HERE

One map foundation. Multiple vehicle functions.

Purpose-built map views for navigation, ADAS, navigation-assisted driving and automated driving

Right content. Right package. Right update.

Conference presentation draft | Dikshith Siddapura | HERE Technologies



© 2026 HERE | Initial draft for discussion

“ADAS” does not define one fixed map

The required information varies by vehicle function, system design and level of driving automation.

ISA

Speed limits
Road rules

Predictive ADAS

Slope and curvature
Predictive attributes

Navigation-assisted driving

Navigation context
Lane-level guidance

Highway pilot

Lanes
Intersection semantics

Automated driving

Localization
Rich lane content



Same umbrella term

Increasing detail and richer functional context

Different information needs

The system question is not “Which ADAS map?”

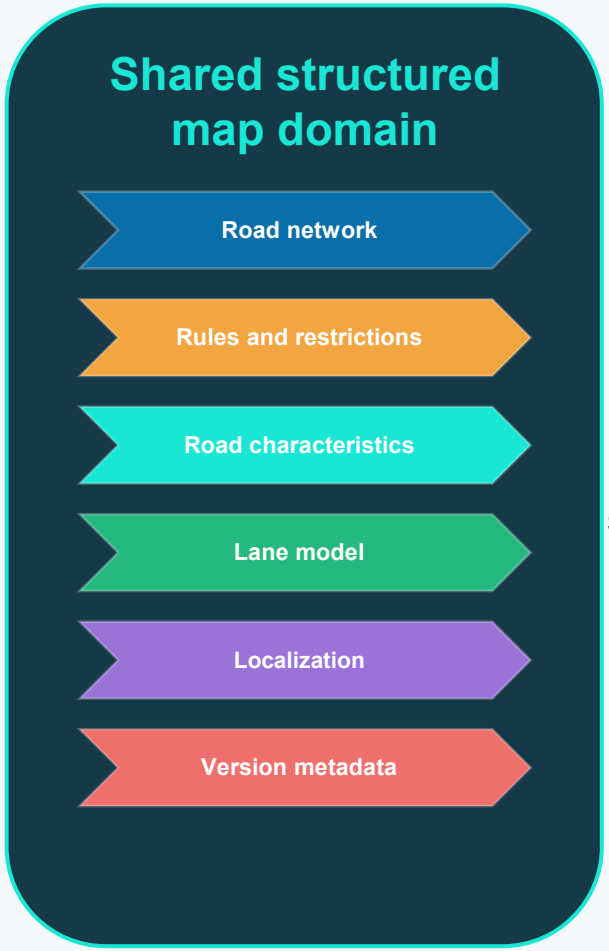
It is: Which map information does the function need, how should it be accessed, and how fresh must it be?

One representation does not fit every vehicle function.

© 2026 HERE | Initial draft for discussion

Purpose-built map views from one shared foundation

Applications consume the information they need, efficiently organized for their processing model.



Select, simplify, compose

Raw NDS.Live tiles

Direct structured map access

Purpose-built Smart Layer

Only required layers and attributes

Service abstraction

Spatial, non-spatial or corridor queries

Navigation / ISA

Reliable road and regulatory context

ADAS / NOA

Performance-oriented map view

Automated driving

Rich lanes and localization

Future functions

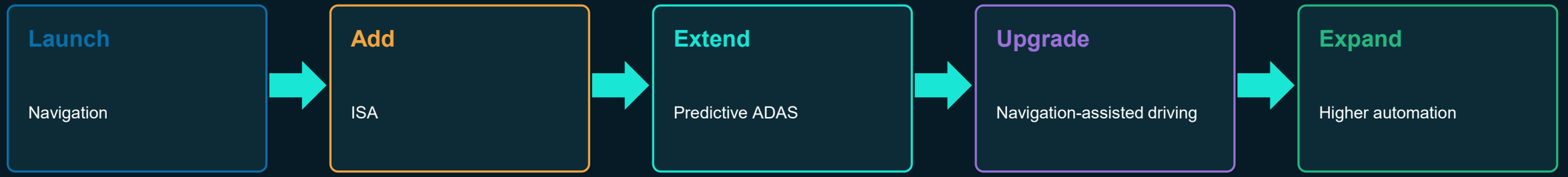
Structured input for evolving software

Same real world. Different views. Greater reuse.

© 2026 HERE | Initial draft for discussion

Evolve vehicle functions without rebuilding the map foundation

A modular map domain can support new content views and functions across the vehicle lifecycle.



