

Foresight for Planners

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American Planning Association

Planning Michigan 2024 | September 26, 2024



American Planning Association

Creating Great Communities for All

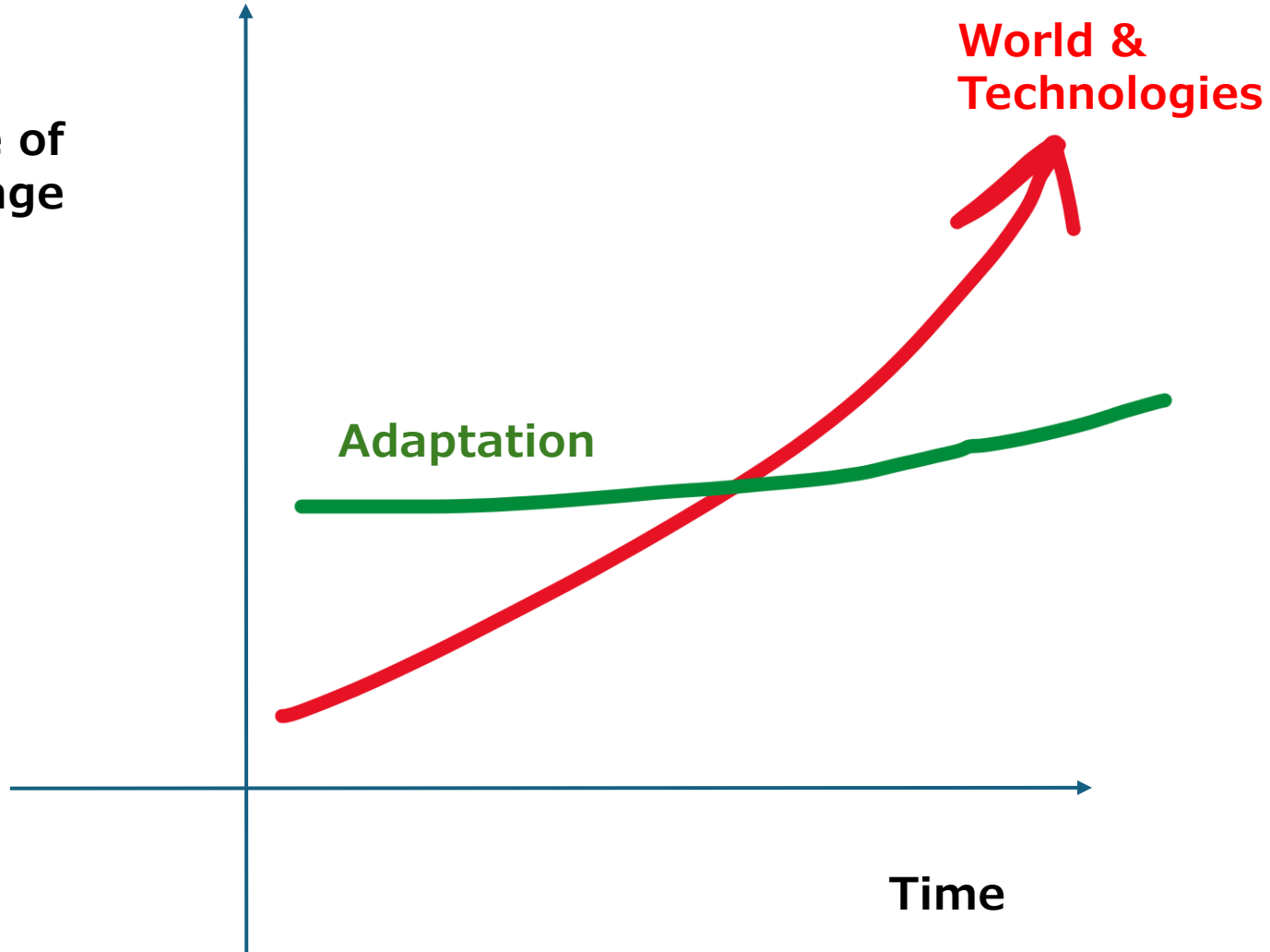


LINCOLN INSTITUTE
OF LAND POLICY



**We live in a world of
accelerating change**

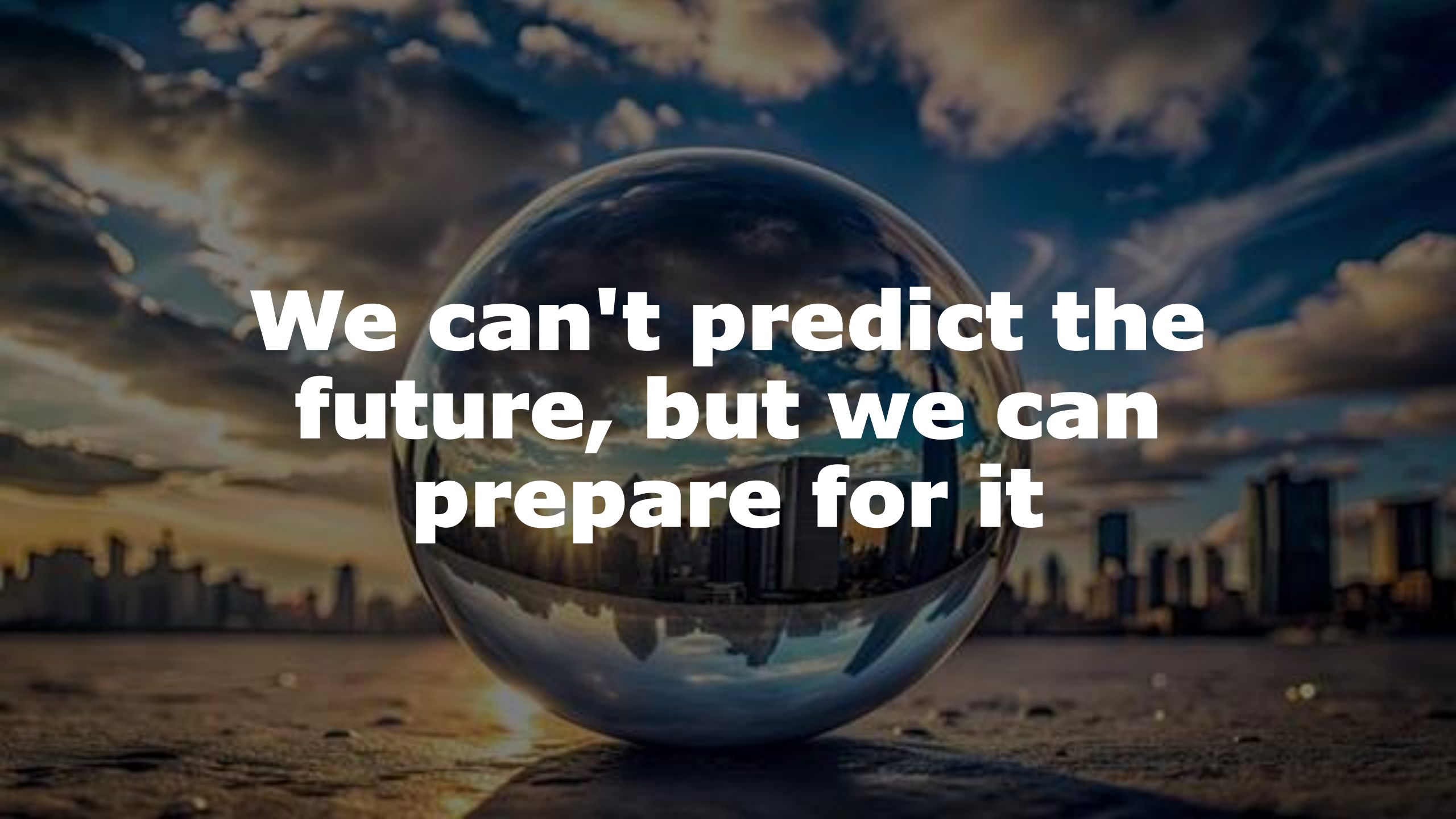
Rate of change



World & Technologies

Adaptation

Time

A large, highly reflective sphere sits on a sandy beach at sunset. The sphere's surface is a perfect mirror, reflecting the sky, the clouds, and a city skyline in the distance. The background shows a real city skyline across a body of water under a dramatic, cloudy sky with warm sunset colors. The text is centered over the sphere.

**We can't predict the
future, but we can
prepare for it**

Foresight is the process of learning with the future, understanding external drivers of change, and preparing for future uncertainties.

“The goal isn’t to predict;
it is to be prepared for alternative
outcomes.”

