



SFMTA Foresight 101

November 19, 2021

About Institute for the Future

Public interest organization
founded in 1968, based in San
Francisco Bay Area.

Our mission is to bring people
together to make the future—today.

Our practical tools, research, and
programs turn foresight into the
critical new insights that ultimately
lead to transformative action.



Facilitators

Rod Falcon
Research Director



Ilana Lipsett, M.B.A.
Senior Program Manager



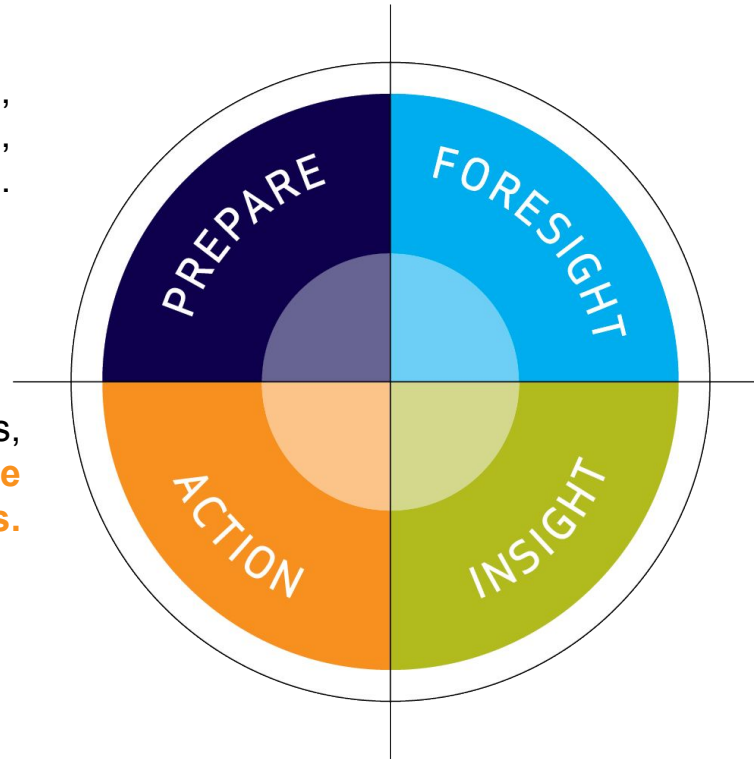


SFMTA Project Plan

	2021 OCTOBER	NOVEMBER	DECEMBER	2022 JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY		
KEY MEETINGS	Project Kick-Off	Foresight Webinar	Start of Ongoing Bi-weekly Alignment Meetings		Ideation Workshop					Final Presentation Webinar		
DELIVERABLES		Project Plan Nov 11 Foresight Webinar Nov 19			Cross Impact Matrix Ideation Workshop Late Feb.					Forecast Report & Visual Map/ Final Scenarios/ Toolkit July 31		
PHASE 0: ACTIVATION	Project Alignment & Planning Oct 1–Nov 10											
PHASE 1: FUTURE FORCES		Desk Research <i>Ongoing</i> Nov 1–Jan 3			Synthesis & Preliminary Summary Jan 3–14		Cross-Impact STEEP Forecasting <i>Development of Future Forces Report & Map of the Future</i> Mar 1–May 31			Synthesis & Deliverable Production June 1–July 31		
		Rider Interviews <i>Identify</i> Dec 1–31			Conduct & Synthesize Jan 1–Feb 28		Thematic Takeaways Memos Feb 28		Alternative Scenarios <i>Development of Alternative Scenario Stories & Toolkit</i> Apr 1–May 31			Synthesis & Deliverable Production June 1–July 31
		Expert Interviews <i>Identify</i> Dec 1–31			Conduct & Synthesize Jan 1–Feb 28		Thematic Takeaways Memos Feb 28					

Foresight practice is a cycle

Gather evidence,
frame futures questions,
prepare your mind.

