we reckon with the pace of change in this field? Where were we 10 years ago? Last year? Where might we be next year?

- What are the biggest challenges and opportunities for policy-making in this space?

- What will be the hardest thing to get right?

- What are the known unknowns? What uncertainties must policy-makers recognize today and address in their work?

- What are the unknown unknowns? The black swans (rare, unpredictable events with extreme consequences)? The game changers?

- If you could ask an oracle a question about the future, and the answer could be enormously helpful in crafting good policy, what would you ask?

CHOOSING YOUR "EXPERTS"

Encouraging your participants to adopt a futures mindset helps prepare them to embrace the scenario vignettes. You can start the day with a moderated panel or conversation, but choose your "experts" carefully.

DO:

- Prioritize "experience experts" who have different, relevant real-world policy, programmatic and/or management experience. Your own workshop participants are excellent options, and probably reflect the different stakeholder groups and characters incorporated in the vignettes.

- Seek out people who are curious and open to different ideas and perspectives, as well as generous with their own ideas, hopes and fears and lessons learned.

- Formulate customized questions that invite experts to speculate on future challenges and opportunities (and send them to the experts in advance).

DO NOT:

- Introduce a lot of new data and research or multiple provocateurs; those are more appropriate for early, exploratory workshops in which you stress level-setting, learning and divergence.

- Default to academic experts with set presentations or narrow points of view. (This is rarely a good idea!)

- Choose "experts" whom you have never met, without talking to them first.

Scenario vignette exercise round 1
Participants are broken into small groups, which accelerates progress towards the desired outcomes through parallel processing. Working in small groups also allows everyone to be heard and to contribute. All groups can work on the same vignette or on different vignettes. Another option is to ask half of the groups to work on one vignette, while the other half tackle a different one.

These breakout groups work on templates – worksheets that provide prompts to organize group discussions and provide physical space to capture the group's outputs – and then debrief their work in plenary (see below for details).

- In the debrief, the moderator asks each group's recorder to briefly report out their top two or three bullet points/insights at tweet length.

- The moderator asks followup questions, e.g. what did the group get stuck on or find difficult to resolve?

- The moderator leads a broader conversation, building on responses to draw out key patterns and posing additional "What ifs?", as warranted.

- The moderator collects templates. Consider hanging the templates on walls before lunch for an informal "gallery walk".

AVOIDING "DEATH BY REPORT-OUT"

Listening to groups report the details of the breakout sessions can be long and boring, and can de-energize important conversations that you want your workshop attendees to be having. A few guidelines can help you avoid "death by report-out":

- Use templates that force participants to identify two or three key insights that they will share with the group.

- Be brief – and police the time, from the very first report.

- Ask someone you know well to report first, modelling the appropriate content and timing.

- If groups worked on different scenario vignettes, show a slide with relevant vignette highlights before each group presents so that everyone can interpret the group's work in context without having to read the full vignette.

- If all groups worked on the same vignettes, ask reporters to add *new* insights only or, after several reports, ask if anyone has *different* insights, answers or approaches to share.

- Have groups go on template gallery walks (with one volunteer per group stationed at each template to answer questions) instead of taking turns reporting out. Then facilitate a quick conversation in plenary about what people found most interesting.

- Point/counter-point: Following one report-out, ask if any group has a counter-point. Next ask if any group has something to add to that argument. Then invite another counter-point. After three or four rounds, ask if any group has something new to add and "popcorn" the responses by briskly asking five (no more than 10) participants to briefly share their response or idea.

- Be more creative (but not gimmicky) later in the day. Role play: Deliver a hypothetical presentation to the board of directors, the UN, the president or the prime minister; deliver a newscast or a speech at Davos; or choose your own creative approach to delivery.

Lunch (before or after first round of vignettes) Ideally with provocateur/expert panellists seated at different tables, but with no agenda other than natural conversation.

Scenario vignette exercise round 2
Small groups work on templates (see below for details) and debrief in plenary (as described above, or in a different format, so long as report-outs are structured and brief).

- Second round vignettes often take less time than the first. Every group should work on a different vignette from the one it explored in round 1. There is no reason to mix up the groups in this round unless a group encountered major problems with one or more participants. Groups that have worked together once before often produce better work on their second assignment together.

Break and individual reflection
Allow significant time (20–30 minutes) in the afternoon to review other groups' templates, and write down individual responses to one or two questions such as:

☐ Name a problem from your vignette or another group's vignette that cannot yet be fully resolved within the current policy framework.

☐ Which stakeholder groups were well represented and served by the policy framework? Which were poorly represented or served?

☐ Did you discuss or hear about particular *future* contexts or developments that need to be better addressed by the policy framework?

☐ How could well-planned *rollout and implementation* of the policy framework improve its potential for success?

☐ What are the key ethical issues that the personas are trying to resolve? Do the suggested policy resolutions address these?

After individual reflections, you can ask participants to post and cluster their responses or just proceed to a facilitated conversation, depending on time.

Optional group exercise
You may opt to ask participants to cluster some of their posted individual reflections and identify the themes that tie the clusters together. You can ask the group to form new small teams to develop suggestions for addressing problems/challenges within a cluster. It is unlikely that you will have time for an additional exercise in a one-day workshop with this basic design, but it may be possible if you have shorter pre-vignette activities.

Facilitated synthetic conversation
Ideally, the workshop host would reconvene the participants into a plenary conversation and offer three or four minutes of his/her own reflections on insights that emerged from the scenario vignette report-outs, individual reflections, and follow-up exercise.

