



Mobilität der Zukunft – Trends und Anforderungen

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AGENDA

- About HERE
- Map Building Process
- HERE HD Live Map



01

About HERE

Dedicated location-based company with global reach

Employs **6,000 people** in 55 countries



Produces maps for nearly **200 countries**



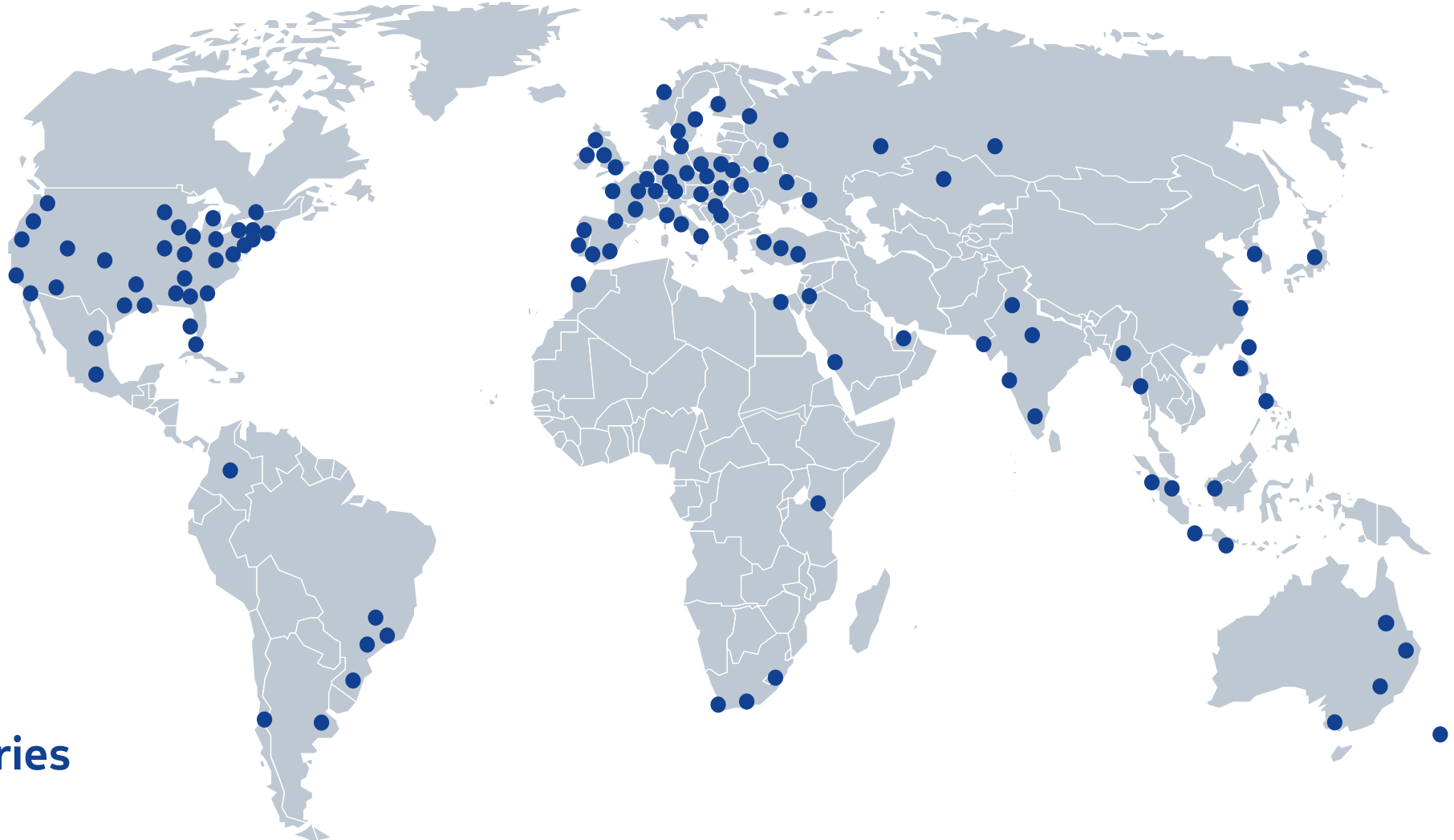
Enables **four out of five** in-car nav systems in North America and Europe



