



in collaboration with

KEARNEY
National Transformations Institute



NAVIGATING THE CHAOTIC TRANSITION TO A NEW WORLD

A new chapter has begun.

Having emerged from one of the most challenging and consequential years in recent history, the world has now entered a year in which the sheer volume and structural depth of change may well prove to be even greater. In many ways, we have entered a world that has suddenly been turned upside down. In the U.S., voters have elected a new administration committed to a global policy agenda that is diametrically opposed to the one that preceded it. In parallel, after a year of lockdowns that exponentially increased our use of virtual means of interaction, we have entered a period in which the digital economy will be an ever more central engine of growth – and disruption. And having endured an already unprecedented pandemic, we now face the all too plausible prospect of a relentlessly adaptive viral adversary. Given these and other structural shifts and uncertainties, 2021 is likely to mark another transformative chapter in the historic critical juncture in which we find ourselves.

For government leaders dedicated to advancing the interests of their citizens in the context of this dynamic and uncertain near-term future, priorities must include repairing the social fabric, navigating a transformed geo-technological order, competing in a transformed global economy, and securing the long-term future. In each of these areas, leaders face pressing challenges and novel threats, as well as a remarkable landscape of emergent opportunities to drive transformative change—starting now.



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H.E. Mohammad Al Gergawi

Minister of Cabinet Affairs, UAE and Chairman of the World Government Summit Organization

2020 will be remembered as the year of "disruption" – be it of human lives, learning and even logic. This time last year, the whole world was caught unaware by a life changing pandemic. Even though pandemics are known to be one of humanity's most evident risks, the world was woefully unprepared for the velocity and voracity of the COVID-19 virus.

The year 2021 must, in turn, be a defining year for the future. Humanity as a whole has a unique opportunity to start fresh, and to chart a "better" course forward. The "Twenty-one in Twenty-one" report provides a suite of priorities for government leaders to consider at this definitive time in human history.

With great change comes great opportunity. Valuable lessons and reminders emerged over the past year, which will be important to heed moving forward. Perhaps, the most important of those is our inextricable connectedness to each other and nature: Our individual and collective actions as nations have important consequences not only for us, but for our children and the many generations to come after them. We are all responsible and we must all be accountable to ourselves and each other.



The World Government Summit was created in the spirit of openness and collaboration to shape a better future. This platform is dedicated to bringing together governments, businesses and thought leaders to discuss and address global challenges, celebrate and share innovation, and attune global thinking towards resilience, preparedness and the future.

The Twenty-one in Twenty-one report covers a wide spectrum of flashpoints for government leaders to address collectively: chief among them are the fair and equitable distribution of vaccines worldwide; the urgent need to address the climate crisis, and to strengthen climate action in line with recovery efforts; harnessing the opportunities presented by digital technologies to bridge inequalities; and addressing the global trust deficit, further devastated by misinformation, growing inequality and perceived failures of governments to deliver on their promises; among others.

Ultimately, the report offers a strong value proposition for strengthened multilateralism and global cooperation. It takes stock of lessons learned, making the case for accelerated collaboration and partnerships, and a strengthened social contract between governments, businesses and citizens at the national and global levels, for the future we all want.

The development of a COVID-19 vaccine in 8 months is a great achievement for humanity, and a clear demonstration that with determination, focus, investment and collaboration, we are capable of overcoming the most impossible of challenges.

The path ahead is filled with many challenges and opportunities. I invite you to join us in bringing human determination and capacities together to collectively address the greatest challenges of our time, today.

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Harness 'Warp Speed' Policy Approaches

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REACTIVATE CRITICAL GLOBAL HEALTH INITIATIVES ON ENDURING THREATS

Preserving decades of progress in addressing the scourge of infectious disease

On the Brink of Overload:

As the global health agenda became single-mindedly focused on meeting the unprecedented challenges of COVID-19, measures to manage a wide range of other critical diseases have fallen dangerously far behind, creating a health overhang that requires immediate action. The pandemic has stolen the spotlight of scientific attention, and COVID-19 restrictions have forced critical testing sites and prevention services for other diseases to close or pause. Disruptions in supply chains and travel have limited the delivery of critical medications for these diseases to struggling areas throughout the world. Interruption to treatments for diseases like AIDS can have devastating consequences, allowing viruses to become drug resistant.

Alongside COVID-19, Least Developed Countries (LDCs), Land-locked Developing Countries (LLDCs), and Small Island Developing States (SIDSs) face HIV/AIDS, tuberculosis (TB), measles, polio, and malnutrition. The nearsingular focus of resources on COVID-19 has created a "vacuum for other diseases to rebound and spread¹" in 2020 as cases of dengue in Indonesia doubled, malaria cases increased throughout South America and Africa, and nearly-eradicated polio outbreaks resumed in Yemen. HIV-, TB-, and malaria-related deaths in the next five years may increase by 10%, 20%, and 35%, respectively.²

"In the news: The effects of COVID19- on other infectious diseases." International Association for Medical Assistance to Travellers. 16 July 2020.

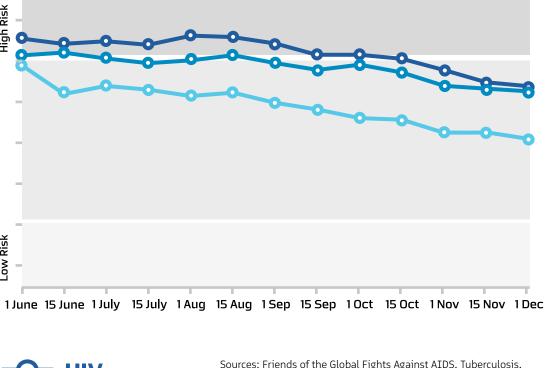
"How COVID19- is affecting the global response to AIDS, tuberculosis and malaria." Friends of the Global Fight Against AIDS, Tuberculosis, and Malaria. 8 February 2021. Alexandra B Hogan, PhD; Britta L Jewell, PhD; Ellie Sherrard-Smith, PhD; Juan F Vesga, PhD; et al. "Potential impact of the COVID19- pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modelling study." The Lancet. 13 July 2020.

10, 20, 35%

Potential increase in HIV-, TB-, and malaria-related deaths in next 5 years, respectively²

Service Delivery Disruption

Average Score of Countries



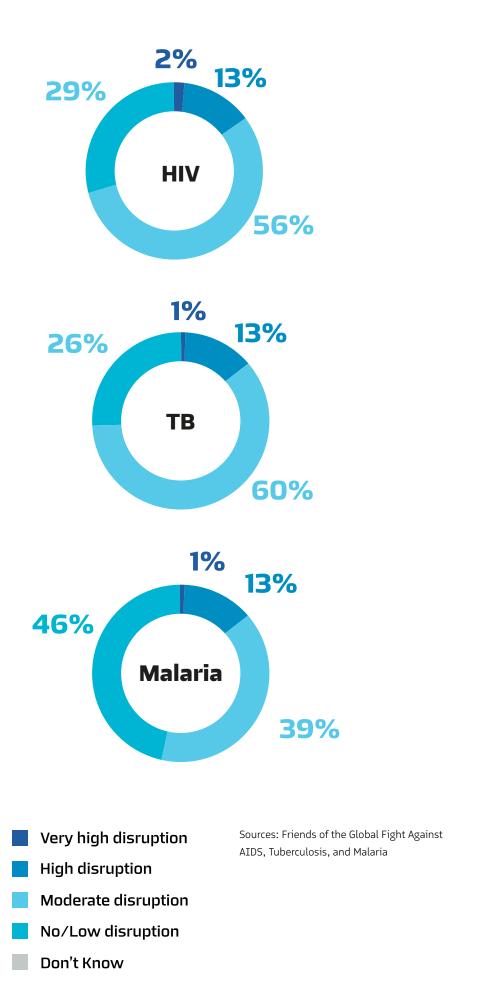
-O- HIV -O- TB -O- Malaria Sources: Friends of the Global Fights Against AIDS, Tuberculosis, and Malaria

PRIORITY FOR ACTION

For government leaders, a key priority in 2021 is reactivating efforts to address the other vast global health problems that have been neglected during COVID-19. Leaders must initiate a surge of collective action to prevent diseases including HIV, TB, and malaria from reemerging stronger than they were before the crisis.

Shutting down or delaying services, tests, and treatments for these diseases have not only increased deaths but are threatening to reverse decades of progress against malaria, TB, HIV, and more. These ongoing threats require continuous attention and investment in order to avoid devastating widespread outbreaks and deaths.

Service Delivery Disruptions Distributions" (1 Dec)





HEALTH OVERHANG

Restoring citizen-level foundations of well-being, resilience, and productivity

A Corrosive, Invisible Challenge:

A hidden and deeply consequential second order effect of the pandemic was the postponement of medical treatment for non-urgent conditions. None of these overhangs, however, is more pervasive and urgent than that of mental health. The pandemic generated tremendous psychological pressure, which has resulted in an unprecedented increase in the prevalence of anxiety and depression. Social connections—vital to managing and easing stress—have been eroded. Additionally, mental health effects have been disproportionately borne by those with fewer economic resources, greater stressors, and less social contact.

COVID-19 has halted or disrupted mental health services in 93% of countries globally, while demand for mental health support is rising sharply.³ Anxiety screenings are increasing,⁴ with depression symptoms tripling in the U.S.³: 40% of U.S. adults reported struggling with mental health⁵ or substance use in 2020⁶ and nearly one in five people diagnosed with COVID-19 was diagnosed with a psychiatric disorder such as anxiety, depression, or insomnia within three months.³

- "COVID19- disrupting mental health services in most countries, WHO survey." World Health Organization. 5 October 2020.
- 4 "COVID19- and Mental Health: A Growing Crisis." Mental Health America. 2021.
- "Pandemic's Emotional Hammer Hits Hard." NPR. 2 September 2020. Catherine K. Ettman, BA; Salma M. Abdalla, MD, MPH1; Gregory H. Cohen, MPhil, MSW, PhD1,3; et al. "Prevalence of Depression Symptoms in US Adults Before and During the COVID19-Pandemic." JAMA Network. 2 September 2020.
- Mark É. Czeisler; Rashon I. Lane; Emiko Petrosky, MD3; Joshua F. Wiley, PhD; et al. "Mental Health, Substance Use, and Suicidal Ideation During the COVID19- Pandemic United States, June 2020, 30–24." Centers for Disease Control and Prevention. 14 August 2020

PRIORITY FOR ACTION

For government leaders, a critical priority in 2021 is proactively identifying those who need treatment and ensuring they receive it rapidly.

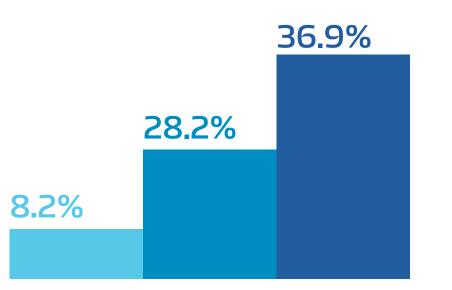
Doing so is a prerequisite for healing the social fabric and creating the conditions for renewed socioeconomic dynamism. The impact of the crisis on mental health has been severe, leaving scars that will outlast the pandemic itself. Mental illness is also linked to increased risk of physical illness, which will further strain healthcare systems and yield grave consequences for economic productivity. Pre-COVID-19, nearly US\$1 trillion in economic productivity was lost annually from depression and anxiety. However, studies suggest that investment in evidencebased care for depression and anxiety yields a fivefold return⁷, making the business case for government action in terms of public value unassailable.

7 "COVID19- disrupting mental health services in most countries, WHO survey." World Health Organization. 5 October 2020.

