

AUSTRIAN INTELLIGENT HIGHWAYS IN 2024

ASECAP Days 2024
Milano, 14.5.20234

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ITS Services



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GUTE FAHRT, ÖSTERREICH!

📍 C-ITS: What? Why? How?

📍 C-ITS & ASFINAG

📍 C-ITS Services on Austrian Highways

📍 Digitalization of Austrian Highways



**WHAT?
WHY?
HOW?**



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A LOT OF TERMS, ONE SYSTEM

Car2X

V2X

WLANp

ITS-G5

C-ITS

**INFRASTRUCTURE to VEHICLE
Communication**

V2I

V2V

C2X

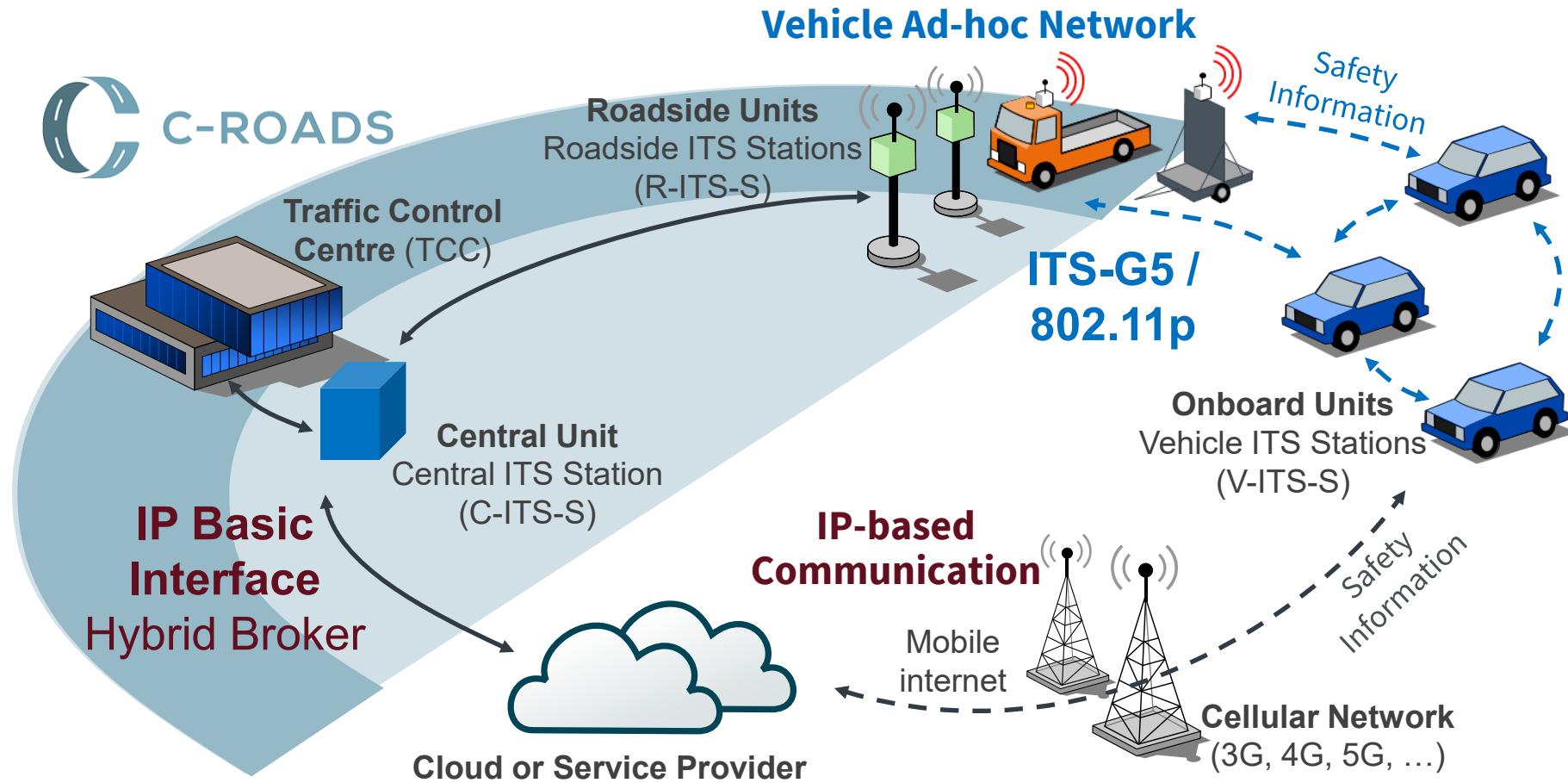
I2V

Cooperative Systems

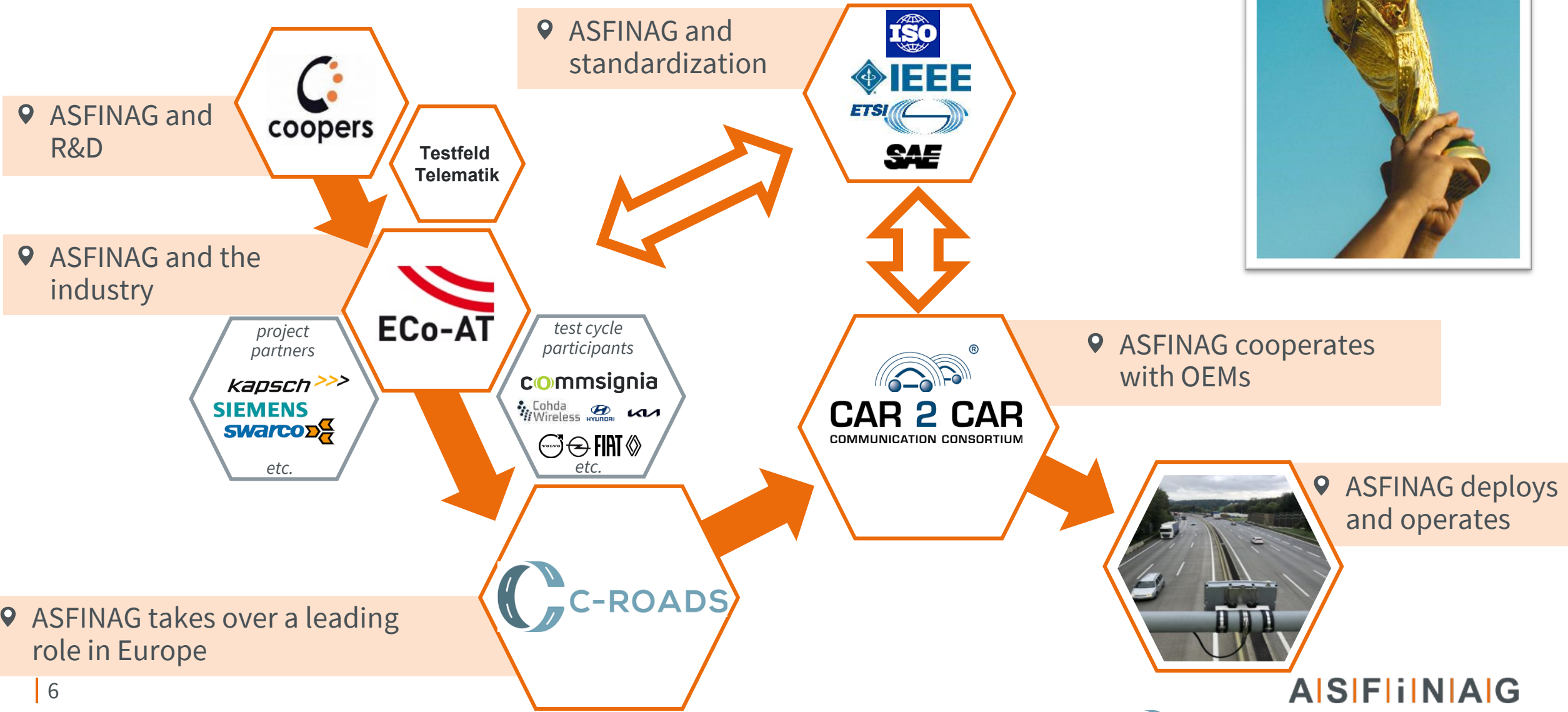
- Direct communication
- Short-range technology
- No internet
- No cellular radio

C-ITS...Cooperative Intelligent Transport System

SUPPORT OF TWO COMMUNICATION MODES



ASFINAG – A DRIVING FORCE IN C-ITS



MEIN PAPA ARBEITET
FÜR DICH.



Danke,
dass du
aufpasst.

