



Strategic Foresight 101: Introduction to Strategic Foresight Methodologies

GSA's Center of Excellence (CoE) Innovation Adoption (IA)

practice created this resource to help orient you to some strategic foresight and design futures methods to help your organization better anticipate risk and prepare proactively for the future.



Centers of Excellence
Resources & Advisory Support



2022 OPM Federal Workforce Priorities.

In May 2022, OPM identified eight workforce priorities, four primary and four enabling, and tasked agencies with choosing two to help improve their workforce over the next four years.

Priority 8 focuses on **Developing an Agency Foresight Capability**, which includes:

- Leveraging the power of foresight to minimize surprise
- Creating anticipatory governance and planning culture
- Conducting future scenario planning
- Identifying emerging skills and future challenges

Overview

This guide includes information about:

- The IA practice at the CoE
- Strategic Foresight and Design Futures methods
- Examples of how to use futures and foresight methods to better anticipate uncertainty and proactively address future risk



About the CoE

Accelerating IT Modernization across government

As part of GSA's Technology Transformation Services (TTS), the Centers of Excellence (CoE) accelerates IT modernization at federal agencies by leveraging private sector innovation and government services while centralizing best practices and expertise for holistic agency-wide transformation.

Advisory Support & Resources

The CoE has launched a new collection of starter guides, templates and models from each center and practice area available to federal agencies and the public. Through American Rescue Plan funding, this work furthers our mission of centralizing best practices and expertise for holistic technology transformation and is provided at no cost to users.

Using these resources, Federal agencies can take the first steps in their modernization journey by considering concepts themselves while also receiving live instruction at virtual workshops and office hours hosted by CoE leads.

[Stay tuned](#) for new releases from all of our centers and practices!



**CoE RESOURCES
& ADVISORY SUPPORT**



What is Innovation Adoption (IA)?

IA is an approach that integrates evidence-based behavioral approaches and intrapreneurial strategies with Organizational Change Management (OCM).

- **Organizational Change Management (OCM)** refers to the practice of helping an organization move from their current state to a desired state, often oriented around a specific, timebound change, but extending beyond that narrow scope and timeframe.
- **CoE's Innovation Adoption practice** layers innovation practices and intrapreneurial practices in with traditional OCM methods to uniquely position change as a market-focused shift in providing new products and services.
- **IA also leverages evidence-based disciplines outside traditional OCM**, such as behavioral science, infusing greater rigor and more modern techniques into a transformation challenge.
- **IA at the CoE brings knowledge of Federal communities** so we can partner with the right stakeholder and 'helpers' inside and outside our partner organizations.



Strategic Foresight Methods Guide



Use this guide to understand some foresight methods.

Section 1

Define strategic foresight and design futures: Understand what strategic foresight is, and how futures thinking can help foster resilience.

Pages 7 - 11

Section 2

Review a strategic foresight process: Learn about aspects of the futures process and the steps that foresight practitioners may take to scan for trends, build scenarios, and understand implications.

Pages 12 - 16

Section 3

Try out futures methods: Build the foundation for enhancing your foresight knowledge and practice by using some of the futures methods in a hands on session.

Pages 17 - 29

Section 4

Learn more: Join an optional office hours to talk to foresight practitioners about their experience.

Pages 30 - 35



Section 1

Defining Strategic Foresight.

Understand strategic foresight and learn how foresight helps you anticipate future needs.

This section includes the following information:

What is strategic foresight?

What is design futures?

Why you would use foresight in your planning process?

How do governments and policymakers use foresight?



What is Strategic Foresight?

A structured and systematic way of using ideas about the future to anticipate and better prepare for change.

According to the Office of Personnel Management, “strategic foresight is not about predictions of the future. In a complex and uncertain world accurate prediction is a fiction. Strategic foresight instead, is about **being prepared for different futures that are all possible, plausible and preferred.**” There is no one future, and in fact a wide spectrum of futures is possible.

We can use foresight methods to:

- Uncover a range of possible and plausible alternative futures
- Identify the indicators or signals that can show us how the future is unfolding right now
- Determine the futures we want to avoid and plan for how we can avoid potential future pitfalls
- Build more resilient long-term strategies that consider a range of plausible scenarios to ensure proactive response
- Test out how key stakeholders, including the public, might react to a potential future scenario



What is Design Futures (e.g., Speculative Design)?

Placing new technological developments within imaginary but believable everyday situations to debate implications before they happen.

According to design academics Dunne and Raby (2013), speculative design (e.g., Design Futures) is “the practice of hypothesizing future products, systems, and services to conceptualize how they might affect societies of the future.”

