

Application Requirements and Services

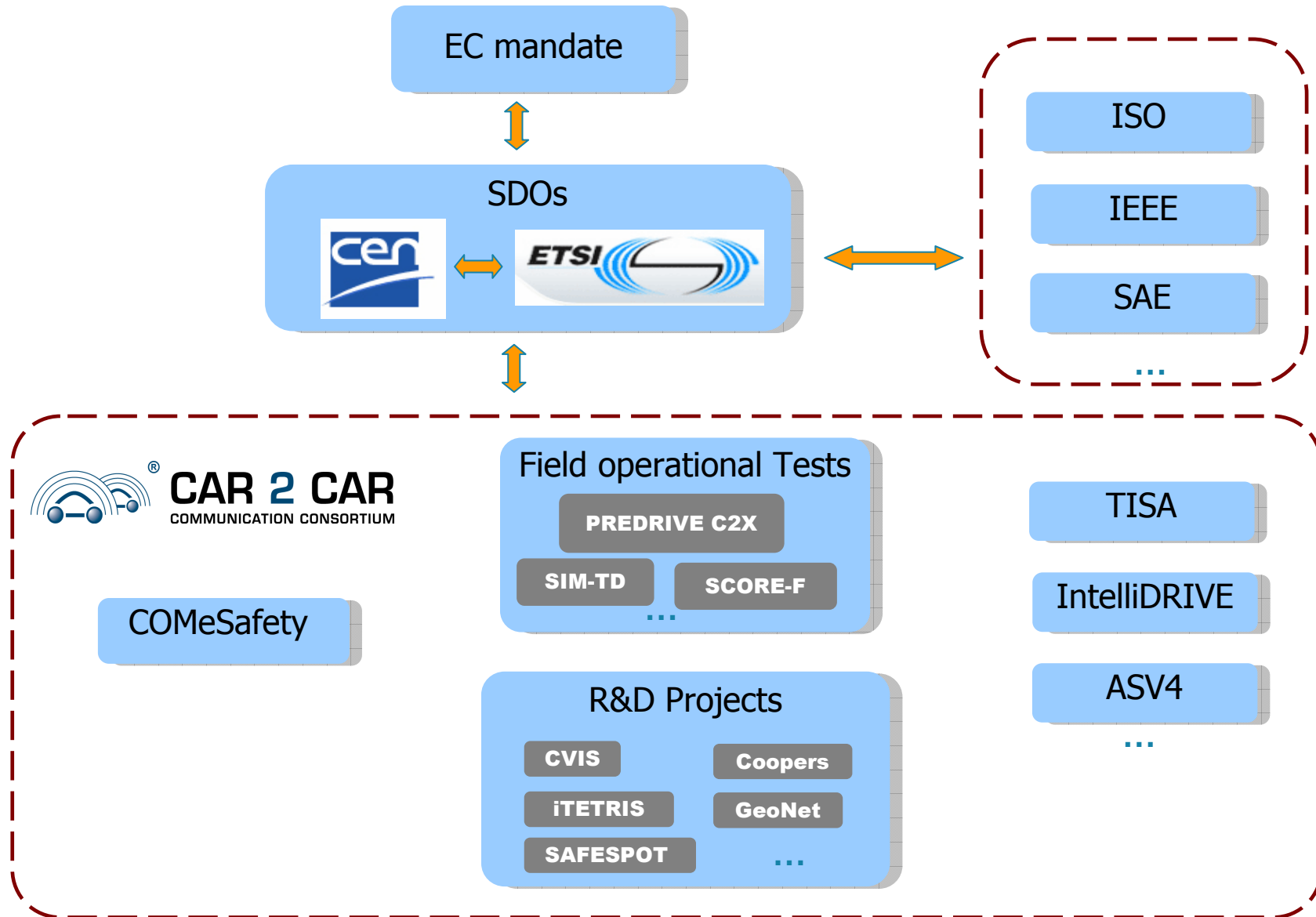
Status report and next steps

Agenda

- General overview of WG1**
- Current work status in WG1**
- Collaboration ETSI-CEN**
- Next steps**



