



# Scenario Planning Sample Syllabus

## Description

This syllabus serves as a flexible template designed to introduce the foundations of scenario planning, particularly for students and professionals aiming to advance their careers in state and local government. Scenario planning, as explored in this course, refers to a strategic decision-making tool that helps communities anticipate and prepare for an array of possible futures. The course emphasizes the use of driving forces and scenario development to support adaptive policy-making and resilient strategies in the face of uncertainty. Instructors and program developers are encouraged to adapt this syllabus based on specific learning objectives, institutional goals, audience needs, or regional priorities.

## Objectives

By the end of the program, students will be able to:

- Compare and contrast the different models of scenario planning and criteria for selecting suitable models to achieve community goals.
- Explore how different models of scenario planning have been used to prepare communities for uncertainties in the future.
- Develop a scenario planning process for guiding communities to develop scenarios and responsive strategies and policies for different scenarios.
- Identify and analyze data on indicators for monitoring how driving forces change over time.
- Develop performance metrics for measuring the impact of different policy options.

## Main References

Goodspeed, R. (2020). Scenario planning for cities and regions: Managing and envisioning uncertain futures. Lincoln Institute of Land Policy.

Stapleton, J. (2020). How to use exploratory scenario planning (XSP): Navigating an uncertain future. Columbia University Press.



## Weekly Plan

### WEEK 1 | WHAT IS SCENARIO PLANNING?

#### Objectives

This module aims to provide a foundational understanding of scenario planning by exploring its origins and the ways in which different perspectives on urban planning have shaped its development. Learners will examine why scenario planning is a valuable tool for planners, how it is applied in practice, and will compare various approaches to understand their unique strengths and limitations.

#### References

Goodspeed, R. (2020). Scenario planning for cities and regions: Managing and envisioning uncertain futures (Ch. 1 "The kind of problem a city is," Ch. 2 "Scenario planning defined," Ch. 3 "Competing approaches"). Lincoln Institute of Land Policy.

Lincoln Institute of Land Policy. (2020). Scenario planning 101. <https://lincolninst.catalog.instructure.com/browse/non-credit-courses/courses/scenario-planning-101>

FFFat MIT. (2011, December 15). Introduction to scenario planning video [Video]. YouTube. <https://www.youtube.com/watch?v=yVgxZnRT54E>

Shell. (2017, December 10). Navigating an uncertain future [Video]. YouTube. <https://www.youtube.com/watch?v=nwub4Bhr-aM>

#### Discussion Prompts

How do different approaches to scenario planning compare in terms of their similarities, differences, benefits, and limitations?

Considering a community you live in or hope to work with, what scenario planning approach would you recommend to address a key issue, and why?

### WEEK 2 | WHAT ARE THE DIFFERENT TYPES OF SCENARIO PLANNING?

#### Objectives

This module focuses on how planners have adapted scenario planning concepts for use in urban planning, highlighting both the benefits and challenges of engaging diverse stakeholders in the process. Learners will analyze real-world case studies to identify



effective scenario planning practices and will consider how and when a hybrid approach can be used to balance the creation of a shared vision for the future with the need to address uncertainty.

## References

Goodspeed, R. (2020). Scenario planning for cities and regions: Managing and envisioning uncertain futures (Ch. 4, "Scenarios in urban planning"; Ch. 6, "Effective scenario practice"). Lincoln Institute of Land Policy.

National Center for Smart Growth. (2018, April). Engaging the future: Baltimore-Washington 2040. <https://www.umdsmartgrowth.org/wp-content/uploads/2018/04/39317-UMD-Printing-Presto-Long-report-FINAL-1.pdf>

Envision Utah. (2013, December 19). Envision Utah history – 2007 [Video]. YouTube. [https://www.youtube.com/watch?v=H1hhmKHxRbc&list=PLjD0Mnwna3y2EE8PcYX\\_UnH7oHO1OoE4y&index=16](https://www.youtube.com/watch?v=H1hhmKHxRbc&list=PLjD0Mnwna3y2EE8PcYX_UnH7oHO1OoE4y&index=16)

Lincoln Institute of Land Policy. (2021, January 8). Developments in South Salt Lake, UT [Video]. YouTube. <https://www.youtube.com/watch?v=Lx8EW08-W18>

Lincoln Institute of Land Policy. (2021, January 8). Transportation in Little Cottonwood Canyon [Video]. YouTube. <https://www.youtube.com/watch?v=XbZIRDiHfKA>

## Discussion Prompts

What are the challenges, scenario planning approaches, and outcomes of two cases from the readings or media?

