



**GFCC**

Global Federation of  
Competitiveness Councils

2021 Global Innovation Summit  
December 1 and 2

# Future Competitiveness

This report created by Simone Melo, Rylie Pope and Roberto Alvarez.

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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.

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# Introduction

On behalf of the Global Federation of Competitiveness Councils (GFCC), we are pleased to present a report of discussions and findings from the 2021 Global Innovation Summit (GIS), convened virtually and accessible globally on December 1-2, 2021. Influential leaders and thinkers from around the world came together in this digital constellation to share knowledge and best practices on competitiveness policies and strategies.

Despite the continuous challenges of coping with the COVID-19 global pandemic across industry, academia, government, the workforce, and society, people from 47 nations signed on to the 2021 GIS to learn from more than 50 keynote speakers, moderators, and panelists. This level of participation is a testament to the GFCC's expanding reach and rising interest in competitiveness and innovation around the world. We are encouraged by the notable increase in participation from African nations, a hopeful sign that the

GFCC is making progress advancing prosperity-enhancing concepts, policies, and strategies in emerging and least developed economies.

The 2021 GIS capped a year of extraordinary programming carried out by the GFCC and its members during a period of unprecedented global challenge. This includes, particularly, the 11 Frame the Future conversations and a concluding report exploring new strategies for the post-pandemic economy, and how to incorporate what we have learned into new policies and programs. The concepts and proposals developed through the Frame the Future series ([we invite you to check out the materials on this webpage](#)) set the stage for the 2021 GIS.

Building on these efforts, the 2021 GIS speakers and panelists explored the most critical issues faced by GFCC member nations, pointed to potential solutions to these challenges, and envisioned opportunities for the future. Across the Summit sessions, several themes emerged as high priorities:

- Raising human capital through widespread access to low-cost, high-quality education and skills training to increase economic opportunities for all citizens of all ages, and to address increasing job and workforce disruptions due to rapid technological change and global competition, which often hit the most disadvantaged populations the hardest;

- Closing the digital divide so all citizens can access the digital economy, digitized work, and knowledge and services provided digitally by businesses, education institutions, governments, health care providers, and others;
- Building capacity in science, technology, and research, and strengthening national and regional innovation ecosystems to ignite innovation, support innovators and entrepreneurs, and grow innovation hubs that drive economic growth and job creation in this New Age of Innovation fueled by the convergence of multiple revolutionary technologies;
- Building resilience across the economy, businesses, and society to adapt and recover quickly from disruptions ranging from natural disasters and extreme weather to pandemics, cyberattack, or supply chain breakdown; and
- Expanding efforts to enhance sustainability and mitigate climate change, environmental degradation, natural resource depletion, and biodiversity loss, unleashing new opportunities for value creation.

In addition, participants considered these and other issues in the specific context of developments in Africa, which has a young population that has increasingly attracted the attention of GFCC members, and Greece, where we will have the 2022 Global Innovation Summit.

We urge you to explore the dimensions of these critical issues, and the insights and potential solutions captured in the GIS Summit Report. We are always amazed at the new things we learn during the Summits, and we are confident that this report holds a new idea, new insight, information on a policy or a program to consider that could be put into practice in your countries.

We extend our gratitude to the moderators, speakers, panelists, and GFCC fellows who made the 2021 Summit a rich, enlightening, productive, and valuable

two days for all who participated. We will be better thinkers, leaders, and change makers thanks to your wisdom. We also commend the GFCC staff who made this tremendous learning experience possible under the most challenging circumstances.

Please make tentative plans for traveling to Athens for the 2022 Global Innovation Summit. We extend our thanks to the Council on Competitiveness of Greece and the Delphi Economic Forum for committing to host the next Summit.

We are fortunate indeed to have the GFCC as a platform that reaches around the world to share knowledge, information, experiences, and lessons learned. May we all put them to good use to build better economies, stronger societies, and a more prosperous future for all.



**Mr. Charles O. Holliday Jr.**  
Chairman, Global Federation of Competitiveness Councils



**The Hon. Deborah L. Wince-Smith**  
President, Global Federation of Competitiveness Councils  
President & CEO, Council on Competitiveness



**Dr. Roberto Alvarez**  
Executive Director, Global Federation of Competitiveness Councils

# The 2021 Global Innovation Summit

The 2021 Global Innovation Summit (GIS) on Future Competitiveness gathered more than 50 C-suite speakers from more than 20 countries working in business, government, higher education, and innovation agencies for two days of interactive dialogues in a virtual platform. People from 49 nations attended the online sessions.

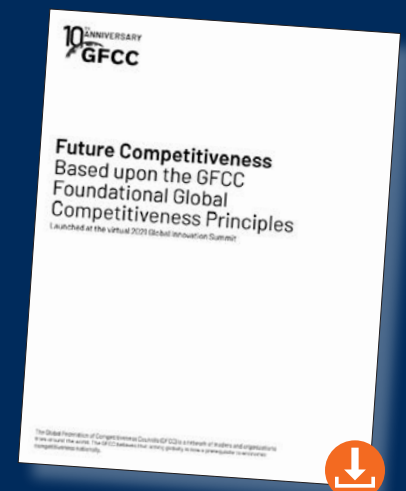
Throughout the panels, keynotes, and interviews, leaders outlined strategies to weave a new competitiveness tapestry for the 21st century – one comprised of innovation, sustainability, resilience, partnership, and inclusiveness. This new approach to competitiveness will be the basis for business models and policy frameworks over the coming decades, executed through new partnerships and cross-sectoral collaboration.

During the event, the GFCC launched the 2021 GFCC *Global Competitiveness Principles* and the *Frame the Future Guidelines and Recommendations for Future Competitiveness* report. Both publications are available online at <https://gis2021.thegfcc.org/assets>.

- First released in 2010, the *Global Competitiveness Principles* have been revisited and refined every year considering the theme highlighted in the GIS, reflecting the changing global landscape and bringing to life ideas generated by the GFCC community during each year's activities.
- The new *Frame the Future* report gathers best practices, trends, and recommendations related to the ten strategic competitiveness areas featured in the GFCC *Global Competitiveness Principles*. This report recaps the 2021 Frame the Future Series, which gathered leaders from 26 countries and hundreds of participants from 62 countries to discuss building a better future through innovation, partnership, resilience, inclusiveness, and sustainability.

## 2021 GFCC *Global Competitiveness Principles for Future Competitiveness*

Co-created by GFCC members and fellows, this flagship publication provides a framework for countries, cities, and businesses that strive to be competitive and become more prosperous. The 2021 edition emphasizes the importance of embedding innovation, sustainability, resilience, and inclusiveness across competitiveness strategies.



# Frame the Future


## Guidelines and Recommendations for Future Competitiveness

The *Frame the Future Guidelines and Recommendations for Future Competitiveness* gathers best practices, trends, and recommendations related to ten strategic competitiveness areas: innovation, talent, intellectual property systems, infrastructure, public-private partnerships, regulation, local development, natural assets, trade and global partnerships, and benchmarking.

This unique content results from discussions during the Frame the Future Series and in-depth conversations held with GFCC members and fellows throughout the year. More importantly, the publication provides a set of ten goals to guide leaders and policymakers towards designing inclusive, resilient, innovative, and sustainable policies and business strategies, emphasizing the need for collaboration and partnerships.

A summary of critical insights discussed during the 11 Frame the Future online sessions is available, with relevant recommendations for building future strategies.



