



**GFCC**

Global Federation of  
Competitiveness Councils

# Building Competitiveness

2022-2023 Annual Report

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The promise of economic growth in the wake of the pandemic was upended due to Russia's invasion of Ukraine, which led to higher risks of energy and food insecurity worldwide. Gas prices are ten times their average compared to the past decade, and food shortages are growing.

Across the globe, particularly in Europe, nations are looking for ways to reduce their dependence on Russian fossil fuels and shift their economies to clean energy sources that can be scaled up. Advancing the energy transition and guaranteeing energy security has become an urgent task. The importance of building resilience, innovating, and driving growth in times of crisis came into the spotlight, and the GFCC 2022 agenda had those issues at its core.

We launched a new initiative in partnership with our member Japan Science and Technology Agency to deepen understanding and develop recommended actions to tackle crises and build resilience worldwide.

This effort translates into our goal to become a platform for collaboration and co-creation with our members and fellows.

In 2022, we were delighted to resume in-person activities. In March, we organized the **Industry-University Partnership for Impact** forum with our member, the Brazilian National Confederation of Industry (CNI), in São Paulo, Brazil. We participated as a content partner in the Delphi Economic Forum in April in Greece, where we proudly held our flagship **Global Innovation Summit** in November.

In parallel, we continued our online activities. We hosted a series of conversations connecting local and global competitiveness, focused on

"When GFCC members and fellows come together, I learn so much from their insights on new global realities, and we all benefit enormously from this wellspring of new ideas and strategies for thriving in an era of rapid change and economic transformation."

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

strategies and enablers for driving innovation and growth, and we carried on with our exclusive **Monthly Calls** for members and fellows. We also started running **Expert Sessions** to dive into a relevant issue shaping the world and impacting competitiveness.

Place-based innovation was the theme for the year. Our discussions highlighted strategies to leverage local assets and spur economic



The Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness, during the Global Innovation Summit 2022 in Greece.

development, connecting industry, university, and research institutions. After the Summit, we held an exclusive workshop in the city of Ioannina, Greece, to systematize and apply the learnings gathered throughout the year.

Additionally, we have worked to improve GFCC operations. We consulted our members and fellows, asking for suggestions to deliver better services, and we are on the way to implementing their recommendations.

As an example of this effort, in 2022, we released the *Call to Action—Place-Based Innovation: An Imperative for Future Growth* in response to a long-standing request to systematize





Mr. Charles O. Holliday Jr., Chairman, GFCC, during the Global Innovation Summit 2022 in Greece.

"The GFCC is an incredible platform for leaders trying to make sense of today's turbulent world and for organizations that want to strategize about future competitiveness."

**Mr. Charles O. Holliday Jr.**  
Chairman, GFCC

acquired learnings into practical steps and actionable points. We have structured our membership processes and created a *Membership Manual* to serve as a guide to support engagement with newcomers to the organization.

Finally, we have concluded a cycle of activities with the **University and Research Leadership Forum**, releasing two reports that capture recent transformations in university models

and education. Since its inception, the GFCC has recognized the importance of universities as engines of economic growth, and we will work to integrate our university members into the overall GFCC agenda in the future.

**This report invites you to learn more about our work and engage with us.**

## The Outstanding Path We Undertook in 2022

The year 2022 brought renewed hope to our global community. We resumed in-person activities, and were able to meet and network again.

For the first time in three years—enabled by the incredible, transformative innovations to quell the COVID-19 pandemic—we hosted our **Global Innovation Summit** on-ground in Greece, one of the many accomplishments for the members and staff of the Global Federation of Competitiveness Councils (GFCC). The events in Athens and Ioannina—engaging the highest level of leadership across Greece in venues of incredible historic significance—provided distinctive insights and opportunities to engage for all participants.

A theme we explored and experienced in Greece—as well as in our other 2022 GFCC activities—is one fundamental to the GFCC since its founding more than a decade ago: that sharing knowledge and best practices on competitiveness policies and strategies would provide benefits to all and strengthen global peace.

### SIGNED BY



Mr. Charles O.  
Holliday Jr.  
Chairman, GFCC



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

Yet, despite the tremendous progress and strides the GFCC and others have made to confront challenges like the pandemic and climate change, the world still suffers from war—including that in Ukraine, where we support the efforts of our member, Kyiv National Economic University (KNEU), to continue its mission to educate the next generation of the nation's leaders.

Recognizing the power of collaboration, we endeavored even more intently in 2022 to leverage our platform in support of our members and fellows, and to strategize on how to build a more robust, resilient, innovative, inclusive, and prosperous future economy.

Our accomplishments—documented in detail in the pages that follow—were only possible because of the intellectual contributions and commitments made by the GFCC members, its fellows, and many other participants in the broader GFCC community. We, therefore, thank the many dozens of speakers, panelists, moderators, and presenters during our **Monthly Calls** and **Expert Sessions**—as well as white paper authors—who made 2022 a hallmark year for the GFCC.

Also, we commend the GFCC staff whose efforts were instrumental in creating and crafting this tremendous, year-long, learning experience. We are grateful for the leadership and strong support from the GFCC board members.

We are particularly pleased to report the GFCC today has a global reach encompassing 50 members and

56 fellows in 33 countries—on every continent except Antarctica. We welcomed new members this past year: the National Competitiveness Office of Oman, the Federal University of Rio Grande do Sul from Brazil, Glavbolgarstroy Holding AD from Bulgaria, Queen’s University of Belfast, from Northern Ireland, and Harper Adams University, from England.

In issuing this annual report, recounting the very important steps we undertook in 2022, we are even more excited about the year to come.

The work of our members over the past year has set a solid foundation for initiatives in 2023. We will collaborate on challenges and opportunities related to energy and climate, skills development, and growth amid crisis—issues of interest to all GFCC member nations.

We look forward to working with you this year and in the years to come to advance our common agenda to drive long-term innovation, productivity, and global prosperity.



## Optimism in a New Reality

The year 2022 shook our assumptions about the world and injected uncertainty into the economy. The GFCC responded to this new reality by strengthening its engagement with our members.

It is so good to be in a room filled with people again. I was delighted to be around our peers at the beginning of 2022 when we convened GFCC members and fellows in person for the first time in three years in São Paulo, Brazil. I believe many of you experienced the same feeling last year, didn't you?