How might each case have benefited from a different or hybrid scenario planning approach, and why?

## WEEK 3 | TRENDS AND FORESIGHT

### Objectives

This module introduces the field of foresight and its importance for planners in anticipating and preparing for future change. Learners will identify key trends and driving forces impacting various communities and regions, and examine how these forces, along with foresight and futurist principles, have been used to navigate uncertainty. The module also includes an evaluation of strategic plans developed through scenario planning processes to assess their effectiveness and adaptability.



## References

Goodspeed, R. (2020). Scenario planning for cities and regions: Managing and envisioning uncertain futures (Ch. 7, "Defining scenario project outcomes"). Lincoln Institute of Land Policy.

Hurtado, P. (2021, February 10). The future of planning is agile, people-centric, and technologically advanced. American Planning Association. <https://planning.org/blog/9211711/the-future-of-planning-is-agile-people-centric-and-technologically-advanced/>

Kedge. (2017). Strategic foresight primer: Unlock the futurist mindset. [https://issuu.com/kedgefutures/docs/kedge\\_foresight\\_primer](https://issuu.com/kedgefutures/docs/kedge_foresight_primer)

Ryan, R. (2020, March 24). Scenario planning for anxious times. Rebecca Ryan. <https://rebeccaryan.com/blog/scenario-planning-for-anxious-times>

Ryan, R. (2020, September 13). Developing a futurist's mindset: Signals and sensemaking. Rebecca Ryan. <https://rebeccaryan.com/blog/developing-a-futurists-mindset-signals-and-sensemaking>

American Planning Association. (n.d.). APA foresight. <https://planning.org/foresight/>

Gomez, A. (2021). Urban air mobility: PAS QuickNotes 91. American Planning Association. <https://planning.org/pas/quicknotes/91/urban-air-mobility/>

Salvatico, Y. V. (2018, January 10). Four ways to overcome blind spots using strategic foresight. GreenBook. <https://www.greenbook.org/mr/market-research-methodology/4-ways-to-overcome-blind-spots-using-strategic-foresight/>

Taylor, J., & Mohammadi, N. (2020, December 1). Smart city digital twins: PAS QuickNotes 89. American Planning Association. <https://planning.org/publications/document/9209455/>

The Futures School. (2020, February 13). The Futures School introduction to strategic foresight [Video]. YouTube. <https://www.youtube.com/watch?v=mTUv5c6w07s&t=3s>

## Discussion Prompts

What are the key forces that influence organizational or institutional planning and implementation?

Which two driving forces do you believe most impact planning in two different communities, and why?



## WEEK 4 | EXPLORATORY SCENARIO PLANNING PART 1

### Objectives

This module focuses on the concept of exploratory scenario planning, explaining its purpose and how it differs from other planning methods. Learners will review examples of how various agencies have applied exploratory scenarios in practice, examine how these scenarios can be used to monitor change and support better decision-making, and assess the benefits, limitations, and outcomes of using this approach in planning contexts.

### References

National Cooperative Highway Research Program (NCHRP). (n.d.). Guidance for scenario planning. [http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36Task145/NCHRP\\_08\\_36\\_145\\_FINAL\\_Abstract.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36Task145/NCHRP_08_36_145_FINAL_Abstract.pdf)

Sonoran Institute. (2019, November 8). What is exploratory scenario planning? [Video]. Vimeo. <https://vimeo.com/371935801>

Stapleton, J. (2020). How to use exploratory scenario planning (XSP): Navigating an uncertain future. Columbia University Press. <https://www.lincolnst.edu/publications/policy-focus-reports/how-use-exploratory-scenario-planning-xsp>

Stapleton, J. (2020). Exploratory scenario planning: How to navigate an uncertain future [Policy brief]. Lincoln Institute of Land Policy. <https://www.lincolnst.edu/publications/policy-briefs/exploratory-scenario-planning/>

Friedrich-Ebert-Stiftung Australia (FES AU). (2020, October 30). The APSA we want: Four scenarios for 2040 [Video]. YouTube. <https://www.youtube.com/watch?v=ti7uOnxwoo0>

Lincoln Institute of Land Policy. (2020, October 7). MSOP Phoenix: Superstition Vistas [Video]. YouTube. <https://youtu.be/J1y4wzmi9vw>

Mid-Region Metropolitan Planning Organization. (2019, September 24). The target scenario [Video]. YouTube. <https://www.youtube.com/watch?v=Dt4oQUXKFg0>

TEDx Talks. (2015, July 15). The mark of climate change on America's national parks / Jeff Mow / TEDxWhitefish [Video]. YouTube. <https://www.youtube.com/watch?v=1lky5MAIsXI>



## Discussion Prompts

How might one of your selected driving forces (week 3) evolve across four different future scenarios (e.g., dystopian, business-as-usual, utopian, and one of your choice)?