Design Futures helps us think about the following questions:

- How can we use our imaginings about the future to change how we do work today
- What futures we want to create and what futures we want to avoid
- How and for whom do we build futures
- How to connect today’s work to tomorrow’s vision
- How we might address challenges and opportunities around the future
- What artifacts from the future we can create to help us make sense of a future world



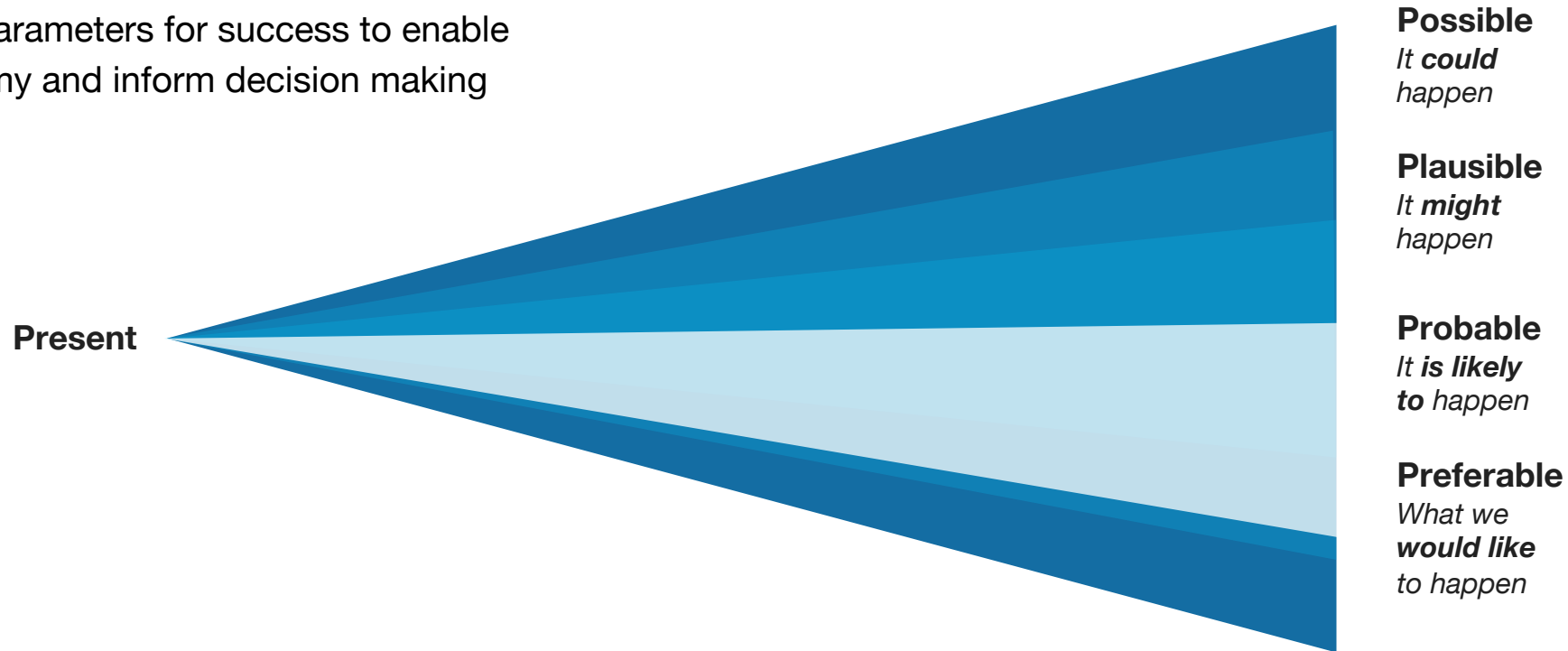
Image: Strategic Innovation Lab, OCAD University, Canada (n.d.)
*Note: citations do not represent an endorsement by the General Services Administration.

Why foresight?

Foresight can help us take a human-centered systems approach to problem solving and risk management.

Strategic foresight and futures thinking:

- Allows for **resilient strategy**
- Identifies risks for mitigation
- Explores possibilities and pitfalls
- Gives parameters for success to enable autonomy and inform decision making



Foresight Example: Future of Open Justice

The UK Policy Lab together with HM Courts & Tribunal Service reconsidered how the principle of open justice should be delivered in the future.

They created a series of story-based provocations illustrating possible future scenarios. These scenarios were used to lead a series of group discussions.

The provocations helped participants think about the future and allowed Policy Lab to distill common principles to use when designing specific delivery mechanisms.



Images: Bruce, R. (2019). UK Policy Lab Using speculative design to explore the future of Open Justice.

Section 2

Reviewing strategic foresight process steps.

Review strategic foresight process steps and what activities can happen at each step.

