



HERE Technologies



Webinaire #2
Les Usages de la donnée Adresse
3 Février 2021

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Data Sourcing & Business Dev.

We have invested in location technology across four decades



1980s
1990s
2000s
2010s
2020s

Intel
Bosch
Pioneer
Continental

HERE's first commercial location-based service was launched in 1998. It was the first location-based service to be used by a large number of people. It was also the first location-based service to be used by a large number of people.

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2017–2018

HERE's shareholder structure broadens, with Intel, Bosch, Pioneer and Continental as

2020



HERE in numbers



200
countries mapped



400+
HERE cars collecting data for maps



700,000
3D data points per second per car



4 of 5
in-car navigation systems in Europe and North America use HERE maps



40+
years of experience transforming location technology



HD Live Map covering **600,000+** kilometers for autonomous driving



9,000+
employees in 56 countries



15,000
venues mapped globally



1,600
cities with transit routing in over 50 countries



Today

#1 location platform
in every analyst
evaluation

*Source: Ovum August 5, 2018; Strategy Analytics, January 3, 2019;
Counterpoint Research, July 26, 2018*

#1



HERE is the leader

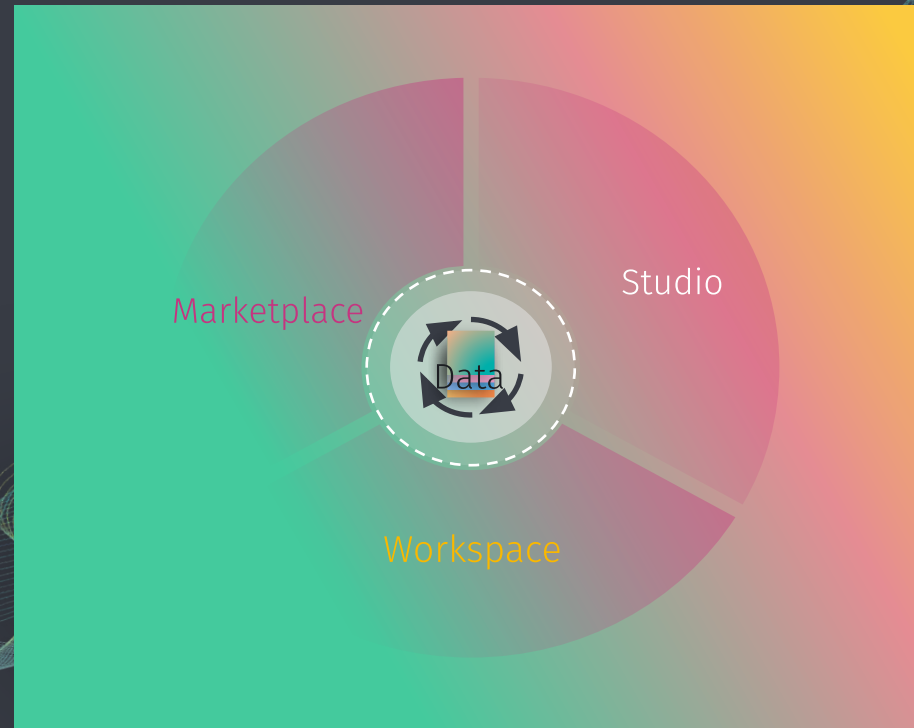
in Ovum, Counterpoint Research
and Strategy Analytics

Ranked #1 in completeness
across the industry

Outranking Google, Mapbox,
TomTom and Apple

HERE Platform:

The place for intelligent data usage and development



Location programming and execution”