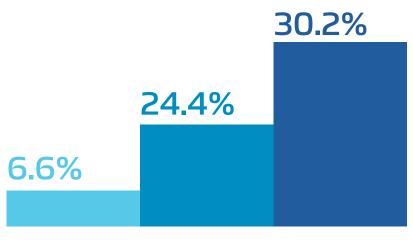
Increase in depression symptoms during the pandemic³

Pandemic Causes Spike in Anxiety & Depression

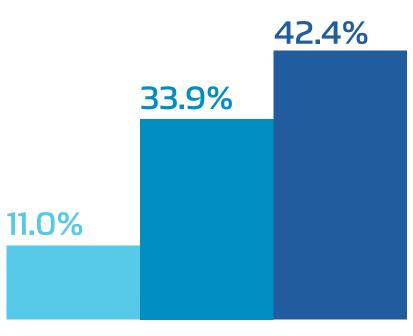
- January-June 2019
- May 14-19, 2020
- December 9-21, 2020



Symptoms of Anxiety Disorder



Symptoms of Depressive Disorder



Symptoms of Anxiety or Depressive Disorder

Sources: CDC, NCHS, U.S. Census Bureau



PROTECT THE DEVELOPMENT OF OUR YOUNGEST MINDS

Reducing damaging stressors on our youngest citizens and confronting barriers to critical child cognitive development

A Generation Under Threat:

In addition to its impact on family dynamics, COVID-19 has multiplied and intensified the stressors in children's lives. These stressors include reduced family income, food insecurity, parental stress, and child abuse, as well as interruptions to education and social contact. Children face increased stress without the routines, activities, and interactions that stabilize and support their development. Peer-to-peer interaction is critical to allow children to express their feelings, learn skills, and ensure proper biological and cognitive development. Without swift and urgent action to address the needs of children during the pandemic, governments face a generational problem.

463 million children globally were unable to access remote learning when COVID-19 shuttered their schools.8 While children are resilient, disruptions and adversity in early childhood can have grave consequences. In early childhood, children develop a sense of identity, ability to recall experiences, anticipate future events, acquire a sense of time, and learn to take turns, share, and realize needs of others.9 Disruption to normal interactions and exposure to adversity in early childhood is linked to peripheral inflammation, neural circuitries, and other biological and neural development problems, including impairments to a child's stress response functions. Stressors can also cause DNA methylation, which alters the genetic process, and can further negatively affect children's brains and immune systems. Childhood adversity also increases the likelihood of developing seven of the 10 leading causes of death. 10 Additionally, financial hardship in childhood is associated with increased risk of metabolic syndrome.

- 8 "COVID19- and Children." UNICEF. October 2020.
- 9 Susan B. Bastable; Michael A. Dart. "Developmental Stages of the Learner." Chapter 5. From Nurse as Educator: Principles of Teaching and Learning for Nursing Practice, Fifth Edition. Jones & Bartlett. 2019.
- "Childhood adversity increases risk for long-term health and behavioral issues." Center for Youth Wellness.

PRIORITY FOR ACTION

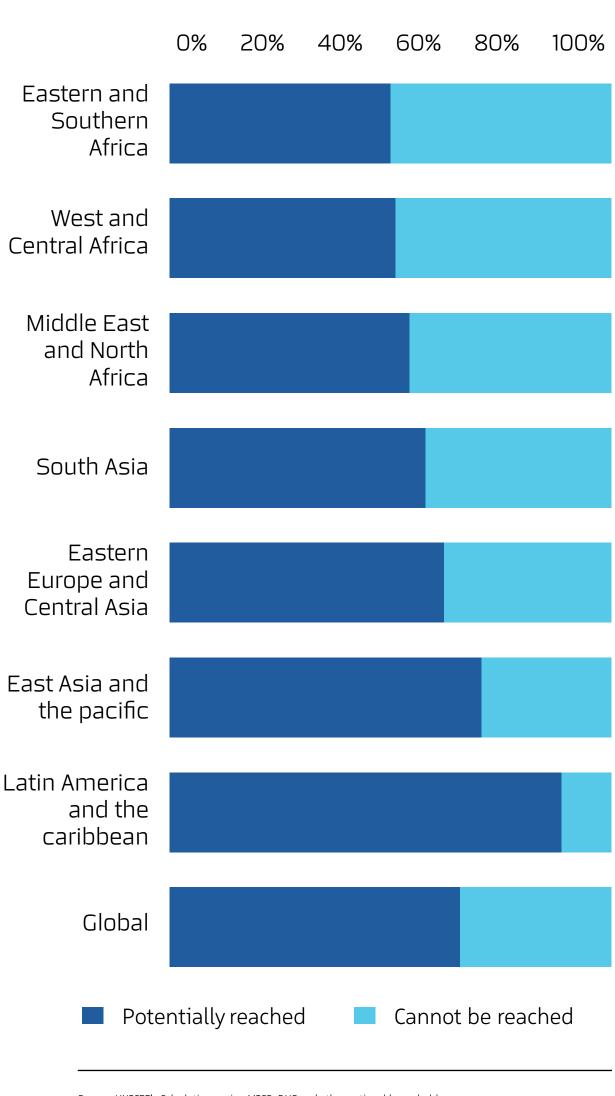
For government leaders, it is a vital priority in 2021 to acknowledge, map, and systematically address the stressors that most challenge children in their communities.

Given the crucial importance of early childhood development, urgent action is required to counteract the devastating costs of these stressors, particularly given their intensification by COVID-19 restrictions. Key imperatives include ensuring that children remain engaged in education, stimulated through social interaction, and financially secure to the greatest possible extent. A systematic approach must include mapping key community-specific

463 Million

Children unable to access remote learning when schools close⁸

At least 463 million – or 31 per cent – of schoolchildren worldwide cannot be reached by digital and broadcast remote learning programs



Source: UNICEF's Calculations using MICS, DHS and other national household surveys.

stressors and working with parents, schools, and institutions to devise a strategy for supporting vulnerable youth. Governments must identify ways to effectively replace the traditional social and educational activities that are critical to childhood development, and support mechanisms for virtual peer-to-peer interaction¹¹. Failure to deliver on this front will have long-term consequences that will ripple throughout the healthcare system and economy for decades to come.



RESTORE AND EXPAND THE EMPOWERMENT OF WOMEN

Addressing the disproportionate economic impact of the pandemic on women

The Unequal Gender Impact of the Pandemic:

Women have been disproportionately affected by the pandemic and require targeted policy interventions designed to help repair their professional trajectories. As a result of COVID-19, four times more women than men have left the workforce. A primary driver is the critical and uncompensated priority of childcare. Women are also most present in sectors hardest hit by the pandemic: education, service, hospitality, elder care, and healthcare. The challenge is thus twofold: many jobs filled by women have disappeared, while already limited societal institutions and support systems for women have collapsed in many countries and localities.

Ewing-Nelson, Claire. "Four Times More Women Than Men Dropped Out of the Labor Force in September." National Women's Law Center. October 2020.

Vesoulis, Abby. "If We Had a Panic Button, We'd be Hitting it. Women Are Exiting the Labor Force En Masse—And That's a Bad For Everyone." TIME. 17 October 2020.

If women and men were equally represented in labor sectors, 112 million fewer women would be at high risk of losing their incomes or jobs as a result of the pandemic¹⁴. Furthermore, since the start of lockdown, women spend on average 60% more time than men helping children with schoolwork and 70% more time on collective childcare responsibilities¹⁵, directly affecting both their ability to work and time spent working. The steep female job loss is expected to be a factor slowing economic recovery. Recursively, a "squeeze" on jobs and increase in family responsibilities will halt the return of women to the workforce.

Esmé Berkhout, Nick Galasso, Max Lawson, Pablo Andrés Rivero Morales, et al. "The Inequality Virus, Bringing together a world torn apart by coronavirus through a fair, just, and sustainable economy." OXFAM. January 2021.

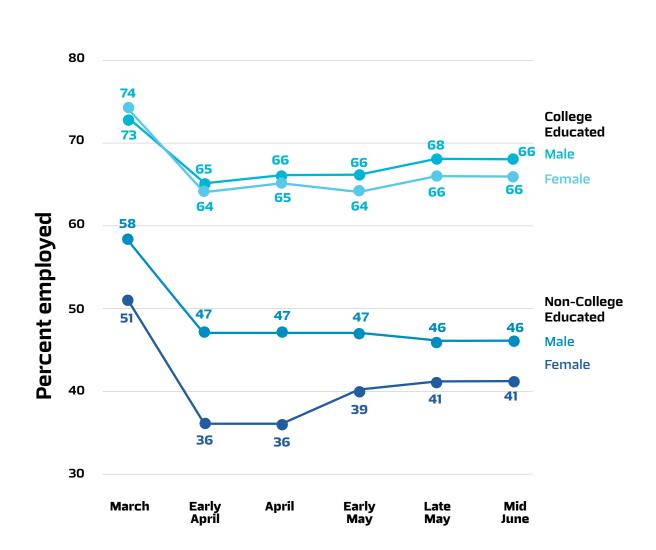
PRIORITY FOR ACTION

For government leaders, a key priority in 2021 following a crisis that disproportionately affected women is to reactivate and expand the social support systems that enable women to work and launch a focused effort to facilitate the entry of women into a more diverse set of sectors.

To build these support systems, governments must work towards parity across all policy areas affecting gender, including parental leave programs for both parents, as well as institutions that provide affordable childcare that is not more expensive than a second parent's income. Boosting female employment and integrating women across all sectors while simultaneously establishing support systems for families are imperative for recovery and economic stability.

More time spent by women on childcare responsibilities than men since the start of the pandemic¹⁴

Job losses hit non-college educated women the hardest



A total of 6,824 members of the probability-based Understanding America Study participated in six tracking survey waves from March 10 - June, 2020. Sample sizes and margins of sampling error for this population are available at: tinyurl. com/CESRGenderDiffs. For full question text, methodology, toplines, and data, visit: covid19pulse.usc.edu

Sources: University of Southern California

[&]quot;Economic inequality: mothers face homeschool disadvantage." Financial Times. 31 January 2021.



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DEFEND THE SOVEREIGNTY OF CITIZENS' MINDS

Enabling the emergence of a shared space of truth

A Cognitive Battlefield:

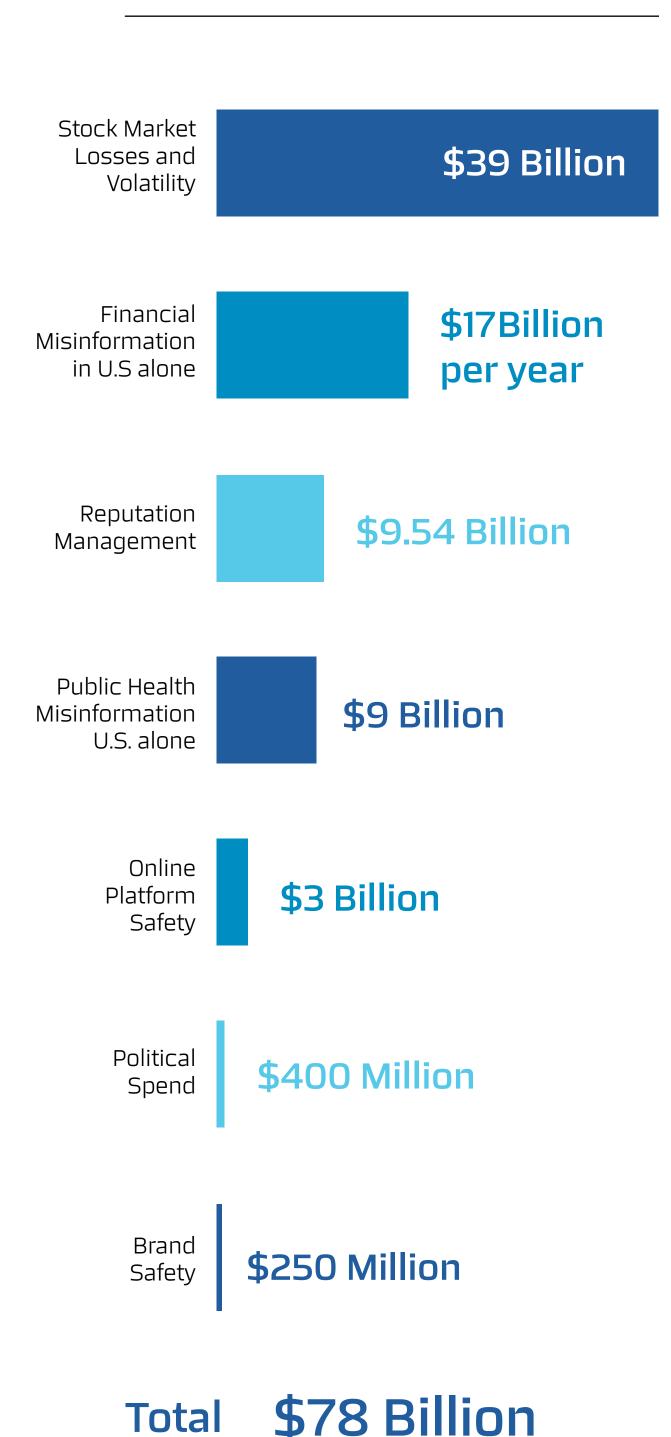
The global competition to influence how citizens and consumers perceive and interpret the world dates back to the very beginnings of modern warfare. Over the last decade, the sophistication of these techniques has skyrocketed due to breakthroughs in cognitive science and behavioral economics. At no time, however, has their power been on such clear display as during the pandemic. The crisis has revealed the incalculable cost of the deep fragmentation of our consensus on what is true, including the reality of the challenges we face from COVID-19 to climate change. These catastrophic costs were on full display in the attack of the U.S. Capitol on January 6, when a mob in the thrall of a social media-enabled illusion launched a violent attack on the institutions at the heart of their own democracy. For government leaders, defending the sovereignty of the minds of citizens is now a central priority.