What specific impacts or conditions would define each of these futures in relation to that driving force?

## WEEK 5 | EXPLORATORY SCENARIO PLANNING PART 2

### Objectives

This module focuses on the scenario planning work of the Delaware Valley Regional Planning Commission (DVRPC), with an emphasis on exploratory scenario planning (XSP). Learners will compare and contrast the predictive, explorative, and normative categories of scenarios produced by DVRPC, and explore how the organization has applied XSP in practice. The module also examines how scenarios can be used to monitor change, support public dialogue, and guide long-term policy decisions. Finally, students will evaluate the role of the Futures Group in advancing the use of XSP within the region.

### References

ARUP. (2019). 2050 scenarios: Four plausible futures. <https://www.arup.com/perspectives/publications/research/section/2050-scenarios-four-plausible-futures>

ARUP. (2019, December 3). Four plausible futures: 2050 scenarios – Arup [Video]. YouTube. <https://www.youtube.com/watch?v=waeySF6h6po>

Delaware Valley Regional Planning Commission. (2020, July 6). Connections 2050: We can't always predict the future, but we can prepare for it [Video]. YouTube. <https://www.youtube.com/watch?v=3hQ82GnEX2Q>

Fusco, B., & Davis, J. (Eds.). (2020). Dispatches from alternative futures: Exploratory scenarios for Greater Philadelphia. Delaware Valley Regional Planning Commission. <https://www.dvrpc.org/Reports/20012.pdf>

Lundberg, K. (2024). To plan, first imagine: Exploratory scenario planning in Greater Philadelphia [Case study]. Delaware Valley Regional Planning Commission. <https://www.lincolnst.edu/case-studies/to-plan-first-imagine-exploratory-scenario-planning-greater-philadelphia/>



## Discussion Prompts

Choose one of the four scenarios from the DVRPC Dispatches report - delayed expectation, people power, technology in the driver's seat, and inclusive tech - for careful analysis:

What key issue does your chosen DVRPC scenario highlight, and why is it significant over time?

What actions would you propose in response, and what outcomes would you hope to achieve?

## WEEK 6 | DEVELOPING A SCENARIO PLANNING PROCESS

### Objectives

This module guides learners through the key steps of a scenario planning process and introduces various models for designing such processes. Students will apply effective practices and lessons learned from previous implementations to new planning contexts, while also distinguishing the unique features of different scenario planning models. Additionally, the module examines the benefits and challenges of collaboration, with a focus on engaging diverse stakeholders throughout each stage of the planning process.

### References

Cuellar, A., Cannady, K., Hanson, T., & Sánchez-Prieto, M. (2024). Pathways for affordable housing initiatives: A community-led scenario planning toolkit (1-day workshop). Lincoln Institute of Land Policy. <https://www.lincolninst.edu/publications/working-papers/pathways-affordable-housing-initiatives-community-led-scenario-planning-toolkit/>

Cascadia Partners LLC. (2024). Housing choices game: A scenario planning activity toolkit. Lincoln Institute of Land Policy. <https://www.lincolninst.edu/publications/working-papers/housing-choices-game-scenario-planning-activity-toolkit/>

Federal Highway Administration. (2016). Supporting performance-based planning and programming through scenario planning. U.S. Department of Transportation. [https://www.fhwa.dot.gov/planning/scenario\\_and\\_visualization/scenario\\_planning/scenario\\_planning\\_guidebook/fhwahep16068.pdf](https://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/fhwahep16068.pdf)



Futrell, J. (2019). How to design your scenario planning process: PAS Memo. American Planning Association. <https://www.planning.org/pas/memo/2019/jul/>

Stapleton, J. (2020). How to use exploratory scenario planning (XSP): Navigating an uncertain future. Columbia University Press. <https://www.lincolnst.edu/publications/policy-focus-reports/how-use-exploratory-scenario-planning-xsp> (Figure 1: The typical XSP process of two workshops, p. 15; Figure 14: Arc planning process, p. 59; Figure 21: The step-by-step process used in PRESTO, p. 69)

## Discussion Prompts

What are the key similarities and differences between the scenario planning processes outlined in Futrell's PAS Memo and the FHWA guidebook?

