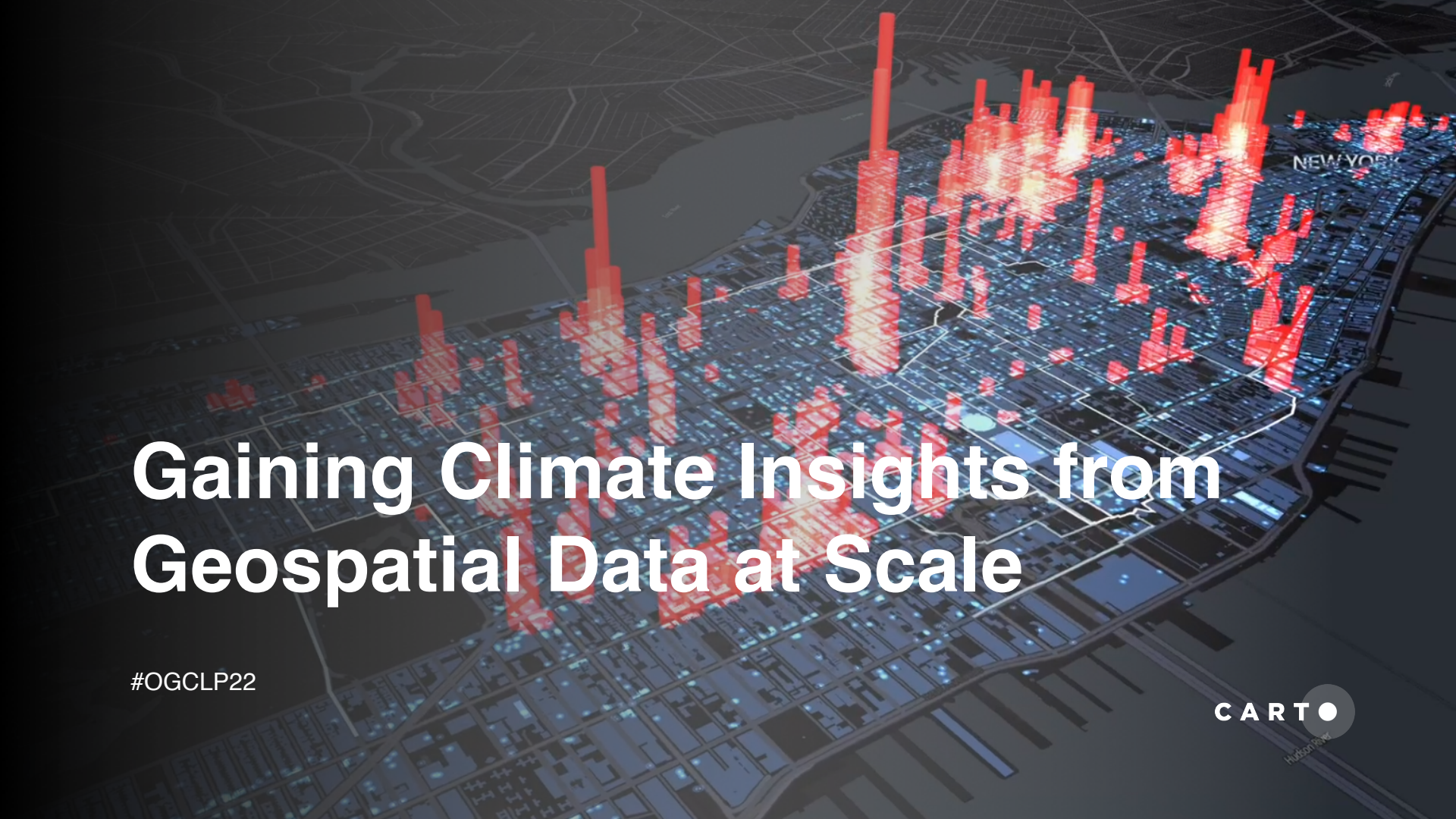


Gaining Climate Insights from Geospatial Data at Scale

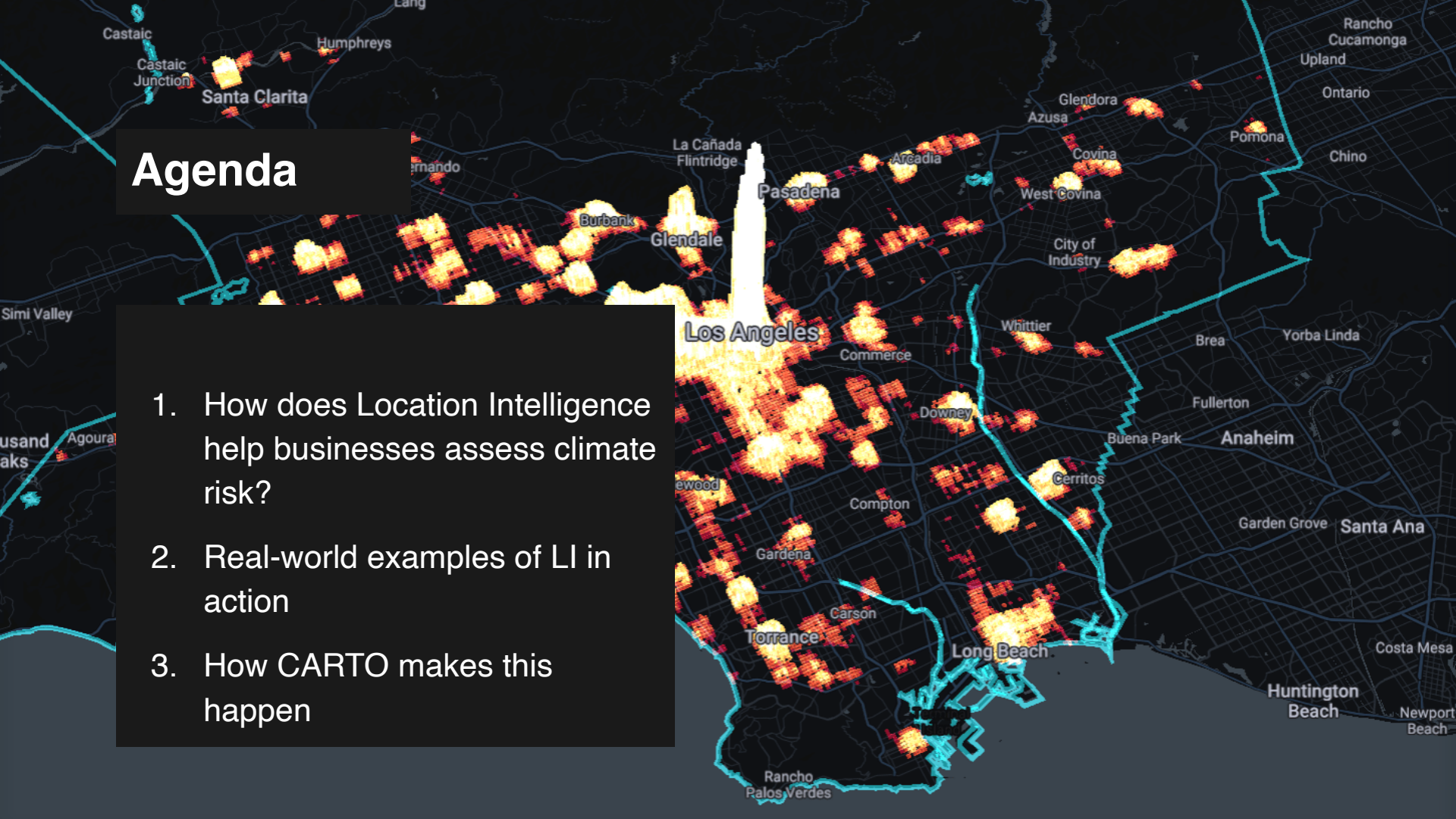
#OGCLP22

CARTO

Introductions

Ian Prentice

Business Development Manager at CARTO
iprentice@carto.com



Agenda

1. How does Location Intelligence help businesses assess climate risk?
2. Real-world examples of LI in action
3. How CARTO makes this happen

Most organizations are missing an opportunity...

80%

of all data collected has a location component

10%

used to power business decisions

Why does **Where** matter?

🌎🌏🌍

- Without **where**, you often can't understand **why**.
- Greater nuance, insight and intelligence behind decision making.
- Post-pandemic, the rules of geography are constantly changing and are continuing to change.
- Location is something we all understand and experience. It's an amazing - and emotive - engagement and communication tool.
- Communicate in a map what would take 1,000 words or 10 bar charts.

Where?

Where are there wildfires?

You're likely

Why?

