

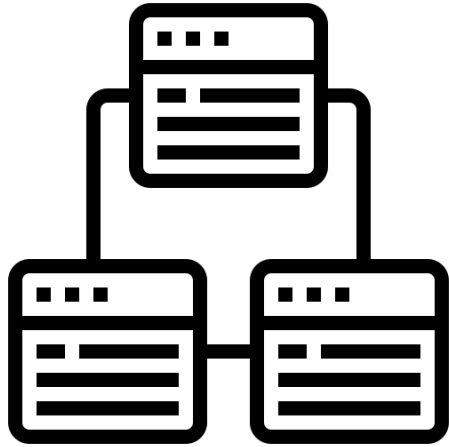


DATA CENTRIC ARCHITECTURE. DATA MIDDLEWARE AS PART OF AN ECOSYSTEM.

COVESA.

EN-51

DATA CENTRIC ARCHITECTURE. MOTIVATION & GOALS.



Architecture

- Common architecture for data transfer and handling
- Common data domain models to interchange data
- On- & Off-board share common data architecture
- Efficient data transfer



Everywhere & Anytime

- Increasing the availability of data
- Data is available, even if single ECU's are shutdown



Cost efficient

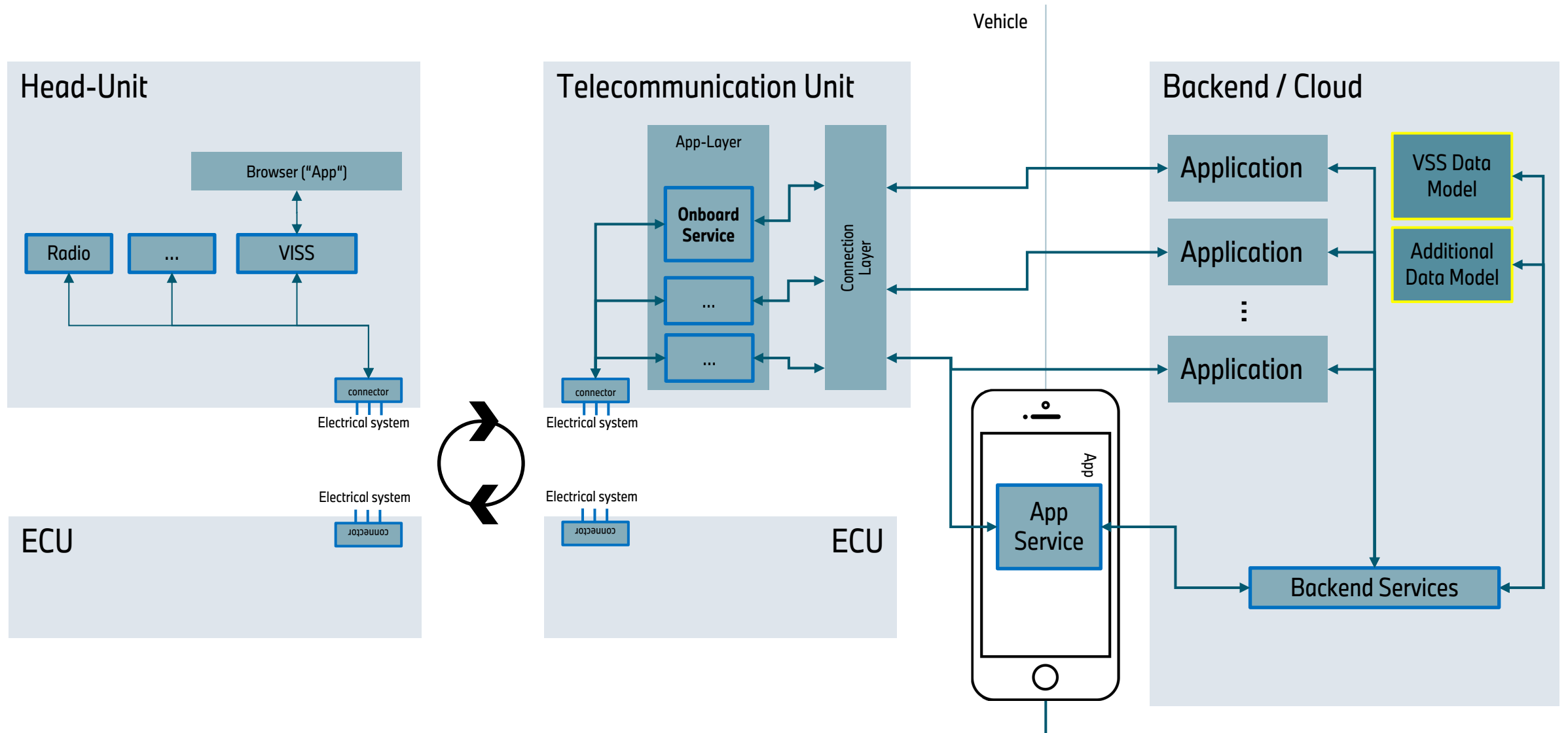
- Reduction of costs
- Shorter feedback loops, faster reaction to regulations
- Time-to-market for data-centric use cases