Location modeling

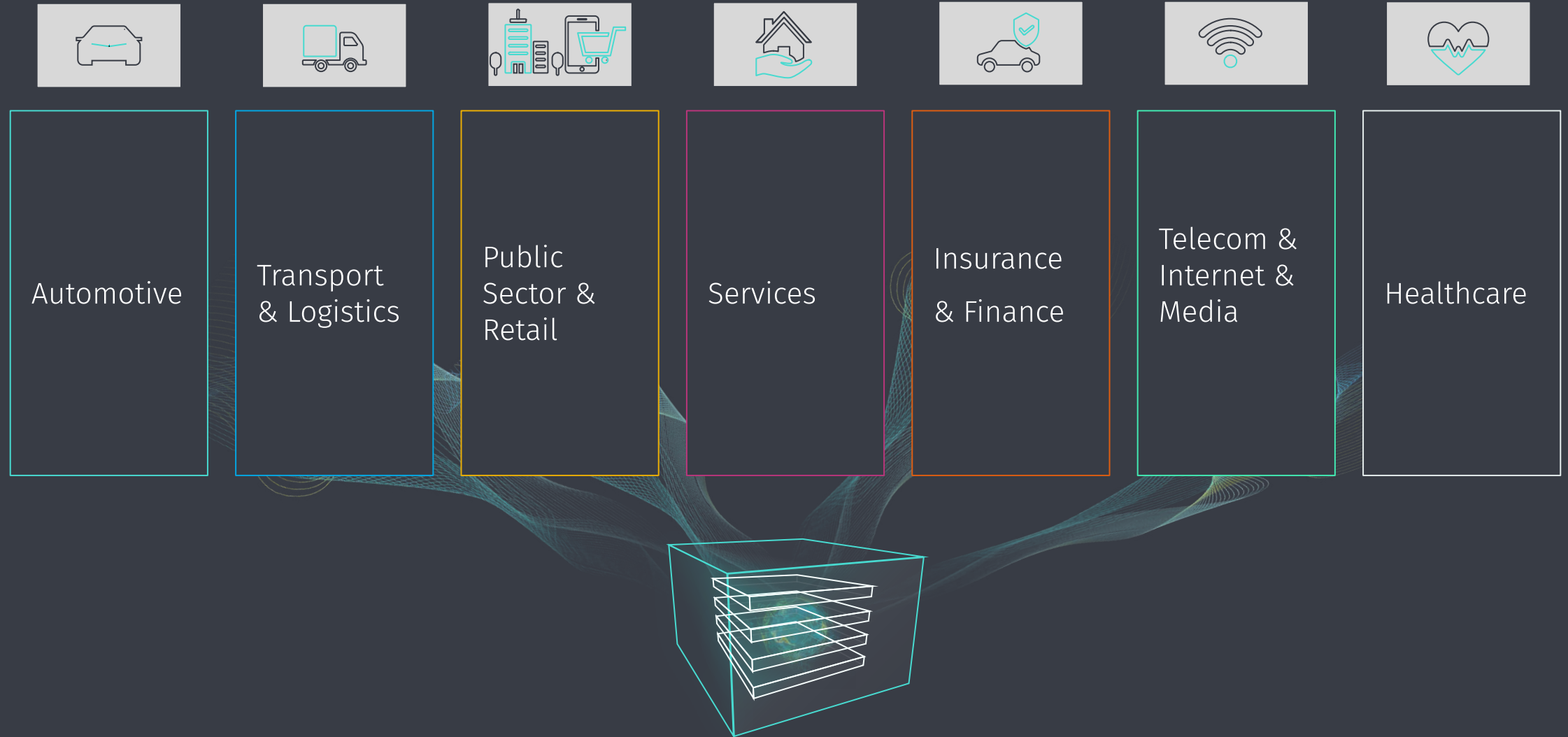
Reality index

Location collaboration & Monetization



HERE Platform:

The “go-to” destination for location services in a variety of industries...



