Everyone knows about “black swans” — extreme, one-off events that are impossible to predict. Think of the assassination of Archduke Franz Ferdinand triggering the first world war or the 1987 stock market crash, which set a record for one-day price slides. But what about the risks that are all around us, hiding in plain sight?

Was anyone really surprised by the Colonial pipeline ransomware attacks? Or the PG&E grid failure? Or Hurricane Katrina, the 2008 great financial crisis, the Fukushima nuclear disaster or the Covid-19 pandemic?

These are the types of risks that many people, from policymakers and business executives to activists and journalists, saw coming way in advance. The particulars of these “grey swans”, as the insurance company Aon dubbed them in a report, may have been unpredictable. But the events themselves were not.
Indeed, they represent a different kind of threat that requires an entirely new way of managing risk. If there is one thing that the pandemic brought home with crystal clarity, it is that seemingly disparate issues, including climate change, supply chain disruption, inflation, financial stability, inequality and nationalism, are in fact intricately related.

Add in increasing digital connectivity and you have what complexity theorists would refer to as an “infinite” problem rather than a series of finite issues. These aren’t the type of risks that can be handled alone, or even definitively. They require a step change in thinking about the nature of the underlying problem and, ultimately, deep changes in the way we live, work and govern.

Take, for example, the fragilities in the US agricultural system exposed by the pandemic. There were lines at grocery stores, even as farmers were throwing away harvests, because of two siloed supply chains. One supplies restaurants, another grocery stores, and both of them are highly concentrated.

In the meat food supply chain, which was severely disrupted by the virus, a mere five counties supply most of the nation’s demand. The top two, San Bernardino and Riverside in California, are crucial to trucking logistics across every industry. These places are also rife with natural disasters and economic inequality (California’s Inland Empire region was ground zero for the housing crisis). Risk hubs, anyone?

An analysis of the meat sector done by MITRE, a non-profit public interest research group, hints at the challenges involved in tackling such a complex problem. You need to think about antitrust policy (why did three corporate suppliers become so big?) and about agricultural subsidies. Why do we pay farmers to grow crops that are mostly eaten by cattle if we want to reduce carbon emissions?

National security is another concern — should China own as much US pork production as it does? So is healthcare in vulnerable populations, and so is technology that is open enough to permit communication across multiple systems but needs to be secure. The list goes on and on. And that’s just one part of the agricultural sector. Bring this kind of analysis to water, energy, finance or the internet, and the spaghetti bowl of complexity grows.

There are plenty of people that want to bring thinking on such complex systems to the post-Covid world. I recently took part in the OECD’s New Approaches to Economic Challenges event exploring whether short-term national responses to the pandemic are creating greater resiliency or simply exacerbating existing system failures. Sector experts at places such as Darpa, the innovation arm of the US Department of Defense, are also thinking hard about how to craft more resilient systems.
The Biden administration certainly has more of this kind of joined-up systems thinking than any White House that I can remember. But the US can and should do more to tackle grey swans.

A valuable guide to these topics is a lengthy paper entitled “Anticipatory Governance”, which proposed ways to help the executive branch cope with “the increasing speed and complexity of major challenges”. It was written in October 2012 by Leon Fuerth, a veteran foreign service officer who was national security adviser to Al Gore, Bill Clinton’s vice-president.

As Fuerth puts it: “If we are to remain a well-functioning republic and a prosperous nation, the US government cannot rely indefinitely on crisis management, no matter how adroit. We must get out ahead of events or we risk being overtaken by them ... Our 19th-century government is simply not built for the nature of the 21st-century challenges.”

The report offers several smart proposals. Here is one of my own. The US needs a resiliency tsar in the White House, someone who answers directly to the president and can cut through public sector bureaucracy, think across agencies and start to focus the administration even more sharply on what it is already doing — reinventing the US economy in a way that will be structurally different from what came before.

Such a person should come from a defence background, where the synchronisation of complex systems, from infrastructure and logistics to technology and people, is everyday business.

This might pose a doctrinal challenge for the US, which has typically kept the military out of matters that take place within national borders. That is yet another systemic challenge to be tackled in a future column.

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