Extracting insights is an art that certainly gets better with practice! One of the biggest challenges for a facilitator is to be listening and observing closely while keeping the meeting on target and schedule and the participants engaged. That's where your team comes in. Empower them to be your eyes and ears. They can

identify problems – and intervene as they arise; they can hand you two or three key insights on sticky notes or cards at the end of each session; and they can huddle with you for a few minutes at the start of breaks. Ask your team to spread out at lunch, which is a valuable time to gauge what people are thinking and discussing.

Above all, don't try to be profound; simply be honest about what you've heard, learned and are still pondering. Also be brief – it's not about you; it's about your participants. You can always follow up with brilliant insights in your post-workshop communication.

EXAMPLE: PRECISION MEDICINE PROJECT VIGNETTE DISCUSSION

The Precision Medicine Team structured their post-vignette exercise discussion around the following questions:

- A common theme is about balancing the autonomy of the individual with the societal benefits of research. What are your thoughts on how to balance that?

- Another common theme is the imbalances of power. Does anyone want to share their thoughts on how to create balance in the policy-making process?

- What major ethical issues came up in your groups?

- We often hear about "dynamic consent" (or more choice) as the solution to balancing the spectrum of options with regard to broad and informed consent. Is anyone aware of other ways to think about consent?

- Does anyone want to share any reflections on the day: surprises, new ways to think about issues, new challenges?

- Are there any exemplary real-world examples that we should learn from or model?

A strong close

Closing strongly is critical at the end of a long day. The host's final remarks include thanking the participants for their time and contributions to move the work forward and clear communication of the next steps, timeline and calls for commitments.

Commitments from participants can be made personally (to themselves) and/or to the broader group.

- Personal commitments might include asking each attendee to address a postcard to themselves, sharing one or two key learnings and comments on how they want to be involved in this work going forward. You could also include a space for a commitment to further the work of the group (see below).

- Postcards can be collected and reviewed by workshop hosts and then posted to participants one or two weeks after the workshop. Writing down the commitment is powerful, even if it's on a worksheet or in a notebook. Consider inviting people to share their commitments aloud, "popcorn" style.

Commitments to the group – stated aloud – are important when there is further work to be done. These might include:

- Agreeing to engage in further testing of the framework with specific stakeholders not present at the meeting

- Participating in conference calls to review workshop insights and suggesting improvements to the policy framework

- Writing a policy-related white paper

- Sharing relevant case studies

- Reviewing and offering feedback on the next iteration of the policy framework.

Be sure to capture these commitments so that you can remind participants and reach out to them accordingly.

LOGISTICAL CONSIDERATIONS

Logistical needs vary, depending on workshop design, location and support. Attention to detail during planning will lead to a smooth workshop experience. It is therefore important to remember:

☐ Name tags (and extras)   ☐ Tape

☐ Templates   ☐ Notebooks/paper

☐ Worksheets   ☐ Power cords

☐ Postcards   ☐ Laser pointers

☐ Extra copies of pre-reads   ☐ Printer

☐ Sharpies   ☐ Emergency supplies

☐ Sticky notes (different sizes)   ☐ Specific AV needs

☐ Flip charts and easels (if needed)

STRUCTURING THE SCENARIO VIGNETTE EXERCISES

All participants should be assigned to small groups (four to six people is ideal), and seated at tables or areas in the main conference room before the exercise begins. Do your best to create diverse groups in terms of country, organization and demographic factors. Breakout rooms are not necessary if groups are able to work effectively around one large room. Also, having everyone in one room will make it easier for facilitators to float between groups and pick up on common themes or gently redirect conversation as needed. Make sure each group has sticky notes and sharpies for capturing ideas on their templates. Ask them to identify a volunteer recorder who can write legibly and if possible, assign a facilitator from your staff to each group.

Participants should receive a paper copy of their scenario vignette. Remind participants that these are stories intended to generate a deeper conversation, not stories that need to be debated or edited. You may consider giving participants all the vignettes, and highlighting the one or two that they will work on during the workshop. A slide at the front of the room that communicates how much time the groups will have to complete their exercise can be a helpful reference, as can a visual representation of the policy framework. (These can also be printed and made available on the tables.)

USING TEMPLATES

We recommend that you use templates to structure conversations around the vignettes. A template is simply a worksheet (often tabletop size in format) that guides participants through a series of questions about the vignette and the characters and themes it introduces. The template helps a small group self-facilitate and capture and share relevant ideas with each other and the broader group.

A good template:

☐ Breaks down what could be a complex conversation into a series of simpler steps

☐ Provides clear instructions and is easy to use

☐ Can be completed within the allocated time

☐ Asks important and interesting questions

☐ Is visual (and visually appealing)

☐ Offers sufficient space to write answers

☐ Includes a specific space to capture a few key insights so that report-outs will be appropriately focused and limited in time

☐ May have fun elements included (such as sketching a magazine cover or writing news headlines)

The template should help identify and capture key issues that emerge out of the group's discussion, and lead the group to connect the specifics of the scenario vignette to the broader issue at the core of the vignette *and* the policy framework. Issues you might have the group explore include:

☐ Matters at the heart of the conflict in the scenario vignette

☐ Winners and losers

☐ Critical policy or regulatory gaps

☐ Blindspots

☐ Ethical questions

☐ Obstacles and barriers

☐ Unintended consequences

☐ Pathways to resolution

☐ Counterfactuals: What alternative policy choice might have prevented the conflict or challenge from emerging in the first place?

