

Community Development – Research

Metro Climate Stats:

Creating Tools for Climate Change Mitigation in our Region

Land Use Advisory Committee - May 21st, 2020



Objectives

- Introduction to the climate change mitigation tools
- Scenario planning brainstorming session

Sustainability



“Providing leadership, information, and technical assistance to support local governments’ consideration of climate change mitigation, adaptation, and resilience”.



Calming the Storm: Localized Flooding in the Twin Cities Region

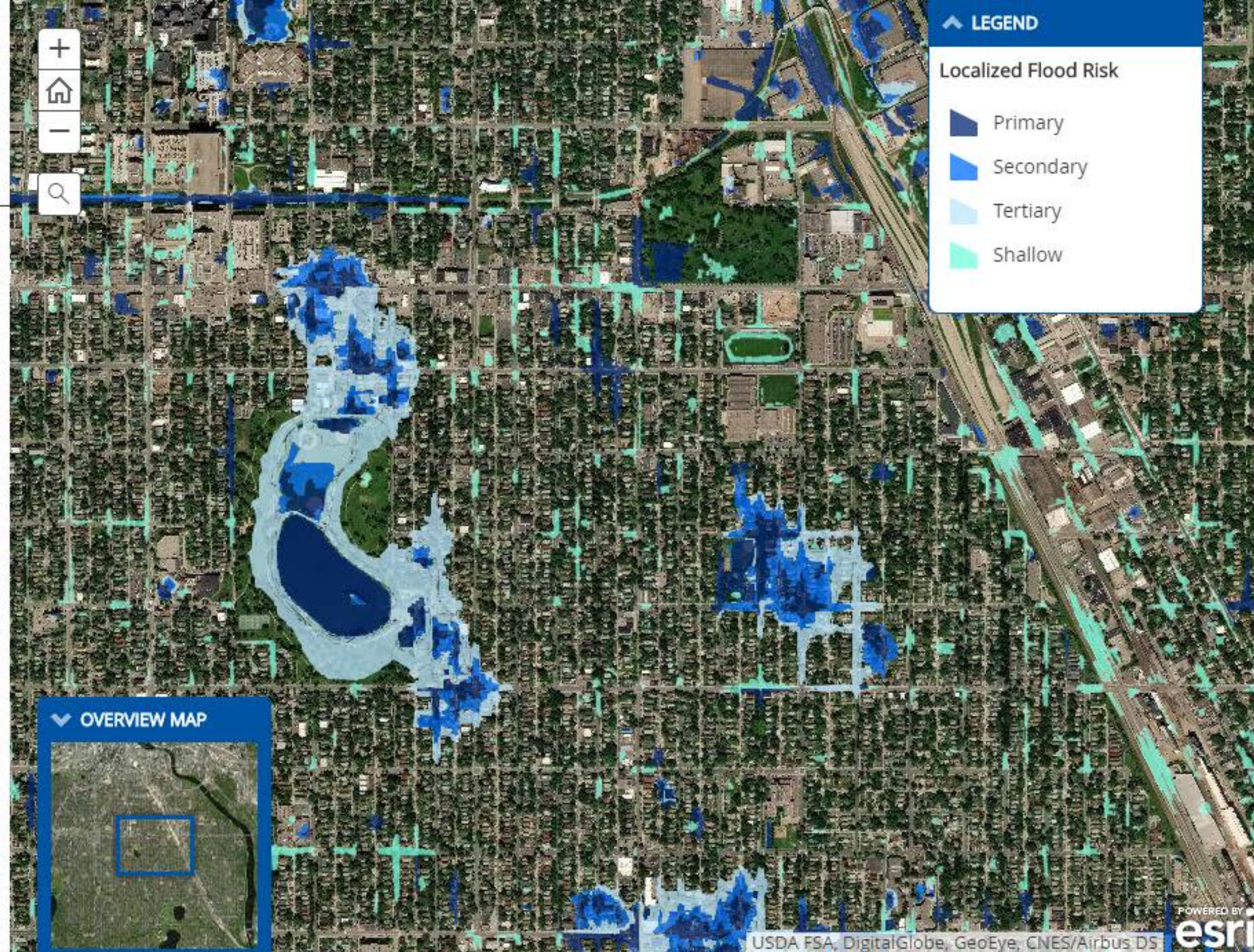
Mapping Localized Flood Risk

What is the Localized Flood Map Layer?