In addition to resuming in-person activities, we launched new online events and experimented with new ways of working with our members. All of that happened in a very different scenario compared to what we had when the GFCC was launched in 2010. Now we have a much more diverse membership base.

The following are three key 2022 highlights about the competitiveness scenario and the GFCC that I wanted to share with you.

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

### Shocks

It is no secret that the world is in a state of angst. The war in Ukraine caused spikes in energy and food prices. Global supply chains are under stress. The unfolding geopolitical decoupling challenges international security and the scientific enterprise. Still, the pandemic has not ended, and meeting the Paris climate goals looks increasingly unlikely. We need to think about innovation, competitiveness, and growth in a more fragmented scenario in the context of recurrent shocks.

### Engagement

The GFCC is a membership organization, and we primarily work with our members. In 2022, we launched new events for our community, such as the **Expert Sessions**, surveyed members on a variety of topics, continued to scale up our virtual platform for the GFCC Community, and, very importantly, developed a new modality of work in partnership with a member, which includes co-design and co-investment.

### Initiatives

We continued to host members for our monthly calls and online events, launched new content arising from the work of the **University and**

**Research Leadership Forum** and other GFCC activities, and also launched the **Driving Innovation in Times of Crisis**<sup>1</sup> initiative in partnership with and thanks to the seed funding of Japan Science and Technology. As noted above, this new initiative marks a qualitative change in how the GFCC engages with members and signals key topics and priorities in our future agenda.

I hope you enjoy this account of our 2022 initiatives, and I look forward to being in contact with you and working together in 2023. If you are not a member, send us a note, and let's explore how you and your organization can be part of our network.

<sup>1</sup> The initiative was originally called Innovating Out of Crisis.



The Global Innovation Summit 2022 featured speakers from **17 countries** for **five days of dialogues** on emergent trends shaping the future of competitiveness. More than 400 people joined our panels, workshops and fireside chats.



We welcomed **five new members**: the National Competitiveness Office of Oman, the Federal University of Rio Grande do Sul, from Brazil, Glavbolgarstroy Holding AD, from Bulgaria, Queen's University of Belfast, from Northern Ireland, and Harper Adams University, from England.



We hosted **six online conversations** and **three Expert Sessions** in partnership with our members to shed light on some of the most relevant topics in the competitiveness agenda worldwide, including the future of data governance, the use of commercial laser technologies in defense strategies, and plans to rebuild Ukraine in the face of war.



Our global footprint spans **31 countries**, amounting to **50 members** and **56 fellows**.



We released **six new publications**, including competitiveness guidelines and reports with groundbreaking content created by the GFCC.



Our *Competitive Edge* blog continued to be a platform for our community to share knowledge and expose innovative ideas. In 2022, we published 18 pieces featuring or signed by our members on various issues regarding competitiveness, ranging from trends shaping work in the Asian-Pacific region to climate literacy, place-based innovation, and others. [Visit our blog](#) to have access to this relevant and exclusive content.



We also welcomed to our community **two Distinguished Fellows** from Japan. Prof. Hiroshi Amano is the Director for Integrated Research of Future Electronics at Nagoya University and received the Nobel Prize in Physics in 2014. Dr. Michinari Hamaguchi is the General Director of SCARDA, former President and currently Counselor to the President of the Japan Science and Technology Agency.

"The GFCC is an amazing platform that encourages engagement at the international level to discuss issues in today's geopolitical environment. The conversations go beyond theoretical discussion and into solutions development by bringing best practices in competition to bear across the commercial, government, and academic arenas."



**Mr. C. Derek Campbell**  
Executive Chairman, African Metals Group



"The right policy and investment frameworks are key to driving the low carbon energy transition. The GFCCC was early to recognise this and has fostered insightful discussions across member countries of what needs to happen to foster innovation and to ensure energy security while addressing the existential challenge of climate change."

**Dr. Joan Macnaughton, CB, Hon, FEI**, is an influential figure in energy and climate policy internationally and has held a variety of roles, including serving as a GFCC Distinguished Fellow



The GFCC has opportunities for government agencies, private sector entities, corporations, universities, research organizations, and individuals to become members.

We recognize the relevance of innovation and technology for competitiveness and the need for collaboration across sectors to pursue sustained economic growth. Our multi-stakeholder setting was designed to facilitate cross-sector dialogue and engagement.

The GFCC provides exposure and access to a unique network of global leaders, innovation agencies, corporations, and research institutes through its networking activities and knowledge-sharing platform.

GFCC members connect and engage with peers regularly, exchanging ideas and exclusive information, addressing challenges related to innovation and competitiveness, and comparing best practices. The GFCC facilitates engagements and promotes discussions.

There are multiple ways of engaging with the GFCC. Members can join our exclusive **Monthly Calls** hosted every second Tuesday of the month or one of our **Expert Sessions**. They also have access to our exclusive social media and collaboration platform, the GFCC Community.

There are also opportunities to host in-person events in partnership with the GFCC, such as workshops, forums, study missions, and others. Additionally, the GFCC hosts its flagship event, the Global Innovation Summit, every year in a different country, always in partnership with a member.

Dr. Ray O. Johnson, Chief Executive Officer of the Technology Innovation Institute (TII) and ASPIRE, was sworn in as a member of the GFCC Board of Trustees during the 2022 Global Innovation Summit in Greece.

Dr. Johnson holds decades of experience in global technology leadership, making strategic investments in disruptive technologies, and developing business strategies that resulted in several new billion-dollar lines of business. He has collaborated with leaders in the highest echelons of government, industry, and academia. He is frequently sought after as a speaker at global forums on business, strategy, innovation, and education.

Board members provide strategic guidance and amplify the GFCC's voice internationally through the different organizations in which they participate. The Board is instrumental in providing global visibility and helping to expand the GFCC Community.

The board of trustees comprises GFCC founders, sustaining members invited by the board, and two



Dr. Ray O. Johnson, Chief Executive Officer of the Technology Innovation Institute (TII) and ASPIRE, at the 2022 GIS in Greece.

representatives from different membership classes, one from a corporation and one from a university, as established in the GFCC bylaws.