The societal costs of misinformation are vast. In their landmark study, 16 RAND identifies political paralysis, the erosion of civil discourse, citizen disengagement, and policy uncertainty as key consequences of "truth decay." Political paralysis alone reduced U.S. GDP by up to 0.5% a loss of about USD20 billion—due to the 2013 government shutdown fueled by an inability to agree on a foundational set of truths, an impact that will be dwarfed by the ultimate cost of the crisis of early 202117. By some estimates, misleading news is costing the global economy USD78 billion each year. 18 Coronavirus misinformation has created an "infodemic" of rumors, conspiracy theories, and misinformation that contributed to the unnecessary loss of countless lives.

Jennifer Kavanagh, Michael D. Rich. "Truth Decay, An Initial Exploration of the Diminishing Role of Facts and Analysis in American Public Life." RAND Corporation. 2018.



Cost of fake news to the global economy, 2019¹⁸



PRIORITY FOR ACTION

For government leaders, an urgent priority in 2021 is to advance comprehensive reform of social media to reduce the prevalence of business models based on manipulating cognitive biases to drive addictive behavior for the purpose of securing saleable attention.

Without a baseline consensus on reality within and among countries, achieving steady progress will be impossible. The rise of fake news and misinformation affects the ability of citizens to make informed decisions. It also has a direct and growing—economic cost for the businesses and governments that have to fight it.

Costs estimates are conservative Sources: CHEQ and University of Baltimore

Total

Ibid.

[&]quot;The Economic Cost of Bad Actors on the Internet." CHEQ and the University of Baltimore. 2019.



6 ALLEVIATE FISCAL OVERHANGS

Financially supporting subnational governments to ensure continuity of essential services

The Cost of Local Government Chokepoints:

The cost of responding to the pandemic—in terms of both necessary investment in health systems and economic support—has placed enormous fiscal pressure not only on national governments, particularly among middle income and developing economies, but also on subnational governments (SNGs) at the regional and local levels across the world. Demand for SNG services is higher than ever, while their revenue streams are under tremendous strain. On average, SNG's account for 39% of national spending on health, as well as 56% of spending on public order and safety, and 16% of spending on social protection¹⁹. Despite this vital role, reduced consumer spending and wages, and diminished funding from sales and income taxes are forcing many SNG's to make drastic spending cuts. Unlike national governments of advanced economies, which can avoid tax increases through borrowing and running deficits, SNG's are often constrained by balanced budget requirements and have few options beyond the support of national governments to avoid suspending essential services.

The Great Recession of 2008—2009 and the exceptionally sluggish recovery that followed demonstrated the costs of ill-timed austerity measures, as cutting public spending during a crisis can reinforce downward spirals. In the U.S., for example, income taxes were lowered at the subnational level, yielding small increases in private spending, but the resulting reductions in government spending actually lowered real GDP growth by 1.2 percentage points (average 0.3 percentage point each year, 2009–2012)²⁰, weighed on growth and recovery, and caused families to suffer as essential local government services were cut.

Sage Belz; Louise Sheiner. "How will the coronavirus affect state and local government budgets?" Brookings. 23 March 2020.

PRIORITY FOR ACTION

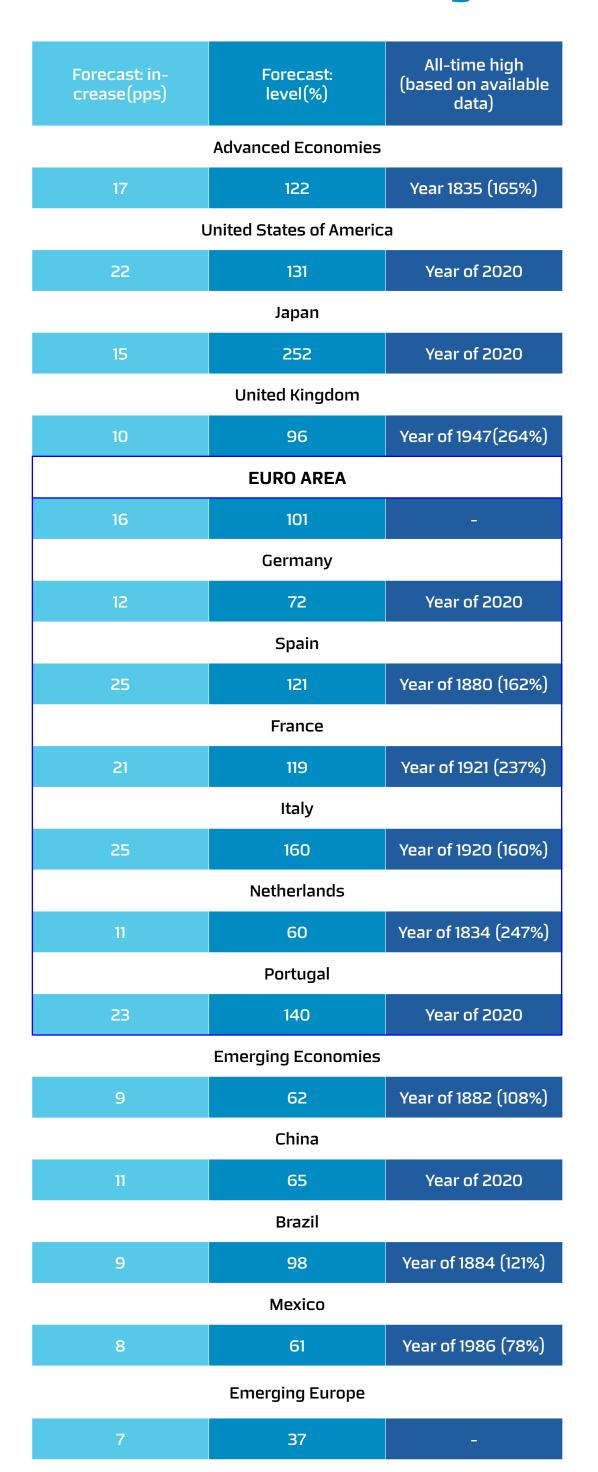
For government leaders, it is an urgent priority to support subnational governments financially in order to ensure sustained provision of vital health, public safety, and social protection services.

These critical services must remain functional to ensure pandemic recovery and to avoid long-term social and economic problems. Governments should focus aid on care—testing, vaccines, basic needs, and securing consumers for the future—rather than on short-term economic impact. Low interest rates are expected to allow the debt and GDP ratio to stabilize over time, and given the likely return of strong economic growth in the second half of the year, now is not the time for austerity, but rather for strong support and investment.



Percentage point decline in U.S. GDP due to government spending cuts during the Great Recession (2009-2012)¹⁹

Public debt: forecasts for 2020 and all-time highs



CaixaBankResearch



REIMAGINE THE ROLE OF CITIES

Revitalizing the urban center with citizen-centered value creation at its core

An Opportunity for Urban Renewal:

Cities, arguably more than any other segment of society, have been deeply disrupted by the pandemic. The fundamental threat posed by close proximity led to the widespread departure of residents and closure of key flows of global connectivity, while the global economy was propped up by the exponentially expanded viability of virtual communication and collaboration. Together, these new realities have brought the core value proposition of cities—centered on the benefits of agglomeration²¹—into question. At the same time, the crisis has starkly revealed the deep-rooted inequalities of urban centers.

Glaeser, Edward L. "Agglomeration Economics." National Bureau of Economic Research. February 2010.

In the early days of the pandemic, wealthy city residents made their escape, with up to 40% of the residents of wealthy neighborhoods in Manhattan exiting the city²² and 20% of Paris's overall population fleeing in the face of the city's lockdown measures²³. Among those who remained in cities, inequalities have been stark. Vulnerability to the virus is measurably higher in low-income neighborhoods plagued by poverty, housing insecurity, and limited access to quality healthcare.²⁴

Quealy, Kevin. "The Richest Neighborhoods Emptied Out Most as Coronavirus Hit New York City." New York Times. 15 May

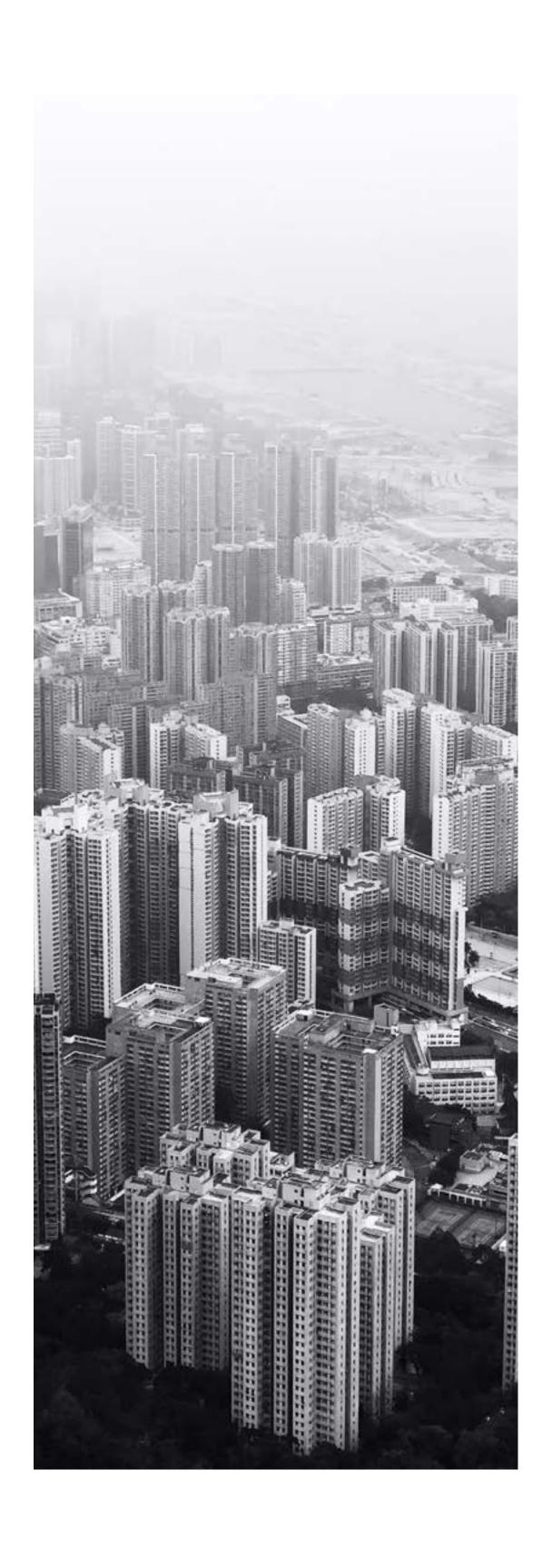
PRIORITY FOR ACTION

For government leaders, re-imagining the value proposition of cities, and how they can offer economic opportunity, wellbeing, and social cohesion to a greater share of their residents, will be central to their continued viability as engines of economic growth.

The current crisis is, above all, a chance to renew cities, rather than return them to a status quo. Leaders have an opportunity to work closely with both the private sector and city residents to redesign cities in ways that will best serve their populations—focusing on creating public value linked to the key emerging needs of citizens and businesses and differentiated strengths of the city.

20-40%

Pandemicdriven population decline in wealthy neighborhoods of major cities ²²,²³



Tidman, Zoe. "Coronavirus: More than one million people fled Paris area as lockdown began, phone data suggests." The Independent. 27 March 2020.