☐ Common ground that can be the basis for compromise/cooperation

The questions you use on your template should be the same across all of the small groups, but customized to your framework, your team's needs for testing and feedback and the themes highlighted in your vignettes. We recommend that you test your template with colleagues in advance to make sure you are generating the conversations and feedback you need.

Templates can be different sizes:

- Shared templates (more than four people) are highly preferable

   ► Minimum size: 11" x 17" (280 x 430mm)

   ► Easier for collaboration: 27" x 34" (680 x 860mm) 27" x 34" or larger; use on tabletops, flipcharts or foam-core panel

- Individual templates, 8.5" x 11" (220 x 280mm), are best for reflection, not conversation

EXPECTED OUTPUTS AND NEXT STEPS

The point of using vignettes as a workshop tool is to help you improve your policy framework by making sure it serves diverse audiences and works in varied contexts (including future ones), enabling you to identify gaps in its coverage or applicability, imagining some of the obstacles it might face in its introduction and application, and anticipating ways in which it might need to adapt and change over time.

Just as we cannot predict the future, we cannot anticipate all of the concerns that future stakeholders who will be affected by the policy might have. The purpose of this exercise is not to get everything right or to be exhaustive in considering challenges and barriers, but to bring the collective knowledge of a diverse group of leaders and experts to the task of crafting a more thoughtful, ethical and adaptable policy.

It is hoped that a scenario vignette workshop like the one described above will also help you socialize your policy framework and its potential utility among key stakeholders, and identify areas of common ground that will help you resolve differences of opinion and move difficult conversations forward.

Your next steps after the workshop will be to revise the initial policy framework to reflect what you learned, and to share your insights and framework modifications with the participants and other stakeholders. If they are major, you may need a few more rounds of feedback and iteration, especially with critical audiences identified during the workshop. You may decide to repeat this workshop with a different group of stakeholders to test a revised framework. You may even develop some new vignettes to capture perspectives that were not included before.

Scenario vignettes can be a powerful tool in helping you to test and improve your developing policy framework and the components therein. Taking the time to integrate vignettes into a well-designed workshop is well worth the investment.

APPENDIX A

Scenario Vignettes And Templates:
Leapfrogging With Genomic Data

These vignettes were developed for the Leapfrogging with Genomic Data Workshop held at the World Economic Forum in July 2020. All situations are fictitious and written to drive thought-provoking conversations on the topic of genomic data policy and ethics. For questions, please contact elissa.prichep@weforum.org.

Structure
In the first round, two breakout groups received the consent vignette and two groups received the data privacy vignette. One of these breakout groups was asked to assume the persona of one character in the vignette when answering the template questions. The other group assumed the persona of the "opposing" character in the story. The same approach was taken in the second round, with two breakout groups receiving the data access vignette and two groups receiving the benefit-sharing vignette. Note that for each round of breakouts the instructions varied slightly, depending on the design of the report-out session.

PATIENT CONSENT GROUP DISCUSSION

Instructions
In your breakout group, identify a volunteer to fill out the large template with team input. This will be collected. Also, identify two volunteers to share their 30-second reflections on the group's discussion and insights during the "popcorn" share-out following this activity.

Please read the following vignette on patient consent and discuss the questions from the perspective of your assigned persona.

Patient consent vignette
By 2024, a major US corporation announces that massive parallel sequencing (MPS) has dropped the price of whole genome sequencing to less than $20 per genome. A country in eastern Africa, seeking to become a continental leader in healthcare as well as an attractive location for healthcare companies seeking to do work on the continent, decides to institute a newborn baby screening policy for all infants born in a hospital. The newborn baby screening policy will require screening and treatment for dozens of conditions to reduce preventable death and disabilities of babies at the time of birth. It will also include a provision that requires taking enough biologic sample to conduct whole genome sequencing. This biologic sample will inform research into population genomic markers and the development of a reference genome.

This country does not yet have the economies of scale or resources to conduct affordable whole genome sequencing nor the workforce to study the results. To make this plan happen, the country has come to a five-year agreement with the US corporation whereby the company will provide training on sample collection, development of a biobank in the country, inclusion of local researchers in research and sharing of information on certain findings. The company will also subsidize the cost of shipping, sequencing, storage and analysis of the genomic information in one of its own out-of-country facilities, so work can begin right away. Both sides are happy with this approach.

As a first step, both sides agree that an appropriate consent form needs to be put into place for parents of newborn babies subject to this policy. The company's Vice-President of Genomic Research recommends a broad consent form that will enable the use of genomic data in a range of future research endeavours so long as the data is de-identified to keep the participant's identity hidden. The country's Director of the National Ethics Review Committee in the Ministry of Health believes there should be a tiered approach to consent, as parents may want to limit the types of research for which the data could be used. Additionally, he is concerned about the lack of consent given by the actual owners of the data, who will not remain infants forever.

The country's Director of the National Ethics Review Committee and the corporation's Vice-President of Genomic Research meet to discuss what model of consent is appropriate . . .

Template questions: Patient consent vignette **_Persona: Major US corporation's Vice-President of Genomic Research_**	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

Template questions: Patient consent vignette *Persona: Director of the National Ethics Review Committee*	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

DATA PRIVACY GROUP DISCUSSION

Instructions

In your breakout group, identify a volunteer to fill out the large template with team input. This will be collected. Also, identify two volunteers to share their 30-second reflections on the group's discussion and insights during the "popcorn" share-out following this activity. Please read the following vignette on data privacy and discuss the questions from the perspective of your assigned persona.