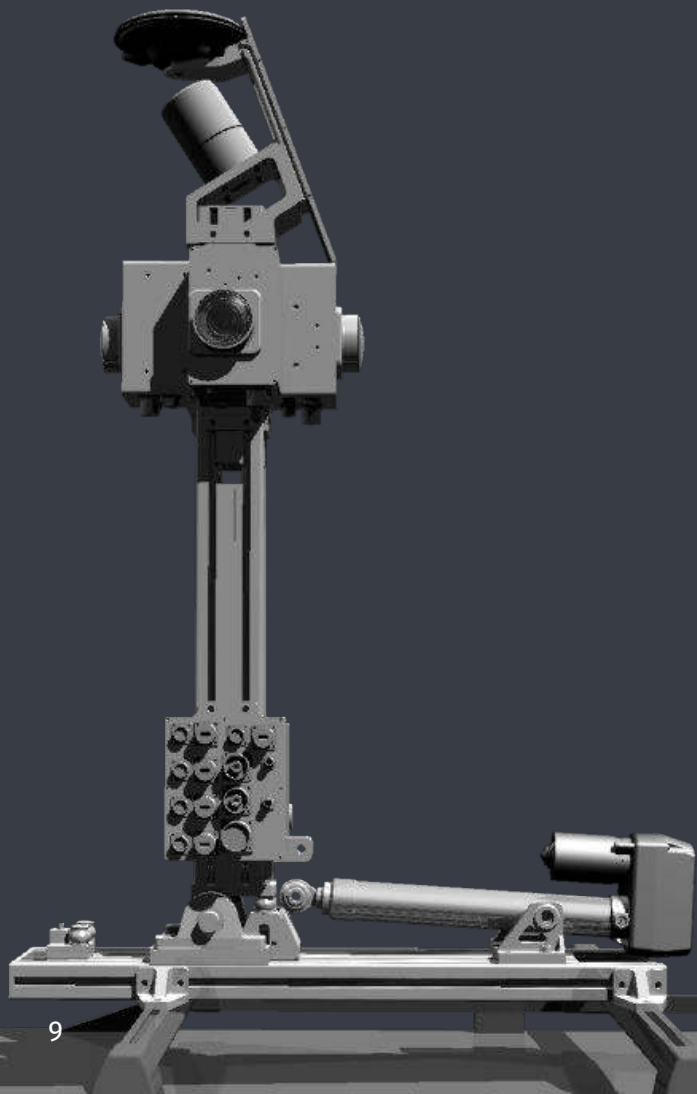
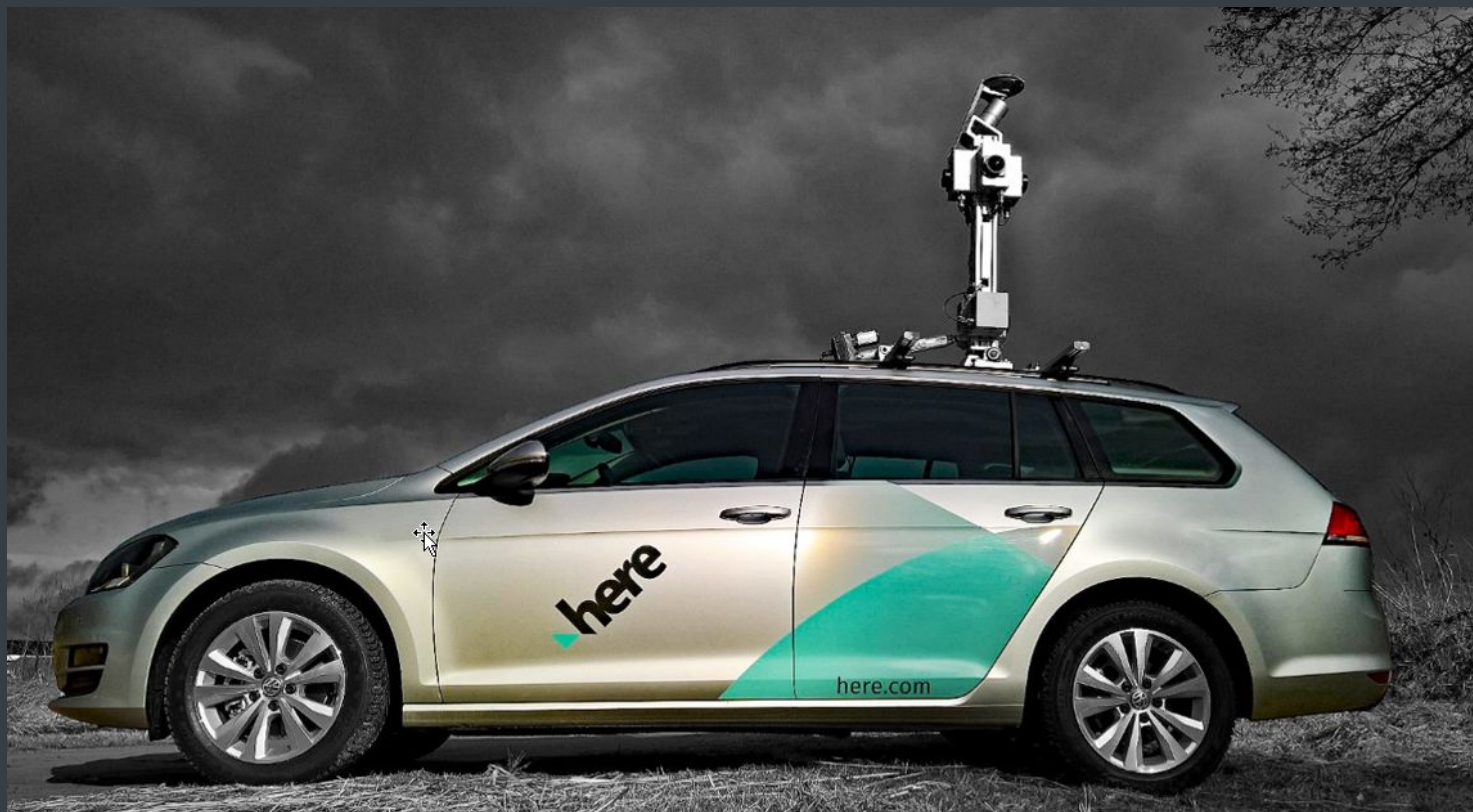
HERE Platform: ... for a variety of markets !



