

Project RAISE

A Responsible AI Strategy for the Environment

IEEE Planet Positive 2030 Workshop, The Hague

Multinational Initiative

25 members working together to advance the responsible development and use of AI, grounded in human rights, inclusion, diversity, innovation, and economic growth.

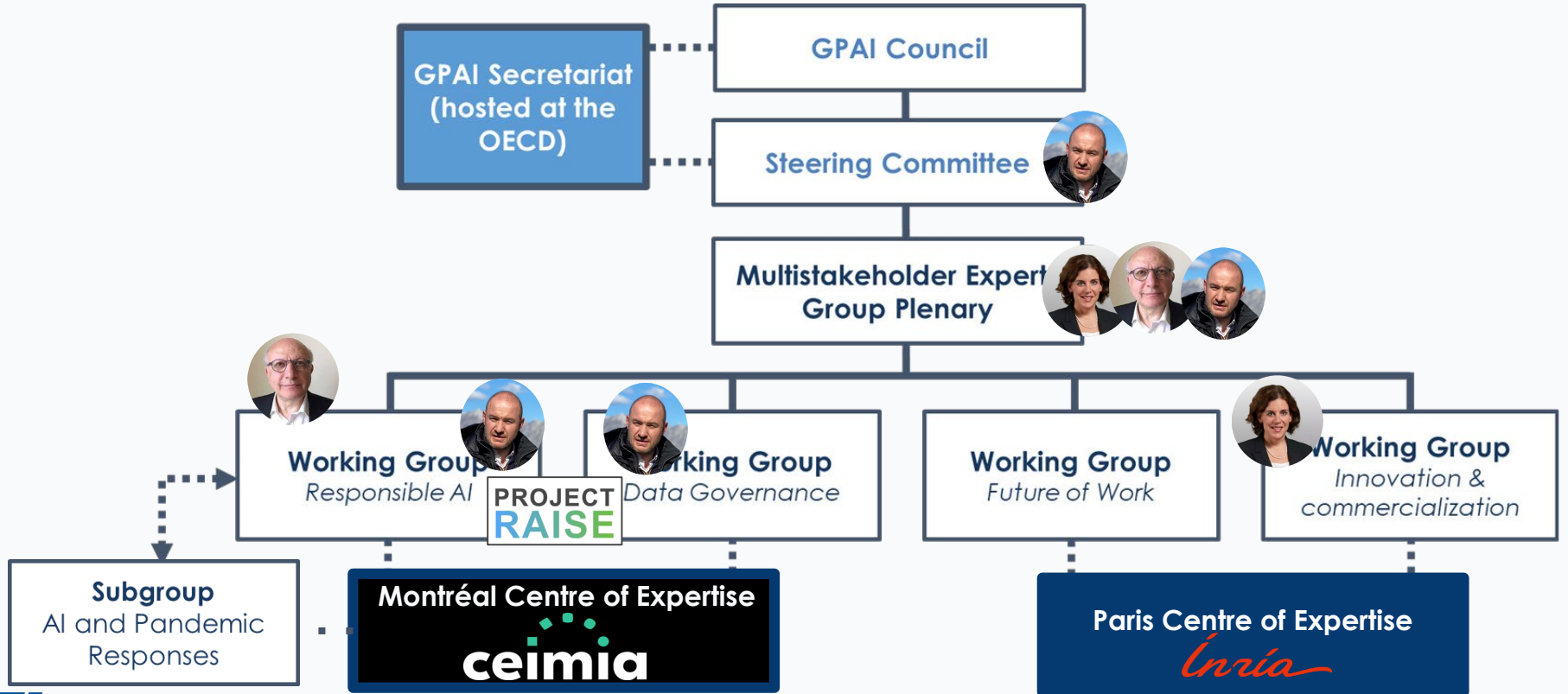


2.8 billion people



- AUSTRALIA
- BELGIUM
- BRAZIL
- CANADA
- CZECH
- REPUBLIC
- DENMARK
- FRANCE
- GERMANY
- INDIA
- IRELAND
- ISRAEL
- ITALY
- JAPAN
- KOREA
- MEXICO
- NEW ZEALAND
- NETHERLANDS
- POLAND
- SINGAPORE
- SLOVENIA
- SPAIN
- SWEDEN
- UNITED KINGDOM
- UNITED STATES OF AMERICA
- EUROPEAN UNION

GPAI STRUCTURE



Project Co-leads



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Project Steering Group Invited Experts



PROJECT RAISE

Overall objective

“Develop and operationalize a global **responsible AI adoption strategy** for climate action and biodiversity”

Long-term objectives

Implement strategic roadmap and recommendations to **inform policy** and **high-impact use cases**

Develop and **impact and risk assessment framework harnessing** AI for climate action and biodiversity preservation responsibly

Work with **institutional partners** to **anchor** AI for environmental action at COP, member states, and other international bodies