Amy Webb, Future Today Institute

<https://www.weforum.org/agenda/2022/01/futurist-amy-webb-on-the-importance-of-scenario-planning/>



SUMMIT OF THE FUTURE
OUTCOME DOCUMENTS

September 2024

Pact for the Future,
Global Digital Compact,
and Declaration on Future
Generations

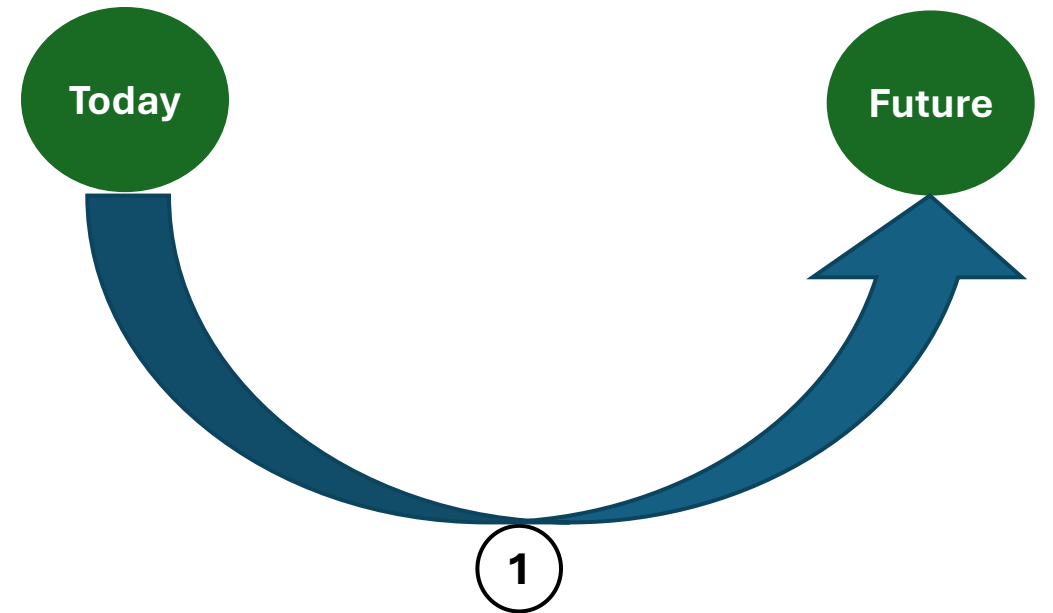
UN recognizes the importance of embedding foresight into decision-making processes, advocating for anticipatory planning to respond to global challenges.

**Note any new patterns, signals,
or changes you have observed
recently**

**What impact can these trends
have on planning and planners?**

How can planners use foresight?

1. Horizon scanning: Understanding external drivers of change and emerging trends that might impact our communities

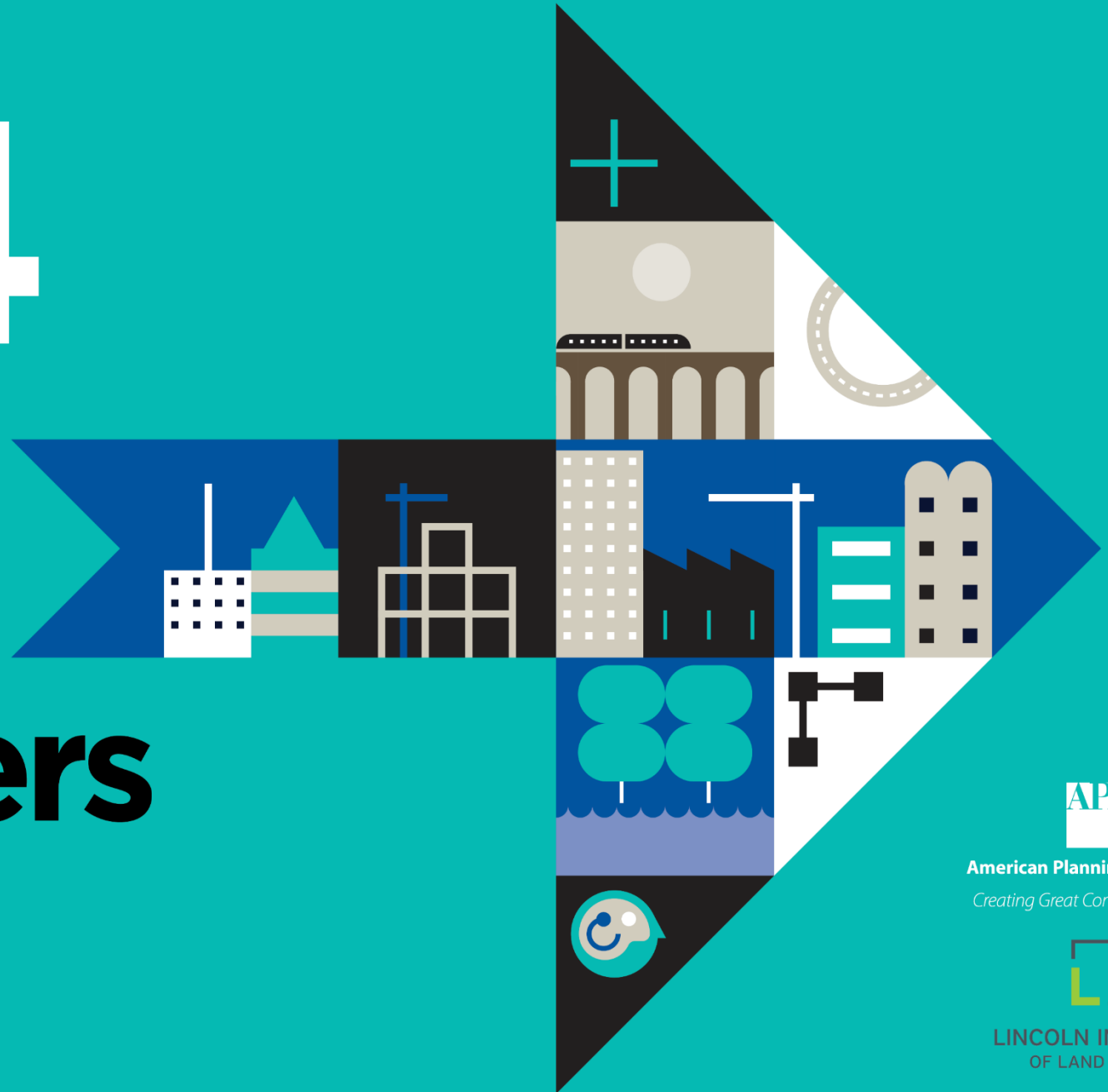


2024

APA FORESIGHT

Trend Report for Planners

Use the future when preparing for uncertainty and helping communities navigate change. Stay a step ahead of the issues impacting the future of planning and our communities. Brought to you by the American Planning Association and the Lincoln Institute of Land Policy.



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Are you familiar with any of the Trend Reports for Planners, and have you used them in your work?



Yes, very familiar!
I have used it in my work.



Yes, I downloaded and read it.
But I didn't use it in my work.



No.
I have not heard of it.



The 2024 Trend Report for Planners



A tool or reference planners can use in their daily work



Over 100 trends and their connections to planning



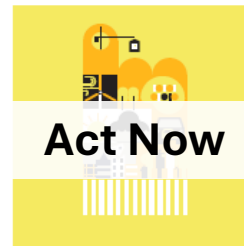
3 timeframes: existing, emerging, and potential future trends



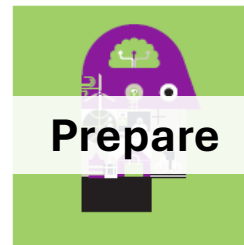
Neutral and fact-based, no endorsements



The future of the planning profession



Act Now



Prepare



Watch & Learn

A World With Less Water



Illustration by Christine Bock

From a circular economy to "fit for purpose," a holistic approach is needed.

By Chi Ho Sham, PhD, the 2023 President of the American Planning Association (APA), He currently serves as the Chair of the New England Council on Urban, a Trustee of the AirWx International Council, and the Chair of the AirWx Stormwater Management Standard Committee.

How should the scarcity of water resources influence urban development strategies in the U.S. in its readiness to adapt to living with less water?

"Water scarcity can be caused by nature and/or humans, with increasing populations, demands on water resources, and climate variability, we are encountering

water scarcity at higher frequency and magnitude. Over the past several decades, the protection of water conservation and efficiency has lowered per capita consumption of water in urban areas of the developed world. However, there are unintended consequences associated with living with less water. For example, most existing wastewater collection systems were designed to rely on gravity and wastewater flow volume to move waste to treatment plants. Failure to move wastes effectively can lead to collection system failures. In other words, urban development strategies must consider the modified urban water cycle when planning new infrastructure. There are many different strategies to tackle water scarcity, which include the development and implementation of a circular economy of water. Instead of taking water from the environment,

treating it for use, treating it again after use, and then releasing the treated water back into the environment, we will need to redesign our urban hydrologic cycle to reduce, recover, reuse, and recycle our water resources. It is important to address as much water as we can from our finite water resources by maximizing the utilization of the resource. Urban development strategies will therefore need to incorporate wastewater harvesting, prevent toxic chemical releases, conserve nonpotable and potable water reuses, and recover other resources (such as energy and nutrients). However, planning must extend beyond the urban boundaries to other communities to preserve natural water bodies, manage watersheds in a holistic manner, and protect natural infrastructure (e.g., forests). We should also consider the "fit for purpose" approach, that is,

Expert Insight

The Futures of Decision-Making in Planning

How will planners in their work and communities be impacted by AI and other emerging technologies?



Lock of staff in AI and ethics concerns have prevented most planners from using this technology.

Scenarios 2024

The Futures of Food Production

According to the Copenhagen Institute for Futures Studies, about 30 years ago, the main challenge in the food industry was the question of how food production could keep up with the pace of population growth. Efficiency and the calories that could be produced were the priority. But today, the main challenge is how we can produce healthy food sustainably and how it can be equitably distributed. Of the four billion metric tons of food

produced for human consumption every year, only 20% ends up on our plates. Meanwhile, climate change as well as social and economic disruptions are increasingly threatening food production (see Scenario: Climate Resilience). According to the World Economic Forum, global food consumption will increase by 1.4 percent annually in the next 10 years, while production is anticipated to increase by only 11 percent per year. It is anticipated that by 2050, global food production will have to increase by 70 percent.

