Connected Cars & 5G

Open innovation partnership between Orange & Ericsson to test 5G network technologies for connected vehicle applications

The partnership conducts 5G technology pilot to leverage 4G to 5G technology evolution and addresses connected vehicle requirements to improve road safety, as well as new automotive connected services for better user experience.

We conduct live testing using a test track on a French site, equipped with an end-to-end wireless experimental network integrating: LTE, C-V2X and future 5G.

Technical requirements for 5G V2X use cases

Very low E2E latency: 1-5 ms
for critical mission V2V/V2I communications

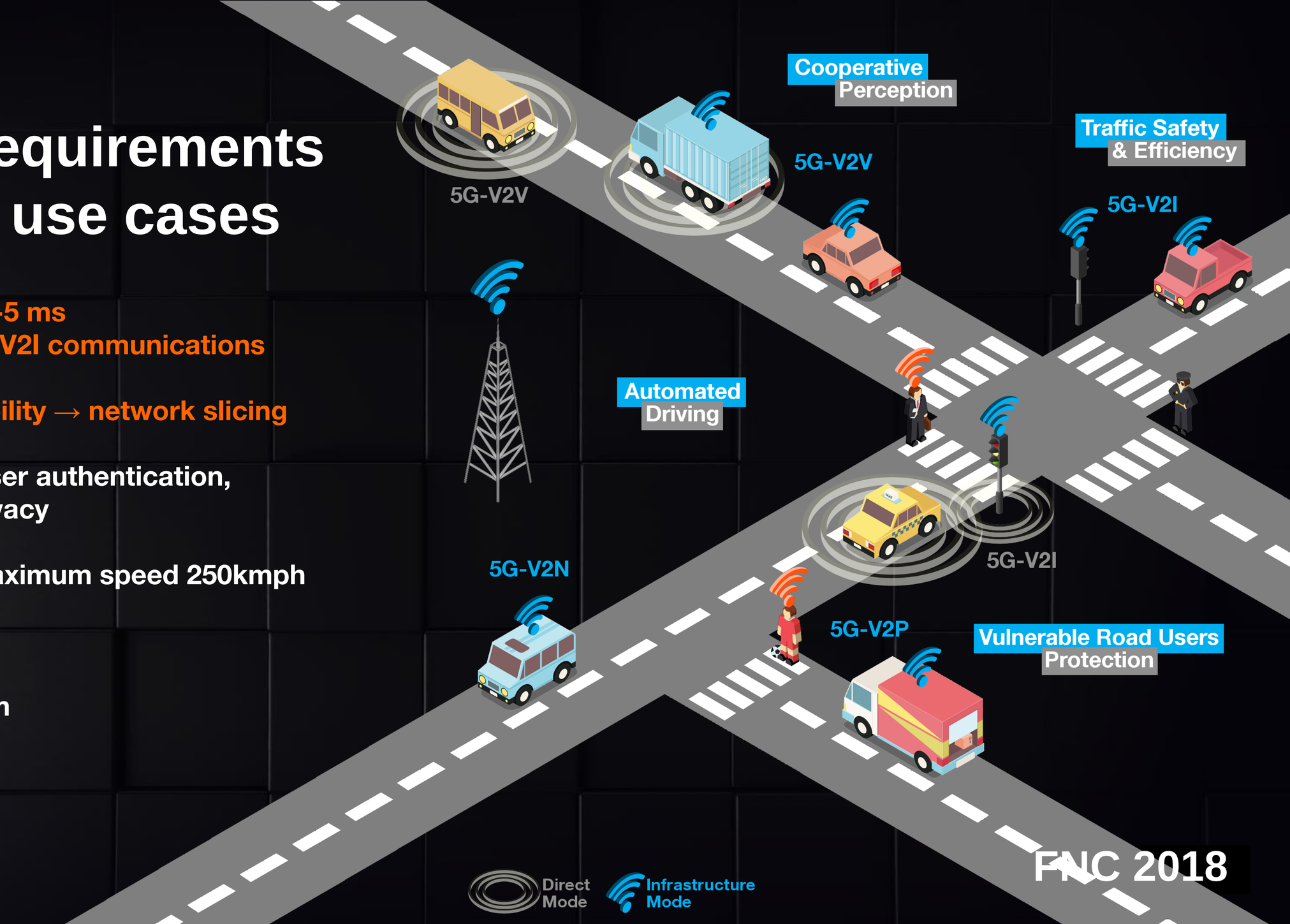
QoS / Scalability / flexibility → network slicing

