

The background of the slide features a close-up photograph of green leaves with intricate white patterns, likely caused by insect damage or a specific plant disease. In the lower-left corner, a person's hand is visible, holding a thin stem or branch. The overall scene is brightly lit, suggesting an outdoor, natural environment.

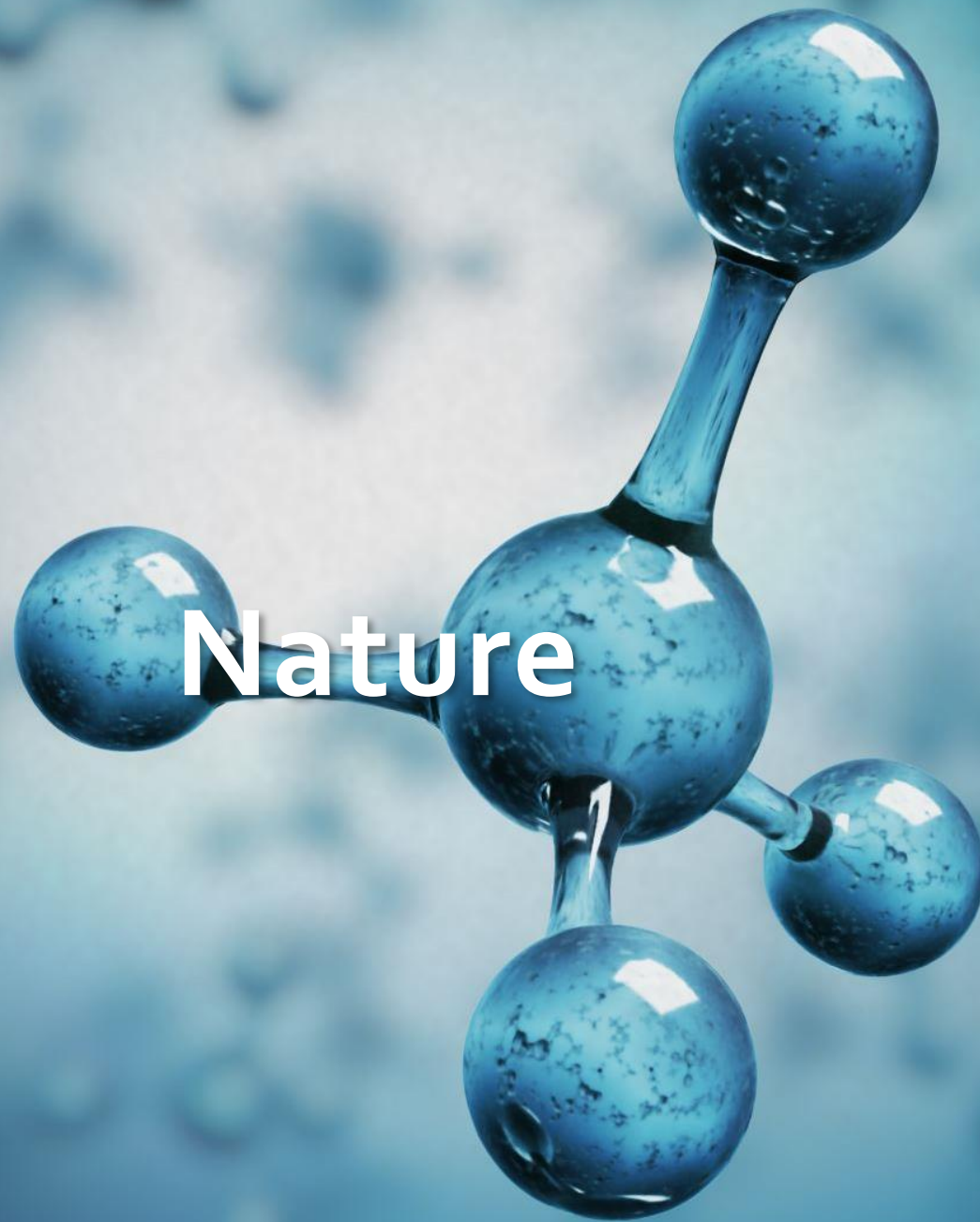
# Exploring the role of technology for upscaling of NBS

*Thomas Andersson, IKED, URBiNAT  
GENK, April 28. 2022*

# Technology a Broad Concept – far from Uniform

- ❖ Capability granted by knowledge
- ❖ Used to emanate from practical skill, human ingenuity, now science, research ...
- ❖ Marginal vs. disruptive
- ❖ Technological revolutions, long-term cycles
- ❖ Technology a confounding variable – use and outcomes depend on intentions, skills, institutions, governance
- ❖ Extent to which ethical and social aspects are integrated in shaping technology and its use

