

## Six Point Roadmap 2020-2022

The Geneva Science and Diplomacy Anticipator (GESDA) is a joint initiative by the Swiss Federal Council and the Canton and City of Geneva which started its operations on 1 January 2020. This initiative with a global outlook and reach will leverage both International Geneva's ecosystem and well-recognized innovation worldwide for the benefit of the planet and its inhabitants. Meeting on 7 and 8 December 2019 at Campus Biotech Geneva, the GESDA Board of Directors agreed on the Foundation's six-point roadmap for the next three years.

### 1. Vision : use the future to build the present

Humanity is facing global challenges putting people and planet under stress. At the same time, the world is experiencing breakthrough science and technological discoveries at an unprecedented speed. The world's most advanced laboratories are already developing the future through their work on frontier science and technologies. Convinced that the world community cannot afford to miss this potential for well-being and inclusive development, especially for people currently living in less advanced, developing and emerging countries, GESDA's ambition is to help do so by anticipating cutting-edge science and technology and translating them into effective tools for humanity.

In order to achieve this, GESDA will:

- Build new bridges between the scientific and policy communities;
- Identify laboratories around the world working at the frontiers of science;
- Map cutting-edge scientific initiatives that have the potential to address new global challenges;
- Anticipate their potential to help address existing and emerging challenges;
- Build consensus among relevant public and private stakeholders;
- Develop exploratory initiatives and projects aimed at improving well-being by addressing emerging challenges of our time;
- Define governance to translate next-generation technologies into early-stage applications;
- Establish public-private impact funds to assist in the implementation of large-scale projects.

### 2. Mission Statement : anticipate, accelerate, translate

The foundation will focus during its 30-month pilot phase on:

- Anticipation: focus on anticipating a limited number of the next-generation science, technology and societal frontier issues and emerging challenges;
- Acceleration: ensure that the world population and diplomacy actors are central to the discussions on those emerging challenges through collaborative creative coalitions;
- Translation: deploy anticipatory solutions in order to address sustainable needs of the world community.

### 3. Topics : focus on three fundamental questions for the world population

GESDA will address three fundamental questions about people, society and planet through the anticipation of scientific frontier issues and the related emerging challenges :

- WHO ARE WE? What does it mean to be human at the age of robots, gene editing and augmented reality?
- HOW ARE WE GOING TO LIVE TOGETHER? Which deployment of technology can help reduce inequality and foster inclusive development and well-being?
- HOW CAN WE ASSURE MANKIND'S WELL-BEING WITH THE SUSTAINABLE HEALTH OF OUR PLANET EARTH? How can we supply the world population the necessary food and energy and regenerate our planet?

As a starting point, the Academic Forum and the Diplomacy Forum will work together on the following frontier scientific issues and related emerging challenges:

Scientific Frontier Issues	Examples of Emerging Challenges
Quantum revolution & advanced Artificial intelligence	Individual identity protection, control mechanisms, inclusiveness
Human augmentation	Longevity, germline gene editing, brain-machine interface
Eco-regeneration and geoengineering	Synthetic biology, decarbonation, regenerative agriculture
Science and diplomacy	Conflict modelling, forecasting and prevention

#### **4. Methodology : Building creative coalitions to enhance inclusive growth and well-being**

GESDA will bring together different actors to map science trends, the related emerging challenges, enabling and regulating solutions, and concrete actions that ad-hoc public-private partnerships can finance. To do this, GESDA is composed of the Board of Directors, the General Secretariat, an Academic Forum, a Diplomacy Forum and an Impact Fund. Their collaborative role will be to create a common language and shared objectives between actors with different identities and to turn them into creative, impactful coalitions bringing together diplomacy-at-large, science, business, NGOs and society.

In this perspective, and in order to gain experience, GESDA will start by accompanying two first experimental projects in 2020:

1. I-DAIR (International Digital Health & AI Research Collaborative) in the field of Artificial Intelligence for Health, chaired by Indian Ambassador Amandeep Gill, former co-director of the High Level Panel of the UN General Secretary on Digital Transformation.
2. The creation of a Geneva-Zurich Center for Science Diplomacy in the field of conflict modelling initiated by the University of Geneva and the Swiss Federal Institute of Technology in Zurich (ETH) along with other national and international partners.