Our [Localized Flood Map For Climate Vulnerability Screening](#) was created using remote sensing data which determines the topography of the earth. The elevation information forms the basis for our localized flood map to determine areas that may experience localized flooding during short, high intensity rain events. An [interactive version of the map](#), similar to the map displayed to the right, is available on our CVA website.

How is localized flooding categorized?

Potential flood areas are categorized into three Flood Impact Zones (FIZ): Primary,



Our climate is changing

Climate change is already occurring in Minnesota and its impacts are affecting our state's environment, economy, and communities.



How we're adapting

Minnesota is taking many steps to increase climate adaptation in our state, including a wide range of planning, research, and implementation efforts.



Planning for the future

State agencies have developed five statewide climate adaptation indicators to help track Minnesota's progress in climate adaptation.



Metro Climate Stats





Estimates suggest that cities are responsible for 75 percent of global CO2 emissions, with transport and buildings being among the largest contributors.

United Nations
Environmental Panel



Challenges



Technical expertise required



Expensive



Staff time



Uncertainty



Metro Climate Stats

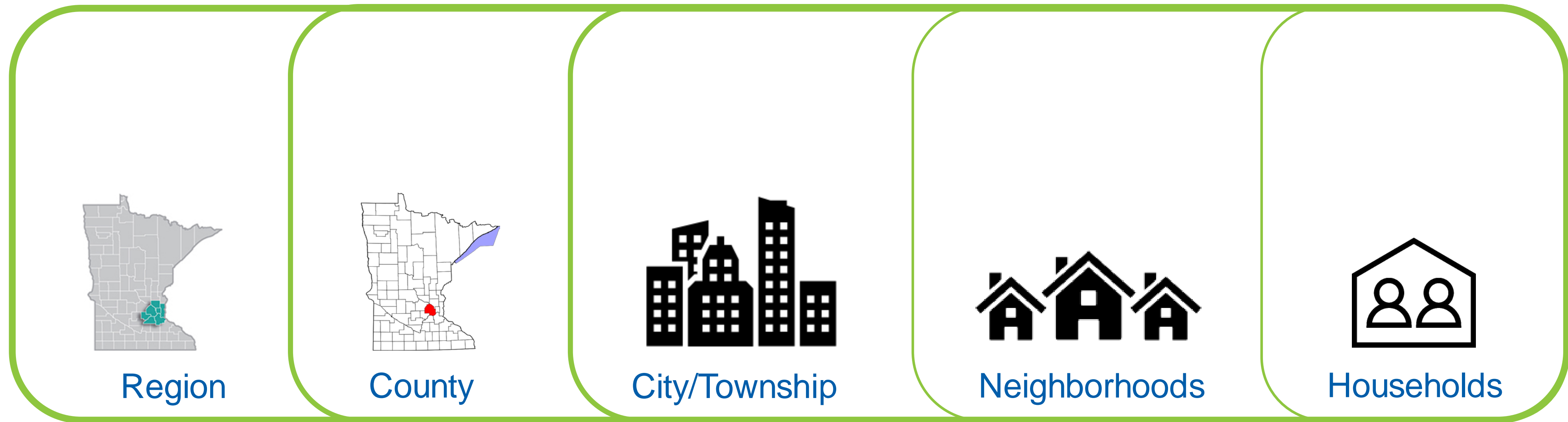


Inventory



Scenario Planning





Greenhouse emissions planning occurs at multiple scales





INVENTORY



INVENTORY

Electricity

Stationary Fuels Combustion

Wastewater

Transportation

Solid Waste

Livestock and Agriculture





SCENARIO PLANNING



SCENARIO PLANNING



SCENARIO PLANNING

Bike lanes?

Transit?

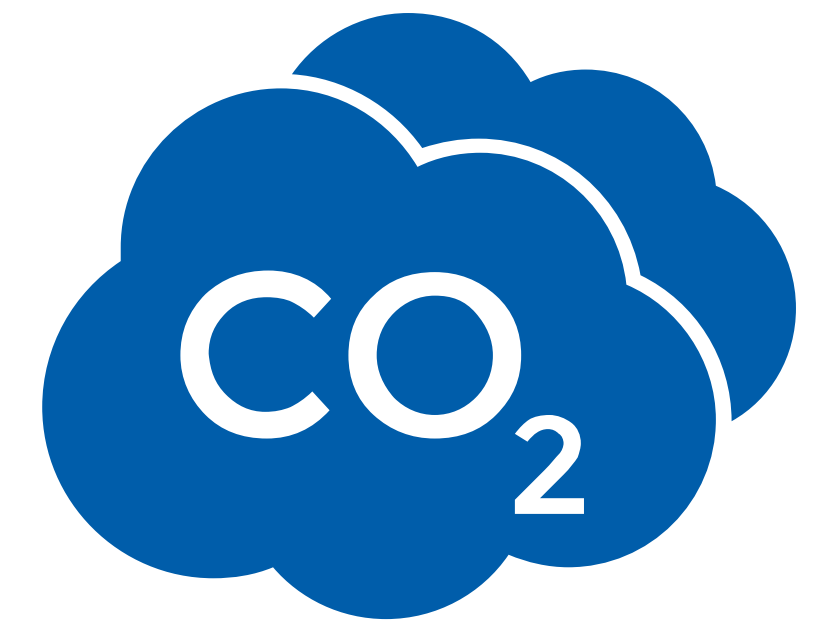
Compact communities?

Electrifying vehicles?

Advanced biofuels?



What is Greenhouse Gas Emissions Scenario Planning?



- Relies on quantitative models and academic research
- Evaluates likely outcomes of policy and technology implementation based on reasonable assumptions
- Provides information to evaluate and improve plans



FOUR DIFFERENT SCENARIOS RELATED TO TRANSPORTATION AND LAND USE



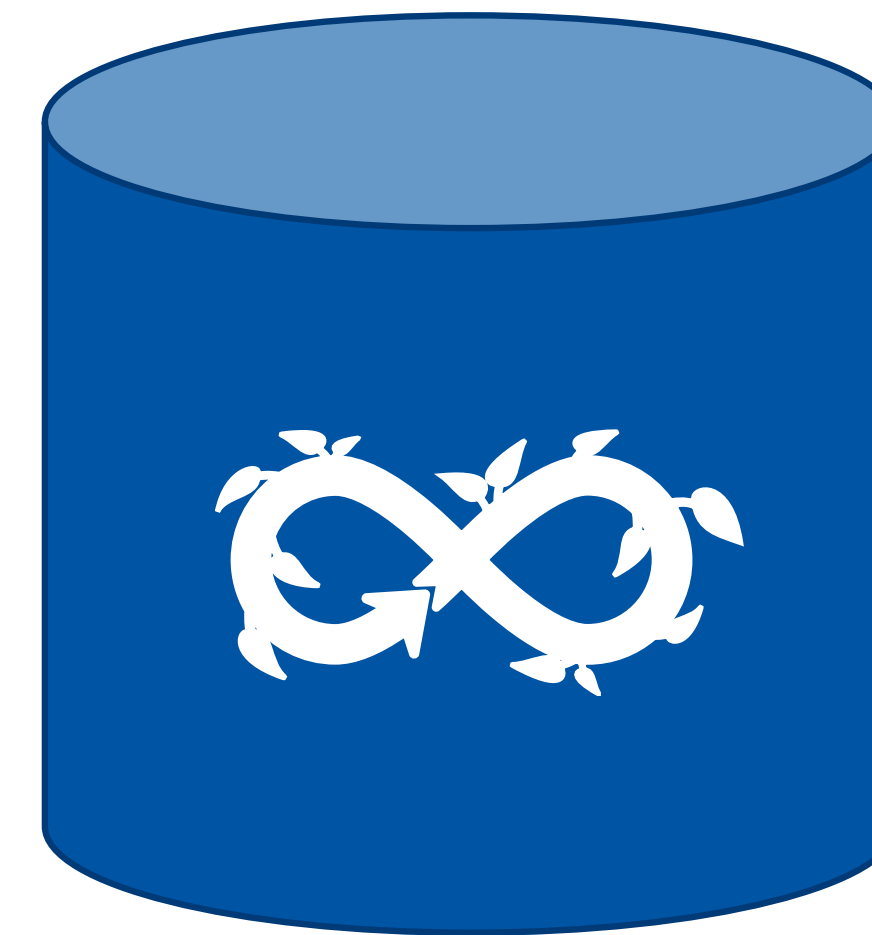
**Business
As Usual**



**Land Use
& Transit**



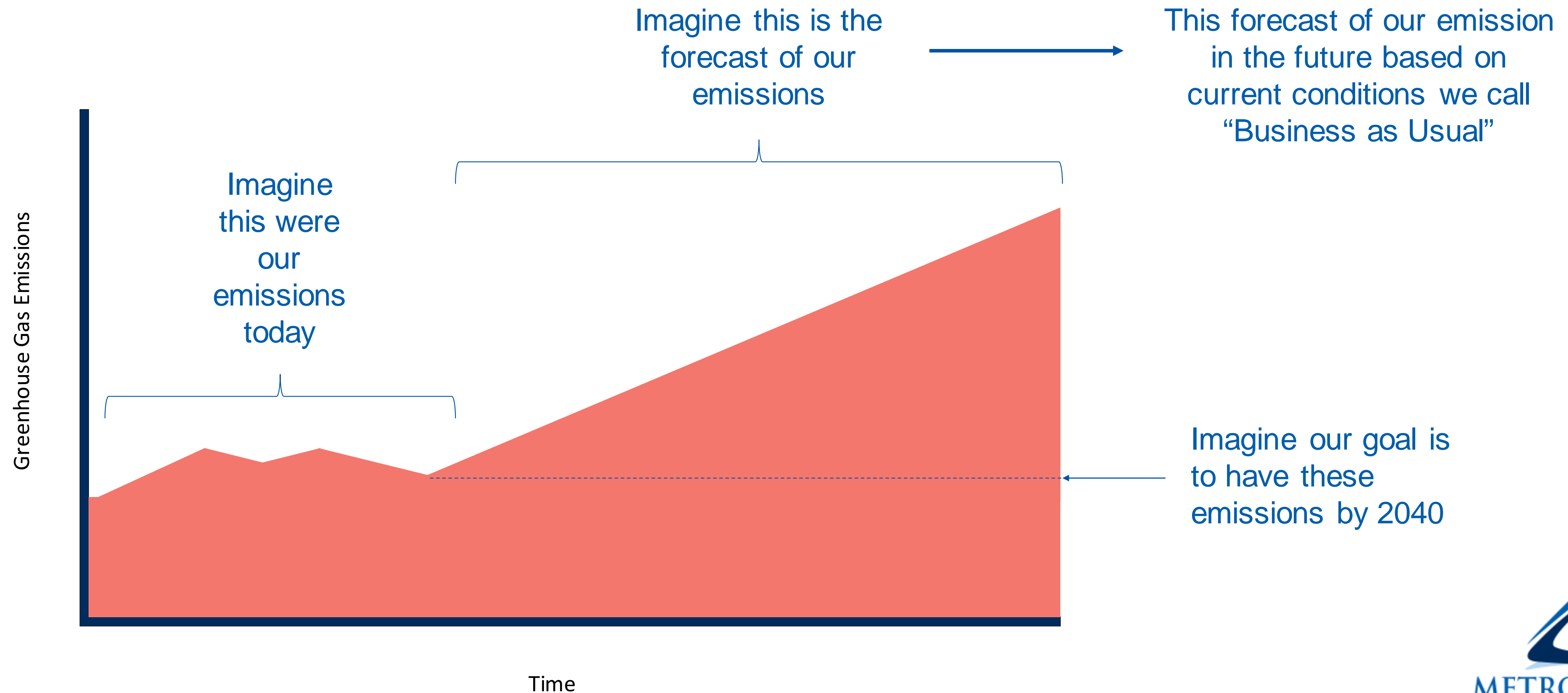
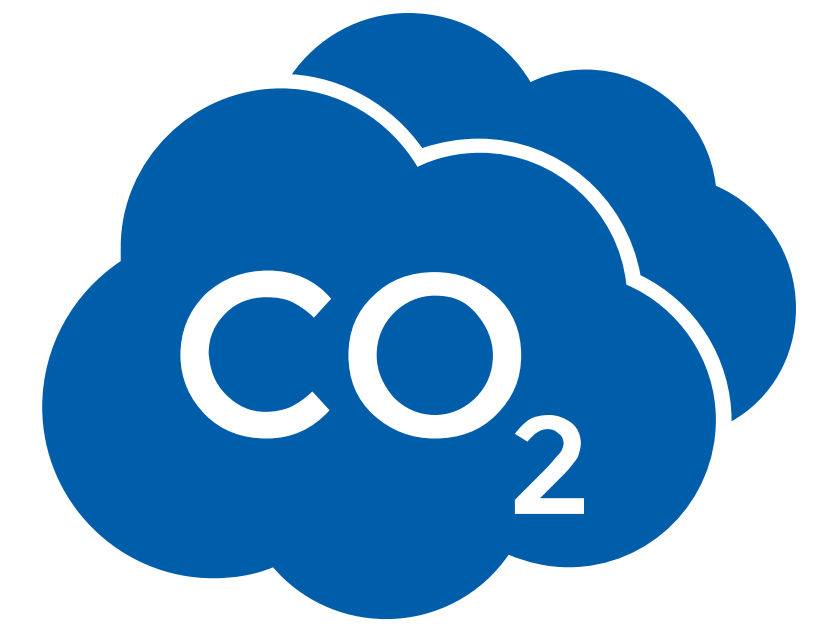
**Emerging
Technologies**