Stable foundation Common data model • modular layers • stable service interfaces • controlled version evolution

Reuse

Avoid program-specific divergence

Differentiate

Add optional functions and offerings

Maintain

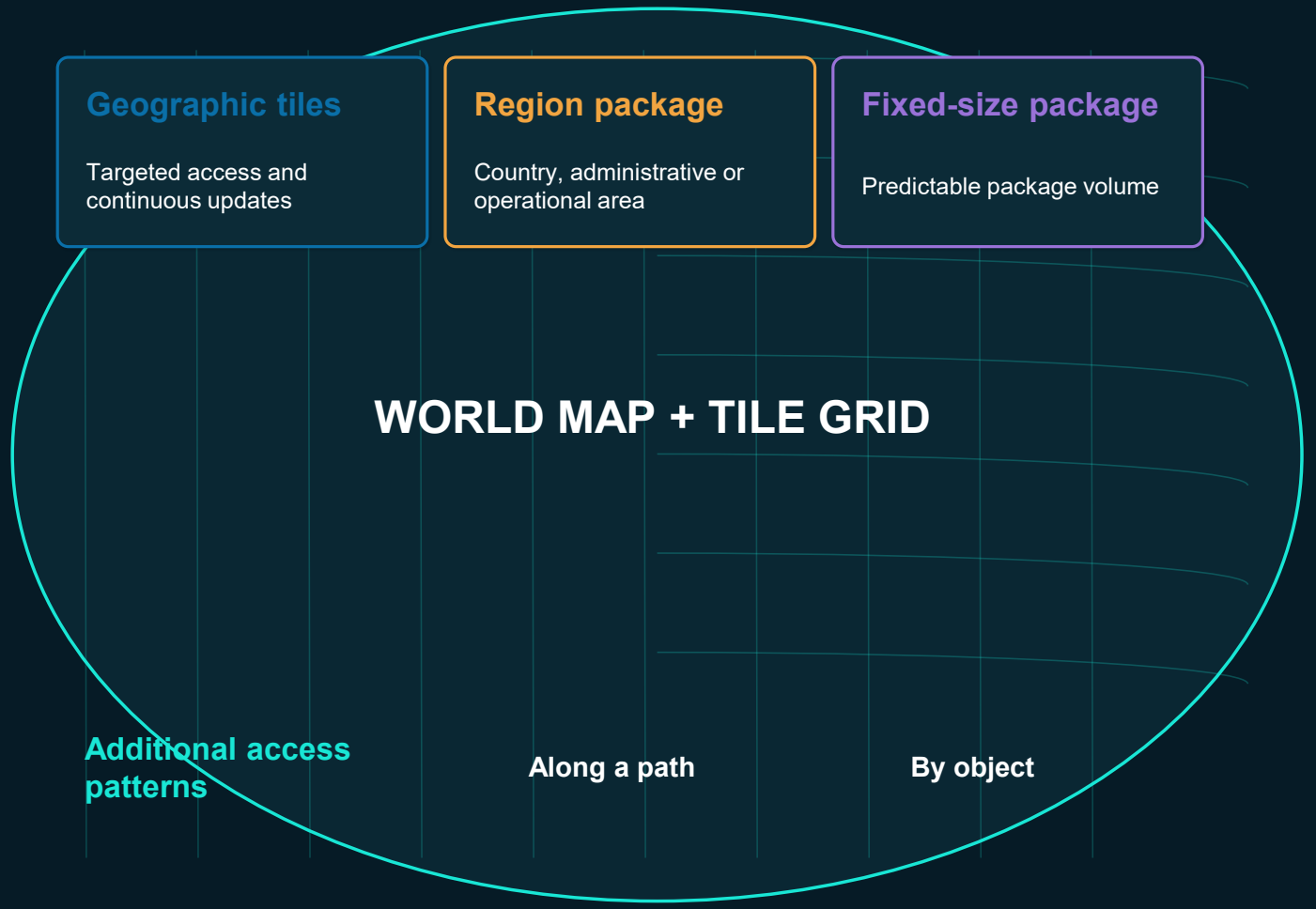
Keep existing deployments stable

Start with what is needed. Add capability over time.

© 2026 HERE | Initial draft for discussion

Package and deliver the map for the deployment model

Connected, regional and offline deployments do not need the same access pattern.



What the deployment must optimize

Connectivity

Online streaming, cached access or offline fallback

Coverage

Targeted corridor, operational zone or complete region

Operations

Regional hosting, scalable deployment and failover

Transfer

Download only what the use case needs

Different packages. Same structured map foundation.

© 2026 HERE | Initial draft for discussion

Update what changes. Keep the rest stable.

Different map information has different lifetimes and should not force one monolithic refresh cycle.