#### **5. Timeline : 30 months to become a respected multilateral science diplomacy start-up**

GESDA's initial start-up phase is three years. Deliverables include:

- 2020 – establish the four thematic platforms and produce relevant position papers;
- 2021 – implement and finance concrete projects;
- Start 2022 – Board of Directors evaluates progress to develop a proposal for the future of the initiative for GESDA's founders.

GESDA will provide regular updates about its activities to the public on its internet site : [www.gesda.global](http://www.gesda.global)

#### **6. Location : Campus Biotech Geneva, Switzerland**

The Geneva Science and Diplomacy Anticipator will leverage Geneva's vibrant national and international ecosystem to strengthen global science diplomacy. It will build on Geneva's and Switzerland's scientific and innovative strengths and their reputation for innovation, peace and neutrality. GESDA will closely collaborate with key international organizations and NGOs based in Geneva, including the United Nations, the multitude of UN technical organizations, the World Economic Forum, the Cyber Peace Institute and the Swiss Digital Initiative on digital ethics. GESDA will operate from Campus Biotech Geneva, an international centre of excellence in biotechnology and life sciences (Neuroscience & Neurotechnology, AI driven Digital Health, Global Health and Digital Continuous Education) which was founded in 2013 by the Swiss Federal Institute of Technology in Lausanne (EPFL), the University of Geneva (UNIGE), the Bertarelli Family and Hansjörg Wyss. GESDA will collaborate with the Graduate Institute of International and Development Studies (IHEID), a world-class research and higher learning institution dedicated to the study of world affairs, with a particular emphasis on the cross-cutting fields of international relations and development issues.

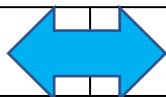
# GESDA ROADMAP 2020-2022 AT A GLANCE

## Vision

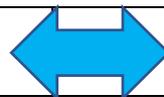
**USE THE FUTURE TO BUILD THE PRESENT**

## Mission Statement

Anticipate



**Accelerate**  
Bridge-Connect-Act



Translate

## Focus

**3 fundamental questions about people, society and planet**

- **WHO ARE WE ?**  
What does it mean to be human at the age of robots, gene editing and augmented reality ?
- **HOW ARE WE GOING TO LIVE TOGETHER ?**  
Which deployment of technology can help reduce inequality and foster inclusive development and well-being ?
- **HOW CAN WE ASSURE MANKIND'S WELL-BEING WITH THE SUSTAINABLE HEALTH OF OUR PLANET EARTH ?**  
How can we supply the world population the necessary food and energy and regenerate our planet?

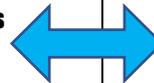
## Method

- Address these fundamental questions through the anticipation of scientific frontier issues and the related emerging challenge as well as the participation in public private demonstrators and scale up projects
- Build creative coalitions around frontier issues, emerging challenges and impactful action

**Next-gen scientific & technology  
Frontier issues**



**Emerging challenges**



**Public-private demonstrators  
& scale up projects**

1. Quantum revolution and Advanced Artificial Intelligence (AI)

Individual identity protection, control mechanisms, inclusiveness

I-DAIR

2. Augmented Reality

Longevity, germline gene editing, brain-machine interface

*tbd later*

3.. Eco-regeneration & geo-engineering

Synthetic biology, decarbonation, regenerative agriculture

*tbd later*

4. Science and Diplomacy

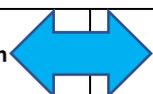
Conflict modelling, forecasting and prevention

*Geneva Zurich Center for Science Diplomacy*

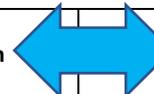
## WHO

**GESDA Ambassadors**

**GESDA Academic Forum**



**GESDA Diplomatic Forum**



**GESDA Impact Fund**

## OUTPUTS

Four **Thematic Platforms** and **Anticipatory Impact Briefs**

Emerging Challenges **Situation Room**  
Populations' **Sounding Board**  
Engaged **Creative Coalitions**

First set of translational public-private partnerships' large-scale **Demonstrators**

## OUTCOMES

- Help the world population benefit more quickly from the advances of science and technology as stated by Article 27 of the Universal Declaration of Human Rights.
- Contribute to human development by reducing poverty and inequality while increasing the number of developing & emerging economies in line with the United Nations Agenda and the Madrid Declaration on Science Diplomacy.
- Leverage the role of Geneva and Switzerland as a hub of multilateralism capable of anticipating cutting-edge science and technology as well as translating them into effective tools for humanity.