Future Competitiveness
Based upon the GFCC Foundational Global Competitiveness Principles
Launched at the virtual 2021 Global Innovation Summit

The Global Federation of Competitiveness Councils (GFCC) is a network of leaders and organizations from around the world. The GFCC believes that acting globally is now a prerequisite to economic competitiveness nationally.
The Global Federation of Competitiveness Councils (GFCC) is a network of leaders and organizations from around the world committed to the implementation of competitiveness strategies to drive innovation, productivity and prosperity for nations, regions and cities. The GFCC develops and implements ideas, concepts, initiatives and tools to understand and navigate the complex competitiveness landscape.

The Global Federation of Competitiveness Councils (GFCC) is a nonprofit, 501(c)(3) organization as recognized by the U.S. Internal Revenue Service. The GFCC's activities are funded by contributions from its member organizations.

For more information, please visit www.thegfcc.org.

/f/thegfcc
/twitter/thegfcc
Originally launched in 2010 and endorsed by more than 30 national competitiveness organizations, the Global Federation of Competitiveness Councils’ Global Competitiveness Principles offer an overarching framework for national policies and programs designed to foster innovation, competitiveness, and prosperity in the 21st century. The Principles emphasize key competitiveness drivers such as investment in research and development; education and training for all citizens; stewardship of natural resources; strong intellectual property rights; an environment that encourages business investment, formation, and growth; open trade; and enabling infrastructure.

Since its inception, the GFCC has reviewed its foundational Global Competitiveness Principles annually to adapt to critical productivity and prosperity challenges—and opportunities—facing GFCC members. Over the past year, GFCC member nations have lived through the greatest economic disruption of our lifetimes. They have struggled to contain the spread of COVID-19, cope with its devastating pain and hardships, and mitigate its disruptive effects on the economy. However, as knowledge of the virus has rapidly accumulated and vaccines — developed miraculously at record speed — have begun to provide some protection to the population, many nations are beginning to set their sights on the future in a world that has transformed in a year’s time.

At this pivotal moment in human history, and ideally positioned to act as a catalyst and agent of change, the GFCC launched a global conversation on the challenges of renewal and opportunities for reinvention that lie ahead. Since the onset of this plague on humanity, many important lessons have been learned that shine a light on new pathways for building more competitive, agile, and inclusive economies.

- **Businesses, universities, and governments can innovate much faster than thought possible.** Accelerating innovation is vital for a future that will be shaped by a whirlwind of change brought about by revolutionary technologies disrupting global markets and delivering new building blocks of prosperity for innovating nations.

- **Businesses and institutions can transform manufacturing, organizations, and work processes, and deploy new technologies much faster than we have in the past.** During the pandemic, organizations made changes at unprecedented speed. When hundreds of millions of workers suddenly moved to telework, companies quickly re-engineered work processes, rolled out new digital strategies, and altered supply chains, manufacturing, and modes of product and service delivery in response to dramatic demand shifts. Such agility is imperative for competitiveness in a world of rapid change.

- **There are many latent innovators and entrepreneurs who are not engaged in the innovation process and entrepreneurship.** During the pandemic, many people from all walks of life stepped up with innovative solutions to cope with disruption in the economy and society. Greater democratization of innovation is possible through open innovation platforms, ecosystems to support independent innovators, low cost tools of production, and digital marketing channels. These models and tools are reducing barriers to entry for prospective innovators and entrepreneurs, and can be harnessed to create a more inclusive innovation ecosystem and more inclusive prosperity.

- **Resilience is an important component of competitiveness and economic sustainability.** All nations must ensure the integrity of supply chains for critical goods, and businesses must strengthen the resilience of their operations to withstand the greater levels of turbulence and disruption expected in the future.

- **The digital divide is a digital disaster for many.** During the pandemic, digital infrastructure, telework, and on-line shopping prevented the complete collapse of many economies and helped maintain social stability. But their potential benefits go well beyond that. The world is moving to online platforms—for knowledge, work, and
accessing job opportunities, health care, education, and services. Yet too many people in rural areas, low-income communities, and underdeveloped countries do not have such access. As a result, their economic opportunities are diminishing, and nations will not be able to fully leverage their human capital. New infrastructure must expand the footprint of economic opportunity.