The future of food production is moving in three main directions to resolve these issues. First is the development of technologies, such as AI, robotics, and precision farming, to make crops more resilient to climate change-related extreme weather events and pests. Second is moving food production closer to consumers through urban agriculture. Third is the food industry's (and others') experimentation with producing synthetic foods in laboratories and growing crops in outer space to provide alternatives to an unsustainable and ethically



New technologies such as CRISPR, and AI help increase crop resilience and adaptability to climate change, allowing crops to grow in more arid areas and reduce the need for pesticides, herbicides, and water (see Scenario: Climate Resilience).

Deep Dive

The trends we need to act on now

The accelerating pace of change we live in becomes visible when looking at the growing list of trends on which planners need to act now. And while most trends from previous *Trend Reports* are still relevant, many new developments around reoccurring topics require our attention. This includes trends and signals around the latest **artificial intelligence** (AI) innovations, **climate change** and **climate action**, the worsening **housing crisis**, persisting **inequities in transportation**, **political polarization** and related societal division, and the risks of **undervaluing youth** in our communities.

Check out [APA's Trend Universe](#) for more trends planners need to act on now.



Environmental impacts of AI

The environmental impact of the AI revolution is starting to come into focus



/ Google's use of AI alone could use up as much electricity as a small country – but that's an unlikely worst-case scenario, a new analysis finds.

By Justine C. and environm
host of Hell o
and Audible C
Oct 10, 2023

TechScape: Turns out there's another problem with AI - its environmental toll

AI uses huge amounts of electricity and water to work, and the problem is only going to get worse - what can be done?

The affordable housing crisis is worsening

The Affordable Housing Crisis Grows While Efforts to Increase Supply Fall Short

What Kalamazoo (Yes, Kalamazoo) Reveals About the Nation's Housing Crisis

A decade ago, the city — and all of Michigan — had too many houses. Now it has a shortage. The shift there explains today's costly housing market in the rest of the country.

Home is where the heart is: A look at DC's housing crisis

New York's Housing Shortage Pushes Up Rents and Homelessness

California housing shortage triggers cycle of despair

Wildfire as a source of greenhouse gas emissions

Wildfires are erasing California's climate gains, research shows

Copernicus: Canada produced 23% of the global wildfire carbon emissions for 2023

Surge in extreme forest fires fuels global emissions

Antigovernment sentiment and increased violence

U.S. grapples with rising threats of political violence as 2024 election looms



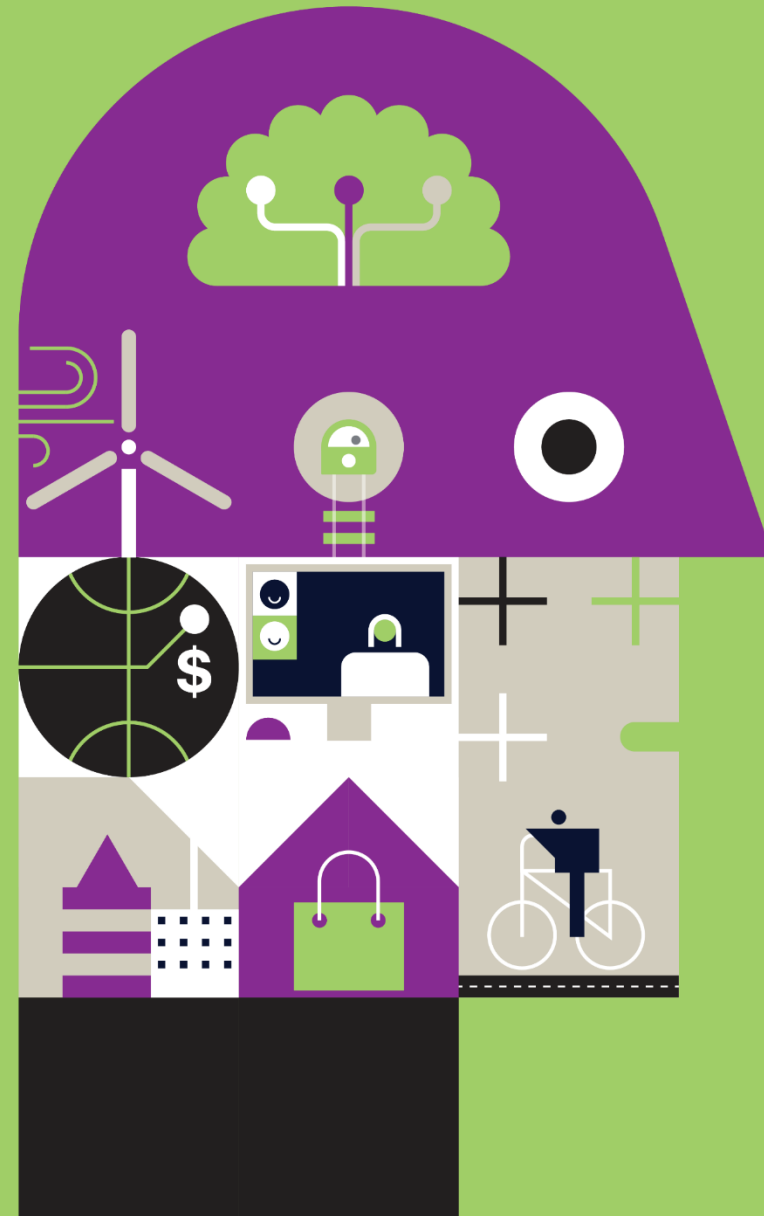
A REUTERS SPECIAL REPORT

Political violence in polarized U.S. at its worst since 1970s

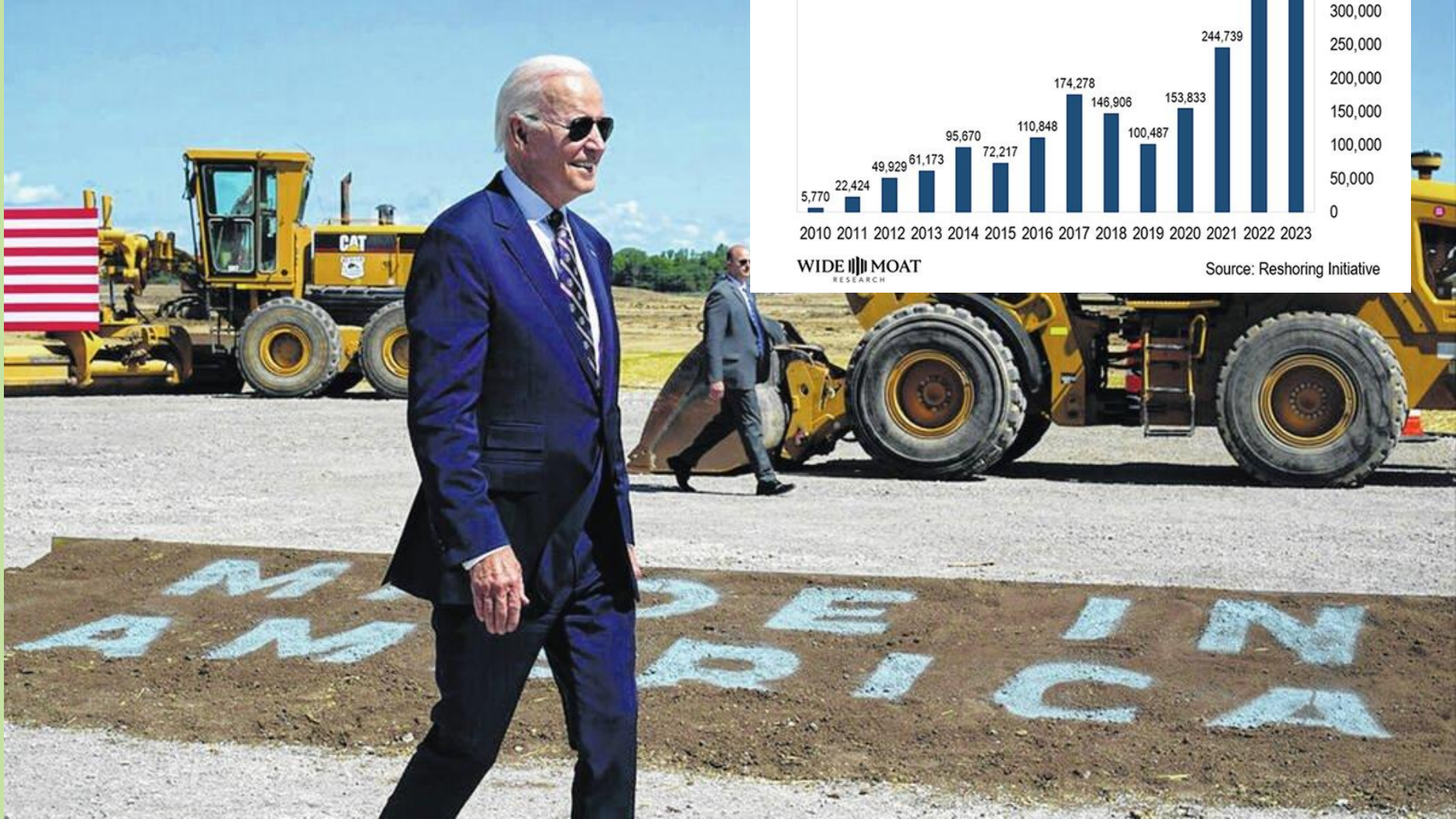
The trends we need to prepare for

We are headed towards a **polycrisis** based on current **global dynamics** related to **climate change**, scarcity of **resources**, **economic warfare**, and a **food crisis**, among other challenges. In addition, a myriad of **technological innovations** in the transportation, production, and other sectors are being developed, some with the promise to resolve current challenges. Many of these developments are starting to impact communities at the local level and planners need to prepare for them.