Data privacy vignette

After several meetings with tribal elders and other members from an indigenous community living in a secluded region of the Andes Mountains, a researcher has earned their trust and they have agreed to participate in her research study. Maria knows this is quite special given the group's well-founded mistrust of outsiders, who have disrupted the community in the past.

She receives broad consent from community members to collect genomic data to search for the biomarkers that may provide clues to their remarkable ability to live at such high altitude. As one way to show her appreciation for their participation, Maria offers to share the results of her study with the tribal elders and study participants.

Her research does not find the biomarkers she was looking for, but it does reveal new information about the tribe's ancestry and how they came to settle in the region they currently occupy. Maria knows this tribe has a strong cultural mythos around their origins and homeland: They believe they are descendants of celestial deities assigned to be stewards of the land since the beginning of time. To her surprise, she

finds evidence of a blend of primarily European ancestry with African, Middle Eastern and indigenous ancestry.

These results could be devastating to the identity of the members of the indigenous tribal community. Furthermore, if she publishes, this information could reignite territorial tensions with another nearby indigenous population that have been simmering for years and, potentially, even attract government involvement to settle claims on land rights between these two groups. On the other hand, this research represents new information on migration patterns that scientists have sought to understand for years.

What is the appropriate balance between maintaining privacy and advancing knowledge? When is it appropriate not to share information?

Before bringing this to her university's institutional review board, Maria meets with the head of the tribal council to discuss . . .

Template questions: Data privacy vignette **Persona: Maria, the researcher**	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

Template questions: Data privacy vignette **Persona: The head of the tribal council**	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

DATA ACCESS GROUP DISCUSSION

Instructions

In your breakout group, identify a volunteer to fill out the large template with team input. This will be collected. The template will help you prepare for your "pitch" presentation. Your team will have between five and seven minutes to present your side, acting as your persona: What is the situation at hand, how do you want to see it resolved and why? Get creative and have fun!

Please read the following vignette on data access and discuss the questions from the perspective of your assigned persona.

Data access vignette

It's 2025, and the new Global Health and Genomic Treaty Organization (GTO) has developed an enforceable framework that governs health data transfers and access between all member countries. Genomic data, as an exceptionally sensitive form of personal data, is included in the framework. Countries or institutions outside of the GTO must show they have met certain "adequacy standards" on data collection, privacy, use and security prior to receiving data from GTO member nations through consortiums, federated data systems, or other data access models.

Unintentionally, this policy may upend a research project that's been in the planning stages for the better part of a year. Leon, a researcher at a major university in Nigeria has collected genomic data from over 100,000 cancer patients from several West African countries, forming one of the largest consortium biobanks in Africa. The biobank is run by the Nigerian government. Nigeria is not a GTO member.

Leon is collaborating with Genevieve, a researcher at a lab in France that has 50,000 samples from cancer patients of West African descent. Together, they are trying to better identify cancer biomarkers unique to certain African populations as part of a World Health Organization multi-stakeholder initiative on cancer prevention.

The two researchers received all ethics and institutional review board approvals needed to start the study, when they were informed that the Nigerian government has not met GTO adequacy standards related to handling genomic data. This prevents Genevieve in France from sending data to Leon. Nigeria does not have national restrictions on data leaving the country, so Leon can send data to Genevieve.

Upon learning of this, the Minister of Health of Nigeria contacts the GTO Head of Adequacy Standards. The Minister of Health accuses the GTO Head of institutionalizing a unidirectional flow of information, benefiting only the Global North and further increasing global

healthcare disparities. Nigeria will not be the only country affected by such standards. The GTO Head defends his organization's mission to protect and secure genomic information in an age of increasing cyberterrorism, data hacks and genomic espionage.

They acknowledge the current situation stands in the way of research intended to improve health and longevity and both want to find a resolution to data access . . .

Template questions: Data access vignette **Persona: Minister of Health of Nigeria**	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

Template questions: Data access vignette **Persona: GTO Head of Adequacy Standards**	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your personahass to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

BENEFIT-SHARING GROUP DISCUSSION

Instructions

In your breakout group, identify a volunteer to fill out the large template with team input. This will be collected. The template will help you prepare for your "pitch" presentation. Your team will have between five and seven minutes to present your side, acting as your persona: What is the situation at hand, how do you want to see it resolved and why? Get creative and have fun!

Please read the following vignette on benefit sharing and discuss the questions from the perspective of your assigned persona.

Benefit-sharing vignette

As baby boomer populations in the US, Europe and Japan are now in their late 70s and 80s, diseases such as Alzheimer's are the greatest public health issue. Pharmaceutical companies refocused their drug development efforts after numerous failed trials targeting amyloid beta about 10 years ago, but effective treatments remain elusive.

Public health researchers working in a South Pacific island notice that several native groups show no signs of dementia throughout their lives, which commonly extend well into the 90s.

Edward, the Head of Research at a European organization with strong ties in the region through its global funding initiatives contacts his counterpart, Oliana, at the leading South Pacific research organization. The two have worked together on numerous research projects in the past.

Edward is anxious to get genomic data on this population to begin research studies that may lead to a better understanding of Alzheimer's disease. Fortunately, Oliana shares that researchers at a nearby university have already collected this data as part of a regional genomic database initiative that was designed to improve health care. Information from the samples has already been digitized and is accessible through the cloud. Edward is thrilled! He asks when he can have access to the data.