Based on one of these approaches, how would you define objectives and outline steps to guide a scenario planning process for your community or region?

## WEEK 7 | SOFTWARE TOOLS

### Objectives

This module introduces learners to the use of software tools in scenario planning, highlighting the key benefits they offer for enhancing analysis, visualization, and stakeholder engagement. Students will differentiate between various scenario planning software tools and explore when and how these tools can add value to the planning process. The module also encourages learners to consider situations where no-tech or low-tech approaches may be more appropriate, emphasizing the importance of selecting tools that align with the context, resources, and goals of the planning effort.

### References

ArcGIS. (2020, July 21). ArcGIS Urban – Transforming urban planning and design [Video]. YouTube. <https://www.youtube.com/watch?v=ScuSibogDpA>

Avin, U. (2016). Sketch tools for regional sustainability scenario planning (Chs. 3–4). National Cooperative Highway Research Program. <https://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36SketchToolsforRegionalSustainability.pdf>



City Explained, Inc. (2013, November 4). Overview [Video]. YouTube. <https://www.youtube.com/watch?v=2BHjF5xfi00&t=197s>

Goodspeed, R. (2020). Scenario planning for cities and regions: Managing and envisioning uncertain futures (Ch. 5, "Digital scenario tools"). Lincoln Institute of Land Policy.

Higgins, N., Waltersdorfer, D., & Zissman, J. (2019). Guidance for scenario planning (Section 4, Tools for Scenario Planning). National Cooperative Highway Research Program.

[http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP\\_08\\_36\\_145\\_FINAL\\_Abstract.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP_08_36_145_FINAL_Abstract.pdf)

### Softwares

ArcGIS Urban: <https://www.esri.com/en-us/arcgis/products/arcgis-urban/overview>

Community Viz: <https://communityviz.city-explained.com>

Envision Tomorrow: <http://envisiontomorrow.org/>

Urban Footprint: <https://urbanfootprint.com/>

### Discussion Prompts

Which digital tool do you believe is most useful for scenario planning in most communities, and what context factors support its use?

In what situations would you recommend this tool over a no/low-tech approach or another digital option, and why?

## WEEK 8 | STAKEHOLDER ENGAGEMENT

### Objectives

This module emphasizes the importance of stakeholder engagement in scenario planning and encourages learners to defend its value in building inclusive, responsive processes. Students will justify the use of principles and approaches that integrate diversity, equity, and inclusion into engagement efforts. The module also explores the selection of appropriate online and in-person games to facilitate meaningful participation, and introduces interactive tools that help stakeholders understand and navigate tradeoffs within different scenarios.



## References

Communication Coach Alex Lyon. (2018, November 14). What is a stakeholder? [Video]. YouTube. [https://www.youtube.com/watch?v=2\\_u7Nv7Wh-M](https://www.youtube.com/watch?v=2_u7Nv7Wh-M)

Erich Pommer Institut. (2018, June 27). The Harvard principles of negotiation [Video]. YouTube. <https://www.youtube.com/watch?v=RfTaIFeEKKKE>

Future 500. (2014, January 8). What is stakeholder engagement? [Video]. YouTube. <https://www.youtube.com/watch?v=VHGTSewbOJY>

Magnin, A. (2015, May 26). Community engagement: City of Canning (Australia) [Video]. YouTube. <https://www.youtube.com/watch?v=H5Jg99J6tZI>

Metropolitan Transportation Commission. (n.d.). Create-a-Future™ [In-person scenario planning game]. <https://www.planbayarea.org/2050-plan/horizon/create-futuretm>

Metropolitan Transportation Commission. (n.d.). Mayor of Bayville [Online scenario planning game]. <https://bayville.planbayarea.org/>

TEDx Talks. (2017, November 29). Questions change everything in community engagement / Max Hardy / TEDxStKilda [Video]. YouTube. <https://www.youtube.com/watch?v=JViKndm2y9E>

Western Student Services. (2016, December 20). What is community engagement? [Video]. YouTube. <https://www.youtube.com/watch?v=Eqwxife716M>

Wheatley, J., & Decision Center for a Desert City. (n.d.). WaterSim [Interactive tool]. Arizona State University. <https://sustainability-innovation.asu.edu/dcdc/watersim/>

Wheatley, J., & Decision Center for a Desert City. (n.d.). WaterSim Arizona [Scenario tool]. Arizona State University. <https://sustainability-innovation.asu.edu/dcdc/watersim/watersim-arizona/>

## Discussion Prompts

How can online or in-person games be used to effectively engage stakeholders in scenario planning?