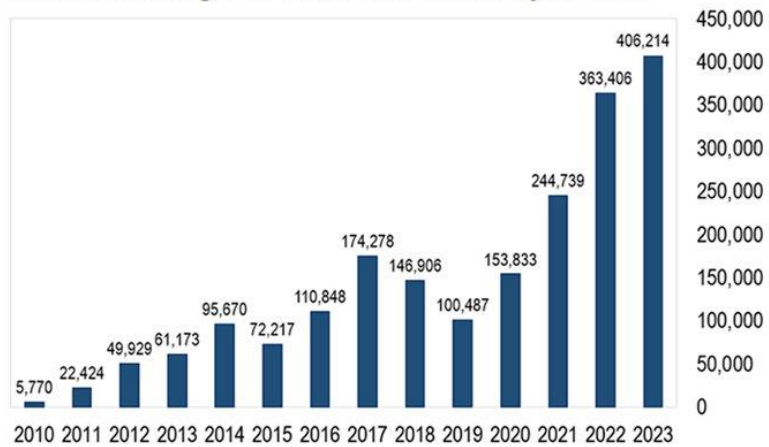
Check out [APA's Trend Universe](#) for more emerging trends planners need to prepare for.



**Made in
the U.S.**



Manufacturing Job Announcements per Year



WIDE MOAT RESEARCH

Source: Reshoring Initiative

Hype Or Reality: Will AI Really Take Over Your Job?

AI Taking Over Human Jobs

self motivated person.

★ CALL NOW ★

Sales Assistant
We currently have an excellent opportunity in our sales office. for more information about the company. See our website or Send resume.

Word Processing Specialist
Our client is seeking a talented and experienced Word Processing Specialist to join their team for a short-term project. a strong background in computer programs in general. \$15/H

EDUCATION

TUTORS NEEDED
We are looking for: highly skilled, motivated and dynamic individuals who have strong communication skills. Candidate must possess a love for teaching. \$12/h B.A. is a must.

DANCE CLASSES
We offers an opportunity for private dance lessons. Students can register for classes and learn based on their specific needs and

We provide complete Property Management, Leasing and Real Estate Services for Residential and Commercial Properties.

ATTENTION: HOME OWNER
2 bedrooms Property has been completely renovated and is currently occupied!! Both tenants are currently on leases and each unit is rented at **\$400**

EXCELLENT INVESTMENT
2 Family (DUPLEX)- Both units have 2 bedrooms and 1 bath. Property has been completely renovated and is currently occupied!! Both tenants are currently on leases and each unit is rented at **\$400 and \$450.**

SEEKING ELECTRICIAN
Good pay, flexible hours, must have some technical training but additional support is available for the right fit. Must have professional attitude, will work with clients.

NO MONEY DOWN
We help home buyers to purchase their home with ZERO money down , call us today to put together a proposal for an offer on your property.

OFFICE AVAILABLE
3 individual enclosed office space

ready to learn. No experience required, looking to fill position ASAP. Compensation based on experience. Job sites vary in distance but are based in city

★ CALL NOW ★

HIRING FOR CONSTRUCTION
Willing to work weekends needed but no experience required, overtime pay possible, call to inquire.

HOUSE FOR SALE
2 bed/2 bath open floor concept condo comes with a lovely kitchen, charming living room w/ fireplace. Now only **Sale for 280000\$**

★ CALL NOW ★

BY OWNER
The suite is spacious and bright. Bedrooms each have queen bed, dresser and a large closet. Fully equipped large kitchen, full bathroom with tub and shower.

RENOVATED 1 BEDROOM
This great corner unit has just finished being renovated including new paint, flooring and appliance.

★ Only for 580\$ ★

SERVICES

GARDEN MAINTENANCE
Experienced in maintenance work such as lawn mowing/blew it clean

Do you need a loan? Do you need some cash fast? CALL US QUICKLY

BOOKKEEPING SERVICES
-Accounts Payable
-Accounts Receivable
-Bank Credit Card Reconciliations
Flexible rates starting at \$18 per hour.

CAREERS

GENERAL HELP WANTED
Seeking someone for general help, eg; filing, organizing, errands, answering emails. Must know how to type. \$10 per hour to start
★ ★ ★ ★ ★ ★ ★ ★

PLUMBERS NEEDED
Seeking help from all levels of experience - will train. Competitive compensation for hard workers. Call today!!!

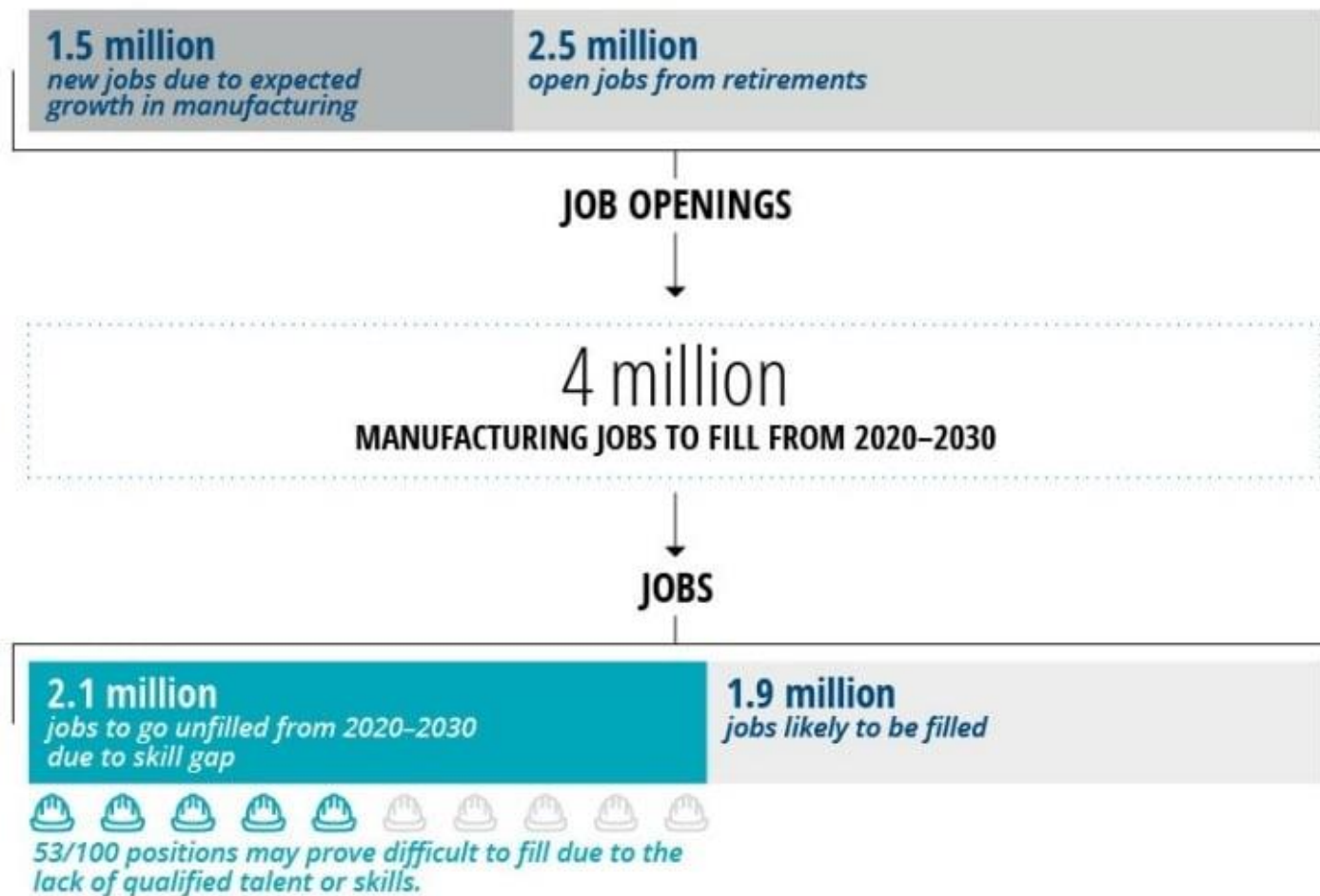
GENERAL MANAGER
a non-profit social enterprise is seeking a full-time General Manager with business experience to lead and manage, the focus of the work will be on sales, marketing, \$60,000 per annum

CONSTRUCTION WORK
Need immediate help with various commercial projects. Must be able to start quickly.

AI Taking Over Human Jobs

FIGURE 4

An estimated 2.1 million open positions may prove difficult to fill by 2030



Note: Retirement age of 66 was considered for the above analysis.

Source: Deloitte analysis of data from the Bureau of Labor Statistics and estimates from the Deloitte economic analysis using the Oxford Global Economic Model.



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FAA Releases Vertiport Design Standards to Support the Safe Integration of Advanced Air Mobility Aircraft

Monday, September 26, 2022

WASHINGTON – The Federal Aviation Administration (FAA) today released [new design guidelines for vertiports](#), infrastructure that will support Advanced Air Mobility (AAM) aircraft. The design standards will serve as the initial step to provide key information for airport owners, operators and infrastructure developers to begin development of facilities that will support operations of AAM aircraft that are electrically powered and take-off and land vertically.

(e) - electric
V – vertical
T – take
O – off &
L – landing

Advanced Air Mobility



7 eVTOLs That Will Be Hitting the Skies by 2025

Visit >

The trends we need to learn about and watch

“The future is already here—it’s just not very evenly distributed.”

Looking at the signals or potential future trends, this quote by science-fiction writer William Gibson seems like a perfect fit. Not knowing what direction items in this section will take, we may want to keep them on our watchlist for now and learn more about them. We are looking at potentially **game-changing technological advancements** that might impact how we will do our work, what we may eat, where we might live, or how long we may be able to live, among many other things.