Currently, seven members compose the board, along with three leaders from the GFCC team.

# Global Leadership is Crucial in Realizing Sustainable Development

We live in uncertain and unprecedented times. Cooperation and solidarity among nations are now determining factors in addressing challenges that affect us all. Momentous issues such as climate change, the COVID-19 pandemic, and mass migration have rendered the scenario even starker. Urban migration has put immense pressure on existing social and physical infrastructures in major cities due to overcrowding. With the over-exploitation of natural resources, our cities now experience the acute problems of groundwater depletion, air pollution, sewage disposal, and solid waste management. If these issues continue unchecked, we should anticipate new, more severe environmental risks and vulnerabilities.

Clearly, in the face of the environmental and social changes already underway, it is now imperative to shape new global leadership models and develop better methods and tools for

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## SIGNED BY



**Dr. Ray O. Johnson**  
CEO, Technology  
Innovation Institute

implementing organizational change with sustainable development as a core objective.

Sustainable development is complex in nature and challenging in its implications for all stakeholders in society. The world's leaders must be willing to make innovative and proactive decisions on moving society forward in a manner that places sustainability at the core of all decision-making ventures.

In this context, we can leverage technology as a powerful tool in promoting sustainable development on a global scale. As the power and pervasiveness

of technology continue to grow, there is an urgent need to ensure that we use it to serve positive societal and economic objectives. Technology is the great leveler of our time, and it has the potential to drive a more sustainable post-pandemic global future if it is deployed thoughtfully and strategically. Strong leadership is a prerequisite for achieving these desirable outcomes.

The United Arab Emirates (UAE) has demonstrated its relentless leadership in deploying transformative technologies for the greater good and in pushing the sustainability agenda forward. Within the framework of the UAE Vision 2021 and the UAE Green Agenda 2015-2030, the country played a starring role in ratifying the Paris Agreement, and in swiftly aligning its national priorities with the UN Sustainable Development Goals (SDG).

Sustainable development is a national priority in the UAE. The country has extended its unilateral support to international efforts through its presence, participation, and internal policies, earning its rightful place among regional leaders in driving sustainability over the past decade.

Well-aligned with this priority, the UAE Net Zero by 2050 strategic initiative is a national drive to achieve net-zero emissions by that year, making the country the first in the Middle East and North Africa (MENA) region to do so. In 2020, amid a raging pandemic, the then UAE President, the late Sheikh Khalifa bin Zayed Al Nahyan, established Abu Dhabi's Advanced Technology Research Council (ATRC) and its applied research arm—the Technology Innovation Institute (TII), a leading global scientific research institute. The intention was clear—to transform the UAE into a preferred global hub for tech talent and advance its vision of enabling an innovation economy focused on achieving enduring and sustainable solutions for society.

Sustainability is an idea that is inextricably linked to knowledge, cooperation, and communication. Only a visionary government with a strong will and conviction in its thoughts and actions can eventually get there. In the UAE, this is an idea whose time has come.

## Connecting Global Partners to New Opportunities in the African Continent

Africa is home to the world's largest free-trade area, the African Continental Free Trade Area (AfCFTA). The AfCFTA is a single continental market, with 1.3 billion people and a combined GDP of approximately US\$3.4 trillion.

The advent of the AfCFTA calls for the African Union (AU) to broaden its scope for enhancement of competitiveness, through partnerships and coalitions, with international competitiveness bodies. The Global Federation of Competitiveness Councils (GFCC), given its rich repertoire in competitiveness, provides an ideal platform for engagement with the African continent to tap from its rich resources for mutual benefit. Such partnerships can be modelled along the lines of the already existing Middle East and North Africa–Organisation for Economic Cooperation and Development (MENA–OECD) Competitiveness Programme, which shares knowledge, expertise and good practices.

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### SIGNED BY



**Mr. Phillip Phiri**  
Executive Director,  
National Competitiveness  
Commission  
of Zimbabwe

Meetings of the AfCFTA are attended by development partners as observers and this can be an ideal starting point for building the AU-GFCC Competitiveness Programme. Trade and competitiveness are intimately connected; hence the need for GFCC to reach out to the AfCFTA Secretariat. Once such rapport is built with the AU, workshops, seminars, and conferences, starting with already existing Africa Competitiveness Councils, from which Africa Competitiveness Report and Principles can be generated.



Africa is richly endowed with abundant resources, and a myriad of opportunities abound for mutual benefit. According to the United Nations, youths in Africa constitute 70 percent of the total population, and there are opportunities for demographic dividends in the form of innovation. Youths, the world over, are at the centre of entrepreneurship and innovations, and with innovation hubs still at its infancy stage in the continent, the AU-GFCC Competitiveness Programme can provide a platform for nurturing them into fully fledged and functional entities, tapping from international best practices.

Many developing countries suffer from the 'resource curse' and has become trapped in low value-added segments of the Global Value Chains (GVCs). United Nations Conference on Trade and Development (UNCTAD) and OECD estimates that GVCs account for almost 80 percent and 70 percent of global trade, respectively. The

GFCC network comprises of executives from renowned MNCs, and the AU-GFCC Competitiveness Programme will provide opportunities for the region to access new markets and diversify exports.

Exchange programmes between institutions of higher learning can also be used to facilitate exchange of ideas. The GFCC may facilitate such programmes between universities in Africa and universities from developed countries. This helps bridge the information gaps existent across the economic divide. The twinning programmes will go a long way in strengthening upcoming African innovations.

The National Competitiveness Commission is open to facilitate any of the suggested initiatives in Zimbabwe as a pilot project for Africa partners engagement.

## Annual Meeting

We held our **Annual Meeting**, gathering GFCC members and fellows in-person for the first time in three years. The meeting happened before the beginning of the Global Innovation Summit in Athens, Greece.

This exclusive gathering is a critical moment to review competitiveness priorities, identify business and policy trends, map relevant investments and projects around the globe, and discuss

future opportunities in the network.

Our community had a chance to learn more about the activities carried out by our new members in their home countries and go over key opportunities in the agendas of all countries represented in the network. Through an exploratory exercise looking into competitiveness priorities, we could map the connections between GFCC projects and our members' initiatives.