World Class Standards



ETSI TC ITS WG1

□ Terms of reference

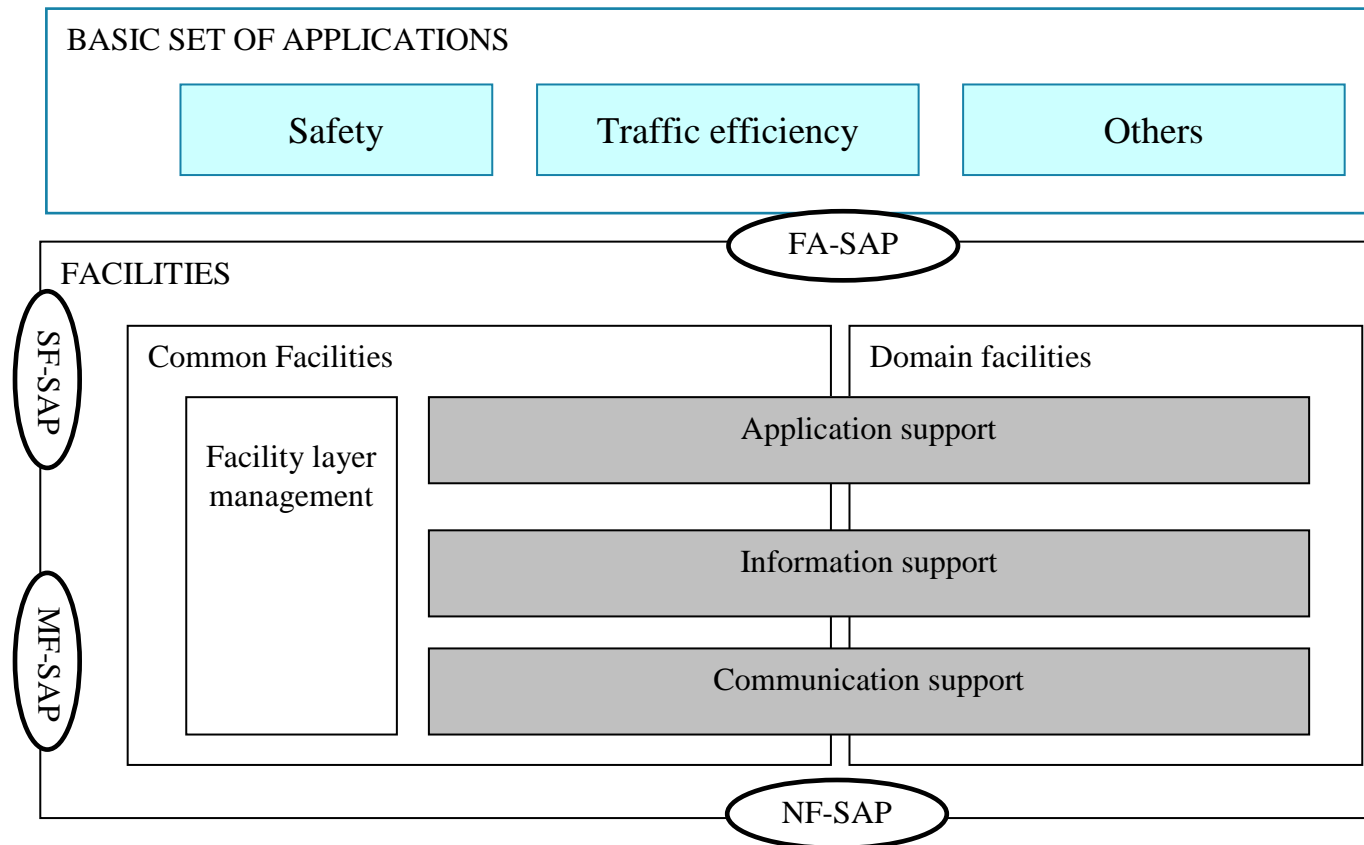
- On a harmonized requirements basis, develop the application classification and specify a V2V / V2I-Communication Basic Set of Applications.
- Define / Specify the functions, services and interfaces to support the V2V / V2I-C Basic Set of Applications.
- Specify application protocols and messages specification to support the Basic applications set.
- Specify the operational requirements for the supporting system.
- Consider conformance, interoperability testing procedures and test suites.
- Contribute to the harmonization and optimisation of the overall system.