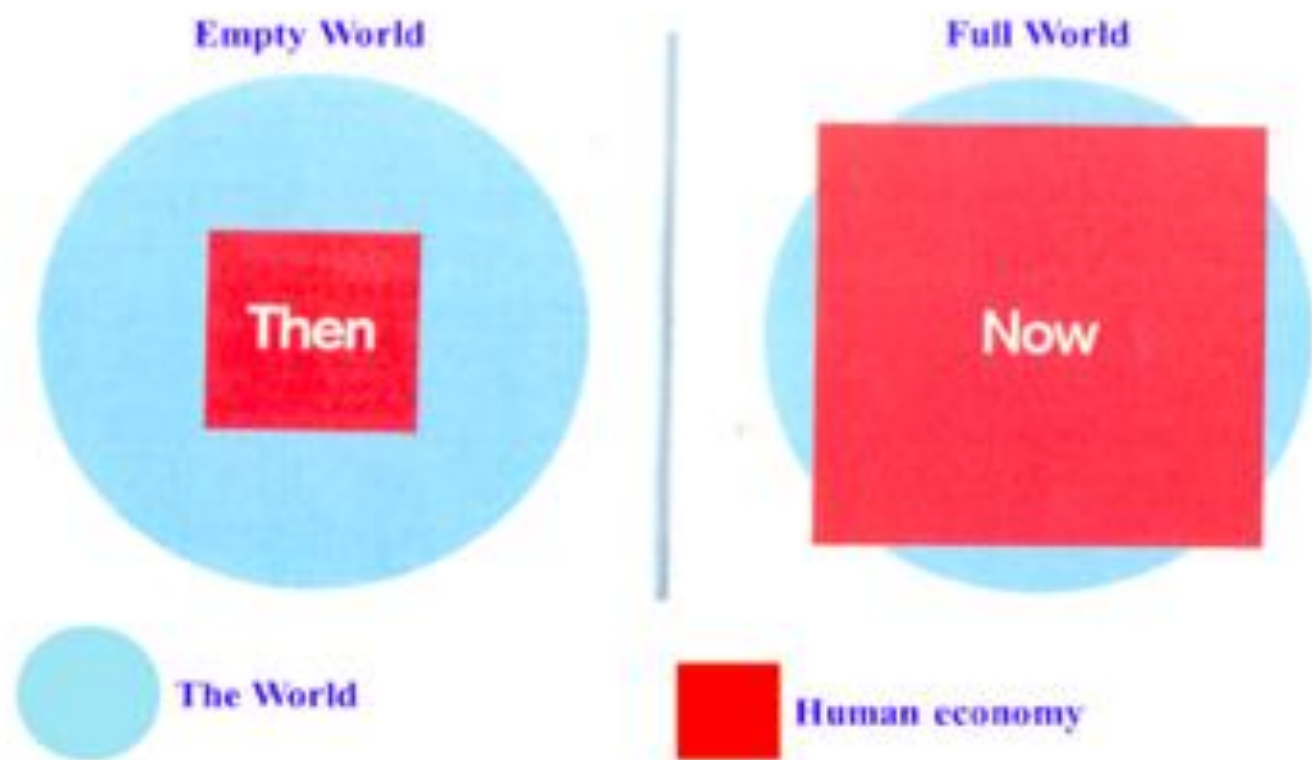




# Nature as a Driving Force for Technology through the Ages

- ❖ Controlling Nature
- ❖ Protecting against the forces of Nature
- ❖ Overcome obstacles set up by Nature
- ❖ Exploit nature's resources faster
- ❖ Biomimicry
- ❖ Nature Based Solutions

# ***Empty World and Full World***



*Source: Club of Rome: Simplified after Herman Daly*

***Labour and Infrastructure limiting factors of human wellbeing***



***Natural resources and Environmental sinks limiting factors of human wellbeing***

## A New Context, from end-of-pipe solutions ...

- ❖ Incremental, piecemeal valuations of Natural Capital have run their course → systemic effects, eco-system breakdown, resilience and thresholds
- ❖ Facing up to **exhaustion** - the fundamental life-carrying capacity of our world is coming under severe pressure (*Climate Change & Biodiversity* crises)
- ❖ **Valuing eco-system services for Humans and for Nature, their interfaces and multiple underpinnings of production, consumption and life itself**
- ❖ **....but also, moving from theory and talking to implementation, experimenting with new solutions, diffusing and scaling what works**





