

# Prototyping a Biodiversity Digital Twin

Grant Agreement ID: 101057437 | DOI: <https://doi.org/10.3030/101057437>

Taimur Khan, Thomas Banitz, Marina Golivets, Volker Grimm, Jürgen Groeneveld, Ingolf Kühn, Franziska Taubert

**Defining a Digital Twin:** A digital twin is a virtual representation of real-world entities and processes, synchronized at a specified frequency and fidelity.

Understanding the forces shaping biodiversity is key to meeting the EU Biodiversity Strategy 2030. In particular, we need to be able to better predict global biodiversity dynamics and how species interact with their environment and with each other. This is an extremely difficult task because the processes underlying biodiversity dynamics are complex.

Our goal is to push the current boundaries of predictive understanding of biodiversity dynamics by developing a Biodiversity Digital Twin (BioDT) providing advanced modelling, simulation and prediction capabilities. Scientists at Research Infrastructures (RIs) will use the BioDT to 1) better observe changes in biodiversity in response to forces that result from climate change or human activity, 2) mechanistically understand how these changes occur and 3) predict the effects of these changes.

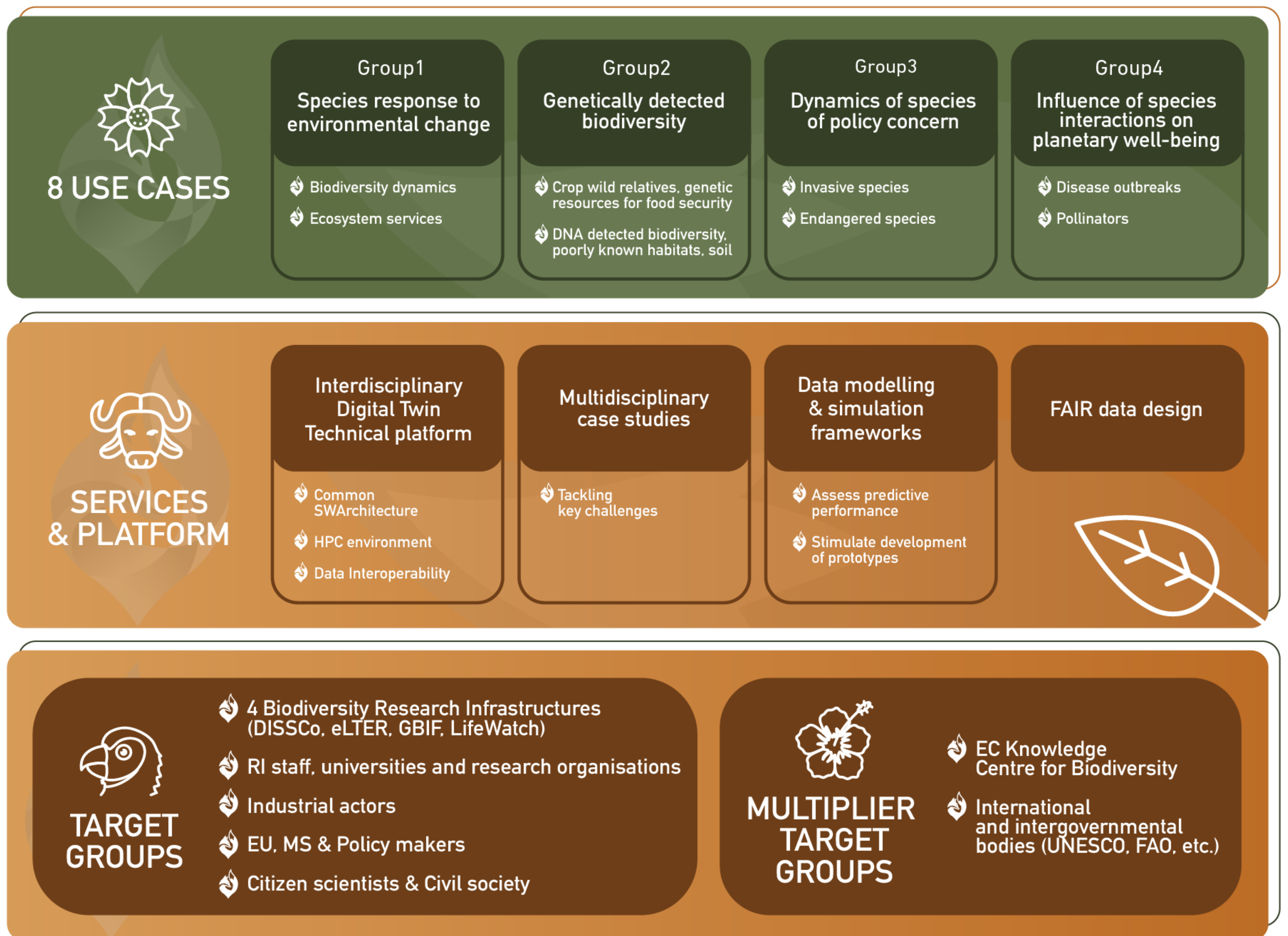


Figure 1. Interlinkages between different outputs and outcomes of the BioDT project.

**Website**



**Partners**