PROJECT RAISE 2022 Activities

2021 Report Implementation



AI Readiness Guidance

OECD GPAI Joint Report AI Compute

Data & AI model licensing

Data institutions

Cross-WG Collaboration
PETs

AI & Climate Change

AI & Biodiversity Preservation

ipcc ipbes Joint Workshop

CODES IEEE NSF Key Engagements

Report Development



UNIVERSITY OF OXFORD KPMG

USTJ

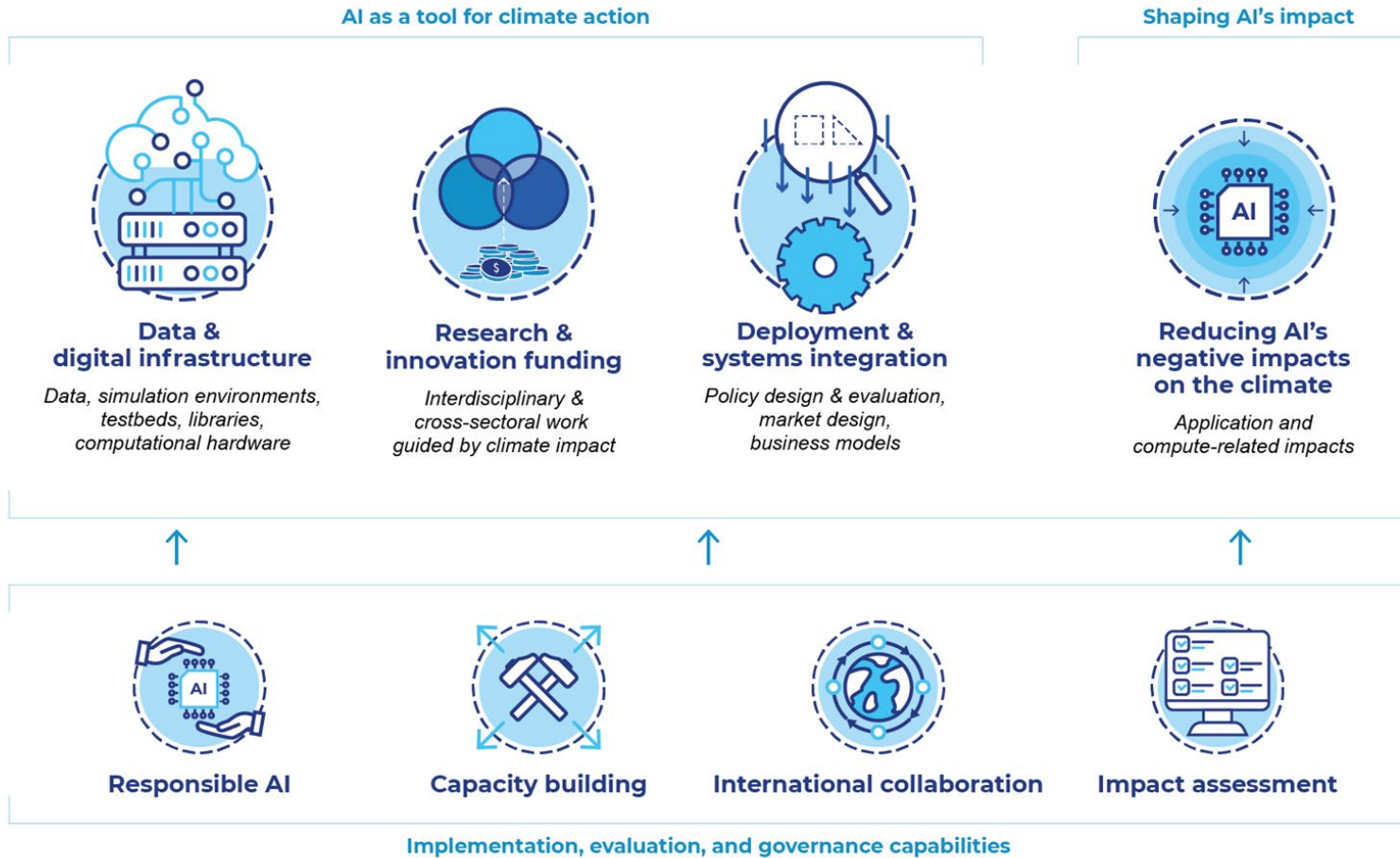
AI & Biodiversity



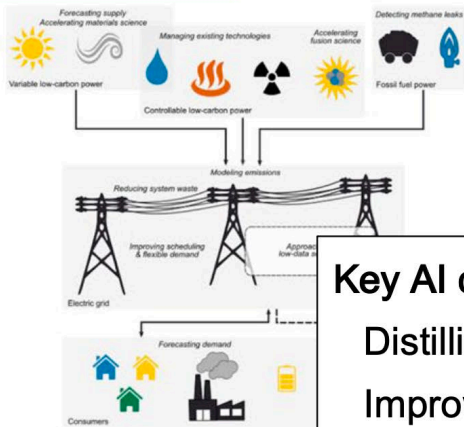


Existing collaborations

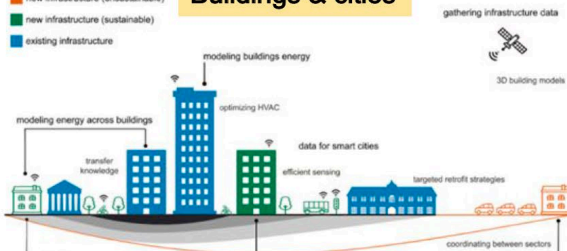
2021 AI & Climate Report summary [see: https://gpai.ai/projects/responsible-ai/environment/climate-change-and-ai.pdf](https://gpai.ai/projects/responsible-ai/environment/climate-change-and-ai.pdf)



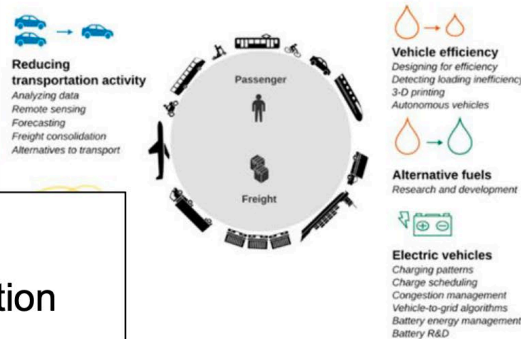
Electricity systems



Buildings & cities



Transportation



Key AI capabilities for climate

Distilling raw data into actionable information

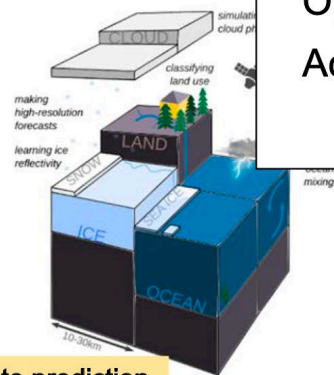
Improving predictions

Optimizing complex systems

Accelerating scientific modeling and discovery

See Rolnick et al. "Tackling Climate Change with Machine Learning"

Climate prediction

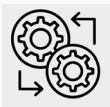


Industry



Societal





Deployment and systems integration

Accelerate the pathway from research → minimum-viable-product
→ testing/deployment → scaling



Case study:

National Grid ESO (UK) has used AI to double the accuracy of its forecasts of electricity demand, enabling better integration of renewables.



International collaboration

