

April 13, 2023

## Concept Note

### **Global Solutions Summit 2023**

#### **At the margins of the Multi-stakeholder Forum on Science, Technology, and Innovation for the SDGs 2023**

*Theme: Leveraging the Diaspora, Youth, and the African Continental Free Trade Area  
to Harness STI4SDGs by 2030*

**Venue: ECOSOC Chamber, UN HQ**

**Date: May 5th, 2023**

**Time: 10:00am – 1:30pm, New York time**

## **I. Introduction**

The [Global Solutions Summit \(GSS\)](#), in partnership with the United Nations Department of Economic and Social Affairs (DESA), the [World Federation of Engineering Organizations \(WFEO\)](#) and its Affiliate Member, the [American Society of Civil Engineers \(ASCE\)](#), is honored to organize GSS2023 at the margins of the [8<sup>th</sup> Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs](#) which will convene at the United Nations in New York on May 3-4, 2023. The theme of GSS2023, which will convene as a designated Special Event at the UN on May 5, is Leveraging the Diaspora, Youth, and the African Continental Free Trade Area (AfCTA) to Harness STI for the SDGs by 2030.

GSS2023 will amplify the discussions at the [Fifth African Science, Technology and Innovation Forum 2023](#) which convened in Niamey, Niger on February 26-27, 2023 and the STI in Africa Day which will convene as a designated Special Event at the UN on May 2.

[The 1<sup>st</sup> STI in Africa Day](#) will shine a spotlight on three levers of potential STI-led socio-economic transformation: (i) Mobilizing and engaging the African Diaspora, numbering close to 170 million people, to serve as a bridge between local communities and the broader regional and global innovation ecosystems; (ii) Developing technical and entrepreneurial skills in youth so that they can become “a major driver of innovation and entrepreneurship and a force for sustained development”; and (iii) capturing the socio-economic development opportunities emerging from the African Continental Free Trade Area (AfCFTA) which has created a current “market of 1.3 billion people with a GDP of \$3.2 trillion and household spending of about \$1.9 trillion.”

GSS2023 will complement the Africa Day discussions by exploring the following question: How can Africa use these levers to (i) accelerate sustainable, inclusive regional and local technology development and deployment to achieve the SDGs and (ii) develop value-added activities in Africa’s manufacturing, agriculture, and service sectors?

## **II. GSS 2023 Background**

To date, Africa has not developed the capacity to utilize these levers to their fullest potential. As a result, too many countries face a glaring paradox. On the one hand, technological solutions for many SDGs are now widely available and new and improved solutions continue to emerge at a steady pace from the African and global scientific and engineering communities. And yet, many countries in Africa and elsewhere are not on track to achieve the Sustainable Development Goals by 2030.

April 13, 2023

Why? What accounts for the confluence of scientific and technological abundance and scant progress on the ground? More importantly, what will it take to move newly discovered as well as existing scientific innovations from the shelves of research labs, universities, and other scientific institutions into the hands of the hundreds of millions of people in tens of thousands of communities throughout Africa who need them to secure potable water, sanitation, electricity, high quality affordable health care, food security and high skill, high wage, high productivity private sector jobs in Africa's emerging manufacturing, agriculture and service sectors?

Building appropriate STI capacity will be the key to meeting Africa's 21<sup>st</sup> Century challenges while simultaneously unleashing Africa's socio-economic dynamism. For example:

**Smart Cities.** Africa is projected to have [24 million more people living in cities each year between now and 2045](#). This is the equivalent of building approximately three New York Cities every year for the next 25 years. Providing potable water, power, sanitation, health care, transportation, and food to the current underserved urban populations as well as to the hundreds of millions of new residents that will populate these new urban settlements can either be viewed as an insurmountable problem or a new opportunity for innovation, growth, jobs, and wealth creation. Frontier technologies can play a vital role in designing and building livable, sustainable urban communities, but will do so only if government, business, international development partners, NGOs and and civil society develop the local capacity to put them to use.

**Smart Agriculture.** Feeding this rapidly growing urban population is another daunting challenge and potential opportunity for employment creation and national development. The solution will entail linking rural, peri-urban, and urban communities in an urban food ecosystem encompassing (i) sustainable urban intensification; (ii) post-harvest storage and processing; (iii) transportation; and (iv) distribution to end customers. None of this will be possible on a scale commensurate with the size of the urban food challenge without harnessing a wide range of frontier technologies including connectivity (ICT, IoT, mobile money, fintech financial services); controlled environmental agriculture including vertical farming and horticulture; block chain; high quality enhanced seed; enhanced genetics including cloud biology; nanotechnology and advanced materials; and 3D printing of cells, food, machinery and structures.

**Smart Factories.** Smart factories which combine AI, machine learning, Open Source software, robotics, 3D printing, cloud computing, and big data analytics are becoming a more prominent feature of the manufacturing landscape. At present, most smart factories are located primarily in developed countries, but Rwanda, Ghana, South Africa, and Nigeria as well as countries in other regions may also be well-positioned to capture some of the jobs and economic growth spawned by smart factories. That will enable them to pole vault over the low-wage, assembly operation stage of development. These smart factories and their related smart supply chains could serve as regional and local growth poles if the countries position themselves to capture these benefits.

### **III. GSS 2023 Program**

GSS2023 will assemble a roster of thoughtful doers -- women and men who are actively working in the field to surmount these development challenges -- to explain what they did, how they did it, what went right and what went wrong, where gaps or broken circuits exist in the innovation/deployment ecosystem, and what needs to be done to create an ecosystem that can support the design, development, and deployment of solutions on the scale required to achieve the SDGs by 2030.

It will:

April 13, 2023

- Discuss specific capacity building policies and programs, including workforce training and development, that would strengthen the local private sector's ability to find, evaluate, adapt, utilize, and deploy technology to address priority development objectives.
- Showcase financially and socially sustainable, inclusive business models for deploying development solutions at scale.
- Discuss programs to strengthen the capacity of the local private sector, the local workforce, and the local engineering community to participate in smart global and local value chains in manufacturing, agriculture, and value-added services.
- Explain how the Diaspora can support these objectives.
- Highlight the importance of developing technology roadmaps that (i) outline a desired solution to a specific, well-defined problem -- e.g., (a) providing affordable, sustainable potable water services to X people in rural areas and urban slums or (b) storing, preserving and adding value to the country or region's agricultural products so that agricultural coops can sell them within the AfCTA; and (ii) describe in detail how the country intends to implement this solution. This would generally include a list of all the stakeholders, including the private sector and the Diaspora, that have to be mobilized; a discussion and evaluation of alternative technological solutions and how each would be deployed at scale to solve the problem; a list of complementary problems that have to be solved along the way (electricity for food processing and storage); coordination, organizational and implementation arrangements; the role of the government and allied multilateral, bilateral, and private sector development partners, etc.

GSS 2023 would be the first chapter in a more substantial discussion of these issues in partnership with the UN and allied partners.