



# Environmental Insights Explorer

Reducing global emissions with actionable data and insights

October 2021







# Working together to build a resilient, sustainable future for our cities

At Google, we unify our practices, partnerships, and products around a single mission – to foster sustainability at scale. By organizing information about our cities and making it actionable through technology, we’re helping people create an even more positive impact together.

The current global state of climate change requires action. Reducing carbon emissions is an essential step. At Google, we’re in our third decade of climate action working toward a carbon-free future. The goals are clear.

## Our cities can lead the way in climate action

Cities by their very nature are hubs of activity – and the source of 70% of the world’s CO<sub>2</sub> emissions.<sup>1</sup> We view this challenge as a tremendous opportunity for urban areas to be the world’s pioneers in climate action.

We have work to do. According to the Global Covenant of Mayors, working with more than 11,000 signatories, less than a quarter of cities have been able to execute on their commitments to climate action due to a lack of time, data, and resources needed to make meaningful progress.

## Environmental Insights Explorer offers a solution

With Environmental Insights Explorer (EIE), Google is providing essential baseline measurement data to help cities identify strategies for climate action – heading toward a goal of reducing one gigaton of carbon emissions annually by 2030 and beyond.

Source:

<sup>1</sup> 2020 Google Environmental Report, [View report here](#)

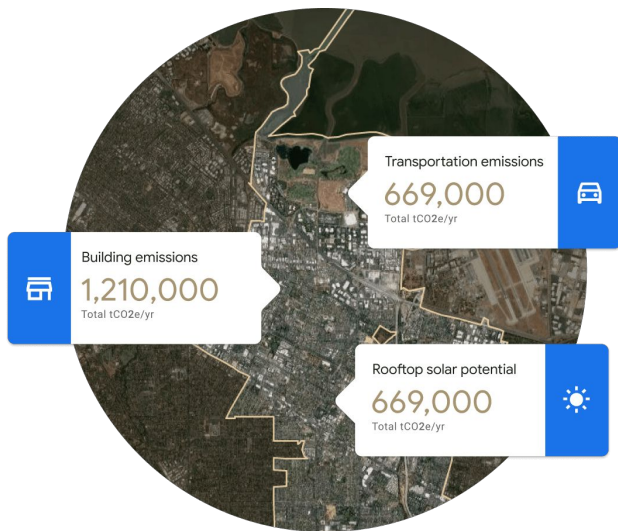
# 2030

CO<sub>2</sub> emissions need to be cut in half

# 2050

Carbon neutrality needs to be achieved





## What is Environmental Insights Explorer?

EIE uses exclusive data sources and modeling capabilities to help cities measure emission sources, run analyses, and identify strategies to reduce emissions. It's designed to make the process of setting an emissions baseline and identifying reduction opportunities simple, straightforward, and actionable.

### Putting Google's mapping data to use for the greater good

EIE's core insights are estimates based on unique Google mapping data to estimate building and transportation activity. Using advanced machine learning along with regional scaling, plus efficiency and emissions factors, EIE contains robust data analytics that are available for cities and local governments across the world to use.

### Creating a foundation for effective climate action

EIE helps cities address climate impact in four ways:



#### Measure

Provide year-over-year estimates across city transportation and emissions



#### Plan

Run scenarios based on granular levels of data and adjustable inputs



#### Act

Inform mitigation goals and identify reduction opportunities



#### Track

Monitor progress in meeting goals and the effects on human health

## Partnering to accelerate action at scale

We work in close collaboration with partners who are equally focused on the same climate goals and liaise with cities and municipalities across the globe.

As just one example of how Google is working with partners to accelerate data-driven climate action, in 2019 Google.org launched a \$4 million action fund in collaboration with ICLEI – Local Governments for Sustainability to support nonprofits and academic institutions in Europe and Latin America.



“ All cities must have consistent, comparable access to quality data to halve global GHG emissions by 2030. The annual, city-scale data designed for climate action now available on the Environmental Insights Explorer can help our member cities and thousands more to cut emissions, enhance resilience, improve public health and well-being, and ultimately save lives.

**Mark Watts**, Executive Director,  
C40 Cities Climate Leadership Group

## Environmental Insights Explorer by the numbers

EIE provides access to climate-relevant data for 20k+ cities and regional governments worldwide to help measure, plan, and track to reduce emissions.

