

An aerial photograph of a city, likely Tokyo, showing a dense grid of buildings and streets. A large, semi-transparent teal shape is overlaid on the left side of the image. In the upper right corner, the word 'HERE' is written in a stylized, dark font, with a teal arrow pointing to the right, indicating the HERE Technologies logo.

# THE PATH TO **AN AUTONOMOUS WORLD**

Oliver Marc Schaetzle | HERE Technologies  
14th Japan-Germany Industry Forum (JGIF)

Tokyo, 8 November 2018

# HERE in numbers

**200**  
Countries mapped




**8,000+**  
Employees in 56 countries  
focused on delivering the world's best  
map and location technologies



HERE Maps on board of  
**100M**  
vehicles and counting

**30**  
Years of  
experience  
transforming  
location  
technology



**28**  
TB map data  
collected  
per day



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




**400+**  
HERE cars  
collecting  
data for  
maps



**700,000**  
3D data points  
per second per car



HD Live Map covering  
**600k+** km  
for Autonomous Driving



December 2015

A joint vision on data, platform and services at scale







Hazard Warnings

Real Time Traffic

On-Street Parking





GPS



ABS



Headlights



Windshield Wipers



Video Camera



Brake Pressure



Fog Lights



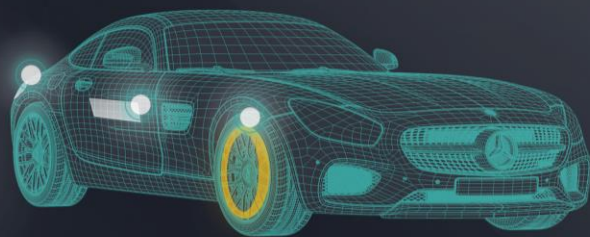
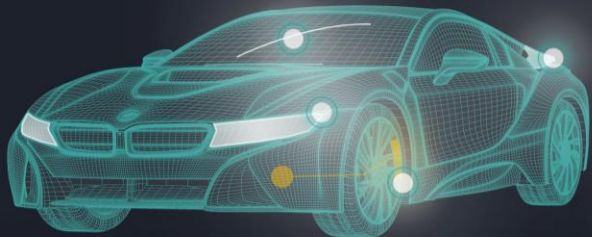
Ultrasonic Parking Sensor