Oliana reminds Edward that the long-standing agreement between their two organizations always provided benefits including capacity-building and training of local researchers in exchange for genomic information.

Edward baulks. That was the case for physical samples, but digital samples do not require the same level of engagement or investment, so should not carry the same expectations for benefits. Further, Edward knows that the organizations that fund his initiatives require open data access.

Oliana and Edward recognize there is no framework in place to govern the exchange of digital data, even though such agreements do exist for tissue samples and other biological data. Oliana firmly believes that such benefits must remain so as not to increase disparities in genomic capabilities between Global North and South. Information is information, regardless of its form of storage. She suggests that Edward send researchers to collect biological samples under the current framework that addresses the exchange of samples for health-related resources and capacity-building while the organizations work out an approach for digital samples.

But Edward pushes back, emphasizing the extra cost of sending personnel to the country and delays in research to address the global need for Alzheimer's disease treatments. The point of digitizing data is to reduce costs and speed up the access to data to foster more international research collaborations and advance scientific discovery.

Edward and Oliana know it is time to negotiate a benefit-sharing model for digital samples. . .

Template questions: Benefit-sharing vignette *Persona: Edward, Head of Research at European organization*	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

Template questions: Benefit-sharing vignette *Persona: Oliana, Head of Research at South Pacific Research Organization*	
What is the conflict about in this scenario?	Describe your persona's desired or ideal approach to a resolution in this scenario?
What is the underlying need(s) that your persona has to meet to resolve this situation?	What gaps or barriers are preventing this desirable future from being reached?
Is there anything else you'd like to mention?	

APPENDIX B
Example Scenario Vignette Workshop Agenda

LEAPFROGGING WITH GENOMIC DATA WORKSHOP

Thursday, 18 July 2019, 9:00 – 17:00

Centre for the Fourth Industrial Revolution

1202 Ralston Avenue, San Francisco, CA 94129

Overview

Genomic data is an especially sensitive form of health data, and its collection and use support scientific research, improved diagnosis and disease treatments that underscore precision medicine. Genomic data collection is accelerating, including in low- and middle- income countries (LMICs), to fill critical gaps in understanding populations not traditionally included in genomics and precision medicine. Without future looking data policies, countries face two main risks: 1) their genomic data does not inform scientific research that may lead to more population-relevant diagnostics and treatments; or 2) their genomic data may be used by and benefit primarily outside parties.

This workshop will bring together thought leaders in policy, bioethics, academia and industry to identify the design challenges and ethical tensions that need to be addressed in order to positively shape the trajectory of genomic data policy development. By exploring vignettes that focus on issues of patient consent, data privacy, data access and benefit sharing, participants will identify priority elements of data policies that are future-oriented and germane to the opportunities and risks faced by LMICs.

This workshop is under Chatham House rules.

CROSS-CULTURAL WORKSHOPS

Policy formulation is (or should be) a multi-stakeholder exercise, and in a global context cross-cultural as well. Exploring, framing and testing policies in cross-cultural workshops can produce rich, valuable conversations and insights, as well as challenges. Design with language and cultural diversity in mind.

- Attract participants able to actively participate by signalling, in the invitation, the types and levels of interaction involved.

- Use a graphic recorder to help participants track, process and communicate the workshop conversations and takeaways.

- Invite participants to respond to key questions in writing in advance if they may feel uncomfortable speaking aloud.

- Arrange/allow for translation, if needed.

- Be sensitive to different comfort levels with icebreakers, games, role playing and report-outs, and make sure there are other ways to meaningfully engage.

- Scrutinize story or character-driven devices such as vignettes and role plays for unconscious bias.

- Pay particular attention to participants' cognitive load.

PRECISION MEDICINE WORKSHOP AGENDA

8:00	Team arrival on-site; agenda run-through, distribution of break out materials
8:30 – 9:00	**Registration and breakfast**
9:00 – 9:10	**Welcome to the World Economic Forum and Precision Medicine Portfolio Overview** *Organization or project director*
9:10 – 9:35	**Interactive "Where do you stand?"** exercise and introductions *Lead facilitators* Participants will discuss their perspective on the trajectory of genomic data, providing context for the rest of the day

DESIGN NOTES: Where do you stand?/ introductions (25 minutes)

Moderator/facilitator demonstrates an imaginary line in the front of the room and identifies the center, the positive side and the negative side.

Facilitator asks all participants to line up horizontally according to whether they feel positively or negatively about the future (in 10 years) of the policy (genomic data use in LMICs). Is it a story of promise or peril?

Facilitator asks each participant to briefly share their name, organization and reflections.. Start at the poles, then the middle, then quickly debrief everyone else.

Facilitator asks all participants to move vertically. Move forward if they believe that policy makers (in government, international organizations, etc.) can have an impact on shaping the trajectory of the policy (genomic data collection and use). Move back if they don't. Quickly debrief people at the extremes.

9:35 – 10:20   **Opening Panel:** Promises and Challenges of Genomic Data

Select experts

A conversation on the practical and ethical issues raised by advancements in genomics and digital data, with:

Chief scientists engaged in collaborative genomic research

Clinical professor connected with LMICs

Chief executive officer of company providing AI-powered quality assurance for global medical systems

Senior executive/scientist, genomics testing company

DESIGN NOTES: Opening panel conversation and discussion (40 – 50 minutes)

Panel (25 – 30 minutes): Panelists introduce themselves. Then moderator/facilitator asks questions, such as:

- **Context:** Why haven't we seen huge data/AI advances in healthcare versus.other industries? How will that change?