Stuart M. Butler; Jonathan Grabinsky. "Tackling the legacy of persistent urban inequality and concentrated poverty." Brookings. 16 November 2020.



TRANSFORM THE NATIONAL PORTFOLIO OF CAPABILITIES

Proactively renewing the government toolkit of capabilities that the future will demand

Making Room for the New:

At any given point in time, the strategic choices of leaders are either constrained or enabled by the capabilities at their disposal. The COVID-19 crisis has exposed vast capability gaps in many countries, including with respect to the health system, digital infrastructure, and cybersecurity. This is an urgent time to strengthen the future readiness of government organizations. So, how can governments fund the necessary investments in the face of intense fiscal pressure? The answer lies in seizing the opportunity afforded by the crisis to conduct a rigorous strategic assessment of the current set of capabilities and ruthlessly cutting investment in those outdated legacy capabilities that are most costly. For most governments, the opportunity for productive culling of this kind is vast. The challenge is often political as longstanding government entities or programs have become bureaucratic fiefdoms defended by powerful interests.

Public health systems represent a timely and compelling example of the tremendous potential societal costs of outdated national capability portfolios. Despite a long series of warnings from leading experts²⁵ regarding the likely occurrence of a pandemic, many countries - including among the advanced economies – found themselves unprepared for COVID-19. In 2019, the Global Health Security (GHS) Index²⁶ found that global preparedness for epidemics and pandemics remains "very weak" and that no single country was fully prepared. Out of a potential GHS score of 100, the average score was 40.2. For highincome countries, the average was 51.9 although COVID-19 has demonstrated that the readiness of many leading countries did not match their scores. Several countries have had exceptionally strong responses to the current crisis, including South Korea. When the crisis hit, South Korea was

Bill Gates, "The Next Outbreak? We're not ready." TED. March 2015.

"The Global Health Security Index." Joint effort of the Nuclear Threat Initiative (NTI) and the Johns Hopkins Center for Health Security. 2019.

equipped with a robust portfolio of health and other capabilities associated with its digital transformation. South Korea learned from its prior acknowledged failures in managing SARS, H1N1, and MERS. As a result, it had invested in a toolkit of capabilities and infrastructure that enabled it to conduct drive-through testing on a massive national scale, analyze test results within 5 minutes, conduct advanced geotagged contact tracing, and enable highly efficient remote work, learning and telemedicine. To date, despite its great urban density, South Korea's death per 100,000 inhabitants is only 2.85.27 This performance has been a function of the pre-staged capabilities that were at the disposal of the South Korean government

"Mortality Analyses." Johns Hopkins University & Medicine. 10 February 2021.

PRIORITY FOR ACTION

For government leaders, a central priority in 2021 is to assess, redesign and re-build their organizations' portfolio of capabilities to meet future requirements on a rigorously prioritized basis.

This moment of transition out of the present crisis is creating a rare and invaluable opportunity to overcome entrenched resistance to change and make room for the capabilities the future requires. Governments must not only assess the future readiness of their entities, but also track their improvement efforts. The approach must be systematic in its assessment of future requirements, ruthless in culling costly obsolete systems, and boldly innovative in investing in robust, multi-purpose capabilities in preparation for an ever more uncertain future.

40.2

Average national score out of 100 on the Global Health Security Index ²⁶



9 NAVIGATE THE GLOBAL COMPETITION FOR ALLEGIANCE

Building agile economic interoperability in a decoupling world

A Decoupling World:

The resurgence of great power competition has intensified tremendously over the last year, fueled by political populism, economic nationalism, and the divisive dynamics of the pandemic. Escalation of this competition is likely to persist given the divergence between the national interests and strategies of the players and the inexorable logic of security competition in the absence of a stable global architecture. Stunningly, the leaders of both the U.S. and China openly discussed the potential "decoupling" of their economies.

In 2021 and beyond, this competition will take novel forms given the new, more multilaterally-oriented global political landscape. The great powers will be competing more intensely for influence in existing global institutions and seeking to attract and retain countries in new institutions, both political and economic. In parallel, and of more immediate near-term importance, the leading powers will be working aggressively to secure their leadership positions in global value chains and to use the incentive of participation in them to countries as inducement to deeper geopolitical alignment. Thus, the net result of great power rivalry may well be the deepening bifurcation of the world—not just politically and economically, but also technologically as the rules and norms of the great powers regarding technology governance diverge.

when the crisis hit. Global trade has slowed significantly since the Global Financial Crisis to an average annual rate of 2.7% from a pre-crisis average of nearly 13%²⁸. The economic decoupling of China and the U.S. has been even more striking across measures including not only trade, but also technology transfer approvals and foreign direct investment. In parallel, efforts are intensifying to bring other countries more deeply into the economic orbits of the great powers—notably in the digital economy. 16 Countries have signed memoranda of understanding with Beijing for the development of a "Digital Silk Road." At the same time, China has proposed an alternative internet architecture called "New IP" that would feature a top-down design²⁹. This is one sign among many³⁰ that the "splintering" of the Internet into bordered fragments may be accelerating as more countries consider determining their approach to digital governance based on geopolitical interests and alignments.

"UNCTAD World Investment Report 2020, International Production Beyond the Pandemic." United Nations Conference on Trade and Development. 16 June 2020.

Durand, Alain. "New IP." ICANN Office of the Chief Technology Officer. The Internet Corporation for Assigned Names and Numbers (ICANN). 27 October 2020.

Ana Swanson; Paul Mozur; Raymon Zhong. "Trump's Attacks on TikTok and WeChat Could Further Fracture the Internet." New York Times. 18 September 2020.

PRIORITY FOR ACTION

For government leaders, a key immediate priority in 2021 is to build the capabilities necessary to productively navigate between the great powers.

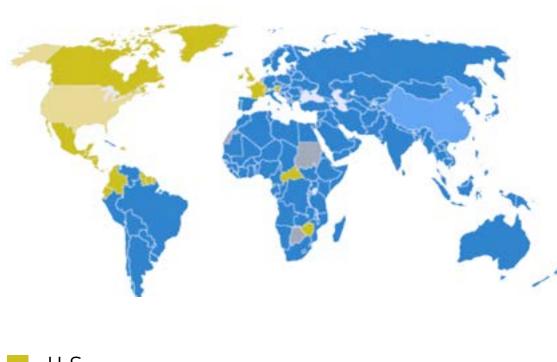
Doing so will involve assessing and deepening multi-sector relationships on all sides of the divide, anticipating and preemptively addressing potential future points of friction to the extent possible, and preparing the economy for a more deeply bifurcated environment. This involves developing agile mechanisms for interoperable exchange with increasingly divergent economic systems, despite what may be significant tensions between them. In doing so, countries will develop the agility

16

Countries have signed memoranda of understanding with Beijing for building a "Digital Silk Road" 29

China's Expanding Economic Reach

U.S. or China as larger supplier of goods, 2019



U.S.

China

No Data

Sources: Financial Times

and capacity to quickly adapt to meeting differing regulatory, trade and technical standards, for example with respect to cross-border data flows. For many countries in between, this interoperable stance will demand delicate diplomatic navigation. It will also create opportunities to benefit from a position as a bridge between what may be increasingly divided blocs.



10 PREPARE TO NAVIGATE A REORDERED GLOBAL TECHNOLOGY MARKET

Understanding and balancing the national relationship with global technology giants

Giants Under Pressure:

The growing consensus on the need for comprehensive reform of technology markets, includes a deep focus on the perceived monopolistic power of the global technology giants. The services these firms provide have been invaluably transformative in many ways. At the same time, their power and our dependence on them has reached unprecedented levels. Despite the vast resources of these firms and the tremendous complexity of taking antitrust action against them, some form of breakup or preemptive deconsolidation, as well as regulatory action, is likely. Amazon and Google comprise the backbone of internet infrastructure: even their competitors depend on their services³¹. Outages are uncommon, but can have catastrophic effects. Organizations and countries are so reliant on technology giants for data storage that service disruption can cause outages across entire businesses, governments departments, and more. Furthermore, disruptive shifts are already on the horizon: Google, which accounts for 90% of search engine traffic in computer users in Australia, has threatened to leave the country entirely should a law pass requiring Google to pay local news media companies.

Amazon Web Services (AWS) is the internet's largest cloud provider, owning almost half of the world's public cloud-infrastructure market (47.8%), three times more than the next closest competitor Microsoft Azure (15.5%), and followed by Alibaba, Google, and IBM.³² Netflix, LinkedIn, Facebook, Adobe, Turner Broadcasting, BBC, ESPN, and Twitter are among the top ten AWS users, spending a combined USD85 million on the cloud computing platform. Other major AWS users include the U.S. Department of State, NASA, and pharmaceutical companies.³³

Su, Jeb. "Amazon Owns Nearly Half Of The Public-Cloud Infrastructure Market Worth Over 32\$ Billion: Report." Forbes. 2 August 2019. "Gartner Says Worldwide IaaS Public Cloud Services Market Grew %31.3 in 2018." Gartner. 29 July 2019.

Saunders, Ben. "Who's Using Amazon Web Services? [2020 Update]." Contino. 28 January 2020.

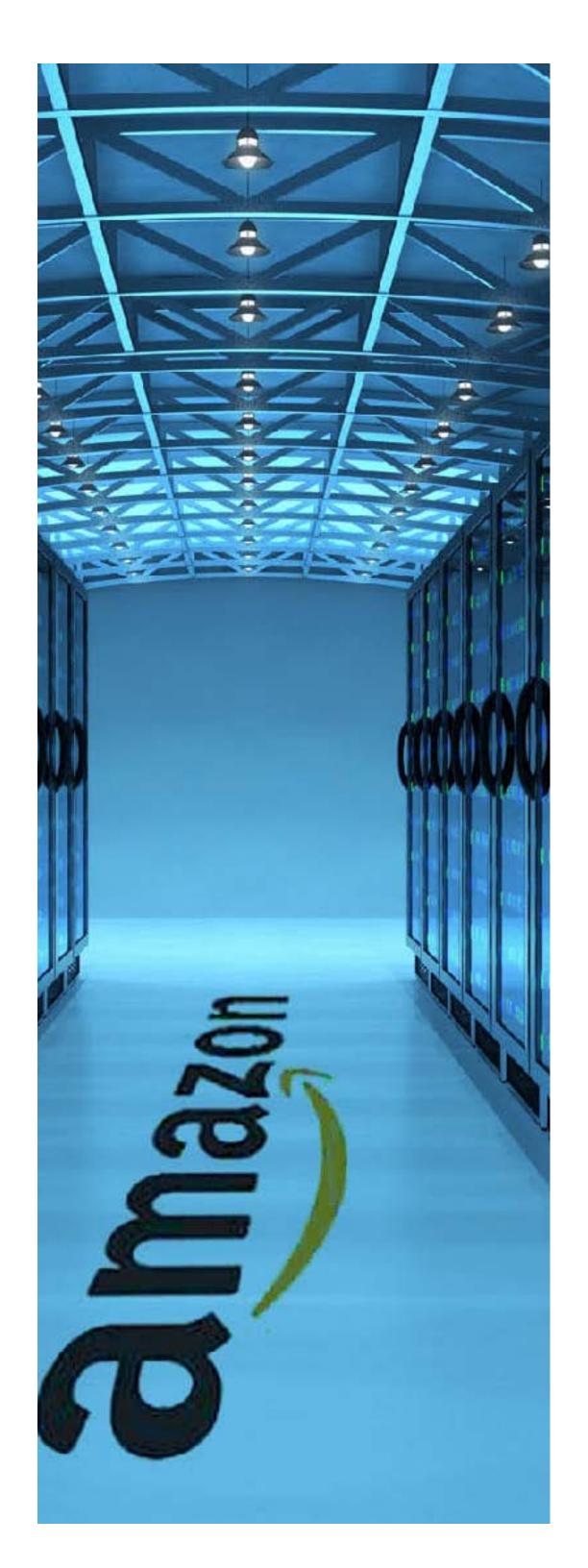
PRIORITY FOR ACTION

For government leaders, a key priority in 2021 is to assess the extent of national dependence on the services provided by global technology giants, ensure readiness for sudden shifts in service availability, and explore the revamping of national technology taxation and regulatory policy.