GFCC members and fellows gathered for the 2022 Annual Meeting in Athens, Greece.

We also had a chance to review and discuss **Driving Innovation in Times of Crisis**, an initiative that started in 2022 in partnership with Japan Science and Technology Agency. Looking at the world scenario, our community indicated four topics to focus our work in 2023, which are:

- The energy, climate and resources crisis and the transition to renewable sources.
- Shifts in the economy and job markets affecting society due to technological change.
- The situation of countries that need to reinvent their institutions to benefit from the global economy.
- The case of least developed nations dealing with multiple crises simultaneously.

We will continue to expand and engage with our community in 2023, through our **Monthly Calls** and **Expert Sessions** with exclusive content for our members and fellows. We will also host in-person meetings and workshops in partnership with members around the globe. We will accelerate the implementation of the **Driving Innovation in Times of Crisis**, including the launch of a new research effort and a focus on the topics mapped during our **Annual Meeting**.

## Building Competitiveness: From Local to Global

We hosted a series of online conversations, **Building Competitiveness: From Local to Global**, to enlighten the path to the 2022 **Global Innovation Summit (GIS)** and gather insights from global leaders on how to build competitiveness in today's challenging world. Implemented in partnership with our members, the Council on Competitiveness of Greece and the Delphi Economic Forum, these dialogues provided a platform for new ideas and connections that were further advanced during the Summit.

Throughout four highly curated sessions, international leaders across industries exchanged ideas, lessons,

experiences, and insights on the importance of connecting individuals to growth opportunities, linking regional and national competitiveness strategies, and sharing different realities to build and advance innovation efforts.

The four conversations focused on the global competitiveness landscape, place-based innovation, competitiveness priorities, and competitiveness enablers. All these topics were further advanced in November during the GIS. [Visit the website](#) to learn more about the series.



Mr. Simos Anastasopoulos, President, Compete GR; Mr. Symeon G. Tsomokos, Founder & President, Delphi Economic Forum; Mr. Charles O. Holliday Jr., Chairman, GFCC; The Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness; Dr. Roberto Alvarez, Executive Director, GFCC; and Ms. Athina Chatzpetrou, Chairwoman and CEO, Hellenic Development Bank, Greece.

This year we introduced **Expert Sessions** to dive into relevant issues shaping the world and impacting competitiveness. Beginning with three sessions in 2022, these events will continue in 2023 and be part of the exclusive offerings for members and fellows, presenting our community with an opportunity to interact with experts, ask questions and send comments.

### JULY 7

**Rebuilding Ukraine**, with Ms. Olena Tsyrukun, Director, KNEU Kyiv National Economic University, provided an overview of the challenges the country has faced since the start of the war, ranging from food security, energy, and infrastructure to the development of a humanitarian crisis.





**AUGUST 30**

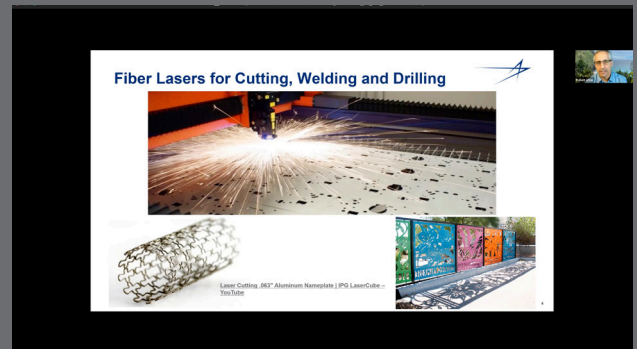
**New Thinking About Data: The Future of Data Governance and the Need for Digital Leadership**, with Dr. Mike Nelson, GFCC Senior Fellow, about the factors shaping data policy and their implications for innovation, research, and development.



Dr. Mike Nelson, GFCC Senior Fellow, presented innovative perspectives on the future of data governance and the need for digital leadership.

**NOVEMBER 29**

**Laser Technology: How Commercial Technologies Can Reshape the Future of Defense**, with Dr. Robert Afzal, Senior Fellow in Laser and Sensor Systems at Lockheed Martin, provided an overview of the commercial uses of laser technologies during the past 60 years. He highlighted developments in laser technologies that transformed manufacturing industries and people's lives and commented on the next revolution underway in defense capabilities. This Expert Session was sponsored by our member Lockheed Martin.



Dr. Robert Afzal, Senior Fellow in Laser and Sensor Systems, Lockheed Martin, provided an overview of the commercial uses of laser technologies and future provisions.

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## Global Innovation Summit 2022

More than 400 global leaders from the four corners of the world participated in the **Global Innovation Summit (GIS)** hosted in partnership with our members, the Council on Competitiveness of Greece and the Delphi Economic Forum, in Athens and Ioannina, Greece.

Leadership representatives from Brazil, Canada, Greece, Japan, Kazakhstan, Malaysia, New Zealand, Oman, Portugal, Qatar, Saudi Arabia, Sierra Leone, United Arab Emirates, United Kingdom, United States, and Zimbabwe spoke at the event.

The Summit's theme was **Building Competitiveness: From Local to Global**, with discussions highlighting the connections between place-based innovation and global competitiveness.

A high-profile group of Greek authorities participated in the activities, including Mr. Lucas Papademos, former Greek Prime Minister and GFCC Distinguished Fellow; Mr. George Handjinicolaou, Chairman of the BoD, Piraeus Bank, and GFCC board member; and Mr. Christos Megalou, CEO,



GFCC members and fellows gather in front of the historical Academic of Athens, in Greece, during the Global Innovation Summit.



The Hon. Niki Kerameus, Minister of Education and Religious Affairs of Greece, spoke at the GIS 2022 in Athens.

Piraeus Bank and GFCC Distinguished Fellow. Various Greek ministers serving the Hellenic Republic's current administration were featured as speakers. Among them were Ms. Niki Kerameus, Minister of Education & Religious Affairs; Mr. Kostas Skrekas, Minister of Environment and Energy; Mr. Christos Staikouras, Minister of Finance; and Mr. Adonis Georgiadis, Minister of Development and Investment.