Strategic foresight process overview

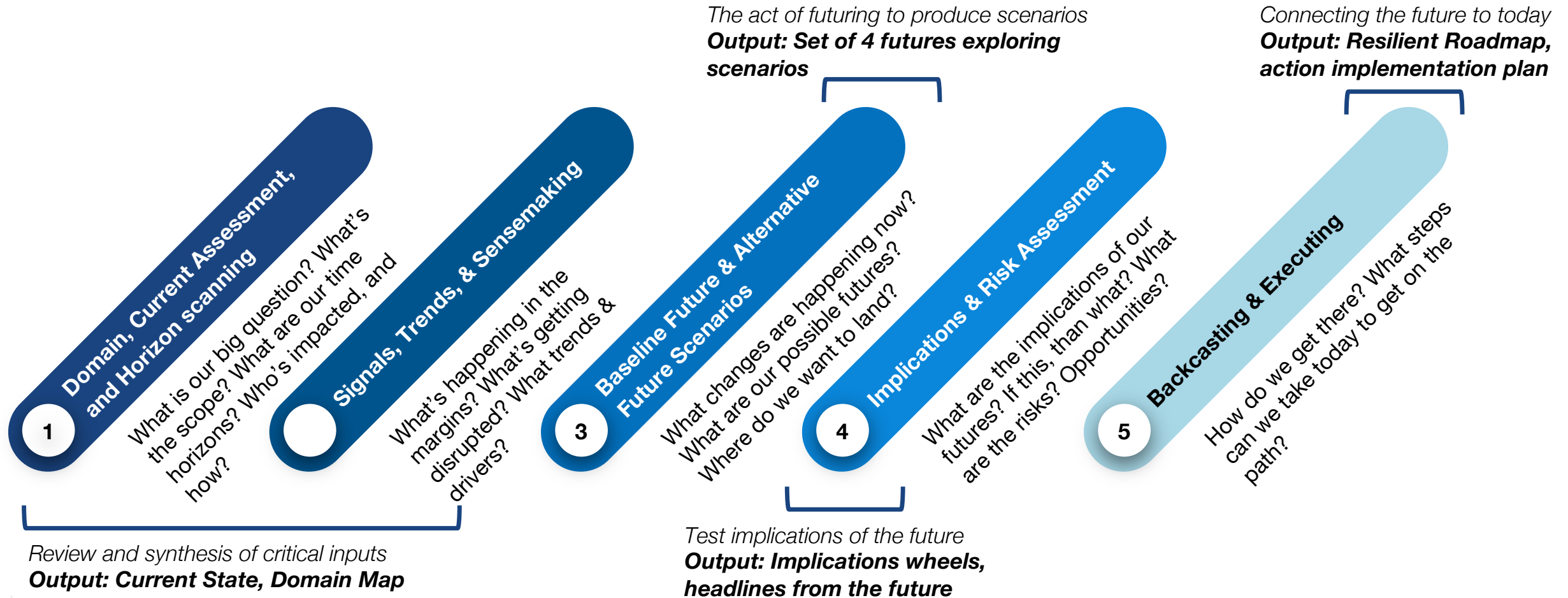
The role of STEEP+V in foresight

Strategic foresight process details



The Foresight Process Overview

What are some key steps and outputs in a strategic foresight process?



The role of STEEP+V in foresight

STEEP+V is a key part of environmental scanning in strategic foresight, and can help contextualize implications of future scenarios.

STEEP+V (Social, Technological, Economic, Environmental, Political, and Values) gives us additional lenses for review signals, trends, and implications for the future, and help us become aware of connections across STEEP+V lenses. These connections are the foundation for shaping future scenarios. **It is important to consider STEEP+V factors as you scan for signals and work through the implications of your scenarios.**

1. Social

Factors related to human culture, work, education, demography, communication, and migration.

2. Technological

Tools, systems, devices, infrastructure, networks, and “made culture.”

3. Economic

Factors around money, financial systems and tools, exchanges, transactions, and business and business models.

4. Environmental

The living environment, the natural world, resources, climate, health, and sustainability.

5. Political

Policy, governance, regulations, rules, organizational systems, and legal issues.

6. Values (additional lens)

Refers to trends and drivers that touch on factors such as ethics, spirituality, and ideology.



The Foresight Process: Details

While there are different foresight models and methodologies, generally most foresight projects contain the following steps. Depending on the model used, these steps may be called different names and contain different action steps.

1. Domain and Horizons

- ✓ Framing your project and domain/topic using STEEP+V
- ✓ Defining current conditions within your domain - what's happening today? How did we get here?
- ✓ Setting your time horizons for scanning (e.g. Horizon 1: Current world, Horizon 2: Near future, Horizon 3: Far future)

2. Sensing and Sensemaking

- ✓ Conducting environmental scanning for signals and trends
- ✓ Reviewing trends by STEEP+V lenses, scanning across time horizons
- ✓ Analyzing trends to identify signals of change
- ✓ Identifying key drivers, weak and strong signals that will influence your future scenarios

3. Scenarios

- ✓ Using key drivers, signals, and artifacts from the future, outlining potential futures
- ✓ Building different future scenarios
- ✓ Linking emerging trends to preferred vision for the future
- ✓ Creating stories from the future
- ✓ Beginning to imagine future worlds by creating artifacts from the future

The Foresight Process: Details Continued

4. Implications and Risk

- ✓ Understanding implications for future scenarios
- ✓ Proactively identifying potential future risks in scenarios
- ✓ Identifying potential possibilities, pitfalls, and unintended consequences of future scenarios



5. Backcasting to Action

- ✓ Prioritizing issues and opportunities in the future
- ✓ Committing to a preferred future scenario to work towards
- ✓ Creating opportunities for stakeholders and users to interact with the potential future

Section 3

Learning Selected Foresight Methods.

