EVO*TEGRA*

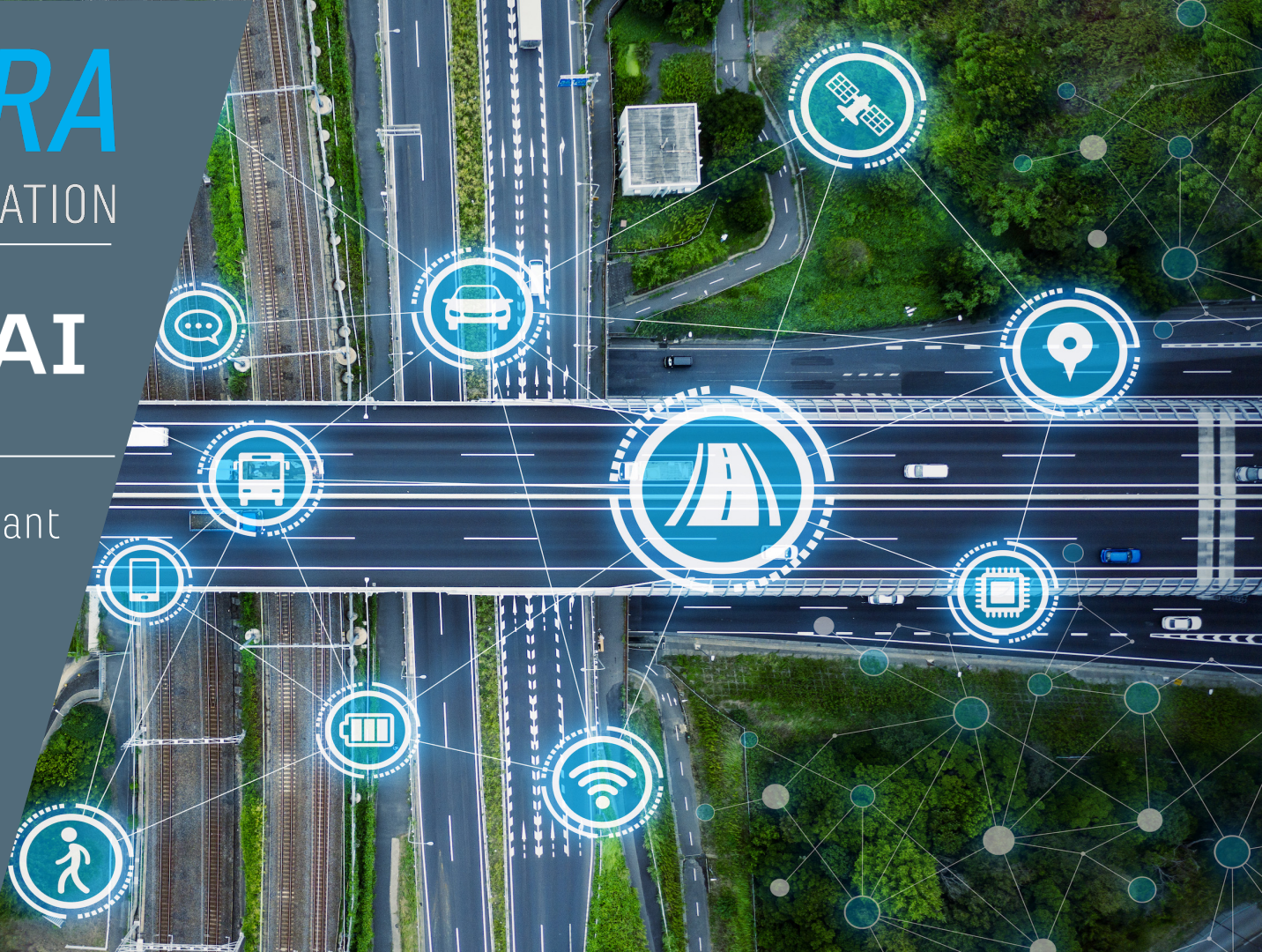## CONCEPTS & INTEGRATION

brīghter AI

Data protection compliant
solutions for lossless
image data acquisition

Smart City

Brighter AI

Brighter AI offers anonymization solutions for image and video data with a focus on automotive and smart city.

"The natural anonymization of Brighter AI has no negative impact on the performance of machine learning models." (Automotive Tier 1)

Evotegra GmbH

brighter AI   **EVOTEGRA**
CONCEPTS & INTEGRATION

We offer customer-specific solutions and products for image recognition with artificial intelligence with a focus on automotive and industry.

"Evotegra GmbH has extensive experience, processes and tools for the automated acquisition and labelling of image data"

Smart City

GDPR-compliant data acquisition

From the optimization of public transport to demand-driven services, the Smart City offers great potential for optimization.

The GDPR-compliant lossless data acquisition can be used for both mobile (e.g. in communal fleets) and stationary systems. While fully protecting the privacy of the citizens, the municipal infrastructure can be monitored more efficiently and public transport and traffic can be optimized.