Security and privacy: user authentication, confidentiality, user privacy

High speed mobility: maximum speed 250kmph

Reliability: 99,999%

Position accuracy: 10cm



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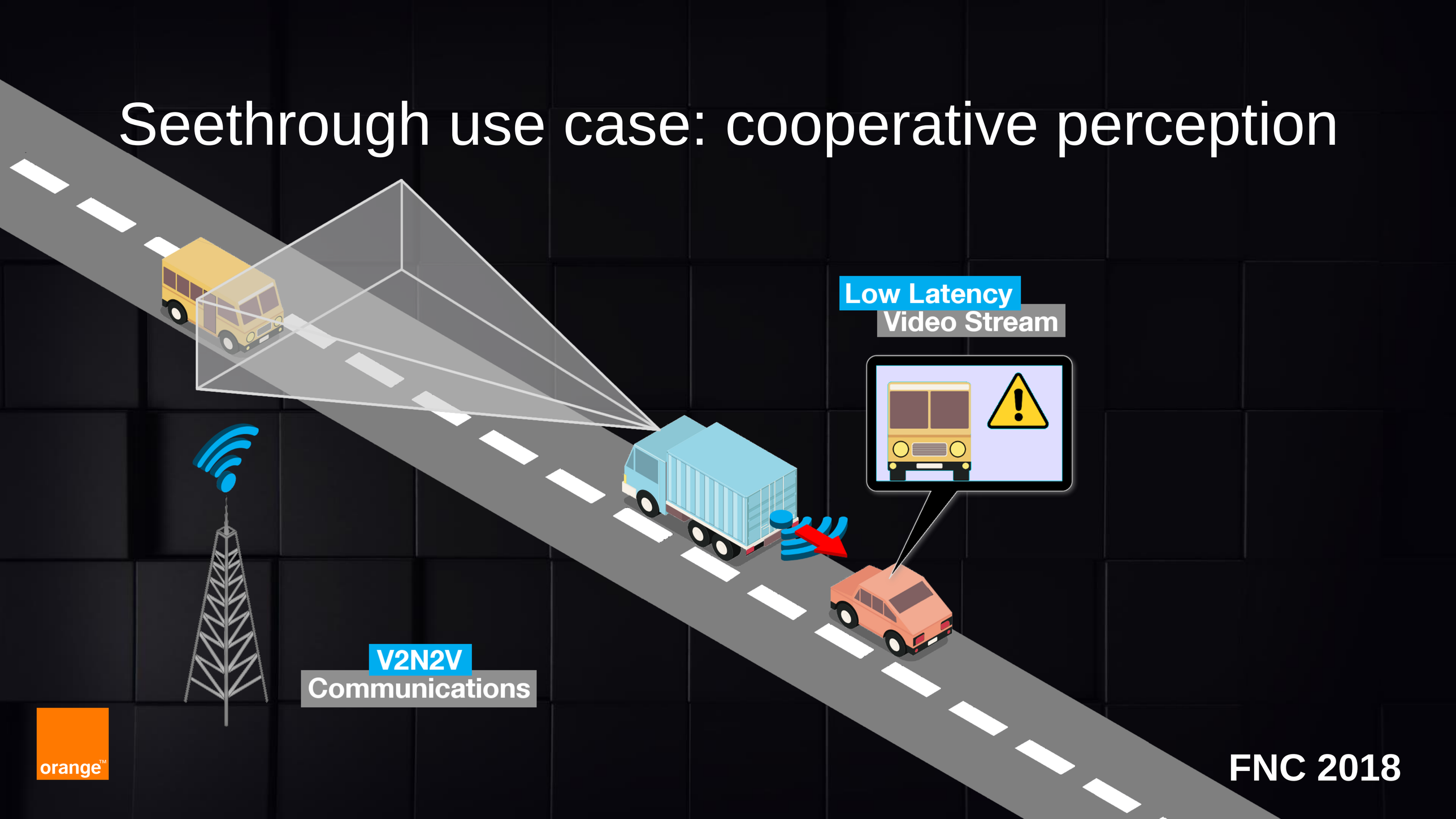
Seethrough use case: cooperative perception