The shifting relationship between governments and leading global technology firms is likely to be rocky and include service disruptions and even the exit of large players from certain markets. In these cases, there may be public frustration as well as opportunities for governments to find alternative providers in domains vacated by the technology giants. The critical challenge for governments is threefold: understanding the full extent to which citizens and the economy rely on the services of the global technology giants; gauging the resilience of citizens and the economy if services are discontinued; and developing contingency plans to replace services provided by technology giants in the event of widespread disruption or exit.

47.8%

Amount of public cloud-infrastructure market singly owned by Amazon Web Services³²





11 BUILD DEEP DATA ALLIANCES

Realizing the benefits of the digital economy through the currency of data

An Emerging Means of Achieving Mutually Beneficial Growth:

2020 ignited a stunning acceleration of the growth of the digital economy. In 2021, this will continue; however, countries will only be able to realize the full benefits of the digital economy by facilitating digital trade and collaboration across borders. By expanding access to cross-border digital trade, investment, and innovation, countries can fuel the growth of their economies and grow competitive advantage, particularly for small and medium-sized digital enterprises. Despite the numerous benefits, divergent approaches to data sovereignty and national security concerns related to cybersecurity remain central obstacles to collaborative approaches to data governance and the digital economy.

The benefits of enhanced data access and sharing are clear. The OECD estimates that it can generate social and economic benefits of up to 2.5% of GDP and that cross-border data flows generate more than USD2 trillion of global economic activity.³⁴ It is therefore unsurprising that countries engaged in data alliances have realized deep benefits. Estonia has been touted for its X-Road—the digital backbone of its e-government that enables citizens to access 99% of state services online, among other benefits. Now, Estonia and Finland have jointly established the Nordic Institute for Interoperability Solutions (NIIS) to develop software allowing for data search and transfer between the two nations' governments and private sector entities.

"Mapping Approaches to Data and Data Flows; Report for the G20 Digital Economy Task Force." OECD. 2020.

Iceland and Faroe Islands recently joined the initiative, and the program is working towards an interoperable Europe.³⁵ X-Road now comprises more than 1,000 inter-connected databases, and answers over 50 million enquiries every month.³⁶

Kivimäki, Petteri. "The story of two countries sharing data." Support Centre for Data Sharing. 2019.

"X-Road – cross-border co-development of national data exchange platform." European Commission. 26 January 2018.

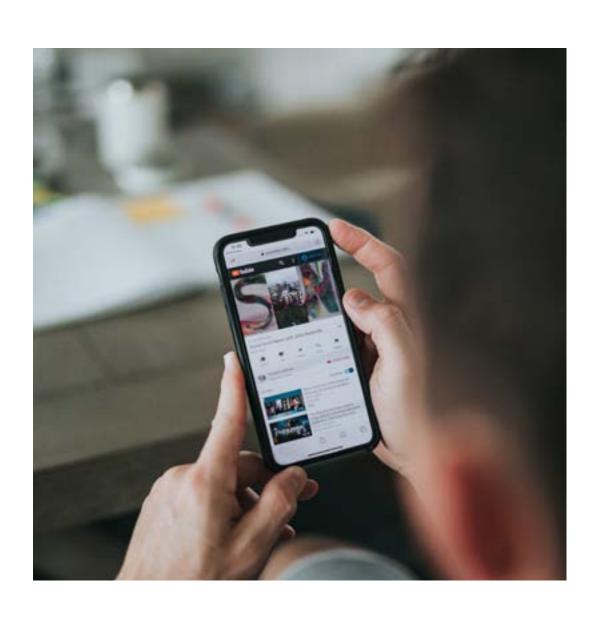
2.5%

Boost to GDP from enhanced data access and sharing³⁴

PRIORITY FOR ACTION

For government leaders, a key priority in 2021 will be to target and form tailored data alliances with trusted partners to generate mutual value by minimizing the obstacles to cross-border digital exchange.

The value of data is not simply in the numbers they reflect, but in the insights that can be extracted. For example, given the extent to which artificial intelligence and machine learning benefit from access to large, diverse and clean data sets, there are vast opportunities for countries to pool data in select domains for the purpose of creating mutually beneficial assets to drive progress in everything from disease treatment to urban transportation. Further, the General Data Protection Regulation (GDPR) in the E.U. epitomizes the commercial competitive advantages of protecting consumer



data in collaborative approaches with partner countries. Companies following GDPR experienced fewer data breaches, lower costs associated with breaches, and greater overall trust with consumers.³⁷ By developing alliances that not only facilitate data exchange, but secure it, countries have the opportunity to accelerate the growth of their digital economies, expanding access to new forms of economic wellbeing across societies.

"Maximizing the value of your data privacy investments." Cisco. January 2019.



12 PREPARE FOR THE NEW MULTILATERALISM

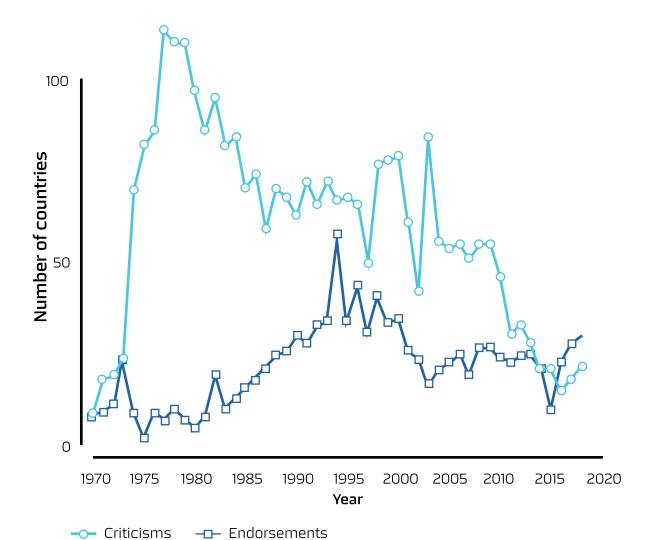
Reinventing the instruments of influence in resurgent institutions of global governance

An Altered Landscape of Power:

In 2021, multilateral diplomacy and the institutions of global governance will be resurgent, led by the new administration in the U.S. White House. The Biden administration's foreign policy team consists of committed and deeply experienced multilateralists, with longstanding relationships with similarly oriented leaders in Europe and much of Asia. On his first day in office, President Biden strongly signaled the U.S.'s intention to return to multilateralism. Among the 17 Executive Orders signed on his first day were those to rejoin the World Health Organization and the Paris Climate Accord. This embrace of multilateralism represents a significant shift from the policy orientation of the prior administration and will have profound global implications. This new multilateralism will also be fueled by a renewed, post-pandemic consensus on the need for collective action to address key global issues. The result will be a dramatic rise in the power and influence of global institutions and multilateral processes, though the legitimacy and effectiveness of these institutions have been weakened over time.

There are also signs of significant international support for the return of multilateralism in general and global economic institutions in particular. A recent analysis found that criticisms from national leaders of global economic institutions have declined for more than a decade and are now at their lowest level.³⁸ This shift may reflect the increasingly universal membership of countries in core global economic institutions,³⁹ as well as new awareness of the characteristics of alternative approaches to managing the international order.

What global leaders think of the United Nations?



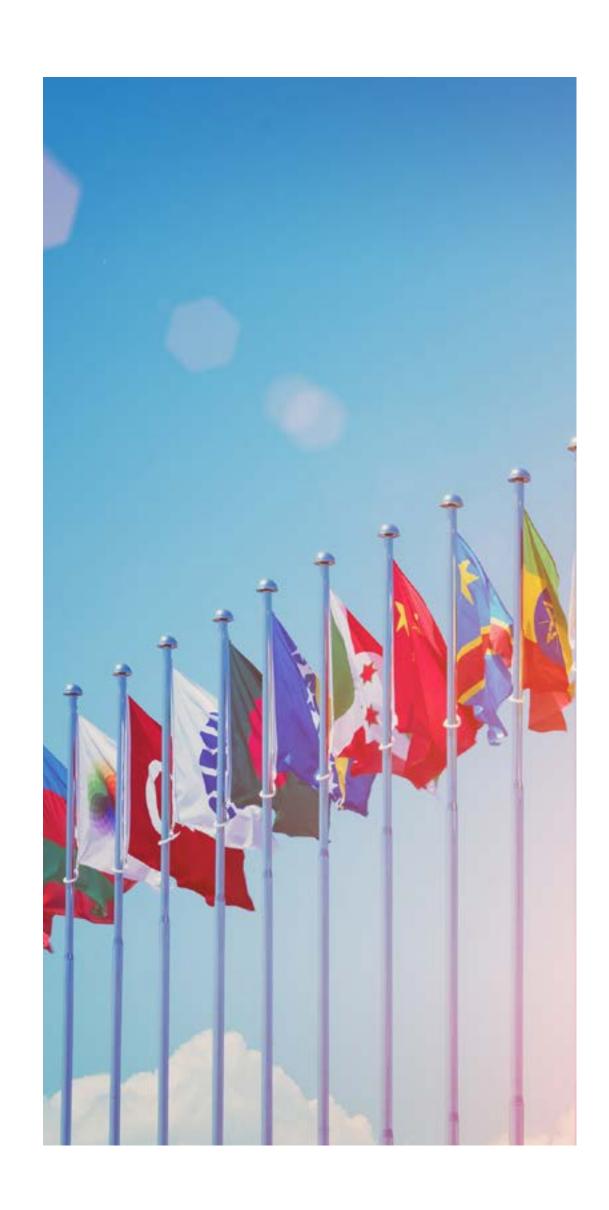
Sources:

Sources: Washington Post and The Review of International Organization's Study, "Legitimacy challenges to the liberal world order: Evidence from United Nations speeches, 1970-2018

PRIORITY FOR ACTION

For government leaders, reinvesting attention, talent, and resources in multilateral institutions will be the most effective way to address the global threats in 2021 that will demand globally coordinated responses.

The 21st century challenges associated with cybersecurity, climate change, and the continued global economic recovery from COVID-19—not to mention fully emerging from the public health threats represented by the pandemic itself—will require coordinated responses. Any notion that threats to national security and the wellbeing of citizens could be addressed at the national level alone ignores the pervasiveness and universally shared nature of these threats.



Kentikelenis, Alexander; Voeten, Erik. "Biden promises to embrace multilateralism again. World leaders agree." The Washington Post. 16 December 2020.

Kentikelenis, Alexander; Voeten, Erik. "Legitimacy challenges to the liberal world order: Evidence from United Nations speeches, 1970–2018." The Review of International O hrganizations. 9 October 2020.



PREPARE FOR THE COMING REGULATORY SHOCK

Establishing the systems and standards needed to navigate a more sophisticated and pervasive regulatory landscape

A New Transatlantic Regulatory Consensus:

With the election of President Joe Biden and his party's capture of the Senate, there will be a rapid transformation of U.S. regulatory policy with respect to the environment, labor standards, trade, technology, immigration, and more. Given the longstanding orientation of the E.U., this shift will lead to a renewed transatlantic consensus across the full spectrum of regulatory domains. The power of this transatlantic regulatory consensus—given not just the size of their combined markets, but also their centrality in global value chains—will lead to rapidly escalating expectations of regulatory compliance, not just in terms of environmental standards, but also human rights and much more.

In his first nine days in office, Present Biden signed 45 executive orders, memos, and proclamations, many of which have global ramifications, including rejoining the Paris Agreement on Climate Change, ending the Muslim travel ban, strengthening health supply chains, lifting regulatory restrictions on U.S. government agencies, and revamping regulatory review.⁴⁰ A renewed commitment to tackling the climate crisis has emerged as Biden recently designated climate a key component of his foreign policy and national security decisions.41 Other executive orders introduced sweeping reforms, from pausing federal oil leases, electrifying government vehicles, reserving 30% of federal land for conservation, and building a national network of electric-car charging stations. Regulatory change is all but inevitable.

The WTO found that following the onset of the

Janowski, Elizabeth. "Here's the full list of Biden's executive actions so far." NBC News. 28 January 2021.

Davenport, Coral; Flavelle, Christopher; Friedman, Lisa. "Biden, Emphasizing Job Creation, Signs Sweeping Climate Actions." The New York Times. 2 February 2021.