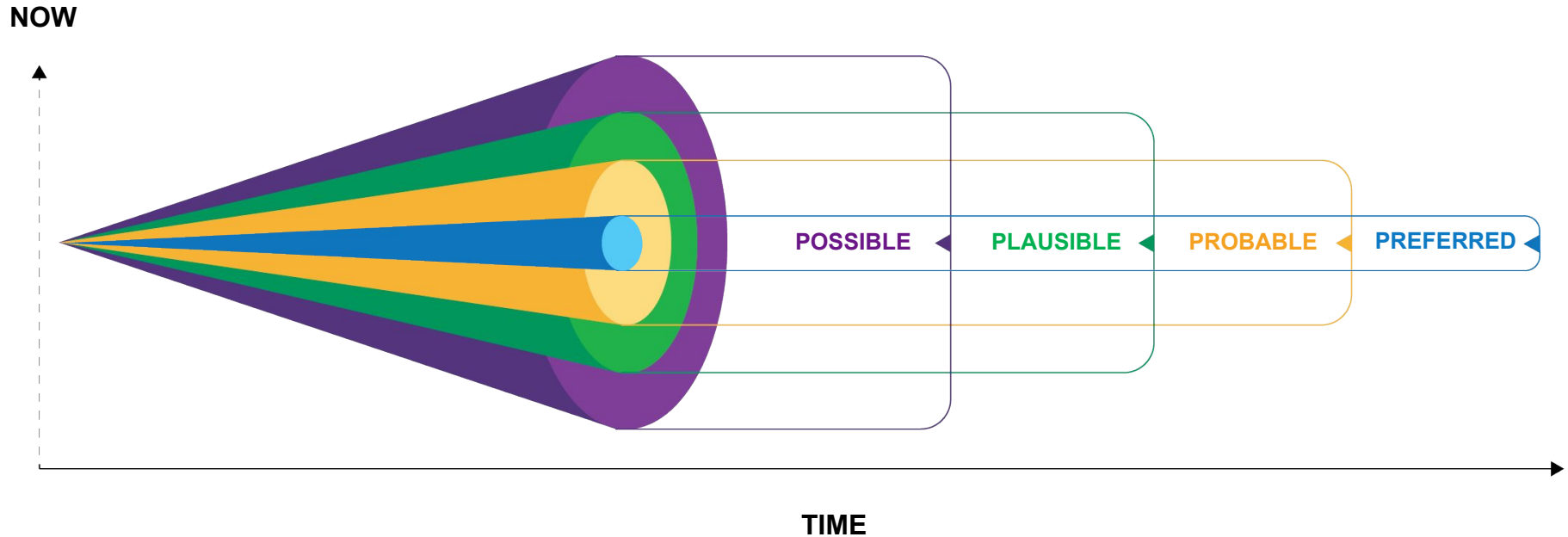


Using your prepared evidence, develop **plausible, provocative visions** (not predictions) **of multiple futures.**

Based on your insights,
frame and prioritize possible actions.

Use your foresight to **provoke meaningful implications.**

Range of Future Possibilities



Please introduce yourself in the chat!



What is your role at SFMTA?

Orient to the future...

On a scale of 1-10

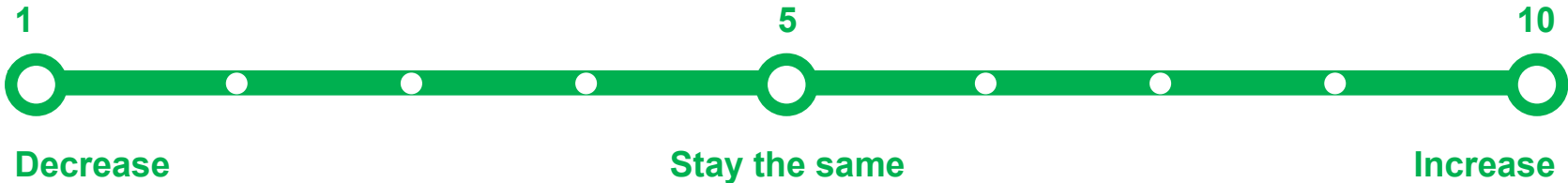
Is technology bringing us together or pulling us apart



Orient to the future...

Over the next 10 years, car ownership in San Francisco will

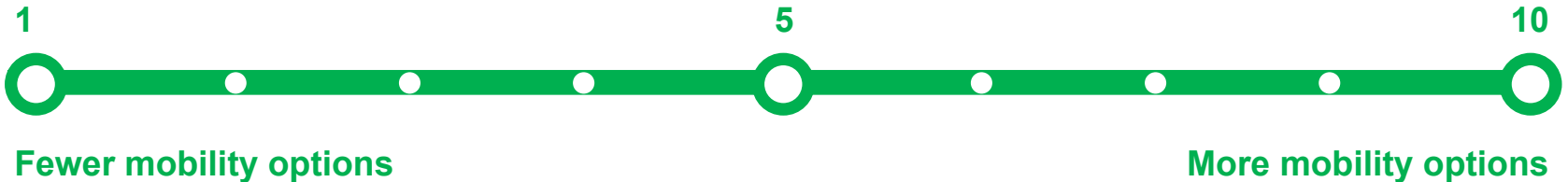
write your # answer in the chat



Orient to the future...

In 10 years, there will be more or fewer mobility options:

write your
answer
in the chat



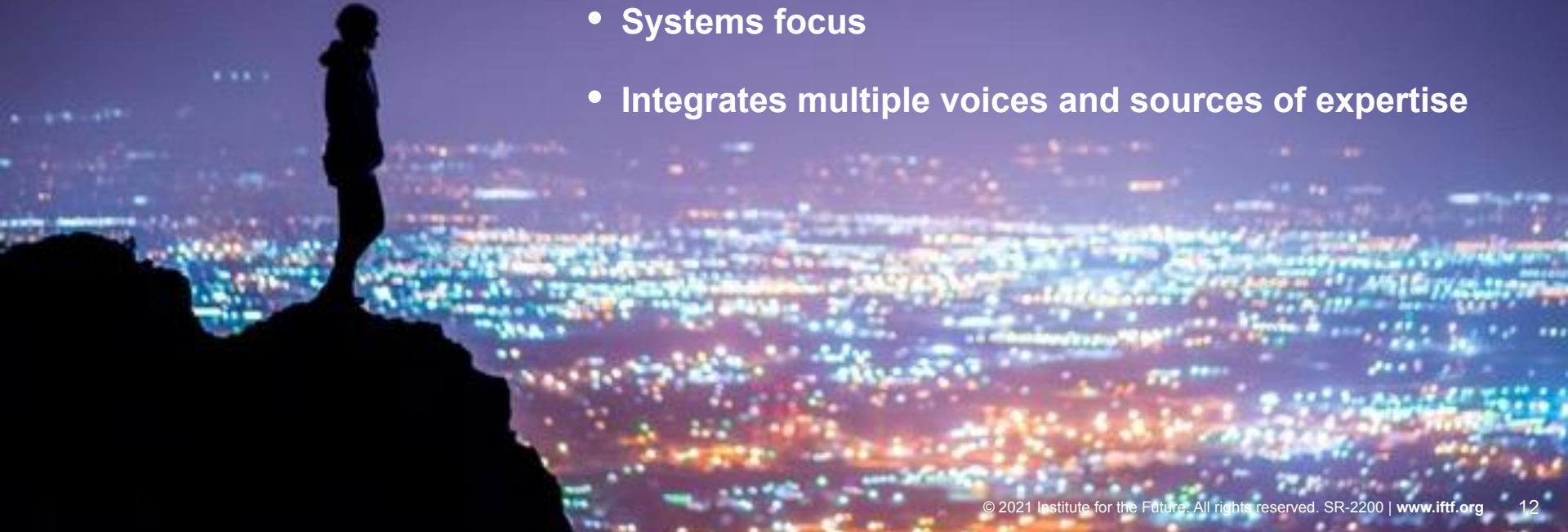
We can't predict the future.