Co-created by its members and embracing what we have learned, it is with great hope that we present the GFCC 2021 Global Competitiveness Principles. They reflect the competitive realities of today, focus on the future state we hope to achieve, and point to potential pathways for progress toward revitalizing and expanding opportunities for growth, innovation, and prosperity worldwide.

The 2021 Principles incorporate a new focus on building the resilience of economies and the agility of businesses and institutions in an era of rapid change, accelerating innovation and extending its reach to complex societal challenges, making the innovation economy more inclusive by empowering all citizens to be potential innovators and entrepreneurs, to ensure physical and digital infrastructure supports economic opportunity for all, and to forge the public-private partnerships that will be needed to realize these goals.

We urge businesses, governments, universities, researchers, innovators, and thinkers around the world to be guided by these Principles as they envision a new future state, and embrace what has been learned as you develop new policies and strategies, plan for new investments, and adopt new business models and organizational forms to bring that new vision to reality.

Charles O. Holliday, Jr.
Chairman, Global Federation of Competitiveness Councils
Former Chairman of Royal Dutch Shell, Bank of America, and DuPont
Chairman Emeritus, Council on Competitiveness
Global Competitiveness Principles

1. Make public-private partnerships an essential component of any strategy or initiative to address sustainable development and build future economies and societies.

   Building innovative, sustainable, inclusive, and resilient economies and societies requires risk-taking, cross-sector collaboration, pooling of resources, and circulation of ideas, capital, people, IP, and other assets beyond organizational and sectoral boundaries. Public-private partnerships (PPPs) are an important tool to enable that and should be aimed at building the future, not simply accomplishing objectives for which one sector alone has the resources to address. The more complex challenges and innovative solutions are, the more society may benefit from public-private partnerships, cross-sector collaboration, and the circulation of resources. Regulatory frameworks should recognize that public-private collaboration may be needed when R&D costs and risks are high, speed in problem-solving is required, and solutions to challenges may otherwise not be developed in a timely manner or at all.

2. Build a future edge via purposeful innovation efforts that engage stakeholders across sectors and industries, focus on complex societal issues, and leverage the potential of novel models and tools for innovating.

   Building more sustainable, productive, inclusive, and resilient economies and societies requires innovation and entrepreneurial behaviors in business and policy. Countries and regions need to boost and update their innovation capabilities, policies, and initiatives, using and promoting the use in industry of the best available models and techniques, such as new agile methods. They should also address the need for legal frameworks that allow and reward public-private collaboration, experimentation, and risk-taking. Fundamental changes in business, the economy, and society will happen only if leaders make purposeful efforts to engage all citizens in the innovation economy and approach today’s critical challenges from a design perspective.

3. Make talent and skills development efforts more inclusive, leveraging real-world problems, data, and partnerships to build the human capital needed for future competitiveness.

   Economies would benefit from the inclusion of all social and demographic groups into the innovation economy. That can happen only through intentional and continued efforts to develop talent pools across the globe. Skills and competencies are fundamental for any economy to thrive, be resilient, and tackle the complex issues related to sustainable development. Providing skills and competencies at speed and scale has become critical in a time of rapid change. However, no single entity can address future talent needs alone; national and local multi-stakeholder groups, public-private alliances, and coalitions must act. Changes in technology, society, organizations, and management have increased the demand for complex problem-solving capabilities, and new ways to engage people in work, the workforce, and education, including greater personalization. These needs can be addressed only through more diverse and flexible talent development approaches including new delivery models, extensive use of digital technologies, experimentation, and involvement from a broader set of stakeholders.
4. **Drive global change toward more innovative, sustainable, resilient, and inclusive economies and societies at the local and regional levels.**

