

# R&D across borders



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The G20 must set up a virtual digital lab and library as a platform to promote collaboration for R&D

**THE G20 IS** united by a common vision of harnessing the power of technology, innovation, and R&D to influence almost all facets of life and world. The mission is to leverage the combined B20 capabilities to promote sustainable development goals through affordable solutions and global-scale business models.

Technology, innovation and R&D are the most powerful forces which possess the power to transform our collective intent into action, goals into results, and challenges into opportunities. Inherently complementary to each other, they create a transformational surge that is driving positive changes around the world. Finding ways to strengthen these forces and harnessing them to address the challenges we face is the purpose of this taskforce. The Technology, Innovation and R&D Taskforce of the B20 also recognises the importance of sustainable progress and the need to address global social and environmental challenges in the pursuit of economic growth.

The task force is a collaboration of more than 170 members from around the world. The themes for discussion generated from the task force members were operationalised by creating focused subgroups. Expert volunteers anchored these subgroups that held detailed discussions to put forth their collective points of view. In the subsequent taskforce meetings, after careful consideration of all the points of views, they were consolidated into 14 impactful recommendations that, in turn, were

grouped into four major areas namely Digital, Deep/Emerging Tech, and Green Tech/Circular Economy and Foundational Domains of Influence.

The G20 should set up a virtual digital lab and library as a platform to promote collaboration for R&D, knowledge transfer of technology best practices, and dissemination of the latest information on globally available resources or funds. We have compiled a compendium with over 125 exemplary case studies.

Digital is an important aspect of the current era. The G20 must create a mechanism for standardising the protocols of industry 4.0 with guidelines to accelerate technology transfer and knowledge sharing on industry best practices. Collaborations among G20 countries should happen to effectively share information for enabling internet for all.

Deep tech is powering our collective journey into the next era. The G20 should set-up a collaboration forum for deep and emerging tech advancement to facilitate joint innovation and R&D. We need to form an innovation body with the capacity to incubate and deep tech startups in the G20.

In health domain, we should constitute a collaboration body for technology-driven cancer research to identify ground-breaking innovations in its pre-

vention, detection, cure, and care. Equally important is to start a G20 knowledge sharing forum and charter on information exchange for med-tech professionals to address neurodegenerative and age-related health diseases.

Space is another domain on which our members focused. We should form a council for earth observation constituting central space agencies, space industry ecosystem, research bodies, and academia to leverage space tech. Water conservation and regenerative agricultural practices are immediate focus areas for space tech.

Sustainability is an important focus area for the G20. We need to promote circular economy and sustainable supply chain practices by facilitating research on alternative materials, and traceability of recycled materials, and to establish global standards for green materials. We should have a collaborative center of excellence to promote the use of biomaterial and bioenergy. We should set up a center of excellence for human-centered design that leverages advanced technologies to reinvent design that is closely integrated into the sustainable solutions of the future.

One of the most important human resources development interventions is to formulate a program to enhance opportunities for women in STEM and

prioritise funding women-led startups. This should become a high priority ongoing initiative for the G20.

The task force of the B20 has an unprecedented opportunity to influence the trajectory of the unimaginable possibilities that lie ahead of us. While keeping in mind that we need to ensure that the benefits of these technologies are accessible to all and contribute to a more sustainable and inclusive future.

We face persistent challenges like water and food scarcities, climate change, economic and social divides, etc. The solutions to these challenges are possible only when we connect and collaborate to access scientific and technological resources and knowledge. The G20 countries contain about 60% of the world's population and 85% of researchers in the world. Thus, the foundations laid by this task force will continue to push forward the agenda of technology, innovation, and R&D in the G20 and the world.

We should foster collaboration and nurture a milieu conducive to positive change as we move forward with optimism while shaping our collective futures. We find ourselves delicately positioned in an era that grants us the power to make the right choices to make a significant change. We need to act now. The Technology, Innovation, and R&D Task Force of the B20 reinforces a greater commitment for innovative, inclusive, and collaborative action to preserve our world and make our future better.

**The G20 must aid standardisation of the protocols of industry 4.0, with guidelines to speed up technology transfer and knowledge sharing**