Requirements

Data acquisition for the Smart City

- Data and Privacy Protection
    - Prerequisite for public acceptance
- Lossless anonymization
    - Post-evaluation of data
- Fully automatic collection
    - Updatable
    - No manual processes
- Mobile and stationary collection
- Flexible use
    - Demand-oriented services
        - E.g. Parking / cleaning / charging stations
    - Maintenance of the infrastructure
        - E.g. road signs / roads / construction sites
    - Mobility
        - E.g. dynamic traffic control (NOx)

Traffic Lights

Germany
- 4 classes

Robust detection
- Night

Traffic Signs

Germany
- ~150 classes (StVo)
- Regulatory signs
- Danger signs
- Directional signs
- City limits
- Signposts
- Additional signs

Construction site managent

Construction sites

Automatic monitoring and documentation

Solution

Fully automated swarm based data collection

- Data selection with artificial intelligence in the vehicle
  - Data anonymization in the vehicle
  - 4G / 5G transmission
  - No manual processes
- AI platform
  - Real-time execution of AI object detection
  - Integration of individual requirements
- AI data
  - Generation of individual training data
  - Training of AI networks
- Cloud
  - Control server for campaign management
  - Collection of distinct property types / locations
  - Data transfer and storage
    - Strong encryption / authentication

Solution

Flexible platform for data collection

- Jetson-Xavier platform for data acquisition
  - High performance for real-time AI applications
  - Low power consumption (15-50W)
  - Simple and reversible integration
  - Fully automatic operation
  - Remote maintenance possible via VPN
  - Updatable
- Flexible
  - Supports numerous sensors / cameras
    - Pictures and videos
    - 3D acquisition with stereo camera
    - GPS
    - CAN
    - …

Composition

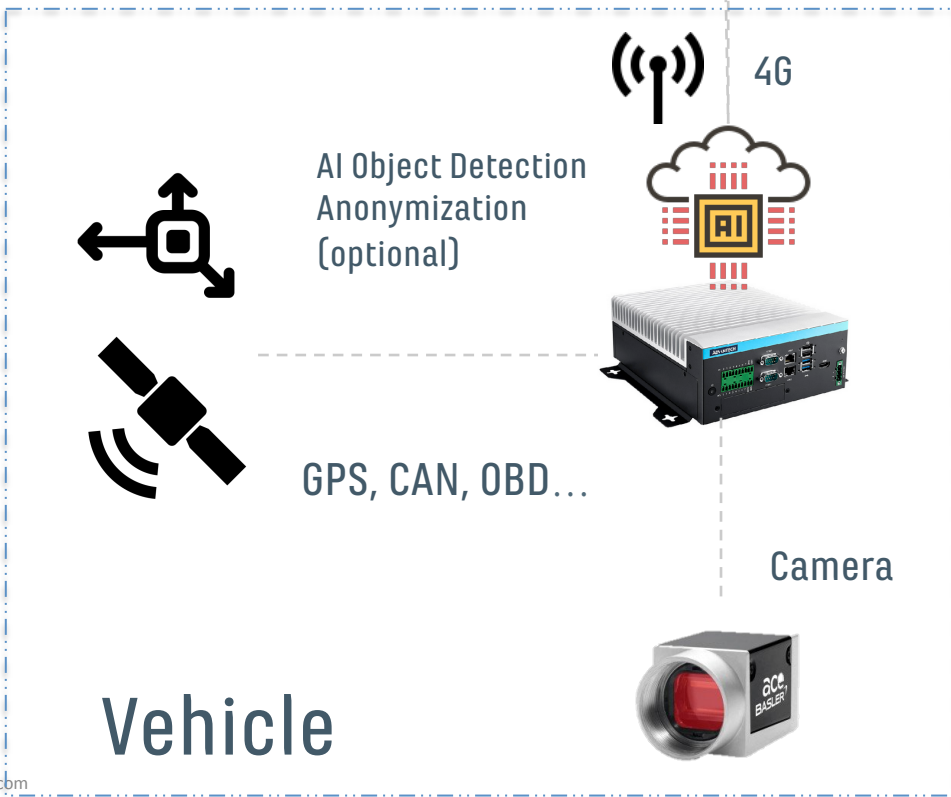Cloud Data storage
Control Server
Anonymization

brighterAI

EVOTEGRA
CONCEPTS & INTEGRATION

4G

Remote
administration

AI Object Detection
Anonymization
(optional)

GPS, CAN, OBD...

Camera

Vehicle

Data protection, GDPR

brighterAI

Principles of data acquisition

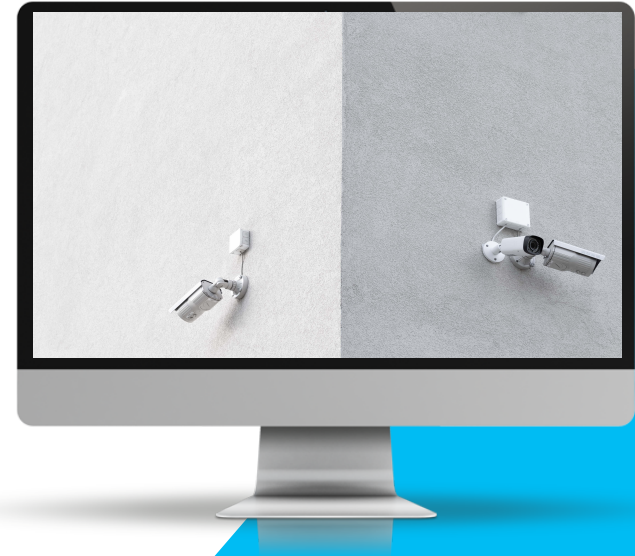Legitimit interest (GDPR Art. 6/1f)
- may be factual, economic or non-material interest (Reimer HK-EuDSchVO Art. 6, margin no. 54.).

Processing and Storage

- Targeted selection through artificial intelligence
  - Data minimisation(GDPR Art. 5 / 1c)
- Lossless anonymization
  - In the vehicle or in the cloud
  - Data protection by design (GDPR, Art. 25)
- Privacy related data only in transient form
  - Anonymized data is no longer subject to the GDPR

Authorization and Authentication

- strong encryption for data transfer and storage

Anonymization

Lossless removal of privacy related features by replacing license plates and faces with synthetic counterparts.

No negative impact on AI models

Both number plates are synthetic!

Thanks!

brīghter AI   EVOTEGRA
CONCEPTS & INTEGRATION

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