But we can learn how to think about the future systematically, turning uncertainty into inspiration for action and increased resilience.



Futures thinking is different from strategic planning.

- Longer-term horizon
- “Future-back” perspective
- Systems focus
- Integrates multiple voices and sources of expertise



Strategic foresight helps organizations to...

- **Imagine** things that don't yet exist
- **Challenge** basic assumptions
- **Examine** the unintended consequences of actions
- **Anticipate** new strategic opportunities
- **Develop** new offerings
- **Evaluate** plans and roadmaps
- **Build** readiness and a shared perspective

What is futures thinking?

Futures thinking is a set of strategic and creative tools that help you anticipate **how the future might be different, and why** –

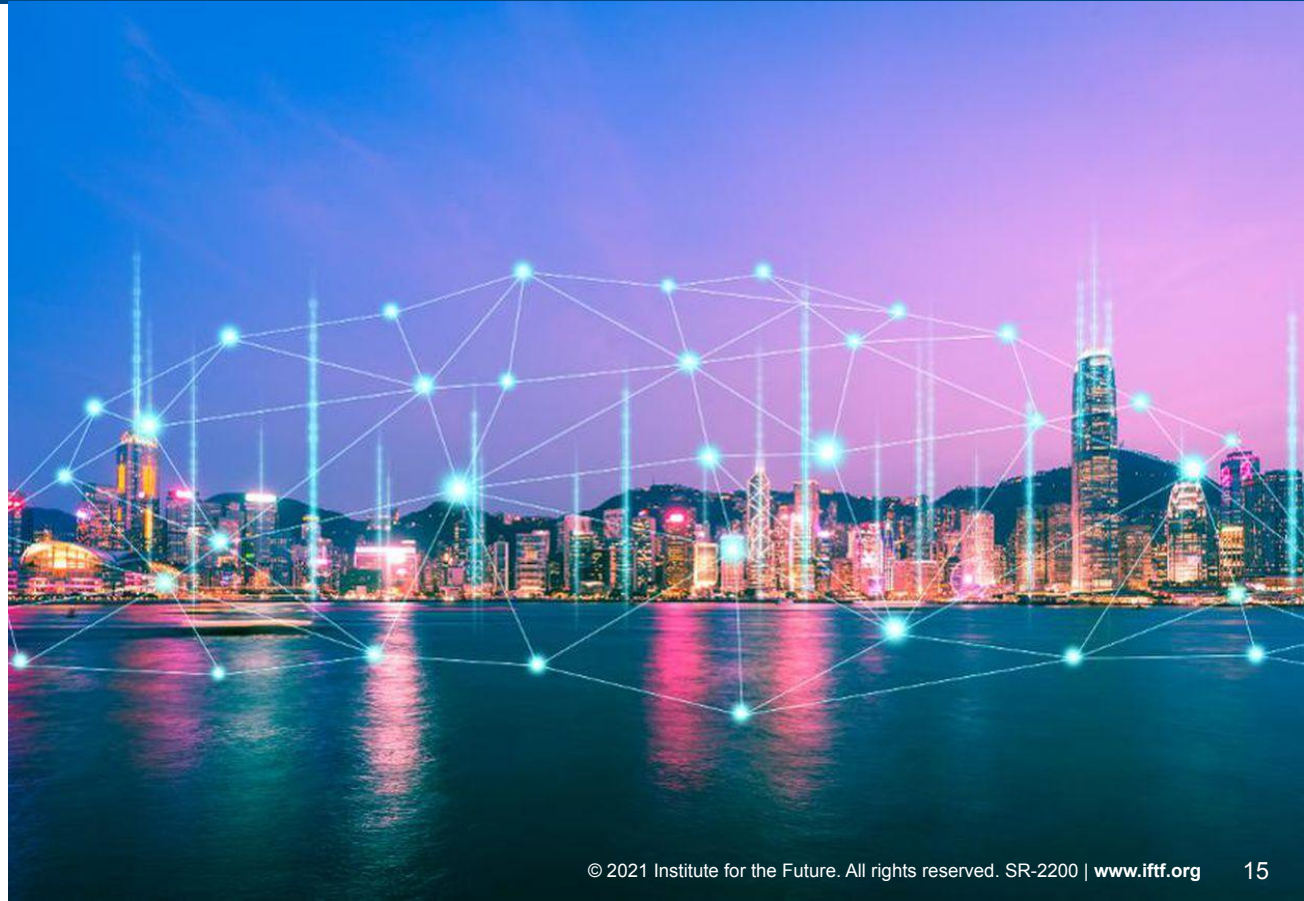
So you can:

- Be ready for anything
- Feel more in control of what happens next
- Make lasting positive changes, in your own life, in your community, and in society.