How HERE captures & detects changes?

TRUE cars, probe, satellite imagery, street-level imagery, media, third parties, communities

TRUE drives

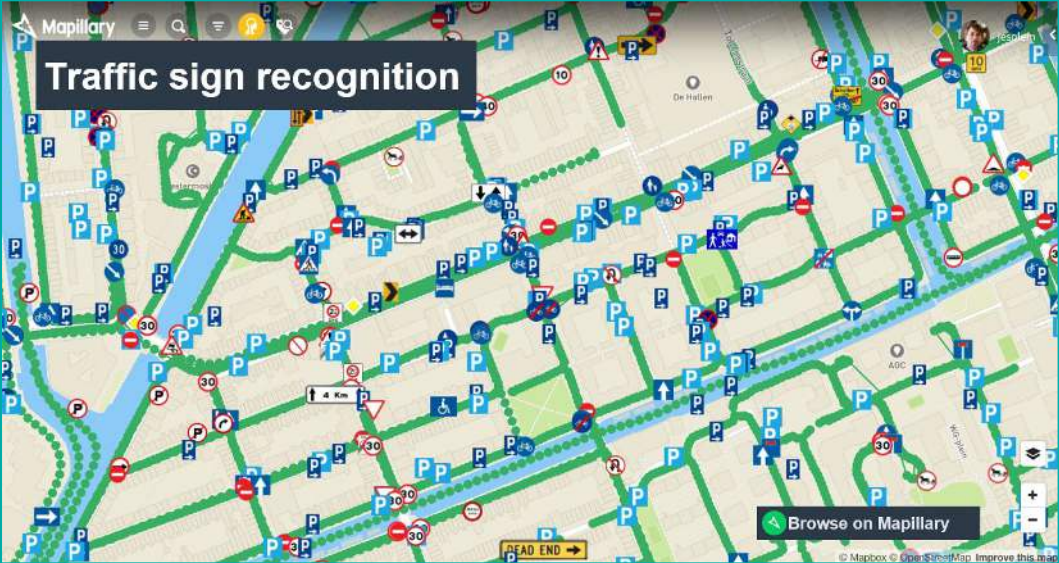


2M unique KM
driven in 50+ countries annually

Crowdsourced street-level imagery (SLI) through

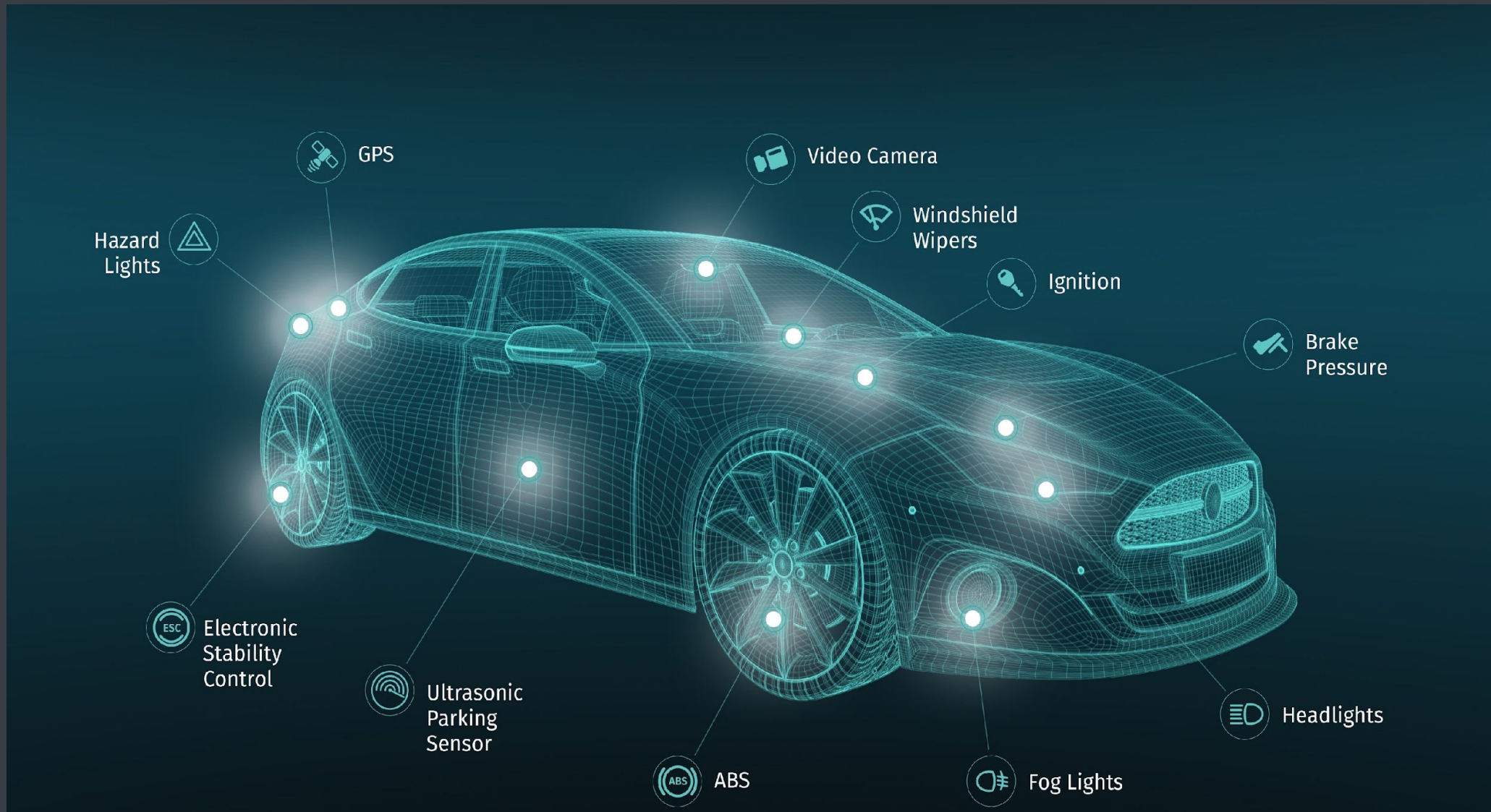