How can we predict the spread of wildfires based on historical climatology data to understand our exposure to risk?

You need to use an LI Platform

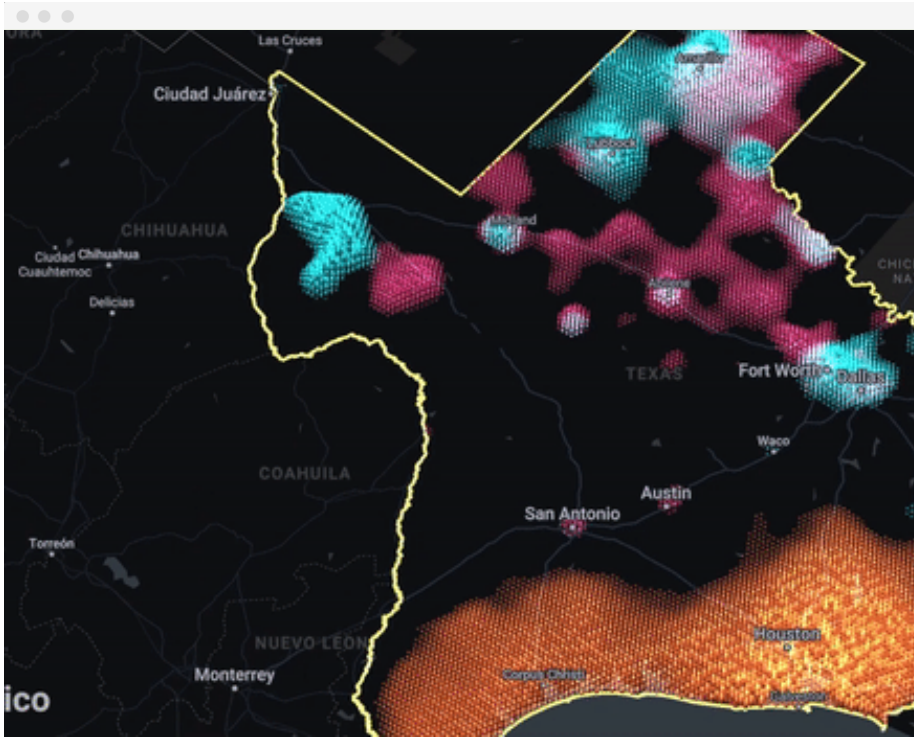
Climate Insights for Every Industry

Public Sector

Transportation departments and government agencies are looking for ways to make more data-driven decisions, especially in response to climate change.

Location Intelligence allows them to:

- Turn climate-related data into actionable insights
- Analyse and prioritise current and future risks to their infrastructure



Smart Cities

Allowing governments to reduce waste and energy consumption, increase eco-friendly public transport options and lower their carbon footprint are some of the key initiatives made possible by spatial data analysis, along with:

- Traffic management
- EV charging site selection
- Energy management
- Service improvements

Retail & CPG

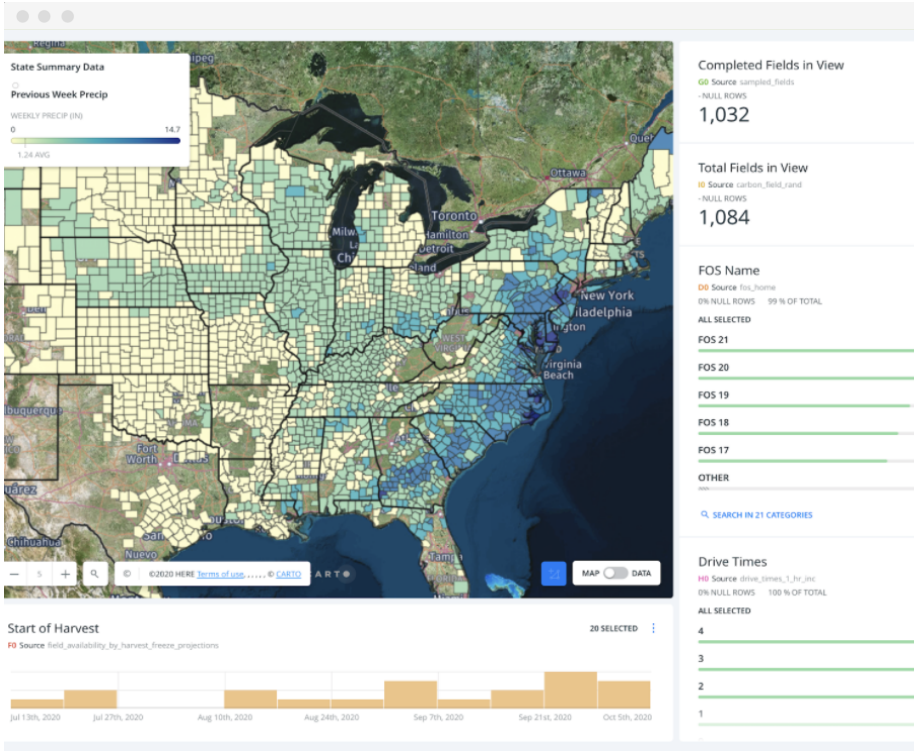
With the help of Location Intelligence, everything from fleet management to route planning can become not only much more profitable, but also more sustainable. Some of these use cases are:

- Sustainable fleet management
- Route optimization for improving speed while decreasing costs

Agriculture

Location Intelligence helps agriculture companies fulfill current demands without compromising the needs of future generations. This is possible with such use cases as:

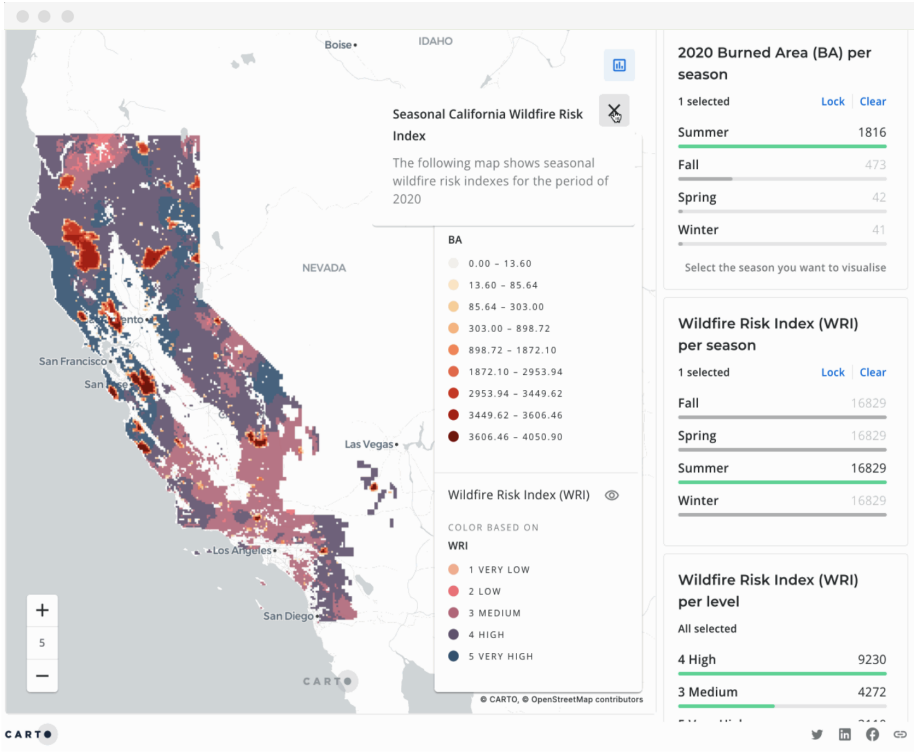
- Climate resilience crop planning
- Spatial data insight-driven field maintenance
- Ensuring food security - producing enough food & mitigating crop failures



Insurance

A growing number of insurance and reinsurance firms are looking to accelerate their investment. Location Intelligence allows them to:

- Identify patterns in risk exposure
- Use analytical methods with geospatial datasets to more rapidly and effectively plan, underwrite, and react.