PRIORITY FOR ACTION

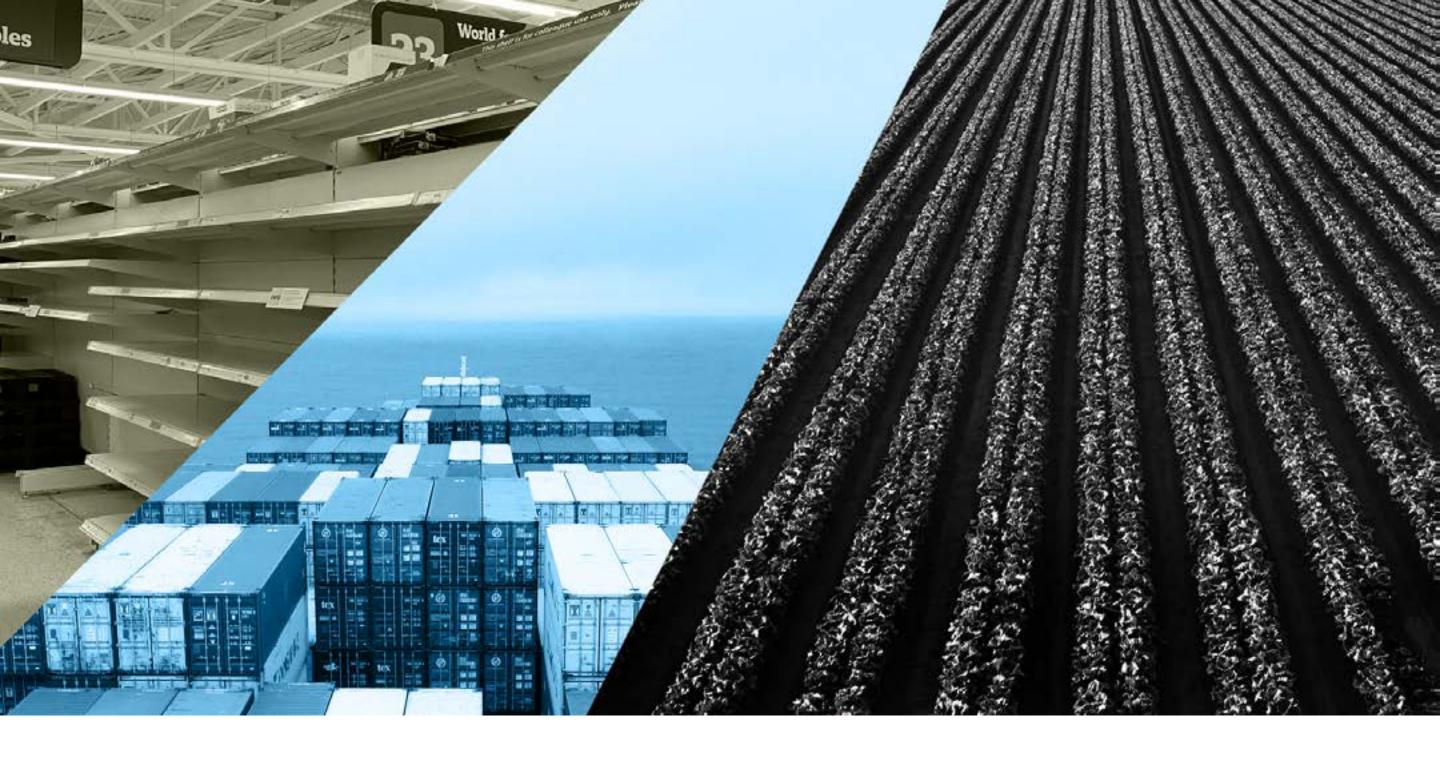
For government leaders, participating in global value chains and accessing the increasingly integrated transatlantic marketplace requires countries to align with a new regulatory consensus.

Those capable of the necessary regulatory transparency and sophistication will have opportunities to seize market share in global value chains from countries that are unable to do so.

45

Executive orders, memos, and proclamations signed by Biden in first week in office, many focusing on regulatory policy⁴⁰





14 REBALANCE SELF-SUFFICIENCY AND COMPETITIVENESS

Simultaneously advancing sustainable economic competitiveness and national resilience in a potentially re-globalizing world

The Unsustainability of Protectionism:

The Global Financial Crisis of 2008—2009 saw the world enter a period of deglobalization as the global trading system weakened and new forms of economic nationalism and protectionism took root. 2020 greatly accelerated this trend, driven by the pandemic and the premium it placed on strategic autonomy and self-sufficiency—particularly in key sectors such as food and medical supplies. Many countries sought to rapidly reduce interdependence in these sectors through an array of protectionist measures. While it continues to be critical for countries to focus on building independent resilience to external shocks, the approach to doing so must fully factor in the cost in terms of competitiveness.

Protected sectors—lacking access to external economic complementarities and no longer subject to the discipline of market forces—inevitably lose competitiveness relative to global peers. While intense competition and economic division are likely to persist between the great powers, the return of multilateralism and the ultimate fading of the pandemic may allow for a broader re-globalization of the global economy. This will in turn unleash the forces of global competition, making artificially supported industries and sectors extremely costly to sustain. In that context, the challenge for governments is to balance the requirements of self-sufficiency and strategic autonomy with the fundamental importance of ensuring that the economy can compete sustainably.

pandemic, as many as 80 countries implemented export prohibitions or restrictions, among them 46 WTO members and eight non-WTO members.⁴² In addition, in the context of economic uncertainty and the prospect of decoupling, the Japanese government announced a USD2.2 billion fund to "restructure supply chains." 43 France has announced an investment of EUR200 million to bring production of select pharmaceutical products back home.44 And Germany has announced a similar effort with a budget of EUR1.1 billion to increase national capacity. 45 It is therefore not surprising that the most recent Bank of America Global Fund Manager survey found that 67% of participants believe localization or re-shoring of supply chains will be the dominant structural shift of the post-COVID-19 world.46

"WTO report finds growing number of export restrictions in response to COVID19-crisis." World Trade Organization. 23 April 2020.

Solís, Mireya. "The post COVID19- world: Economic nationalism triumphant?" Brookings. 10 July 2020.

"Macron pledges 200 mln euros to repatriate drug production to France." Reuters. 16 June 2020.

Gómez, Fernando J.; Radel, Tobias. "Why the global trade of chemicals is key to COVID19- recovery." World Economic Forum. 15 December 2020.

Smith, Elliot. "U.S. and European firms face 1\$ trillion in costs to relocate their Chinese supply chains, BofA says." CNBC. 18 August 2020.

67%

Percentage of global fund managers who believe localization or re-shoring of supply chains will be the dominant structural shift of the post-COVID-19 world⁴⁶

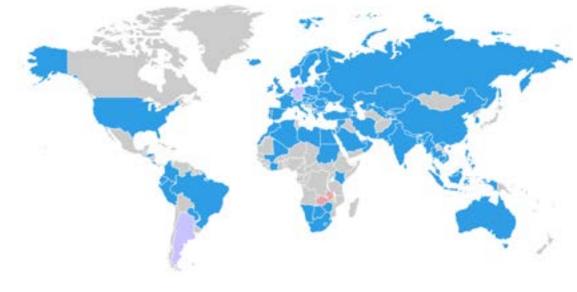
COVID-19 Temporary Export Measures

Affected products include personal protection equipments (e.g. masks, gloves), pharma products, hand sanitizer, food and certain other products

PRIORITY FOR ACTION

For government leaders, a key priority in 2021 is to reevaluate protectionist decisions driven by the self-sufficiency imperative from the perspective of competitiveness.

In particular, they must consider new approaches to strategic autonomy beyond costly, unsustainable long-term investments in protected sectors. The focus must be on achieving the same degrees of national resilience, but through alternative means that enhance, rather than destroy, competitiveness. There is an increasingly wide range of innovative opportunities for doing so,



Export restrictions/bans (98 countries)

Export liberalisations (2 countries)

Export restrictions and liberations (2 countries)

None (137 countries)

Source: ITC Market Access map

including the systematic diversification of suppliers, investment in smart, sense and pivot supply chain systems, and a host of other means for ensuring reliable, efficient, and stable sourcing—even in the context of crisis.



DRIVE RADICAL, INCLUSIVE UPSKILLING AT SCALE

Confronting a digital world of work requires attention to skills

The Revolution in Accessible Learning:

The pandemic has exponentially increased virtual interaction of all kinds, notably in education. This, combined with ongoing advances in the cognitive sciences, has created a vast array of opportunities to radically accelerate upskilling inclusively across all segments of society. 94% of the global workforce lives in countries with workplace closures and now contends with digitization and corporate consolidation, leaving millions unemployed and giving rise to new and evolving skills in high demand.⁴⁷ Furthermore, 42% of core skills necessary for existing jobs are expected to change by 2022.⁴⁸ Ten countries currently feature accelerators geared towards closing the skills gap and devising national strategies for upskilling⁴⁹, but this is not enough to address global demands.

[&]quot;COVID-19 and the world of work. Sixth edition." International Labour Organization. 23 September 2020.

Zahidi, Saadia. "We need a global reskilling revolution – here's why." World Economic Forum. 22 January 2020.

[&]quot;Closing the Skills Gap Accelerators." World Economic Forum.

Before the pandemic, education technology was already a massive market, with investments of nearly USD19 billion in 2019.⁵⁰ As COVID-19 shuttered more schools and educational institutions, online education flourished, with the online education market expected to be USD350 billion by 2025.⁵¹ In addition to the rapidly growing education technology market, upskilling and reskilling could boost global GDP by USD6.5 trillion, create 5.3 million jobs by 2030, and increase global productivity by 3%.⁵²

Lalani, Farah; Li, Cathy. "The COVID19 - pandemic has changed education forever. This is how." World Economic Forum. 29 April 2020.

"Investment in Upskilling Could Boost Global GDP by 6.5\$ trillion by 2030." World Economic Forum. 25 January 2021.

PRIORITY FOR ACTION

For government leaders, particularly given the intensity of competition in the knowledge economy and the deepening challenge of job displacement by advanced automated systems, investing in the radical, targeted upskilling of citizens is a central strategic priority.

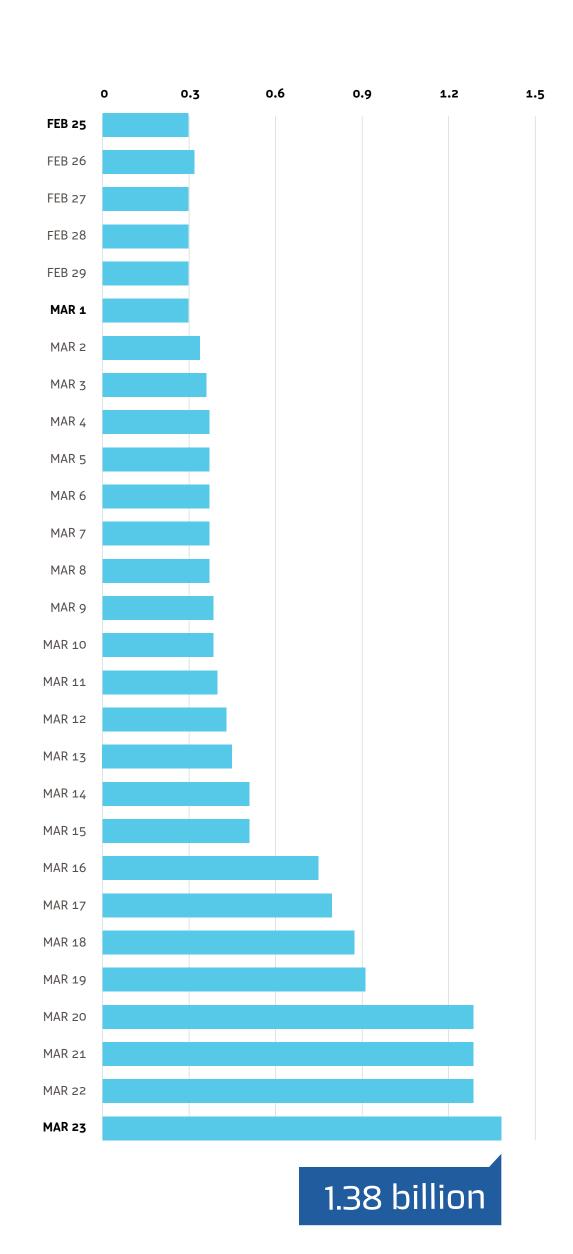
Governments have a strong incentive to upskill, and retain talent by pursuing sophisticated upskilling, with a focus on leveraging vast online education resources, governments can drive mutual benefit and further competition and innovation between the private and public sectors. Reskilling and upskilling the workforce requires a society-wide commitment, including collaboration between governments and businesses, as well as leveraging technology to commit to skill building right down to the individual level. Upskilling will also usher in an era of new jobs.