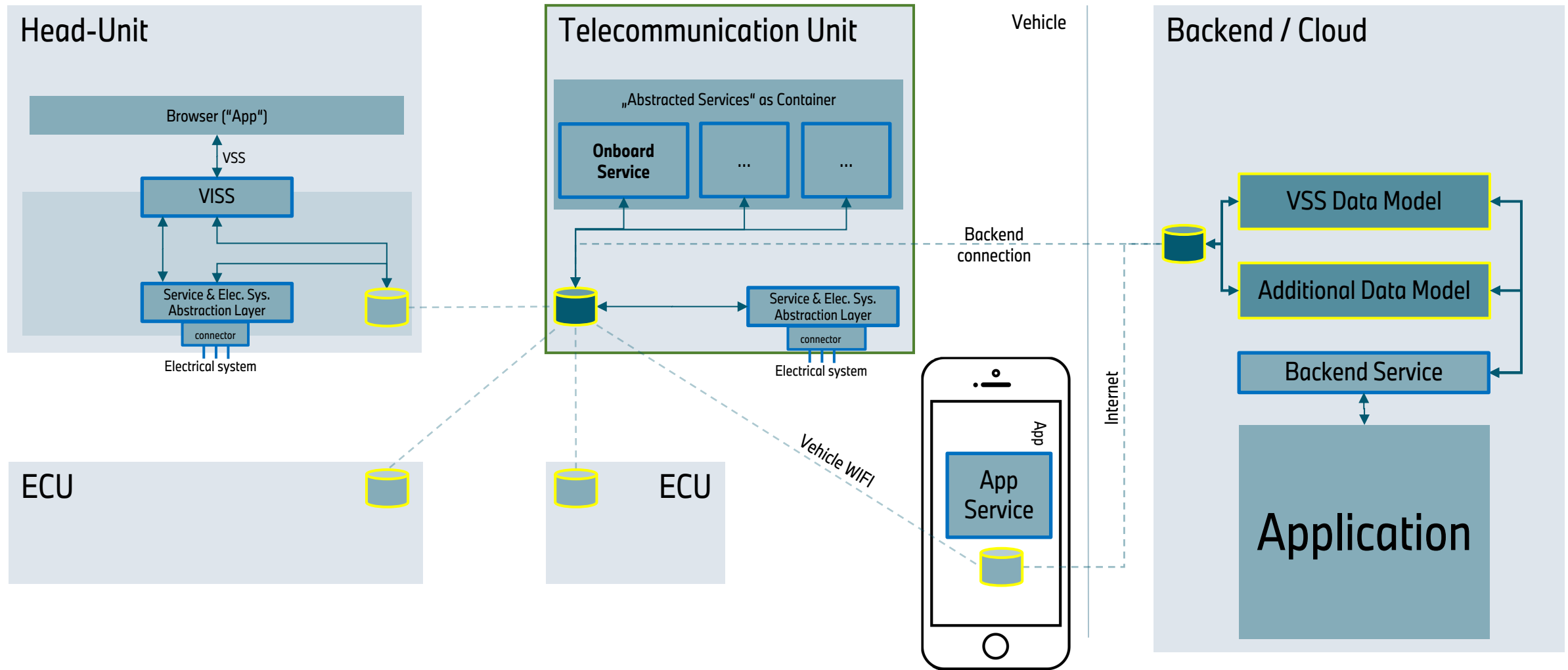
Simplicity

- Simplify interaction with vehicle on & off-board
- Data centric use cases on & off-board

DATA CENTRIC ARCHITECTURE. TODAY'S ARCHITECTURE.

