

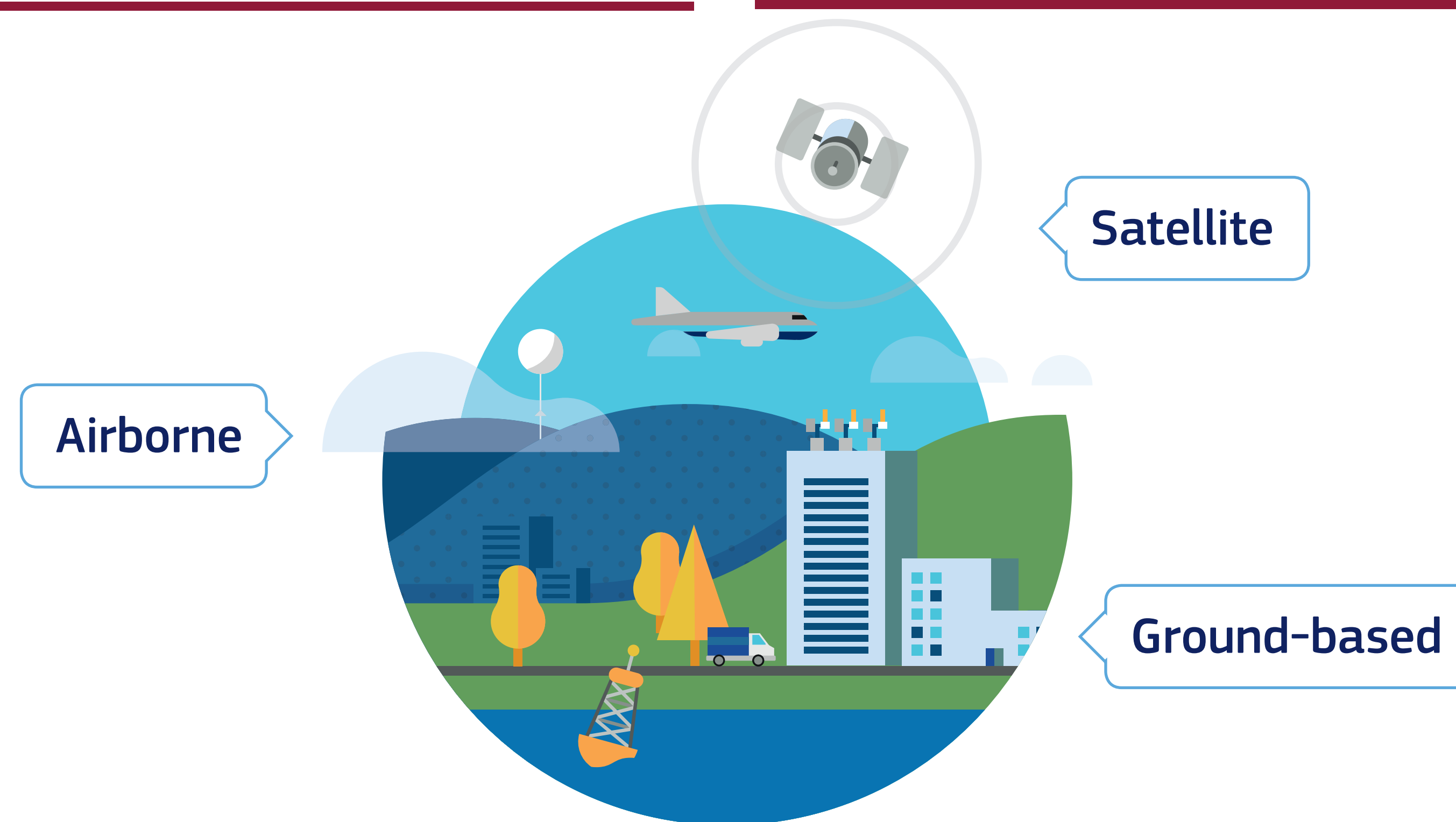
Copernicus Climate Change Service (C3S): A European Operational Response to Climate Policies and Action

The Copernicus Climate Change Service adds value to environmental measurements and provides free access to quality-assured, traceable data and applications, all day, every day. We offer our users consistent information on the climate anywhere in the world, and support policymakers, businesses and citizens to deal with the consequences of climate change and help them prepare for the future.

How C3S works

Earth observations

Our Earth is monitored 24/7 by a range of satellites, as well as sensors on the ground, in the oceans and in the air. The European Earth observation programme, Copernicus, has a dedicated set of satellites, called the Sentinels, to deliver vital information on the state of our planet. Combined with observations from third-party satellites and sensors spread across the globe several petabytes of environmental data are gathered around the clock.

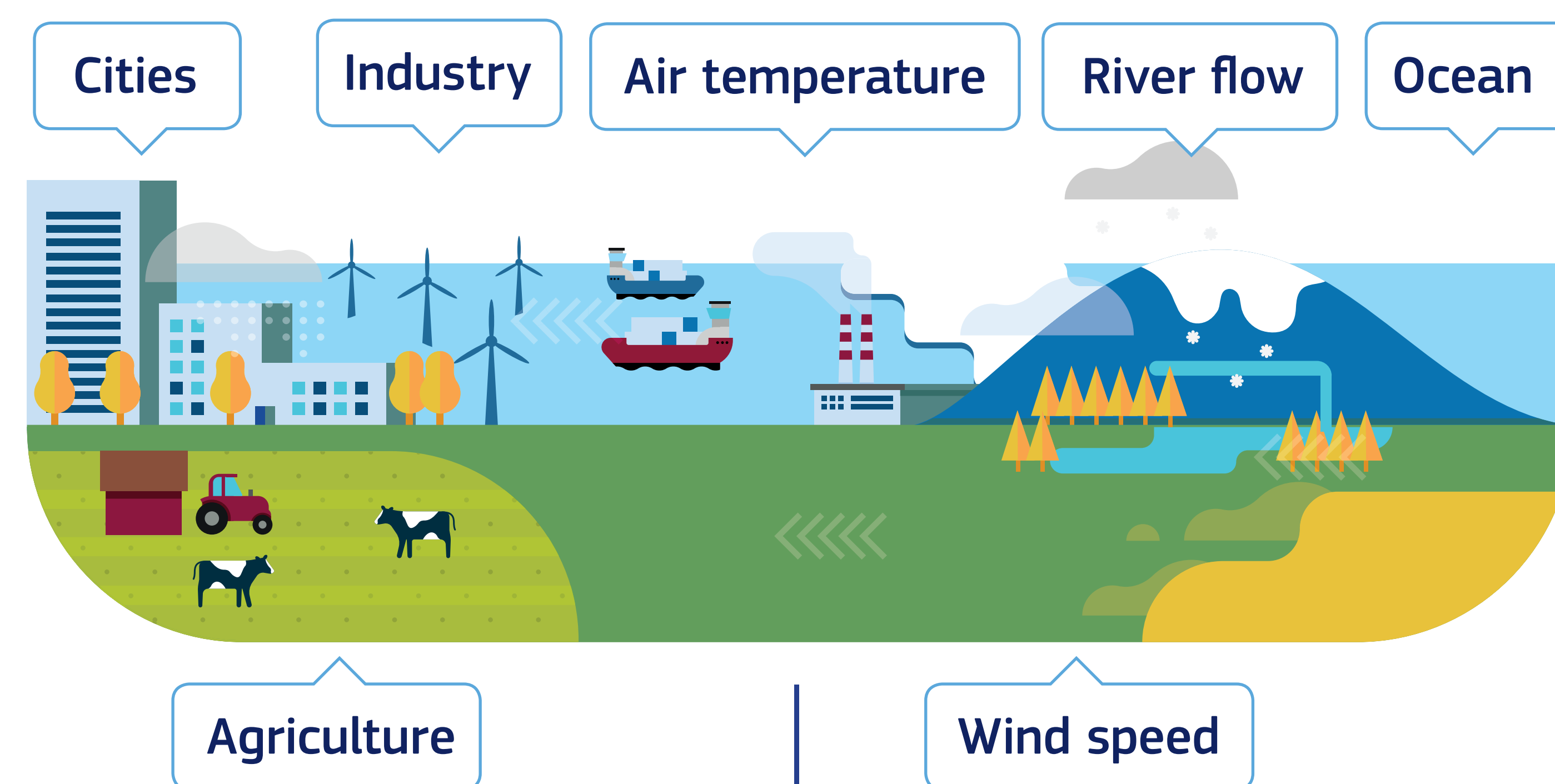


Earth observations are vital in providing the necessary information to businesses, scientists and policymakers and to keep track of agreements made by several parties. By constantly monitoring greenhouse gases, for instance, it is possible to establish whether the goals set in the Paris Agreement will be met and which actions still need to be taken. Observations play an important role in making sure that policymakers continue to respond to climate change and are held responsible.

Modelling

The Copernicus Climate Change Service uses state-of-the-art numerical models that combine observations with historical climate information to produce free, full and open access data and tools about the past, present and future climate.

Climate models make it possible not only to look at the past and current situation but also to make predictions about the short-term and long-term future.