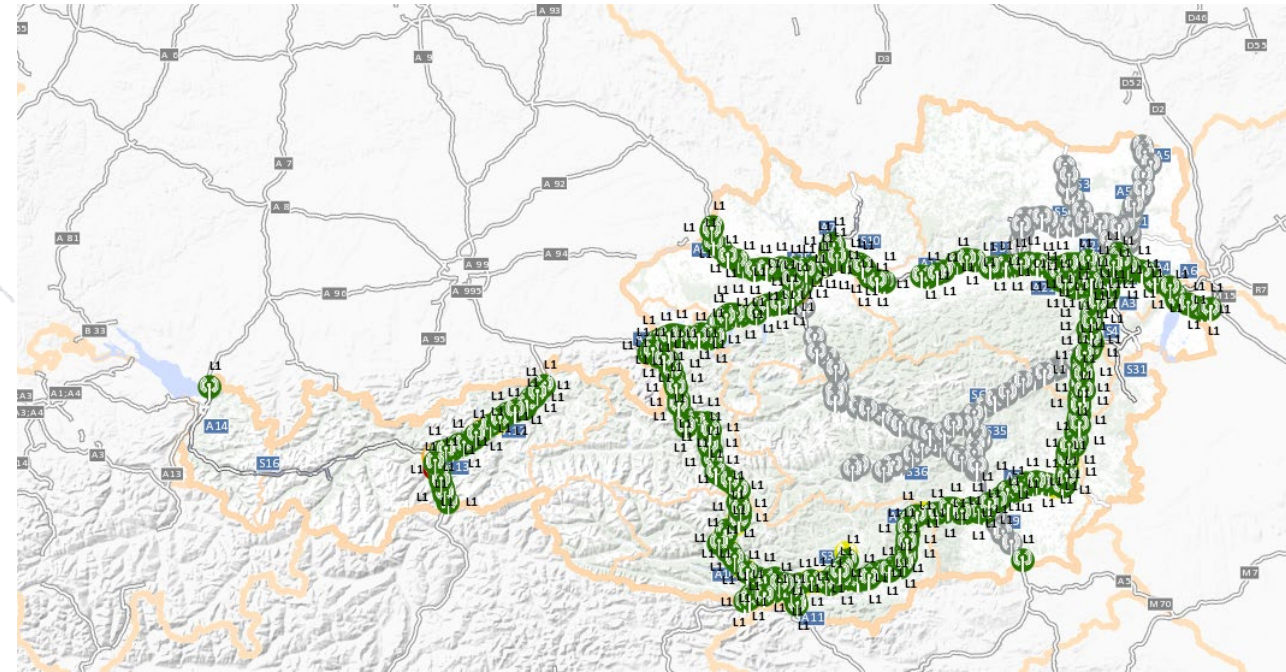
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ASFINAG: C-ITS STATIONARY SYSTEM

Final plan: 525 RSUs
Road network: 2 250 km
→ every ~4 km one RSU

Currently deployed: 370 RSUs



Sending (I2V)

„Infrastructure-to-Vehicle“



Roadworks warning



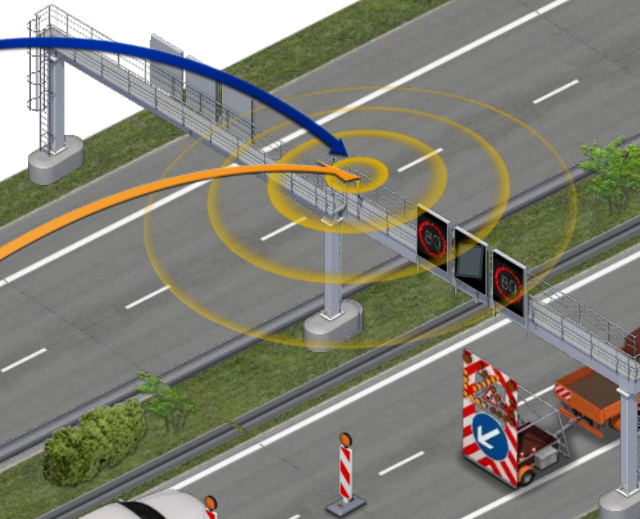
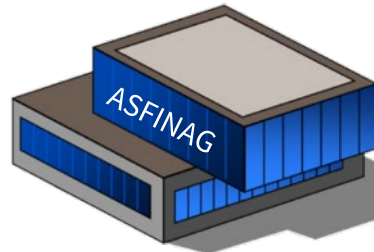
Hazardous location notification



VMS
(digital traffic sign)

C-ITS
Hybrid

For other receivers
(e.g. cities,
neighbouring
countries)



partly designed with C2C-CC Illustration Toolkit
© Car2Car Communication Consortium

Receiving (V2I)

„Vehicle-to-Infrastructure“



Travel time (BT/WLAN)



Travel time (C-ITS)



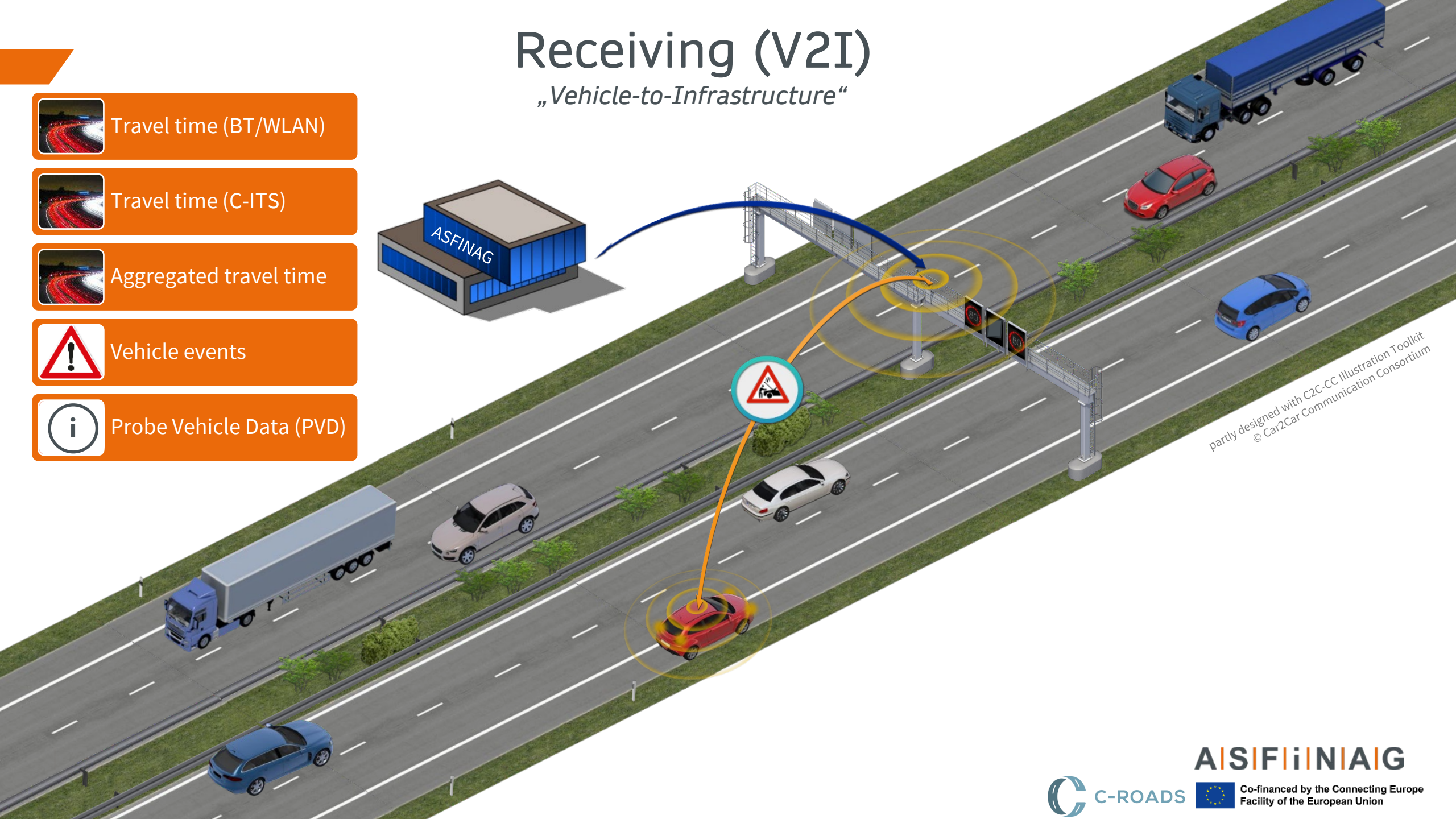
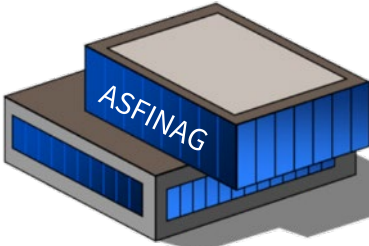
Aggregated travel time



Vehicle events



Probe Vehicle Data (PVD)



partly designed with C2C-CC Illustration Toolkit
© Car2Car Communication Consortium

ASFINAG: C-ITS MOBILE SYSTEM



Plan: 200 vehicles by 2026
400 vehicles by 2030

Service vehicles:
tolling inspection, traffic manager,
regional service
winter maintenance, truck
mounted attenuators

Currently equipped: 70 vehicles



stationary

1

C-ITS SERVICES FOR THE FIRST SERIES-PRODUCTION VEHICLES



Stationary Vehicle -
Post-crash



Stationary Vehicle -
Broken-down vehicle



Stationary Vehicle -
Stopped vehicle

Traffic Condition

Dangerous
Situation

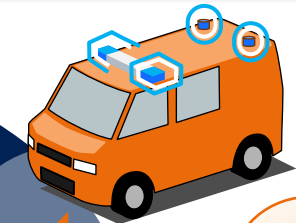
Road Works
Warning



Stationary safeguarding
emergency vehicle



Emergency vehicle
in operation



2

mobile

C-ITS: FIGURES, DATA, FACTS



Golf 8



ID.3



ID.4



ID.5



T7



ID.Buzz



CUPRA Born



ID.7

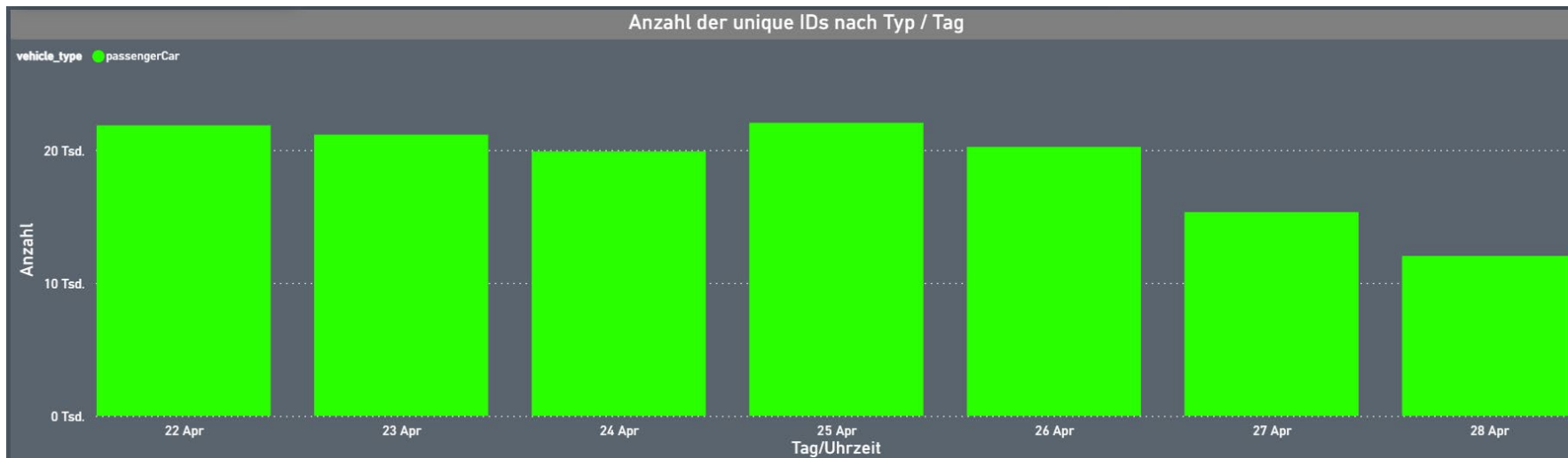
Mo-Fr 20.000 – 22.000 C-ITS vehicles per day

Sa-Su 12.000 – 15.000 C-ITS vehicles per day



...

approx. 1,2 Mio.



ASF INAG: DIGITALIZATION ROADMAP



- 📍 Roadworks (short-term, long-term)
- 📍 Safety related events
- 📍 Directives (especially traffic signs)
- 📍 Infrastructure support (drive through tolling stations, park + rest)
- 📍 Interconnectivity to roads beside highways and neighboring countries
- 📍 Multimodal interconnectivity and traffic management
- 📍 Infrastructure support for automated driving

C-ITS status

C-ITS in operation:
C-ROADS Use Cases: RWW, HLN

C-ITS in operation:
C-ROADS Use Cases: IVS

New C-ROADS Use Cases:
e.g., POIM-PA

C-ITS Hybrid Broker

New C-ROADS Use Cases:
e.g., CPM, IVIM (including automated vehicle container)

QUESTIONS?

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ITS Services

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Co-financed by the Connecting Europe
Facility of the European Union