The GFCC presented the **Global Competitiveness Awards** to a distinguished group of leaders who have decisively contributed to advancing innovation and competitiveness



Mr. Symeon G. Tsomokos, Founder & President, Delphi Economic Forum; Mr. Christos Megalou, CEO, Piraeus Bank, and GFCC Distinguished Fellow; the Honorable Lucas Papademos, Prime Minister of Greece (2011-2012), and GFCC Distinguished Fellow; The Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness; Mr. Kostas Bakoyannis, Mayor of Athens; and Mr. Simos Anastasopoulos, President, Compete GR.

agendas. Mr. Christos Megalou, Chief Executive Officer at Piraeus Bank, was recognized with the Pathbreaking Industrial Leadership Award. Dr. Michinari Hamaguchi, General Director at SCARDA and Counselor to the President Japan Science and Technology Agency, received the Transformative National Leadership Award for his role in advancing research in Japan. Mr. Symeon Tsomokos (Founder & President, Delphi Economic Forum) and Mr. Simos



Anastasopoulos (President, Council on Competitiveness of Greece; Chairman & CEO, Petsiavas S.A.) were both acknowledged with special recognitions for their partnership with the GFCC and impact on national competitiveness.

Additionally, the GFCC held an exclusive workshop focused on place-based innovation in the city of Ioannina, addressing key challenges and opportunities in competitiveness strategy and critical initiatives to connect industry, university, government, and civil society.



Mr. Charles O. Holliday Jr., Chairman , GFCC; and The Honorable Konstantinos Skrekas, Minister of Environment & Energy of Greece

## Monthly Calls

We continued to host exclusive **Monthly Calls** to GFCC members and fellows. This recurring event serves as a platform for our global community to review global developments, share updates, and access exclusive content in a trustworthy environment, bringing the knowledge and expertise in our network to the forefront.

The **Monthly Calls** happens every second Tuesday of the month in a virtual format offered in two different time slots to allow participants across time zones to join the call at a convenient time.

Every month, one of our members or fellows presents on a relevant issue shaping the world. In 2022, our exclusive calls included presentations and discussions on a variety of topics, such as:

- Coupling energy security and energy transition
- Translating advanced research to the marketplace
- Building a world class applied research center
- Competitiveness in Africa
- Innovation in the Brazilian health industry
- Agricultural systems and decarbonization efforts in Northern Ireland
- The Driving Innovation in Times of Crisis initiative
- Sustainability and impact assessment in higher education



## It is Always the Right Time for Sustained Enterprise Risk Governance

It is said that the second-best time to conduct risk management is now. I will slightly modify the rest of the quip to suggest the best time to conduct risk management is always. In that spirit, Lockheed Martin has had a longstanding engagement with the Global Federation of Competitiveness Councils (GFCC) and the Council on Competitiveness since 2015. As the GFCC has grown, we have found areas of common interest across technology, sustainability, and enterprise risk management, fostering dialogues with members from industry, academia, and non-governmental organizations worldwide. The following are some examples of collaborations in which we either garnered or offered insight.

- Lockheed Martin recently increased the integration of sustainability governance and enterprise risk management. For instance, our corporate risk liaison committee is now

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**Mr. Christopher Geiger**

Vice President Internal Audit and Enterprise Risk Lockheed Martin Corporation



responsible for reviewing periodic sustainability core issues assessments that define sustainability goals. Current sustainability goals fall into four priority areas: advancing resource stewardship, elevating digital responsibility, fostering workplace resilience, and modeling business integrity. These priorities are best managed in conjunction with enterprise risks.

- We stood up Lockheed Martin Evolve to create partnerships with mid-size defense, commercial, and space firms and doubled Lockheed Martin Ventures fund from \$200 million to \$400 million. An example of this focus on innovative partnership is our lunar mobility team with General Motors to deliver optionally self-driving rovers.
  - In November 2022, Dr. Robert Afzal, Lockheed Martin Laser and Sensor Systems Senior Fellow, presented a GFCC webinar on “Laser Technology: an Example of How Commercial Technologies Can Reshape the Future of Defense.” The rich discussion held lessons on the interplay between investments in commercial and defense technologies.
  - Our Enterprise Risk Management team participated at the 2022 Global Innovation Summit as part of a dynamic emerging risk program. In-depth competitiveness discussions among the wide array of diverse participants were a novel information source for risk identification. Risk identification, or sensing, remains a key component of risk governance because no amount of advanced technology can analyze or mitigate a risk that is not identified.
- Competitiveness is often associated with innovation, but the GFCC has also championed the important role of other factors such as resilience. For competitiveness in 2022, it was again (and always) the right time for sustained enterprise risk governance.

"There is no one challenge that defines our times. We need an economy that serves everyone and is sustainable. We need security and resilience too. Yet boosting productivity—lowering costs—still sits at the core. Without that, almost everything else is a pipe dream. The GFCC brings together leaders from around the world to share ideas and challenge one another. It is always a thrill to engage in genuine dialogue with the GFCC network because of the quality of the people and the importance of the topics."



**Mr. Dylan Jones**

President, Pacific Economic Development Canada (PacifiCan)



"The GFCC 2022 Global Innovation Summit was spectacular. The breadth of the themes covered in the discussions and panel events was tremendous, and the speakers brought insights from around the globe which were truly stimulating."

**Maria K. Norton**

International Advisor, Research and Innovation Services,  
University of Southampton

## Looking Ahead: The Challenges and Opportunities that Lie in Store for Greece

Greece's economic and growth journey in the last decade has been marked by extraordinary volatility but also resilience. From a country on the literal verge of a catastrophic default to today's strong growth prospects, Greece has gone a long way on a virtuous path and can look towards the future with optimism. Nevertheless, there are significant structural deficiencies in the Greek economy and the political system that need to be addressed if the country is to fulfill its potential.

Following a sustained effort from consecutive governments, Greece has just recently managed to exit the European Commission's enhanced surveillance framework and pay off the remaining tranches of its IMF debt ahead of schedule. As the country regains its financial independence, it is presented with the opportunity to plan once more its economic future. While Greece has seen a robust growth rebound after the pandemic and has managed to stem the

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repercussions of the energy crisis, especially on the more vulnerable members of society, the competitiveness of the Greek economy remains relatively stable.