Futures thinking is...

A city government coming up with ways to be resilient in the face of climate change.

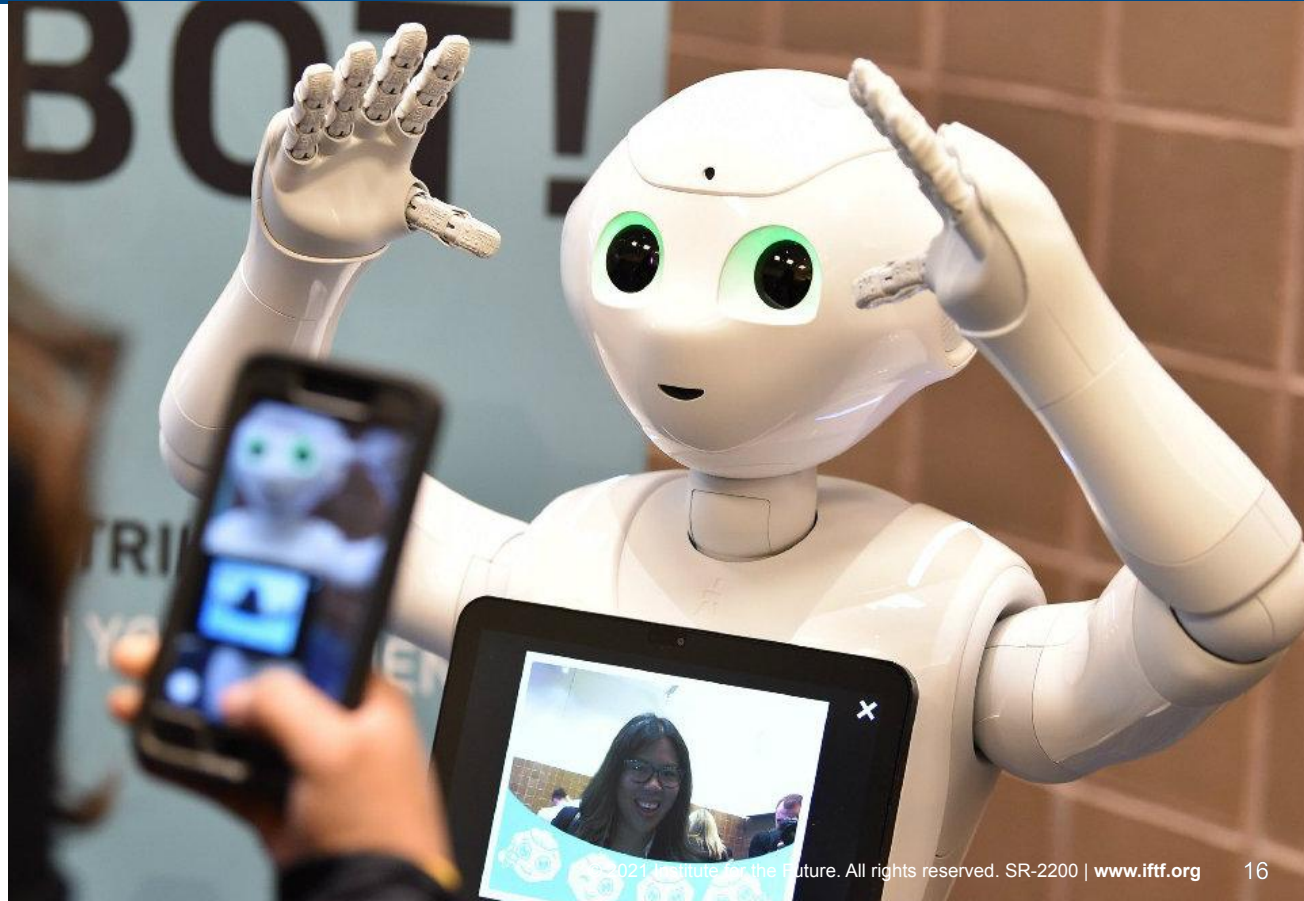
What kinds of new buildings and community services will it need to help people cope with extreme weather in the future?



Futures thinking is...

A tech company trying to anticipate the long-term ethics and social consequences of its new products.

Will their technology be good for humanity in the long run, or could it harm society in hard-to-predict ways?



Futures thinking is...

A CEO looking to lead their company into the future and to avoid being disrupted by new technologies or competitors.

What should the company start doing differently, to survive shifts and disruptions in the marketplace?



Futures thinking is...

United Nations researchers setting new sustainable development goals for the year 2040.

What are our biggest goals for humanity, and what will it take to achieve them?



Futures thinking is a public transit agency that....



add your ideas to the chat!

