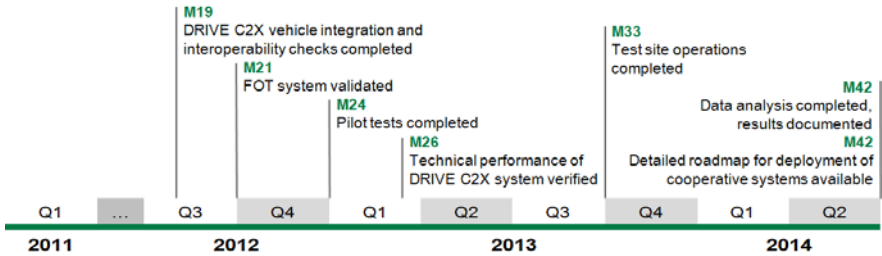


Motivation and Objectives

DRIVE C2X creates a reference for cooperative driving in Europe by bringing together seven national test sites and creating a harmonised testing environment based on the newly developed DRIVE C2X reference system. Field operational tests using the reference system provide reliable and comparable results under different conditions, providing decision makers, authorities and the public with much-needed certainty about the safety, efficiency and environmental benefits of cooperative driving and its economic feasibility.

Project Plan, Milestones and Deliverables



Technical and Methodological Approach

- The DRIVE C2X reference system is the technological foundation for the field operational tests. It combines the results of PRE-DRIVE C2X with the latest developments in ETSI TC ITS standardisation.
- DRIVE C2X unites different technologies: the system uses IEEE 802.11p-based DSRC technology, complemented by cellular communication, and incorporates ad-hoc networking.
- The experimental procedure is designed to provide consistency across the seven test sites. It specifies a systematic approach across all FOTs and combines state-of-the-art FESTA methods.
- The evaluation framework includes the collection of subjective and objective data, the identification of research questions, testable hypotheses and performance indicators.

Achievements

- Common European C2X system prototyped and evaluated in field trials across Europe:
 - Proper functioning under real life conditions verified.
 - European-wide interoperability proven
 - The impact of the various use cases assessed
 - Use cases for early deployment discussed and agreed
- Europe-wide awareness of cooperative systems created.
- Completion of standardisation achieved.
- Realistic business cases and a commonly agreed implementation strategy developed.

Results



Safety impacts clearly positive. Most effective functions were:

- In-Vehicle Signage speed limit could reduce on average 23% in fatalities and 13% in injuries
- Weather Warning leads to 6% fewer fatalities and 5% fewer injuries (assuming 100% penetration rate)

Efficiency and environment: statistically significant for two functions.

- Impact of In-vehicle signage grows with penetration rate and is biggest for fuel consumption and CO₂ (-2.3% in the high passenger car penetration rate).
- Green Light Optimal Speed Advisory with small reduction in fuel consumption and CO₂.

User acceptance very high:

- 9 out of 10 test users highly welcome the cooperative system and are willing to use it if it were available on their vehicles.

Budget	18.5 M€	Funding	12.4 M€
Duration	42 months	Start	January 2011
DG	CNECT	Contract n°	270410
Coordinator	Matthias Schulze, Daimler AG	Contact	matthias.m.schulze@daimler.com
Partners	33 partners among them Daimler, CRF, BMW, Renault, Ford, PSA, VW, Volvo, Opel, and 13 support partners		
Website	www.drive-c2x.eu		