



epic

FORECASTING

# FRICTION

## Ethnofutures Techniques for creative scenarios & strategic decisions

Jan English-Lueck, San Jose State University

Rod Falcon, Institute for the Future

Jasmine Low, San Jose State University Alumna

Session 1: Sept 20  
(3-6 pm Pacific) | Sept 21  
(8 - 11 am AEST)

Session 2: Sept 21  
(8-11 am Pacific) | (5 - 8 pm  
CEST)

# Land Acknowledgment

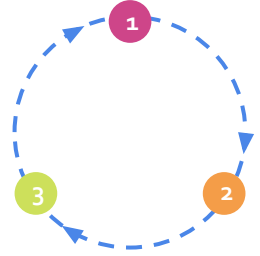
While we gather at San José State University, we are gathered on the ethnohistoric tribal territory of the Thámien Ohlone, who were the direct ancestors of the lineages enrolled in the Muwekma Ohlone Tribe, and who were missionized into Missions Santa Clara, San José and Dolores.

The lands on which San José State University is established was and continues to be of significance to the Muwekma Ohlone Tribe. We also recognize that the ancestors of the Muwekma Ohlone constructed and maintained the three Bay Area missions. Our campus extends to surrounding areas that held a tuppentak, a traditional roundhouse which were once located at the historic 'Lopé Yñigo's Landgrant Rancho Posolmi y Pozitas de las Animas (Little Wells of Souls), and also Marcello, Pio and Cristobal's Land grant Rancho Ulistac, which were places of celebration and religious ceremonies, as well as nearby ancestral heritage "shellmounds," that served as the Tribe's traditional cemetery sites and territorial monuments.

San José State University also desires to honor the military service of the Muwekma who have honorably served overseas during World War I, World War II, Korea, Vietnam, Desert Storm, Iraq and who are still serving in the United States Armed Forces today.



# LEARNING OBJECTIVES



PHASE 1

## Insight

KEY  
OUTCOME

An “Aha” moment that provokes action

TOOLS

- Ethnographic research
- Recognizing frictions

PHASE 2

## Foresight

A plausible, internally consistent view of the future

- Signals
- Drivers
- Scenarios imagining choices & consequences

PHASE 3

## Action

A clear, compelling way forward that can help you get there early and win

- Leveraging friction
- Provocations & opportunities

# Session 1

Sep 20 Pacific 3-6 pm	Sep 21 AEST 8-11 am	
3-3:20 PM	8-8:20AM	Part 1: Introductions, intersections of ethnographic and futures experience (in breakout groups)
3:20-4:00 PM	8:20-9:00 AM	Part 2: Scenario Building; Friction, how you can discover it, and what you can do with it
4:00-4:15 PM	9:00-9:15 AM	Break
4:15-4:55 PM	9:15-9:55 PM	Part 3: Set up for Workshop, Breakout Room Discussions

# Session 1

Sep 20 Pacific 3-6 pm	Sep 21 AEST 8-11 am	
4:55-5:15 PM	9:55-10:15 AM	Part 4 Report Outs on Scenarios, Frictions, Reflections
5:15-5:30 PM	10:15-10:30 AM	Break
5:30-6:00 PM	10:30-11:00 AM	Open Q and A
6 PM	11:00 AM	Adjourn

Our Objectives	Your Activities
<b>Pework</b>	<b>Review Video, Forecasting Skill Building</b>
<ul style="list-style-type: none"> <li>● <b>Integrate</b> basic forecasting methods with ethnographic data collection and interpretation.</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Outline</b> the basic skills of ethnographic forecasting, aka ethnofutures</li> <li>● <b>Review</b> English-Lueck/Avery</li> <li>● <b>Note</b> case study example (Corporate Care)</li> <li>● <b>Practice</b> skills in Exercise 1</li> </ul>
<ul style="list-style-type: none"> <li>● <b>Discover</b> sources and uses for friction in teams, organizations, communities.</li> <li>● <b>Imagine</b> building consensus and provoking conversations about consequences</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Review</b> Diversity Friction Harmonisation</li> <li>● <b>Note</b> existing ethnographic applications</li> <li>● <b>Practice</b> skills in Exercise 2 of using ethnofutures for resilience</li> </ul>
<ul style="list-style-type: none"> <li>● <b>Discover</b> use cases for ethnofutures approaches within their organizations</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Review:</b> Future Readiness Playbook, Corporate Foresight</li> <li>● <b>Play</b> with Frictions/Actions Exercise</li> <li>● <b>Customize</b> to your own situation</li> </ul>

# Part 1: Introductions and Pre-Work Review

Building on the video, prepping for the workshop

## Virtual Workshop Ground rules

1. Keep muted while others speak
2. Use the chat to ask questions and share resources
3. Keep breakout room discussions confidential



# Review Pre-read

## Video and Reading Review

Future Readiness Playbook, Frictions 360 Tool ([link](#))

Ethnographic examples of friction spotting,  
consensus building

## Introductory Exercise 1

Signal, Driver, your Ethnographic Forecast for your  
Professional Future

## Session 1

Room 1	Room 2	Room 3
Facilitator: Jan	Facilitator: Rod	Facilitator: Jasmine
Kellie Hodge	Aude Omerin	Francesca Barrientos
Meghan McGrath	Sofia Lozano Pallares	Adam Williams
Daniela Busse	Czarina Aggabao Thelen	Robin Steiner
	Jason King	Kirin Carpenter

# Homework Reflections and Introductions

[in breakout  
rooms]

My **name** is ...and my current **role** is...

The **signal** I identified relating to my professional career is...

A shaping **driver**, or force, acting on my professional career is...

Based on this signal and this driver I can imagine that in 10 years **I might optimally** be doing this...

# Breakout Discussions

What stood out  
to you in your  
discussions?



# From Homework Video

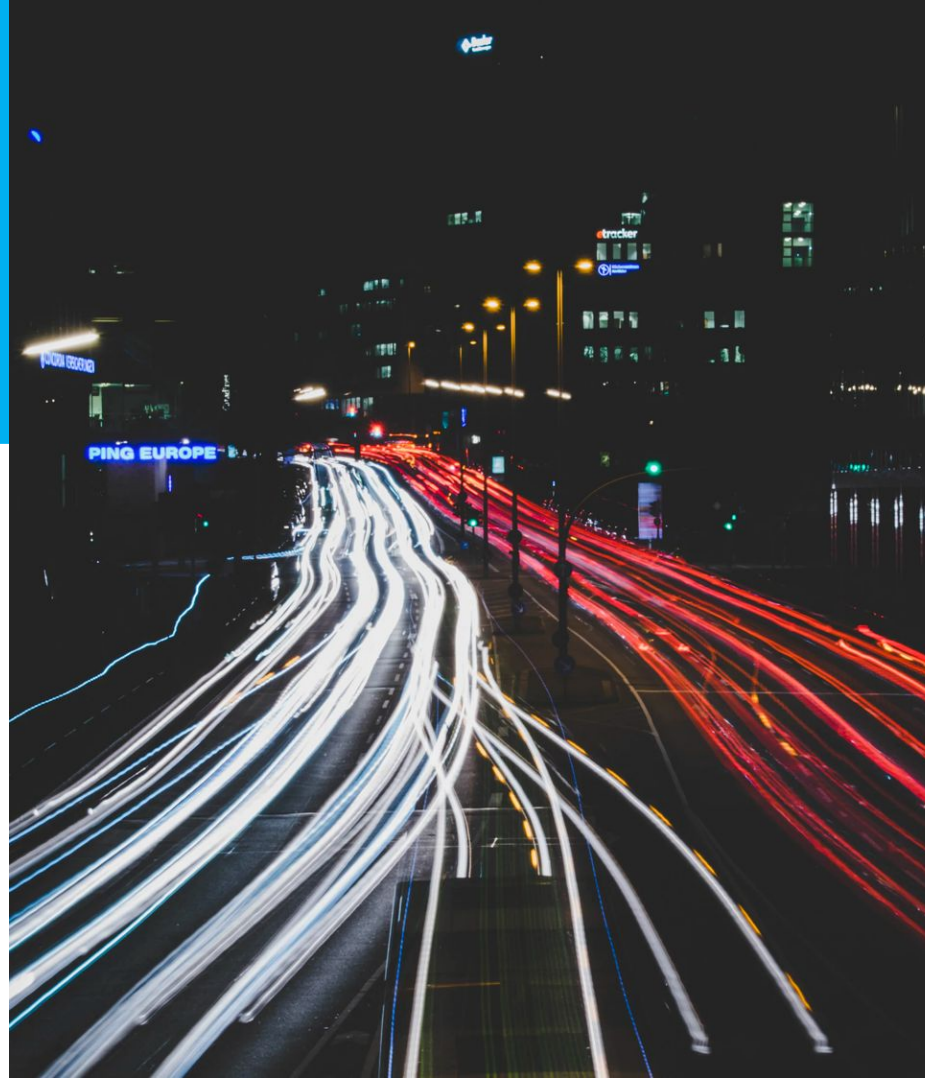
## What are the foundational ethnofutures forecasting tools?



- Drivers
- Signals
- Context
- Inferences

“**Drivers of change**” are broad, long term 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”...

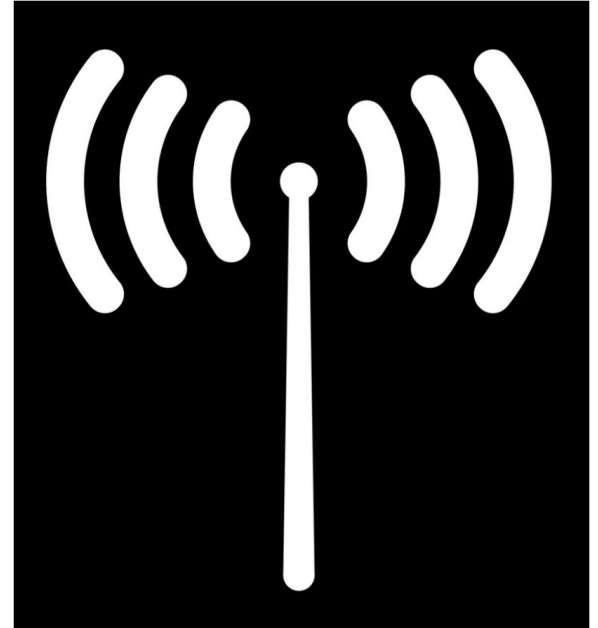
- The pandemic
- Climate change
- Extreme heat and weather events
- Shift to clean energy
- Increasing economic inequality
- New ideas for wealth redistribution (maximum wage, billionaire ban)
- Aging population and decreasing birth rates in richer countries
- The youth boom in Africa
- Growing migrant and refugee crises
- Automation of work
- Increase in facial recognition
- The Internet of Things
- Anti-racist activism
- Cryptocurrencies, NFTs, and centrally backed digital currency
- Virtual reality
- CRISPR/genetic editing
- Universal basic income
- Lifelong learning + reskilling
- The ethical tech/responsible innovation movement
- The rise of plant-based eating
- Gender equality efforts
- mRNA vaccines
- Social-media fueled conspiracy theories
- Anti-democratic voting laws
- Deepfakes video and audio
- Satellites, space Internet
- What would YOU add to this list?



# What is a signal of change?

**“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.



# Signal: Eco-distress emerges as a new formative cohort experience

**What:** In the UK, almost 60% of psychiatrists had seen patients “distressed about environmental and ecological issues” within the last year. Young people are suffering from “**eco-distress** – a low mood, helplessness, anger, insomnia, panic and guilt” at a higher rate than the general population.

**So what:** Research shows that young people are deeply impacted by their political experiences before age 24. Living in an unpredictable eco-environment can spill over into the rest of their lives and be as formative as political affiliation.



## Half of child psychiatrists surveyed say patients have environment anxiety

**Research finds young people in England feel growing distress about the future of the planet**

Source:

<https://www.theguardian.com/society/2020/nov/20/half-of-child-psychiatrists-surveyed-say-patients-have-environment-anxiety>

# Signal: Coworking spaces focus on the suburbs

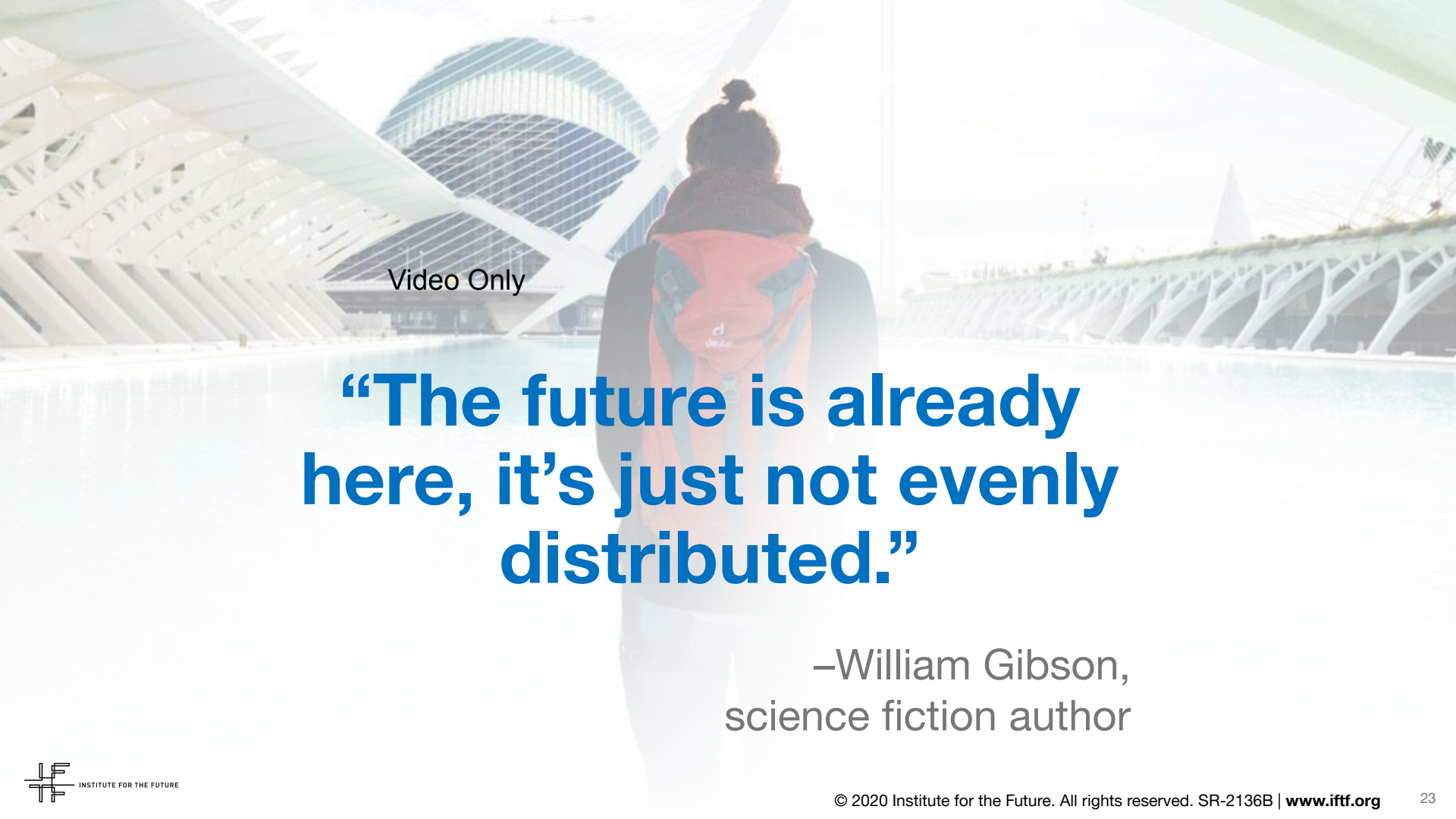
**What:** Daybase, a new coworking company, is opening spaces in the suburbs where residents had long commutes to central business districts pre-pandemic.

**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 ISN'T a signal

- **...a driver of change** (like smart cities, or AI, or aging)—broad, underlying force that is well established and will shape the nature of the future
- **...a forecast**—something that *may* happen in the future



Video Only

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

–William Gibson,  
science fiction author

## Interpreting Signals of Change

If the signal is a leading edge indicator, what does that imply?

If the signal disrupts an existing convention, what does that imply?

If the signal is limited to a particular context or community, what does that imply?



# Applying drivers and signals to yourself

Become aware of what you hope, fear, and expect from your future and consider what might be if the arc of your work unfolds from drivers and signals you detect.

What are the drivers that shape your career choices?

What are the signals of change you see around you and in the wider world of work?

Create a forecast for yourself, that you will share during your self-introduction.

# Part 2: Concepts and Case Studies

Rod Falcon/Jan English-Lueck

# Creating Scenarios

Ethnographically Designed Fictions

## Three steps to translating signals to scenarios

1. **Consider the types of shifts this signal represents:** *What are we moving from and what are we moving towards?*
2. **Imagine this signal has become the norm in the future,** creating new ways of doing things and challenging our basic assumptions: *What does that look like? What happens? To whom?*
3. **Now think about the “so whats”:** *What are the larger implications? What happens as a result of these changes?*

# Linking Signals to Ethnography



# what is a scenario

- Scenarios are rational, evidence-based stories about the future – not science fiction, not fantasy.
- Scenarios are tools to test different assumptions about potential directions of change – and so they typically come in a set.
- Scenarios are snapshots of life in the future. They help us think about the kinds of lives ordinary people will live in ordinary places, the dilemmas they'll face, and the kinds of choices they might make.

# what is a scenario

- *Scenarios don't predict the future - they reveal the various ways in which changes may combine to produce unexpected outcomes.*
- A scenario may describe the future through the eyes of a single person. But most often, scenarios describe an entire community, a local city, a nation, or even the world.
- Like any futures story, scenarios are brought to life through creative use of narratives, images, and data.


# three ways we face the future

**UTOPIAN**

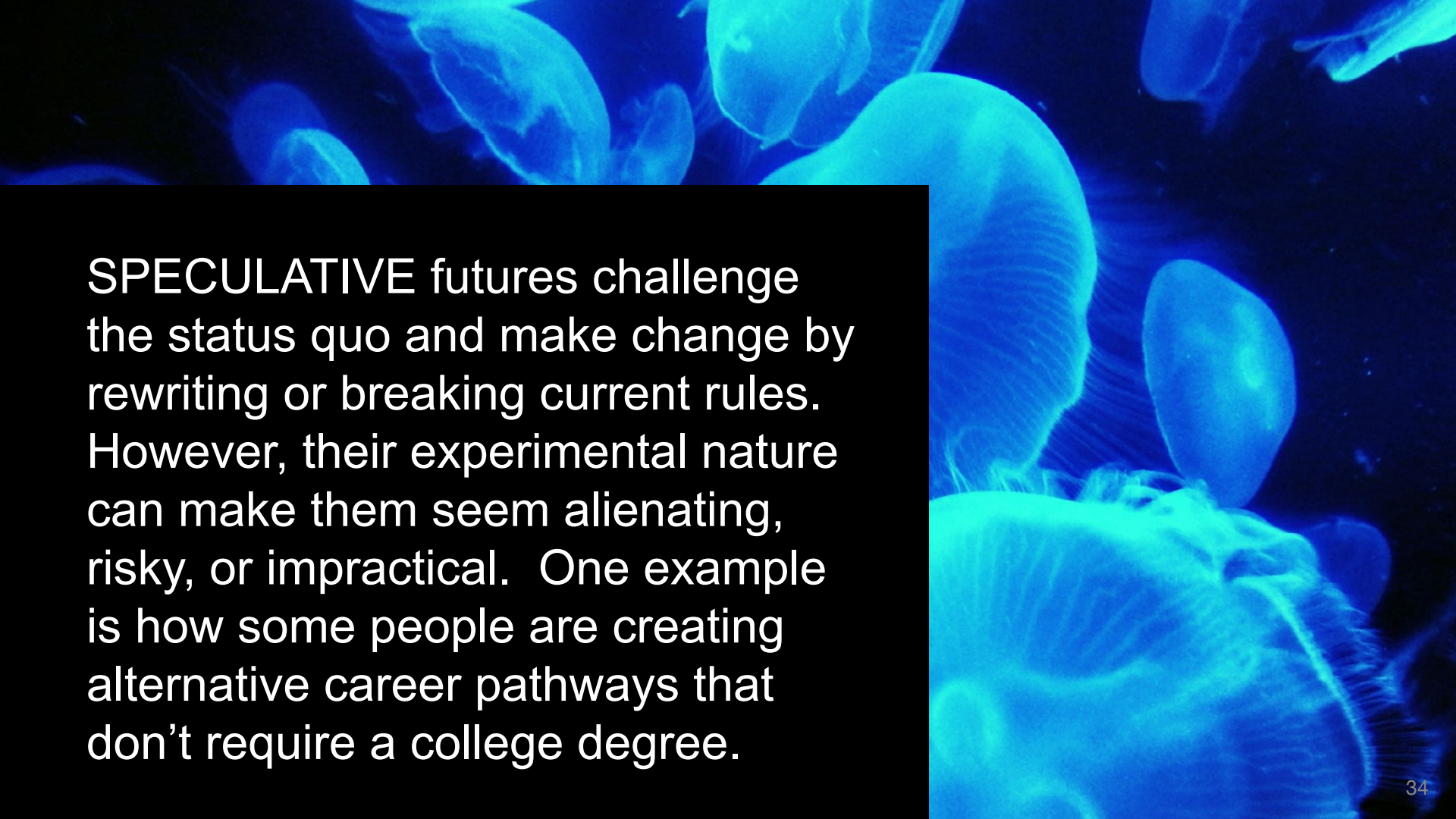
**SPECULATIVE**

**PRAGMATIC**





UTOPIAN futures seek idealism within current frameworks or express nostalgia for the past. For example using self-quantification technologies when eating for greater self-awareness, self-improvement, and productivity.



SPECULATIVE futures challenge the status quo and make change by rewriting or breaking current rules. However, their experimental nature can make them seem alienating, risky, or impractical. One example is how some people are creating alternative career pathways that don't require a college degree.





PRAGMATIC futures work within constraints to maximize outcomes and repurpose existing assets. We see this in how people repurpose everyday technologies to generate value beyond their intended use.



**No one can predict the future.**

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

# Identifying Frictions and Possibilities

To create climate positive futures, practice collecting signals of hope, like the signal above of a rickshaw driver growing flowers and vegetables on his rickshaw's roof as a natural AC during India's extremely hot temperatures.

(Image by Sanjana Shenoy)

From  
<https://www.iftf.org/future-now/article-detail/three-basic-steps-to-creating-climate-positive-futures/>



**Friction  
Spotting  
Where do we  
look for  
frictions?**

**In ourselves**

- Our own biases
- Team dynamics
- Organizational silos

**In the world we  
study**

- Conflicts between stakeholders
- Consequences of contradictory drivers [Ex. profit and sustainability]
- Unintended consequence of fixing problems



# Why it matters

Frictions as detours,  
frictions as triggers



# Friction Flipping



- Identify conflicts, pains, and gaps
- Ask, "what if" pessimistic futures contain hidden possibilities?

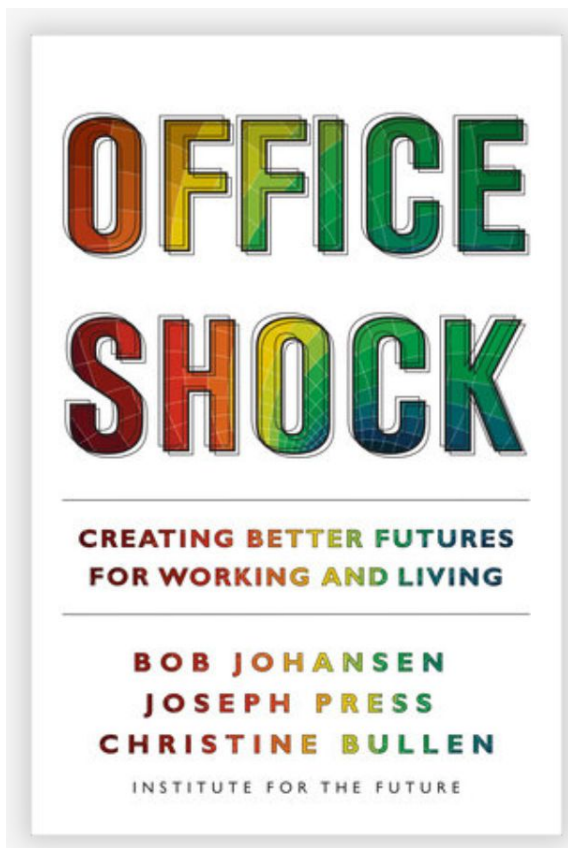


# Techniques for flipping

- Identify unexpected edge cases
- Rethink frictions and challenges. Imagine how they can be assets
- Ask, “Under what conditions could this challenge be an asset?”

# Context: The future of working

Right: Image of book cover from  
IFTF's Office Shock: Creating Better  
Futures for Working and Living



## MAKE YOURSELF KNOWN

WITH THE ART & SCIENCE OF REPUTATION MANAGEMENT



Your data is buried treasure, and everyone is digging for it. How do you protect it, trade it, share it, and get value from it?



Do you know how to get credit for everything you do—or can do?



Can you shine no matter where you are in the world—or who you're with?



Everyone is visible ...

... just about everywhere all the time. What matters is what you do with your visibility.

## BEFRIEND THE MACHINES

TO MASTER HUMAN-MACHINE COLLABORATION



Can you put a swarm of hundreds of smart digital assistants to work for you?



When machines talk to you, do you know how to talk back?



Can you make things happen as easily in VR and AR worlds as you do in the physical world?



Machines are getting smarter

Some of them will work for you. Sometimes you'll work for them—or even in them. More and more, you'll work side by side to get things done.

## BUILD YOUR CREW

IN THE MANY WORLDS OF PEER PRODUCTION



Everyone needs a crew

You'll build your crew—or crews—as you make your way through life. And you'll do it by making things together: fashions, tools, shelters, and ... well ... life!



Do you know the recipe for creating communities from the bottom-up?



Can you turn any problem into a design project?



Do you know how to buy and sell in digital currencies like Bitcoin and to build new worlds with them?

# FUTURE skills

GET FIT FOR THE BEST FUTURE YOU CAN IMAGINE

## MAKE SENSE OF LOOPY COMPLEX SYSTEMS



Everything is connected

The connections are growing minute by minute. They create feedback loops, and the loops are getting faster and faster. Making sense is all about finding your path through these complex systems.

## KEEP IT GOING

BY BUILDING RESILIENCE IN EXTREME ENVIRONMENTS



The world is going through a rough patch

We've got political earthquakes and social tsunamis. Lots of people are looking for basic shelter today but also looking ahead to tomorrow—building a steadier future.



Can you tap what's valuable in your network to build new kinds of commons and protect everyone in a risky world?



Can you find your own clear ethical path through a blend of diverse values and cultures?



Empathy. Social intelligence. Emotional intelligence. Most people build their caring IQ through trial and painful error. Is there a smarter path toward taking care of yourself and others?



Humans are wired for stories. Do you know how to find a story in a heap of data and then tell that story in words and images, in person and in 3D virtual worlds?



What are the mental habits that can help you jump start your future today?



To change the world, you need to change the way you think. Can you connect the dots in new ways?

# AI-enabled Work and Workers

1. Automation or Augmentation *...Will workers be replaced or enhanced?*
2. Distributed or Centralized *...Who makes the tools?*
3. Bottom-up or Top-down *...Who drives adoption and use of AI tools?*
4. Regulated or Unregulated *...And enforcement of the regulation*

# Reflections

- Questions so far?
  - Type into the chat
  - Consider questions for breakout group facilitator
- Transition into case study and applications
- Come back from Break for Breakout room exercise

# Break

15 minutes

# Part 3: Friction Flipping in Future Work

Jan English-Lueck, Rod Falcon, Lyn Jeffery, Jasmine Low,

## Exercise 2

Friction Flipping Future Work:  
Breakout Room Teams in Civic, HR, and  
Applications use cases





## Internal frictions

*(within teams, organizations)*

## External frictions

*(among stakeholders in markets, groups,  
and communities)*

**How can I discover** frictions  
with ethnography?

**Who** experiences frictions?

What are the **various**  
**frictions**?

What are the **potential**  
**consequences**?

**What actions can I take** to  
change the conversation?

# Reminder

## Session 1

Room 1	Room 2	Room 3
Facilitator: Jan	Facilitator: Rod	Facilitator: Jasmine
Kellie Hodge	Aude Omerin	Francesca Barrientos
Meghan McGrath	Sofia Lozano Pallares	Adam Williams
Daniela Busse	Czarina Aggabao Thelen	Robin Steiner
	Jason King	Kirin Carpenter

## Scenario building exercise:

## The future of work

**Room 1:** You are part of a strategy team in your organization **responsible for developing an evidence-based organizational vision** about how to adapt to the future of hybrid and remote work by adopting innovative technologies (e.g. AI).

**Room 2:** You are part of a research and urban design team **responsible for providing the vision for how a major city** will achieve aggressive transportation solutions. You must help rethink where office work will be done and consider the role of design in contributing to that vision.

**Room 3:** You are leading a team doing user experience research. You **manage researchers working on a social networking tool** focused on providing innovative ways to increase job reskilling for people facing job-displacement as a result of AI and automation.

## Step 1

**Elect** a notetaker.  
**Flesh out** your use case (5 minutes)

## Step 2

**Impressions of three alternative scenario** framework (stakeholder perspective, ex. utopian, pragmatic, speculative)

**Develop one** using a signal from your reading or an original signal from your team (5 minutes)

## Step 3

Clearly **identify** one or more frictions. Try to identify a challenge and try to flip it to become an asset (10 minutes)

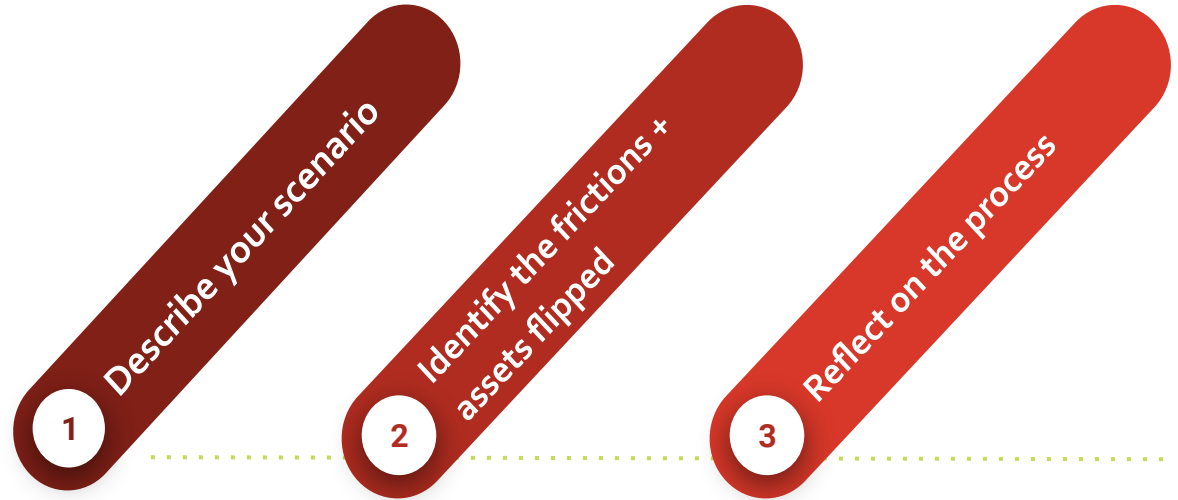
## Step 4

**Discuss** how the assets could be nurtured in your hypothetical use case (5 minutes)

## Step 5

**Review** your talking points (5 minutes)

# Scenario share-out



- Notetaker: Write descriptive paragraph in the chat
- Spokesperson: Create 3 minute report out

# Breakout Room Report Outs

# Breakout Discussions

Discuss Scenarios, begin to think about how you would use this approach in your organizations



# TIPS AND VARIATIONS



## ACTION

- ▶ Invite diverse participation—everyone has a different perspective on the capabilities and resources within an organization or stakeholder group. To ensure you really understand your existing assets, you may need more stakeholders in the room.
- ▶ Consider running this exercise with external stakeholders from a neighboring community. You may uncover unexpected allies and resources, or even a worthwhile mutual benefit partner to share assets with.
- ▶ Try running this exercise at various intervals of your action roadmap to adjust and refine your needs as you build towards your future.

### SCALING IMPACT THROUGH PARTNERSHIP

In their 2014 book *The Reciprocity Advantage*, Bob Johansen (ITF) and Karl Ronn argue that the road to impact-at-scale lies through clearly assessing a wide range of internal assets and sharing them with partners who can do things you cannot.

# Break

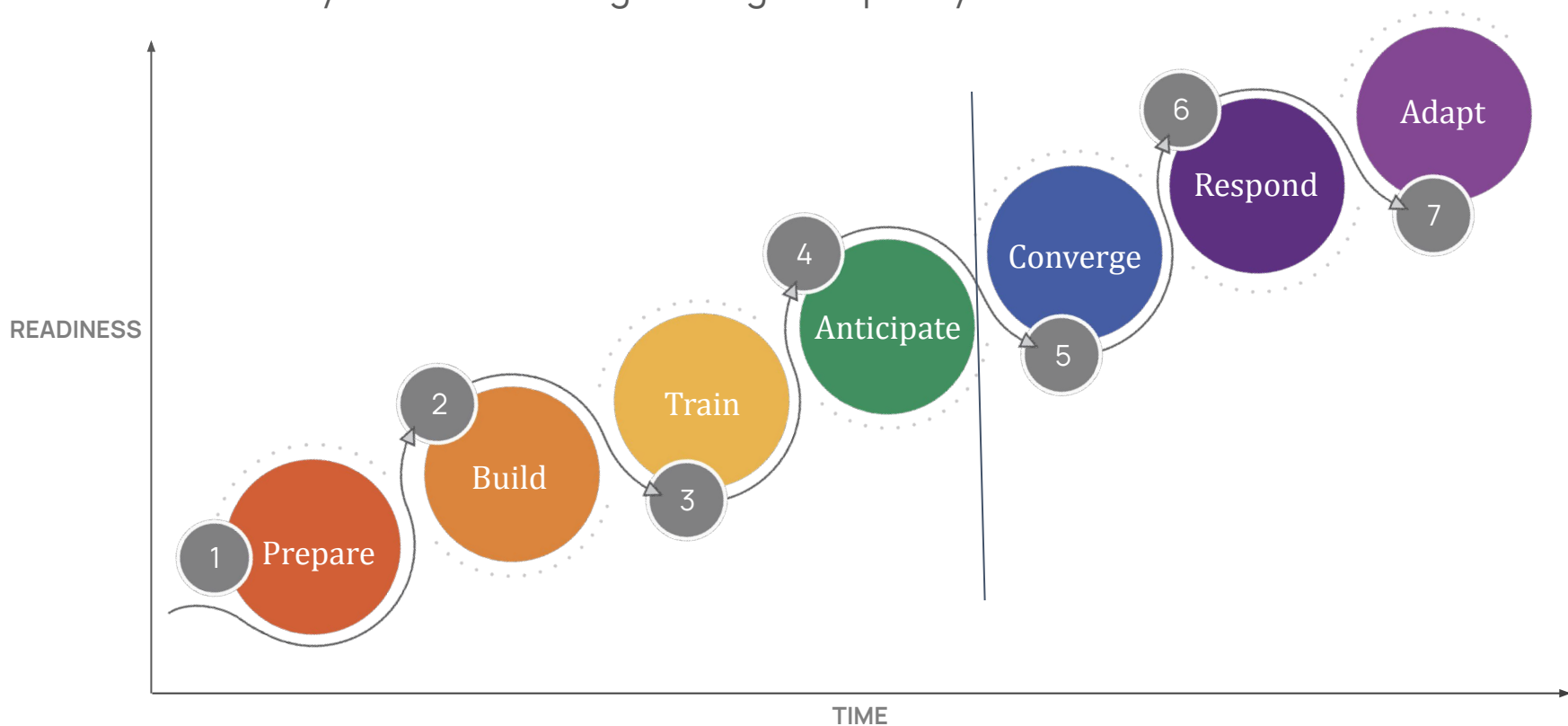
15 minutes

Be back at 7:00 PM PDT/ 1:00 PM AEDT

Taking it home

# Transforming Valuable Foresight into Actionable Insight

An IFTF Playbook for Building Foresight Capacity



Where would  
your practice  
fit into your  
organization?

Where are  
the frictions?

### MAJOR TRADE-OFFS

#### Why are you practicing foresight?

organizational ←————→ environmental

pragmatic ←————→ provocative

proprietary ←————→ public

#### Where will your practice fit into the organization?

centralized ←————→ distributed

dedicated ←————→ dynamic

operational ←————→ strategic

#### How will you create and disseminate foresight?

internal ←————→ external

quantitative ←————→ qualitative

informational ←————→ experiential

### YOUR PRACTICE

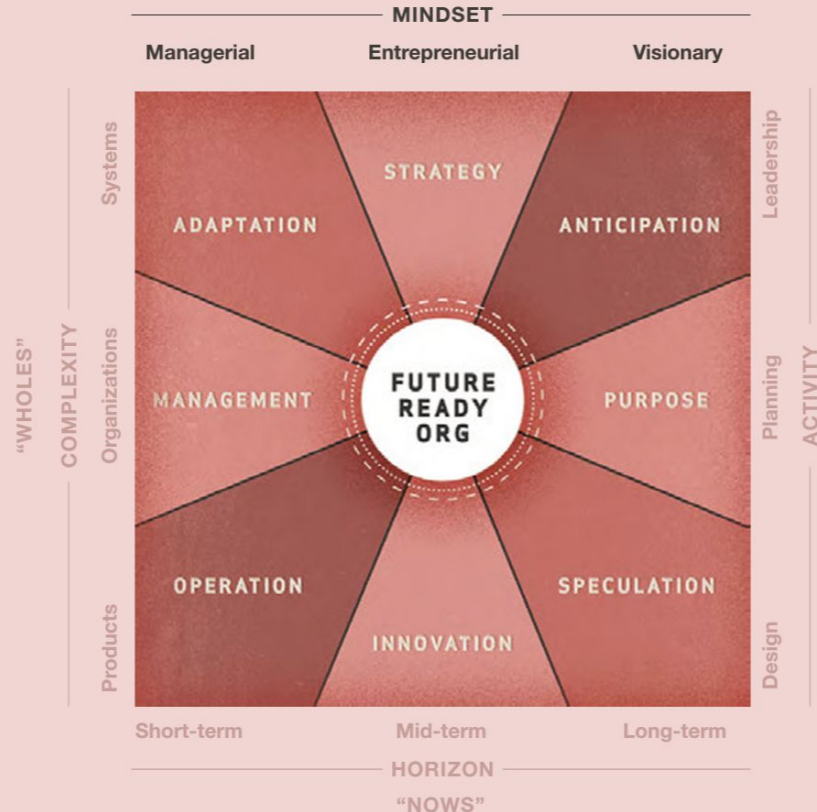
What will your practice look like? Who will be part of it?

How will it be integrated with the rest of the organization? What are your plans for scaling?

From: Toward Future Readiness: A Playbook for Building Foresight Capacity, Institute for the Future 2020.

# Products | Design

## Integrating Strategic Foresight Across Organizational Activities



- **OPERATION**  
Day-to-day; existing products, services, and programs
- **INNOVATION**  
New products and services; design thinking
- **SPECULATION**  
Customer foresight and design futures

From: Toward Future Readiness: A Playbook for Building Foresight Capacity, Institute for the Future 2020.

## Acknowledgements & contact information

Thanks to the Anthropology Department at San José State University. Additional thanks to the staff and researchers at the Institute for the Future. We would additionally want to thank the foresight professionals who shared their stories with the Vantage Project and the Irvine Foundation. For further conversations contact:

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[rfalcon@iftf.org](mailto:rfalcon@iftf.org)

[jasmine.m.low@gmail.com](mailto:jasmine.m.low@gmail.com)

# Questions & Answers

- Please raise hands or use the chat function to ask questions



# Appendix

## Insights from different use cases

Framing alternative scenarios and ethnographic user research to guide technology R&D

Applying ethnographic futures design thinking

Policy-oriented design, Using bottom-up forecasting to make sure efforts match needs

Being the ambassador of ethnofutures scenario building with teams for large orgs and product roadmaps

# Use cases for ethnofutures integrating professional foresight practices

## Framing alternative scenarios and ethnographic user research to guide technology R&D

"I...designed some bespoke user research to do two things.

One, demonstrate to that team how far they were away from productization of the thing that they were trying to build.

And two, try to illuminate that path of, how could they possibility be successful with their chosen course?

What would need to be true? How would we need to approach it? What kinds of partners would we need to have to be successful?"

*Rachel, Ethnographer and Research strategist*

# Innovation & Design

## Applying ethnographic futures design thinking

"So we executed a project where we did ethnographic futures with three families. I know that it's not a huge methodological innovation, but for us it was. We did a project where we explored futures with families from disadvantaged backgrounds in Mexico. And something else that I liked and that I had not had the chance to do it properly before, was that we took the futures imagination all the way up to futures artifacts. So we exhibited an experiential futures installation in a design festival in a big museum in Mexico city last year."--

*Jaime, Design Strategist*

# Policy-oriented service design

Using bottom-up forecasting to make sure efforts match needs

"...figur[ing] out how to do ethnographic research with people who are living on the streets, people experiencing homelessness, to really also get the same kind of voice of the people that are affected out and begin to understand what is the future of care in the public realm for low income people who are homeless look like. What should we be developing? What should we be refining? Where should we be doing it? What are the assets in that community and what are the systems of care that compliment those assets?"

*Kathleen, Foresight Consultant and Coach*

# Using ethnofutures for roadmapping and visioning in tech orgs

## Being the ambassador of ethnofutures scenario building with teams for large orgs and product roadmaps

- Large tech organizations have planning and roadmapping seasons where strategic foresight is most effective
- Being in the room with the knowledge of ethnofutures can be a great opportunity to showcase and present forecasted scenarios
- Adequate level-setting with stakeholders (e.g., “this is a provocative exercise to help us think through potential risks and opportunities) is important for keeping cross-functional teammates (XFN) interested and invested in exercises that can at first glance be taken as abstract
- It’s important for the ambassador to keep in mind the core goals of the time and scope the work to match these goals for high impact