Key Terms

Foresight Fundamentals: Key terms

Drivers of
change

+

Signals of
change



Imagination | Creativity | Courage

Forecasts

Foresight Fundamentals: Key terms

Drivers of
change

+

Signals of
change



Imagination | Creativity | Courage

Forecasts

“Drivers of change”

are broad, longterm forces that will shape the next decade or more.

- Measured with **quantitative indicators**
- Include both historical and emerging trends, at different scales and rates of change
- **Convergence of multiple drivers** creates unexpected outcomes



Use the **STEEP** framework to remind yourself to explore beyond the obvious

- **Social**
- **Technological**
- **Economic**
- **Environmental**
- **Political**



Drivers of change take many forms, such as:

- a quickly advancing area of scientific research
- a shift in consumer behavior
- a new technology entering the mainstream
- a social movement
- an increasingly popular policy idea
- a growing threat documented by experts and researchers
- a major demographic shift
- a long-term regulatory effort
- a widespread cultural change

Choose your “drivers of change” ...



- The pandemic
- Climate change
- The Internet of Things
- Shift to clean energy
- Increasing economic inequality
- New ideas for wealth redistribution (maximum wage, billionaire ban, Universal Basic Income)
- Aging population and decreasing birth rates in richer countries
- Deepfake audio and video
- Growing migrant and refugee crises
- Automation of work
- Increase in facial recognition
- Anti-racist activism
- Cryptocurrencies, NFTs, and centrally backed digital currency
- Virtual reality
- CRISPR/genetic editing
- Lifelong learning + reskilling
- The ethical tech/responsible innovation movement
- The rise of plant-based eating
- Gender equality efforts
- Social-media fueled conspiracy theories
- Anti-democratic voting laws

Foresight Fundamentals: Key terms

Drivers of
change

+

Signals of
change



Imagination | Creativity | Courage

Forecasts

A person with a backpack is walking away from the camera through a futuristic architectural structure. The structure features a large, curved, white, ribbed canopy that resembles a modern stadium or arena. The ground is a light blue, reflective surface. In the background, there are more futuristic buildings and a large, curved, blue structure. The overall scene is bright and modern.

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

William Gibson,
science fiction author

Signals of Change

Specific observations ways the future might be different.

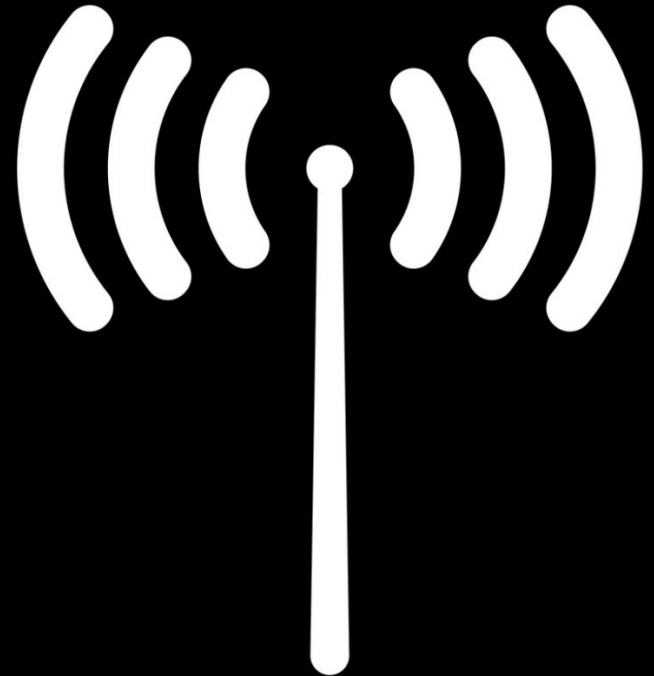
Examples of signals are:

- product, service, or experience
- business initiative
- anecdote, personal observation, or behavior
- research project or prototype
- new kind of job
- policy or law
- change in the physical world

**Signals are not trends.
(i.e. “AI is getting big” is *not* a signal)**

“Signals of change” are vivid, eye-opening, real examples about how the world is changing, today.

- **Small, local innovations** with the potential to disrupt the status quo.
- Provide vivid detail about **new and unexpected** experiences, uses of technology, social interactions, shifting values, business models, etc.
- **Along with drivers, act as evidence and data points** for plausible, provocative forecasts and visions of the future.



Netherlands nudges people to ride public transit

WHAT: An experiment in Rotterdam showed that giving people a free transit card holder that labeled them as sustainable travelers increased their rides per day on public transit.

SO WHAT: The social psychology on display in this experiment—nudging, and making people feel to connected to a large cause of sustainability—has the potential to play a huge role in behavior change.



What are some ideas for nudges or other small actions that might shift SFMTA rider behavior?

Coworking spaces focus on the suburbs

WHAT: Daybase, a new coworking company, is opening spaces in the suburbs, targeting residents who had long commutes to central business districts pre-pandemic but aren't returning to the office.

SO WHAT: As the world is still adjusting to what post-pandemic working patterns will look like, companies such as Daybase are offering new alternatives to workers that could cement shifts in where people choose—and are able—to work from.



What would it mean for SFMTA if a majority of previous downtown workers—who commuted from outside of SF—never returned to the office?

Autonomous vehicles gain popularity among seniors, disabled.

WHAT: A new study showed that seniors and disabled riders in Arizona prefer autonomous vehicles to taxis or rideshares.

SO WHAT: Populations who were previously mobility-limited have an increasing number of modes of transportation to choose from, which could take riders away from buses, trains, and para-transit options.