5 IMPERATIVES	10 GOALS
 <p><b>Sustainability</b></p>	<ul style="list-style-type: none"> <li>Put a price on carbon.</li> <li>Triple investments in the development of clean technologies.</li> </ul>
 <p><b>Innovation</b></p>	<ul style="list-style-type: none"> <li>Make the speed of innovation during the pandemic the standard for the future.</li> <li>Implement organizational and legal solutions to accelerate the trial of new technologies.</li> </ul>
 <p><b>Inclusiveness</b></p>	<ul style="list-style-type: none"> <li>Make digital infrastructure, devices, and skills accessible and affordable to all citizens.</li> <li>Act on purpose in all situations to advance diversity and inclusion.</li> </ul>
 <p><b>Resilience</b></p>	<ul style="list-style-type: none"> <li>Create facilities to share data and knowledge on past crises and drive institutional learning.</li> <li>Redesign supply chains and processes to be more adaptive and more resistant to shocks.</li> </ul>
 <p><b>Partnerships</b></p>	<ul style="list-style-type: none"> <li>Create organizations to connect public and private entities, facilitating innovation.</li> <li>Adapt legislation to allow resources to easily circulate between the public and private sectors.</li> </ul>

# The 2021 Global Innovation Summit Agenda

## Day 1 – Segment 1

**Opening – Future Competitiveness**  
8:10 a.m.

**Panel Conversation: Frame the Future**  
8:25 a.m.

**Keynote: Future Competitiveness & Prosperity  
in a Disrupted and Turbulent World**  
9:20 a.m.

**Panel Conversation: Future Innovation**  
9:45 a.m.

**Closing of Day 1 – Segment 1**  
10:35 a.m.

## Day 1 – Segment 2

**Opening Day 1 – Segment 2**  
4:00 p.m.

**Panel Conversation: Future Inclusiveness**  
In partnership with Lockheed Martin Corporation  
4:05 p.m.

**Leadership Conversation: Future Resilient Societies**  
5:00 p.m.

**Panel Conversation: Future Sustainability**  
5:25 p.m.

**Closing of Day 1 – Segment 2**  
6:15 p.m.

All times are Eastern Standard Time.



## Day 2 – Segment 1

### Opening of Day 2 – Segment 1

8:00 a.m.

### Panel Conversation: Future Markets – Spotlight on Africa

8:10 a.m.

### Leadership Conversation: Future Innovation Hubs

9:05 a.m.

### Panel Conversation: Looking Ahead

9:35 a.m.

### Closing of Day 2 – Segment 1

10:25 a.m.

## Day 2 – Segment 2

### Opening of Day 2 – Segment 2

4:00 p.m.

### Panel Conversation: Future Resilience

4:05 p.m.

### Keynote: Future Knowledge Networks

5:00 p.m.

### Panel Conversation: Future Partnerships

5:25 p.m.

### Closing of GIS 2021

6:15 p.m.

PANEL CONVERSATION

# Frame the Future

**PANELISTS**

**Mr. Omar Al-Ansari**

Secretary General at Qatar Research, Development, and Innovation Council  
Qatar

**Mr. Charles O. Holliday Jr.**

Chairman, GFCC  
USA

**Mr. Hiro Nishiguchi**

CEO, Japan Innovation Network (JIN)  
Japan

**Ms. Gianna Sagazio**

Director of Innovation, Brazilian National Confederation of Industry (CNI)  
Brazil

**The Hon. Deborah L. Wince-Smith**

President, GFCC  
President & CEO, Council on Competitiveness  
USA

**MODERATOR**

**Dr. Roberto Alvarez**

Executive Director, GFCC  
Brazil

## Discussion questions

- What should be the top priority for countries and cities that want to be more innovative and competitive?
- What is the one lesson that you have learned this year that would help humanity to frame a better future?
- How can the GFCC help advance innovation, competitiveness, and prosperity globally?

## Situation

In 2021, the GFCC executed the Frame the Future series, a flagship initiative convening more than 50 C-suite leaders working in business, academia, government, civil society, and research entities from 26 countries. They discussed best practices, strategies, and models to drive future competitiveness throughout 11 high-level online gatherings, with more than 1,000 people in attendance. Participants were invited to reflect on how to weave innovation, partnerships, resilience, sustainability, and inclusiveness into ten competitiveness areas: innovation, talent, intellectual property systems, infrastructure, public-private partnerships, regulation, local development, natural assets, trade and global partnerships, and benchmarking. As a result of the series, the GFCC developed ten goals to guide leaders, organizations, and businesses towards designing better policies and strategies.

## Challenges

The world is living through a period of unprecedented change and faces multiple interrelated challenges. Global warming, the overuse of natural resources, a massive shift in labor markets due to technological change, the COVID-19 pandemic, poverty, social inequality, and lack of access to critical infrastructure, just to cite a few. Addressing these issues needs to become a priority in competitiveness agendas around the globe — in doing so, nations and local economies can also generate novel opportunities for value creation and turbocharge growth. Governments, businesses, and citizens must work together, breaking down barriers and building strategic collaboration to advance sustainable development and global prosperity. A set of common goals, such as the ones outlined in the GFCC report *Frame the Future Guidelines and Recommendations for Future Competitiveness*, can help countries foster international cooperation on relevant issues.

## Opportunities

**Build human capital as a top priority**

Talent is the centerpiece of a flourishing innovation ecosystem. Governments and businesses need to invest in human capital development, creating affordable and accessible life-long education for all populations. Upskilling and reskilling strategies need to be purposefully designed to

increase diversity in the talent pipeline and create new opportunities for people to participate in the innovation economy. Talent development efforts can create future value and progress and it must become a priority.


**Boost Capability**

Governments and businesses need to foster continued investment in boosting research and innovation capability that can be re-purposed in the face of crisis. For instance, research in genomics applications for the past 20 years helped Qatar achieve technological readiness

to face the COVID-19 pandemic, reusing technology and materials to develop test kits and contain the spread of the virus.

**Improve Communication Skills**

Societies need to develop a common language to advance sustainable development goals and meet global challenges. It is crucial to improve communication strategies and skills to engage stakeholders and facilitate collaboration across sectors.

 **Watch the full session**

.....  
 "COVID-19 has taught us that an investment in capability development is never an investment loss. The idea of human centric competitiveness and talent at the center of a healthy innovation ecosystem reinforces the importance of investing in capabilities."

**Mr. Omar Al-Ansari**  
 Secretary General, Qatar Research, Development, and Innovation Council



Dr. Roberto Alvarez, Executive Director, GFCC; Ms. Gianna Sagazio, Director of Innovation, Brazilian National Confederation of Industry (CNI); Mr. Hiro Nishiguchi, CEO, Japan Innovation Network (JIN); Mr. Omar Al-Ansari, Secretary General, Qatar Research, Development, and Innovation Council (QRDI); Mr. Charles O. Holliday Jr., Chairman, GFCC; and the Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness.

KEYNOTE

# Future Competitiveness and Prosperity in a Disrupted and Turbulent World

The state of people's minds and the perception of hope held by a given population play an essential role in a country's level of productivity. A factor that has been overlooked for a long time by policymakers and politicians.

Exclusive data from the Gallup Group surveying populations across 160 countries demonstrated that the percentage of negative experiences, namely sadness, stress, pain, and anger, is rising worldwide, impacting people's ability to fight for a better life and thrive.

In 2020, the [Negative Experience Index](#) found that 32 percent of the world population had experienced negative emotions one day before the survey. Since 2014, numbers have been steadily increasing one to three percentage points per year. Compared to past years,



**Mr. Jim Clifton**  
Chairman & CEO, Gallup Inc.

the data suggests that the world is becoming progressively vexed and having substandard hope.

But this perception is not equitably shared across all demographics. The gap has widened between the 20 percent with higher income levels and the 20 percent with lower income levels. The latter holding less hope for their future and well-being than previous generations.

In contrast, economists agree that one of the most productive times in human history was between 1850-1950 in the United States. During this period, large parts of the population experienced "cognitive expansion," meaning they perceived their future to be more promising than what they were living through.

**Mr. Jim Clifton**  
Chairman & CEO, Gallup Inc.

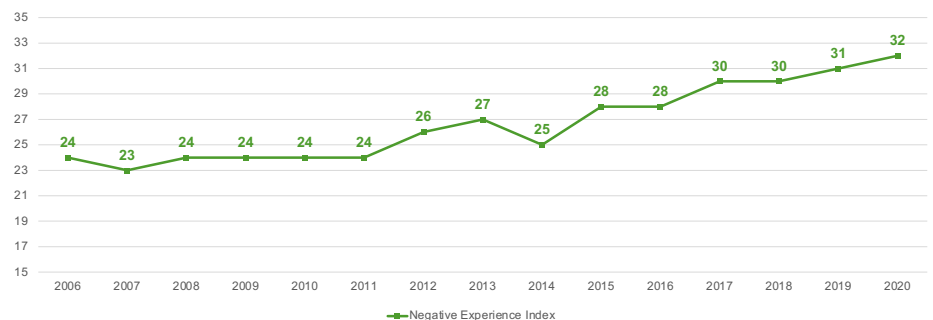
MODERATOR

**Dr. Roberto Alvarez**  
Executive Director, GFCC  
Brazil

## Negative Experience Index in 2020

### Worldwide

The Negative Experience Index is a measure of experienced well-being on the day before the survey. Questions provide a real-time measure of respondents' negative experiences.



