2026 GESDA Anticipation Summit

Highlights Report

14-15 October 2026



gesda

Use the future to build the present

Foreword

Science is not waiting for us to catch up. With breakthroughs once thought to be decades away already reshaping our world, how can the institutions tasked with governing their consequences keep pace?

This was the challenge at the heart of the 2026 GESDA Anticipation Summit. Bringing together leaders from science, diplomacy, government, industry and civil society, in order to ensure that expected breakthroughs do not create governance dilemmas.

Five years after the launch of the GESDA Science Breakthrough Radar®, an independent scientific appraisal confirmed its remarkable ability to anticipate the direction of scientific progress. From organ rejuvenation and genetic reprogramming to quantum computing, many of its early anticipations are now becoming reality. Yet it also found that in many areas, science is moving faster than expected. In artificial intelligence, capabilities once projected a decade into the future have already arrived.

This acceleration presents a paradox. While science is giving us unprecedented power to transform our world, it is also narrowing the time available to decide how that power should be used. Anticipation offers a way to reclaim that time.

It creates the space for governments, researchers, industry and society to confront difficult questions, build common ground and act before technological projections become a reality.

At GESDA, we believe that the greatest value of anticipation lies not in predicting the future, but in expanding our ability to shape it. From the Open Quantum Institute to emerging work on neurotechnology and natural ecosystems, we are translating scientific anticipation into opportunities for cooperation and tangible impact.

The 2026 Summit reinforced a defining conviction at the heart of GESDA's mission: the future will not wait for our decisions. But with anticipation, our decisions need not wait for the future.



Prof. Marilyne Andersen
Director General, GESDA



Peter Brabeck-Letmathe
Chairman, Board of Directors, GESDA

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The 2026 GESDA Summit in numbers

+ 750
Participants

+ 80
Speakers

+ 30
Sessions

6
Youth Fellowship Partner institutions

17
Workshops

+ 570
Les Nocturnes participants

5
Key themes

Watch the session recordings



From left to right: Doaa Abdel Motaal (Visiting Professor, Polar Studies, Sciences Po, Paris), Ram Prasad Subedi (Ambassador and Permanent Representative of Nepal to the UN in Geneva), Véronique Bouchet (Senior Director at the World Meteorological Organization), and Tiffany Morrison (Laureate Professor at the University of Melbourne) joining international colleagues to discuss the future of cross-border scientific cooperation and environmental governance during the "Future of Nature" session. "2026 GESDA Anticipation Summit". Geneva, 15 October 2026.

What is the Anticipation Summit?

Scientific breakthroughs are reshaping geopolitics, security, health, economies and societies faster than institutions are able to respond.

The GESDA Anticipation Summit is the world's leading invitation-only event dedicated to anticipatory science and diplomacy.

It brings together leaders across science, government, industry, international organisations, philanthropy and civil society to understand the breakthroughs that could transform society over the next 5, 10 and 25 years, and to shape global cooperation needed today.

The 2026 edition was built around the 5 themes of GESDA's latest Science Breakthrough Radar: Machines, Planet, Society, People and Life.

Convenes

750+ scientists, diplomats, policymakers, innovators, and executives across industry sectors.

Bridges

Science, policy and diplomacy through targeted, high-level dialogue that turns emerging research into governance and action.

Catalyses

Multistakeholder coalitions, moving beyond conversation toward concrete experimentation, investments and real word impact.

Shapes

How decision-makers interpret, prioritise and act on the scientific breakthroughs over the next 5, 10 and 25 years. Starting now.

> “The future of technology is too important for any country to shape alone. We need strong partnerships between governments, science and business. Cooperation makes us stronger and together, we can shape our future.”

Krzysztof Gawkowski
Deputy Prime Minister and
Minister of Digital Affairs, Poland





> “The future should not be discovered by a few and explained to the rest, it should be anticipated by many.”