What kind of offerings might SFMTA consider that could cater to disabled and senior populations who don't want to ride typical public transit?

What signals of change are you seeing in San Francisco?

- A co-worker doing interesting outreach?
- An activist community pushing for change?
- New policies that the Board of Supervisors is considering?
- Ways of addressing work and commute changes?



add your ideas to the chat!

Foresight Fundamentals: Key terms


Drivers of
change
+
Signals of
change



Forecasts

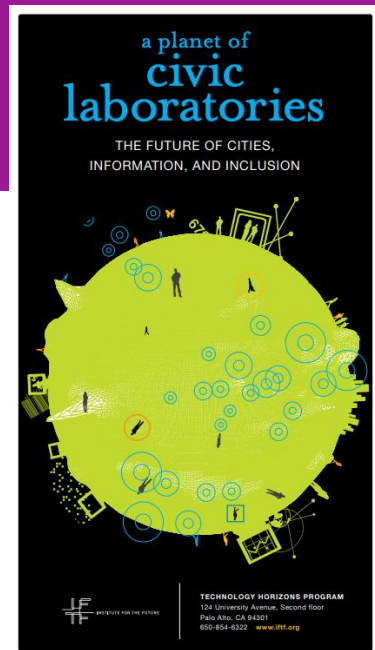
A forecast is a story about the future that provokes insight in the present

- **Plausible, provocative, and informed by data** (Drivers and Signals of Change) from today
- Applied to concepts **at different scales**
- **Can take many forms:** single statements, narrative paragraphs, scenarios, personas, headlines from a future news story, etc.



Any useful statement
about the **future**
should at first seem
ridiculous. JIM DATOR

Map of the Decade



a planet of civic laboratories
THE FUTURE OF CITIES, INFORMATION, AND INCLUSION

drivers
civic laboratories
the future of cities, information, and inclusion

commons
self-organized and participatory efforts

markets
Demand and supply-driven offerings and experiences

design & planning
Open and enabling platforms for collaboration and decision making

governance
Public oversight and intervention

drivers

commons

markets

design & planning

governance

drivers



2020 Forecast Legend

The map highlights the advances and innovations that will harness urban data to reduce poverty and promote inclusion. These advances are placed on an axis organized three scales of response and four drivers.

SCALE

SCALES OF INTERVENTION
Technology and social innovation are the most powerful tools for addressing the needs of the most vulnerable. These tools are used to address the needs of the most vulnerable, from people to networks and environments.

CATEGORIES OF RESOURCES
The map highlights the resources that are needed to address the needs of the most vulnerable. These resources are used to address the needs of the most vulnerable, from people to networks and environments.

13 FORECASTS
Thirteen forecasts are presented, each highlighting a different aspect of urban life. These forecasts are used to address the needs of the most vulnerable, from people to networks and environments.

TRENDS AND TECHNOLOGY ADVANCEMENTS
The map highlights the trends and technology advancements that will lead to more granular and accurate data collection. These trends and technology advancements are used to address the needs of the most vulnerable, from people to networks and environments.

ROADS
Signpost each road with a specific example from the world. These roads are used to address the needs of the most vulnerable, from people to networks and environments.

KEY TRENDS
The map highlights the key trends that will lead to more granular and accurate data collection. These key trends are used to address the needs of the most vulnerable, from people to networks and environments.

Anticipating the Second Curve



QUESTIONS? CLARIFICATIONS?

Drivers of
change

+

Signals of
change



Imagination | Creativity | Courage

Forecasts



10 MINUTE BREAK

Methodologies used in this project

- **Cross Impact Matrix**
- **Ethnographic Foresight**
- **Scenarios**



SFMTA Project Plan

	2021 OCTOBER	NOVEMBER	DECEMBER	2022 JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY		
KEY MEETINGS	Project Kick-Off	Foresight Webinar	Start of Ongoing Bi-weekly Alignment Meetings		Ideation Workshop					Final Presentation Webinar		
DELIVERABLES		Project Plan Nov 11 Foresight Webinar Nov 19			Cross Impact Matrix Ideation Workshop Late Feb.					Forecast Report & Visual Map/ Final Scenarios/ Toolkit July 31		
PHASE 0: ACTIVATION	Project Alignment & Planning Oct 1–Nov 10											
PHASE 1: FUTURE FORCES		Desk Research <i>Ongoing</i> Nov 1–Jan 3			Synthesis & Preliminary Summary Jan 3–14		Cross-Impact STEEP Forecasting <i>Development of Future Forces Report & Map of the Future</i> Mar 1–May 31			Synthesis & Deliverable Production June 1–July 31		
		Rider Interviews <i>Identify</i> Dec 1–31			Conduct & Synthesize Jan 1–Feb 28		Thematic Takeaways Memos Feb 28		Alternative Scenarios <i>Development of Alternative Scenario Stories & Toolkit</i> Apr 1–May 31			Synthesis & Deliverable Production June 1–July 31
		Expert Interviews <i>Identify</i> Dec 1–31			Conduct & Synthesize Jan 1–Feb 28		Thematic Takeaways Memos Feb 28					