- **Facing and overcoming obstacles:** What are we seeing in terms of different approaches, guidelines and laws (e.g. handling sensitive genomic data in LMICs)? For research? For business? For implementing systems? For international collaborations? For implementing genomic testing in specific countries?

- **The future:** Are you optimistic about the next 10 years? Why? How could LMICs "leapfrog"?

Group discussion (15 – 20 minutes): Moderator facilitates a group conversation about:

- Common concerns (e.g. increase in healthcare disparities around the world)

- Possible mitigations/solutions

- Underlying ethical issues and tradeoffs

- Personal experiences or stories

10:20 – 10:35   **Break**

10:35 – 10:45   **Project Overview and Workshop Objectives**

Lead facilitators

10:45-11:45 Diving into the Future: Breakout Scenario 1

Designed to facilitate an exploration of a future 10 years from now in which genomic data has affected norms regarding data privacy and how we engage with patients through consent processes

DESIGN NOTES: Breakout scenario vignette exercise, round 1 (60 minutes)

Break participants into four groups of approximately six. (For groups of eight, two subgroups of four will work.)

Each group has a staff facilitator and chooses a volunteer reporter and a volunteer recorder to fill out the group's vignette templates.

The breakout groups read and discuss the first vignettes (data privacy) and complete the template from the perspective of their assigned persona (30 minutes).

Next they read and discuss the second vignettes (patient consent), again completing the template from the perspective of their assigned persona (30 minutes).

During the breakout, facilitators refocus people if they go off on tangents. The goal is to understand policy barriers and gaps, ethical underpinnings of these issues and potential avenues for resolution related to patient consent, data privacy, data access and benefit sharing.

Staff collect the templates and submit their own reflections to the lead facilitator before the end of the day.

11:45-12:05 Plenary: "Popcorn" Share

Members of each breakout group share how they approached their future situation

DESIGN NOTES: Plenary discussion (20 minutes)

Two members of each group present their top two or three bullet points.

- **Person 1 answers:** What did the group get stuck on or find difficult to resolve?

- **Person 2 answers:** What outcomes or insights did the group have?

During or after the report-outs, the moderator/facilitator may raise questions, such as:

- Would this be different in a different country? For different stakeholders?

- How might the trade-offs change if the stakeholders, incentives, regulations, use cases, or outcomes were different?

For example,

- Regarding patient consent, how might consent be affected at a US hospital that may be screening all newborns? If countries don't allow parents to opt-out, does the corporation have an ethical duty to cancel the deal? Should the child ever be able to withdraw consent? When the corporation finds actionable genomic mutations in individual samples, how should they deal with them?

- Regarding data privacy: Does it matter that the researcher received broad consent ahead of time? Is it ever ethical to sacrifice some privacy for the good of research? Would it be different if her findings were medical in nature instead of only about migration patterns?

12:05-13:00 Lunch

13:00-14:00 Diving into the Future: Breakout Scenario 2

> Designed to facilitate an exploration of a future 10 years from now in which genomic data has affected norms regarding data access and benefit sharing from research. Be prepared to offer a creative "pitch" about your policy solutions.

DESIGN NOTES: Breakout scenario vignette exercise, round 2 (60 minutes)

Participants return to their four existing breakout groups. Each group has a staff facilitator and volunteer reporter to fill in the group's vignette templates.

Two groups receive a vignette on data access and two groups receive a vignette on benefit sharing. The breakout groups first read and discuss their vignette from the perspective of their assigned persona and complete the questions in the template (~40 minutes).

Next, the groups spend about 20 minutes to develop a "pitch story", or skit, on how their persona seeks to address the conflict with the opposing persona. The group may take a cooperative or hard line approach. Creativity and props are encouraged in acting out their position.

Note: Acting out the situation helps participants immerse into the situations described in the vignettes and can lead to deeper insights and surprising discoveries.

14:00 – 14:45 Diving Into The Future: Pitch

> Exploration of the key factors and consequences that emerged in your scenario and how your group recommends addressing those from "your" assigned perspective
>
> Counter-points offered by group assigned an alternative perspective

DESIGN NOTES: "The pitch" in plenary (45 minutes)

Each group has between five and seven minutes to present their pitch: What is the situation at hand? How do you want to see it resolved and why? Groups are encouraged to be creative and act this out and/or use props.

Sequence the groups' presentations by vignette (data access groups go first, one followed by the other). Then they (and the observers) will ask each other questions.

After a total of 20 minutes on the first vignette, switch to the other vignette (i.e. benefit sharing) and repeat the same exercise.

14:45 – 15:00	**Break**

15:00 – 15:45	**Diving Into the Future: Common Ground**

Participants are re-combined into four new groups to develop common group and solution-oriented recommendations

DESIGN NOTES: Common ground (45 minutes)

Four new groups with staff facilitators move to different corners of the space. Each group gathers around a white board (with sticky notes and pens). At least one volunteer offers to debrief.

- The moderator explains the goal: To seek resolutions from the previous question as quickly as possible. Top-of-mind answers are encouraged.

- Identify key problems (~10 minutes): Individuals write, on sticky notes, the key problem to solve (1 – 2 minutes). The first volunteer answers. The facilitator collects and piles all similar answers together, noting themes. Repeat until the sticky notes are gone. Agree on and write the main one or two problems on the top of the board.