Action at the city and regional levels is fundamental to building more innovative, sustainable, and resilient economies and societies with opportunities for all citizens. Infrastructure, talent, capital, and demand for resources are concentrated in cities and exurban regions, and these areas serve as critical gateways for the innovation and trade that drive the global economy. These population centers are being affected by climate change and need to adapt, reduce their resource consumption and greenhouse gas emissions, and build resilience by design. Focusing on innovation to solve these challenges can create new economic opportunities. Global cases and best practices show that cities and regions can transform their economies but need to develop talent pools, invest in critical infrastructure, provide low friction business environments, nurture future industries, and connect globally. Cities and regions need strategies to build future prosperity through public-private partnerships, and relentless efforts to weave together the assets and capabilities of diverse stakeholders into local or regional innovation ecosystems.

5. **Make intellectual property systems functional, adaptable, data-centric, easy to use, and accessible to all social segments.**

Making businesses and economies environmentally sustainable at scale requires new technologies and innovative business models. IP regimes need to reward innovation and investments worldwide, and protect against IP infringement and theft. As the economic landscape becomes increasingly complex and dynamic due to digitalization, datafication of human activity, the rise of artificial intelligence, and the expanding flow of data they generate, data stewardship will gain importance and must be integrated into IP systems and policies. New organizational models, open innovation platforms, and open-source technologies present new opportunities for innovation, are increasingly part of corporate strategies, and need to be considered when updating IP systems. IP offices must recognize this evolving landscape, embrace experimentation and institutional learning, consult stakeholders in adapting IP processes, and emphasize the use of data. Globally, there is a need for a single, verifiable, reliable, enforceable, one-stop IP protection regime that could lower costs for entrepreneurs and boost innovation. Across geographies, efforts are required to prepare and support people to access and use IP systems.
6. **Accelerate the deployment of sustainable and resilient infrastructure, creating opportunities for inclusion, sustainable growth, and prosperity, locally and globally.**

Building a more prosperous future across nations will require both investment, to close the global infrastructure gap, and efforts to build new and different types of infrastructure and reduce greenhouse gases (GHGs) in the atmosphere. Cities and nations should create sustainability and resiliency by design, adopting innovative technologies and business, finance, regulatory, trade, and public-private partnership models. Enhancing resiliency requires using new technologies to make infrastructure adaptable and reconfigurable, capable of performing under stress and in the face of extreme climate, sanitary, and social shocks. Financial incentives should encourage deployment of infrastructure that contributes to reducing GHG emissions. In the digital economy, inclusiveness depends on closing the cyberinfrastructure gap, and connecting all citizens and businesses to the digitalized economy. Cities and nations need public-private partnerships to close the digital divide.

7. **Establish regulatory frameworks that are clear and transparent, highly adaptable, focused on risk, and that keep pace with technological change.**

Regulation must draw a balance between the protection of citizens and the benefits of technological progress. New revolutionary technologies are reshaping the business landscape and society, blurring the boundaries of industries, and changing consumer behaviors. Future-proof regulatory frameworks must be able to adapt to rapid change, experiment with new approaches, foster speedy institutional and business learning, and implement timely updates. Regulators must operate across siloed areas of policy and policymaking expertise to ensure they have an integrated view when weighing the costs and benefits of regulation. Governments should also shift the focus of regulation from process compliance to risk assessment. Cities and nations that succeed in this task will be better prepared to address future challenges, crises, and emerging economic opportunities, and can gain a competitive edge. New regulatory regimes should catalyze energy transition toward net-zero greenhouse gas emissions, and be coupled with policies to tackle the social and economic downsides of the transition to cleaner energy.
8. **Reimagine the economy and business from a systems perspective, and leverage technology to boost the productivity of natural resources, preserve biodiversity, advance sustainability, and build resilience.**

Cities and nations that strive to dramatically increase the productivity of natural resources, and preserve nature and biodiversity can unleash value creation and gain a competitive edge. The opportunities for investment, industrial transformation, new business formation, jobs, and economic growth associated with such efforts are enormous. Science, technology, and innovation can provide a diversity of ways to expand the productivity of natural resources, lower humanity's footprint on the planet, fight climate change, and preserve nature. However, realizing the full potential presented by technology and breaking the trade-off between natural resource use and sustainability require systemic changes in value chains and the economy. System design must be emphasized and coupled with new incentives for deploying new business models and technologies that improve sustainability.