Frequently changing

Selected safety and situational information

Periodically changing

ADAS attributes and regional content

Stable foundation

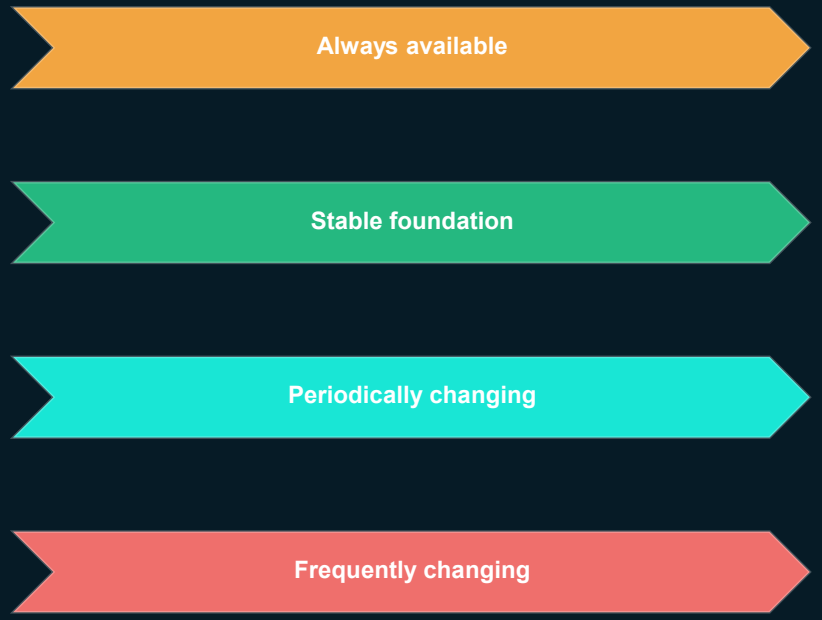
Road network, geometry and references

Always available

Offline baseline and essential fallback

Selective layer updates

Refresh the layer that changed, while preserving unrelated content.



Freshness where it matters. Less unnecessary transfer.

© 2026 HERE | Initial draft for discussion

Optimize the complete map-delivery pattern

Balance content relevance, application performance, freshness and operational efficiency.

Content view

Which features, attributes and relationships?

Packaging

Tiles, regions, fixed-size packages, paths or objects?

Update behaviour

What changes, and how often?

Access model

Raw structured data or service abstraction?

Purpose-built map delivery for the vehicle function

Relevant information

Efficient consumption

Required freshness

Lifecycle evolution

As vehicle software becomes increasingly AI-assisted, trusted and structured map information remains a critical foundation for understanding the driving environment.

One map foundation. Multiple vehicle functions. Right content. Right package. Right update.

© 2026 HERE | Initial draft for discussion

HERE NDS.Live SLS

2026+

Right content. Right Time. High Service Performance.

© 2026 HERE | Initial draft for discussion

The Right Map, at the Right Time

***Intelligent** on-demand delivery*

HERE NDS.Live SLS delivers exactly the map content vehicles need, efficiently and on demand.

Combine intelligent retrieval, multiple automotive use cases, and NDS.Live interoperability.

On-Demand

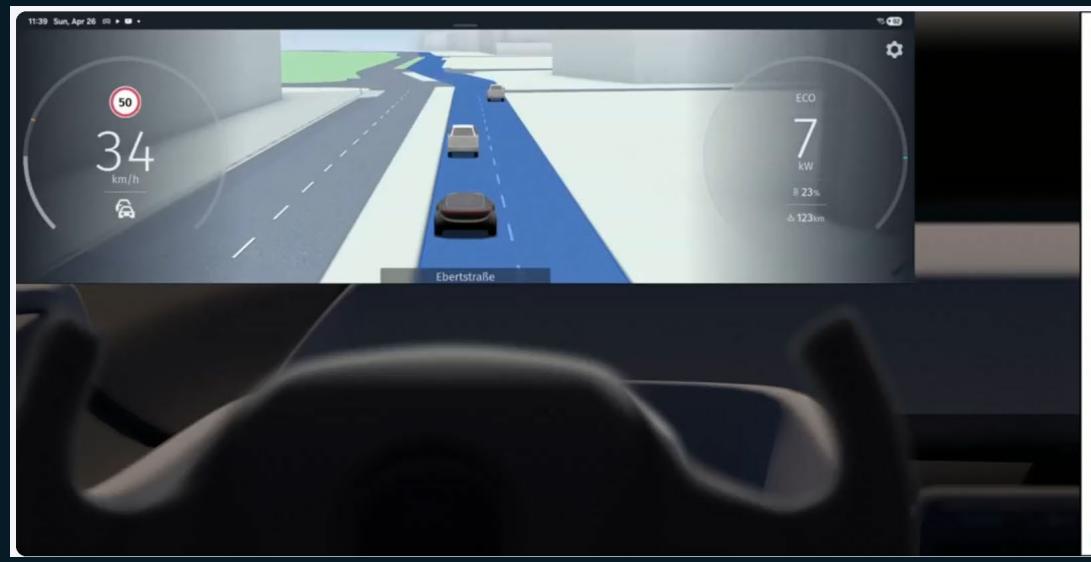
Smart Layer Tile delivery

200ms

Hot-Cache response

Supporting capabilities

- Selective retrieval of Smart Layer Tiles
- Intelligent regional hot-cache delivery.
- NDS.Live-native service for in-vehicle map consumption.
- Content delivery driven by vehicle requests rather than full-map downloads.





© 2026 HERE | Initial draft for discussion

Engineered for Automotive Scale

Scalability, geographic availability and operational excellence

1,000+

RPS per region
scaling linearly across regions

100MB/s

Map data throughput
Per region

<600ms

End-to-end latency
p95

99.5%

Availability SLA
Automated failover

Multi-region active-active
Europe, US deployed, Asia.

Designed for continental fleets



© 2026 HERE | Initial draft for discussion

Thank You

© 2026 HERE | Initial draft for discussion