Review the following methods cards to help you understand how to use selected future methods to build more resilient, long-term strategies.

This section presents the following foresight and futures methods:

Postcards from the future (provocations of a future world)

Sensemaking: Signals and Trends

Scenario Building

Implications/Futures Wheel

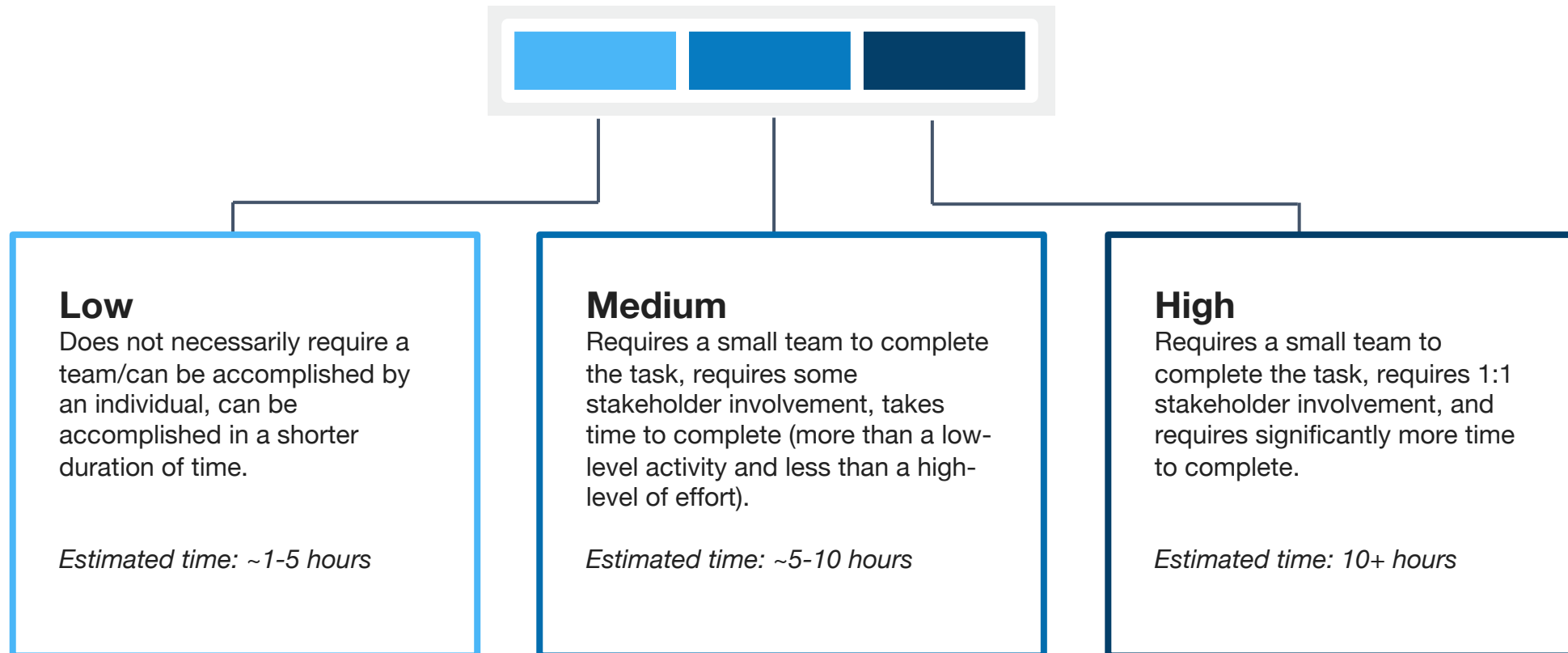
Headlines from the Future



Levels of Effort

How much time will it take?

These foresight and futures methods have varying levels of effort – some can be completed in an hour, and others may take a longer time. We have identified the level of effort for each of these methods to help you consider which might work best for you.





What and How:

Provocations and provocative statements about the future to help participants imagine a future world based on signals.

Creates mini-artifacts from the future.