Crowdsourced street-level imagery platform. Using computer vision to connect images from consumer videos and photos to create immersive street-level views and extract map data – 190 countries.



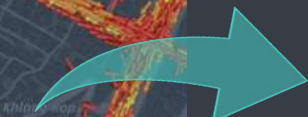
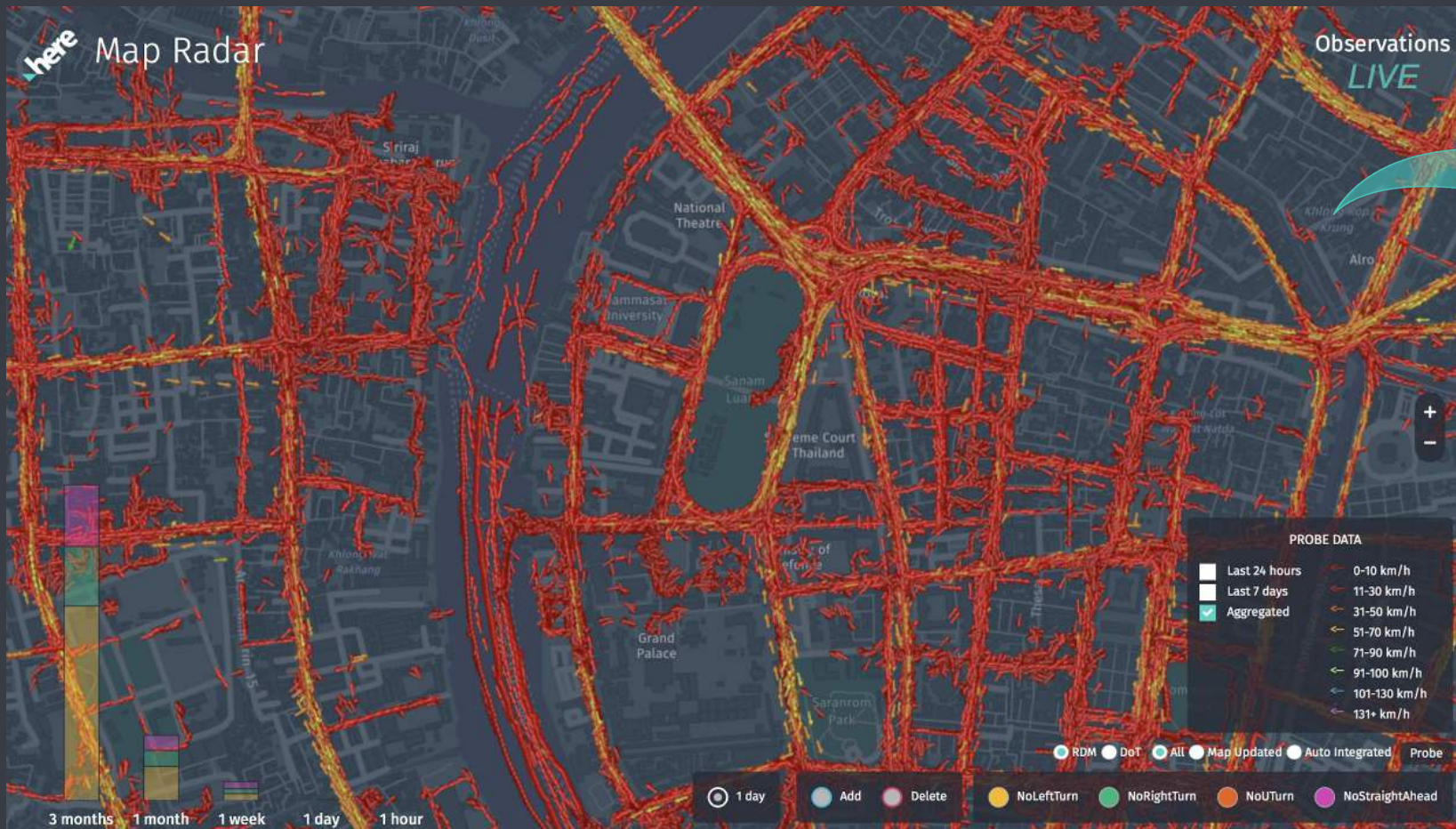
Vehicle sensor data