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"As leaders, we need to get better at measuring the state of our constituencies, and that is the countries, cities, and organizations that we run," points out Mr. Jim Clifton, Chairman and CEO of the Gallup Group. "Because it is going to be difficult to improve overall productivity if people don't get into a better state of mind."

For Mr. Clifton, it is crucial to create formal ways of measuring a population's level of hope to help leaders understand people's experiences and expectations for the future and therefore improve competitiveness and productivity. But as of today, there isn't any formal dataset of this type available.



**Watch the full session**

.....  
"As leaders, we need to get better at measuring the state of our constituencies, and that is the countries, cities, and organizations that we run. Because it is going to be difficult to improve overall productivity if people don't get into a better state of mind."

**Mr. Jim Clifton**  
Chairman & CEO, Gallup Inc.

PANEL CONVERSATION

# Future Innovation

## PANELISTS

**Mr. Eldar Abdrazakov**

Chairman, Kazakhstan  
Competitiveness Council  
Founder & CEO, Centras Group  
Kazakhstan

**Dr. Ghadah Al-Dabbagh**

Head, Omnipreneurship Lab,  
Al-Dabbagh Group  
Saudi Arabia

**Ms. Samantha Bradley**

Managing Director of RealmSpark,  
ASU Enterprise Partners  
USA

**Dr. Ray Johnson**

CEO, Technology Innovation Institute  
UAE

**Dr. Mohd Yussof Sulaiman**

President & CEO  
Malaysian Industry-Government Group  
for High Technology (MIGHT)  
Malaysia

## MODERATOR

**Mr. Chad Evans**

Treasurer, GFCC  
Executive Vice-President, Council  
on Competitiveness  
USA

## Discussion questions

- What is needed to make the speed of innovation during the pandemic the standard?
- What types of institutions do countries need to accelerate new technologies?
- How can we empower innovation leaders in business and policy?

## Situation

Innovation is the primary driver of competitiveness and national progress, and it has been gaining momentum worldwide since the beginning of the COVID-19 pandemic. The disruption caused by the spread of the virus propelled governments, businesses, and citizens to adapt and find new ways of delivering services and selling goods. The adoption of digital technologies has been sped up by several years, and digitalization is at the forefront of economic recovery. Governments have the task of optimizing operations, regulations, and legal frameworks to facilitate the trial of new technologies and advance innovation. There is growing awareness among policymakers and business leaders on the importance of fostering structural measures to promote innovation, including increased spending on research and development (R&D), investments in education, the update of the public sector toolkit, and creating an enabling environment for entrepreneurs.

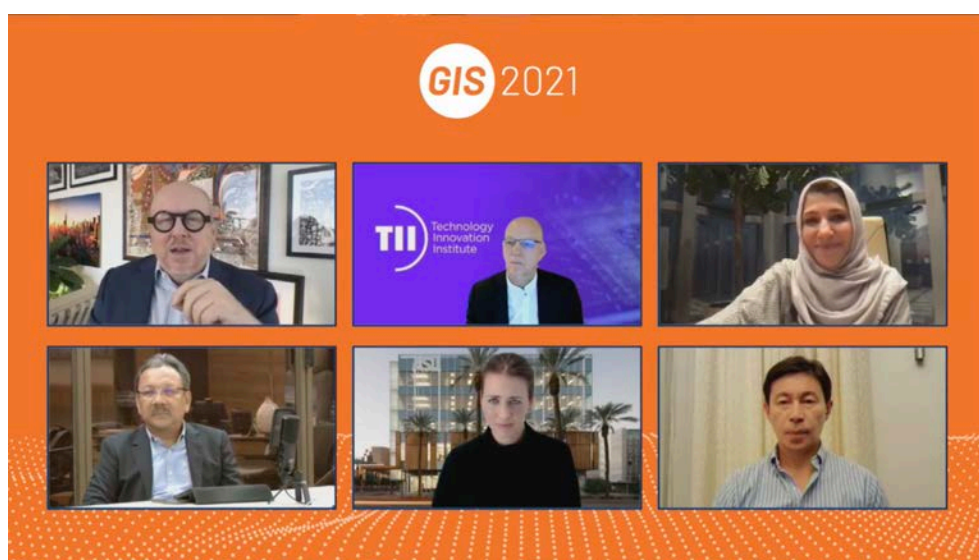
## Challenges

Societies have entered a new age of innovation fueled by the convergence of advanced computing, big data, sensors, Artificial Intelligence, biotechnologies, and the Internet of Things. These frontier technologies present new opportunities to advance sustainable development and meet global challenges. But their adoption also brings risks such as increasing inequalities, further accentuating the digital divide between the technology haves and have-nots. A successful transition to the knowledge-economy depends on fostering inclusive measures through international cooperation and policy-making. In the private sector, innovation relies on integrating technical know-how and business strategies into actionable plans focused on delivering to consumers' needs. Yet, large corporations and SMEs might face different challenges to advance innovation. While large corporations struggle to find a balance between innovative practices and the existing business models, SMEs need funding and technical support to develop and test products in the market, grow business structures, and scale up innovation.

## Opportunities

**Hold a consumer-centric approach to innovation**

Businesses can build a competitive advantage by investing in innovative ideas and solutions based on an



Mr. Chad Evans, Treasurer, GFCC, and Executive Vice-President, Council on Competitiveness; Dr. Ray Johnson, CEO, Technology Innovation Institute; Dr. Ghadah Al-Dabbagh, Head, Omnipreneurship Lab, Al-Dabbagh Group; Dr. Mohd Yussof Sulaiman, President & CEO, Malaysian Industry-Government Group for High Technology (MIGHT); Ms. Samantha Bradley, Managing Director of RealmSpark, ASU Enterprise Partners; and Mr. Eldar Abdrazakov, Chairman, Kazakhstan Competitiveness Council, and Founder & CEO, Centras Group.

understanding of customers' needs. That is an important strategy for innovative companies to remain competitive. In contrast, a technology-driven business that does not meet market needs and demands is less likely to succeed.

#### Foster an innovation ecosystem

Creating a flourishing innovation ecosystem depends on a range of factors: a large concentration of technical talent, technology, business knowledge, cultural

diversity, and good cooperation and proximity across the ecosystem to leverage professional networks. The latter proves to be a powerful tool to reduce conflicts and stagnation and foster professional growth among workers who become more mature through interactions with peers.

#### Deploy innovation frameworks

Innovation frameworks and methodologies are essential tools to evaluate business and government strategies. The

"Data is our new oil. Investing in a connected economy based on secure data is one of our national innovation strategy pillars."

**Dr. Ghadah Al-Dabbagh**  
Head, Omnipreneurship Lab, Al-Dabbagh Group

Foresight method, for instance, engages a multidisciplinary team over the analysis of megatrends and develops multiple scenarios to reveal and discuss valuable ideas for the future. The objective is not to provide close-ended answers but to expand and re-frame possible developments that need to be considered.<sup>1</sup> Deploying innovation frameworks and making them widely available to business strategists and entrepreneurs can improve decision-making, helping them better evaluate options and foster new opportunities.



**Watch the full session**

<sup>1</sup> OECD (2021), <https://www.oecd.org/strategic-foresight/whatisforesight/>.

PANEL CONVERSATION

# Future Inclusiveness

**PANELISTS**

**Ms. Tofara Chokera**

TofaraOnline (Digital Marketing and Innovation ConsultingTrust)  
Zimbabwe

**Mr. Dylan Jones**

President, Pacific Economic Development Canada (PacifiCan)  
Canada

**Dr. Eric Smith**

Director of Artificial Intelligence, Data Analytics, and Exploitation (AIDAE), Lockheed Martin Advanced Technology Center (ATC)  
USA

**Dr. Jay Walsh**

Interim Vice President for Economic Development and Innovation  
University of Illinois  
USA

**MODERATOR**

**Dr. Paul Roben**

Associate Vice Chancellor-Office of Innovation and Commercialization,  
University of California San Diego  
USA

## Discussion Questions

- How can countries and cities eliminate cost barriers for all citizens to access digital infrastructures, devices, and skills?
- How can companies and all organizations act on purpose to advance diversity and inclusion?
- What can a global organization do to help with that?