1. Collect initial trends and drivers to inform your future world.
2. Each participant should think of as many provocative statements and commonplace reactions around a future world as possible in a given amount of time. There are no right/wrong answers.
3. Based on a trend or signal, ask participants to complete the following sentence "In a world where x (x being a provocative statement about something that is true in a future world), people will y (y being a commonplace reaction to that provocative future statement). This allows participants to set the status quo for a future world.
4. For example: "In a world where **robotic pets can sense their owner's medical emergencies before they happen**, people will **have improved health outcomes.**"



Pros

- Lightweight futures activity
- Does not require a lot of time to facilitate
- Allows for many participants to contribute
- Creates mini-artifacts from the future



Cons

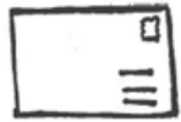
- Requires prep time to identify and synthesize emerging trends and signals within your domain
- Requires additional time to identify participants with diverse perspectives to generate a wide array of future worlds



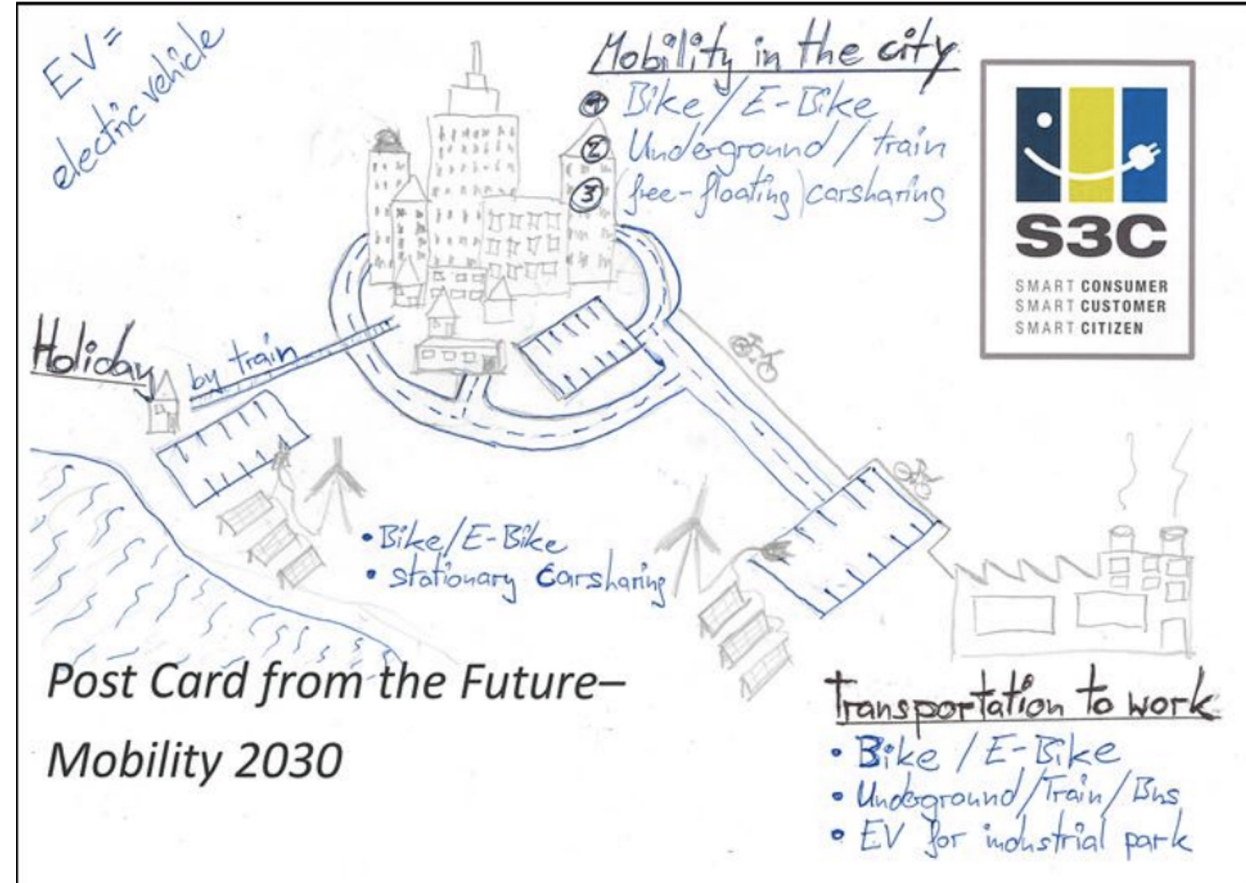
Example:

What do you need to do?

What do you expect mobility



to be like in 2030?





What and How:

Review emerging signals and trends across multiple time horizons to make sense of what is going on now and what may be coming in the future.

1. Assess your current state by considering these questions: what is your key issue? What are your time horizons? What's the recent history in your domain (topic area)?
2. Map out your domain and identify key sub-topics in your domain, including STEEP+V factors.
3. Begin scanning to identify signals and trends. Utilize sources like alerts, blogs, journals, doctoral dissertations, etc.
4. As you scan, think about what catches your eye as odd, uncommon, or completely out there.
5. Track your trends based on time horizons so that you can evaluate weak signals, strong signals, and wildcards.
6. Ensure that you consider a wide and divergent range of sources.
7. Consider building trend cards that summarize the trend, its potential impacts to your domain, and the time horizon.