Hazard Lights



Ignition





Sensor data is sent to the cloud



ABS ACTIVATED

28 (PPI)  
EVASIVE BRAKING INITIATED  
ABS ACTIVATED



here



**CAUTION**  
SLIPPERY ROAD  
CONDITIONS AHEAD

**Data** is sent back  
down to vehicles

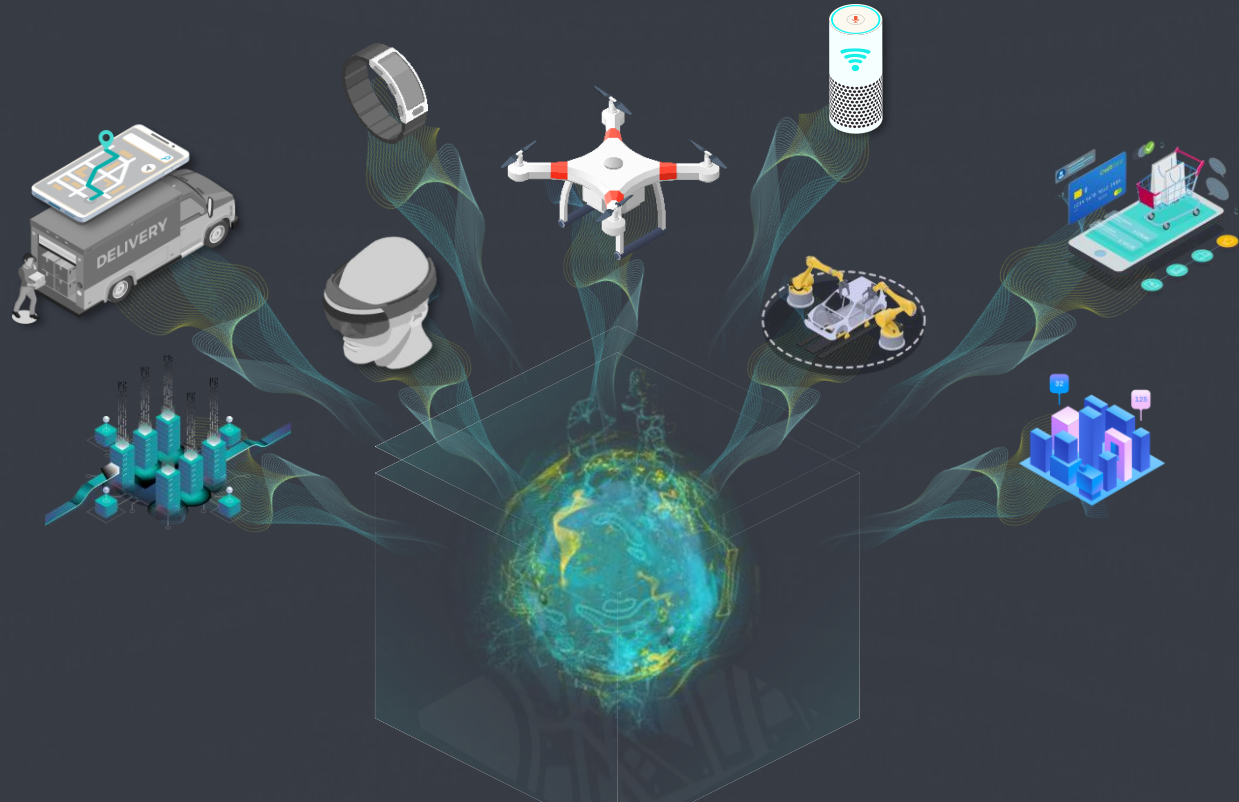


here



# Adding additional datasets

Expanding into every industry...



# OUR **VISION**

Creating a **DIGITAL REPRESENTATION** of the **PHYSICAL WORLD**



Original product: **The map**

FROM **PAPER**

A laptop screen displays a digital map. A route is highlighted with thick, multi-colored lines (red, orange, yellow, and green) that curve across the map. The map shows a city layout with buildings, roads, and a blue body of water. The text "TO DIGITAL" is centered on the screen in a bold, black, sans-serif font. In the bottom right corner of the map, there is a small red triangle icon and the word "here" in white text.

TO DIGITAL

here



TO 3D



TO **HD LIVE**



**TO INDOOR**





**TO EVERYTHING  
AUTOMONOUS**

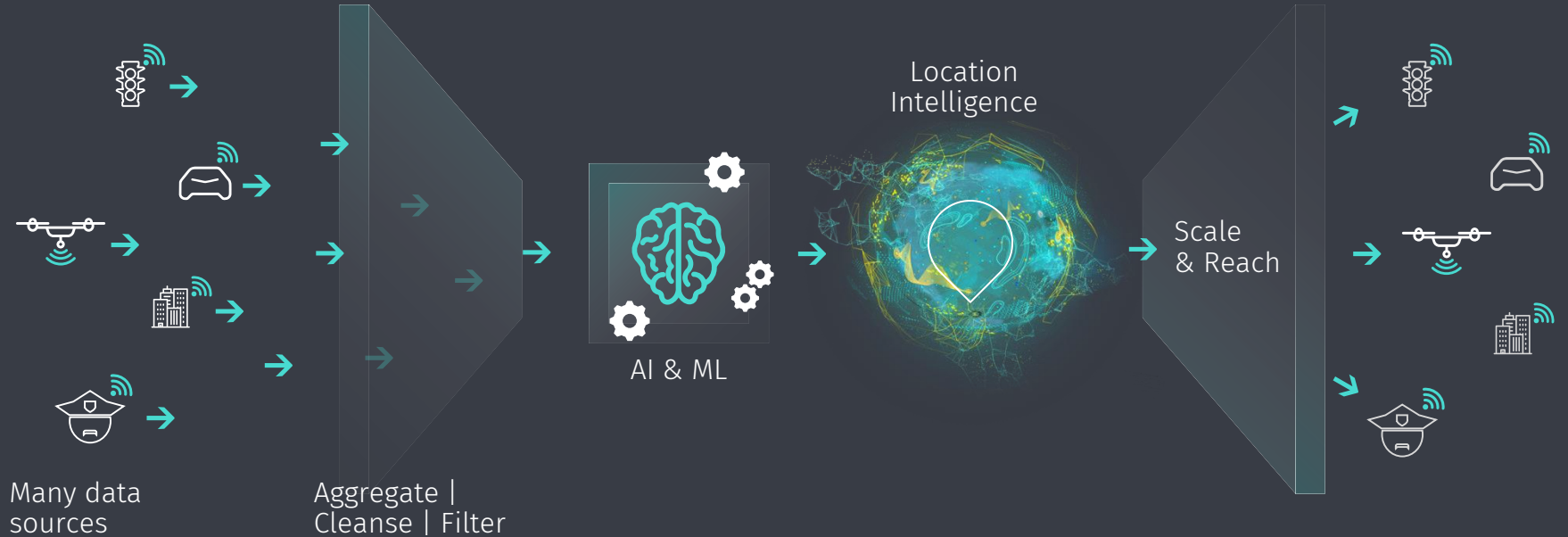


# THE REALITY INDEX™

Location & POIs  
Real-Time Information  
Beyond roads  
Things  
People  
Spatial & Aerial

# All based on the HERE Open Location Platform

A powerful system to manage and orchestrate location data



A dark blue world map with white outlines of continents and countries. A white rectangular box is centered over the map, containing the text "COMBINING SENSOR DATA".