HERE pioneered the development of sensor data. Map updates rear real-time



Probe - Automated detection

Using machine learning & spatial algorithm to detect and validate map changes



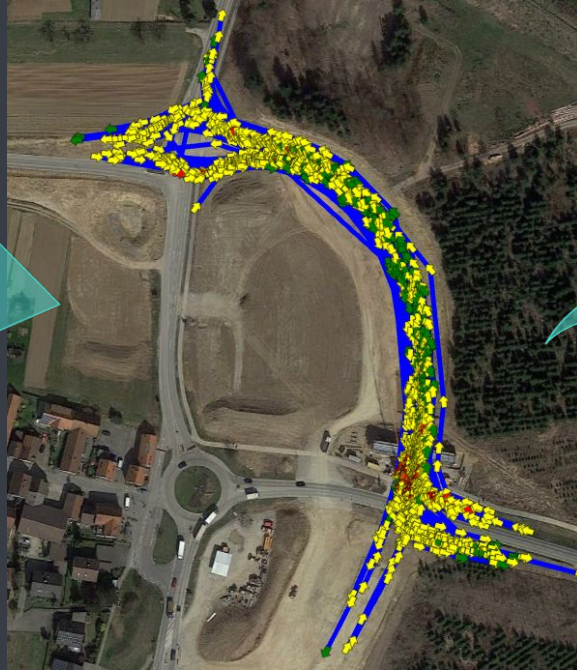
8 features supported by probes:
Turn Restriction, Direction of Travel (DOT), Lane Count, New Geometry, Missing Roundabout, Speed Limit/Category change, Traffic Signal/Stop Sign, Access Characteristics