# Realising Solutions

# Collaboration Mechanism

Academy/Science/  
innovation  
&  
Practice



# Market







# URBiNAT URBan inclusive and innovative NATure

Front runner cities

Follower cities

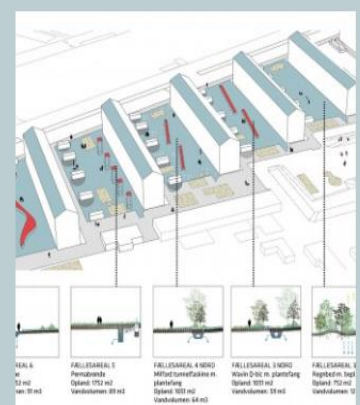
Observer cities



## HEALTHY CORRIDORS AS DRIVERS OF SOCIAL HOUSING NEIGHBOURHOODS FOR THE CO-CREATION OF SOCIAL, ENVIRONMENTAL AND MARKETABLE Nature-Based Solutions



Technological



Territorial



Participatory



Social and Solidarity Economy

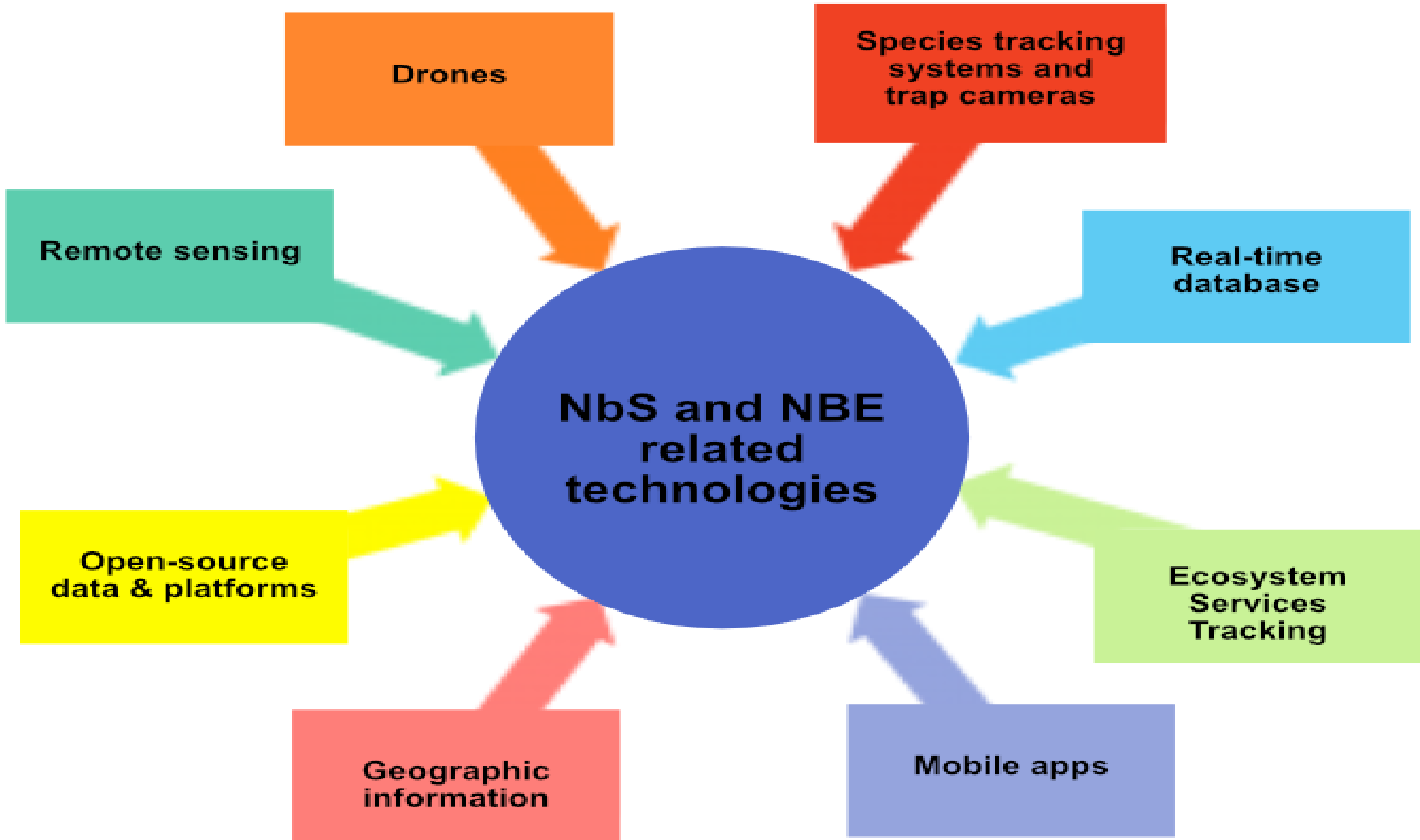