- Identify "success" (~five minutes): Individuals capture what success looks like from the perspective of their persona on sticky notes. Repeat the above process.

- Identify ethical motivations (~ five minutes): Individuals capture their persona's ethical motivation on sticky notes. Repeat the above process.

- Identify solutions (~10 minutes): Pair up and brainstorm solutions leading to success. Capture ideas on sticky notes. After a few minutes, have people share ideas regarding why and whether that solution will work.

- Assess ethical needs (~10 minutes): Ask if the solutions meet the identified ethical needs. Why? Why not? Options? Hold an open discussion.

Staff photograph white boards and submit, with their own reflections, to the lead facilitator.

15:45 – 16:45	**Plenary: Share and Discussion**

Members of each breakout group share how they reconciled their future situation and all participants engage in a discussion of key themes and what they learned

DESIGN NOTES: Plenary discussion (60 minutes)

Moderator/facilitator invites shared reflections on the breakout activity: How did they try to solve the issue and address the ethical concerns? For example, discuss:

- Balancing individual autonomy and societal benefits (e.g. of research)

- Addressing imbalances of power in the policy-making process

- Other ethical issues (e.g. "dynamic consent" or greater choice)

Moderator invites shared reflections on the day: Surprises, new ways to think about issues, new challenges, exemplary real world examples to model.

**16:45 – 17:00   Postcard to Self, Commitments and
                     Closing Remarks**

Lead facilitators

Each attendee addresses a postcard to themselves, sharing a
key learning and how they want to be involved in this work in
the future

Reflections on the day and next steps for the Leapfrogging with
Genomic Data workstream

DESIGN NOTES: Closing session
(15 minutes)

Postcard to self/commitment: Lead facilitator
asks each attendee to addresses a postcard to
themselves, identifying a key learning and how they
would like to be involved in this project in the future,
such as:

- Sharing case studies that represent best
  practices

- Writing a policy recommendation white paper

- Developing an ethics framework

Reflections: Lead facilitator invites comments using
a "popcorn" approach.

Next Steps: Lead facilitator describes what to
expect next from the convening organization.

APPENDIX C
Scenario Planning and Design Resources

SCENARIO PLANNING

Chermack T. *Scenario Planning in Organizations: How to Create, Use and Assess Scenarios.* Berrett-Koehler, 2011. (A comprehensive, if somewhat academic, guide to scenario planning in theory and practice.)

Ranen, M. Scenario Planning. 2019. (A series of accessible articles that break down the value and process of scenario planning.) http://bit.ly/2PpTiEo

Scearce, D. and Fulton, K. *What If?: The Art of Scenario Thinking for Nonprofits.* Global Business Network, 2004. (A comprehensive, easy-to-use guide for non-profits and policy-makers.) https://community-wealth.org/sites/clone.community-wealth.org/files/downloads/report-scearce-et-al.pdf

Schwartz, P. *The Art of the Long View: Planning for the Future in an Uncertain World.* Doubleday Currency, 1996. (A classic – an accessible and time-tested introduction to the what, why, and how of using scenario planning.)

Wilkinson, A. and Kupers, R. "Living in the Futures." *Harvard Business Review,* May 2013. (Lessons from Royal Dutch Shell's pioneering and ongoing experience with scenarios.) https://hbr.org/2013/05/living-in-the-futures (link as of 18/2/20).

Wilkinson, L. "How To Build Scenarios," *Wired,* November, 1995. (Scenario planning at a glance.) https://www.wired.com/1995/11/how-to-build-scenarios/ (link as of 18/2/20).

FORESIGHT

Bishop P., Hines A., and Collins T. "The Current State of Scenario Development." *Foresight,* 2007; 9(1). (An overview of different foresight and scenario creation methods.) http://www.andyhinesight.com/wp-content/uploads/2012/10/68-The-Current-state-of-scenario-development-foresight-march-2007.pdf (link as of 18/2/20).

Jackson M. "A Practical Foresight Guide – Methods." *Shaping Tomorrow;* 2011. (A compilation of different foresight techniques; other available chapters address foresight and planning.) https://www.shapingtomorrow.com/media-centre/pf-ch03.pdf (link as of 18/2/20).

DESIGN AND FACILITATION

Ertel, C. and Solomon, L.K. *Moments of Impact: How to Design Strategic Conversations that Accelerate Change.* Simon and Schuster, 2014. (An excellent guide and toolkit for designing and executing productive meetings.) https://www.amazon.com/Moments-Impact-Strategic-Conversations-Accelerate/dp/1451697627 (link as of 18/8/20).

Gray, D., Brown, S, and Macafuno, J. *Gamestorming: A Playbook for Innovators, Rulebreakers and Changemakers.* O'Reilly, 2010. (An extensive assortment of games, exercises, and techniques to generate new ideas, and improve communication and collaboration.)

Senge, P., et al. *The Fifth Discipline Field Book:* Strategies and Tools for Building a Learning Organization. Nicholas Brealey, 1994. (A classic, with many ideas for designing and facilitating productive conversations.)

FUTURE TRENDS

US National Intelligence Council. *Global Trends 2030: Alternative Worlds.* Office of the Director of National Intelligence, 2019. (The latest in a two-decades long set of global trends documents focused on US national security – but broadly applicable.)https://www.dni.gov/index.php/who-we-are/organizations/mission-integration/nic/nic-related-menus/nic-related-content/global-trends-2030 (link as of 18/8/20).