## Situation

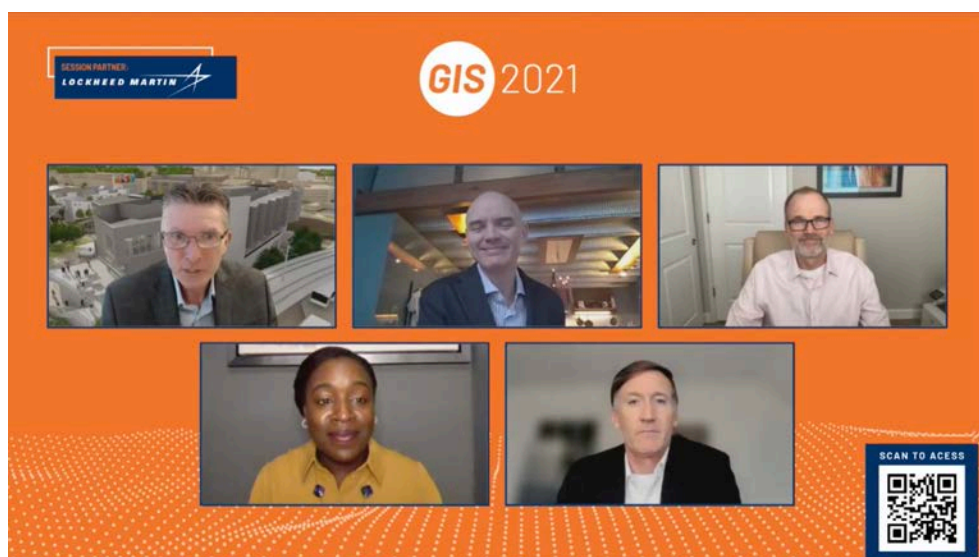
Societies are wasting human capital and potential. The lack of access to basic infrastructure, quality education, skills, and job opportunities impedes people from participating in the innovation economy and hinders a country's ability to thrive and increase prosperity. Today, half of the world's population, 3.7 billion people, and most women in developing countries do not have access to the internet. The COVID-19 pandemic highlighted inequalities since families from less privileged backgrounds were hardest hit. Driving inclusive policies and strategies will be even more important as economies transition to the future of work marked by ever-evolving technologies and automation, which can, if not properly addressed, widen the gap between marginalized and privileged social groups. Governments, businesses, and universities must build an inclusive

and diverse talent pipeline in a system that provides equitable development opportunities for people to foster social mobility. In the era of automation, competitiveness will be deeply tied to inclusive talent development at scale.

## Challenges

Facilitating access to education and digital infrastructure at low costs, including broadband internet and digital devices, remains a significant obstacle. In many places, families are confronted by the high prices of education and do not have access to the quality learning that could foster social mobility and better opportunities. The potential of e-learning during the pandemic proved to be highly selective depending on the family's housing conditions, income, and available digital devices for children to follow the lessons. Furthermore, gender gaps remain significant. Worldwide, women occupy a small percentage of managerial positions in technology and business, and are less likely to pursue a career in science and/or technology than men. In many countries, the streaming of women away from careers in these two fields happens in early childhood education, even before puberty. Finally, in a world increasingly enabled by data and algorithms, a non-inclusive technology development policy can lead to social bias and racism embedded into programming.





Dr. Paul Roben, Associate Vice Chancellor—Office of Innovation and Commercialization, University of California, San Diego; Mr. Dylan Jones, President, Pacific Economic Development Canada (PacifiCan); Dr. Eric Smith, Director of Artificial Intelligence, Data Analytics, and Exploitation (AIDAE), Lockheed Martin Advanced Technology Center (ATC); Ms. Tofara Chokera, TofaraOnline (Digital Marketing and Innovation Consulting Trust); and Dr. Jay Walsh, Interim Vice President for Economic Development and Innovation, University of Illinois.

## Opportunities

### Focus on early childhood education

Recent studies have pointed to the importance of investing in inclusive childhood learning to equip children to meet the future as healthy and skilled adults.<sup>2</sup> In an increasingly digital economy, there is a growing need for adults to enter the workforce with cognitive skills based on problem-solving and independence acquired during childhood. A new focus on childhood nutrition and basic core education has been gaining the attention of policymakers. Inclusive childhood education can also help close gender gaps in future workplaces.

### Use digital platforms to access global talent

Available digital platforms allow for companies to search for skilled talent anywhere, and for people to connect with professionals through online communities. Government and policymakers need to explore the growing interdependence

in the talent pipeline across the globe and invest in new ways of boosting social and economic growth in developing nations.

### Make digital infrastructure available to everyone

Governments need to create accessible and affordable pathways for people to learn digital and other technical skills since most future jobs will require them. However, the world still faces significant digital infrastructure gaps in developing countries and rural areas in developed nations. Universal broadband internet should become a fundamental right to all citizens as economies transition to become digital and highly connected.



**Watch the full session**

"Inclusiveness is the most significant opportunity of the 21st century. Many people saw what happened in the 20th century as rooted in the idea that growth and inclusion were competing. That zero-sum approach was a huge mistake. We need to leverage fairness to drive growth."

**Mr. Dylan Jones**

President, Pacific Economic Development Canada (PacifiCan)

<sup>2</sup> World Bank Group, Inter-American Development Bank, Unicef, 2018, [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https percent3A percent2F percent2Fwww.ecdan.org percent2Fassets percent2Fbackground-study---early-childhood-development.pdf&clen=1069268&chunk=true](chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.ecdan.org%2Fassets%2Fbackground-study---early-childhood-development.pdf&clen=1069268&chunk=true).

LEADERSHIP CONVERSATION

# Future Resilient Societies

**PANELISTS**

**Dr. Michinari Hamaguchi**  
President, Japan Science and  
Technology Agency (JST)  
Japan

**Prof. Pradeep Khosla**  
Chancellor, University of California  
San Diego  
USA

**MODERATOR**

**Prof. Colin Grant**  
Vice Principal International  
Queen Mary University of London  
United Kingdom  
U.K.

**Discussion Questions**

- What are the essential features to build future resilient societies?
- How can different nations engineer their paths to get there?
- How does a future resilient society translate into science and technology priorities and initiatives?

With climate change threatening livelihoods and the risk of a new pandemic not eliminated, there is a growing emphasis on the importance of building resilient capabilities. Technology can help to prepare societies for future shocks and enable a better quality of living. But it is crucial to pursue a technology system committed to ethics and social cohesion, and create policies focused on reducing the negative impacts of technologies, such as bias against minorities embedded in algorithms and the spread of fake news and misinformation. Further, it is also essential to develop processes to transition people to new job opportunities when disruptive technologies displace workers.

In Japan, building resilient societies depends on investing in infrastructure and disaster preparedness. The country's geographical conditions are prone to natural disasters, including earthquakes, tsunamis, volcanic eruptions, typhoons, and landslides, which could significantly worsen with rising temperatures due to

.....  
"Integrating the opinions, visions, and talent of young people is crucial for building the resilience of tomorrow's societies."

**Dr. Michinari Hamaguchi**  
President, Japan Science and Technology Agency

global warming. The Japan Science and Technology Plan, a landmark policy paper issued every year with goals for developing science and technology programs in the country, emphasizes the importance of developing measures to mitigate and manage risks related to extreme weather events. Japanese leaders have been working on a human-centric approach to resilience, supporting diverse lifestyles and wellbeing during a crisis. The program helps people deal with mental health issues and trauma.

Furthermore, education and information are crucial to developing societal preparedness. Universities have a role in training students to foster innovative thinking and develop a mindset to test multiple hypotheses independent of ideologies. American education fosters this type of reflexive thinking in students to

.....  
 "As leaders, we need to keep an open mind and bring people from all walks of life into the education system."

**Prof. Pradeep Khosla**  
 Chancellor, University of California San Diego

develop better decision-making. Finally, it seems crucial to give opportunities to young leaders to engage in policy discussions and bridge intergenerational divides.



Prof. Colin Grant, Vice Principal International, Queen Mary University of London, United Kingdom; Dr. Michinari Hamaguchi, President, Japan Science and Technology Agency (JST); and Prof. Pradeep Khosla, Chancellor, University of California San Diego.