3.2

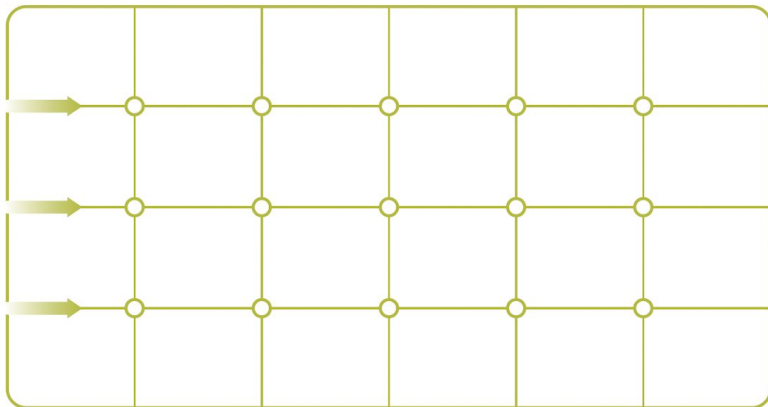
INSIGHT

MAP CROSS-IMPACTS

By creatively juxtaposing forecasts across a wide variety of “impact zones,” we can visualize complex futures and systematically identify threats, opportunities, and critical insights.



IFTF FORESIGHT ESSENTIALS TOOLKIT



WHY THIS TOOL?

- ▶ **Understand** how large-scale changes might impact an entire community, organization, or industry.
- ▶ **Create** meaning from complexity by showing the intersection of multiple forces and domains in a single, graphic format.

WHEN TO USE:

- ▶ **You're exploring and comparing** impacts and unexpected opportunities within a forecast or scenario.



FORESIGHT
ESSENTIALS



Examples of drivers that could shape the future of transportation

- From office jobs to remote work
 - Aging population and changing mobility needs
 - From fringe idea to adoption of Universal Basic Income policies
 - From in-person to remote or blended K-12 education
 - Rising movement for diversity and racial equity
- Post-COVID recession/unemployment
 - From bad to worse: climate destabilization and extreme weather
 - Facial recognition and spread of surveillance technologies
 - Growth of data privacy regulation
 - Decreasing trust in institutions & government



- **What impact areas should be included in this project?**



Ethnographic foresight aka ethnofutures

- Positions everyone as an “expert” futuremaker
- Anticipates emergent futures by understanding the values, behaviors, and toolsets of future-facing people in the context of their daily lives
- Used to uncover signals or stories of how people are experiencing the present in ways that are likely to grow and have increasing importance in the long term future

CALIFORNIA WORKER VOICES

Anticipating the Future from the Frontlines



Vanessa Mason | Rod Falcon

- **Who should we talk to?**
- **What groups of stakeholders should we be speaking with?**
- **Nonprofits and advocacy groups?**



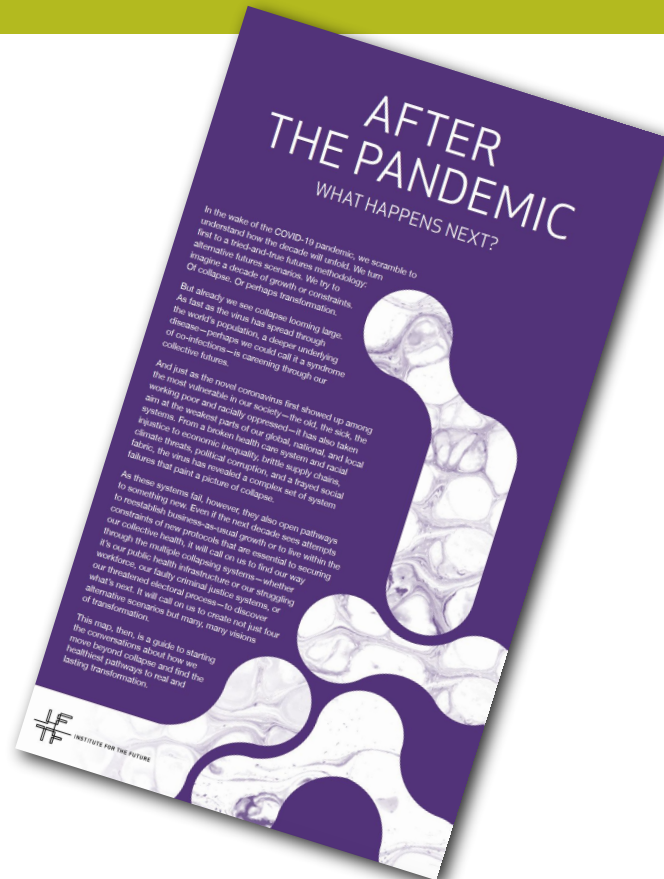
Enter into the chat

Scenarios

- Scenario Building provides a framework to organize signals, drivers, and foresight into four clear paths to the future.
- Jim Dator's 4 alternative futures archetypes:
 1. growth
 2. constraint
 3. collapse
 4. transformation.
- Many ways to build scenarios

Scenarios build capacity for foresight and futures thinking

- **Use** scenarios as a first step to to engage team in futures work
- **Change** who participates in conversations about the future
- **Embed** futures thinking into civic society



AFTER THE PANDEMIC

WHAT HAPPENS NEXT?

In the wake of the COVID-19 pandemic, we scramble to understand how the decade will unfold. The turn first to a three-scenario futures methodology: alternative disease scenarios. We try to imagine a decade of growth or constraints, of collapse, or perhaps transformation.