Check out [APA’s Trend Universe](#) for more signals and potential future trends.



Space debris

Cantwell, Hickenlooper Bill to Clean Up Space Junk Passes Senate Unanimously

‘Space Is the Wild West’: Expert Says International Action Needed to Address Growing Space Debris Problem

The International Space Station had to move to dodge space junk

Geoengineering

**This controversial climate solution could be exactly what the planet needs.
Or it could be a colossal disaster**

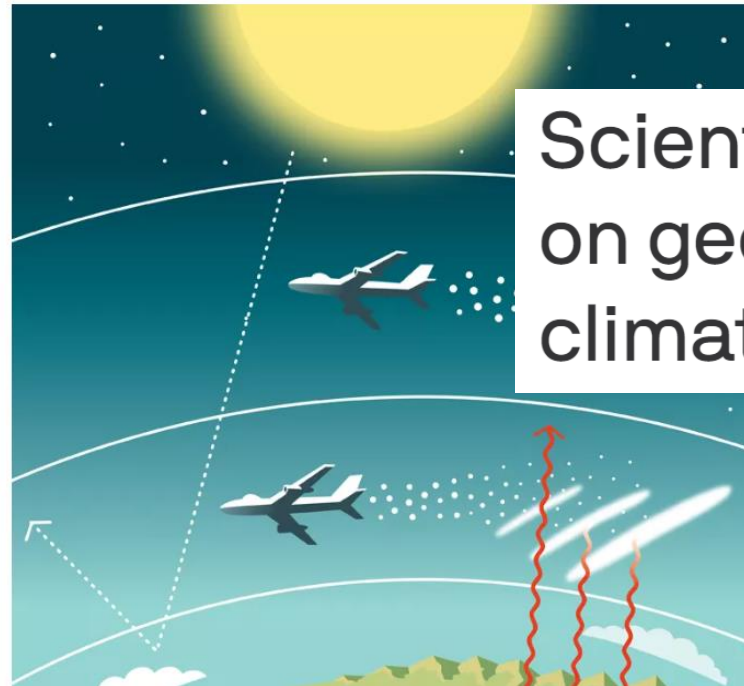
Solar Geoengineering Could Wreak Havoc on the Planet

To respond to climate change, we
should focus on ramping down
fossil fuels

By Krystal Vasquez

Illustrations by Peter and Maria Hoey

September 21, 2023



Scientists want near moratorium
on geoengineering to cool
climate — for now

Floating solar arrays

Are Floating Solar Panels the Future of Clean Energy Production?

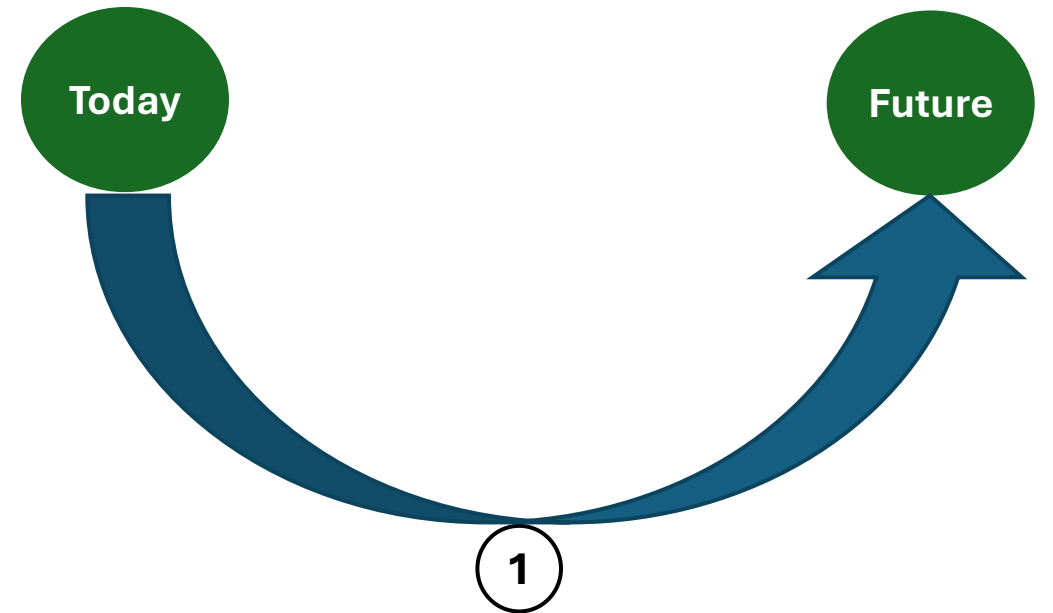
“Floatovoltaics” could drastically raise power generation and conserve water in reservoirs, according to a new study

**Long popular in Asia,
floating solar catches
on in the U.S.**

Army floating solar array is the largest floating system in the Southeast

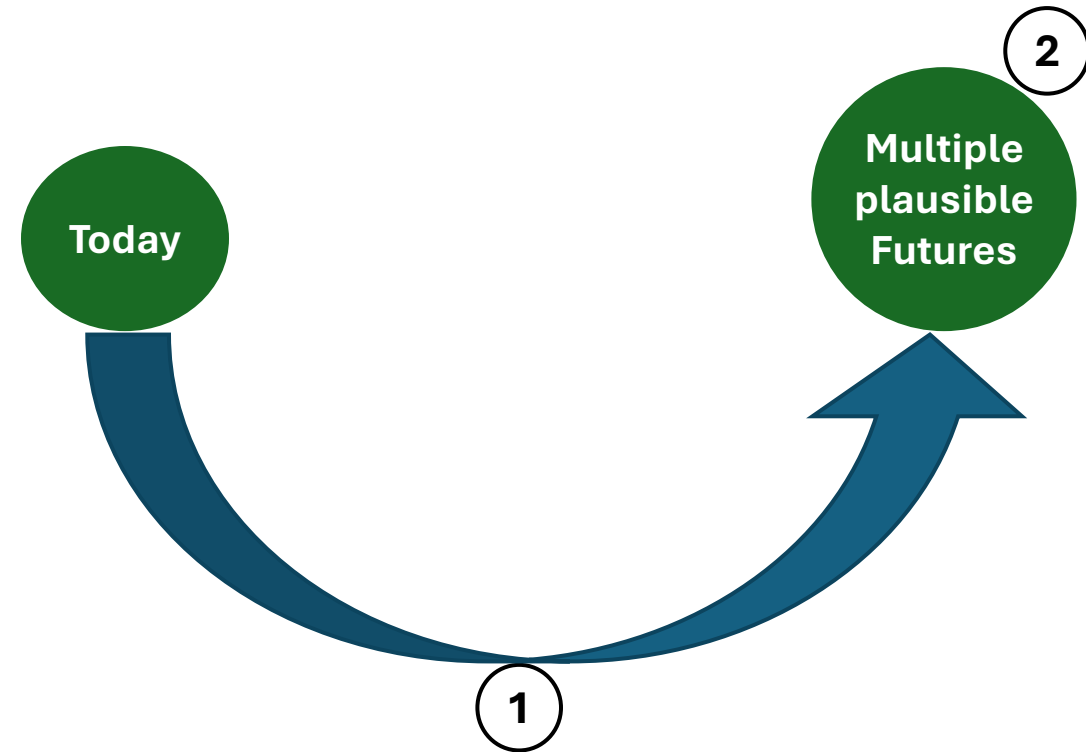
How can planners use foresight?