 **Watch the full session**

PANEL CONVERSATION

# Future Sustainability

**PANELISTS**

**Mr. Bob Barbour**

Director & Chief Executive, Centre for Competitiveness  
UK

**Ms. Elisa Jagerson**

General Partner, Wildcat Venture Partners  
USA

**Prof. Ts Mohamed Ibrahim Abdul Mutalib**

Vice Chancellor,  
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**Dr. Rogério Studart**

Distinguished Fellow, GFCC  
Brazil

**Dr. Kande Yumkella**

Distinguished Fellow, GFCC  
Sierra Leone

**MODERATOR**

**Mr. Charles O. Holliday Jr.**

Chairman, GFCC  
USA

**Discussion Questions**

- What is the best way to put a price on carbon?
- How in practice could humanity triple investments in clean technologies?
- What is the biggest investment opportunity related to future sustainability?

**Situation**

Humanity has reached a critical point. The planet can no longer withstand the current rate of deforestation, pollution, and environmental degradation without compromising life on Earth with significant biodiversity loss. Climate change is a real threat to societies and economies, and a just transition, tackling polluter industries, is long overdue. Power generation (electricity and heat) and transport accounted for two thirds of total greenhouse gas emissions in 2019, followed by industry and building.<sup>3</sup> Avoiding a climate disaster depends on revamping strategies in these sectors to make them more efficient and sustainable for the future by using clean and renewable technologies. In the past decade, the cost of renewable energy has become more competitive. Solar panels are now 85 percent cheaper than they

.....  
"Research shows that we don't need new technologies to power the energy transition. What we need is to penetrate different verticals and different markets. Tech maturity is quite substantial at this point."

**Ms. Elisa Jagerson**

General Partner, Wildcat Venture Partners  
Title, organization

were in 2010.<sup>4</sup> There is a significant shift occurring in climate technology with innovative technologies such as Artificial Intelligence (AI), machine learning, the Internet of Things (IoT), and advanced manufacturing being deployed. These new enabling mechanisms can facilitate the transition to the green economy. But

<sup>3</sup> IEA (2021), Greenhouse Gas Emissions from Energy: Overview, IEA, Paris <https://www.iea.org/reports/greenhouse-gas-emissions-from-energy-overview>.

<sup>4</sup> IRENA (2021), Renewable Power Generation Costs in 2020, <https://www.irena.org/publications/2021/Jun/Renewable-Power-Costs-in-2020>.



Mr. Charles O. Holliday Jr., Chairman, GFCC; Ms. Elisa Jagerson, General Partner, Wildcat Venture Partners; Mr. Bob Barbour, Director & Chief Executive, Centre for Competitiveness; Dr. Rogério Studart, Distinguished Fellow, GFCC; and Prof. Ts Mohamed Ibrahim Abdul Mutalib, Vice Chancellor, Universiti Teknologi PETRONAS.

a successful transition to a more sustainable society depends on building political will among all stakeholders, winning consumer preferences, and making significant investment to build green infrastructure.

## Challenges

The main challenge in tackling climate change and reducing environmental degradation is fostering political will among all concerned actors. There is still a misalignment between public and private interests. It is in the public interest to transition to a green economy as fast as possible to avoid a climate disaster. But national focus on short-term goals, fears of increased costs, and economic losses have been halting climate commitments. These economic fears do not consider the cost of carbon in the supply chain or the risks that rising temperatures bring for life on earth. But the hope for a just transition is growing steadily. Societies have matured technology and knowledge

to power the low-carbon economy, and there is increasing interest in opportunities at the intersection of sustainability and innovation. Many developing countries are willing to step in the direction of a just transition that promotes inclusiveness and growth, but they still lack fiscal capacity. International finance must leverage green infrastructure building, bringing financial expertise to help developing countries access funding.

## Opportunities

### Improve waste and resource management

Waste generation rates are rising across the globe. In 2016, the cities generated 2.01 billion tonnes of solid waste. This number is expected to increase by 70 percent from 2016 to 2050, according to the World Bank.<sup>5</sup> New economic models need to create value from waste in supply chains by using waste management strategies. Waste prevention, recycling, and reuse could fit into circular economic


models and reduce the burden on landfills, conserve natural resources and save energy.

### Power the hydrogen economy

In recent years, clean hydrogen has been gaining momentum, with policies and businesses fostering new projects around the globe. Green hydrogen can be an alternative to fossil fuels in several ways. First, hydrogen offers an alternative to decarbonize a range of sectors, such as transport, and chemical, iron, and steel production. Second, it can be converted into electricity to warm houses or into fuels for vehicles. Third, hydrogen can store the variable output from renewable sources to meet demand. However, hydrogen technologies remain expensive, and incentives are needed to scale up technologies and reduce cost, and therefore, accelerate adoption.

### Invest in carbon-capture, utilization, and storage

The transition to a low-carbon economy depends on a multifaceted strategy that brings together different technologies to reduce the carbon footprint in the energy mix. Carbon capture, utilization, and storage (CCUS) is an important emission reduction technology that can be applied across the energy system. CCUS is gaining momentum with the United States, Europe, Australia, New Zealand, China, South Korea, and the Middle East planning to integrate more than 30 new facilities as part of their net-zero strategies. If that comes to reality, the global CO<sub>2</sub> capture capacity would more than triple, to around 130Mt per year.<sup>6</sup>

 **Watch the full session**

<sup>5</sup> World Bank (2019), Solid Waste Management Brief, <https://www.worldbank.org/en/topic/urbandevelopment/brief/solid-waste-management>.

<sup>6</sup> IEA, World large-scale CCUS facilities operating and in development, 2010-2020, IEA, Paris <https://www.iea.org/data-and-statistics/charts/world-large-scale-ccus-facilities-operating-and-in-development-2010-2020>

PANEL CONVERSATION

# Future Markets Spotlight on Africa

**PANELISTS**

**Mr. NJ Ayuk**

Executive Chairman, African Energy Chamber  
Equatorial Guinea

**Dr. Gibson Chigumira**

Founding Executive Director,  
Zimbabwe Economic Policy Analysis  
and Research Unit (ZEPARU)  
Zimbabwe

**Dr. Nkem Khumbah**

Chairman, Africa Development  
Futures Group  
South Africa

**Dr. Frannie Leautier**

Senior Partner & CEO, SouthBridge  
Investments  
Tanzania

**Prof. Elizabeth Strobbel**

Chancellor, Webster University  
USA

**MODERATOR**

**Mr. C. Derek Campbell**

Executive Chairman, AlphaSierra  
Group  
USA

## Discussion Questions

- How can governments and businesses couple the development of African resources with sustainability?
- What are the main opportunities for innovation and future growth in Africa?
- How can we accelerate such opportunities via global partnerships?

## Situation

Attracting foreign investment is a forward-thinking strategy that will continually produce opportunities in Africa at the local and national levels. Many countries across the continent have relied heavily on foreign aid, which has largely failed to deliver sustainable economic growth and poverty reduction. The failure to create long-term solutions requires a shift to attracting foreign investment instead of foreign aid. The narrative about Africa is evolving, from a place that needed aid to a place with an increased appetite for entrepreneurship, the use of new technologies and value creation, the want to be self-sustaining, and where the return on investment is lucrative. African companies, organizations, and governments are weaning their reliance off aid, and instead look to investment, trade, and partnerships. Currently, the return on investment in Africa is high due to the expanding presence of entrepreneurs, making it an ideal time to bring business to the continent. Africa has

the opportunity to leapfrog, particularly in the energy sector, since the existing technology gap is substantial. Support for leapfrogging, innovation, and upscaling should consider investments and incentives to create a circular economy that protects natural assets and paves the way for a just energy transition where all sectors with a carbon footprint come into play.

## Challenge

Africa needs to be self-sufficient and reduce its reliance on outside parties. Donors expect results and have high expectations when aiding African countries. Developing a long-term sustainable strategy to attract foreign investment and partnership, not aid, is a substantial task that requires collaboration across governments, private corporations, and public organizations. Gathering significant support to implement continent-wide change is a monumental job that will take the full attention of all major actors. Both top-level officials, including the political establishment and leaders of major companies, and the general population need to support the strategy to reduce the need of foreign aid.

## Opportunities

### Leverage natural resources

Africa is rich in natural resources that can be an asset in the transition to the green economy. The rich forests in areas


such as the Democratic Republic of Congo can be used to enhance carbon sequestration efforts.

**Invest in African people**

Building up Africa's workforce and available talent is crucial to reduce reliance on foreign resources and develop the economy. The continent has more than 1 billion residents and its young population is one of the most under tapped advantages. The human development problem can be turned around through increased information dissemination and upskilling of workers.