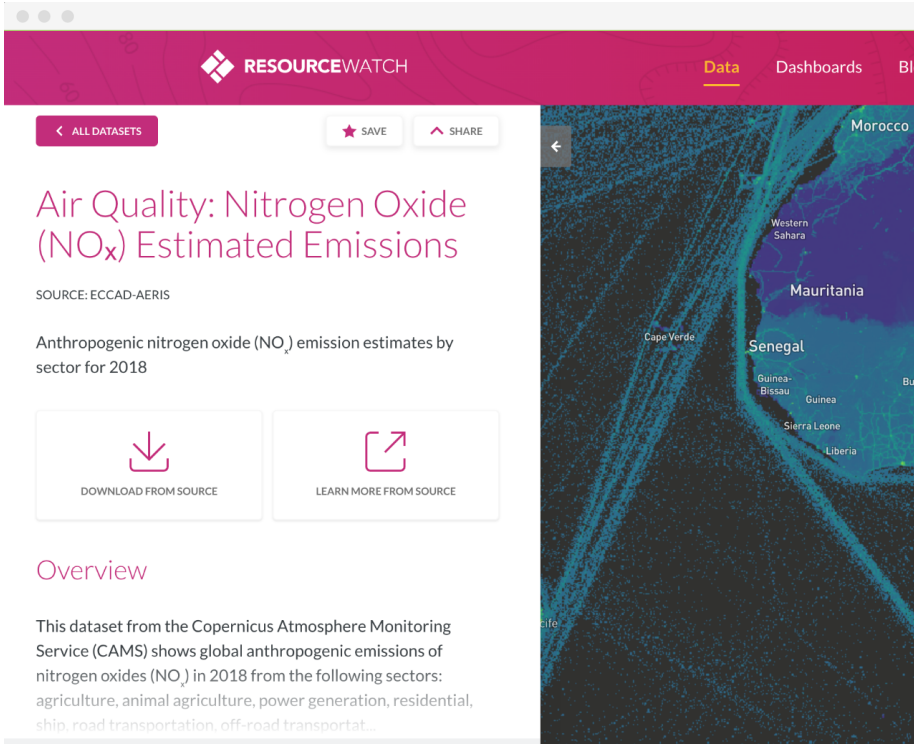
Real-world examples
Harefield
Northwood
Pinner
Gerrards Cross
Ruislip
Fulmer
Uxbridge
Stoke Poges
Northolt
Iver
Hayes
Slough
Windsor
Datchet
Longford
Old Windsor
Harrow
Stanmore
Edgware
Greenford
EALING
FINCHLEY
BRENT CROSS
WEMBLEY PARK
CRICKLEWOOD
Wembley
NOTTING HILL
FINSBURY PARK
STRATFORD
EDMONTON
TOTTENHAM
WOOD GREEN
WALTHAMSTOW
WOODFORD
HAROLD HILL
Romford
Ilford
Barking
Dagenham
Rainham
WOOLWICH
Erith
Bexleyheath
Dartford
Welling
Sidcup
Chislehurst
Beckenham
Bromley
Swanley
Farningham
Eynsford
Orpington
West Wickham
Addington
New Addington
Chelsfield
Purley
Shoreham
Downe
Coulsdon
Banstead
Epsom
Ashtead
Oxshott
Cobham
West Byfleet
Wisley
Woking
Knaphill
Chobham
Ottershaw
Chertsey
Weybridge
Esher
Walton-on-Thames
Sunbury-on-Thames
Teddington
Twickenham
Feltham
Egham
Virginia Water
Ascot
Sunningdale
Kingston upon Thames
New Malden
Surbiton
WIMBLEDON
STREATHAM
Mitcham
Morden
Thornton Heath
Croydon
Wallington
Sutton
Bisley
Basingstoke
Farnborough
Aldershot
Camberley
Bracknell
Ascot
Maidenhead
Slough
Windsor
Reading
Wokingham
Newbury
Hungerford
Marlborough
Swindon
Oxford
Abingdon
Wantage
Didcot
Henley-on-Thames
Wallingford
Thame
Aylesbury
Amersham
Chesham
Beaconsfield
High Wycombe
Marlow
Maidenhead
Windsor
Staines-upon-Thames
Egham
Chertsey
Woking
Guildford
Godalming
Haslemere
Petersfield
Alton
Basingstoke
Andover
Newbury
Hungerford
Marlborough
Swindon
Cirencester
Tetbury
Malmesbury
Chippenham
Trowbridge
Frome
Shepton Mallet
Glastonbury
Wells
Bath
Bradford-on-Avon
Melksham
Devizes
Pewsey
Salisbury
Amesbury
Stonehenge
Warminster
Westbury
Shaftesbury
Blandford Forum
Wimborne Minster
Ringwood
Fordingbridge
Lymington
New Forest
Southampton
Eastleigh
Fareham
Portsmouth
Gosport
Havant
Chichester
Arundel
Littlehampton
Worthing
Shoreham-by-Sea
Brighton
Hove
Lewes
Newhaven
Seaford
Eastbourne
Hastings
Bexhill-on-Sea
Rye
Battle
Uckfield
Crowborough
Tunbridge Wells
Sevenoaks
Westerham
Edenbridge
Oxted
East Grinstead
Haywards Heath
Burgess Hill
Hassocks
Lancing
Shoreham-by-Sea
Worthing
Littlehampton
Arundel
Chichester
Havant
Portsmouth
Gosport
Fareham
Eastleigh
Southampton
New Forest
Lymington
Ringwood
Fordingbridge
Wimborne Minster
Blandford Forum
Shaftesbury
Warminster
Westbury
Trowbridge
Melksham
Devizes
Pewsey
Salisbury
Amesbury
Stonehenge
Frome
Shepton Mallet
Glastonbury
Wells
Bath
Bradford-on-Avon
Chippenham
Malmesbury
Tetbury
Cirencester
Swindon
Marlborough
Hungerford
Newbury
Andover
Basingstoke
Alton
Petersfield
Haslemere
Godalming
Guildford
Woking
Chertsey
Egham
Staines-upon-Thames
Windsor
Maidenhead
Marlow
High Wycombe
Beaconsfield
Amersham
Chesham
Aylesbury
Thame
Wallingford
Henley-on-Thames
Didcot
Wantage
Abingdon
Oxford
Keyboard shortcuts
Map Data ©2022
Terms of Use
Report a map error
Google

WORLD RESOURCES INSTITUTE

WRI

WRI's Resource Watch program needed an easy way to enable a worldwide audience to view timely datasets covering climate change, human health, air quality, energy, water, and more.

- The tool built on CARTO enables users to dive into curated topic pages of data, explore near real-time visualizations and create and share their own unique data visualizations by overlaying individual data sets.

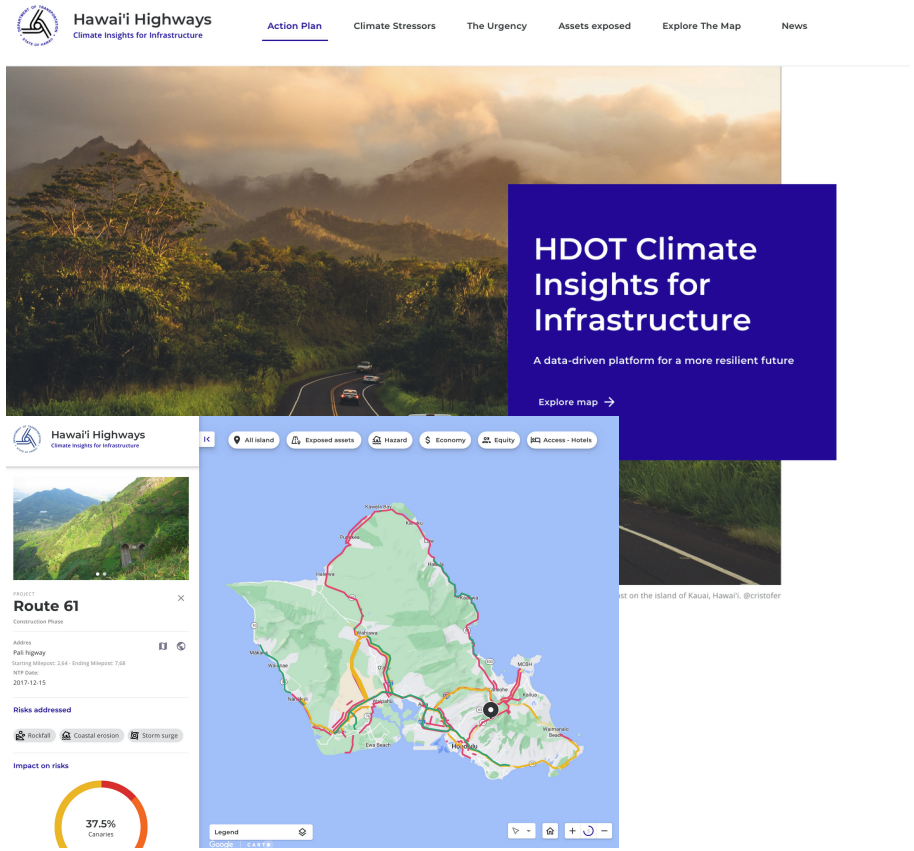


Hawaii Highways

The HDOT Climate Insights for Infrastructure built by CARTO takes advantage of GCP technology for Hawaii Highways.