Alexandre Fasel
State Secretary, Federal Department
of Foreign Affairs, Switzerland

Machines

AI Quantum, robotics: as machines become both partners in solving humanity's hardest problems and agents with real power over our lives, what rules can the world still agree on?

Machines Among Us

As AI moves beyond screens into physical workplaces, robotics, and battlefields, human judgment must lead technological capability. While automation promises to transform industries, autonomous systems pose critical governance challenges — from preserving human control over the use of force in armed conflict to ensuring technology enhances, rather than undermines, workplace dignity.

> "Not everything we can automate is something that we should automate."

Gilbert F. Houngbo
Director-General, International Labour Organization (ILO)



> "AI will be a warp drive for scientific discovery, increasing the number of hypotheses we can test to arrive at grand truths."



Hiroaki Kitano
President & CEO, Sony Computer Science Laboratories

AI Inflection

AI is rapidly accelerating scientific discovery and reshaping global power dynamics. From transforming biomedical research to elevating digital infrastructure as a geopolitical asset, the session highlighted AI's power to unlock breakthroughs at an unprecedented scale. With Geneva set to host the 2027 AI Summit, leaders emphasised transitioning from fragmented regulation to shared global safeguards that protect security without stifling innovation. A strategic partner to the FDFA for the 2027 Geneva AI Summit, GESDA will contribute expertise on frontier AI governance and AI-driven discovery.

Planet

Space, deep oceans, the poles: as planetary systems buckle, how do we protect what remains and restore what we've lost?

The Future of Nature: Spotlight on the Cryosphere

As climate change and human activity accelerates loss, conservation will need to complement passive intervention with responsible active intervention — spanning large-scale rewilding to engineering life itself. Habitat loss is not inevitable: ecosystems can recover through intervention and monitoring, although this requires a rigorous and cautious approach to avoid new damage. This session confronted the ethical boundaries of redesigning nature, examining who decides how far scientific intervention should go and demanding urgent, timely action to safeguard our planet's remaining natural heritage. Building on these discussions, GESDA is preparing the incubation of a new Initiative in the field of EcoSystems Augmentation with an initial deep dive on the Cryosphere.

> "Proteins that are very efficient at ice-making are now being tested for cloud seeding."

Konrad Meister
Assistant Professor & Group Leader, Boise State University & Max Planck Institute for Polymer Research



> "The biggest challenge that we have in front of us is keeping pace with all the developments in orbit and the speed of private sector activities in space."



Aarti Holla-Maini
Director, UNOOSA

Space Inc.

As space opens up for commercial enterprise, private corporations are rapidly replacing nation-states as the primary rule-makers in orbit. With the upcoming retirement of the International Space Station (ISS) and the rise of commercial stations, this session confronted the urgent regulatory vacuum surrounding orbital accountability, space debris, and resource ownership — from returned Martian samples to asteroid mining. Speakers discussed the need to stop viewing outer space as a frontier to conquer and start treating it as a shared habitat to protect. With the regulatory vacuum in orbit growing, GESDA supported Geneva's successful bid to host the 2029 International Astronautical Congress, positioning International Geneva as the place to build the shared rules that space now needs.

Society

Disinformation, digital warfare, AI and education: as technology reshapes how we fight, learn and cooperate, what kind of societies do we want to build and who gets a say?

Geopolitics of Science

Amid rising geopolitical tension and fierce technological competition, this session addressed how to safeguard open scientific cooperation without compromising national security. Drawing on successful models like CERN alongside Africa's expanding research capacity, discussions emphasised that global progress relies on equitable partnerships, scientific independence, and mutual trust. To prevent a fragmented scientific landscape, international research must remain inclusive, ensuring every region contributes to and benefits from shared innovation.

> "At the heart of CERN are our shared democratic and cultural values with our member states. Those values are absolutely central, and we will not deviate from that."