Stronger international cooperation on AI-for-climate applications will be important in unlocking AI's full potential for addressing climate challenges.

Recommendations include:

- Support **knowledge sharing** on AI-for-climate policies and implementation between key stakeholders in different countries.
- Bring together researchers and innovators to **address common and cross-border AI-for-climate challenges**, and as part of this, **pool data and agree on data standards**.
- **Develop an international AI-for-Climate Partnership** to support the coordination and delivery of international AI-for-climate work.



WHAT IS A DIGITAL TWIN?

Our planet is a complex system. To better understand how it works, we have created a simulated 'living' replica.

Driven by advanced AI, this computer model is fed by a continuous flow of observations from the physical world.

It allows us to revisit our past, understand our present and predict our future.

PHYSICAL WORLD
Planet Earth

DIGITAL TWIN

Computer model

Destination Earth

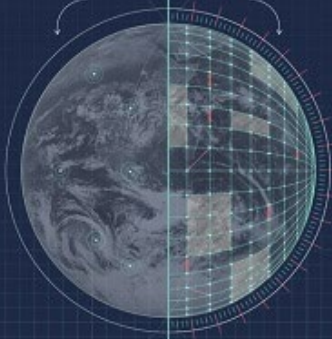
UNDERSTAND THE PAST, PREDICT THE FUTURE

Fed by real-world observations, these digital twins let us understand what has happened on Earth – and what will happen in the decades ahead.

PAST

Revisit the past and understand change

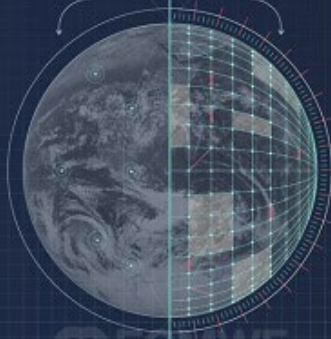
Observations Simulations



PRESENT

Assess and monitor our current situation

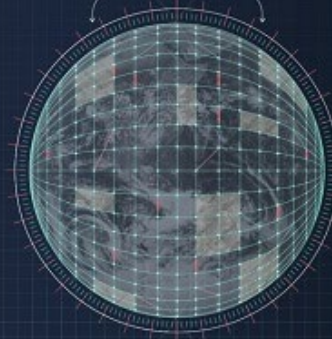
Observations Simulations



FUTURE

Predict future changes and test how we might intervene

Simulations



**PROJECT
RAISE**

Call for action
Address big
technical challenges

Call for expertise
Join Project RAISE