1. Horizon scanning: Understanding external drivers of change and emerging trends that might impact our communities

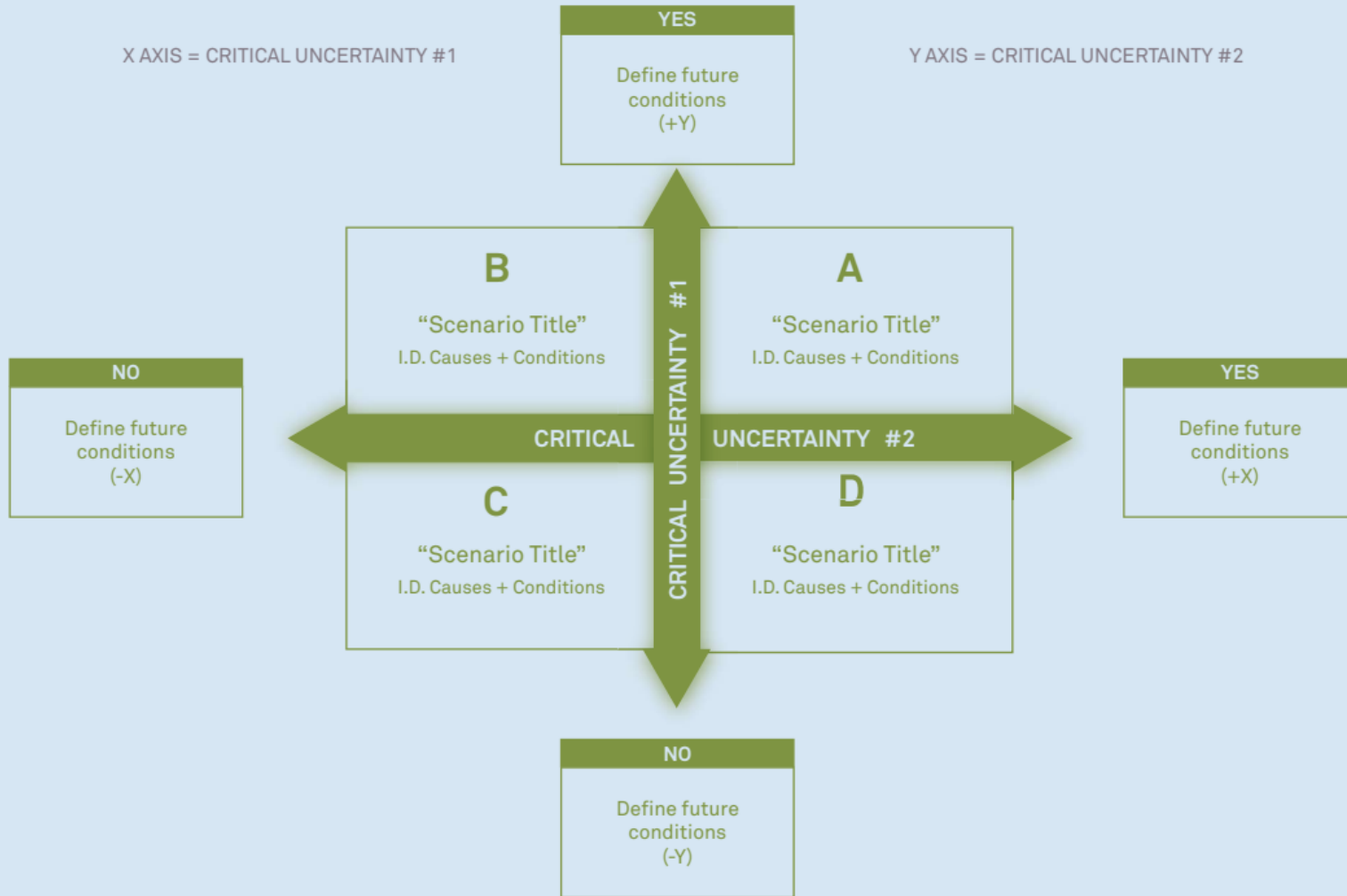


How can planners use foresight?

1. Horizon scanning: Understanding external drivers of change and emerging trends that might impact our communities.
2. Scenario planning: Creating multiple plausible futures



The Scenario Matrix Defining Four Futures



How to Use Exploratory Scenario Planning (XSP) Navigating an Uncertain Future

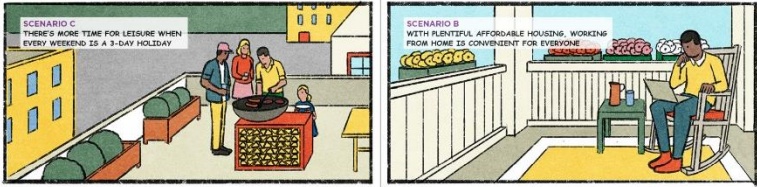
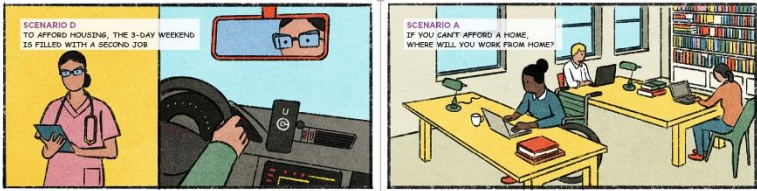
Jeremy Stapleton

Lincoln Institute of Land
Policy

The Futures of the (Home) Office

Will the changing workplace and housing availability create a better—or worse—work-life balance? Illustrations by Klaus Kremmerz

Housing crisis worsens and the cost of living increases.



Affordable housing and mental health facilities are plentiful and the cost of living has stabilized.

In-office work required, everyone works a 4-day week.

Fully remote work is the new normal.

Scenarios 2034

How Decision-Making in Planning

work when AI and politics intersect? Illustrations by A. Richard Allen

AI is improved. Many planning tasks can be done by this technology, including data-based decision-making.

Political polarization and societal division have worsened as parties grow more at odds on policy issues.

AI is taking over decision-making, as no consensus can be found due to political polarization and societal division.



Political polarization and societal division have been declining, making community consensus easier to achieve.

Political polarization and societal division have worsened as parties grow more at odds on policy issues.



Conventional climate mitigation efforts are insufficient. Climate change continues to worsen.

Lack of trust in AI and ethical concerns have prevented most planners from using this technology.

Scenarios 2044

The Futures of Global Climate Action

How the scenes might play when consumerism and science go head to head.

Globalized. Almost all products in the U.S. market are either produced in the U.S. or sourced from friendly markets.



M&M: Fury Road; Cinematix/Alamy

SCENARIO D THE END OF THE WORLD IS A LONELY PLACE
Local production where possible. Climate change limits the areas where crops can be grown. It's an isolated and unequal world. Wars are being fought for resources.



Wall Street; Allstar Picture Library Ltd./Alamy

SCENARIO A GREED RULES
Rampant consumerism without care for others and the environment. Everything is produced locally, no matter how unsustainable production is. Geoen지니어ing will fix the climate crisis.



Wall-E; Cinematix/Alamy

SCENARIO C WE ARE IN THIS TOGETHER
Global collaboration on climate action. Production happens where climate change allows for it. Global collaboration to find solutions to climate migration.



The Devil Wears Prada; Maximum Film/Alamy

SCENARIO B NO REGRETS
Rampant consumerism without care for the environment. Buy everything from anywhere no matter what. Geoen지니어ing will fix the climate crisis.

The world is more globalized than ever before.

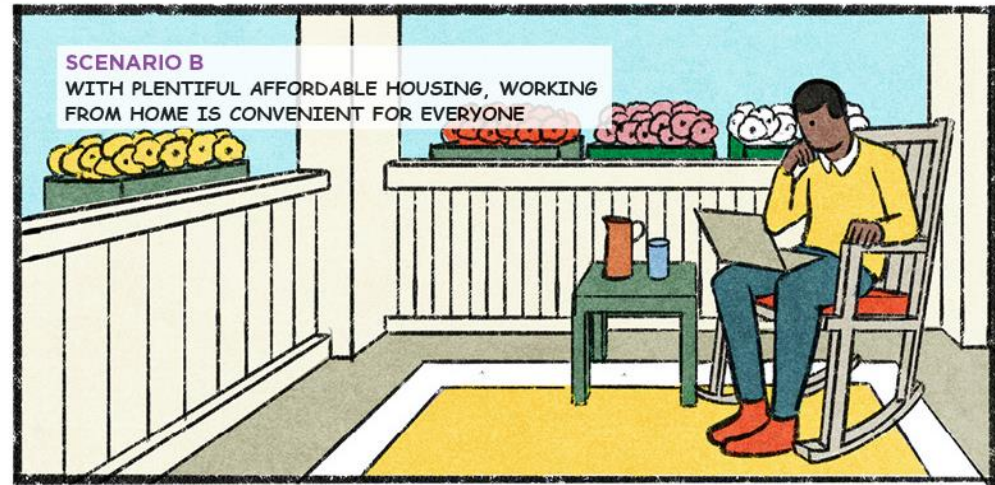
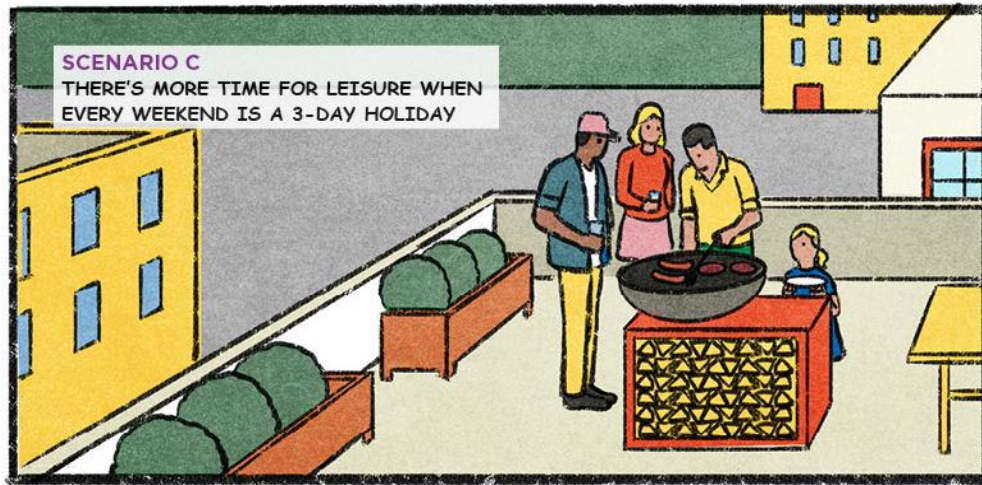
Climate mitigation efforts, including geoen지니어ing, are successful. Global temperatures have been decreasing.

Scenarios 2054

The Futures of the (Home) Office

Will the changing workplace and housing availability create a better—or worse—work-life balance? Illustrations by Klaus Kremmerz

Housing crisis worsens and the cost of living increases.



Affordable housing and mental health facilities are plentiful and the cost of living has stabilized.

In-office work required, everyone works a 4-day week.

Fully remote work is the new normal.

Scenarios 2034

The Futures of Decision-Making in Planning

How will planners do their work when AI and politics intersect? Illustrations by A. Richard Allen

AI capabilities have massively improved. Many planning tasks can be done by this technology, including data-based decision-making.

SCENARIO D AI IS THE PLANNING DIRECTOR

AI is taking over decision-making, as no consensus can be found due to political polarization and societal division.



SCENARIO A ALL IN FAVOR SAY "AI"

AI is everyone's new coworker.

Planners, together with the community, collaborate with AI to make the right decisions for the future of the community.