□ Work methods:

- WG meetings: one meeting every 3 months in average.
- WG ad hoc meetings: according to work progress and work need
- WG meetings can be associated with TC meetings
- Email exchanges, conference calls, web meetings.
- WG1 also participate to joint session or joint discussion with other WGs.

- Number of contributions and participants is increasing

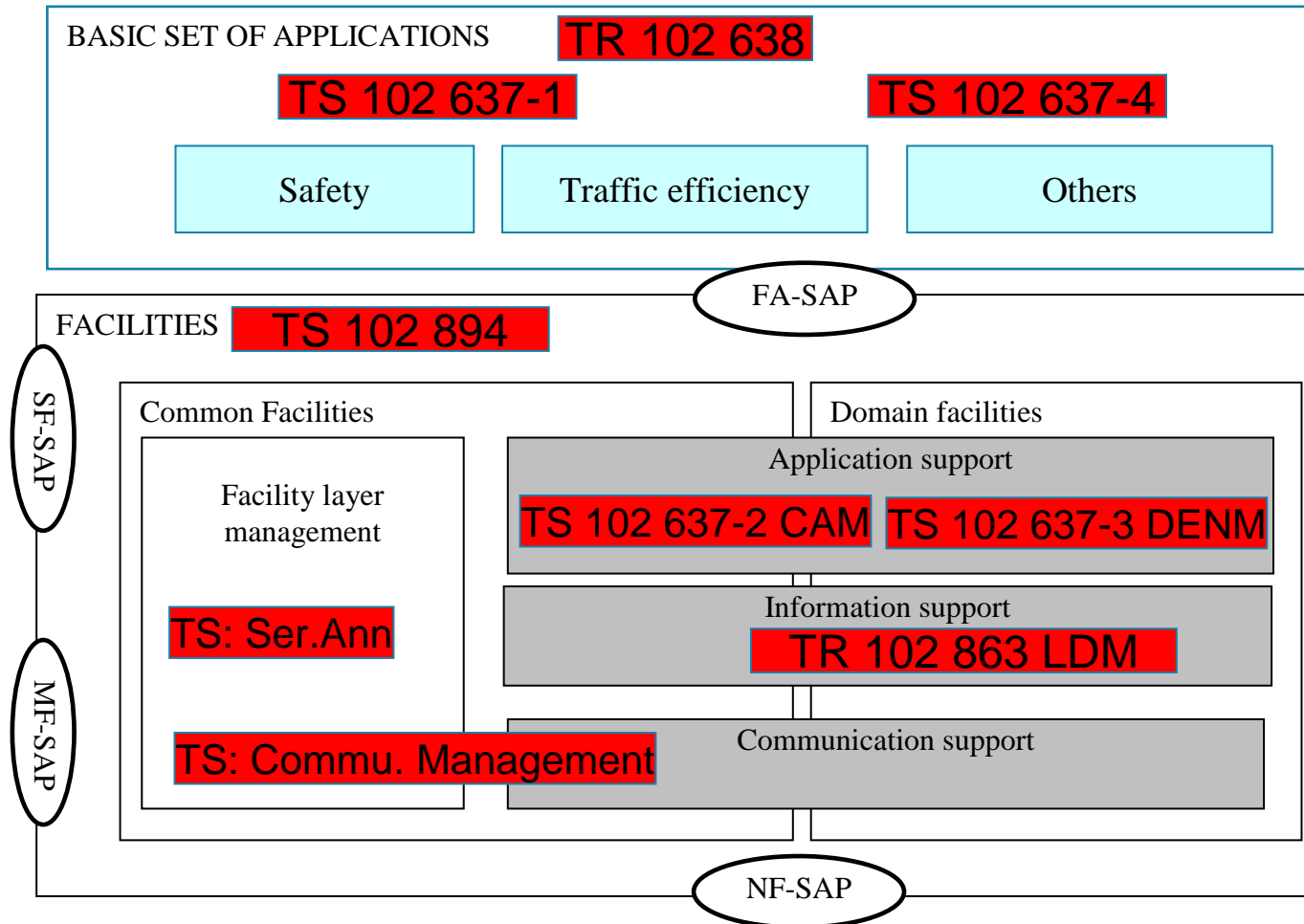
Application Facilities model



Current WIs

- TR 102 638: Basic Set of Applications Definition (published).
- TR 102 698: C2CCC 2008 Demonstration specifications (published)
- TS 102 637 - 1: BSA functional requirements (final stage)
- TS 102 637 - 2: Cooperative Awareness basic services, including cooperative awareness message. (under approval)
- TS 102 637 – 3: Decentralized Environmental Notification Basic Service (under approval)
- TS 102 637 – 4: BSA operational requirements (final stage)
- TS 102 894 : Facilities layer specifications (ongoing)
- TR 102 863 : Local dynamic Map (ongoing, STF)
- TS 102 868/102 869: CAM & DENM Testing specifications (ongoing STF)
- TS: Service announcement (work initiated)
- TS: Communication management (work initiated)

Application model



Basic Set of Applications

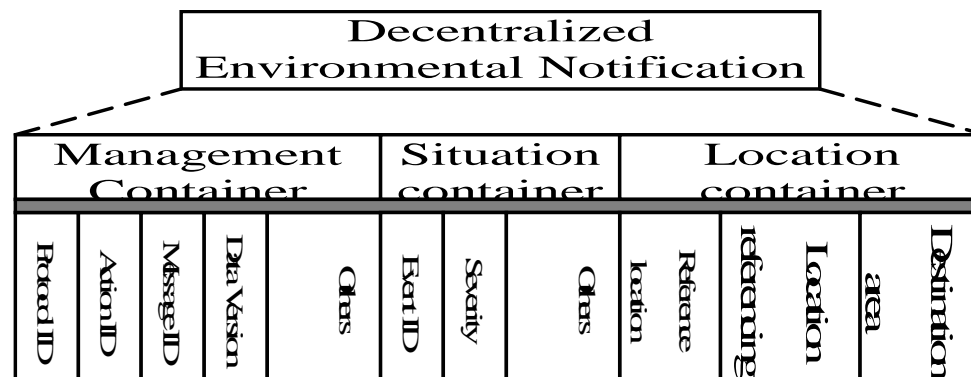
- ❑ A selection of applications/use cases considered as deployable at the first stage after standards completion.
 - In order to scope the standardization work within WG1.
- ❑ Mainly focus on ITS G5 technologies for V2V/V2I, but also takes into account other access technologies
- ❑ Includes safety, traffic efficiency and other applications/services
- ❑ Considerations points for the selection:
 - Societal value
 - Business value
 - Customer value
 - Technological maturity
 - Time to value
- ❑ Answers collected from stakeholders by distributing a questionnaire.
- ❑ Finally, 32 use cases are selected, these use cases were further grouped into applications
- ❑ Functional and operational requirements of BSA are developed.

Cooperative awareness message

- ❑ Periodic heartbeat message sent by an ITS station to its vicinity.