Mark Thomson
Director General, CERN





> "We cannot function without a deep understanding of how to use language and manipulate it, to be able to take on the full extent of AI and other systems coming down the line."

Sarah Al Amirii
Minister of Education, United Arab Emirates

Minds and Meaning

As emerging technologies blur the line between human and machine capabilities, societies must fundamentally rethink education, work, and institutional trust. Grounding technological advance in philosophy and ethics, speakers challenged traditional views on human agency in an AI-driven era. The session called on public institutions to invest directly in people and highlighted pioneering models, such as the Geneva Public Portal to Anticipation, to shift public engagement from passive consultation to active citizen participation in shaping technological futures.

People

Longevity, neurotech: as science opens new possibilities for how long and how well we live, who decides what's acceptable, and who gets access?

The Brain Goes to Market

As neurotechnology moves from clinical laboratories into everyday consumer devices, the session explored a future in which the boundaries between the human brain and technology are increasingly blurred. From brain-computer interfaces that restore lost abilities to wearable devices capable of interpreting neural signals, scientific advances are opening extraordinary possibilities for human health and capabilities. Yet the rapid commercialisation of these technologies raises fundamental questions about mental privacy, cognitive freedom and who controls our most sensitive data. Drawing on emerging regulatory approaches, including Chile's pioneering protection of brain data, speakers examined how governments, researchers and industry can close governance gaps before they become entrenched. GESDA's new Compass platform, launched at the summit, supports this effort by helping countries anticipate the impact and ethical implications of Brain-Computer Interfaces.

> "We need to be anticipatory, not reactive with governance."
>
> **Alessandra Colecchia**
> Head of the Science and Technology Policy Division, OECD





Alok Jha (Science and Technology Editor at The Economist) moderating the "Future Therapeutics" session during "2026 GESDA Anticipation Summit". Geneva, 15 October 2026.

Future Therapeutics

A revolution in healthcare is unfolding, driven by multi-system metabolic therapies, like diabetes treatments now transforming heart, liver, and kidney care, and single-dose gene therapies that can replace a lifetime of chronic treatment. Yet these miraculous breakthroughs expose deep societal rifts around pricing, affordability, and equitable global delivery. Concurrently, as traditional antibiotics lose effectiveness, the race to develop novel anti-infectives and live biotherapeutics is hindered by broken market models that fail to fund the drugs humanity needs most. The speakers discussed how scientific breakthroughs are redefining healing, and how to ensure that innovations reach those who need them most.

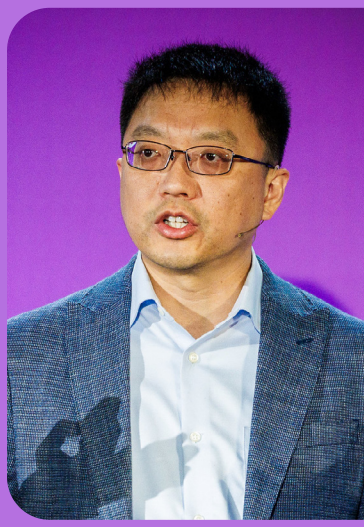
Life

Synthetic biology, cell engineering: as science designs solutions to tackle disease and hunger, how do we govern tools powerful enough to reshape life itself?

Engineering Life

As biology transitions into a programmable technology, scientists are moving from modifying existing organisms to building partial and self-replicating living systems from scratch. Over the next 5, 10, and 25 years, cell engineering promises to revolutionise medicine, food production, and industrial manufacturing. However, the dual-use nature of these tools presents severe biosecurity risks, as the same techniques used to combat diseases can be weaponised to synthesise novel biological threats. This session confronted the urgent gap between rapid scientific advancement and lagging global regulation, questioning who decides what lifeforms are created and how to ensure both equitable access and biosecurity.

> "What excites me is being able to enter into this phase where we can precisely control genes to bring health back when people get sick or older."