Enables mobile, web, and enterprise solutions for **global industry leaders**

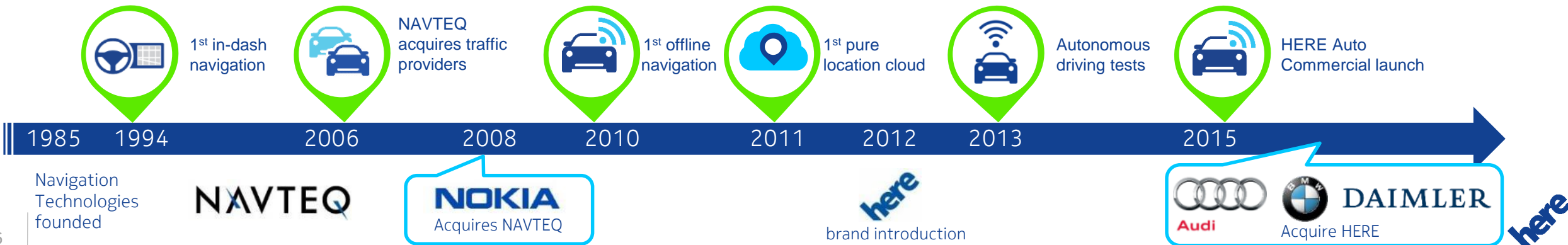


Dedicated location-based company with global reach



Employs **6,000 +** in
people in **55 countries**

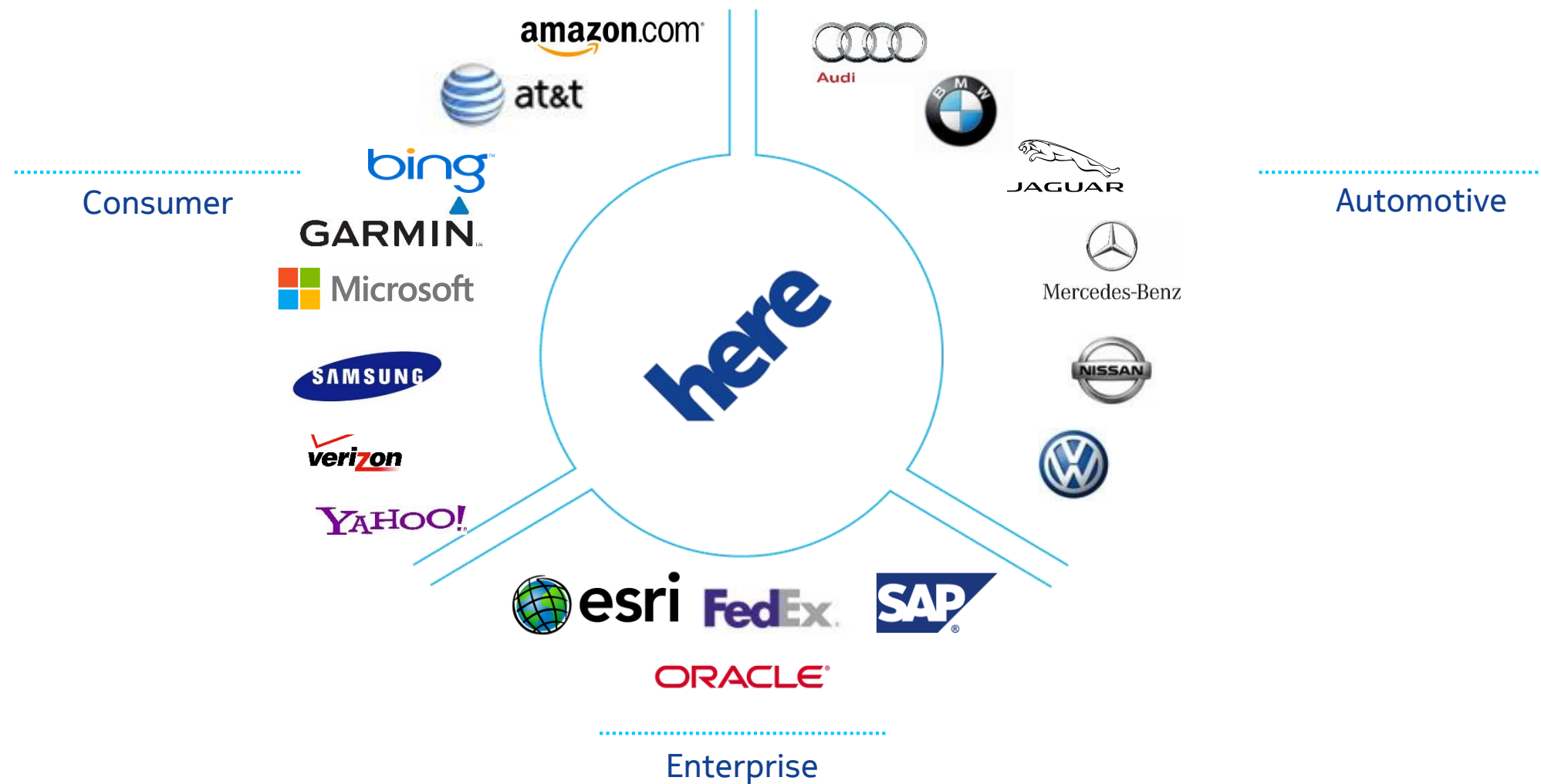
Continuously Bringing More Value to the Market