SCENARIO C GOING NOWHERE FAST

No one wants to or can make decisions.

Societal division and political polarization bring everything to a halt.



SCENARIO B DEMOCRACY RULES

Planners are consensus builders working with the community to make human-centered decisions jointly.

Civilized discourse is possible in a united community.



Lack of trust in AI and ethical concerns have prevented most planners from using this technology.

Political polarization and societal division have worsened as parties grow more at odds on policy issues.

Political polarization and societal division have been declining, making community consensus easier to achieve.

Scenarios 2044

The Futures of Global Climate Action

How the scenes might play when consumerism and science go head to head.

The world is deglobalized. Almost all products in the U.S. market are either produced in the U.S. or sourced from friendly markets.



Mad Max: Fury Road; Cinematic/Alamy

SCENARIO D THE END OF THE WORLD IS A LONELY PLACE

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SCENARIO A GREED RULES

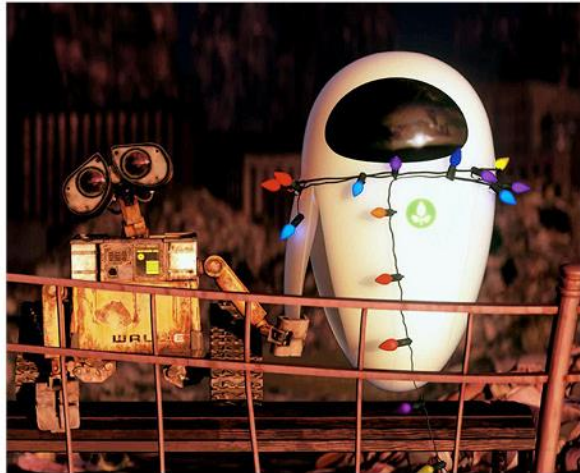
Rampant consumerism
without care for others
and the environment.

Everything is
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production is.

Geoengineering will fix
the climate crisis.



Wall Street; Allstar Picture Library Ltd/Alamy



WALL-E; Cinematic/Alamy

SCENARIO C WE ARE IN THIS TOGETHER

Global collaboration
on climate action.

Production happens
where climate change
allows for it.

Global collaboration
to find solutions to
climate migration.

SCENARIO B NO REGRETS

Rampant consumerism
without care for the
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Buy everything from
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Geoengineering will fix
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The Devil Wears Prada; Maximum Film/Alamy

The world is more globalized than ever before.

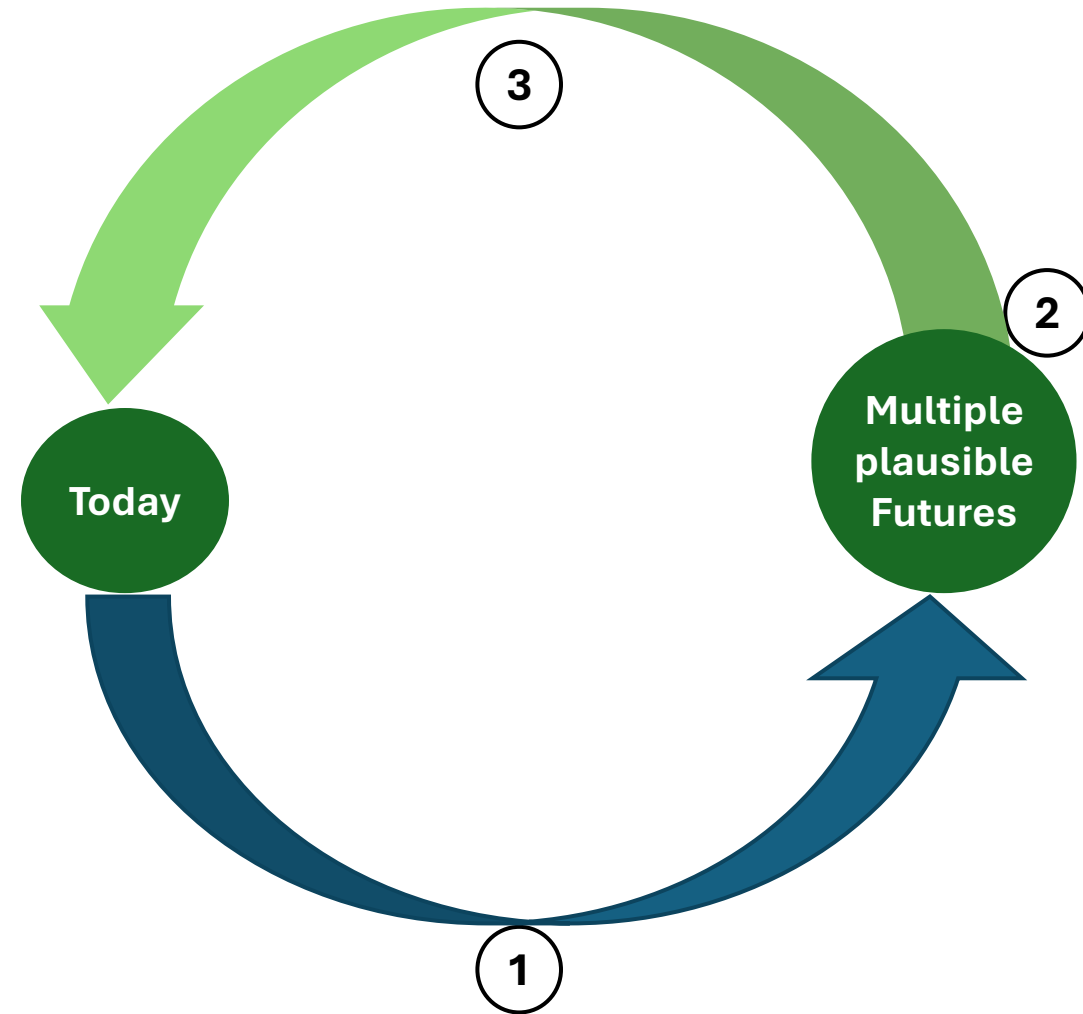
Conventional climate mitigation efforts are insufficient.
Climate change continues to worsen.

Climate mitigation efforts, including geoengineering, are successful.
Global temperatures have been decreasing.

Scenarios 2054

How can planners use foresight?

- 1. Horizon scanning:** Understanding external drivers of change and emerging trends that might impact our communities.
- 2. Scenario planning:** Creating multiple plausible futures.
- 3. Backcasting:** What needs to happen today to be prepared for multiple plausible futures?