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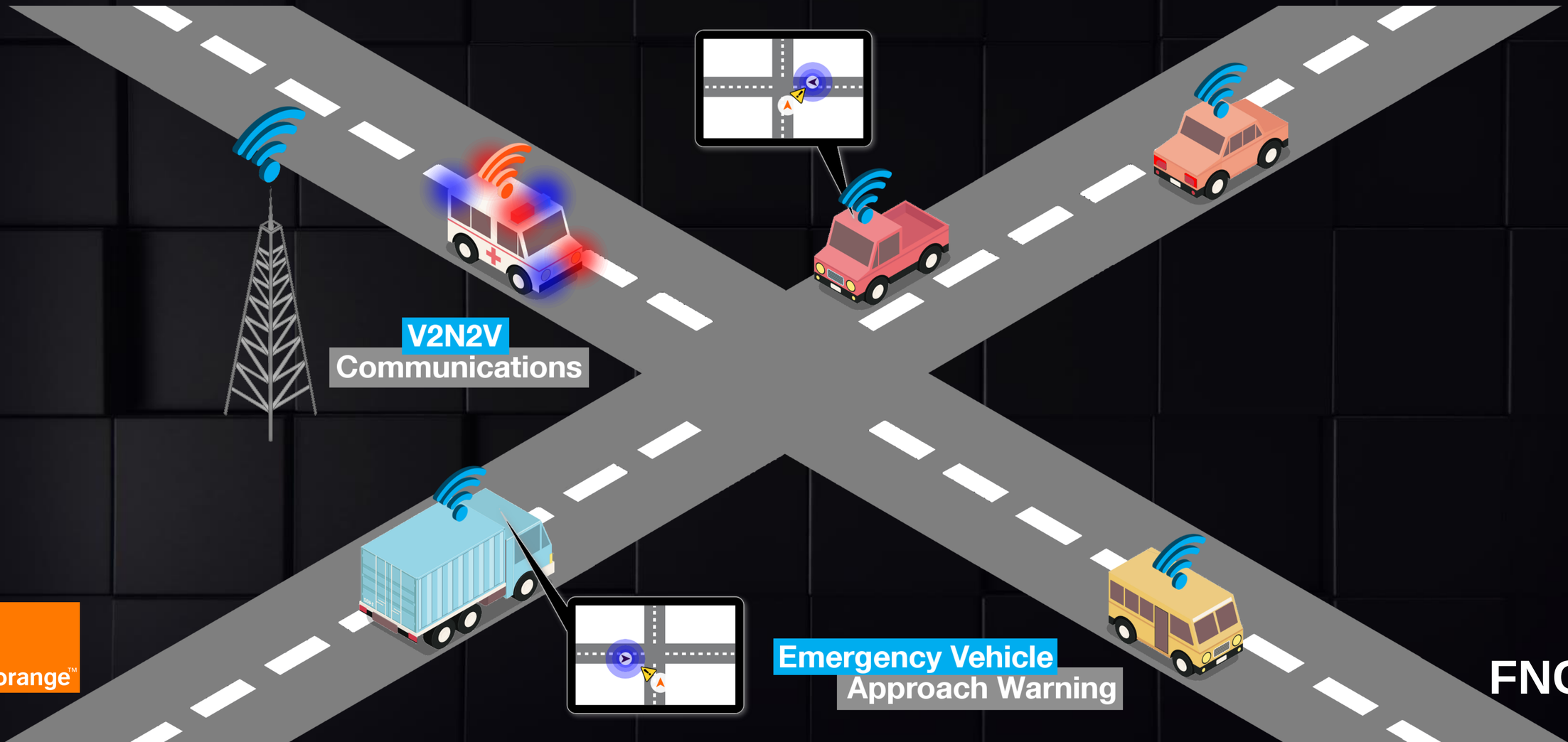
Emergency vehicle approaching use case



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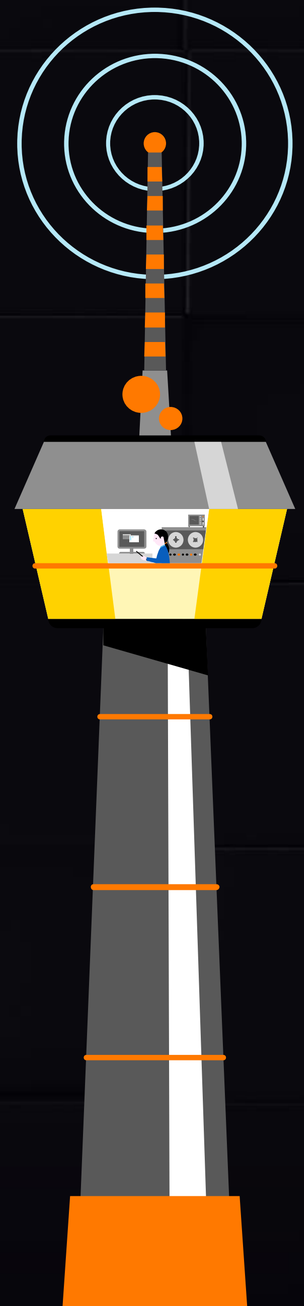
Main outcomes

Split of the data and control plane **reduces the delay**

Network slicing brings **advanced QoE** in the management of the differentiated traffic compared to basic QoS policy



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Next Steps

LTE-V2V (Rel.14) to assess the enhanced performance in terms of latency and communication range

Virtualized RAN capability to assess advanced features of radio ressource allocation

New experimental **5G platform** in CEVA at Montlhéry with UTAC & Ericsson

European research project **5GCar**
5G V2X architecture
Multi link multi RAT
Security/privacy