Probe – Automated detection

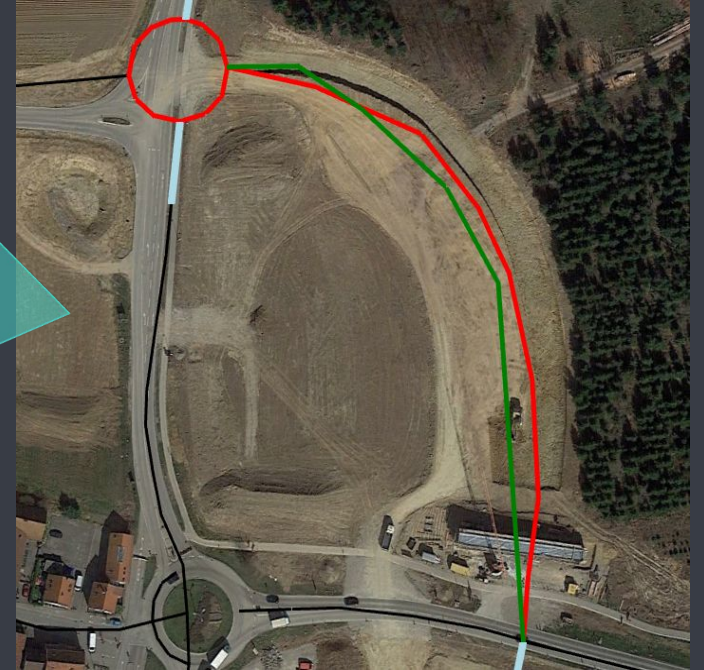
Example – discover missing roads



Predict intersection
Inputs: probe data, satellite imagery, rich map features



Leverage probe trajectories to reconstruct a road between 2 intersections connected by trajectories



Output: list of shape points for each road

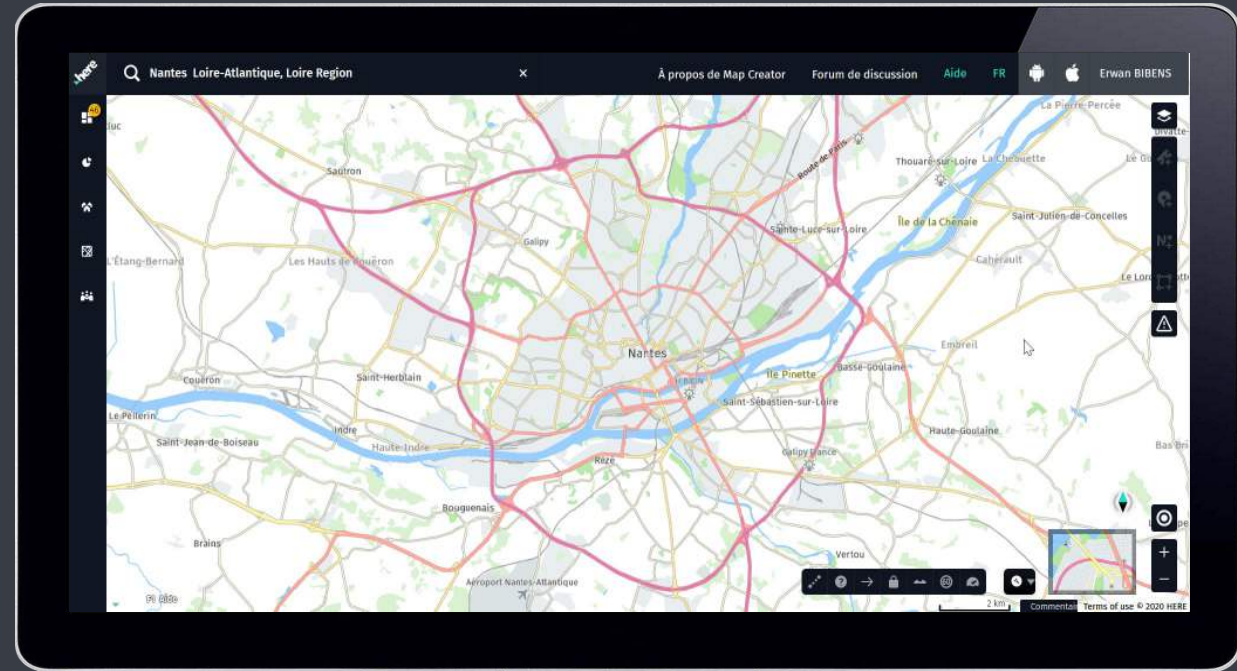
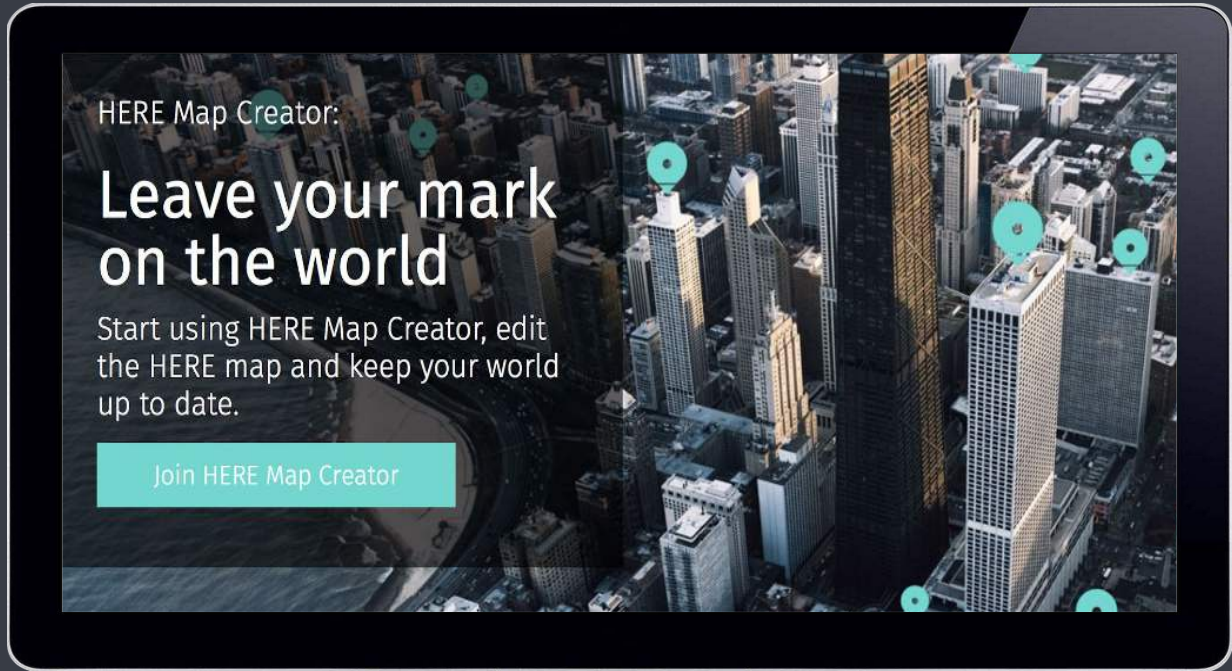
Technology: Machine learning/ deep learning