- ❑ Receiver of CAM make use of received information.
- ❑ CAM is independent from application.
- ❑ CAM is initially defined within C2CCC, and revised in ETSI ITS TC, reflecting progress in FoT projects i.e. simTD, PREDRIVE-C2X
- ❑ In current TS, vehicle CAM and Road Side CAM are included.
- ❑ CAM includes information of:
 - Station identifier
 - Time stamp
 - Position of the station.
 - other attributes according to different profile:
 - Basic vehicle (vehicle size, vehicle length, acceleration control...)
 - Emergency vehicle profile (basic vehicle + siren status + request response)
 - Public transport vehicle profile

Decentralized Environmental Notification

- ❑ Event driven warning messages sent by authorized ITS station by detecting dangers/abnormal situations.
- ❑ DENM is closely related to use case/applications.
- ❑ DENM is initially defined in C2CCC, and revised in ETSI.
- ❑ DENM provides information of detected situation type, situation location, situation duration, relevant area etc.
- ❑ Other functions of DEN basic service include:
 - Canceling function: to allow originator station or a third part station to cancel an DENM being previously sent.
 - Information correlation function: to allow receiver to distinguish a DENM concerning the same event sent from different stations without ambiguity.



CEN-ETSI collaboration

- ❑ A collaboration framework is being defined/developed between CEN and ETSI in response to the EC mandate
- ❑ Application/facilities are of most relevant and relies on an efficient collaboration framework between CEN and ETSI.
- ❑ A minimum set of standards and work program are under definition.
 - To provide a common set of standards supporting the deployment of Cooperative systems.
 - By taking into account international standard harmonization.
- ❑ Methodology:
 - Application- technology matrix
 - This methodology is commonly agreed by ETSI and CEN.
 - Matrix is developed based on ITS reference architecture
 - ETSI developed the matrix draft based on BSA definition.