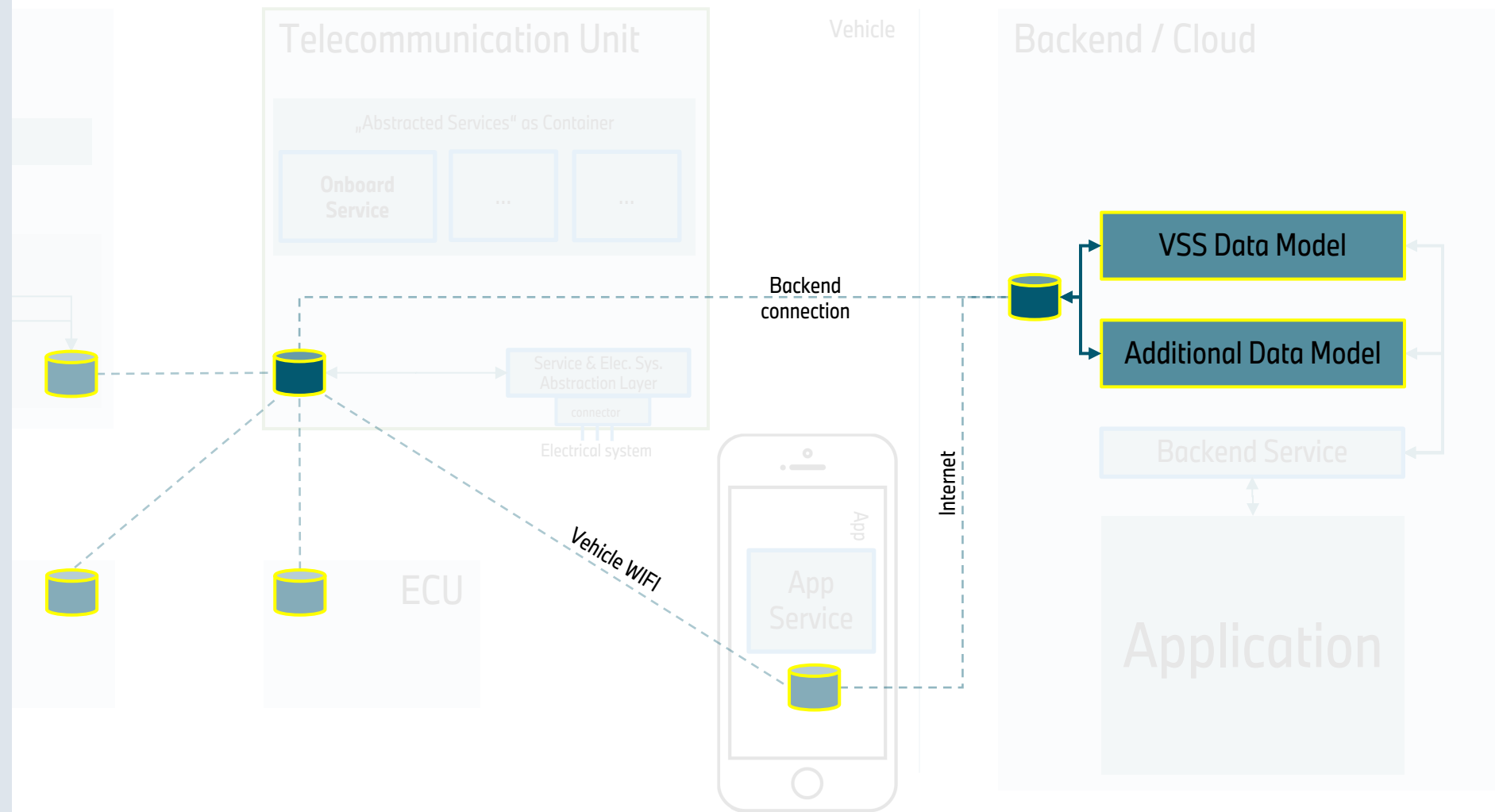


DATA CENTRIC ARCHITECTURE. DATA MIDDLEWARE AS PART OF AN ECOSYSTEM ARCHITECTURE.



DATA CENTRIC ARCHITECTURE. DATA MIDDLEWARE AS PART OF AN ECOSYSTEM ARCHITECTURE.

- Global data model and verification based on VSS
- Centralized on-board connection handling
- Partial on-board data models, to reduced storage on each ECU
- Each ECU stores only the data required or created by the services
- The whole data is accessible, can be requested and subscribed, via the data middleware
- Easy introduction of additional data models



DATA CENTRIC ARCHITECTURE. OUTLOOK ON THE DATA MIDDLEWARE.

- Rollout middleware to research fleet to confirm & harden the concept against the following criteria
 - Scalability
 - Connectivity
 - Availability
 - Ease of use
 - Running costs

- Usage of 3rd party end to end data middleware let an OEM focus on
 - increasing quality of personalized experience on different touchpoints by adding additional domain data models
 - relating this semantically rich data to each other and enabling new services