

Competitiveness and Our Sustainable Future Based upon the GFCC

Based upon the GFCC Foundational Global Competitiveness Principles

Launched at the 2017 Global Innovation Summit in Kuala Lumpur, Malaysia



COMPETITIVENESS AND OUR SUSTAINABLE FUTURE

The Global Federation of Competitiveness Councils (GFCC) is pleased to present a set of principles to support the Sustainable Future of Production, Consumption and Work.

Since its inception, the GFCC has reviewed its foundational *Global Competitiveness Principles* regularly to adapt to critical productivity and prosperity challenges—and opportunities—facing GFCC members. Originally launched in 2010 and endorsed by more than 30 national competitiveness organizations, the GFCC's foundational *Principles* offer an overarching framework for national policies and programs aimed at fostering innovation, competitiveness and prosperity in the 21st century.

The *Principles* provide an important framework as countries, regions and cities strive to be competitive, grow their economies and become more prosperous. The *Principles* emphasize key competitiveness drivers such as investment in research and development; education and training for all citizens; sustainable and responsible development of natural resources; strong intellectual property rights; open trade; and a stable, transparent, efficient and fair environment for business investment, formation and growth.

GFCC members and fellows have cocreated the 2017 edition of the *GFCC Principles of Competitiveness*—in short: they result from a deep nearly year-long conversation involving key global competitiveness, business, technology, entrepreneurship,

policy and thought leaders. *The 2017 Principles of Competitiveness* emerge from a global co-creation process and reflect a variety of perspectives within our network.

The world is going through rapid transformations driven by technological growth, climate change, urbanization, and changing demographics. No industry or country will be unaffected. In this edition of our Competitiveness Principles, the GFCC outlines a conceptual framework to maximize the upside of such transformations, for instance, harnessing the potential of new technologies—artificial intelligence, sensors, robotics, and additive manufacturing—to drive sustainable production, prepare economies and societies to face some of the challenges ahead.

This emerging reality will require new frameworks for thriving innovation ecosystems—new government policies, new business concepts, and new cross-sector alliances. While we face critical challenges during this age of disruption and transformation, we are also presented with a host of opportunities.

The GFCC recognizes the importance of sustainability as a competitive advantage and the *Principles* reflect that. Greater efficiency in how nations, regions and cities use natural resources and consume energy can lower company costs and improve living standards around the world. This year's *Competitiveness and our Sustainable Future* set forth policies



to strengthen a country or city's competitiveness and, through that, create value and drive prosperity for all their citizens—at the local and national level.

The GFCC envisions these Principles will encourage new competitiveness strategies and support nations, cities and businesses in their efforts to grow and develop. We hope their implementation can help drive momentum in leveraging the potential of new technologies and business models, creating new opportunities for growth, innovation and prosperity, capitalizing on global efforts around the Sustainable Development Goals (SDGs).

Charles O. Holliday, Jr.

Global Federation

of Competitiveness Councils

GLOBAL COMPETITIVENESS PRINCIPLES

 Build cross-sector coalitions and public-private partnerships to drive future and sustainable growth. Public and private sector collaboration is critical for scaling sustainable future production and consumption systems, as well as for developing the future workforce. Technologies, standards, regulations, investments, policies and initiatives need to be coordinated through consultation, cooperation and joint investment mechanisms. Establishing buy-in on opportunities, challenges and common goals from government, academia, business and civil society will be critical for creating a common sustainable future.









 Make innovation the centerpiece of sustainable growth strategies. Innovation is a fundamental driver for sustainable production systems and a key factor for creating new businesses. To drive sustainable future growth, countries, regions and cities need to combine: world-class STEM, business and creative capabilities; favorable regulatory regimes; openness and trust; top-notch infrastructures; capital availability; smart finance; and effective business connectors and knowledge brokers.







 Invest in developing the skills needed for future production, and in transitioning the workforce and society to a new economic paradigm. The transition to future production systems will require a massive adaptation in the workforce, powered by STEM and social sciences. New skills will be needed; jobs that do not exist today will emerge; many jobs will disappear.

Government, academia, businesses and civil society will need to come together to effectively develop future workforce, respecting local cultures and values. They will need to work to ensure citizens will have opportunities to adapt and access future economic opportunities regardless of race, gender, religion, age or economic status.









 Enhance local capabilities and leverage local assets to build global competitiveness. Cities and regions have become the cornerstones for today's economy—they concentrate: manufacturing, consumption of goods and resources, innovation capabilities, finance and economic activities in general. The emergence of future sustainable production-consumption systems will primarily take place in cities and their surrounding regions. It will be essential to mobilize local actors in government, business, academia, non-profit, international organizations and financial institutions and leverage local innovation capabilities to create new sustainable technologies, businesses, jobs and production systems.





 Implement functional, fast and forward-looking IP regimes to unleash innovation and global deployment. New technology solutions and business models will make future production systems possible. They will emerge and deploy in places were innovators and businesses are sure they will receive rewards for their efforts. Speed is critical for IP regimes as technology and global competition continue to accelerate.



6. Bridge technology development, investment and sustainable business models with infrastructure development.

Sustainable, resilient and secure physical and cyber infrastructures will be essential to address global challenges in areas such as water, energy, climate, mobility, food, housing and natural resources. Investments in these infrastructures will also have the potential to turbocharge innovation capabilities and capacities. Countries, regions and cities should tap into the potential of infrastructure investment as a key accelerator for sustainable technologies, businesses and production systems. Innovative finance and regulation will be essential.

















 Scale sustainable technologies and business models through global markets. Future competitiveness will result from local innovation combined with global perspective and scale. Global flows of goods, capital, information and ideas will be essential for future production systems. Stakeholders should support open and transparent markets as drivers for economic growth around the world.