The tool incorporates self-service Location Intelligence and visualizations, empowering non-technical users to generate powerful insights on the state's climate resilience.

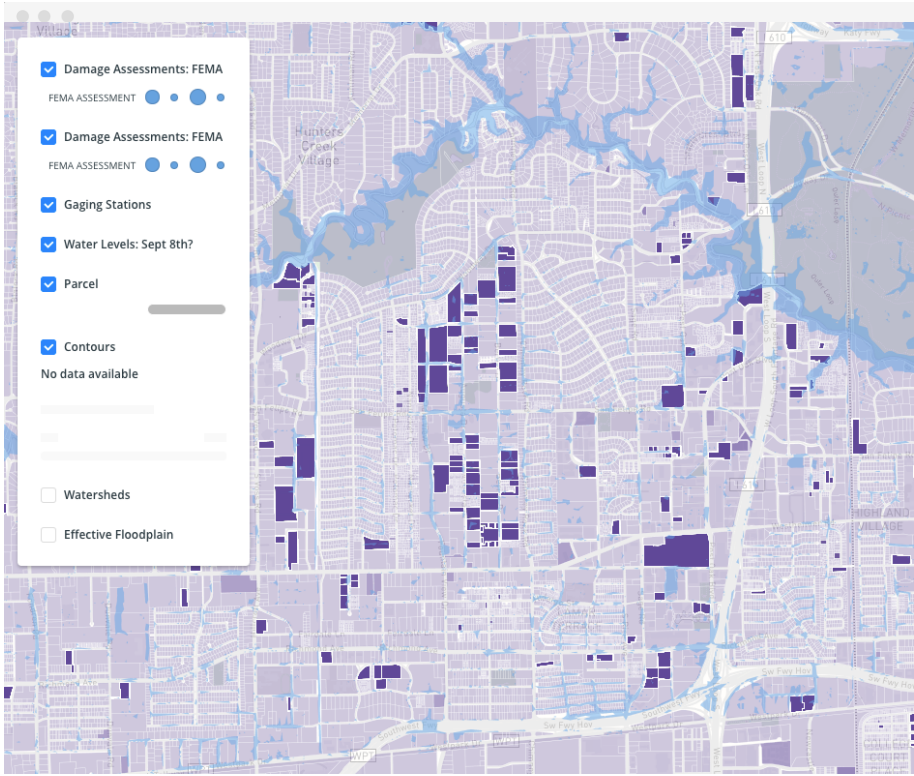
- Hawaii DOT are able to identify elements of the state's transport infrastructure most at risk from climate-related impacts, helping them guide future investment, maintain existing infrastructure and plan for climate-related resilience.



Harris County, TX

Harris County faced a major catastrophe resulting from Hurricane Harvey and needed help with recovery and future disaster planning. They used CARTO to inform citizens and help the County manage recovery efforts, and plan for future climate events.

- County officials can now enhance the accuracy of data in real time, enabling citizens and response teams to plan more effectively, and ensure continued flood monitoring where needed.



PHILIP MORRIS INTERNATIONAL

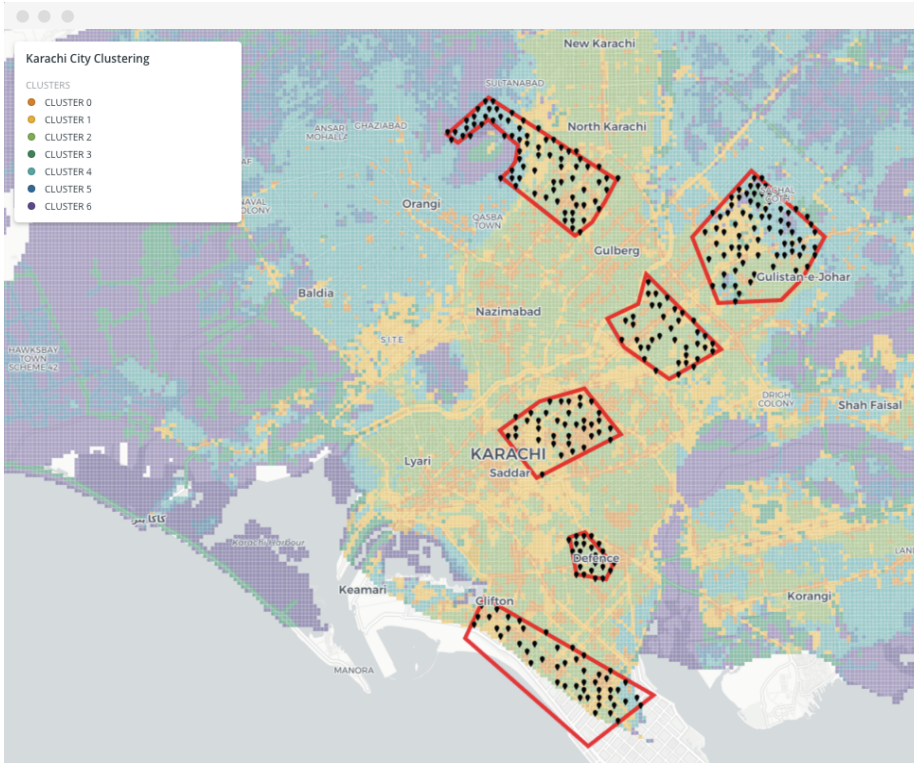
Philip Morris

Philip Morris International's sustainability team uses CARTO to gather location-based behavioral insights on cigarette butt littering, identifying problematic hotspots in cities.

Using CARTO, they can:

- Use external datasets such as POIs & foot traffic to predict where there may be more litter with up-to-date data.
- Visualize data collected as part of the World Is Not An Ashtray project, monitoring the impact of anti-littering activities.