In what ways might these games support or limit equitable participation, and how do your examples illustrate this?



## Assignment Ideas

### ASSIGNMENT 1

For this assignment, you are invited to apply what you've learned about scenario planning by developing a draft process for a specific community or region. Your goal is to design a scenario planning process that could help that community prepare for future uncertainties in a thoughtful, inclusive, and strategic way.

Start by selecting a community—this could be a place you currently live, have lived in the past, or hope to work with in the future. Next, identify the relevant stakeholders who should be involved in the planning process. These might include residents, community organizations, government departments (municipal, county, state), or regional partnerships. Then, research opportunities where these stakeholders might naturally come together, such as public meetings, local events, or workshops, and use this as a basis to design a stakeholder meeting.

In your meeting design, outline its purpose and create a timeline of activities that would guide participants through a scenario planning process. The meeting should begin with a brainstorming session to identify driving forces that may shape the community over the next 50 years. Participants should then rank these forces based on their level of impact and uncertainty. Using the two most significant forces, construct a 2x2 scenario matrix, placing one force on the horizontal axis and the other on the vertical axis. Then, write a brief description of what the future could look like in each of the four resulting quadrants. Your scenarios should consider key social, political, economic, technological, environmental, and fiscal implications.

To support your process, include a written explanation or short self-recorded video reflecting on your meeting design. Discuss the purpose of the meeting, the objectives behind each activity, and the results you hope to achieve. Also consider potential challenges you might encounter in facilitating the meeting, and how you would address them. Reflect on what success would look like if your meeting were carried out effectively and had the intended impact.

Finally, include the scenario matrix that would result from your meeting, along with a short paragraph describing each of the four scenario narratives. This assignment is intended as a draft planning process, so focus on clearly communicating your logic, creativity, and understanding of scenario planning principles. You are welcome to make assumptions where needed, as long as they are explained.



## ASSIGNMENT 2

Building on the foundation you developed in Assignment 1, where you identified key driving forces and created future scenarios for a selected community or region, Assignment 2 asks you to design the second phase of a scenario planning process. This phase will focus on helping your community prepare for long-term uncertainty by identifying strategies for monitoring change, developing flexible policy responses, and establishing performance metrics to track and communicate the impacts of those policies over time.

To begin, continue working with the same community or region you selected for Assignment 1. Revisit the list of relevant stakeholders—residents, local organizations, government departments, or regional partners—and consider how they might be involved not only in designing the process but also in implementing actions, tracking progress, and sharing findings with the broader public. Identify existing events, forums, or platforms where stakeholder engagement could naturally occur and use that as a foundation to design a new stakeholder meeting.

This meeting should be clearly structured and purposeful. Design a set of time-bound activities that guide participants through three major objectives: first, developing a strategy to monitor how the selected driving forces may change over the next 50 years; second, designing flexible policy options that could respond to those changes; and third, determining how to measure the effectiveness of those policy responses and communicate outcomes with the wider community. As in Assignment 1, you will explain the thinking behind your meeting design in either written form or a short self-recorded video. Be sure to address the purpose of the meeting, the intended results of each agenda item, anticipated challenges, and how you would navigate them. Also reflect on what successful facilitation would look like.

Your assignment should also include anticipated outcomes from this meeting. Begin by listing indicators you would use to monitor changes in the driving forces, along with the kinds of data and information needed for each indicator, and how these would be shared publicly. Then, outline activities and policy responses tailored to each of your original four scenarios. Finally, describe how the implementation of these policy responses would be monitored over time, specifying the data sources and sharing strategies you would use.

To complete the assignment, create a visual timeline that illustrates how your selected driving forces might evolve over the next 50 years, how policy responses would be triggered, and how their impacts would be assessed and adapted as necessary. This timeline should help visualize the dynamic relationship between monitoring, action, and community adaptation through time.