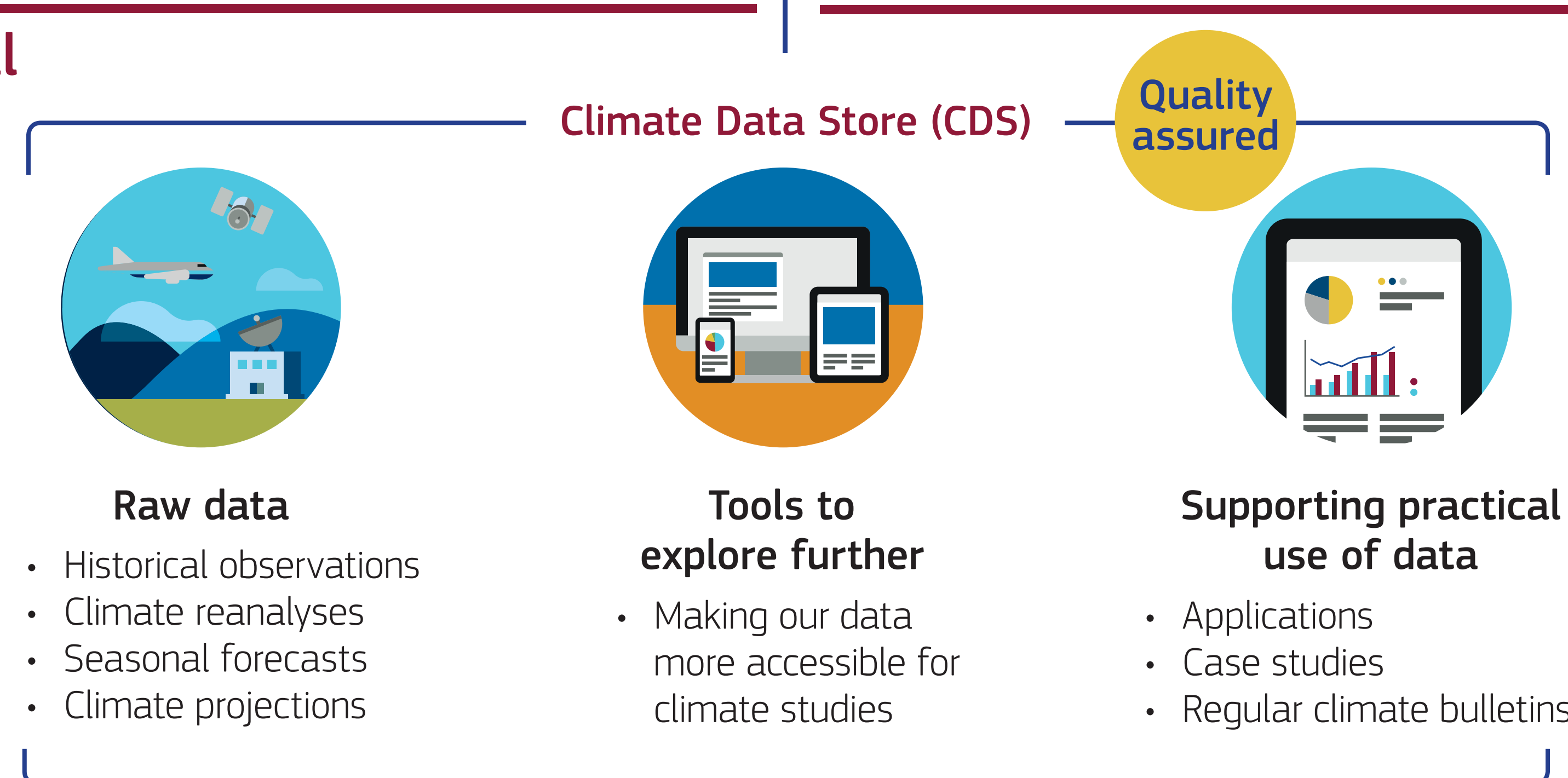
Earth observation data allows us to improve and validate our climate models. With better models we are able to fine-tune our predictions and therefore better support decision making for the future.

Combining observations with models produces 'maps without gaps' and a fully consistent description of the historical climate and its evolution.

Outputs: European and global

Core to our service is the provision of free, full and open access quality-assured data and tools related to climate change. Anyone can dive into the wealth of information in our Climate Data Store: cds.climate.copernicus.eu

To show how our data, tools and information could be used, we have partnered with external organisations to develop examples of how the private and public sectors deal with climate-related decision-making and planning.



Businesses can use our data to improve their existing services or create new products.

Industry can benefit from assessing how it might be affected by changes in the climate, and adapting accordingly.

Public services and scientists can rely on our comprehensive and quality-assured data.

Policymakers at city, regional and national scale can use our information for their short-term and long-term planning and decision making related to climate change.

Users

