# Annex 1 - C-ITS deployment description template

C-ITS Deployment [Name of the City]

# Objectives

[Free text addressing the main general objectives of the C-ITS implementation]

## Use-cases objectives:

Main policy goal(s) for C-Roads participation in C-ITS deployment.

Increase road safety

Improve traffic management and road operations

Increase user satisfaction

Reduce environmental impact

Other

**Cooperation with private and/or public bodies in the procurement, deployment, and operation of the C-ITS Services**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Public | Private | Public & Private |
| Procurement |  |  |  |
| Deployment & Installation |  |  |  |
| Service Operation |  |  |  |

**C-ITS Investment funds**

C-Roads Project

National/Local funds

Others

# C-ITS deployment Description

[Free text to provide a general description of the city’s characteristics]

## Use-cases description:

# C-ITS Geographical Coverage

Linear length (km):

Area (km2):

Figure 1 - Map of [City] C-ITS deployments.

**City Geography**

Mountainous/hilly

Flat

Valley

Other

**Urban streets network (C-ITS deployment areas)**

See Figure 1 below for an explicative example.

Logo, company name

Description automatically generated

*Figure 1 - Designs of urban street networks.*

Traditional Grid Design

Curvilinear Loop Design

Beginning of Cul-De-Sac

Conventional Cul-De-Sac

Other

# Technical elements

[Free text with further details regarding the Architecture of the C-ITS deployments]

**Regarding European interoperability, the use of C-Roads specifications**

Yes

No

**C-Roads WG2 specifications version**

1.1

1.4

1.5

1.6

1.8

2.0

Other:

**Type of communication**

Short-range communication (ITS G5 - RSUs)

Cellular communication

Hybrid communication

**Short-range communication (RSU's) deployed until 2023/Q4**

1 to 10

11 to 20

21 to 50

More than 50

Not applicable

**C-Roads challenging aspect(s) faced in the C-ITS deployment**

Need for modifications of existing data source (e.g. format, content) to be compliant with ETSI message standard / WG2 technical requirements.

Need for frequent updates per changes in WG2 technical requirements (e.g. C-ITS Server).

Procurement of HW (e.g. traffic controllers, sensors, RSUs) due to lack of documentation on minimum requirements / available vendors

Use case specifications not in line with existing system architecture/infrastructure

Other:

# C-ITS use-cases and deployment stage

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **C-ITS Service** | **Acronym** | **Use-Case** | **Type of Road Network** | **Code** | **Deployment date** | **Initial Stage** | | **Intermediate stage** | | **Operational** |
| **Planned but not yet started** | **Procurement phase** | **Installation phase** | **Testing phase** |
| In-Vehicle Signage | IVS | Free Text | All | IVS-FT | 2023 Q4 |  |  |  |  |  |
| Traffic Signs | All | IVS-TS | 2023 Q4 |  |  |  |  |  |
| Hazardous Location Notification | HLN | Accident Zone | All | HLN-AZ | 2023 Q4 |  |  |  |  |  |
| Traffic Jam Ahead Warning | All | HLN-TJA | 2023 Q4 |  |  |  |  |  |
| Stationary vehicle | All, mainly on motorway | HLN-SV |  |  |  |  |  |  |
| Weather Condition Warning | All | HLN-WCW | 2023 Q4 |  |  |  |  |  |
| Temporarily slippery road | All | HLN-TSR | 2023 Q4 |  |  |  |  |  |
| Animal or person on the road | Motorway | HLN-APR |  |  |  |  |  |  |
| Obstacle on the road | All | HLN-OR |  |  |  |  |  |  |
| Emergency or Prioritized Vehicle Approaching | All | HLN-EPVA | 2023 Q4 |  |  |  |  |  |
| Emergency or Rescue/Recovery vehicle in Intervention | All | HLN-ERVI | 2023 Q4 |  |  |  |  |  |
| Railway Level Crossing | All | HLN-RLX |  |  |  |  |  |  |
| Unsecured Blockage of a Road | All | HLN-UBR |  |  |  |  |  |  |
| Alert Wrong Way Driving | Motorway | HLN-AWWD |  |  |  |  |  |  |
| Public Transport Vehicle Crossing | Road, Urban Road | HLN-PTVC |  |  |  |  |  |  |
| Public Transport Vehicle at a Stop | Road, Urban Road | HLN-PTVS |  |  |  |  |  |  |
| Signalized Intersections | SI | Signal Phase and Timing Information | All | SI-SPTI |  |  |  |  |  |  |
| Green Light Optimal Speed Advisory | All | SI-GLOSA |  |  |  |  |  |  |
| Imminent Signal Violation Warning | All | SI-ISVW | 2023 Q4 |  |  |  |  |  |
| Traffic Light Prioritization | All | SI-TLP | 2023 Q4 |  |  |  |  |  |
| Emergency Vehicle Priority | All | SI-EVP | 2023 Q4 |  |  |  |  |  |
| Probe Vehicle Data | PVD | Vehicle Data Collection | All | PVD-VDC |  |  |  |  |  |  |
| Event Data Collection | All | PVD-EDC |  |  |  |  |  |  |
| Road Works Warning | RWW | Lane Closure | All | RWW – LC |  |  |  |  |  |  |
| Road Closure | All | RWW – RC |  |  |  |  |  |  |
| Road Works - Mobile | All | RWW - RM |  |  |  |  |  |  |
| Winter Maintenance | All | RWW - WM |  |  |  |  |  |  |
| Extended Work Zone |  |  |  |  |  |  |  |  |
| Automated Vehicle Guidance | AVG | SAE Level Guidance | Interurban roadways | AVG-SAELG |  |  |  |  |  |  |
| AVG | Platoon Support Information | Interurban roadways with more than one lane | AVG-PSI |  |  |  |  |  |  |
| AVG | Situation Based Distance Gap |  |  |  |  |  |  |  |  |
| AVG | Vehicle Type and Lane Specific Speed Limit / Recommendation |  |  |  |  |  |  |  |  |
| Collective Perception |  | Perception of VRU on the Road |  | VRU |  |  |  |  |  |  |
| Navigation Information |  | Smart Routing |  |  |  |  |  |  |  |  |
|  | Parking Information |  |  | 2022 Q2 |  |  |  |  |  |
|  | HD-Cartography |  |  |  |  |  |  |  |  |
| Connected and Cooperative Navigation in and out of the city |  | Dynamic Access Control of Designated Infrastructure |  |  |  |  |  |  |  |  |
| Dynamically Controlled Zones |  | Zone access control for urban areas |  |  |  |  |  |  |  |  |
|  | Dynamic Environmental Zone |  |  |  |  |  |  |  |  |
|  | Loading zone management |  |  | 2021 Q3 |  |  |  |  |  |
|  |  | Smart Slip Ramp |  |  |  |  |  |  |  |  |
|  |  | Emergency electronic brake light |  |  |  |  |  |  |  |  |
|  |  | Motorcycle approaching indication |  |  |  |  |  |  |  |  |
|  |  | Cooperative collision risk warning |  |  |  |  |  |  |  |  |
|  |  | Information on AFV fuelling & charging stations |  |  |  |  |  |  |  |  |
|  |  | Wrong way driving |  |  |  |  |  |  |  |  |

**The average necessary deployment time (months) for each stage:**

Initial stage - Planned but not yet started:

Initial stage - Procurement phase:

Intermediate stage - Installation phase:

Intermediate stage - Testing phase:

Operational: