

# The Axes of Uncertainty

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Leaders often make common errors as they make strategic decisions about the future: they under-predict or over-predict change. The reason? Most of us find uncertainty uncomfortable, so we are reluctant to confront it. We can't solve for future uncertainty, but we can prepare ourselves to think critically about signals and decisions – to understand all the dependencies we should consider that might impact the future.

These uncertainties are a way of understanding the dynamics shaping the future. There are just a few primary drivers that fall into four broad categories.

#### → Economic shifts

These include the macroeconomic trends and forces shaping our economies (how will this trade war with China impact your company's ability to make widgets?); microeconomic fluctuations (what disruption could upend your market? What are your known competitors building?); workforce readiness (is your current workforce upskilling/ reskilling fast enough? Are schools training your future workforce adequately?).

#### → Social changes

Demographic and population shifts, migration, access to education and public health all impact our futures. So do the influence of social media, journalism, marketing campaigns and gaming. Our social values, religious beliefs and ethics are evolving.

#### → Technological progress

Our communications and telecommunications infrastructure have always played a significant role and uncertainties here challenge every organization. (Will 5G be deployed nationwide using a single set of standards? Will it be nationalized? Or will individual companies build and maintain the infrastructure?) Computer systems – artificial intelligence, cloud-based, genetic – directly influence us all. Access to components, custom chipsets and training data, will cause an emerging technology to accelerate or decelerate.

#### → Politics and Activism

There is no question we're living through a time of significant political disruption. Regulation, new rules and legislation, executive orders, international treaties and accords and trade agreements all directly and indirectly impact our futures.

All of these drivers fall outside the direct control of just about every organization. It is possible to influence (or try to quash) new regulation, but even the boldest lobbying efforts aren't guaranteed. The big tech giants don't develop the next versions of their hardware and software products by committee; what they release is what we must all eventually use.

Meanwhile, internally, an organization faces numerous uncertainties: changes within key departments or leadership positions; fluctuations of share prices; the success or failure of new business units; legal battles involving patents and personnel; and whether or not an industry will have the workforce it will need in the future. These are uncertainties every organization must contend with, but they are under the direct control of an organization's leaders.

Investigating those four uncertainties, along with uncertainties about your organization and industry, is a good way to see your plausible futures in advance of them actually occurring.

## Building Your Axes

The Future Today Institute's methodology for seeing around corners begins with identifying deep uncertainties. Then, we surface emerging trends, identify commonalities and connections between them, map their trajectories over time, describe plausible outcomes, and ultimately build strategy to achieve desired outcomes. We begin and end the process with a framework called the Axes of Uncertainty. We use this framework at the start of all our foresight research and again as the basis for writing scenarios.

The goal of every organization should be to confront these areas of uncertainty as often as possible. One way to do this is using the Axes of Uncertainty framework.

First, begin by creating a list of unknowns for each of the four categories: economic issues, social changes, technological progress and political issues. When possible, incorporate related uncertainties about your organization. Do this using logical statements present today rather than speculations about what the world might look like in the future. Develop those statements as opposites.

### For example

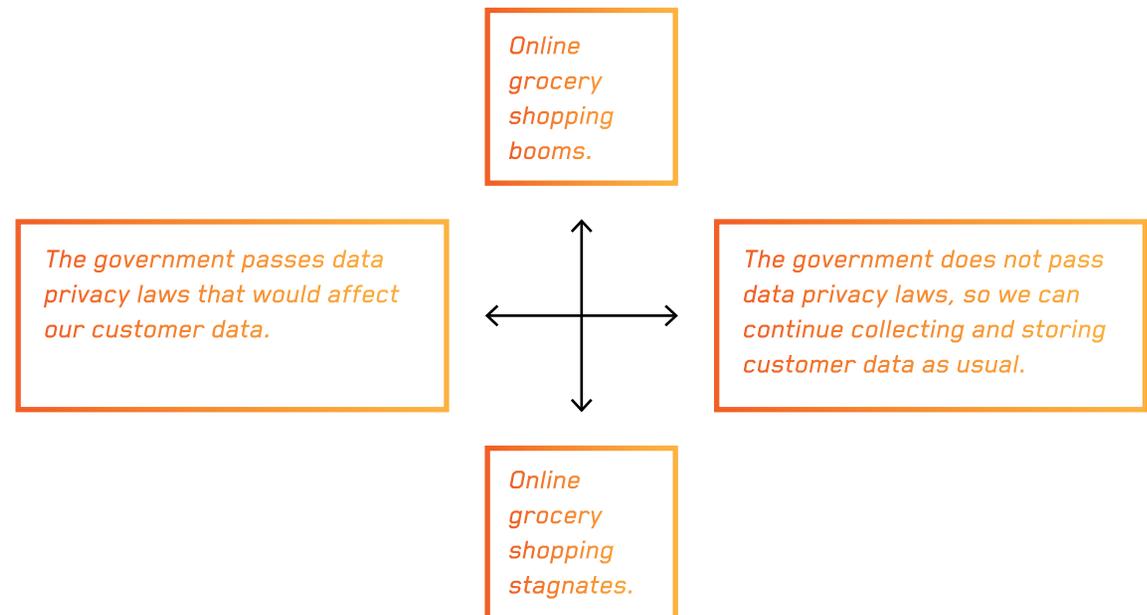
*The government passes sweeping data privacy laws that would affect our customer data.*



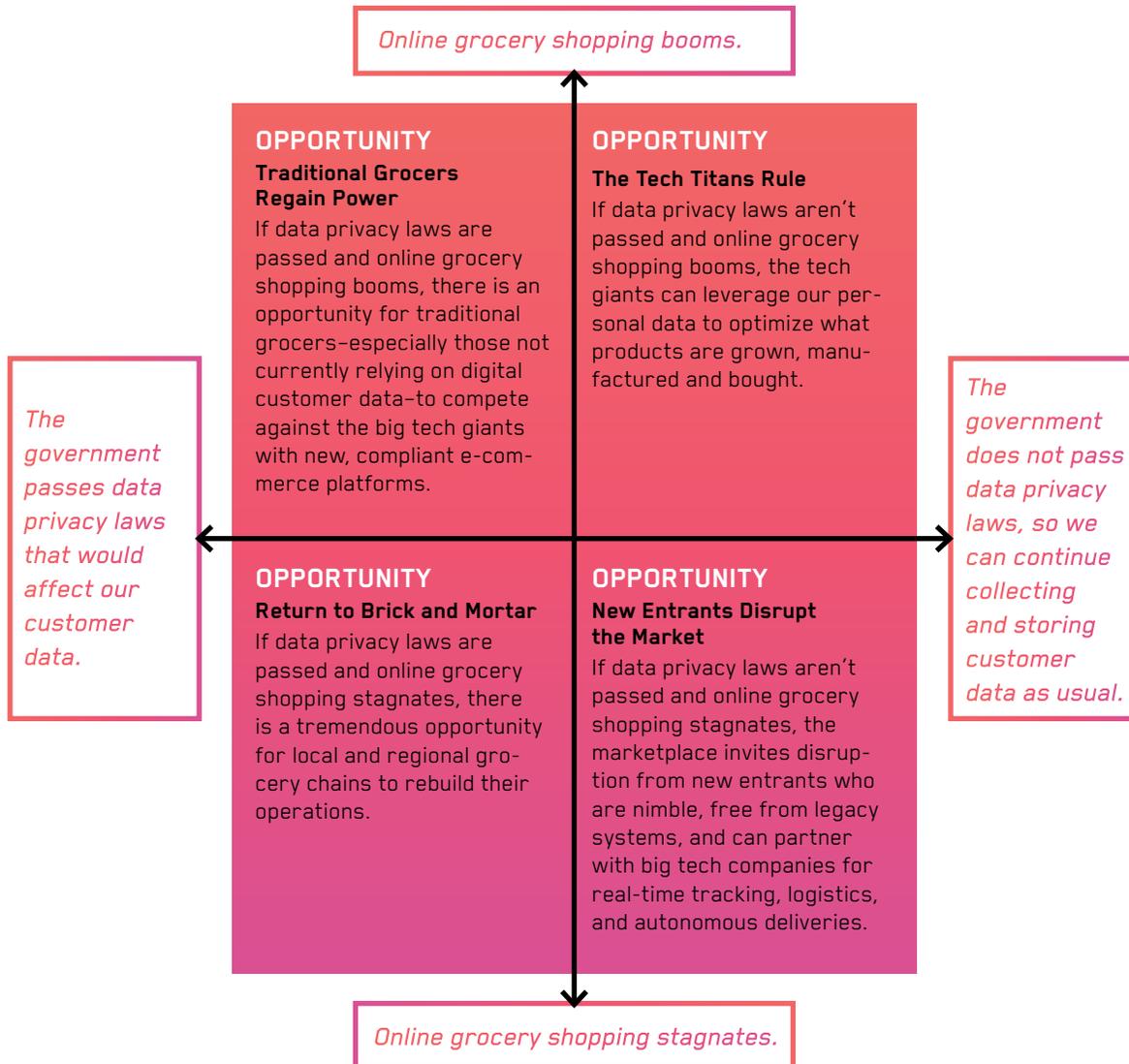
*The government does not pass sweeping data privacy laws, so we can continue collecting and storing customer data as usual.*

Try to be exhaustive in building your lists of uncertainty. A good way to accomplish comprehensive lists is to include outsiders in this work. Seek those who do not work on your team, in your organization and even in your industry.

Next, select two uncertainty statements from different categories and pair them in a 2 x 2 matrix.



Now using the statements on each axis endpoint, develop a headline for the four quadrants. Describe the outcome for your organization. Typically, one headline will be an opportunity, one will reveal risk, and two will be neutral for the organization.



## The matrix reveals four plausible futures

### Return to Brick and Mortar

If data privacy laws are passed and online grocery shopping stagnates, there is a tremendous opportunity for local and regional grocery chains to rebuild their operations.

### New Entrants Disrupt the Market

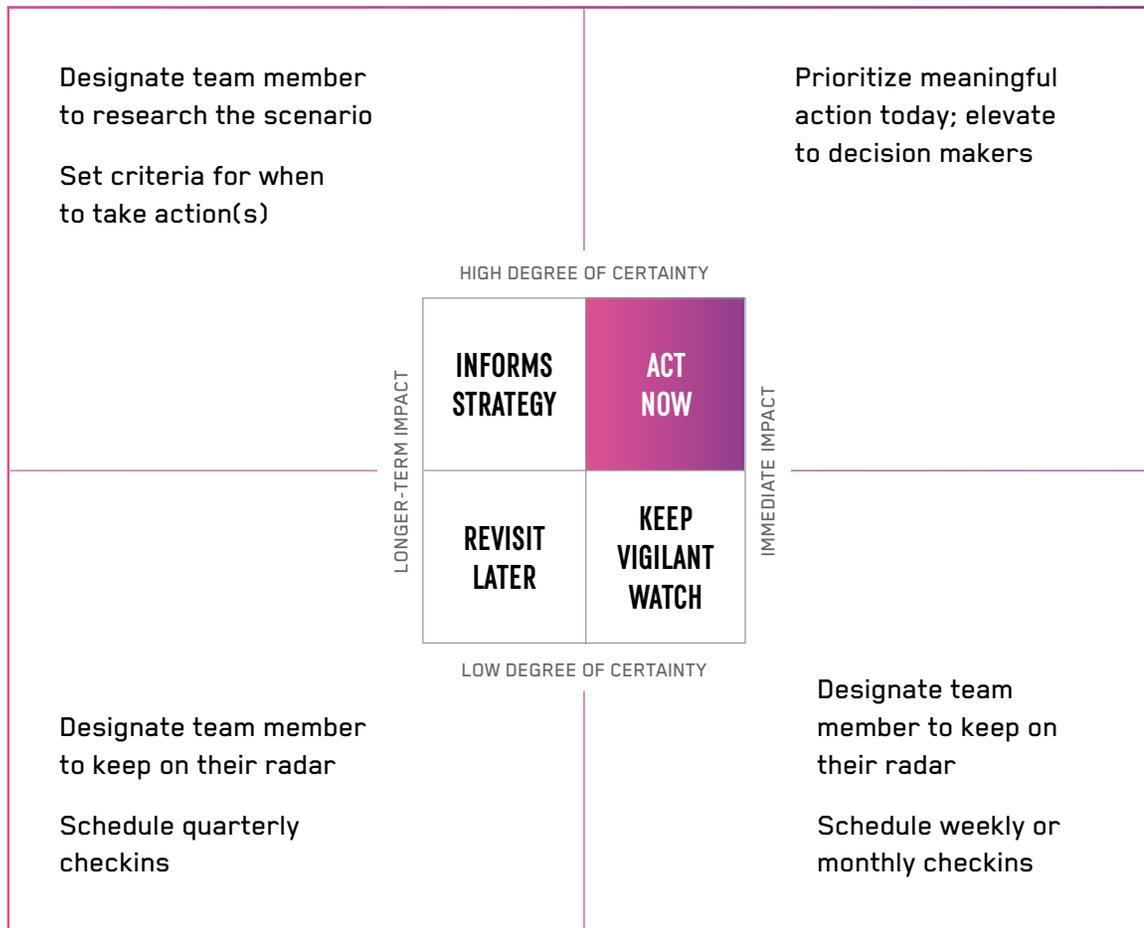
If data privacy laws aren't passed and online grocery shopping stagnates, the marketplace invites disruption from new entrants who are nimble, free from legacy systems, and can partner with big tech companies for real-time tracking, logistics, and autonomous deliveries.

### The Tech Titans Rule

If data privacy laws aren't passed and online grocery shopping booms, the tech giants can leverage our personal data to optimize what products are grown, manufactured and bought.

### Traditional Grocers Regain Power

If data privacy laws are passed and online grocery shopping booms, there is an opportunity for traditional grocers—especially those not currently relying on digital customer data—to compete against the big tech giants with new, compliant e-commerce platforms.



## From Headlines to Scenarios

Scenario planning originated at the start of the Cold War, in the 1950s. Herman Kahn, a futurist at the RAND Corporation, was given the job of researching nuclear warfare, and he knew that raw data alone wouldn't provide enough context for military leaders. So instead, he created something new, which he called "scenarios." They would fill in the descriptive detail and narration needed to help those in charge with creating military strategy understand the plausible outcomes—what could happen, if a certain set of actions were taken. Simultaneously in France, the futurists Bertrand de Jouvenel and Gaston Berger developed and used scenarios to describe preferred outcomes—what should happen, given the current circumstances. Their work forced the military and our elected leaders into, as Kahn put it, "thinking about the unthinkable" and the aftermath of nuclear war. It was such a successful exercise that their approaches were adopted by other governments and companies around the world. The Royal Dutch Shell company popularized scenario planning, when it revealed that scenarios had led managers to anticipate the global energy crisis (1973 and 1979) and the collapse of the market in 1986 and to mitigate risk in advance of their competition. Scenarios are such a powerful tool that Shell still, 45 years later, employs a large, dedicated team researching and writing them.

Once you and your team have developed several dozen headlines, choose a few for further exploration as detailed scenarios. We recommend prioritizing your headlines based on the data/ evidence you have and your estimated timing of impact.

## Embracing Unknowns

Given that we cannot know exactly how the future might unfold, what's the best way to prepare for change? Reduce uncertainty as much as possible. This means investigating leading indicators, writing full scenarios that incorporate: all four categories of uncertainties, details on your particular organization and industry, and related tech trends.

This is the true power of the Axes and of scenario planning. Acknowledging the uncertainties that lie before us enables us to confront them head on, to spot both opportunity and risk, and to rehearse our responses when we still have time to make corrections.

## About The Future Today Institute

Founded in 2006, the Future Today Institute helps leaders and their organizations prepare for deep uncertainty and complex futures. We focus exclusively on how emerging technology and science will disrupt business, transform the workforce and ignite geopolitical change. Our pioneering, data-driven forecasting methodology and tools empower leaders to make better decisions about the future, today.

Our forecasting methodology has been featured in the *MIT Sloan Management Review* and in the *Harvard Business Review*, and it is taught at universities around the world. FTI clients and partners include government agencies, Fortune 100 companies, investment firms, news and entertainment media organizations and associations. Our focus is technology, and we intentionally work with a wide variety of organizations to enable the transfer of knowledge and best practices across industries.

Reliable strategic foresight depends on both ingenuity and rigorous evaluation. We work in cross-disciplinary teams comprised of trained futurists as well as subject-area experts, technologists, designers, process-thinkers and creative minds.

FTI is based in New York City and Washington, D.C.

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