Pros

- Trends and signals will help inform your key drivers and help you develop scenarios
- The further you push out, the more signals you will have to inform your scenarios



Cons

- Too much data may cause analysis paralysis
- You will need to be mindful of both your personal and organizational biases in your scanning
- Requires additional time to identify divergent or fringe sources (Horizon 3: Far future) as you scan to ensure you have enough signals to build your alternative futures



Example:



Preparing for Catastrophic Biological Incidents

Current Trend

The COVID-19 pandemic underscores the importance of building resilient systems that can detect and withstand catastrophic biological incidents. These incidents can significantly affect public health. For example, they can increase rates of disease and death, disrupt health care delivery, and worsen longer-term public health concerns such as drug misuse and mental health.

GLOBALIZATION

CLIMATE CHANGE

URBANIZATION

increase the probability, intensity, and frequency of catastrophic biological incidents.



Individual and collective stressors weaken systems needed to prepare for, detect, respond to, and recover from these incidents. For example, there have been a variety of funding challenges, including declining funding for public health, uneven investments in health care, reactionary and disease-specific funding, and limited funding to prepare for high-consequence, lower-probability events.

Fragmentation within and across federal and nonfederal governments and the private sector makes it harder to build integrated capabilities and to coordinate with international partners. Moreover, the vast range of threats—intentional, accidental, and naturally occurring—makes it difficult to effectively prepare.



In addition, **mistrust** of government and science can frustrate response and recovery efforts.

In September 2020, Pew Research Center reported that **only 20% of Americans trust government.**

Drivers of Uncertainty

Preparedness funding—for robust public health systems, strategic and integrated investment approaches, and lower-probability events—faces sustainability challenges as crises recede and priorities shift.



The National Biodefense Strategy may not fully drive change across fragmented agency missions to prepare for unpredictable threats that could occur simultaneously.



Integrating data to create reliable information for timely national situational awareness, detection, response, and recovery is a significant challenge.



Federal efforts to build a more resilient medical supply chain may not be sufficient to allow for rapid access to supplies during future catastrophic incidents.



Progress to enhance trust in government and science and overcome disparities in health care may be uneven and challenging.





What and How:

Scenarios are plausible stories of how uncertainties could play out in the future in your domain. They are informed by both strong and weak signals and influenced by key drivers.

1. If using the 4 Archetypes approach to scenario building, decide on your scenario archetypes (for example Continuation, Collapse, Transformation, and New Equilibrium).
2. Identify the driving forces for each of your scenarios.
3. Use your key drivers to anticipate the outcomes of each scenario. What will happen in that future world? How will your drivers influence or impact that future scenario?
4. Name your scenario with a title that describes the future world.
5. Build out your narrative for each scenario, including a few sentences to describe what that world looks like, and a brief paragraph to describe what's happening in that future.



Pros

- Easy scenario building technique that's ideal for teams or individuals new to foresight
- Produces a robust set of scenarios for different alternative futures, as well as a continuation scenario, which represents a baseline future
- Creates examples of future worlds for stakeholders to react to



Cons

- Requires robust set of key drivers and an analysis of what drivers will look like in each scenario
- Does require a higher level of effort to build out each world



Example

Houston Foresight used a scenario archetype approach to build scenarios for NASA around the Future of Work.





What and How:

Identifying implications, impacts, possibilities, and pitfalls associated with key changes in future scenarios. Map the domino effect of potential consequences, identify risks, and communicate complex relationships.

1. Select one of your scenarios and identify a change or key challenge associated with your scenario that you'd like to review.
2. Place your change in the middle of the futures wheel.
3. Begin to identify the direct or "first order" impacts of that change. If that change in the middle happened, what would happen next?
4. Identify indirect or second order consequences. If the first order consequence happened, what would happen next?
5. Identify third order consequences. If the second order consequence happened, what would happen next?
6. Map connections between different impacts. Consider layering STEEP+V factors onto the futures wheel for further analysis.
7. Analyze and prioritize implications to identify actions.



Pros

- Map connections between implications
- Proactive identify risks and opportunities associated with your future scenario
- Helps you to plan for proactive risk mitigation
- Allows a diverse range of stakeholders to contribute to implications and opportunities