350 Billion

Projected size of the online education market by 2025 (in USD)⁴⁸

COVID-19's Staggering Impact On Global Education

Number of leaners impacted by national schools closures worldwide



Figures refer to learners enrolled at pre-primary, primary, lower-secondary, and upper-secondary levels of education, as well as tertiary education levels.

Sources: WEF, UNESCO

⁵¹ Thid



16 REINVENT THE TASK STRUCTURE OF THE WORKFORCE

Harnessing the opportunities of the future of work

Diminished returns:

Two global labor trends intersected in 2020. First, the future of work gained momentum as the accelerating sophistication of advanced automated systems continued to disrupt the task composition of labor. More than wholesale job displacement, we are witnessing a shift in the structures of jobs in which the human-machine interface is central and more routine tasks are automated. Second, in parallel, 2020 shattered all preconceptions of the viability of remote working. As the world continues to navigate the pandemic-altered work reality, these trends create remarkable opportunities to optimize the workforce, and the jobs within it, in mutually beneficial ways.

Productivity has increased by an estimated 47%53 for remote workers since the start of the pandemic. Remote work has also changed the task structure. For knowledge workers during lockdown, the number of tasks perceived as tiresome dropped from 27% to 12%; additionally, the number of tasks readily offloaded also decreased from 41% to 27%.54 With 47% of jobs in the U.S. subject to automation,55 the future of work entails an unprecedented shift in traditional labor norms. The WHO recently developed task shifting and task sharing, demonstrating an overhaul in task structure, optimizing and expanding patient care, and minimizing burden on healthcare systems. The practices involve shifting tasks from highly qualified health care workers to those with less training and qualifications and sharing tasks among equally qualified workers (thereby freeing up time for workers with higher qualifications). 56 The concepts have the potential to be applied to both virtual work and the changing work environment with artificial intelligence.

Nagy, Alessandra. "Prodoscore Research from March/April 2020: Productivity Has Increased, Led By Remote Workers." Business Wire. 19 May 2020.

Birkinshaw, Julian; Cohen, Jordan; Satch, Pawel. "Research: Knowledge Workers Are More Productive from Home." Harvard Business Review. 31 August 2020.

Frey, Carl Benedikt; Osborne, Michael. "The future of employment: how susceptible are jobs to computerisation?" Oxford Martin School, University of Oxford. 17 September 2013.

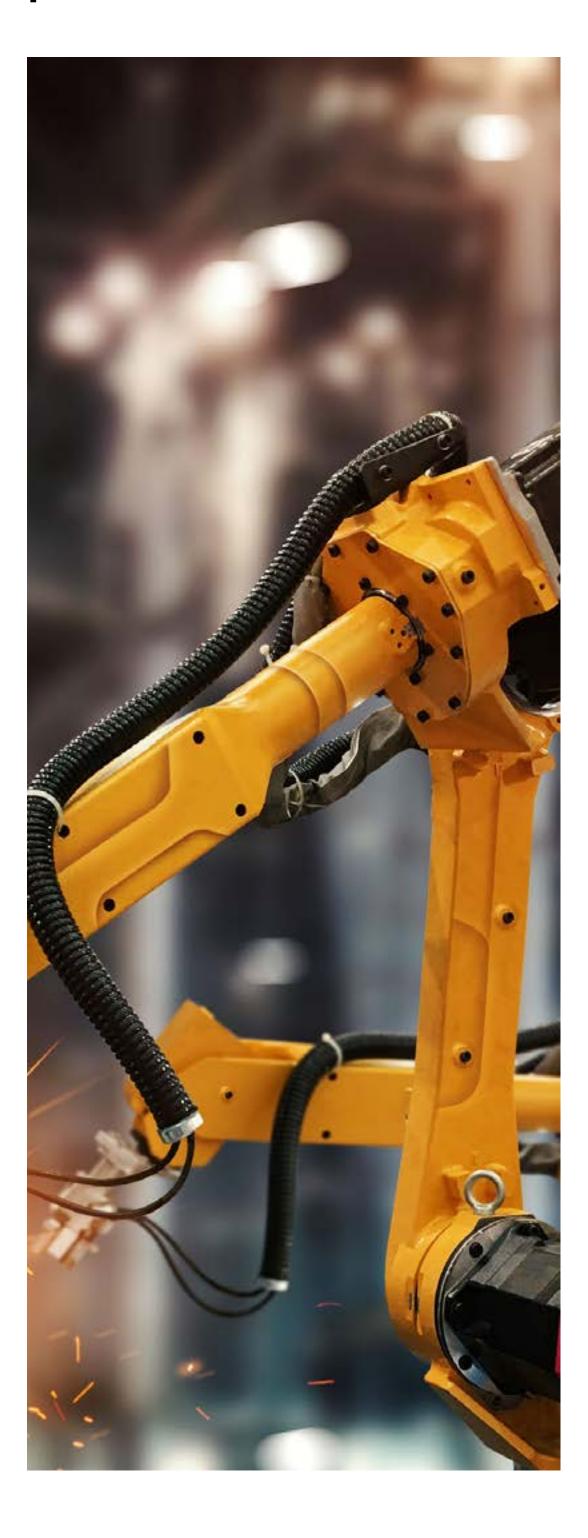
"Sharing and Shifting Tasks to Maintain Essential Healthcare During COVID19- in Low Resource, non-US settings." Centers for Disease Control and Prevention. 14 October 2020.

PRIORITY FOR ACTION

For government leaders, viewing work through the lens of tasks and their differentiated requirements for in-person versus remote delivery allows tasks to be redistributed in ways that optimize both productivity and worker satisfaction.

Between tasks better suited to automation and those that can be bundled into virtual job portfolios, workspaces can be optimized for productive interaction. For governments adjusting to the new labor market and facing significant 47%

Increase in remote working since the start of the pandemic⁵³



fiscal pressure, this represents a key priority in 2021. A sophisticated task restructuring allows for a better distribution of talent (i.e. through keeping a database of skills and qualifications).



TELIMINATE VIRAL BREEDING GROUNDS GLOBALLY

Ensuring global distribution of vaccines and aid to preemptively block the evolutionary pathways of COVID-19

The Danger of Neglected Viral Incubators:

As the global race to secure vaccines becomes increasingly competitive, developing economies are the most obvious losers. The head of the World Health Organization recently warned that we are on the brink of a massive moral failure. However, even self-interest dictates that vaccine rollout must be inclusively global. If it is not, those countries left behind will not only suffer vast human consequences but may also become evolutionary breeding grounds for new variants of the virus, including mutations that are resistant to current vaccines. Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS) comprise over 1 billion of the world's population, and are amongst the most vulnerable to the external shocks of COVID-19 given their limited means to respond. ⁵⁷ These countries not only face a health crisis, but economic strife as a result of crashing commodity prices and loss of exports.

Staggeringly, nearly half of economic costs of the pandemic in 2021 will be shouldered by advanced economies even if full vaccination in those countries is achieved.⁵⁸ In the most likely scenario in which developing economies achieve 50% vaccination by the end of 2021, the world economy will still face a USD1.8-3.8 trillion economic blow, with half of that absorbed by the wealthiest countries.⁵⁹

Çakmaklı, Cem; Demiralp, Selva; Kalemli-Özcan, ebnem; Yeşiltaş, Sevcan et al. "The Economic Case for Global Vaccinations: An Epidemiological Model with International Production Networks." National Bureau of Economic Research. January 2021.

59 Ibid.



Economic cost shouldered mostly by wealthy countries if only 50% vaccination in developing countries (in USD)⁵⁹

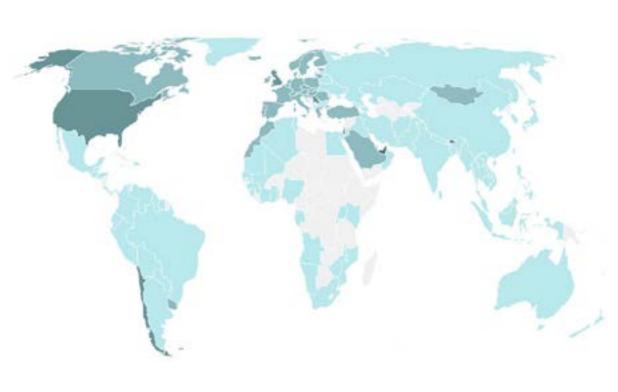
PRIORITY FOR ACTION

For government leaders, an urgent priority in 2021 is to ensure equitable and rapid global distribution of vaccines in order to prevent the coronavirus from continuing to evolve and spread.

We now face the very real prospect of COVID-19 becoming a relentless adversary, evolving in ways that remain just beyond the speed of vaccine development cycles. Preventing this catastrophic outcome requires eliminating breeding grounds for the virus, notably among developing countries. Beyond what are fundamentally important humanitarian concerns, recent studies make it clear that the global economic costs of not inoculating all countries exceeds the cost of manufacturing and distributing vaccines to the entire world.⁶⁰

World Map of Vaccinations

More than 678 million vaccine doses have been administered in 161 countries



Note: Data last updated April 7

Dose administered per 100 people



<1 to 12

12 to 38

38 to 77

77 to 181

181

Source: Our World in Data, NY Times

60 Ibid.



18 ADAPT TO THE GRAY ZONE

Ensuring readiness for the next generation of threats

An Evolving and Opaque Threat Landscape:

"Gray zone warfare" refers to forms of conflict that are carefully calibrated to stay just below the threshold of kinetic state-level conflict. The emphasis is on deception, stealth, and non-attribution. The ever more advanced tools and techniques include cyber instruments, the use of proxy forces, and sophisticated information operations targeting citizen perceptions. While the prevalence of this form of conflict has risen steadily for nearly a decade, the pandemic—by expanding the scope of digital interaction and creating new forms of vulnerability (e.g. health systems)—has fueled significant innovation and growing sophistication in the practice of gray zone warfare.

Although cyber threats are only one example of changing gray zone dynamics, they provide a useful sense of the scale of the challenge and the pace of change. For example, just in the 2017—2019 period, total global malware infections increased by 15%, 61 the global average cost of a data breach reached nearly USD4 million, 62 and the estimated economic losses as a result of end point attacks increased by 78%. 63 Taking the longer view, the number of publicly known state–sponsored cyber incidents has increased from 8 in 2005, and 33 in 2016 to approximately 88 in 2020. 64

- 61 "2020 Sonicwall Cyber Threat Report." Sonicwall. 2020.
- 62 "Cost of a Data Breach Report 2020." IBM. 2020.
- 63 Sonicwall, Symantec, IBM/Ponemon.
- 64 "Cyber Operations Tracker." Council on Foreign Relations. 2020.

PRIORITY FOR ACTION

For government leaders, the urgent priority in 2021 is to strengthen the monitoring of gray zone dynamics and build capabilities for deterring and responding to them more rapidly and effectively.

Recent trends make the existential importance of this priority unambiguously clear. Given the breakneck pace of technological evolution in gray zone warfare and the cost of maintaining parity, many countries will require new forms of strategic partnerships to meet the challenge on a sustainable basis. Pooling assets and building joint capabilities with allies will be essential. In addition, increasing awareness of the full range of gray zone threats across the entire government—beyond traditional security entities—and the private sector will be essential to ensuring whole-of-nation readiness.



Publicly known state-sponsored cyber incidents in 2020⁶¹





19 COUNTER CRIMINAL EXPLOITATION OF THE CRISIS

Aggressively preempting COVID-19-related crime to secure the viability, equity, and perceived legitimacy of the response

A New Frontier of Criminality:

A New Frontier of Criminality: Criminals are exploiting the COVID-19 crisis, including by systematically targeting the desperate demand for vaccines and medical equipment. The false medicines market is worth an estimated USD70—200 billion. Transnational criminal groups, notably in Sub-Saharan African and Latin American countries, pose a serious threat to distribution vehicles or storage facilities. There has also been increasing incidence of fake personal protective equipment and medical supplies, as well as fake Covid tests being sold online.