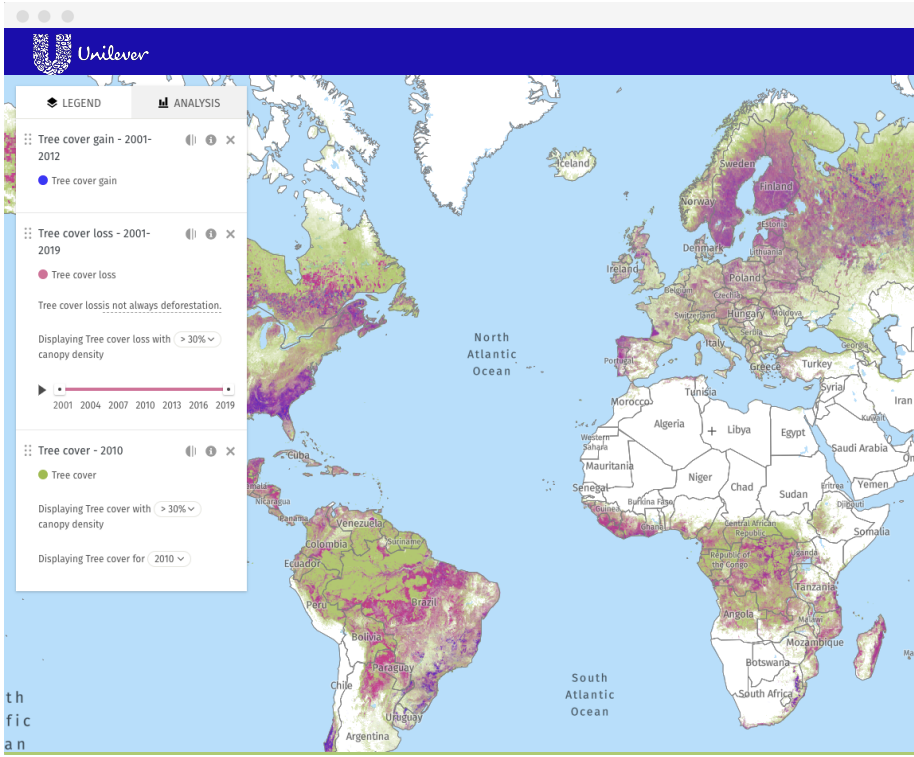
Learn more here.



Unilever

Unilever's sustainability team is using CARTO to create and maintain a deforestation tracker as part of their ESG objectives.

The solution brings together a wide range of datasets on deforestation across the globe, providing visualizations and spatial analytics to ensure data driven decision making.

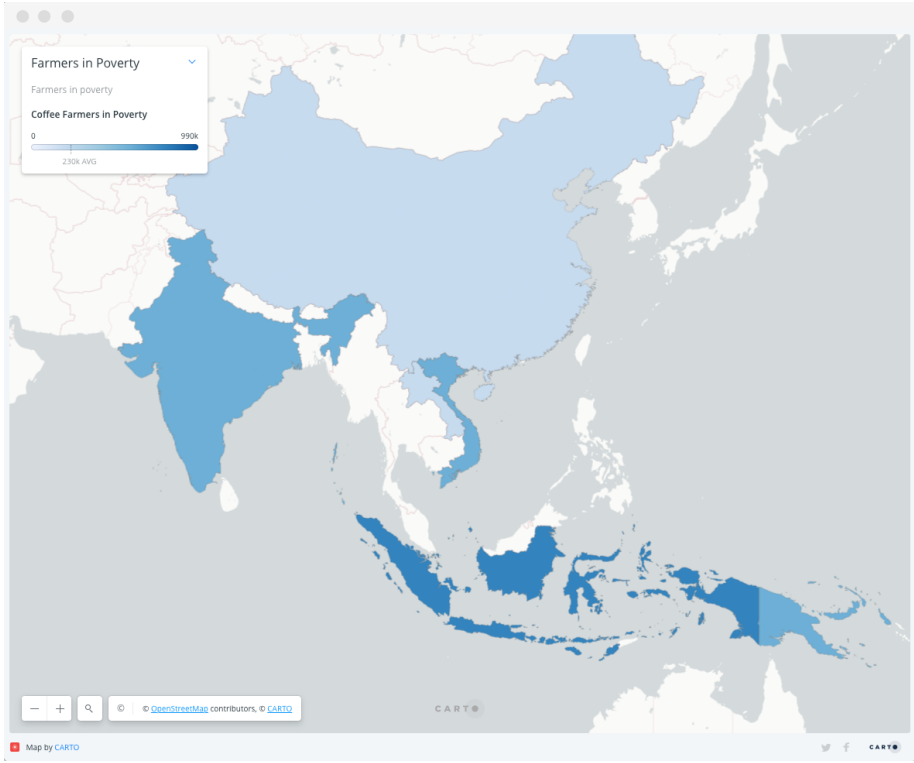


Enveritas

Enveritas

Enveritas is working directly with 400,000 local farmers in Latin America, Africa and Asia to verify sustainability practices.

Using CARTO, Envertias is able to help coffee farmers visualize the results of their analysis, and to continue their work towards building more sustainable supply chains to help bring farmers out of poverty.



SISTEMA.bio
CREATING VALUE FROM WASTE

Sistema.bio

Sistema.bio's mission is to drive sustainability through transforming waste into energy, as well as bringing economic, air quality, and waste reduction benefits to smallholder farmers around the world.

Using CARTO's platform, Sistema.bio was able to:

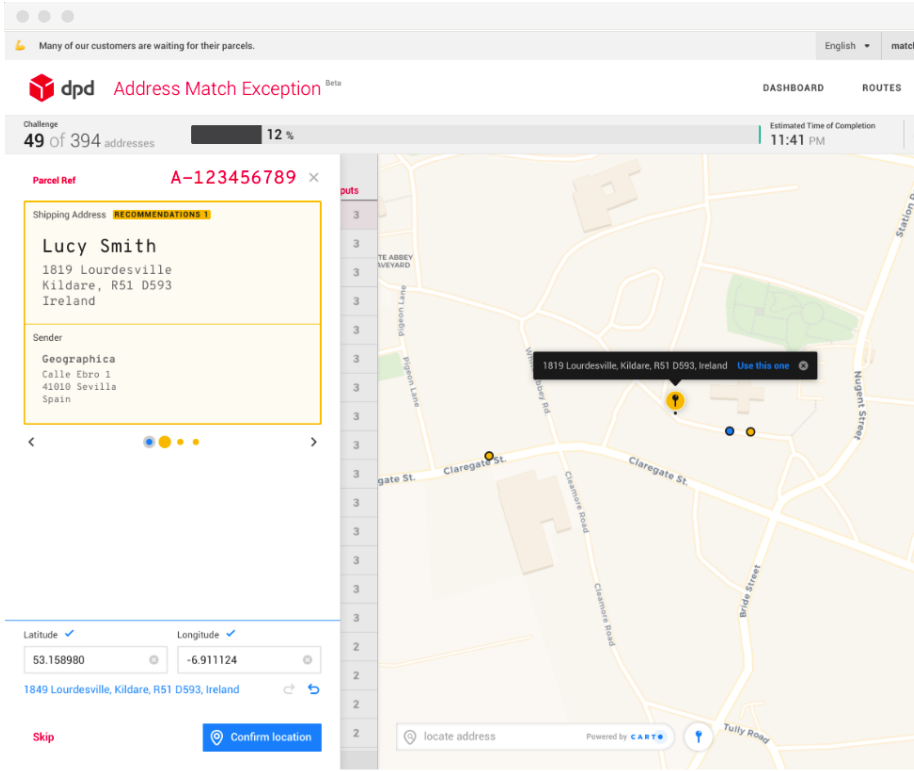
- Visualize all existing and new biodigester installations across the globe
- Analyze current market presence to prioritize field operations & route optimization
- Grow a sustainable footprint by targeting hyper-local geographies to reach new customers