Automated media monitoring

Billions of data decoded in real time using a media-content platform, providing HERE access to a vast collection of newspaper articles and social media content



Community edits



HERE Map Creator : <https://mapcreator.here.com>

Third-party sources

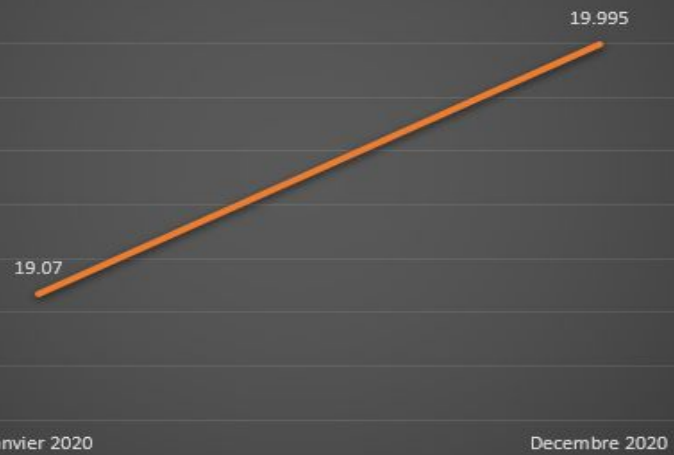


HERE maintains **deep relationships** with Government,
Local authorities and Private companies

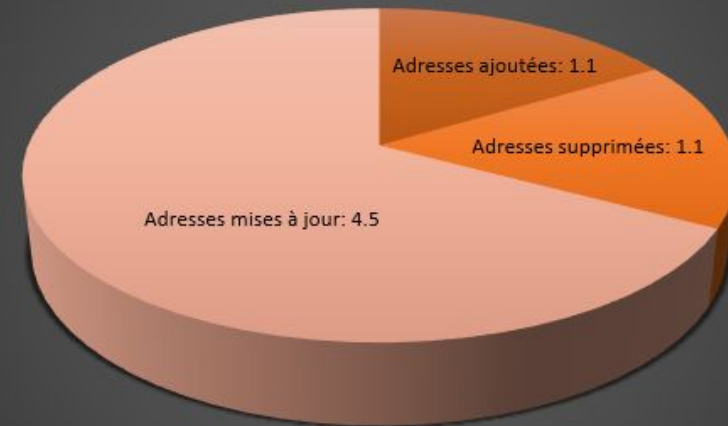




Nombre de Points Adresse
(en millions)



Mise à jour Avril 2020
(en millions)



Thank you

HERE Data Acquisition and Community

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