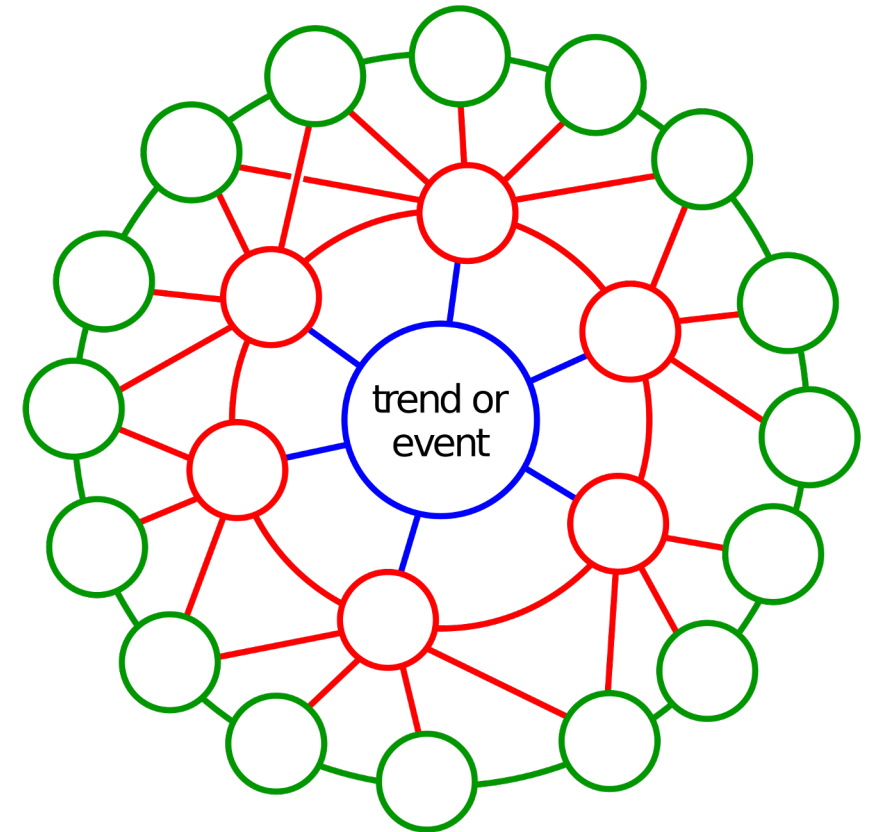
Cons

- Selected scenarios may need additional time spent creating multiple futures wheels
- You may need additional time to identify a diverse group of perspectives to ensure implications are as diverse and divergent as possible



Example

Futures Wheel
Example: Adopting
Single Payer
Healthcare

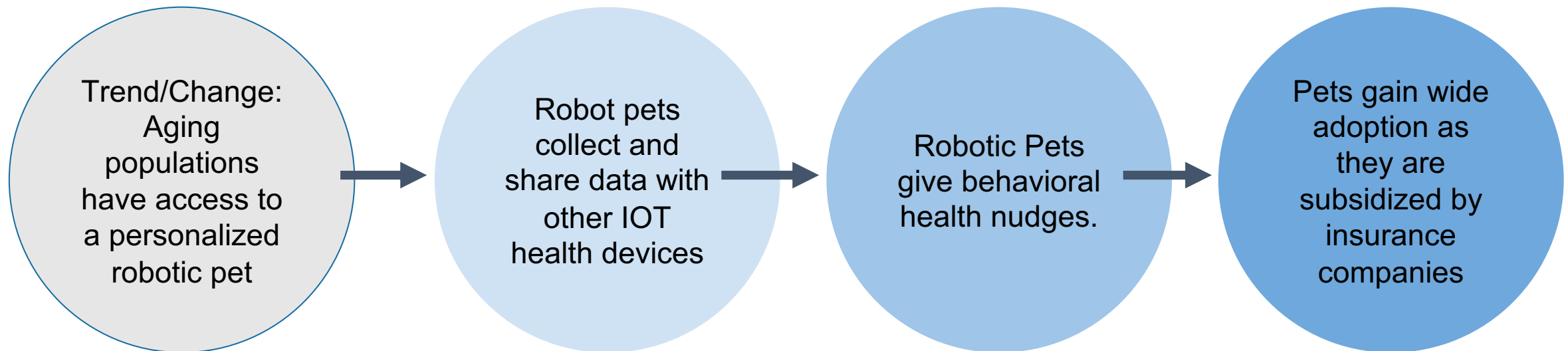




Example

Robotic Pets

Combating dementia and loneliness in aging populations





What and How:

A way to visualize the future you are trying to build and identify the outcomes you want to achieve. These hypothetical events are representative of the type of change you'd like to see in a particular scenario.

1. Review the key drivers for your scenario.
2. Brainstorm a series of headlines that might appear on the news that would demonstrate progress in your future.
3. Additionally, brainstorm headlines that would indicate that you are not making progress or are experiencing unintended consequences.
4. Think about what these headlines would look like 10 years and 20 years in the future.
5. Review your headlines to identify key themes across the visions for the future. What might those themes mean for what you will do today?



Pros

- This is a great opportunity to bring in stakeholders to help imagine the future world
- Headlines can help create a roadmap of progress towards your vision of the future
- Headlines are a lightweight futures exercise to encourage world building



Cons

- Headlines are not intended to be precise predictions for the future
- You need a strong set of drivers to help inform your headlines
- You may need additional time to include diverse perspectives in the activity of generating headlines



Example

FUTURE HEADLINES

Use this when you are planning for the future, and you want to visualize hypothetical endpoints, so that you can build a product & build stronger business stories.