In recent years, the country has seen a series of reforms in the public sector and the labor market, coupled with vigorous efforts at digitalization. This is a path that needs to be maintained and strengthened in the future, as

the country prepares to enter the 4th industrial revolution. Due to its large size, the public sector plays an inherently important role in the well-functioning of the country and continuing efforts to modernize it are crucial.

Greece must also seek to increase foreign investment in order to stimulate growth and employment opportunities. To do this, it must make use of its strategic geographic location between Europe and Africa and leverage the country's role as a core EU country and a reliable cog in the international system of government.

Furthermore, Greece needs to invest in new technologies such as renewable energy sources or digital infrastructure to improve its competitiveness on the global market. Of particular importance here is the need for the country to make the most of the EU Resilience and Recovery Facility, whose almost 40 billion in grants and loans are primarily targeted towards the "twin" transitions,

green and digital. It should also continue to seek more FDI investment through incentives such as tax breaks, a more reliable and efficient justice system or grants for research and development projects.

Innovation must be encouraged amongst domestic entrepreneurs to create new products or services that can be exported around the world. Finally, Greece must focus on improving both the education standards and digital skills so that its citizens are equipped with the skills they need to succeed in a modern economy.

With strong government support, increased foreign investment, innovative business models and improved fiscal management, Greece could create new opportunities for economic growth and job creation. If properly implemented these measures could also help alleviate some of the social tensions that have plagued Greece since the outbreak of its debt crisis.

# Global Competitiveness Principles

The GFCC *Global Competitiveness Principles* provide a framework for countries, cities, and businesses striving to be competitive and become more prosperous. The 2022 *Principles* emphasize the importance of fostering key competitiveness drivers such as investments in R&D, education, and training for all citizens; stewardship of natural resources and intellectual property rights; cultivating an enabling business environment and financing critical infrastructure. Additionally, the *Principles* focus on place-based innovation, which has been on the GFCC agenda throughout the year.





## Call to Action—Place-Based Innovation

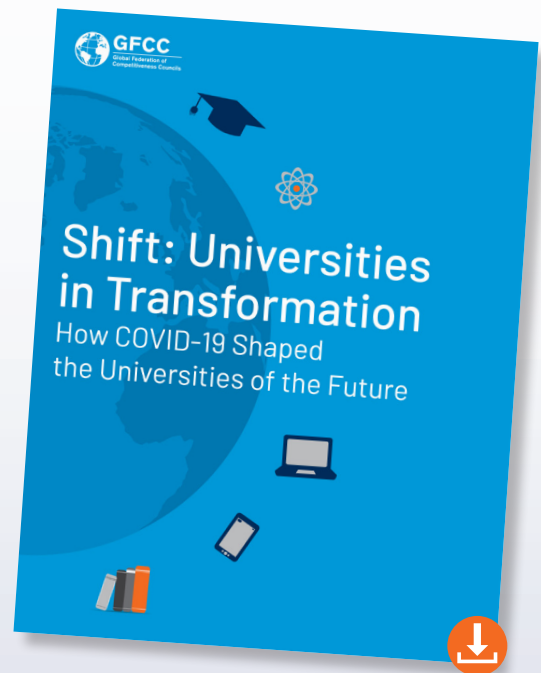
We launched a new publication this year, the *Call to Action—Place-Based Innovation: An Imperative for Future Growth*, answering a long-standing request from our community to provide practical recommendations for applying the *Global Competitiveness Principles*. The publication lists ten practical steps to advance place-based innovation worldwide, recognizing that there is no one-size-fits-all approach and that the design of strategies must reflect local realities. We are proud to say that the *Call to Action* builds on the expertise of our network, spanning more than 30 nations, and is the result of a collective effort shared by our members and fellows.



## Shift: Universities in Transformation

We launched a new report as part of the University and Research Leadership Forum. *Shift: Universities in Transformation, How COVID-19 Shaped the Universities of the Future* brings together lessons learned by global universities during the Covid-19 pandemic.

This report resulted from 31 exclusive interviews with university leaders across eight countries conducted between 2020 and 2021, laying out the strategies used by universities to react to the pandemic in real time. It captures the innovative solutions put in place, exploring long-term implications on university models and identifying the game-changers shaping the future of higher education.



## Industry-University Partnerships for Impact

We co-hosted a workshop with our member, the Brazilian National Confederation of Industries (CNI), to discuss critical trends and innovative collaboration models between industry and universities.

The *Industry-University Partnerships for Impact Forum*, an initiative by the **University and Research Leadership**

**Forum (URLF)**, happened in March 2022 in São Paulo and gathered more than 30 C-suite leaders from ten countries as speakers.

The Forum allowed leaders in the GFCC network to exchange best practices and experiences with their counterparts in Brazil, forging new connections and partnerships.



Mr. Daniel Leibfried, Director for Innovation, John Deere Latin America; Dr. Marianne Walck, Deputy Laboratory Director for Science and Technology and Chief Research Officer, Idaho National Laboratory; Mr. Alex Fedozzi Vallone, Institutional Relations Coordinator, Institute for Technological Research (ITP); Dr. Camila Gramkow, Economic Affairs Officer Economic Commission for Latin America (ECLA); Prof. Alejandro O. Silva Vela, Director of the Science and Technology Park, San Agustín de Arequipa National University; Mr. Phillip Phiri, Executive Director, National Competitiveness Commission of Zimbabwe; and Dr. Kazuyoshi Shimada, Director, Washington, D.C., Office, Japan Science and Technology Agency (JST), participating in a panel about partnerships to seize the sustainability and resilience opportunity.

Since its inception, the GFCC has advocated for strengthened ties between universities and industry. The URLF creation in 2016 signaled this commitment, establishing a venue for GFCC university, government, civil society, and corporate members to identify and discuss ideas to advance the university and research enterprises.

The forum **Industry-University Partnerships for Impact** happened the day after the 9th Brazilian Industry Innovation Summit led by CNI, which gathered decision-makers from corporations, government representatives, academia, and science and

technology institutions to discuss the role of innovation as the primary strategy for growth and competitiveness. The GFCC and the Council on Competitiveness, a member and founder of the GFCC, convened two delegations of leaders to attend and speak at the event in Brazil.