World Economic Forum. Assorted reports on global issues. https://www.weforum.org/reports (link as of 18/8/20).

NOTABLE REPORTS: SCENARIOS IN ACTION

Kahane, A. "Learning From Experience: The Mont Fleur Scenario Exercise." 2010. (Describes one of the most famous and influential scenario projects, which was conducted in South Africa in 1993.) www.reospartners.com/learning-from-experience-the-mont-fleur-scenario-exercise/ (link as of 2/3/20).

Rockefeller Foundation. "Scenarios for the Future of Technology and International Development," 2010. (A thorough scenario report on a topic of global importance.) http://www.nommeraadio.ee/meedia/pdf/RRS/Rockefeller%20Foundation.pdf (link as of 18/2/20).

Special thanks to master scenarists Jonathan Star (Scenario Insight and Matt Ranen for their contributions to this list.)

APPENDIX D

Templates

These three templates – "Crafting the Concepts", "Capturing the Conflicts" and "Drafting the Story" – were created to help teams develop their own scenario vignettes. They are intended to be used sequentially, moving from broader, general ideas for a set of vignettes or a single vignette (Templates 1 and 2) to the story elements of one specific vignette (Template 3). Instructions for each are provided below.

CRAFTING THE CONCEPT

Start with this template to explore the big picture. Use it to brainstorm the elements for a range of possible vignettes or as a first step in drafting one vignette.

In your team, discuss and capture:

- Timeframe: What year in the future is your vignette set (ideally five to 10 years in the future)?

- Project themes: What themes or dilemmas do you want to explore with your vignette (e.g. privacy, access, equity, public benefit)?

- Key characters: What stakeholders and constituencies will be affected by your policy (e.g. government ministries, indigenous populations, corporations, patients)?

- Geographies/context: Where/in what context might the vignette be set or play out (e.g. the US, LMICs, at a corporate shareholders meeting, during/after a highly visible protest)?

CAPTURING THE CONFLICTS

Now is the time to get more specific about the ideas you generated in the first template. You can still be working at the level of vignette sets or on one specific vignette. If you are defining a set of vignettes, consider connecting the story elements that go together after your brainstorming (e.g. link them by drawing lines or symbols, such as stars and triangles, using different-coloured markers). You can start in any section of this template; prompts are included for each at the bottom of the page.

- Conflicts or tensions: What tensions or conflicts could arise from the key themes or dilemmas you've identified? These usually reflect different, strongly held priorities or perspectives. You might draw inspiration from current news stories/headlines.

- Persona sets or pairs: Start to be more specific about the personas who might be on opposite sides of the conflict or tension and why. What kinds of organizations, roles and identities might they inhabit?

- Basic plot lines: What precipitating events (e.g. new laws, discoveries, disasters) might bring the conflict – and the different perspectives of the personas?

DRAFTING THE STORY

Now you're ready to get very specific and focus on one vignette. Drawing on the previous template, you might divide up your team members to work on different vignettes involving different conflicts, personas and plot lines. Again, you can start in any section of this template.

- Time and place: Exactly when (year, month if meaningful) and where (country, context, such as a conference, governmental hearing, media broadcast) is the vignette taking place?

- Core issue: What is the key dilemma or issue (from Template 1) that you are addressing?

- Conflict: What conflict is at the core of this issue?

- Personas: Who are the people who are in opposition? Give them names, titles and organizational affiliations (can be fictional), perspectives, concerns, motivations and actions. Think about their back stories and personalities.

- Precipitating event: What has happened or is happening to bring these personas together or out into public?

- Question(s) to resolve: What questions does this raise for the personas and the larger set of stakeholders? Think about how these might be resolved.

Now you are ready to begin writing the vignette. Start with a simple draft.

- What is the situation in which your personas are operating?

- What is the complication or precipitating event that has arisen?

- What is the question that your personas (and eventually, your workshop participants) are left to resolve?

Like most creative exercises, your vignette is likely to involve multiple iterations. Refer back to the section on "Features of good scenario vignettes" for more guidance (p. 8). If you decide that your structure doesn't quite work (this happens often), go back to your earlier templates and try out some different elements.

The ultimate test of your vignettes is how they work together as a set. Your vignettes should be divergent, representing different issues, stakeholders, and tensions or tradeoffs that matter most to your project.

CRAFTING THE CONCEPT

Future Year _____

PROJECT THEMES

▶

▶

▶

▶

▶

Key issues or dilemmas
(e.g. privacy, security, accuracy, public benefit)

KEY CHARACTERS

Stakeholders/constituencies affected by the policy: Government ministries, indigenous populations, corporations, etc.

GEOGRAPHIES AND CONTEXTS

Settings
Where: the EU, the U.S., LMICs. etc.
What: Corporate shareholders meeting, global conference, big protest)

WORLDVIEW STUDIO

CAPTURING THE CONFLICTS

Timeframe _____

CONFLICTS OR TENSIONS	PERSONA PAIRS OR SETS	BASIC PLOT LINES

Recent Headlines

Look for personas who are different, but interact, e.g. citizen/government; consumer/corporation

Explore differences across culture, wealth, power, ideology, age, geography, etc.

Precipitating events, e.g. new laws, discoveries, elections, national disasters

WORLDVIEW STUDIO

DRAFTING THE STORY

TIME AND PLACE(S)	CORE ISSUE	CONFLICT

PERSONAS	PRECIPITATING EVENT	QUESTION TO RESOLVE

WORLDVIEW STUDIO