 Use advanced technologies to boost resource productivity, create sustainable value chains and decouple natural resource pressures from economic growth. New, disruptive, emerging technologies open up enormous opportunities to increase the efficiency and productivity of energy and other natural resources—from minerals to water. In order to maximize this potential, these advanced technologies should be combined with smart regulation and systemic business, production and urban networks concepts. This mix can help decouple economic growth from natural resources depletion, while combatting biodiversity loss, desertification and land degradation.













 Implement forward-looking, seamless and efficient regulations that create favorable conditions for the emergence of new business models and sustainable technologies. Efficiency, transparency and predictability are key attributes for functional and innovation-positive business environments. A fast-paced, changing global scenario also requires flexibility, adaptation, speed and accelerated learning. The emergence of future production and consumption systems will require experimentation and institutional learning.



 Turbocharge local and national sustainable development through systematic business, regulation, policy and strategy. For countries, regions and cities to compete and cooperate in building sustainable production and consumption systems, it will be essential to track key metrics and constantly assess new solutions and practices implemented globally. Learning and adapting will only be possible with systematic global engagement and benchmarking.



UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

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



End poverty in all its forms everywhere



End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Ensure healthy lives and promote well-being for all at all ages



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Achieve gender equality and empower all women and girls



Ensure availability and sustainable management of water and sanitation for all



Ensure access to affordable, reliable, sustainable and modern energy for all



Promote sustained, inclusive and sustain-able economic growth, full and productive employment and decent work for all



Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



Reduce inequality within and among countries



Make cities and human settlements inclusive, safe, resilient and sustainable



Ensure sustainable consumption and production patterns



Take urgent action to combat climate change and its impacts*



Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



Strengthen the means of implementation and revitalize the global partnership for sustainable development

GLOBAL FEDERATION OF COMPETITIVENESS COUNCILS

SUSTAINING AND GENERAL MEMBERS

Argentina

Business Foundation for Quality and Excellence—FUNDECE

Australia

Department of Industry, Innovation and Science

Brazil

National Confederation of Industry— CNI/SENAI/SESI/IEL

Brazilian Innovation Agency—Finep

Canada

Go Productivity

Ecuador

Quito Council on Competitiveness

Greece

Delphi Economic Forum

Federation of Industries of Northern Greece

India

India Council on Competitiveness

Japan

Japan Science and Technology Agency—JST

Kazakhstan

Kazakhstan Competitiveness Counci

National Chamber of Commerce

Korea

Korea Economic Research Institute— KERI (on leave)

Malaysia

National Council of Professors—MPN

Malaysian Industry-Government Group for High Technology—MIGH

New Zealand

BusinessNZ

Qataı

Qatar Foundation R&D

Russia

Eurasia Competitiveness Institute

Saudi Arabia

Saudi Arabian General Investment Authority—SAGIA

United Arab Emirates

Competitiveness Office of Abu Dhabi

United Kingdom

Centre for Competitiveness

Unites States of America
Council on Competitiveness

UNIVERSITY MEMBERS

Australia

Monash University

Brazıl

Pontifical Catholic University of Rio Grande do Sul

Canada

Western University

Waterloo University

Finland

University of Helsinki

Germany

Ludwig-Maximilians-Universität

Greece

The American College of Greece

Hong Kong

University of Hong Kong

Italy

University of Bologna

Korea

Ajou University

Malaysia

Universiti Teknologi Petronas

University of Malaya

Mexico

Monterrey Institute of Technology and Higher Education

New Zealand

University of Auckland

Norway

University of Oslo

Portugal

Catholic University of Portugal

University of Minho

Qata

Qatar University

Weill Cornell Medicine—Qatar

Saudi Arabia

King Abdullah University of Science and Technology

Singapore

Singapore Management University

Switzerland

University of Zurich

Taiwan

National Taiwan University

United Kingdom

Imperial College London

King's College London

Ulster University

University of Sheffield

University of Southampton

University of Warwick

United States

Arizona State University

City University of New York

Georgetown University

Michigan State University

Northeastern University

Ohio State University

University of California San Diego

University of Chicago

University of North Carolina

at Chapeĺ Hill

University of South Carolina

Webster University

CORPORATE MEMBERS

AT Kearney

BlueSpace

Vanas Cranastidia

IRM

I ockheed Martin

Nadim Industrias

Xinova

GFCC FELLOWS

Distinguished Fellows

Zakri Abdul Hamid

Edward D. Agne

Nathalie Cely

Lee Yee Cheong

Luciano Galvão Coutinho

Amr Al-Dabbagh

Petros G. Doukas

Luis Fernande

Nika Gilauri

Karen A. Holbrook

Jerry M. Hultin

Carole Hyat

João A. H. Da Jornada

Charles Kiefel, OAM

Stephen Kingon

Ashwani Kuma

Joan MacNaughton, CB Hon FEI

Christos Megalor

Peter Meyers

Mark Minevich

Liam Nellis

Lucas Papademos

Richard Parker, CBE, FREng

Jack Sim

Rogerio Studar

Manual Traitanhar

Gregory F Trevertor

Simon Peter "Pete" Worden

Kandeh K. Yumkella

Senior Fellows

Dionisio Garcia Banning Garrett

Mark Esposito

7.Wanza / late

, Rehan N. Chaudri

.

GFCC TEAM

Charles O. Holiday Jr.

Chairman

Deborah L. Wince-Smith

President

Roberto dos Reis Alvarez Executive Director and Secretary

to the Board Chad Evans

Treasurer

Yasmin M. Hilpert

Director of Policy and Engagement