Unmatched portfolio for Automotive, Enterprise and Consumer



Leading brands trust HERE





02

Map Building Process

Initial Collection of Road Data

- Digitizing from official paper maps
- Fieldwork on Plots
- Since 2000 Data Collection with GPS
- Since 2010 TRUE Drive with
Panoramic Camera and LIDAR



Keeping the Map fresh

- Internal change detection processes
- External information
(about 80.000 sources worldwide)
- Data collection by driving with multi-cameras and LIDAR-vehicles



Sourcing - Detecting change is number 1 priority

Proactive Sourcing



Controlled Maintenance



Community Feedback





03

HERE HD Live Map

Our Automotive mission

At HERE we strive to make driving **smarter, safer and more enjoyable** by delivering best-in-class Connected Services & Driver Experiences.



Market Problems for Automated Driving

Problem	Key Needs	HERE Solution
WHERE EXACTLY AM I?	Precise positioning for lateral & longitudinal control of vehicle on the road surface	HD Live Map
WHAT LIES AHEAD?	Accurate planning of vehicle control maneuvers beyond sensor visibility.	
HOW CAN I GET THERE COMFORTABLY?	Making automated driving comfortable for humans	



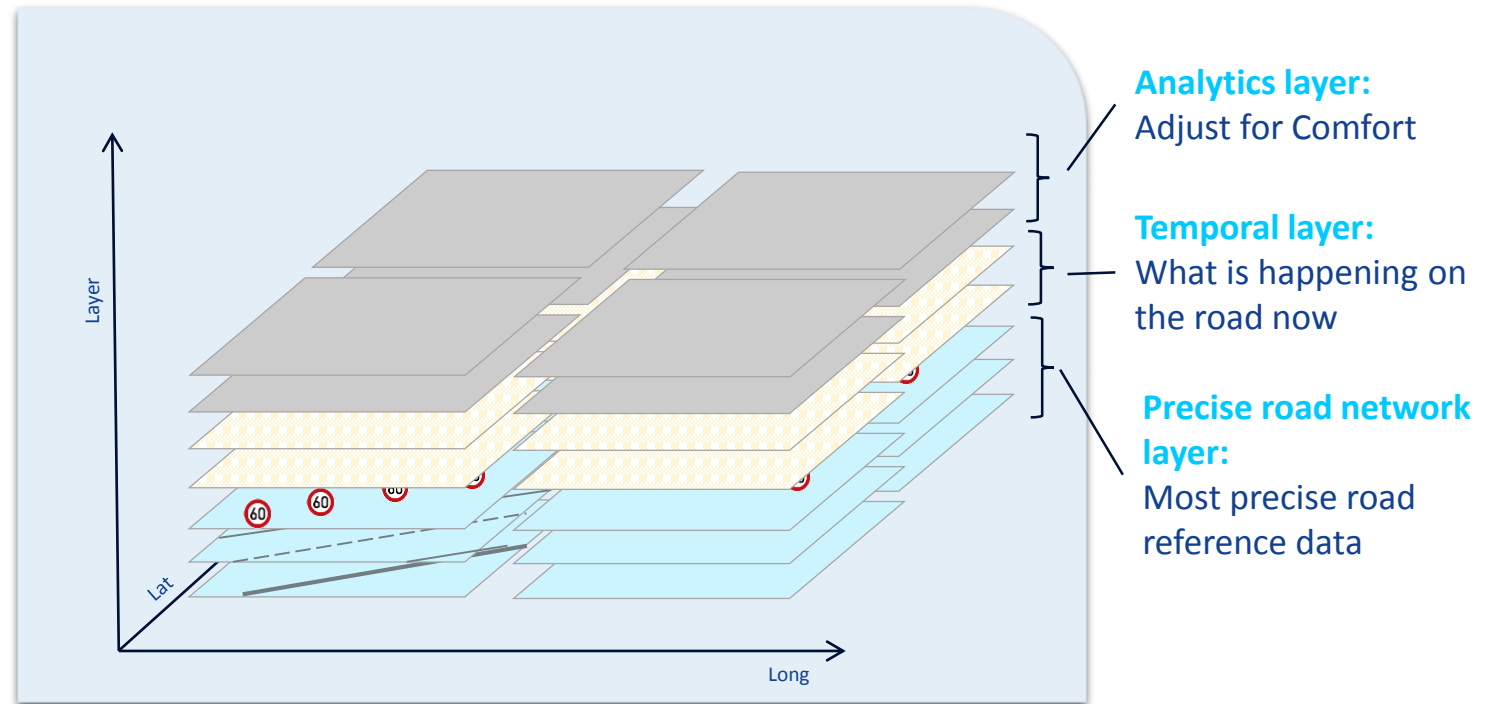
Introducing HD Live Map

HD Live Map is a cloud service product providing highly accurate and continuously updated map, dynamic road network and speed profile data, all delivered in a layered map-tile format.

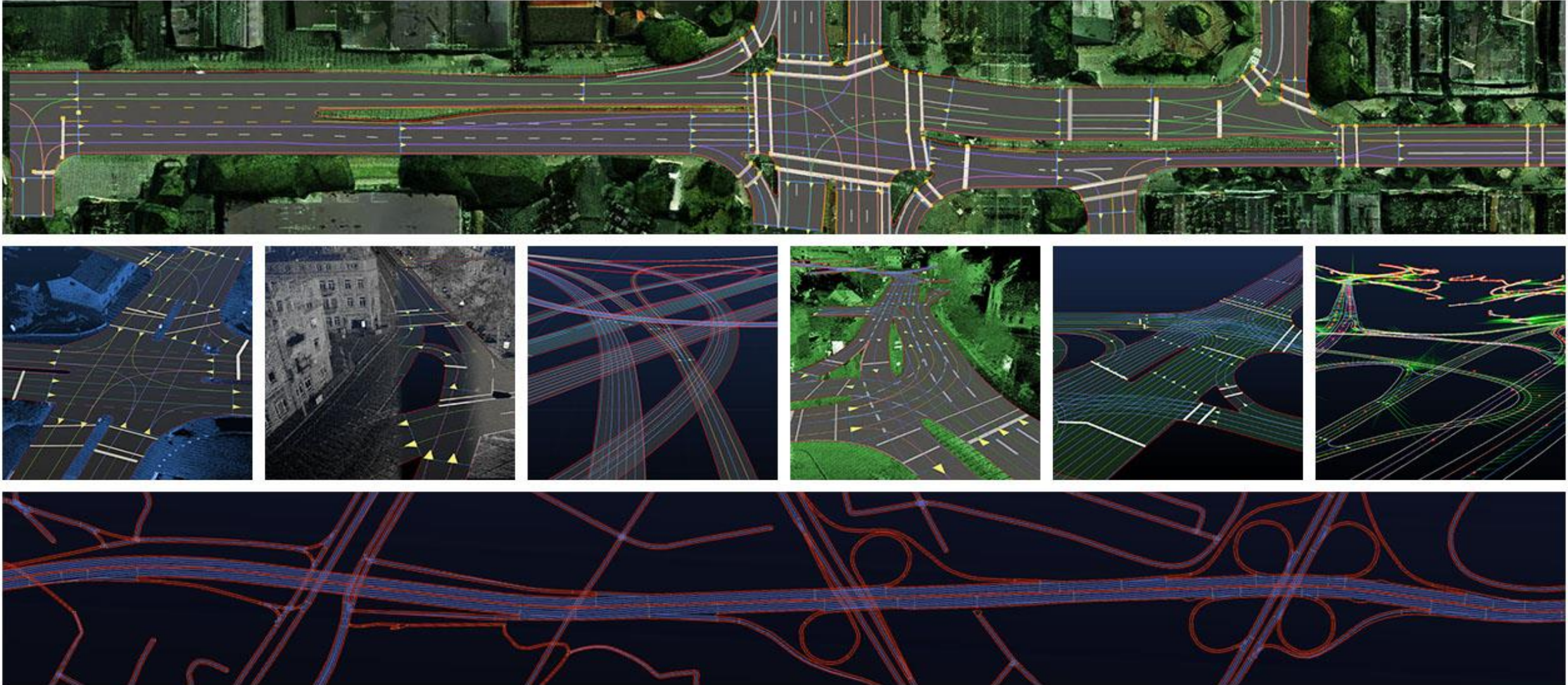
The ability to provide a high precise “live map” allows vehicle driving strategies to be prepared in advance, allowing for a comfortable driving experience that wouldn’t be possible otherwise.