9. **Take advantage of existing networks across all sectors to build trust and expand global engagement based on shared values.**

Public and private stakeholders need to acknowledge that public support for global trade has eroded. They should act locally to uplift and transition to new opportunities segments of the economy and society negatively affected by globalization, regaining trust and buy-in. Negotiators should seek to develop fully functional global and multilateral frameworks that address economic and social challenges, create new value, and build momentum toward a renewed global trading system. In an evolving global landscape in which trade, data, technology, and internet policies are increasingly intertwined, countries need to update their foreign commercial, trade, and service institutions with new expertise and keep pace with rapid change. The need for trust-building and international institutions that can enable global collaboration, trade, and investment calls for concrete actions to address asymmetries in industry and government capabilities and performance across nations, but also a renewed commitment to transparency and respect for the rule of law.

10. **Invest in benchmarking and institutional learning to prepare cities and nations to cope with uncertainty and disruption, and build future competitiveness.**

The world is living through a time of accelerated transformation, uncertainty, and rising global risks in which competitiveness will be increasingly defined by the capacity to respond and adapt to extreme economic, business, societal, and natural shocks and disruption. Benchmarking and institutional learning are the cornerstone of competitiveness and must include a focus on best practices in crisis response and recovery. To prepare for future shock and disruption, cities and countries should begin now to develop platforms for sharing crisis data and information, co-creating resilience capabilities, and strengthening cross-sector and cross-border relationships. Perspectives must shift and see investments in preparedness as drivers for future resilience, global competitiveness, and value creation. At a global level, nations should collaborate in developing a facility to accelerate learning and fill persisting gaps in capabilities across nations.
United Nations Sustainable Development Goals

The 10 Principles of Competitiveness align with the United Nations Sustainable Development Goals (UN SDGs) launched in 2015. To learn more, visit sustainabledevelopment.un.org/sdgs.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>UN SDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>End poverty in all its forms everywhere</td>
<td>End poverty in all its forms everywhere</td>
</tr>
<tr>
<td>2</td>
<td>Zero hunger</td>
<td>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</td>
</tr>
<tr>
<td>3</td>
<td>Good health and well-being for all</td>
<td>Ensure healthy lives and promote well-being for all at all ages</td>
</tr>
<tr>
<td>4</td>
<td>Quality education</td>
<td>Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</td>
</tr>
<tr>
<td>5</td>
<td>Gender equality and empower all women and girls</td>
<td>Achieve gender equality and empower all women and girls</td>
</tr>
<tr>
<td>6</td>
<td>Clean water and sanitation for all</td>
<td>Ensure availability and sustainable management of water and sanitation for all</td>
</tr>
<tr>
<td>7</td>
<td>Affordable and clean energy</td>
<td>Ensure access to affordable, reliable, sustainable and modern energy for all</td>
</tr>
<tr>
<td>8</td>
<td>Decent work and economic growth</td>
<td>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</td>
</tr>
<tr>
<td>9</td>
<td>Industry innovation</td>
<td>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</td>
</tr>
<tr>
<td>10</td>
<td>Reduced inequalities</td>
<td>Reduce inequality within and among countries</td>
</tr>
<tr>
<td>11</td>
<td>Sustainable cities and communities</td>
<td>Make cities and human settlements inclusive, safe, resilient and sustainable</td>
</tr>
<tr>
<td>12</td>
<td>Responsible consumption and production patterns</td>
<td>Ensure sustainable consumption and production patterns</td>
</tr>
<tr>
<td>13</td>
<td>Climate action</td>
<td>Take urgent action to combat climate change and its impacts*</td>
</tr>
<tr>
<td>14</td>
<td>Life below water</td>
<td>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</td>
</tr>
<tr>
<td>15</td>
<td>Life on land</td>
<td>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</td>
</tr>
<tr>
<td>16</td>
<td>Peace, justice and strong institutions</td>
<td>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</td>
</tr>
<tr>
<td>17</td>
<td>Partnerships for the goals</td>
<td>Strengthen the means of implementation and revitalize the global partnership for sustainable development</td>
</tr>
</tbody>
</table>
Global Federation of Competitiveness Councils Membership

