

Building a highly accurate digital replica of the Earth system

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DestinE is a flagship initiative of the European Commission that will develop a digital twin of the Earth to support climate change and extreme weather events adaptation and mitigation strategies. This novel information system will provide unprecedented levels of detail, quality and interactivity, to support policymakers to better respond and adapt to environmental challenges posed by extreme events and climate change.

# Informing industrial operations and decision-making

DestinE information insights will help enable the industrial sector to understand the impacts of the climate crisis and extreme weather events on their business and identify opportunities for innovation and growth.

### Stakeholders across relevant industrial sectors



## Agriculture and food

Anticipate the climate crisis impact on productivity and adapt the supply chain.



## Construction and real estate

Adapt to changing weather conditions and sea levels in vulnerable areas.



#### Consumer goods

Anticipate supply chain disruption and adapt to changing consumer preferences.



## Energy and utility companies

Mitigate the climate crisis impact on energy supply and demand



## Insurance and finance

Mitigate the financial risks associated with climate crisis and extreme weather events.



#### Transportation

Mitigate the climate crisis and extreme weather events impact on transportation infrastructure.

...and more!

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DestinE will support the implementation of the Green Deal and the Digital Strategy of the EU by leveraging digital technology to enable accurate and actionable adaptation strategies and mitigation measures to:



Anticipate both natural disasters and man-made environmental damage.



Enable investigating what if scenarios to understand consequences of adaptation choices and explore possible future evolutions of our planet.



Understand the socio-economic effects of climate chanae.



Help communities adapt to climate change related challenaes.

## **Destination Earth Components**



#### Core Service Platform

User's entry point to the DestinE system, offering evidence-based decision-making tools, applications and services, based on an open, flexible, and secure cloud-based computing infrastructure.



#### Data Lake

Data access harmonisation of Digital Twins data and federated providers such as ESA, EUMETSAT, ECMWF, Copernicus and many other sources. Big data processing capabilities provided to allow computing in proximity to the data.



#### Digital Twins and the Digital Twin Engine

Digital replicas of different aspects of the earth system based on the fusion of cutting-edge simulations and observations, orchestrated with a unified software environment, the Digital Twin Engine.