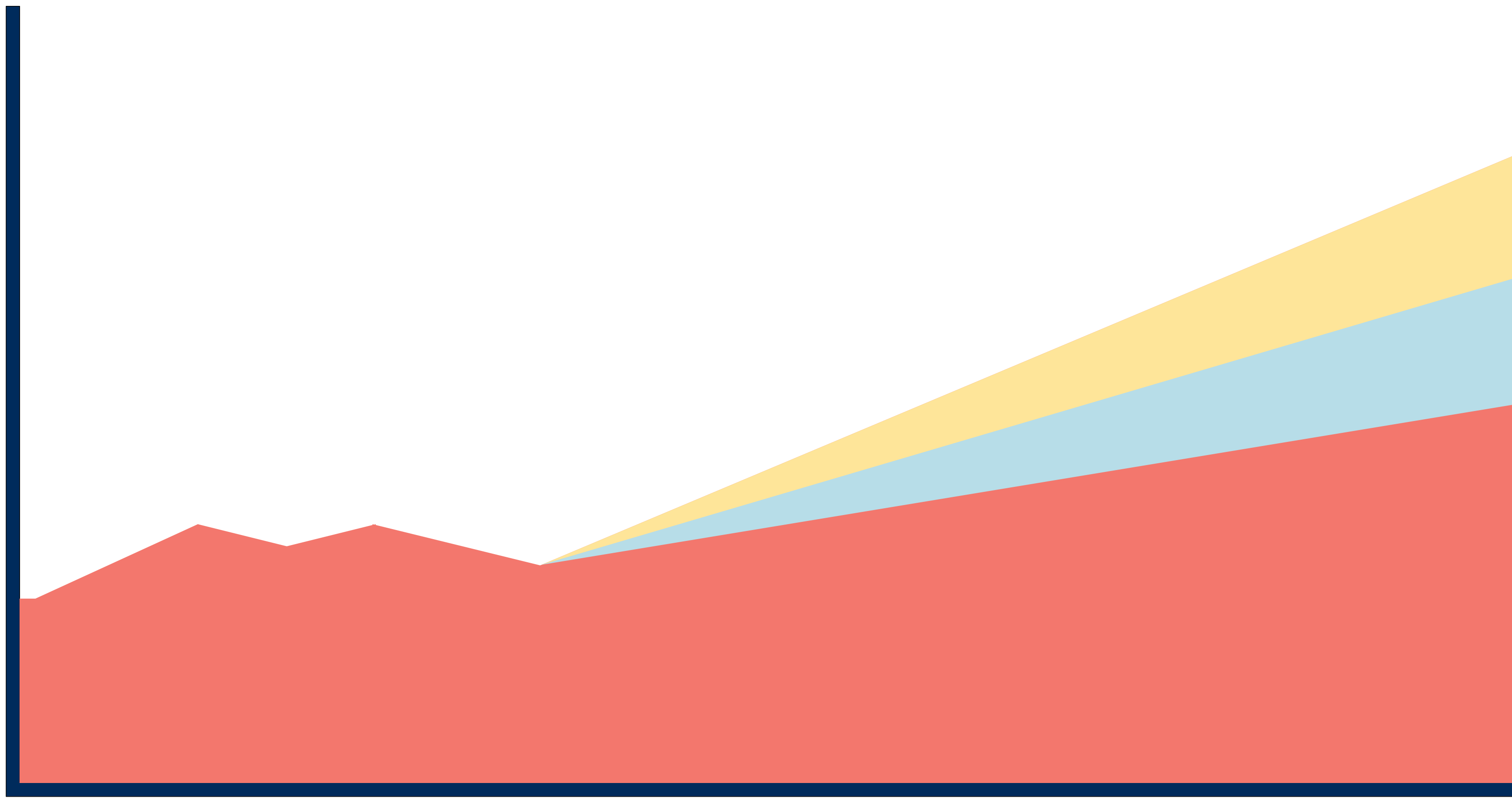
**Building
Energy +
Circular
Economy**



What is Greenhouse Gas Emissions Scenario Planning?