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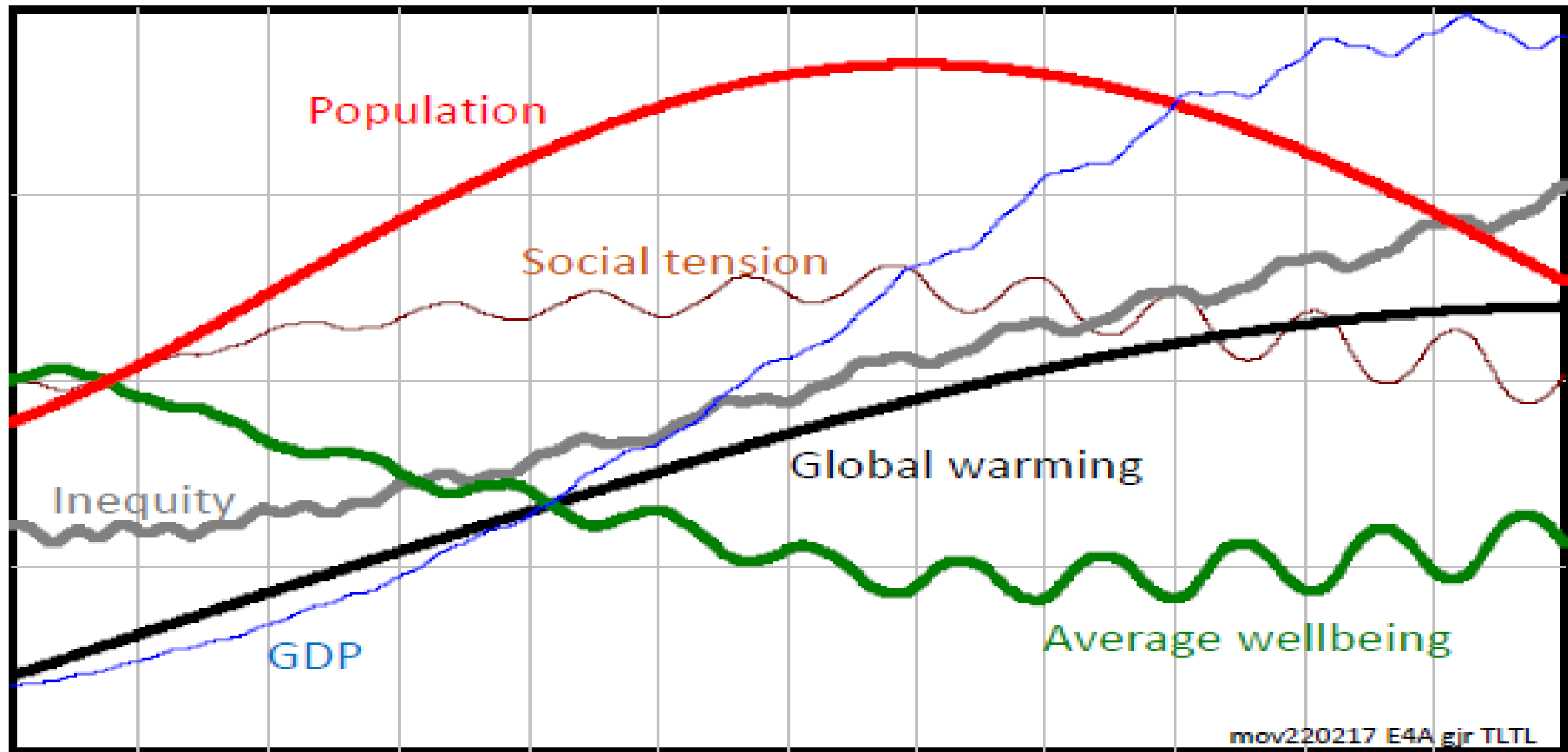


# Digital Enablers

- ❖ Digital tools embedded with methodology and content for specific purposes
- ❖ Support interactivity – two-way initiative
- ❖ Speed and reach
- ❖ Tailor communication to meet with varying needs and motivations
  - **Downsides, risks**
  - **Hybrid solutions**
  - **Governance, capacity-building, competences**







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Main trends in Earth4All model base run – World 1980 to 2100