In November 2022, we released a report covering the discussions held in the Forum, with a detailed analysis of the trends and models pinpointed by university and corporate leaders. The report is available for download.





## Delphi Economic Forum

In April 2022, the GFCC partook in person at the Delphi Economic Forum, a global event that gathers leaders from diverse expertise. Five thematic pillars guided the discussions: world security, the climate emergency, the future of the European Union, technological change and economic transformation, and the Greek socio-economic recovery.

The GFCC participated as a content partner in two panels during the Forum and organized a delegation

of leaders from the Americas, Europe, MENA, and Southeast Asia to join the discussions.

The conversation *From Global to Local: Leveraging National Assets to Build Future Global Competitiveness* featured Mr. Simos Anastasopoulos, President of the Council on Competitiveness of Greece and the Chairman & CEO of PETSIAVAS S.A.; Mr. Fotis Kournousis, Member of the Board of Directors of the Hellenic Development Bank and Deputy Head of the



Mr. Fotis Kournousis, Member, Board of Directors of the Hellenic Development Bank, and Deputy Head, Council of EquiFund; Dr. Mohd Yusoff Sulaiman, CEO & President, Malaysian Industry-Government Group for High Technology (MIGHT); Mr. Athanasios Savvakis, President, Federation of Industries of Greece; Mr. Olin Wethington, Chairman, Wethington International LLC; Mr. Simos Anastasopoulos, President, Compete GR, and Chairman & CEO, PETSIAVAS S.A.; and The Hon. Deborah L. Wince-Smith, President, GFCC, and President & CEO, Council on Competitiveness.

Council of EquiFund; Mr. Athanasios Savvakis, President of the Federation of Industries of Greece; Dr. Mohd Yusoff Sulaiman, CEO & President of Malaysian Industry-Government Group for High Technology (MIGHT); Mr. Olin Wethington, Chairman of Wethington International LLC; and the Hon. Deborah Wince-Smith, President of the GFCC and President & CEO of the Council on Competitiveness. The discussions highlighted strategies to leverage national assets and build global competitiveness.

A second session called *From Global to Local: Lessons from the GFCC Frame the Future Series and Implications to National Competitiveness*, included Dr. Ghadah Al-Dabbagh, Head of the Omnipreneurship Lab of the Al-Dabbagh Group; Mr. Adam Broecker, Vice President of Enterprise Strategy L.M. Space at Lockheed Martin Corporation; Mr. Chad Evans, Executive Vice President of the Council on Competitiveness; Dr. Miguel Athayde Marques, Vice-Rector of the Catholic University of Portugal; Dr. Mohd Yusoff Sulaiman; and Dr. Roberto Alvarez, Executive Director of the GFCC. Participants reviewed



Dr. Ghadah Al-Dabbagh, Head of the Omnipreneurship Lab, Al-Dabbagh Group; and Dr. Roberto Alvarez, Executive Director, GFCC.

key learnings of the 2021 **Frame the Future** series, reflected on the GFCC 2021 *Global Competitiveness Principles*, and discussed priorities for national competitiveness agendas in 2022 and beyond.

During GFCC panels, leaders from different regions of the globe shared insights about the energy crisis, the importance of creating mechanisms for cross-sector collaboration to advance competitiveness worldwide, the most recent global security threats and implications for competitiveness agendas, the role of leadership for driving transformation in business and government, and the need to update the toolkits through which countries invest in innovation.



## Driving Innovation in Times of Crisis

We launched a new initiative in partnership with our member Japan Science and Technology Agency (JST) to deepen understanding and develop recommended actions to tackle crises and build resilience worldwide.

**Driving Innovation in Times of Crisis—Keystones to Competitiveness and Prosperity in a Turbulent World** will leverage knowledge and resources in the GFCC network to help economies and societies navigate future crises, limiting losses and enhancing innovation and growth.

**Driving Innovation in Times of Crisis** aims to collect multidimensional perspectives on crisis and innovation, gather conceptual definitions, and benchmark policy and business cases.

In the past two centuries, crises have become more frequent. Growing interconnectedness in the global economy, accelerated industrialization, and evolving climate dynamics are among the factors pushing crisis development and escalation. The frequency and severity of pandemics



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and epidemics, and other disruptions, such as extreme weather events, are increasing. There are also new threats related to the advancement of digitalization across sectors and the rise of cyber-attacks.

The COVID-19 pandemic highlighted the importance of identifying crises and developing capabilities to anticipate future shocks to mitigate their potential adverse effects. But it also demonstrated the incredible opportunity crossroad moments present to spur innovation.

Throughout 2022, we hosted two webinars. On September 29, we held the session *Learning to Navigate Crises* with two guest speakers, Dr. Haruo Hayashi from Japan, President of the National Research Institute for Earth Science and Disaster Resilience (NIED), and Ms. Geraldine Wessing, Chief Political Analyst and Scenario Planner at Shell based in the United Arab Emirates.

On October 21, we held the session *Learning From Past Crises to Build Future Resilience* with three guest speakers, Dr. Yuchi Ono from Japan, Professor at the International

Research Institute of Disaster Science (IRIDeS), at Tohoku University, Mr. Olenkiy Ustenko from Ukraine, Ukrainian politician and economist, People's Deputy of Ukraine of the 9th Convocation, and Mr. Charles O. Holliday Jr., GFCC Chairman.

Our hosts, GFCC Executive Director Dr. Roberto Alvarez, GFCC President the Hon. Deborah L. Wince-Smith and Dr. Kazuyoshi Shimada, Director of the Washington D.C. Office, Japan Science and Technology Agency (JST), moderated the discussions.

We also engaged our university members to select two researchers to develop a crisis definition, review relevant examples of crises, and identify the main response mechanisms. We received more than ten applications from seven countries. In 2023, we will host workshops and publish exclusive reports to help businesses, governments, and organizations take advantage of a crisis to become more competitive.

## Eco-innovation: The Agenda of the Brazilian Industry

The global economic agenda has been embracing themes related to sustainability in response to risks that climate changes impose on human life. As the United Nations (UN)<sup>1</sup> warns, global warming threatens health and damages agriculture, putting into check the existence of coastal cities, with occurrences of extreme weather events and increasing poverty world-wide. To address these issues, the last UN Conference on Climate Change, held in 2022, demanded commitments from the authorities of different countries. In the case of Brazil, there is an opportunity to rescue the strategic role that a more active government in climate leadership can play in combating global warming and creating a more favorable environment for a sustainable industry.