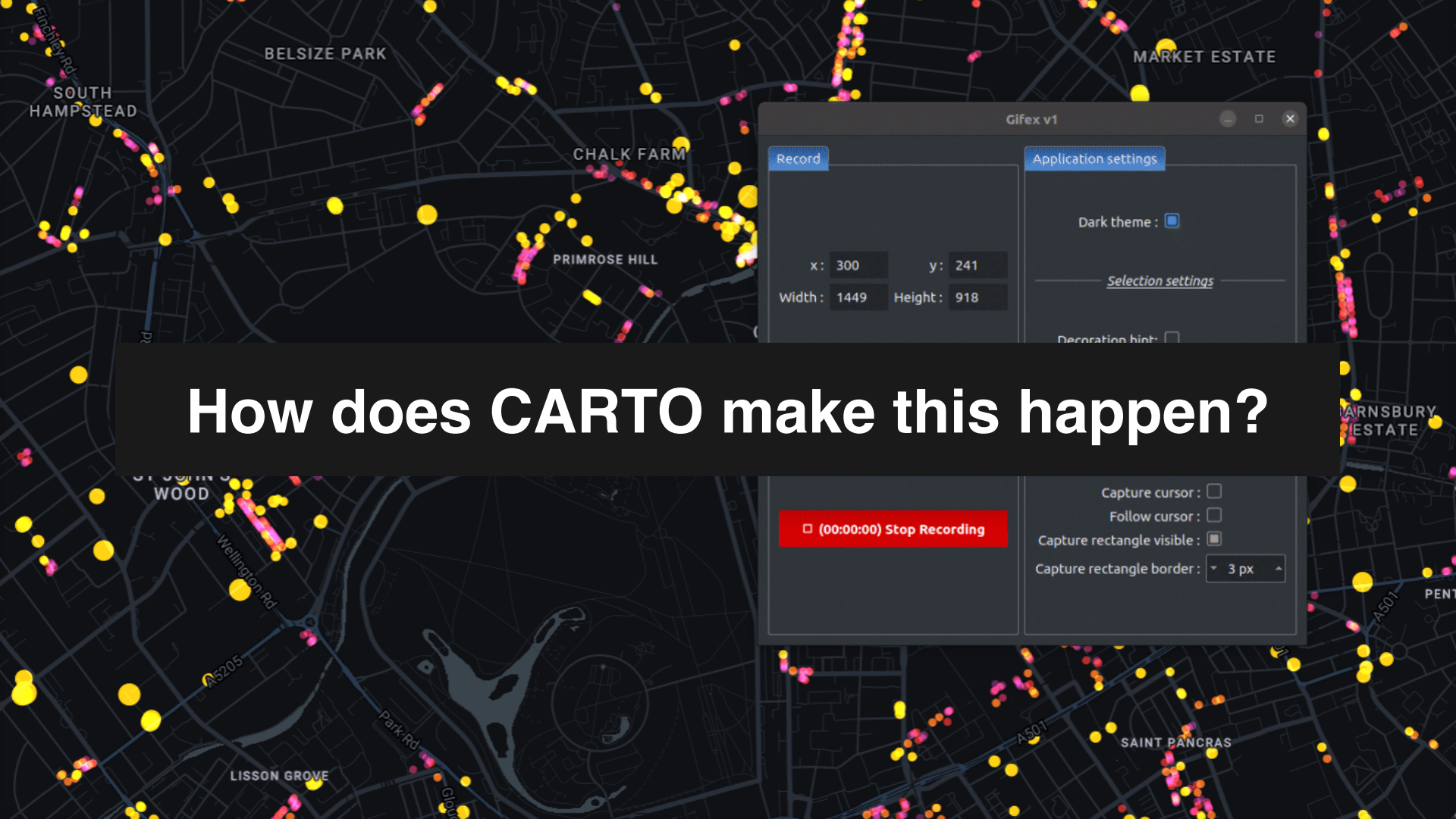
dpd

DPD

DPD Ireland use CARTO to optimize their operations by:

- Improving their location data quality with an Address Match Exception App
- Spatially optimizing parcel routing for each depot with an algorithm that takes into account:
  - Vehicle Size
  - Drop off type (B2C vs B2B)
  - Driver shifts
  - Driver experience
  - Speed limits





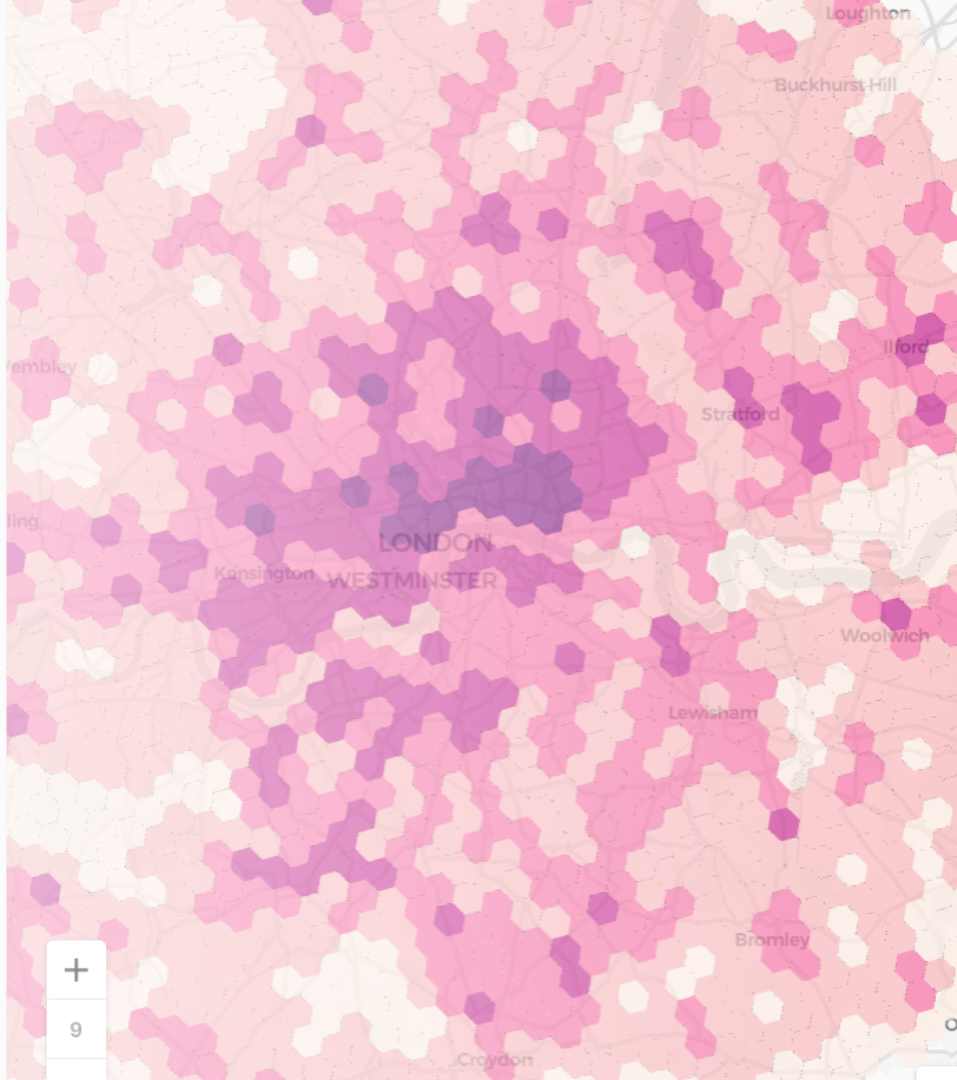
How does CARTO make this happen?

Cloud-native Location Intelligence

CARTO is a cloud-native Location Intelligence platform.

Our mission is to empower our users with the best data and tools to unlock the power of spatial analytics.

We want to democratize access to Location Intelligence, so it’s not just for specialists.



Where Adds Value

Connectivity

CARTO connects to the cloud data warehouse, tools, and services you already use to simplify your workflow.

Premium Data

Access over 12k datasets from our Data Observatory! We vet providers to provide you with the highest-quality, most accurate and relevant data globally.

Build, Visualize & Share

Browser-based analytics & visualization platform. In-app analysis with SQL and no-code options available; no prior GIS experience needed!

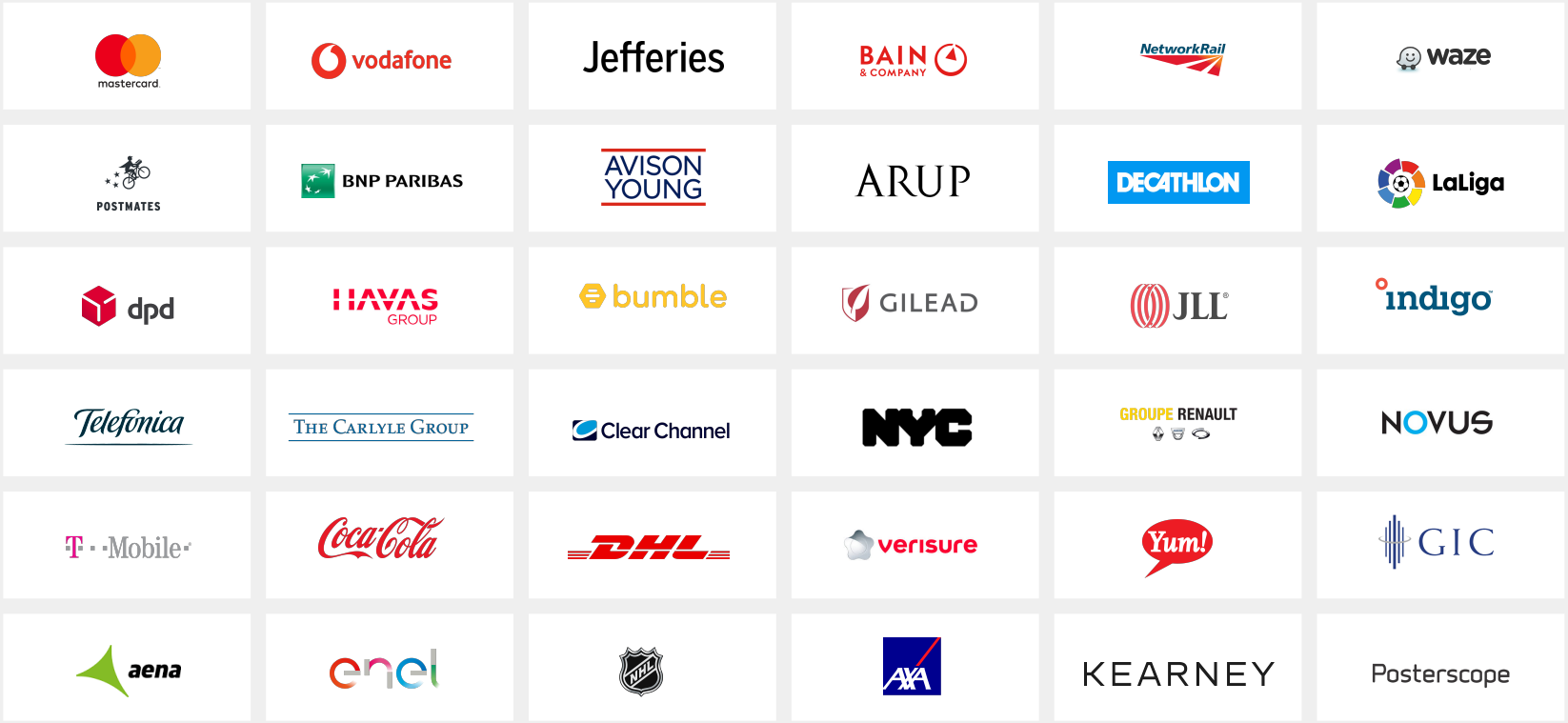
Solve problems

Our Analytics Toolbox and Python integrations make fast, automated and iterative analysis of Big Data easy.

End-to-End Offering

Get access to our whole tech stack with an Enterprise license: APIs, connectors, developer libraries, Python integrations, Location Data Services.

Market-leaders trust CARTO



Thanks!

Overall score (out of 4)

All selected

Principality Stadium	3.149
Wembley Stadium	2.982
Murrayfield Stadium	2.928
Old Trafford	2.876
Manchester Central Conv...	2.845
Others	12.914

Search in 5 elements

Distance to station (m)

Distance to major airpor...

Number of hotels within...