⁶⁵ Clark, Fiona. "Rise in online pharmacies sees counterfeit drugs go global." The Lancet. 3 October 2015.

^{66 &}quot;Global operation sees a rise in fake medical products related to COVID19-." INTERPOL. 19 March 2020.

⁶⁷ Ellyatt, Holly. "Criminals are selling fake Covid test results as they look to profit from travel restrictions." CNBC. 1 February 2021.

INTERPOL has warned of potential criminal activity with "falsification, theft, and illegal advertising" of COVID-19 vaccines, as well as the distribution of fake testing kits.⁶⁸ 3,000 websites have been identified by INTERPOL's cybercrime unit for suspected selling of illicit medical equipment and medicines, and more than half also contained spamming and phishing software.⁶⁹ Pharmaceutical groups must be monitored: for example, Changchun Changsheng Biotechnology was fined USD1 billion two years ago by Beijing for distributing fake vaccines to children.⁷⁰ Governments must also be wary of fake vaccines being distributed by criminals.

68 "INTERPOL warns of organized crime threat to COVID19- vaccines." INTERPOL. 2 December 2020.

69 Hookway, James. "Covid19- Vaccines Are 'Liquid Gold' to Organized Crime, Interpol Says." The Wall Street Journal. 3 December 2020.

Felbab-Brown, Vanda. "Beware the criminal threat to the fight against Covid." Financial Times. 16 December 2020.

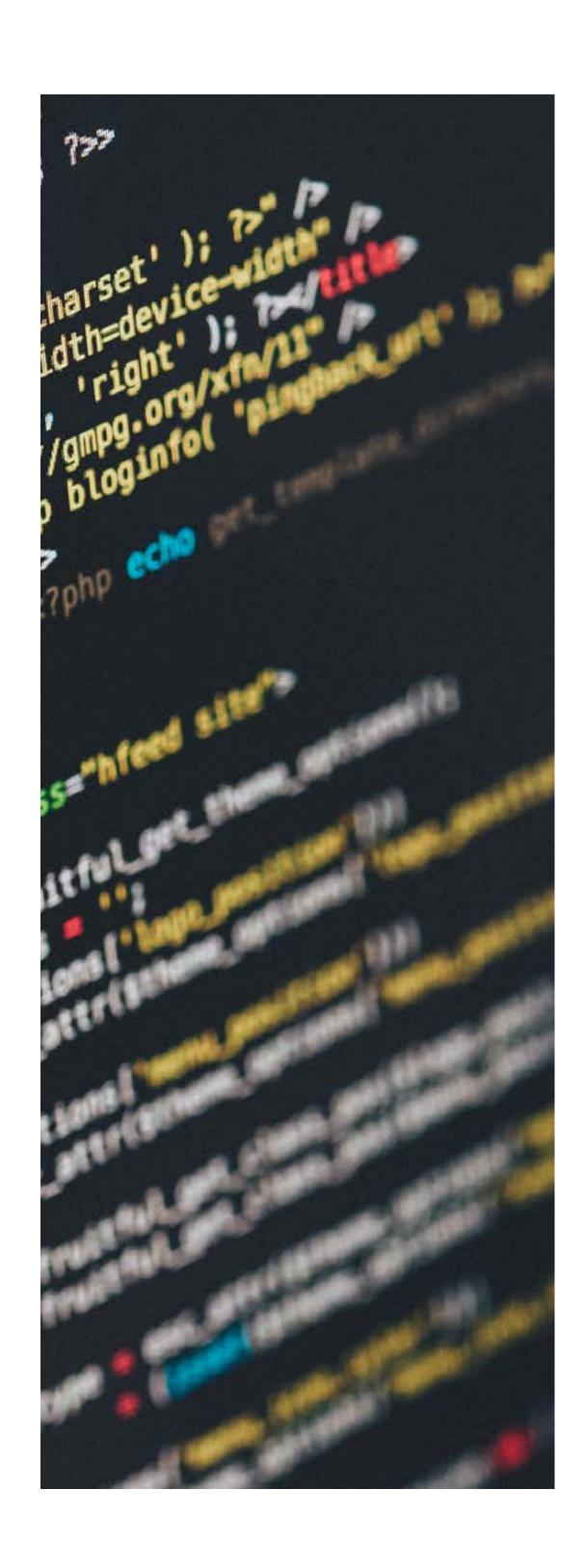
PRIORITY FOR ACTION

For government leaders, a key priority in 2021 is to take preemptive action against illegal vaccine activity including by ensuring safe and secure supply chains, reliable information flows, and shutting down illicit websites and avenues for marketing fake vaccines and medical equipment.

This requires close coordination amongst government agencies and law enforcement, and international dialogue to ensure safety and security of distribution. Governments must closely monitor corruption, ensuring that vaccines are not marked up, illicitly traded, exchanged in criminal deals, or extorted for influence. Governments should also continue to instill public trust and confidence in their approved vaccines and products.

3,000

Websites identified by Interpol suspected of selling illicit medicines and medical equipment related to COVID-19⁶⁹





20 ACTIVATE WHOLE-OF-SOCIETY CIRCULAR RESILIENCE

Strengthening sustainable food and water system resilience in the context of accelerating climate change

Vulnerable Systems:

Climate change is the defining challenge of our time. Failure to accelerate sustainability and slow the rate of global warming will result in long-lasting or irreversible damage to ecosystems. Food and water security lie at the heart of these ecosystems due to the nature of the complex and intersecting ecosystems that shape the food, agriculture, and water domains. Current food and water consumption patterns and the systems that support them are currently functioning in ways that rapidly increase the vulnerability of global food systems—from heavy consumption of unsustainably resource—intensive food products to the constant push towards more efficient productivity. Already, governments, private sector organizations, non-profit and advocacy groups, as well as local community organizers are directing ever–greater resources towards addressing the challenge of climate change. Yet adequately addressing sustainability and the dual challenges of food and water security will require urgent and coordinated action at all levels of society.

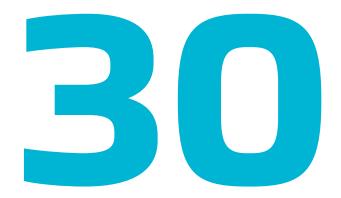
As climate change progresses, the chance of extreme weather events increases alongside it. Greater intensity of extreme weather events can have devastating effects, including to food and water security. Increased or irregular rain can completely devastate crops. 2020 witnessed the most Atlantic storms on record, with 30 storms striking the region and some hurricanes reaching winds well over 100mph.⁷² This trend is likely to continue, leaving the future of food and water security hanging in the balance.

Bernard, Steven; Hodgson, Camilla. "Climate graphic of the week: Storms intensify in the Atlantic." Financial Times. 30 January 2021.

PRIORITY FOR ACTION

For government leaders, an urgent priority in 2021 is activating societal change at the national level by designing countrywide strategies that drive circularity not only at the national level, but that also cascade down to local and individual levels.

Potential actions to advance national circularity include designing a national narrative to inspire and activate all levels of society; using a patient, long-term and state-led investment approach to finance structural change; partnering with the private sector to deliver public value; empowering local communities with national data assets on resource use; and leveraging behavioral sciences to guide aggregate behavioral change in line with national strategy. Additionally, at the local level, policymakers can connect individuals with an understanding of resource consumption and security at the level at which it becomes most tangible—their communities.

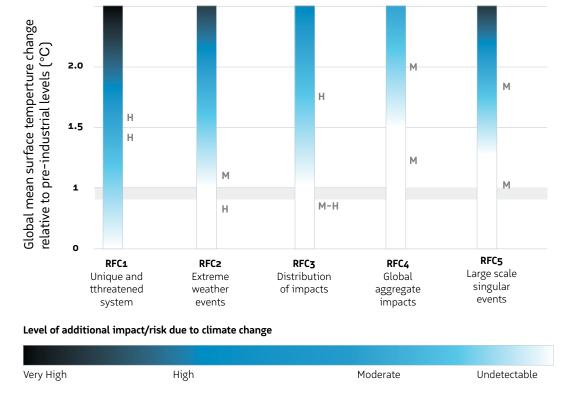


Record number of storms that hit the Atlantic in 2020⁷²

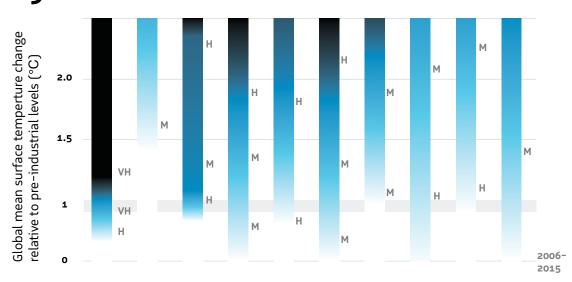
How the level of global warming affects the impacts and/or risks associated with the Reason for Concerns (RFCs) and selected natural, managed, and human systems

Five RCFs illustrate the impacts and risks of different levels of global warning for people, economics and ecosystem across sectors and regions

Impact and risks associated with the RCFs



Impact and risks for selected natural, managed and human systems



Source: IPCC, Special Report - Global Warming of 1.5 degrees



HARNESS 'WARP SPEED' POLICY APPROACHES

Accelerating the achievement of policy objectives through concentrated, collaborative innovation

Rethinking What is Possible:

Notwithstanding its political sensitivity and recent challenges with distribution, Operation Warp Speed (OWS) demonstrated how focused investment, public-private sector collaboration, and harnessing competition can vastly accelerate complex processes. OWS nearly halved the time required to develop approved vaccines, but it was not the first project of its kind: Project Apollo landed a man on the moon, focusing the efforts of thousands on a singular goal. Even earlier, the Manhattan Project sprinted to develop the atomic bomb. 73 However, neither project demonstrated as impressive and rapid coordination as OWS. Collaboration and knowledge sharing between health, defense, agriculture, and other government departments as well as the private sector achieved a vaccine in 8 months. Billions of dollars were poured into companies, including Johnson & Johnson, Moderna, AstraZeneca, Regeneron, Novavax, and Pfizer.⁷⁴ These successful public-private partnerships demonstrate that collaboration across sectors can provide crucial solutions and be leveraged to tackle society's most pressing challenges.

OWS standardized vaccine development protocols (usually controlled by pharmaceutical companies) to streamline data collection and forced pharmaceutical companies to develop vaccines parallel to clinical trials (saving time by eliminating the waiting period for trial results). OWS also accelerated the production of vaccines that demonstrated the most success rather than letting the private sector direct this dialogue or public perception.

Operation Warp Speed nearly halved the time required to develop approved vacciness⁷⁴

PRIORITY FOR ACTION

For government leaders, it is now a priority to determine how similar approaches to Operation Warp Speed can be used to accelerate the achievement of other urgent policy objectives.

The key for governments lies in realizing the potential of proactive and collaborative action, aligning multiple stakeholders around a shared issue, and prioritizing a single outcome rather than incremental improvement. Furthermore, applying a mission-oriented framework relies on a clearly defined goal with tangible criteria. Similar approaches can potentially be applied to additional health problems or even energy infrastructure, where approaches require collaboration of governments, companies, institutions, regulators, and more, so long as all parties can agree on a shared, focused objective.





THE OPPORTUNITIES OF A CRITICAL JUNCTURE

In 2021, the world will enter even more deeply into the critical juncture that defines this moment in history. Critical junctures are periods in which deep—and often disorienting—change is highly compressed. They are periods characterized by strategic fluidity, uncertainty, and institutional flux in which agency and choice play a decisive causal role in setting the long-term path of future developments. As a result, critical junctures are exceptional periods of choice, opportunity and consequence for leaders, institutions, and societies in which large-scale transformation is both most possible and most urgent. Choices made and actions taken now will disproportionately shape the future trajectories of individuals, institutions, nations and indeed the world itself. The 21 priorities outlined in this paper provide one perspective on a set of issues that only government leaders can address at the scale and with the whole-of-society unity of effort required to deliver real results.

About Kearney

As a global consulting partnership in more than 40 countries, our people make us who we are. We're individuals who take as much joy from those we work with as the work itself. Driven to be the difference between a big idea and making it happen, we help our clients break through.

About the National Transformations Institute:

Kearney's National Transformations Institute and Global Business Policy Council are dedicated to helping senior government and business leaders anticipate, shape and accelerate the transformations underway around the world, based on rigorous strategic foresight.

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