



## Involved people

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- Dirk Helbing**, Professor for Computational Social Science, ETHZ
- Michael Batty**, Emeritus Professor of Planning, Chairman, Centre for Advanced Spatial Analysis (CASA), University College London
- Neil Davis**, Director of the UC Gump South Pacific Research Station, Research Affiliate at the Berkeley Institute for Data Science, Director of the Tetiaroa Society and the Blue Climate Initiative
- Jenty Kirsch-Wood**, Head of Global Risk Management and Reporting, UNDRR
- Geoff Mulgan**, Professor of Collective Intelligence, Public Policy and Social Innovation at University College London
- Jeroen van den Hoven**, Professor of Collective Intelligence, Public Policy and Technology at Delft University of Technology

CURRENT SOLUTION IDEA CONTRIBUTORS

## Challenge to tackle

There are **many initiatives** of **different scales** which attempt to **develop digital twins** (or avatars) of physical, ecological, social or individual systems, and their couplings. As the motivation beyond these initiatives is to **support policy- and decision-making** by **providing a simulation space** in the **digital sphere** to **test policy interventions**, this raises a number of **ethical, governance** and **participation questions**

Realistic computer simulations as input to decision-making have the potential to **guide better interventions**. Currently, several initiatives plan digital avatars and digital twins on the level of individuals (in precision medicine), society (digital urban twins for city planning) and the planet (earth observation, climate forecasting, oceans). This requires **trust between the science** and **diplomacy communities** on the **potential** and **value** of **data-based modelling** approaches. However, it also requires entirely new **multi-lateral governance approaches** to **manage risks** and **avoid dual use**

## Solution idea in a Tweet

**Empower policymakers** and **citizens** to make **better decisions** with the help of **digital assistance** and **tools**

## Pilots/Initiative

Pilots/Initiatives will be identified by the working group in the making

## Solution idea key elements

- The goal of this Solution idea is to **identify new opportunities** and **create participatory tools** for a flexible, adaptive, resilient management of **complex systems**, using **powerful digital tools** to **help navigate the 21st century**
- The **Geneva Digital Empowerment Approach for Participatory Navigation and Action** is a **transparent** and **open public-private-citizen-civil society initiative** whose objectives are to:
  - Provide a global overview** of the **different initiatives** for digital avatars or twins in all domains considered
  - Set up a global oversight mechanism** and an **observatory** of the initiatives to promote their deployment and application in an inclusive, transparent, participatory, sage, responsible, and accountable way, empowering citizens globally and ensuring that the limits of the models and the consequences of their use are well understood and communicated, considering in particular the nature of complex systems
  - Enable citizen participation** in **debating, developing, deciding** and **implementing** solutions to global challenges and global governance, through amongst other initiatives, a "digital agora" for combinatorial innovation and collective intelligence

## Type of Solution idea

Governance
  Knowledge
  Innovation

## Anticipation

### ANTICIPATION TIMELINE



## ANTICIPATORY SCIENCE

1. Quantum Revolution and Advanced AI <b>SAB 1</b> <b>SAB 2</b>	2. Human Augmentation <b>SAB 3</b> <b>SAB 4</b>
3. Eco-regeneration & Geoeengineering <b>SAB 5</b> <b>SAB 6</b>	4. Science & Diplomacy <b>SAB 7</b> <b>SAB 9</b> <b>SAB 8</b> <b>SAB 10</b>

## Involved SDGs