HD Live Map Layers

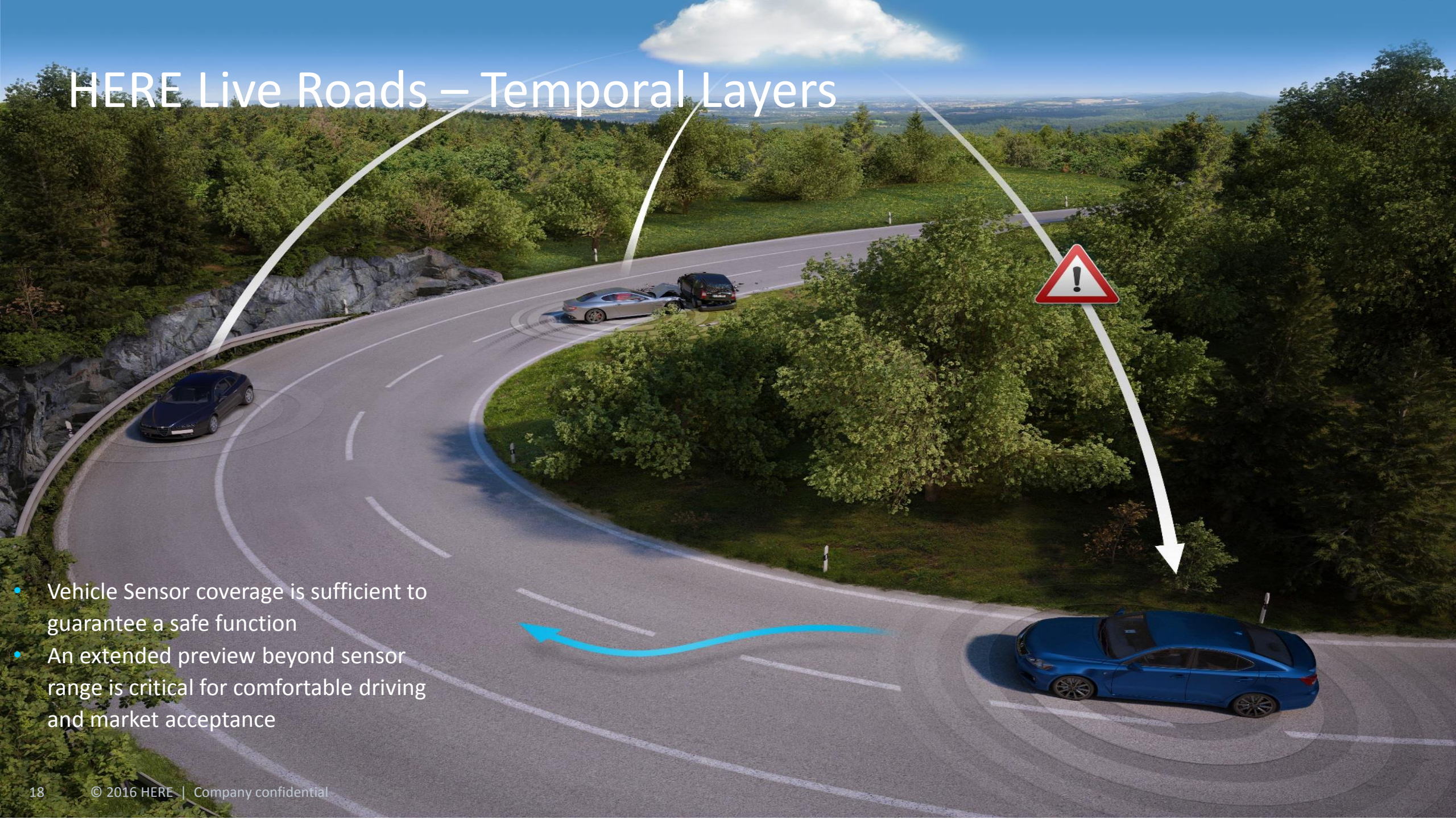
- Layers with high permanency
 - Stable road network attributes
- Layers which are temporal
 - Frequent changes due to nature of the data
- Analytics Layer
 - Analysis of human driving behavior