SUSTAINING AND GENERAL MEMBERS

Australia
Government of Australia
Government of Australia — Department of Industry, Innovation and Science

Belgium
Eurasia Competitiveness Institute

Brazil
Brazilian National Confederation of Industries — CNI/SENAI/SESI/IEL

Canada
Western Economic Diversification Canada

Greece
Council on Competitiveness of Greece — CompeteGR
Delphi Economic Forum

Japan
Japan Innovation Network
Japan Science and Technology Agency — JST

Kazakhstan
Kazakhstan Competitiveness Council

Malaysia
Malaysian Industry-Government Group for High Technology — MIGHT

Qatar
Qatar Research, Development and Innovation Council — QDI

United Arab Emirates
Abu Dhabi Department of Economic Development

United Kingdom
Centre for Competitiveness

United States
Council on Competitiveness

Zimbabwe
National Competitiveness Commission

UNIVERSITY AND RESEARCH MEMBERS

Australia
Monash University
RMIT University

Brazil
State University of Paraíba / Universidade Estadual da Paraíba

Canada
University of Victoria

Greece
American College of Greece

Japan
Okayama Institute of Science and Technology

Malaysia
Universiti Teknologi Petronas

Mexico
Monterrey Institute of Technology and Higher Education

New Zealand
University of Auckland

Peru
Universidad Nacional de San Agustín de Arequipa

Portugal
Catholic University of Portugal / Universidade Católica Portuguesa

Qatar
Qatar University

Ukraine
Kyiv National Economic University

United Kingdom
Queen Mary University of London
University of Southampton

United States
Arizona State University
Georgetown University
Purdue University
Texas A&M Engineering Experiment Station
University of California San Diego
University of Chicago
University of Illinois
University of North Carolina at Chapel Hill
University of South Carolina
Webster University

CORPORATE MEMBERS

Al-Dabbagh Group
Athens Exchange Group — ATHEX
Center for Research and Consulting LLC
Justitia or Yanos Gramatidis and Partners
Lockheed Martin
Nadim Industries
Piraeus Bank
Whitecap Investments LLC

GFCC FELLOWS

Distinguished Fellows
Zakri Abdul Hamid
Amr Al-Dabbagh
Spyros Artavanis-Tsakonas
O. Derek Campbell
Nathalie Cely
Lee Yee Cheong
Luciano Galvão Coutinho
João A. H. Da Jornada
Petros G. Doukas
Luis Fernandes
Nika Gilauri
Yanos Gramatidis
Karen A. Holbrook
Jerry M. Hultin
Carole Hyatt
Charles Kiefel, AM
Stephen Kingon
Ashwani Kumar
Tae Shin Kwon
Joan MacNaughton, CB Hon FEI
Christos Megalou
Liam Nellis
Kandeh K. Yumkella

Senior Fellows
Edward O. Agie
Marcelo Augusto de Felippe
Rehan N. Chaudri
Fred Davies
Margareta Drzeniek Hanouz
Mark Esposito
Dionisio Garcia
Banning Garrett
Kathryn Hause
Greg Horowitt
Elisa Jagerson

GFCC TEAM

Charles O. Holliday Jr.
Chairman

The Hon. Deborah L. Wince-Smith
President

Roberto Alvarez
Executive Director and Secretary to the Board

Chad Evans
Treasurer

Vanessa Puerta
Head of Operations

Simone Melo
Community and Communication Manager

Rylie Pope
Research Associate