- 1 Group definition**
Come up with a definition for your category.
 - Use the "we define [category] as..." textboxes under the category title to write your final group definition.
 - You can use the space below the textbox to brainstorm before finalizing.
 - 5 minutes
- 2 Draft headlines**
 - Write several headlines that incorporate your aspirations as if you've achieved them by taking the next step.
 - Imagine how someone has responded to your actions. Add date and author and some photos to make your headline come alive.
 - 10 minutes
- 3 First share-back**
 - Each group will share their first drafts of the three headlines.
 - After each group shares, the other groups will share one thing they liked, and one thing to be improved upon.
 - 1 minute to share, 1 minute for feedback
- 4 Play and iterate**
 - Change the words in your headline, date or attribution to quickly iterate on impact of your headline.
 - Incorporate at least one piece of feedback into your updated headline.
 - 10 minutes

	WORST-CASE	BUSINESS AS USUAL	BEST-CASE
SOCIAL/ENTERTAINMENT	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.
TECHNOLOGICAL	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.
ECONOMIC	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.	[HEADLINE] Date: [DATE] Author: [NAME] [PHOTO] Add a photo to accompany your headline.

Image: Mural. (n.d.). Future Headlines Template. *Note: citations do not represent an endorsement by the General Services Administration.



Section 4

Learn more about foresight methods.

Now that you've previewed a few foresight and futures methods, consider how you might use them to help identify and address future risks.

This section reviews the following information:

Additional considerations

What happens next?

How can I get more support?



Additional Considerations: Taking a DEIA lens in foresight work

“Foresight relies heavily on diverse perspectives, the elimination of groupthink, and the inclusion of all points of view when envisioning, designing and building a preferred future for all” – 2022 Federal Workforce Report



Viewing the process through the lens of DEIA is essential to ensure that the future scenarios you are building are inclusive and reflective of diverse perspectives across your organization.

Opportunities to focus on DEIA in this Guide include:



Reviewing sources of your trends and signals

- What sites or sources of information are you using to generate your signals and trends?



Considering who should be at the table for defining the future

- How are you identifying key stakeholders?
- How are you bringing in diverse perspectives as you build future scenarios?
- Who might be missing or not represented?
- How are you considering accessibility needs?

Additional Considerations: Taking a DEIA lens in foresight work

DEIA at TTS is defined as follows:

Accessibility considers ability to access the tools and capabilities that allow for equal and full participation

At TTS this means providing reasonable accommodations, training for best practices and manual testing, developing and procuring accessible software, supporting the Section 508 team and their responsibilities and flexible work schedules.

[More on DEIA approach and initiatives at TTS](#)

Diversity centers the representation of voices and experiences. At TTS, this means org-wide and leadership demographics, career progression, and programming. TTS plays a key role in developing the government’s digital products and services. It is imperative that the diversity of our team reflects that of our country.



Equity implores us to examine the impacts of the structures and systems that govern our policies, processes, and decision-making
At TTS this means special opportunities and awards, promotions and pay, and performance reviews.

Inclusion belonging focus on the culture of the workplace environment. At TTS this means offering special opportunities and awards, promotions and pay, performance reviews.

Closeout and Next Steps

In this guide, you reviewed:

- Definitions of strategic foresight and design futures and the strategic foresight process
- A set of key foresight/futures methods you can use to proactively build resilience into your future plans

Now, you're ready to start building out foresight capacity in your agency:

- Start by setting your domain, and tracking emerging trends, issues and signals
- Consider using some of the futures methods in this guide to bring stakeholders together to help define what's possible for the future

For additional support from subject matter experts, attend the office hours on June 30 at 11:00 am ET.



CoE Approach to Strategic Foresight

We integrate design futures and strategic foresight best practices and methods to guide our work. There are a number of methods available and highlighted below are a subset of references we use as part of our CoE Strategic Foresight service offering. We do not endorse any one method.

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Partnering with our Centers and Practice Areas

Government departments and agencies partner with the CoE to co-create and accelerate their modernization initiatives. Our model focuses on bringing in the right people, at the right time, to drive sustainable outcomes.

Experienced

- **Top talent.** Federal employees with public and private sector experience in modern capabilities
- **Industry experts.** A dedicated team with subject matter expertise to meet your modernization needs

Human centered

- **People first.** Use human-centered design to identify and validate needs, priorities and key stakeholders
- **Inclusive and agile.** Deliver on roadmaps to address pain points, through prototyping and enterprise implementations

Results driven

- **21st century capabilities.** Migration of legacy systems to modern platforms and capabilities
- **Sustained success mindset.** Enable partner agencies to support their own technology modernization.



Thank you.

To learn more, email us at connectcoe@gsa.gov.



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