HERE HD Map – Precise Road Network Layers



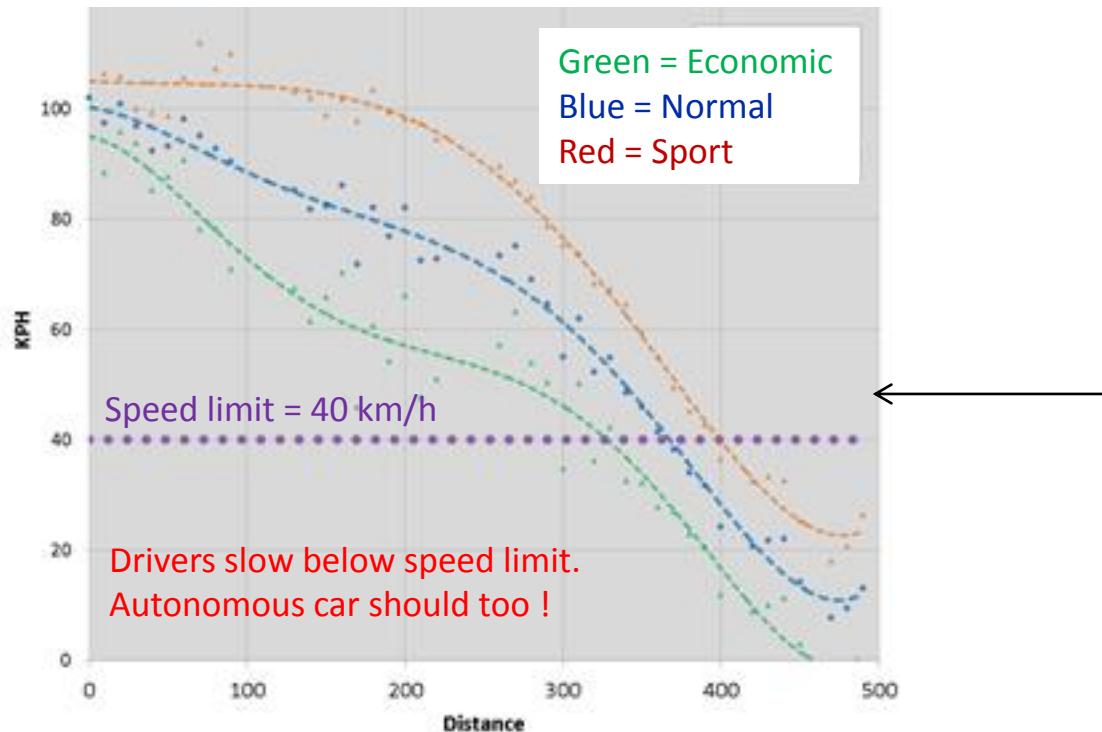
HERE Live Roads – Temporal Layers



- Vehicle Sensor coverage is sufficient to guarantee a safe function
- An extended preview beyond sensor range is critical for comfortable driving and market acceptance

Human Speed Profiles – Analytics Layer

- Define driving behavior as
 - Normal (50 percentile)
 - Economics (25 percentile)
 - Sport (75 percentile)
- OEM can tune autonomous driving style





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