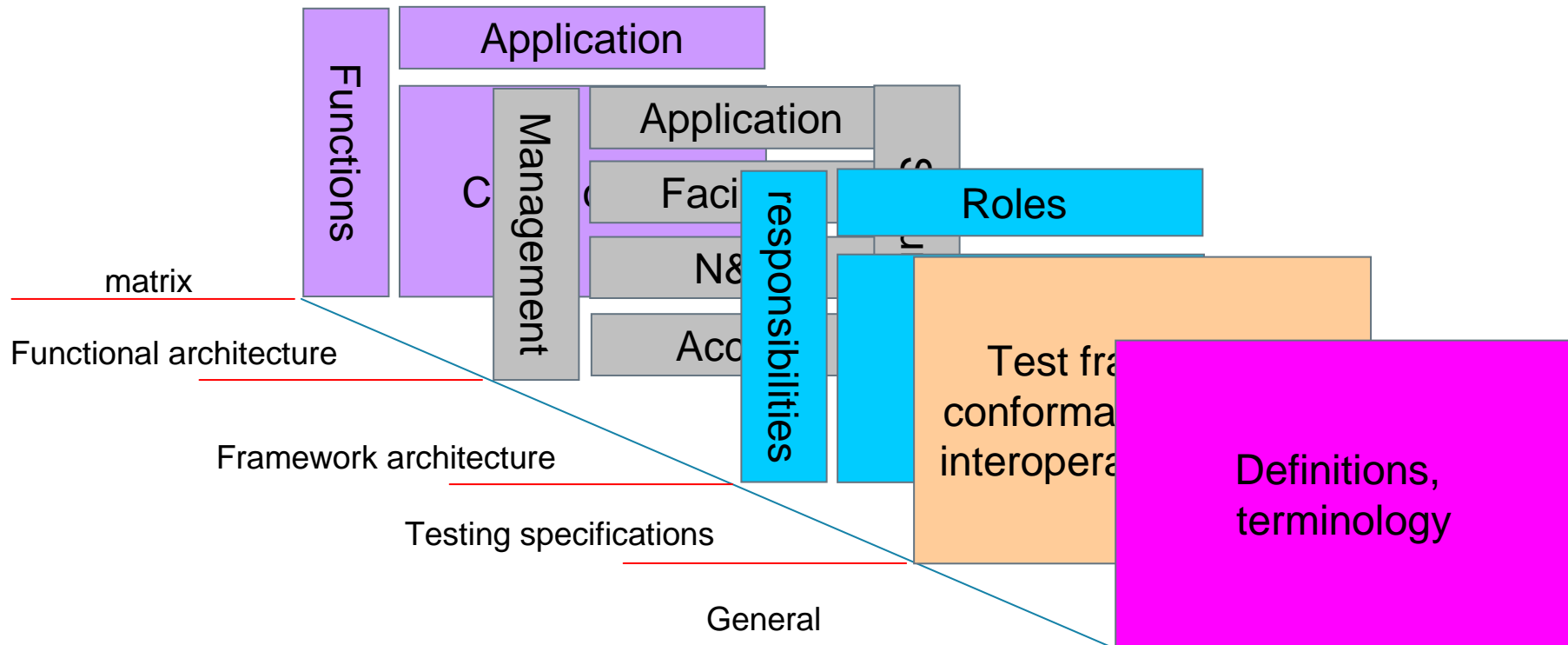


Matrix

CEN-ETSI collaboration

Making use of Matrix

- A general view of required systems and functionalities for one or set of applications.
- We need to take into account other dimensions of standardization
 - Functional architecture
 - Operational architecture
 - General definitions/terminology
 - Testing specifications.