In fact, there is a greater tendency to adopt national and regional plans to encourage economic recovery

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based on sustainable guidelines, with a strong component of technological development and low-carbon innovation. Companies, governments, and stakeholders of innovation ecosystems have strengthened their mobilization towards the broader ESG (Environmental, Sustainability and Governance) agenda, which becomes a fundamental part of strategic plans and public policies. In this process, investments focused on eco-innovation gain prominence both as a source of sustainable solutions and as a competitive strategy, since innovation

<sup>1</sup> UN. Causas e Efeitos das Mudanças Climáticas. Disponível em: <https://www.un.org/pt/climatechange/science/causes-effects-climate-change>.

is critical to make the transition to more sustainable economies feasible, faster, and cheaper.

According to the Organization for Economic Cooperation and Development (OECD), eco-innovation can be defined as innovation that results in less environmental impact, whether this effect is intentional or not. Terms such as green innovation and environmental innovation are also used interchangeably. As pointed out by Economic Commission for Latin America and the Caribbean (ECLAC),<sup>2</sup> the sustainability agenda is progressively more integrated and incorporated into industrial practices and processes, a movement also pushed by capital markets.

The growing importance of promoting eco-innovations as a driving force towards a more sustainable economy will be the focus of the next International Industry Innovation Summit (September 27th and 28th) organized by the National Confederation of Industry in Brazil (CNI) and the Brazilian Micro and Small Business Support Service (Sebrae), with the support

of Entrepreneurship Mobilization for Innovation (MEI), and of which the Global Federation of Competitiveness Councils (GFCC) has been an important institutional partner. The next Summit is a great opportunity for the engagement of GFCC's global network. Considering that innovation and sustainability are key factors in socioeconomic development, and given the positive signals from the new Brazilian federal government regarding the crucial importance of socio-environmental management and assets, such as the process of decarbonizing the economy, it is not only necessary but also opportune to discuss the country's comparative advantages, how companies are preparing for this new technological race and what measures are being adopted internationally in favor of a more sustainable economy that can inspire national policies.

<sup>2</sup> Study carried out by ECLAC in partnership and commissioned by CNI/MEI.

## How We Came to Focus on the Importance of Crisis in the GFCC

Japan Science and Technology Agency (JST), Japan's public funding agency in the fields of science and technology, has been a member of the GFCC for the past six years. In 2021, the 10th remembrance of the Great East Japan Earthquake, we participated in the **Frame the Future** series. Our goal was to use the series as a platform to help reflect on Japan's recovery process, share lessons learned, and discuss future steps to enhance the resilience of our society. The discussions, including the preparations, were extremely productive. We unpacked and understood the importance of learning from the past, developing preparedness measures, and sharing data, experiences, and memories. We also understood the importance of strategic investments in multilateral frameworks, infrastructure, human capacity building, and the creation of partnerships, which will help to develop a competitive edge.

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**Dr. Kazuyoshi Shimada**  
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### A Renewed Focus on Crisis

After the **Frame the Future** series, we hosted specific discussions with other members about crisis and resilience, and we noted by then that our conceptions of crisis and disaster were indistinguishable. I had the opportunity to discuss crises with the Queen Mary University of London (QMUL) faculty members. During the conversation, Professor Adrian Armstrong suggested, "a disaster is an event, while a crisis is not because it refers to the point or period of change when a society shifts from one phase to the



next.” This changed my thinking that a disaster is just the tip of the iceberg and that there might be hidden implications attached to disasters. Recognizing various phases of a crisis will allow for better preparation to overcome disasters and build a better resilient society.

### **The GFCC Is the Best Place to Discuss Crisis**

I have yet to see a study that explores the relationships between societal changes within entirely different dimensions of today's world. The challenge and opportunity for JST and the GFCC is to create a view of the world's current crises. The GFCC, a global multi-stakeholder organization, is the best partner to create this view together. Thus, in 2022, we began our preliminary deliberations at our monthly calls and webinars.

### **First, We Learn From the Past**

We are beginning 2023 with a literature review gathering examples of crises and recurring definitions. For

the implementation, we selected two research fellows studying or working at the GFCC university members. We received applications from great candidates coming from all over the world. We will start the research soon with those selected. The discussion's foundation will be laid in the first four months of research.

### **Connection with GFCC Members' Activities Is the Ultimate Goal**

We look forward to engaging you in the discussion on the prepared foundation soon. We are a group of organizations from different nations with different interests, cultures and economic conditions, but we share the same planet. We are also colleagues who strive for competitiveness that makes mutual prosperity possible. I believe creating our view of crisis and collaborating together connecting our existing practical activities and our rich diversity will direct our competitiveness in today's society.

In 2022, we embarked on a journey to rekindle our relationships with members and to bring our community together through in-person activities.

With the support of the Japan Science and Technology Agency, we proudly launched our **Driving Innovation in Times of Crisis** initiative, which aims to advance the understanding and preparation of organizations and nations to innovate, compete, and build prosperity in these unpredictable times.

As we turn our gaze to 2023, we have exciting plans in store. Our focus remains on further engaging with members, both online through the GFCC Community and in person, as we anticipate ramping up in-person events in collaboration with members. Our mission to drive innovation and competitiveness will continue to be a top priority, as we work with all members, fellows, and partners outside of the GFCC community to further develop and scale up **Driving Innovation in Times of Crisis** and make impact across sectors and geographies.

We will also be deploying more in-person activities with members across regions of the globe, taking the **Global Innovation Summit** to new heights and new destinations.

To our valued members, we extend an invitation to reach out to us and share your ideas. Let us explore the possibilities for joint work and further strengthen our community. We are eager to hear from you and to continue working together in 2023. For our partners, we hope to open new doors for collaboration and to expand the impact of our work.

Together, let us make 2023 a year to remember!

The GFCC is a multistakeholder membership organization with universities, corporations, government agencies, and an extended network of fellows in more than 30 countries. For more information about GFCC initiatives, [visit our website](#).

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