**Reform government policies to accelerate development**

There is a current infrastructure deficit across the energy, transportation, and productive sectors. A change in African government policies (policy, legislative, and regulatory frameworks) can create an opportunity to attract investment in infrastructure projects and enable a business-friendly environment.

 **Watch the full session**

.....  
 "Africa has the potential to leapfrog and take over new technologies since it hasn't completed its energy transition and therefore it could easily adopt solar, wind, hydrogen, and other forms of energy generation."

**Dr. Frannie Leautier**  
 Senior Partner & CEO, SouthBridge Investments



Mr. C. Derek Campbell, Executive Chairman, AlphaSierra Group; Prof. Elizabeth Strobble, Chancellor, Webster University; Dr. Nkem Khumbah, Chairman, Africa Development Futures Group; Mr. NJ Ayuk, Executive Chairman, African Energy Chamber; Dr. Frannie Leautier, Senior Partner & CEO, SouthBridge Investments; and Dr. Gibson Chigumira, Founding Executive Director, Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU).

LEADERSHIP CONVERSATION

# Future Innovation Hubs

**PANELISTS**

**Prof. Hassan Al-Derham**  
President, Qatar University  
Qatar

**Prof. Mary Collins**  
Provost, Okinawa Institute of Science  
and Technology (OIST)  
Japan

**MODERATOR**

**Prof. Harris Pastides**  
Interim President, University of South  
Carolina  
USA

## Discussion Questions

- What should cities and regions do to position themselves as innovation hubs?
- In which industries and technologies should they bet?
- How can cross-sector collaboration be fostered in practice to drive innovation?

Societies are turning to innovation to accelerate growth and solve pressing social issues. In that quest, cities, regions and nations are betting on building and growing innovation hubs that concentrate talent, infrastructure, capital, and business expertise and accelerate ideation, innovation, entrepreneurship, and collaboration among multiple stakeholders.

Innovation hubs can leverage a university's capital assets, provide opportunities to produce ideas, connect researchers with industry, and create mentorships between students, the university, and industry leaders. Innovation hubs play a prominent role in developing sustainable solutions to the unprecedented challenges that societies face today, such as climate change, the talent shortage, global supply chain shortcomings, and the COVID-19 pandemic. Universities are positioned to be a center of innovation and lead the way in setting the example

for what innovation hubs should look like. Universities have much of what is necessary for an innovation hub: talent pool, resources, infrastructure, R&D, reasoning and motivation, and the ability to foster partnerships.

Innovation hubs can serve surrounding communities by developing innovative solutions to local problems. Universities are positioned to understand the community's needs and give back to the community that supports them.

At Okinawa Institute of Science and Technology Graduate University, research specializes in issues specific to the region, such as life longevity and the ecology of coral reefs. They use their unique setting to their advantage by developing innovation and research initiatives relating to topics most relevant to their region and the people in the area. Embracing a region's specialties is key to a lasting innovation hub. It will garner support from the community and stay relevant to the region by continually attracting local talent and giving back.

Qatar University uses a similar approach by focusing its innovation resources on sustainable technologies and green energy since Qatar's economy is reliant on oil and natural gas. Utilizing the community's needs gives Qatar a social perspective and helps catalyze social and economic development for the region.



The University of South Carolina is uniquely positioned to participate in local industry partnerships with big corporations such as Boeing, BMW, Volvo, and Michelin. Programs have been created to curate skills and relationships between students and jobs, such as the Engineering Management program, which was designed specifically with feedback from companies in mind.

Partnerships between universities and local organizations, governments, and businesses are part of a thriving university ecosystem. Collaboration

cannot be understated in importance for universities to be a booming innovation hub. Universities cannot offer it all and need trusting, long-term partnerships to continually produce innovative solutions.

 [Watch the full session](#)

.....  
 "Innovation is not just modern technology development. Innovation comes from combining technology with all the disciplines within a university, including cultural, artistic, humanitarian, and policy activities. Too often we relegate innovation solely to the engineers or scientists."

**Prof. Harris Pastides**  
 Interim President, University of South Carolina



Prof. Hassan Al-Derham, President, Qatar University; Prof. Harris Pastides, Interim President, University of South Carolina; and Prof. Mary Collins, Provost, Okinawa Institute of Science and Technology(OIST).

## PANEL CONVERSATION

# Looking Ahead

### PANELISTS

**Mr. Simos Anastasopoulos**

President, The Council on Competitiveness of Greece

Chairman & CEO, PETSIAVAS S.A. Greece

**Mr. Socrates Lazaridis**

CEO, Athens Exchange Group Greece

**Mr. Christos Megalou**

CEO, Piraeus Bank Greece

**Mr. Symeon Tsomokos**

Founder & President, Delphi Economic Forum

CEO & Founder, Tsomokos SA Greece

### MODERATOR

**The Hon. Deborah L. Wince-Smith**

President, GFCC

President & CEO, Council on Competitiveness USA

### Discussion Questions

- What are the key themes for future competitiveness in Greece and globally?
- How can global partnerships help advance Greek competitiveness?
- What should the GFCC Community expect for the meeting in Greece in 2022?

### Situation

Since 2007, Greece has been grappling with a struggling economy, culminating in 2015 when Greece defaulted on its debt. But the situation has been changing. The government has worked with domestic companies to restore competitiveness and drive sustainable growth. Now, Greece is positioned to revamp its economy with significant sustainability, digitalization, and innovation efforts. There has recently been a concerted effort to digitize economic and government processes to improve citizen experiences, higher productivity and efficiency, and better policy outcomes. Digitalization efforts, along with the Greece 2.0 Plan, which includes 106 investments and 68 reforms utilizing investment resources of €31.16 billion from the private sector via equity capital and loans and €30.5 billion from

European countries, will mobilize a total of €60 billion in investments in the country during the next five years.<sup>7</sup> These measures aim to bring Greece out of the economic slowdown.

### Challenges

Although Greece is taking steps to advance its economy and economic policies, the country still faces the challenge of securing long-term support and investment from both foreign and domestic companies and banks. Greece needs to make a concerted effort to develop international relationships and focus on policies that make the country an attractive asset to foreign actors. However, a focus on policies that attract foreign investment cannot outweigh the emphasis on internal improvements and pushes to innovate Greece and enhance its competitiveness. Internal policy and economic changes also need to focus on attracting, developing, and retaining a talent pool that can drive the innovation economy. These changes should empower local people and local businesses. Policy changes that make innovation more inclusive take time, effort, and money – which is a challenge for a country coming out of an economic recession.

<sup>7</sup> <https://greece20.gov.gr/en/the-complete-plan/>.



The Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness; Mr. Simos Anastasopoulos, President, The Council on Competitiveness of Greece, and Chairman & CEO, PETSIAVAS S.A.; Mr. Symeon Tsomokos, Founder & President, Delphi Economic Forum, and CEO & Founder, Tsomokos SA.; Mr. Christos Megalou, CEO, Piraeus Bank; and Mr. Socrates Lazaridis, CEO, Athens Exchange Group.

## Opportunities

### Create partnerships with varying interests

Partnerships between academia, the public sector, the private sector, and international actors are crucial for Greece transforming its economy and government. This is a big task, but the long-term benefits of solidifying partnerships that drive innovation and economic prosperity are worth the effort. Strong partnerships will also help attract foreign investment and build confidence in Greece.

### Educate all residents

A sizeable economic transformation cannot happen without the support and work of the people in the country and educating the people is one of the best ways to get them on board. Upskilling and reskilling will provide Greeks with tools to stay involved in the evolving innovation economy. The investment of educating residents beyond basic skills and information has clear positive economic impacts, such as increased GDP over time.

### Modernize bureaucracy

Simplifying government processes and making government decisions easier to understand create a more efficient bureaucracy. Digitizing the public sector is part of a strategy to make government action quicker, less complicated, and more systematic. Utilizing the most current technology in the government can help implement changes promptly.

 [Watch the full session](#)

"Through collaboration with the GFCC and other organizations in Greece, we have mobilized the community, as well as the public administration and the government, to promote the idea of competitiveness, sustainability, and innovation in the country."