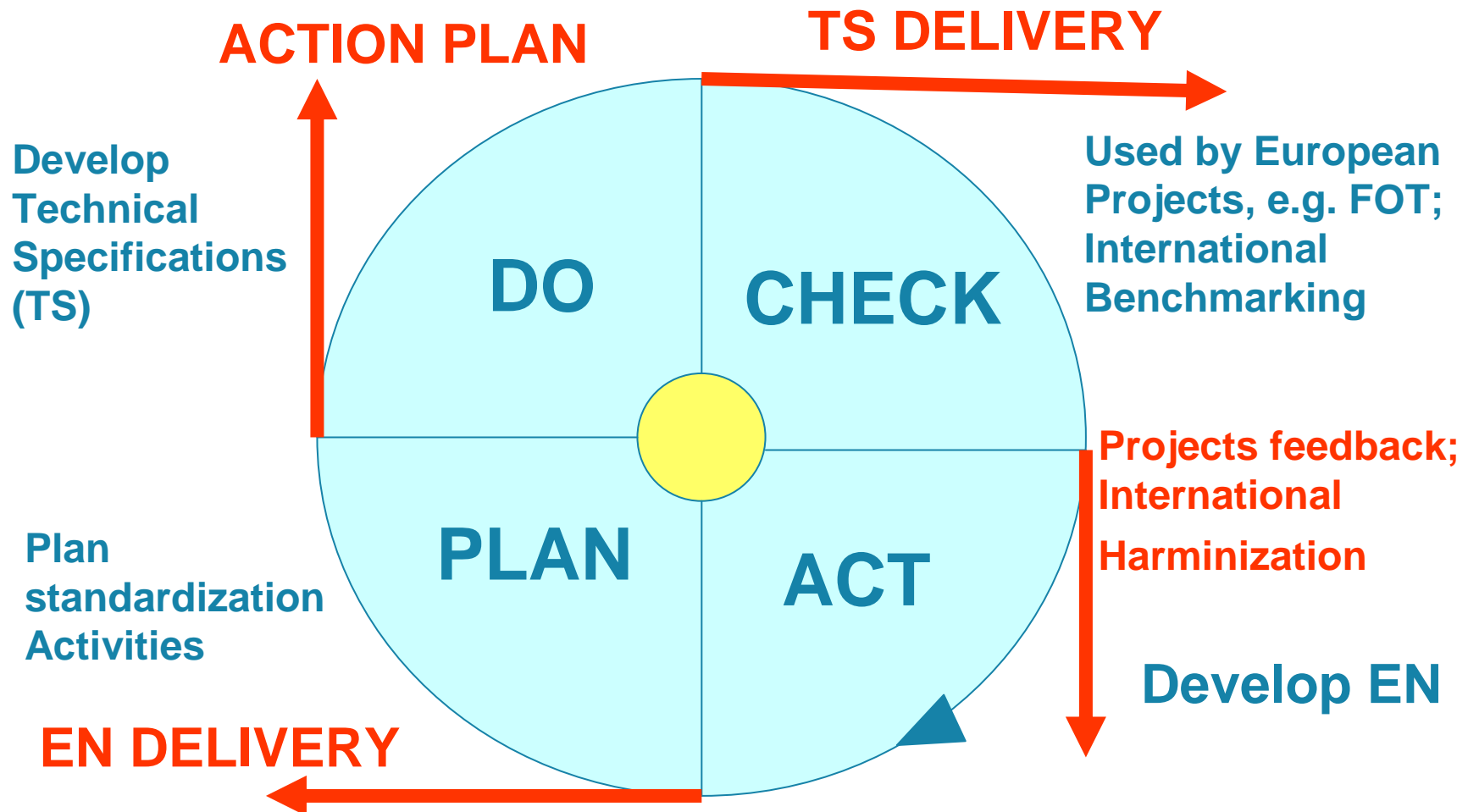


Next steps

- ❑ **ETSI-CEN collaboration**
 - **Minimum Set of Standards (MSS)**
 - **Work plan for development of MSS**
 - **Collaboration framework definition:**
 - Work split
 - collaboration framework
 - **Examples that may require collaboration work:**
 - Road geometry information message
 - GPS correction data
 - Minimum common rules for applications.
- ❑ **Continue specifications, deliver specifications for FoT and testing specifications.**
 - **Revise TS based on received feedbacks.**
 - **International standard harmonization**
 - **Other messages, other facilities?**
- ❑ **Active collaboration with other WGs in ETSI is needed.**



STANDARDIZATION PDCA





World Class Standards

Thank you very much.

Any questions?