But already we see collapse looming large. As fast as the virus has spread through the world's population, a deeper underlying disease—perhaps we could call it a syndrome of overdevelopment—is carving through our collective future.

And just as the novel coronavirus fed almost up among the most vulnerable in our economic, social, and work-life working poor and racially oppressed—it has also taken aim at the essential parts of our global, national, and local systems. From a broken health care system and racial friction to economic inequality, finite supply chains, climate trends, political corruption, and a frayed social fabric, the virus has revealed a complex set of system failures that point to a system of collapse.

As these systems fail, however, they also open pathways to something new. Even if the next decade sees attempts to rebuild broken economic growth or to live within the constraints of new protocols that are essential to securing our collective health, it will call on us to find new ways through the multiple collapsing systems—whether it's our public health infrastructure or our declining workforces, our daily critical justice systems, or our threatened electoral process—to discover what's next. It will call on us to create not just four alternative scenarios but many, many visions of transformation.

This, then, is a guide to starting the conversation about how we might reimagine our world and build a better transformation.



AFTER THE PANDEMIC


A DEEPER DISEASE

GROWTH SAVING CAPITALISTS

Valuing the economy
Leveraging stimulus

Growth is a virtue. As stimulus packages encourage investment, economic inequality continues to grow. The decade ends with a warning sign as the race that separates demand for safe furnished consumers and investments breaks away.

RESPONSE | Buck to invest
RESET | Automation, ethical, surveillance
REINVENTION | Neerparty



COLLAPSE GOVERNING

Valuing political power
Leveraging masks as symbols

With leadership that prioritizes political wins, both sides are drawn together. Red, blue, and Black. Street rage evolves as a deeply divided nation grows unmanageable. Clusters of assessment states set the stage for a fractured union.

RESPONSE | Masked divisions
RESET | Masked divisions
REINVENTION | Exit strategies

TRANSFORMATION SOCIAL SOLIDARITY

Valuing social well-being
Leveraging mutuality

Building on the best of collective governance actions to provide mutual aid as a form of voluntary health, the decade concludes the priority economic aims of the 2020s with new infrastructure to provide and protect universal basic rights.


RESPONSE | Mutual aid
RESET | Sharing essential, civil theories
REINVENTION | A global new deal

CONSTRAINT GERM PODS

Valuing health
Leveraging testing and contact tracing

Data-driven health surveillance tools create algorithmic clusters of viruses, the air, and the outdoors. Over the decade, those so-called germ pods expand to signify a wide range of identity markers and new cultural subgroups.

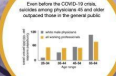
RESPONSE | Zero-drive policy
RESET | Algorithmic epidemiology
REINVENTION | Post-based governing



BROKEN HEALTH SYSTEMS

Health inequities: UNANTICIPATED
Health status: POLICIZED
Health outcomes: DISCRIMINATED
Health workers: TRAUMATIZED


Even before the COVID-19 crisis, healthcare among physicians of color and Black Americans of Hispanic and public health workers was significantly lower.



ECONOMIC INEQUALITY

Low-wage workers: SACRIFICED
High-income earners: FORTIFIED
Unemployment: SKEDD
Savings and debt: IMBALANCED


Half the COVID-19 cases occur with high percentages of ethnic minorities.



FRAGILE SOCIAL FABRIC

Public social spaces: VIRTUALIZED
Educational institutions: INTERRUPTED
Cultural experiences: THREATENED
Cities/towns/villages: REAPPORTIONED

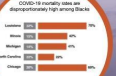
Americans believe that trust in government and each other has been eroding and that trust is further being eroded by the pandemic.



RACIAL INJUSTICE

Equal opportunity: UNRECOGNIZED
Public safety: JAGGED
Conversations of color: INCAUTERIZED
Shifting demographics: RESTRUCTURED

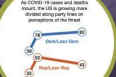
COVID-19 mortality rates are disproportionately high among Blacks.



POLITICAL DIVISION

Federal government: DECONSTRUCTED
State and local governments: DISRUPTED
Blue vs. Red: PERVASIVE
Political atmosphere: MISLEADED


An COVID-19 issue and health model for the pandemic were debated among party lines in approximately 60 percent of the time.



CLIMATE EMERGENCY

Climate science: CONTESTED
Carbon dioxide: DIVERTED
Environmental regulation: DISRUPTED
Climate change perception: INSUFFICIENT


Average of pollutants that contribute to global warming will be 45% higher in the COVID-19 era than the 1990s.



BRITTLE SUPPLY CHAIN

Food systems: SHAKED
Medical supply chains: MISREGULATED
Power generation: ESQUELLED
Consumer goods: HOMOGENIZED

The projected rate of food insecurity is expected to double for over 40 million people as a result of COVID-19.



How will we use scenarios in this project:

- Anticipate change: identifying drivers, signals scanning
- Deepening understanding of the dynamics of change
- Deploying the best scenario method based on inputs (2x2, alt futures, systems mythology)
- Systematically organizing elements of the scenarios
- Soliciting input from SFMTA, stakeholders, riders
- Writing and refining scenarios with feedback from YOU!
- Communicating scenarios in a compelling way

Futures thinking is an SFMTA that....



add your ideas to the chat!

QUESTIONS?

THANK YOU

Workshop for SFMTA
November 19, 2021

Rod Falcon | falcon@iftf.org
Ilana Lipsett | ilipsett@iftf.org