**Mr. Simos Anastasopoulos**  
President, The Council on Competitiveness of Greece  
Chairman & CEO, PETSIAVAS S.A.

PANEL CONVERSATION

# Future Resilience

**PANELISTS**

**Mr. William Bohnett**

President, Whitecap Investments LLC  
USA

**The Hon. Jerry Hultin**

Distinguished Fellow, GFCC  
USA

**Ms. Aigerim Kushumbayeva**

Senior Associate, Center for Research  
and Consulting  
Kazakhstan

**Dr. Kazuyoshi Shimada**

Director of Washington D.C. Office,  
Japan Science and Technology  
Agency (JST)

**MODERATOR**

**Prof. James Metson**

Deputy Vice Chancellor-Research,  
University of Auckland  
New Zealand

## Discussion Questions

- What models work for cities and countries to share information on past crises?
- How can alliances make supply chains more adaptive and resistant to shocks?
- What types of solutions and platforms can accelerate institutional learning?

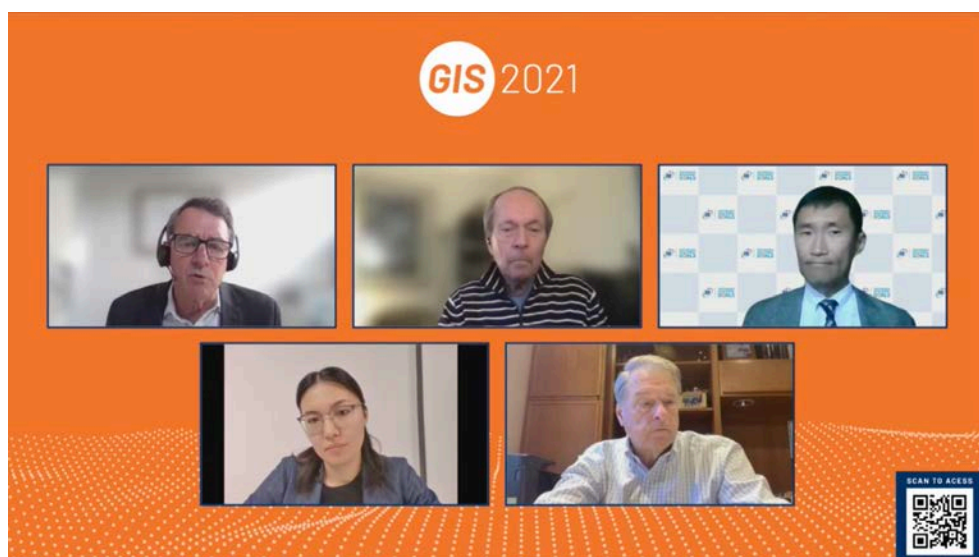
## Situation

Societies are at a crossroads, currently facing unprecedented challenges such as water scarcity, food security, pandemics, extreme weather events, and global poverty that demand new ways to build global, national, and local resiliency to get ahead of the next big crisis. Adaptability is increasingly important as new disasters and challenges can occur on a regular basis and without any warning, as seen with COVID-19. Building resiliency and preparedness into everyday life is needed to better prepare people for crisis. As seen throughout 2020 and 2021, the COVID-19 pandemic highlighted weaknesses across societies and sectors, leaving no one untouched by the pandemic. Health systems, supply chains, and social and familial dynamics were all stressed. As the world still recovers, it has become increasingly apparent

that resilience and preparedness to multiple crises needs to be inherent in ways of life.

## Challenges

Prior to the COVID-19 outbreak in 2020, there was little priority placed on resilience by businesses and governments. But, when existing ways of operating were not working during the pandemic, leaders needed to find new ways to continue to function. One of the main challenges in creating resilience as part of everyday life is that the large amounts of time, energy, and money it takes to effect change are more significant than what most individuals, companies, and governments are willing to do. Building resilience takes a long time and is an arduous process that must be started now to combat the predicted challenges of the next few decades. People resist change, especially when the challenges are in the future and they do not think they are negatively impacted. The ability to anticipate upcoming problems is stunted; governments and people often think in the short term, which keeps them from understanding and preparing for future challenges. Without a proper understanding of what challenges lie ahead and people's current capabilities, economies, infrastructures, and governments, resilient mechanisms will always be a step behind where they need to be.



Prof. James Metson, Deputy Vice Chancellor-Research, University of Auckland; the Hon. Jerry Hultin, Chair & Co-Founder, Global Futures Group LLC; Dr. Kazuyoshi Shimada, Director of Washington D.C. Office, Japan Science and Technology Agency; Ms. Aigerim Kushumbayeva, Senior Associate, Center for Research and Consulting; and Mr. William Bohnett, President, Whitecap Investments LLC.

## Opportunities

### Build a sense of togetherness


Resilience is more than just a physical form of strength. A strong sense of community drives resilience and stability on a local level. Curating relationships between all community members creates trust, understanding, and togetherness that drive resilience during difficult times. Resilient communities show strong leadership, social cohesion, increased communication, higher levels of education, and effective planning.

### Rethink the layout of cities

Well-designed cities provide resilience through access to necessities and overall better quality of life. In a time of crisis, being in a city with functional public transit, easy access to healthcare, food, water, energy, child and elderly care, and work means people can continue to function with as little disruption as possible. An urban transformation that embodies the idea of a "15 Minute City" — the idea that all your necessities are never more than fifteen minutes away — is one way to ensure that the majority of the population will have access to necessary resources and be more productive.

### Provide residents with updated information and skills

Educating and training all demographics of people is crucial to building a resilient society. Keeping people engaged in the economy as the workforce becomes increasingly automated and digitalized benefits both the workforce and the economy while also providing resilience. The more people are educated on current and future events and are given the skills to act accordingly, the more prepared they will be as change comes.

 [Watch the full session](#)

"What's evident when understanding resilience is the challenge of scale. Resilience extends from the individual through societies and into systems, including infrastructure, both physical and digital through economies, and indeed into our wider geopolitical environment."

**Prof. James Metson**  
Deputy Vice Chancellor-Research, University of Auckland

KEYNOTE

# Future Knowledge Networks

## Discussion Questions

- How will global knowledge networks look in the future?
- What are the priorities for collaboration in research to positively impact the world?
- What is the role of North-South collaboration in driving sustainable growth?

Creating a more prosperous, sustainable, and inclusive future depends on disseminating information and knowledge to all. This can be accomplished through knowledge networks, which are collections of individuals and teams across organizational, spatial, and disciplinary boundaries that invent and share a body of knowledge. Universities are centers of intelligence that serve students, local communities, and partners and are uniquely positioned to foster future knowledge networks due to their



**Prof. Robert Zimmer**  
Chancellor and President Emeritus,  
University of Chicago

capability to communicate with multiple actors and forge partnerships. There is an opportunity for universities to play an increasingly important role in the transfer of knowledge in a world connected by technology.

Collaboration and differing viewpoints are critical to purposeful knowledge creation and circulation. Expanding existing partnerships and creating new ones will enhance diversity available at universities, which was increasingly seen as crucial to student development during the pandemic. The University of Chicago has recently partnered with Chicago city colleges to connect to a more diverse



**Ms. Lori Schmidt**  
GFCC, Distinguished Fellow

group of students and staff. This partnership aims to upskill and educate a larger audience to better prepare them for a technology-driven workforce.

Economic development and inclusive innovation require knowledge networks to forgo competitive relationships and strengthen collaboration efforts. Universities compete over faculty, students, investments, and many other things, but the gains of setting competitions aside and partnering with each other are more beneficial. Open communication among universities is more accessible now than ever with video conferencing tools, which means collaboration should be at its

**Prof. Robert Zimmer**  
Chancellor and President Emeritus,  
University of Chicago  
USA

## MODERATOR

**Ms. Lori Schmidt**  
GFCC, Distinguished Fellow  
USA

highest. The goal of knowledge networks is to disseminate information. But, if universities are not communicating with each other, the knowledge networks are ineffectual.

Knowledge networks exist outside the university sphere and are becoming key in disseminating knowledge between companies, governments, and people. Fostering a sense of inclusivity across all demographics and industries is critical for successful global knowledge networks.



**Watch the full session**

.....  
"When we think about the future, we should think about the importance of bringing people together. One of the advantages of being a mathematician is to work in an area in which you speak an essentially universal language. You can go virtually anywhere in the world and understand someone's ideas, and they understand yours."