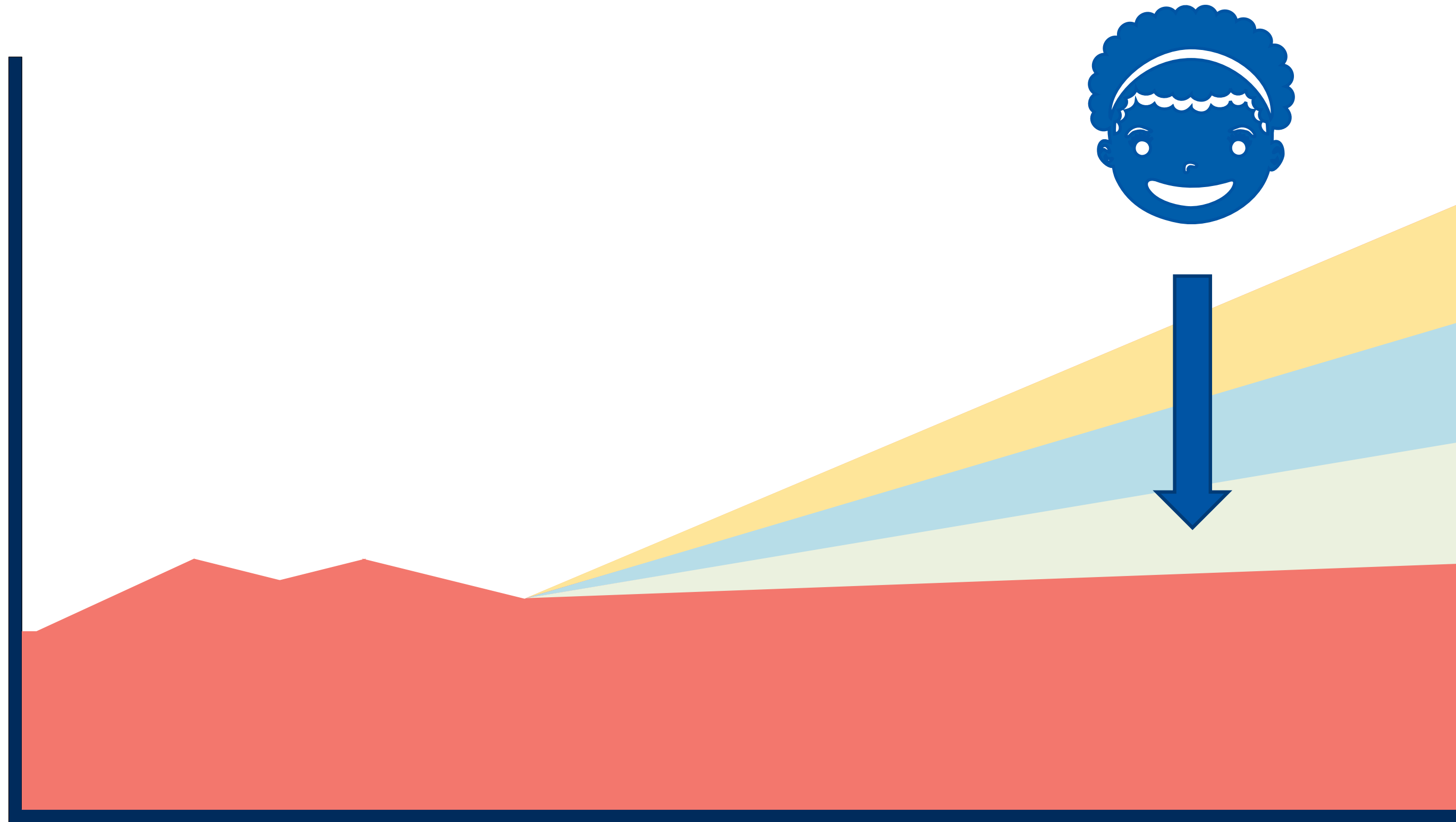
Greenhouse Gas Emissions



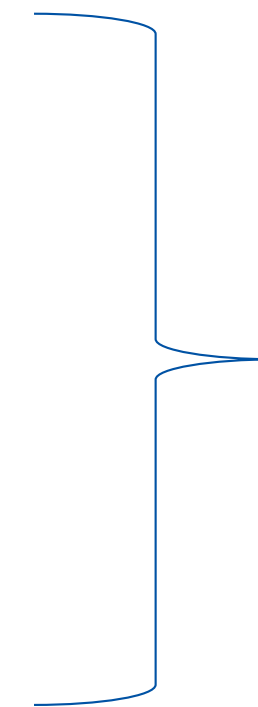
Combining strategies yields even bigger CO2 emissions savings



Greenhouse Gas Emissions



Time



Ambitious action is necessary to meet our climate goals



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