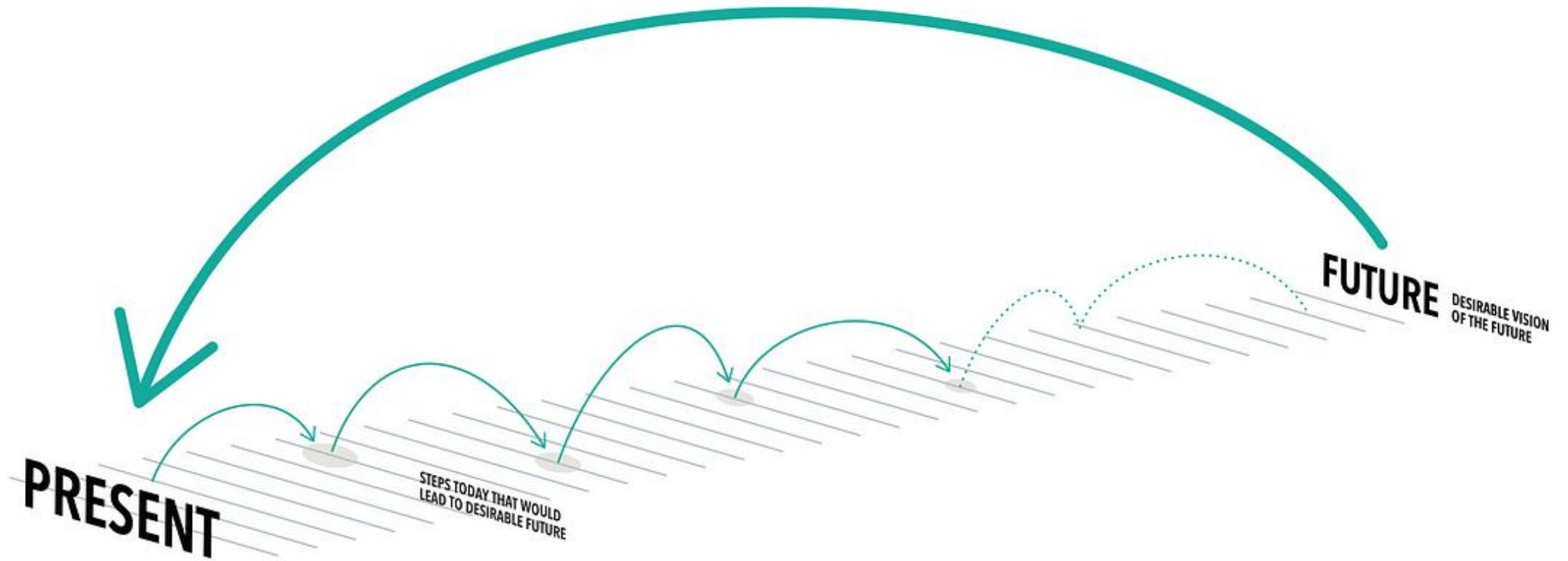
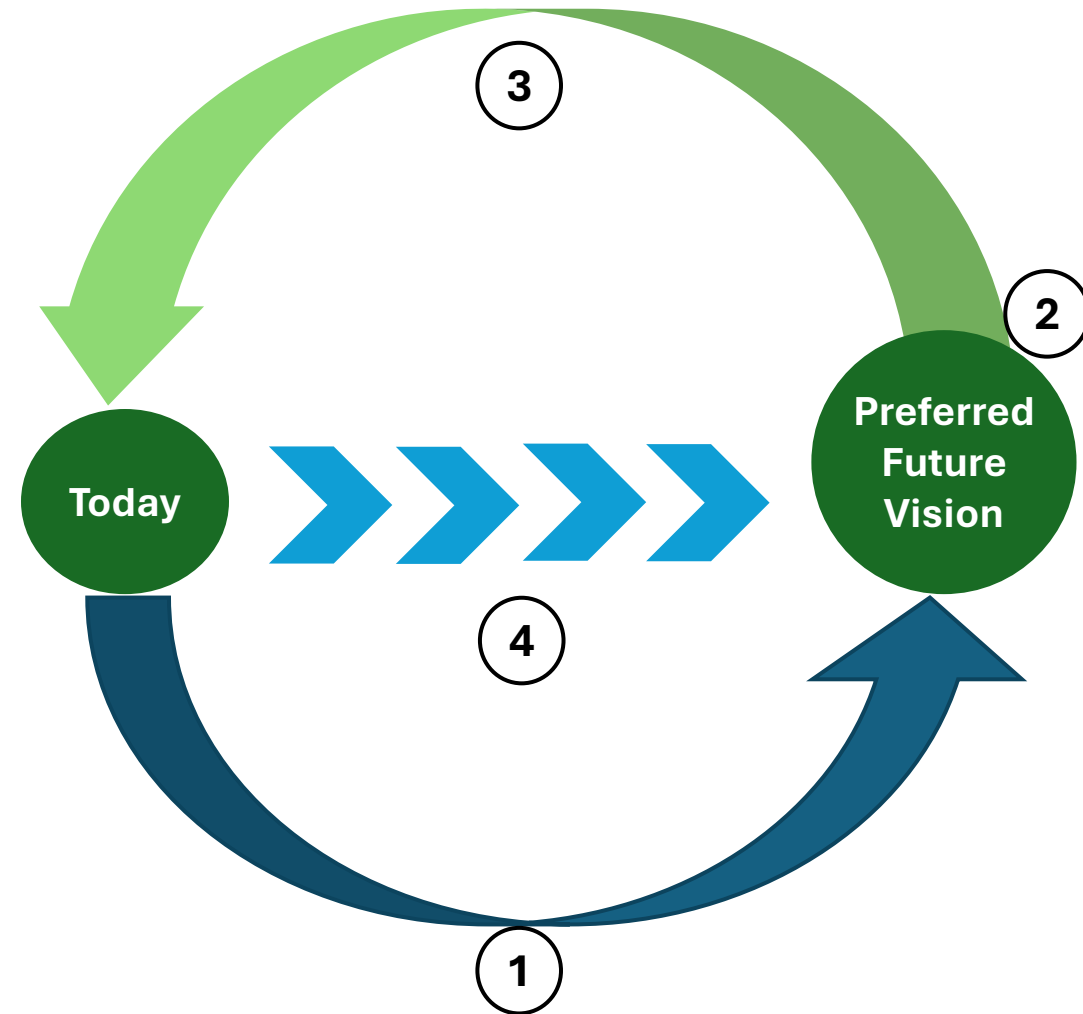


Figure 5 Backcasting to a Desirable Future. Adapted from *The Natural Step* (2011).

How can planners use foresight?

- 1. Horizon scanning:** Understanding external drivers of change and emerging trends that might impact our communities.
- 2. Scenario planning:** Creating multiple plausible futures.
- 3. Backcasting:** What needs to happen today to be prepared for multiple plausible futures?
- 4. Creating an agile plan** that allows to pivot while the world is changing around us





Using the Future to Create Dynamic Plans

online **CM|6**



2022

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Trend Report for Planners

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APA's Trend Universe

The [Trend Universe](#) is the place to find all of the trends that APA has identified as part of its foresight practice. The trends here are dynamically updated, reflecting the accelerating pace of change of today and tomorrow. Here, you can find existing trends (act on them now), emerging trends (start preparing for them), and potential future trends (keep watching and learn more about them) organized around eight general themes.

Transportation and Infrastructure

Emerging trends within the [transportation and infrastructure](#) sectors are changing how we get around, how we access critical services, and where we live and work.

Economic Development

Changes in global and local [economic development](#) are altering consumer behavior in communities and influencing how urban systems respond to these shifts.

Technology

Emerging and evolving [technology trends](#) are significantly influencing where and how people live, work, and play.

Social Change

[Social change](#) is frequently mirrored in the way we plan and structure our communities, as well as in the methods and practices of planning itself.

Climate Change, Energy, and the Environment

The effects of [climate change](#), along with innovations in energy production and grid modernization, are shaping both our built and natural environments.

Work and the Workplace

Rapid changes in the nature of [work and workplace](#) environments are influencing how people choose their jobs, commute to work, and spend their leisure time.

Politics and Geopolitical Dynamics

[Political and geopolitical trends](#) both influence and are influenced by shifts across the societal landscape.

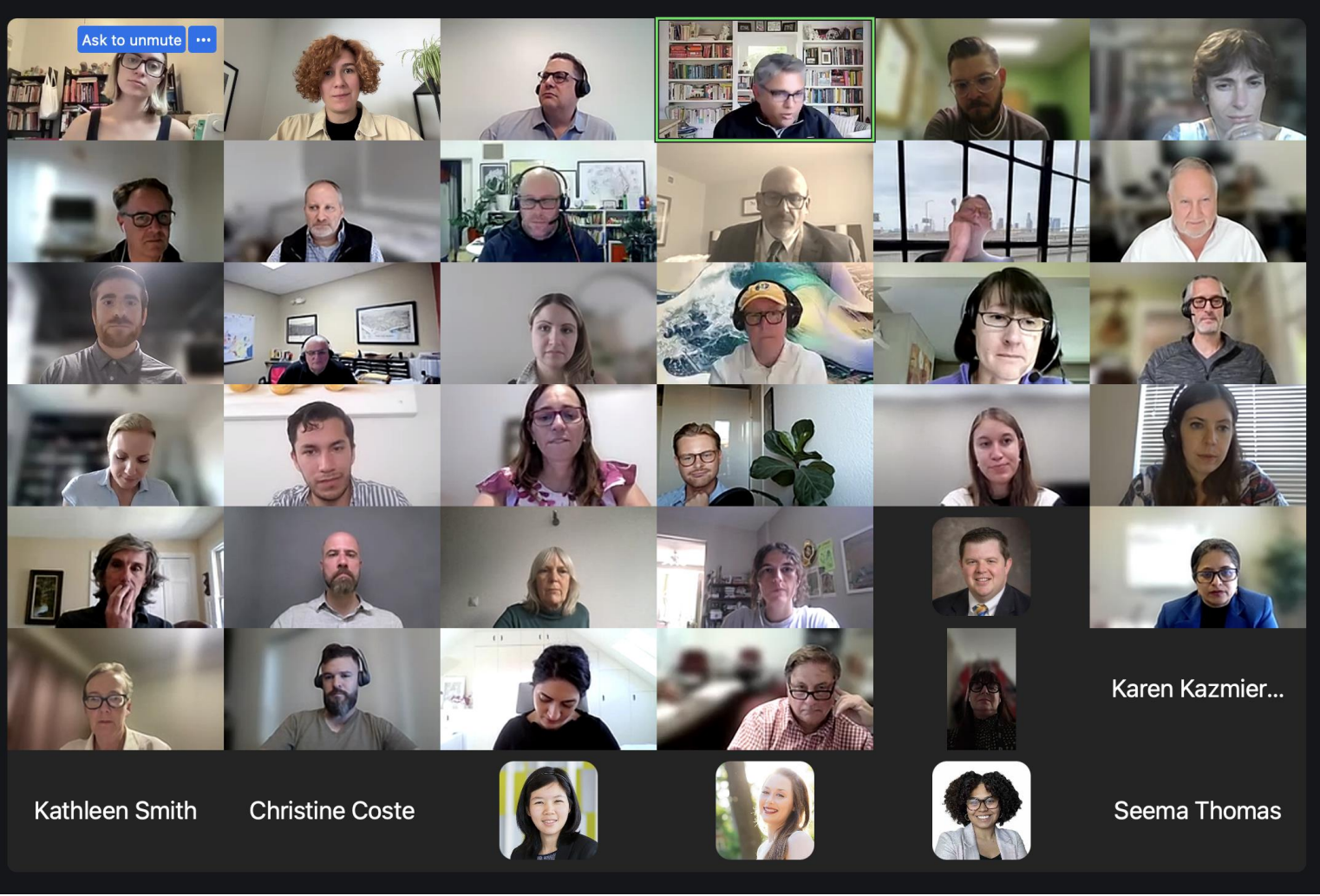
Housing

Emerging trends in the [housing](#) sector point to the critical role that planners will likely play in future decades.

PlanTech and Planning Methods

The world is in constant flux and so is the planning profession. [PlanTech](#), the technologies planners can use in their work to facilitate processes or make certain tasks more efficient, is emerging as a critical element of the future of planning. Emerging methods, such as people-centric and hyperlocal planning approaches to enhance equity, or the integration of futures literacy and imagination into planning, are also rising to meet the challenges of a complex and uncertain future.

APA Trend Scouting Community



APA Foresight

planning.org/foresight

The practice of foresight “is the art and science of **taking responsibility for the long-term consequences** of our decisions and actions today.”

Jennifer M. Gidley (2017): The Future: A very short introduction

