



AUROLA SUMMIT

OLOS
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CEO

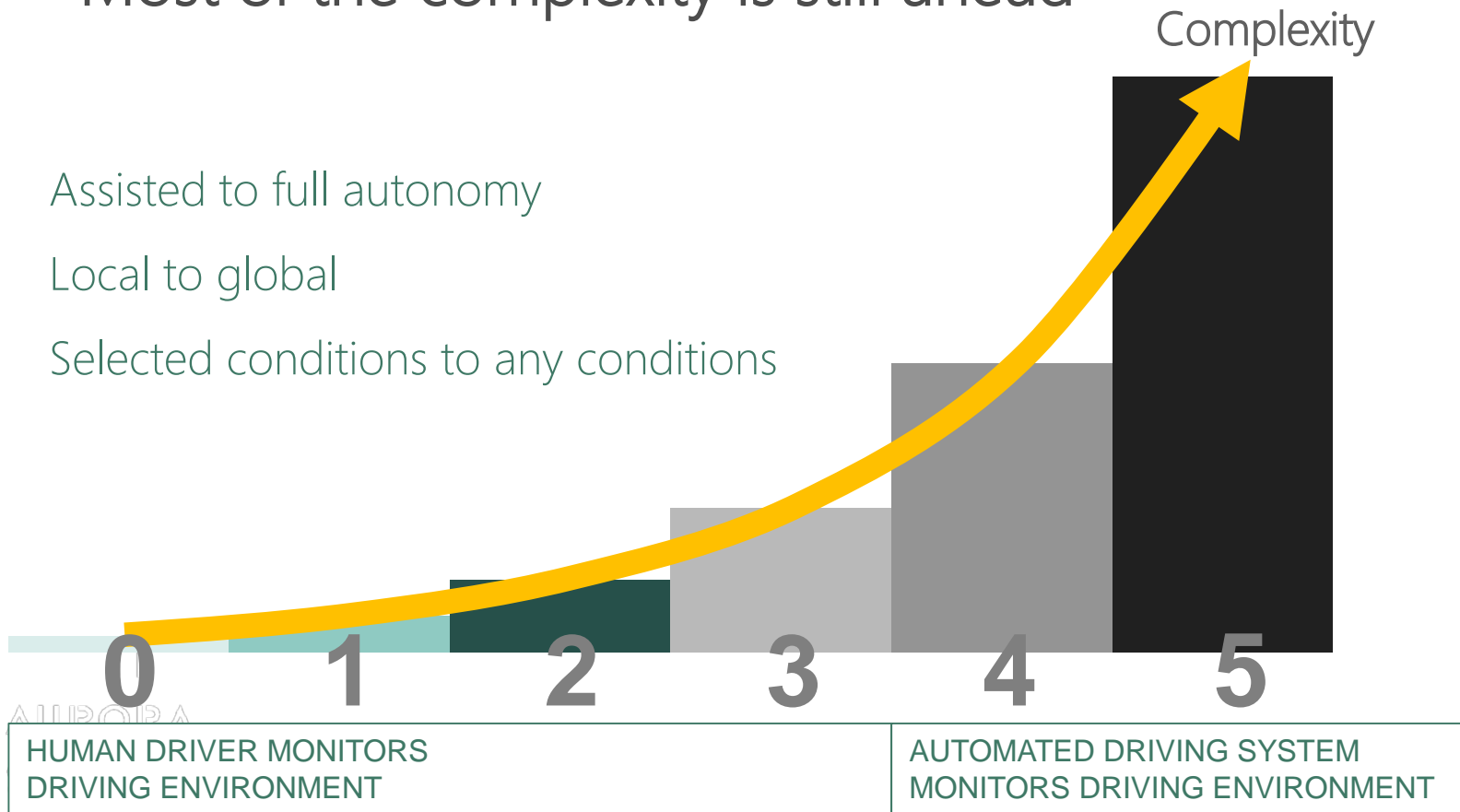
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Most of the complexity is still ahead

Assisted to full autonomy

Local to global

Selected conditions to any conditions



Autonomous cars need maps

Navigation

Safety
Speed
Comfort



Types of maps

2D approximate topological maps

Navigation
Route planning

- Similar to maps used in GPS navigators

3D precise spatial maps

Positioning
Ego-motion
Trajectory planning

- Unprecedented needs
- Novel ideas of what constitutes a map



The challenge of scale

Open Street Map has already millions of updates every day

AVs will need billions of updates per day

Distributed data collection becomes the norm



Centralized collection of data becomes unfeasible
- no matter if 500, 10k, or 100k cars mapping, it is still not enough

The challenge of data content and quality

A background image of a park path with a pedestrian sign. The path is paved and leads through a wooded area with many trees. A signpost with a black sign featuring a white pedestrian icon stands on the right side of the path. The overall scene is brightly lit, suggesting a sunny day.

Represent the Full Reality

- **Integrated:** imaging and spatial combined
- **Rich:** multispectral for reliability
- **Spatially accurate:** for positioning accuracy

Encoded for efficiency

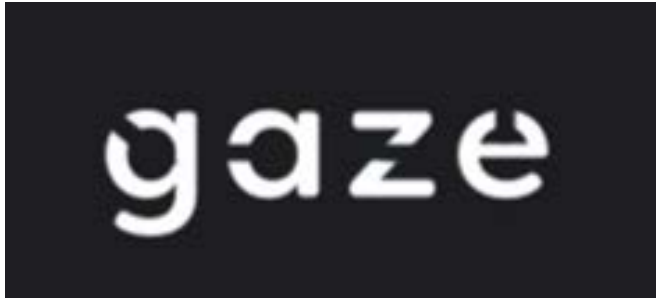
- **Compact:** for storage, communication, and distribution
- **Structural:** for efficient retrieval and use
- **Purposed:** for direct application in analysis

The future

- Smart sensors
- Communication networks and data processing chain
- Retrieving data from hundreds of millions of vehicles 24/7
- Detecting changes, updating records, and distributing the new information downstream and upstream

WE HAVE MOVED AHEAD...

ArcticRED is now Gaze Inc.



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