Prof Dr Stanley Qi
Associate Professor of Bioengineering, Stanford University



Caroline Steel (Science Broadcaster and Journalist), Alexandra Olaya-Castro (Professor of Physics at University College London), and Tobias Denzler (Head of Science and Technology at QAI Ventures AG) speaking at the "Quantum Effects in Biology" panel during "2026 GESDA Anticipation Summit". Geneva, 15 October 2026.

Quantum Effects in Biology

Once thought impossible in warm, complex environments, living organisms appear to harness quantum mechanics for essential processes — from photosynthesis to avian navigation. This session explored the emerging convergence of quantum biology and advanced quantum technologies, examining how precision sensing and control of biological systems could revolutionise medicine. By bridging fundamental physics and cellular biology, speakers highlighted a powerful new frontier capable of transforming disease diagnosis, drug discovery, and our core understanding of human health. The Open Quantum Institute, born at GESDA and now hosted at CERN, concluded its three-year pilot in 2026, with 10 of 20 use cases reaching proof of concept, demonstrating how anticipating quantum science can translate into early action.

Geneva Public Portal to Anticipation







Visitors networking while diving into GESDA's Science Breakthrough Radar by engaging with the "Geneva Public Portal to Anticipation", an interactive and immersive installation developed with EPFL (eM+ Lab) to experience the possible futures shaped by science at a personal level. "2026 GESDA Anticipation Summit", Palexpo, Geneva, 14 and 15 October 2026.

> "The biggest attraction for me was the anticipation portal, where I got to actually explore 5, 10, 25 years into the future. 100% I would recommend this to anyone."
>
> **Participant**

Part of GESDA's initiatives to democratise early understanding and uses of emerging science, the Geneva Public Portal to Anticipation stands out as an interactive exhibition at the intersection of arts, science and diplomacy, empowering citizens to anticipate and project themselves into the future.

This interactive journey provided the public with a space for the imagination beyond what now exists, where people and AI can co-create new narratives to navigate unpredictable futures and tackle complex global challenges through interdisciplinary collaboration.

Les Nocturnes de GESDA



Jeannette Loesch and Georges Auguste Dubois, featured in the "Les Nocturnes de GESDA" exhibition, curated by Prof. Daniela Jopp (Université de Lausanne, SWISS100), featuring the stories and perspectives of Swiss centenarians. "2026 GESDA Anticipation Summit", Geneva, 15 October 2026.

For the first time, the GESDA Anticipation Summit opened its doors to a broader public for an evening dedicated to the theme of longevity: *"What if we live to 150? Rewriting the human contract"*

Through a series of lightning talks delivered in both French and English, Summit participants and the wider public explored longevity and the concept of anticipation from a variety of perspectives, spanning economics, health, nutrition, urban planning, ethics, society and, more fundamentally, the broader human condition.



Sami Kanaan, GESDA Board member and former Mayor of Geneva, addressing participants during "Les Nocturnes de GESDA". "2026 GESDA Anticipation Summit", Geneva, 15 October 2026.

Participants said:

> "I find it really interesting, it is the first time I was exposed to this kind of event."

> "What interested me the most was exploring how we're going to deal with an aging population in a long term, how we can extend health span."

+ 570
Participants

7
Sessions

The **Geneva Science and Diplomacy Anticipator (GESDA)** is a Swiss public-private foundation, honest broker and neutral convenor, providing a trusted platform to bridge the gap between cutting-edge science and multilateral diplomacy to ensure future breakthroughs benefit all of humanity. Drawing on insights from the GESDA Science Breakthrough Radar®, GESDA brings together scientific, diplomatic, policy, business and societal communities to anticipate emerging opportunities and translate them into debate and action. The Science Breakthrough Radar® represents a network of 2,400+ leading scientists in 90+ countries and is cited by the UN Scientific Advisory Board, UN Security Council, UNESCO, OECD, G20, CERN, and the European Commission.

For more information, see **www.gesda.global**

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