# COMBINING **SENSOR DATA**

# HD Live Map - The most intelligent vehicle sensor for automated driving

Answering four fundamental questions of the autonomous vehicle:

Precise Positioning



Planning beyond sensor visibility



Contextualize sensor function



Localized rules of the road



Industrial capture  
LiDar Data

HD Live Map  
aggregate



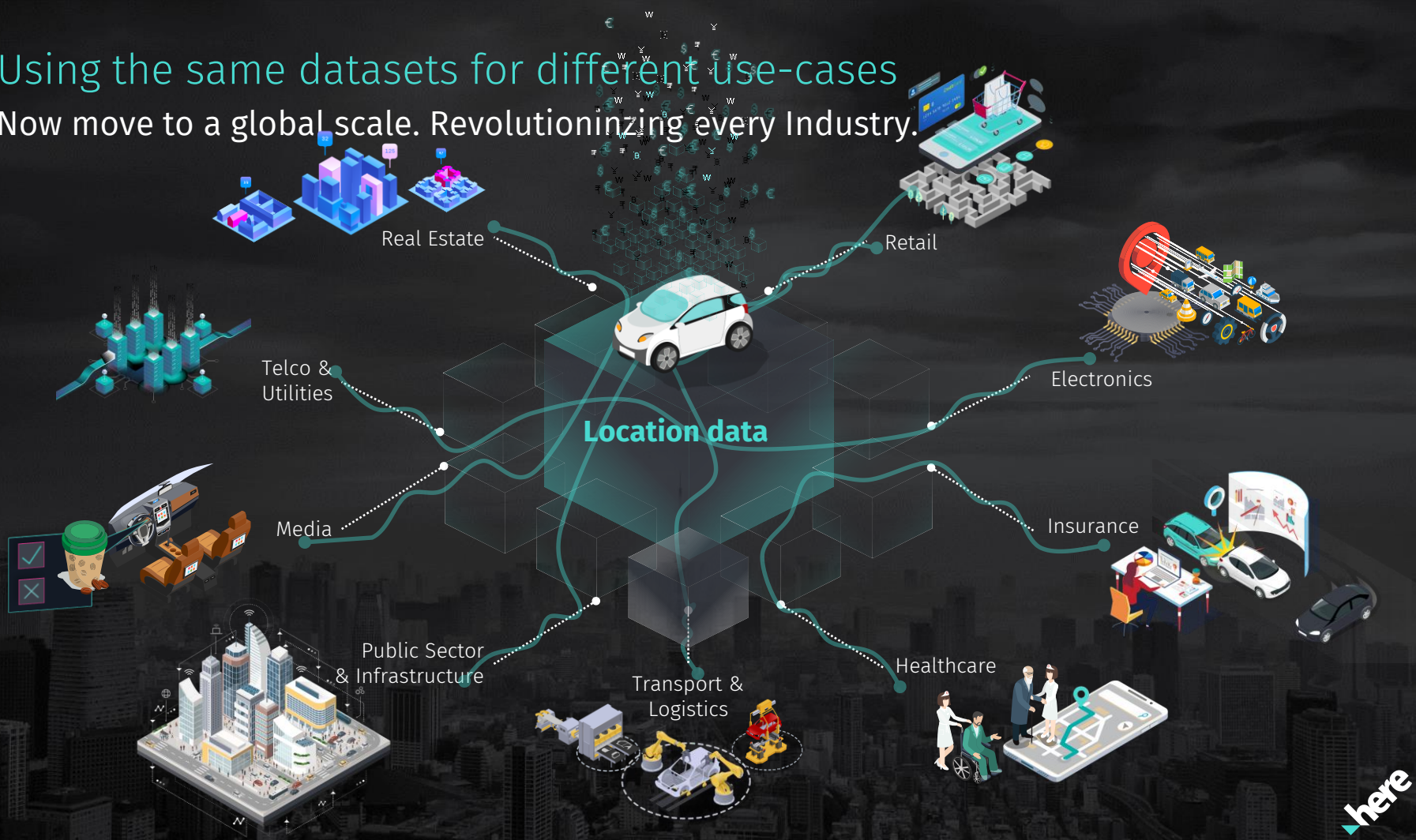
Vehicle grade  
sensor Data



Mobile device  
sensor Data

# Using the same datasets for different use-cases

Now move to a global scale. Revolutionizing every Industry.



ENABLING AN  
**AUTONOMOUS WORLD**  
FOR EVERYONE

**TOGETHER**





Contact – we would love to hear from you

**Oliver Marc Schaetzle**  
Director Sales

**Mobile: +65 83888037**  
**Oliver.Schaetzle@HERE.com**