In 2021 alone\*:

OVER  
**450**

cities exploring EIE data for climate action planning efforts

OVER  
**150**

cities use EIE data in their greenhouse gas inventories and/or compare with their emissions data

OVER  
**15**

cities use EIE in their climate action plans or for monitoring city climate targets

\* Projected by end of year.

## Cities turn insights into climate action

Available for thousands of cities worldwide, EIE offers insights on building emissions, transportation emissions, rooftop solar potential, air quality, and tree canopy. Access to more accurate information helps cities accelerate improvements in operational efficiency, and reduces the time it takes to inform climate action plans. In very real terms, this creates a faster path to fresher air, cleaner energy, and more trees for more neighborhoods.



### Launching a clean and equitable energy future plan in Cleveland, Ohio

The city of Cleveland worked with Greenlink Analytics and used EIE data to launch a 100%-clean electricity plan that spans buildings, transportation, and solar.

### Creating a sustainable operations and resilience action plan in Orange County, Florida

Seventy-eight cities across eight counties came together as part of the East Central Florida Regional Resilience Collaborative to set a plan to reduce regional transport emissions.



“After exploring several options, our East Central Florida Regional Resilience Collaborative worked with ICLEI and Google EIE data to provide greater data accuracy of the greenhouse gas emissions of all trips, a single source of data covering a wide range of transportation activity, and a consistent methodology to measure multiple transport modes and allowed us to track changes across all eight counties and 78 cities collectively.

**Patty Sheehan**, Commissioner, Orlando, Florida



“ Austin’s love for trees is evident in our urban forest, helping to clean the air and moderate hot summers. The collaboration between the city, the University of Texas, and Google will capture data to help mitigate climate change. This collaboration between the city, UT, and Google will capture data associated with this part of what’s special about Austin.

**Steve Adler**, Mayor, Austin, Texas



## Going from climate data to climate action in Monterrey Metropolitan Area, Mexico

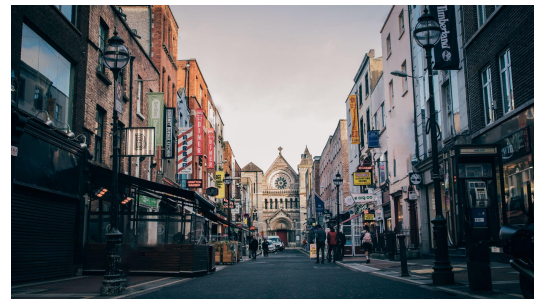
Working in collaboration with ICLEI, and with support from Google’s Action Fund, Monterrey is developing data-driven projects focused on transportation, buildings, and solar.

“ The Environmental Insights Explorer allows us to generate useful information to measure and track the progress of a multi-year investment in cycle infrastructure and initiatives to help promote cycling and encourage citizens to select cleaner modes of transportation. Now we can bring Environmental Insights Explorer data analytics to conversations about transportation greenhouse gas emissions and show people the impact of supporting such programs to help start reducing emissions for our entire city, which can help inform the debate.

**Peter Kurz**, Mayor, Mannheim, Germany

## Using data to inform policies and accelerate action in Dublin, Ireland

In Dublin, city leaders are using EIE insights to inform smart transit programs with the goal of reducing emissions and increasing the use of cleaner modes of travel. EIE also offered insights on reductions in CO<sub>2</sub> emissions due to COVID-19 lockdown restrictions.



“ Google EIE data analytics in their work measuring the impacts of sustainable mobility investments and improvements in cycling infrastructure are contributing to the conversation about transportation greenhouse gas emissions and encouraging cleaner modes of transportation in Dublin.

**Owen Keegan**, Chief Executive, Dublin City Council





# The time to act is now

At Google, we believe that data and technologies can help accelerate the actions required to enable the world's transition to a low-carbon future. With EIE, we're making environmental data and insights readily available to help cities around the world work together to address climate change – and to build a brighter, healthier, and more sustainable future for their citizens, their communities, and our planet.

To learn more or explore Environmental Insights Explorer for your city, visit [goo.gle/eie](https://goo.gle/eie)