**Prof. Robert Zimmer**

Chancellor and President Emeritus, University of Chicago

PANEL CONVERSATION

# Future Partnerships

## PANELISTS

**Dr. Bernardo Calzadilla-Sarmiento**  
Managing Director, Directorate of Digitalization, Technology and Agri-Business, and Director, Department of Digitalization, Technology and Innovation, United Nations Industrial Development Organization (UNIDO)  
Austria

**Prof. Isabel Capelo Gil**  
Rector, Universidade Catolica Portuguesa  
Portugal

**Mr. Charles Kiefel AM**  
Co-Chair, Australian Advisory Board on Technology and Health Competitiveness  
Australia

**Prof. Dimitris Lagoudas**  
Senior Associate Vice Chancellor for Engineering, Research and Deputy Director of Texas A&M Engineering Experiment Station (TEES), Texas A & M USA

**Dr. Pedro Wongtschowski**  
Chairman of the Board, Ultra Group  
Brazil

## MODERATOR

**The Hon. Deborah L. Wince-Smith**  
President, GFCC  
President & CEO, Council on Competitiveness  
USA

## Discussion Questions

- What is the secret to creating public-private 'connectors' that catalyze innovation?
- What steps should nations take to foster the circulation of resources across public and private sectors via legislation reform?
- How can collaboration in a global community such as the GFCC impact local/national competitiveness?

## Situation

In a world that is increasingly interconnected and facing multidimensional problems, partnerships are the foundation to solving issues and moving towards a better future together. Society has reached a point where problems are getting more complex and harder to solve which will require a resurgence of communication and connectedness between people and institutions. Partnerships between governments, universities, businesses, international organizations, civil societies, and philanthropic organizations have all played a crucial role during the COVID-19 pandemic by developing vaccines in record time and distributing them in mass. Society has seen a shift in the types of partnerships and how they communicate. The rise of e-meetings has changed the dynamics of partnerships while giving them a new future. The ability to meet and engage with others through an online platform

significantly decreases the barriers to global partnerships. The successes of partnerships has increased the recognition of how valuable they are to society at solving problems efficiently.

## Challenges

Although society has seen an increased connectedness due to video communicating apps such as Zoom, GoToMeeting, Microsoft Teams, Google Meet, and many others, the quality of communication and partnerships is still to be seen. Being in person allows for small, informal conversations and networking that are not possible when using an online platform. These social interactions are pivotal in developing strong, trustworthy, and long relationships among institutions, and they are not occurring because of the pandemic. More effort is needed to foster meaningful partnerships and achieve results. Partnerships are the most successful when the partners understand and respect each other's culture, which can be lost over an online platform.

## Opportunities

### Update regulations to promote innovation and inclusivity

Regulations in many areas are outdated and do not match the current demands of partnerships. The goal of regulations should be to promote innovation and encourage more partnerships, not discourage them. Regulations should take into consideration data privacy, safety





The Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness; Mr. Charles Kiefel AM, Co-Chair, Australian Advisory Board on Technology and Health Competitiveness; Prof. Isabel Capelo Gil, Rector, Universidade Catolica Portuguesa; Prof. Dimitris Lagoudas, Senior Associate Vice Chancellor for Engineering, Research and Deputy Director of Texas A&M Engineering Experiment Station (TEES), Texas A & M; Dr. Bernardo Calzadilla-Sarmiento, Managing Director, Directorate of Digitalization, Technology and Agri-Business, and Director, Department of Digitalization, Technology and Innovation, United Nations Industrial Development Organization (UNIDO); and Dr. Pedro Wongtschowski, Chairman of the Board, Ultra Group.

and security, international collaboration, and existing policy restrictions. Being more agile, using technology foresight to predict the future, and coping with a rapidly developing technology should be understood when modernizing regulations.

**Make university engagement more beneficial for all partners**

Universities can act as connections that bring together research and students with industry. Partnerships with universities are an opportunity to better

prepare students for the future while driving innovative solutions. They are a platform where all partners benefit from what each other offers, which is a pillar of lasting partnerships.

**Make Intellectual Property (IP) more consistent**

Collaboration across borders becomes increasingly difficult due to misunderstanding each other's Intellectual Property (IP) laws. The goal of partnerships should be to drive innovation, which is inhibited by confusing and differing

.....  
 "Partnership is not the end result. A partnership is the process that leads to that. It's about trust, transparency, and coming together. And when there is strong leadership within the partnership, it is easier to accomplish goals."

**Dr. Bernardo Calzadilla-Sarmiento**  
 Managing Director, Directorate of Digitalization, Technology and Agri-Business, and Director, Department of Digitalization, Technology and Innovation, United Nations Industrial Development Organization (UNIDO)

IP laws in every country. Creating an international IP law that is easy to follow and can be used for product and idea development across borders will encourage partnerships to innovate.

 **Watch the full session**

# Convergence Around Development Goals to Support Competitiveness

There is growing awareness of the need for an integrated approach to drive continuous growth and build resilient economies. As communities emerge from the COVID-19 pandemic, multiple players working in government, policymaking, academia, and the private sector — including a variety of stakeholders in the GFCC Community — have analyzed and endorsed the importance of resetting societies on a new path, one that is green, inclusive, and resilient. Innovation in processes, products, services, and business models and the development of frontier technologies will play an essential role in this transition.

Released during the 2021 Global Innovation Summit (GIS), the GFCC Frame the Future Guidelines and Recommendations for Future Competitiveness suggests ten goals (see page 5) to embed sustainability, inclusiveness, resilience, innovation, and partnerships into future competitiveness strategies. These objectives point towards finding opportunities that serve multiple development outcomes, covering several competitiveness dimensions at once. For instance, investing in innovation and clean technology can reduce the impacts of climate change and drive green jobs to workers who are facing a vulnerable employment situation.

After a long period of global disruption in 2020 and 2021, new economic recovery packages and business strategies can be an opportunity to implement the goals and increase societies' resilience to future shocks. Within the GFCC Community, which gathers C-suite leaders working across sectors in more than 30 countries, there is a convergence of ideas over the goals and projects to drive their implementation.

However, we face the challenge of adapting transnational objectives and metrics to different realities. A focus on green energy in Africa cannot neglect the fact the continent still deals with a very low electricity rate. In the Sub-Saharan region, less than 50 percent of the population has access to electricity.<sup>8</sup> There are significant differences among Sub-Saharan nations. But, in multiple locations, most of the population still lives off-grid without reliable power. For instance, in Sierra Leone, only 25 percent of the population has access to electricity. Stating that the whole African continent needs to transition to green energy seems inadequate considering the immediate need for energy supply.

Similarly, there are significant disparities across the globe in digital connectivity. Access to broadband internet emerged as a lifeline during the pandemic due to the unprecedented scale of disruption and the reliance on remote work, remote learning, e-commerce, e-government services, and food delivery. But in the Asia-Pacific region, more than half of the region's population remain "unconnected."<sup>9</sup> Even in better-off nations, only 50 percent of rural households have reliable internet connection.<sup>10</sup>

<sup>8</sup> IEA (2020), SDG7: Data and Projections, IEA, Paris <https://www.iea.org/reports/sdg7-data-and-projections>.

<sup>9</sup> *ibid.*

<sup>10</sup> *ibid.*

Making digital infrastructure accessible and affordable for all citizens of the world needs to become an international priority. In 2016, the United Nations issued a resolution establishing access to the internet as a human right. This need came to the forefront during the global pandemic, when ICT infrastructure became essential to support livelihoods worldwide. A failure to close these staggering digital divides risks increasing socio-economic inequalities across populations.

Finding long-term solutions to address these gaps and drive sustainable, inclusive, and resilient societies depends on cross-sector collaboration, information exchange, and accelerated learning of best practices. The GFCC has been at the forefront of this movement, facilitating high-level conversations and partnerships with members working in different sectors and areas of expertise. We aim to cross-pollinate learning to encourage new ways of doing business and policy strategies that drive more competitive nations and companies and boost inclusive prosperity.

This was clear during the GIS 2021, an online event marked by high-level discussions on emergent issues influencing future competitiveness, such as rapid technological advancement, climate change, the depletion of natural resources, the energy transition, and social disenfranchisement, among other topics.

The GIS 2021 proves the power and the relevance of the GFCC Community in leading a comprehensive competitiveness agenda to advance inclusive prosperity through its trusted network of leaders and organizations. In 2022, the GFCC convenes an in-person meeting in Athens, Greece, from November 14 to 17.

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