FINAL EVENT

Evaluation and further work

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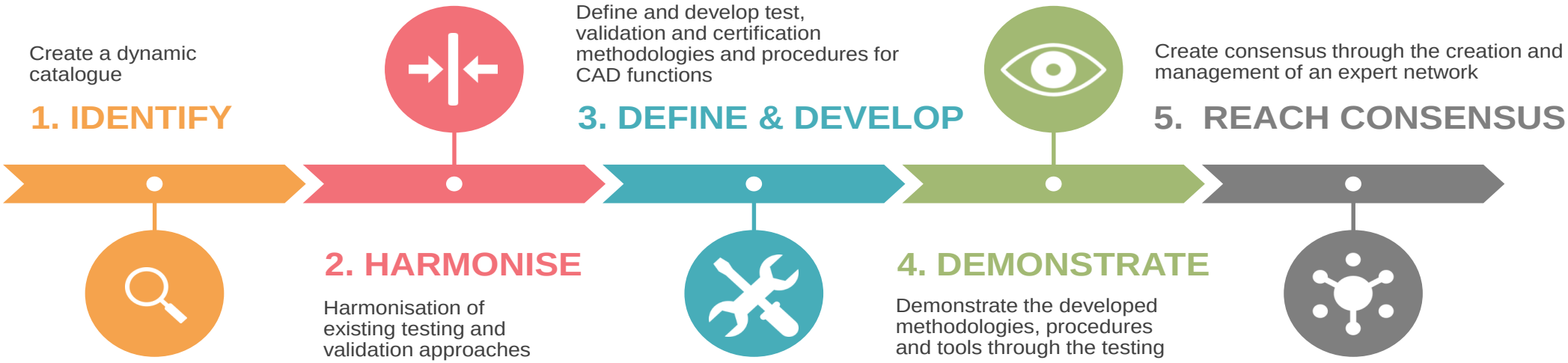
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824309.

Project's Objectives

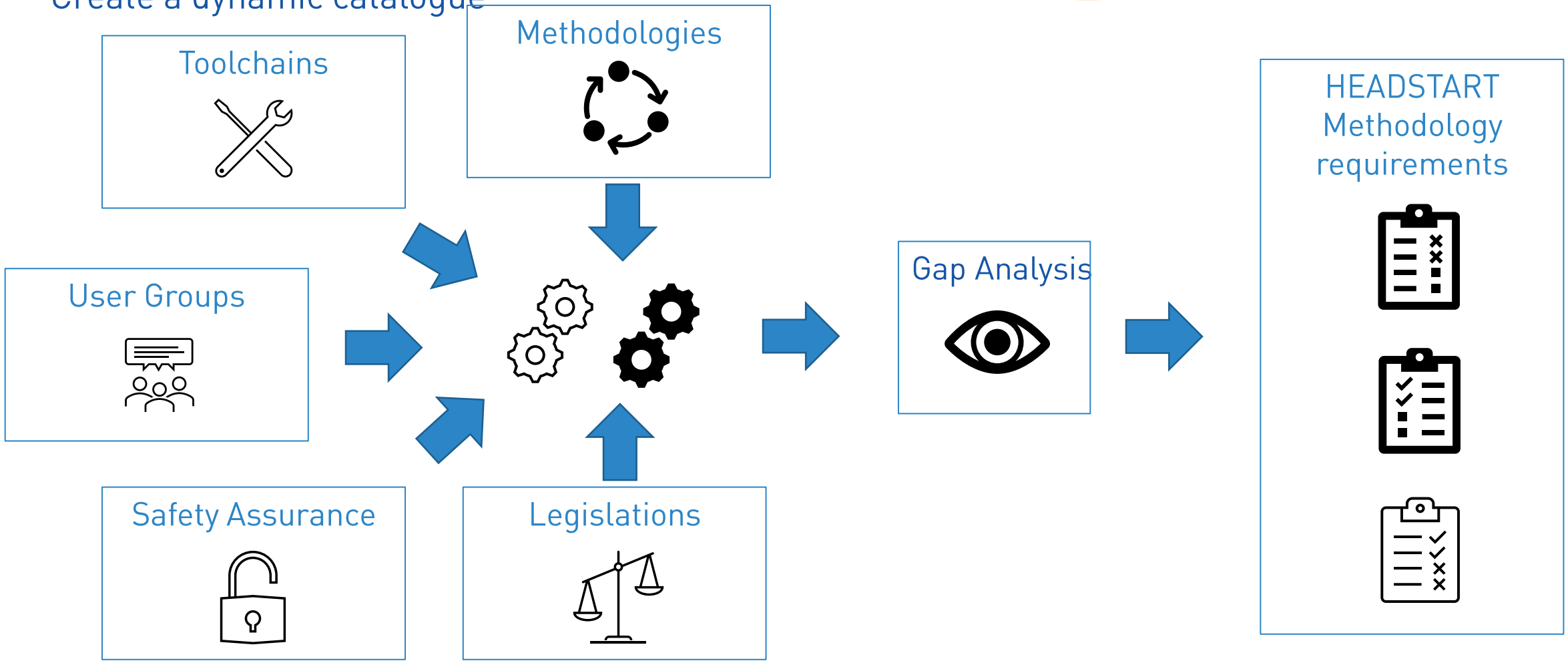
HEADSTART will define testing and validation procedures of CAD functions including:

- its key enabling technologies (i.e. communication, cyber-security, positioning)
- by cross-linking of all test instances such as simulation, proving ground and real world field tests
- to validate safety and security performance according to the needs of key user groups (technology developers, consumer testing and type approval)



1. IDENTIFY

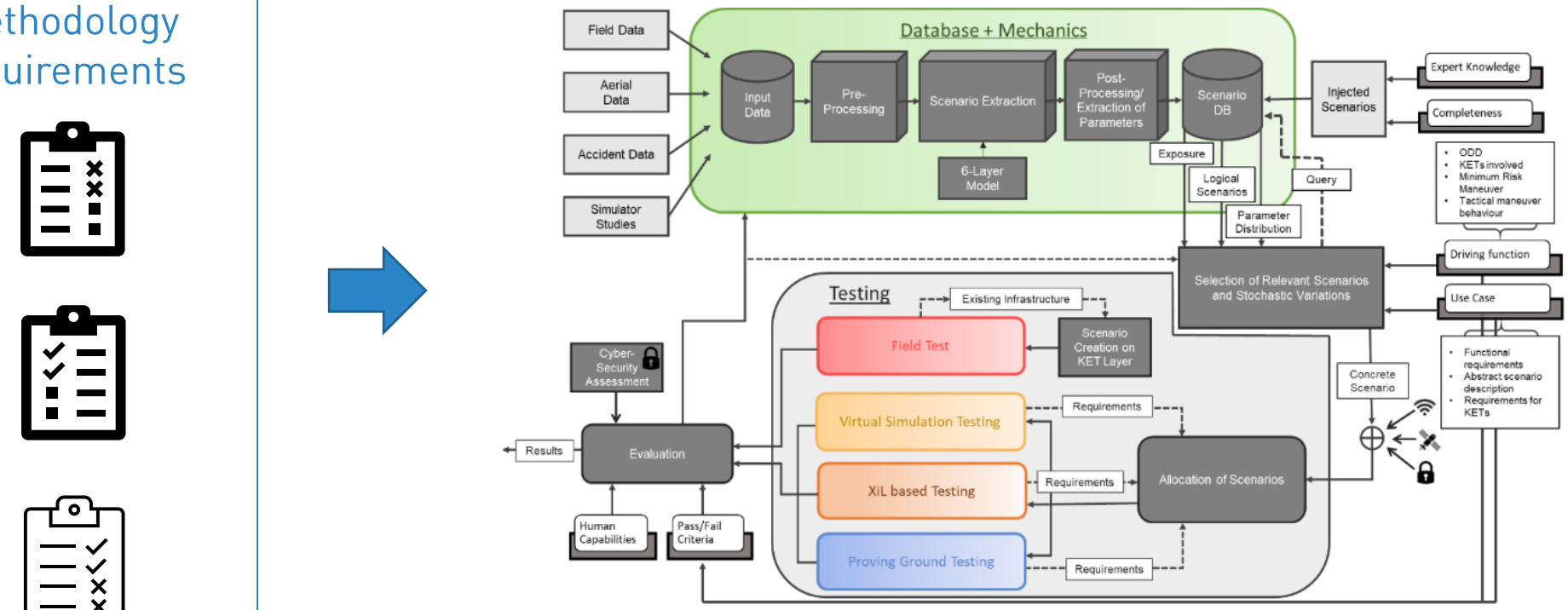
Create a dynamic catalogue



2. Harmonise

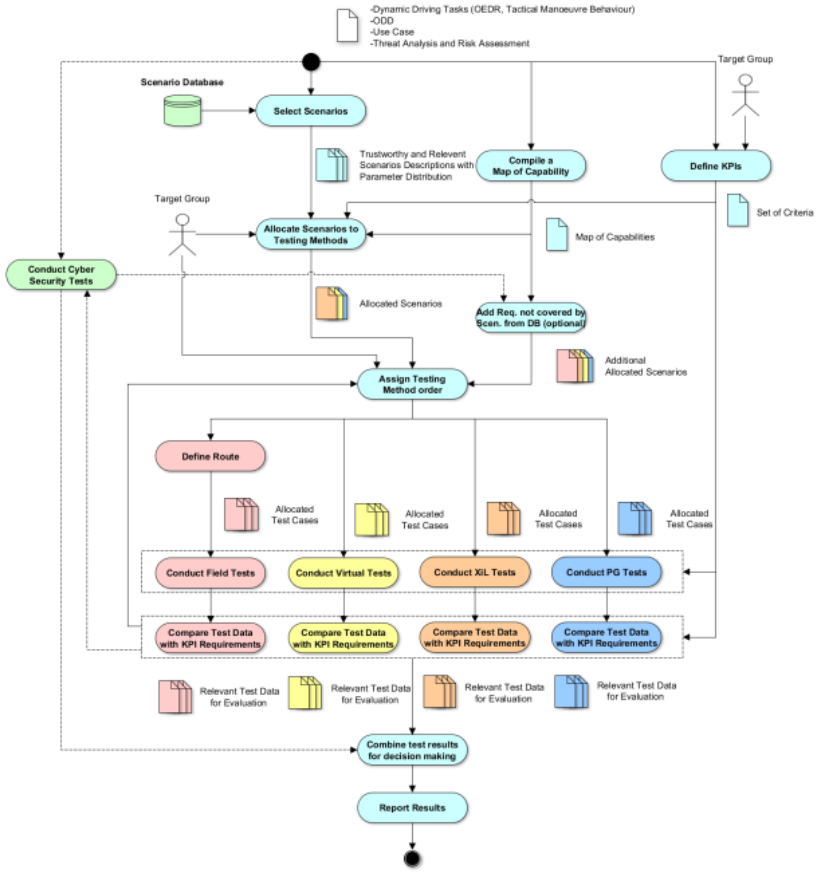
Harmonisation of existing testing and validation approaches

HEADSTART Methodology requirements



3. Define and develop

Define and develop test, validation and certification methodologies and procedures for CAD functions.



Truck Platooning

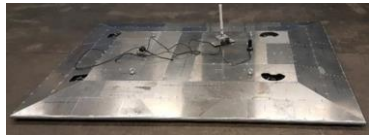
Highway pilot

Traffic Jam Chauffeur

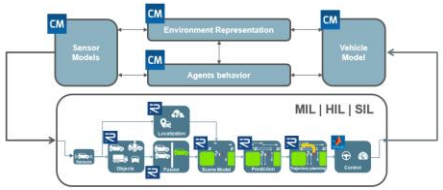
4. Demonstrate

Demonstrate the developed methodologies, procedures and tools through the testing.

ENSEMBLE



Linked Projects



5. Reach consensus

Create consensus through the creation and management of an expert network.

Manufacturers

Japan Automobile Manufacturers Association, Inc.

European Automobile Manufacturers Association

FILIÈRE AUTOMOBILE & MOBILITÉS

OICA

Public

National Transport Commission

UNECE

KETs

5GAA Automotive Association

CAR 2 CAR COMMUNICATION CONSORTIUM

Consumer

EURO NCAP

Other relevant initiatives

EATA European Automotive and Telecom Alliance

ECSEL JU

EGVI European Green Vehicles Initiative

ANDVI Australia & New Zealand Driverless Vehicle Initiative

CETRAN

ERTRAC

EUROPEAN TRUCK PLATOONING

SIP 戦略的イノベーション創造プログラム

American Center for Mobility CONNECTED. AUTOMATED. VALIDATED.

Nouvelle France Industrielle (NFI)

Project Deliverables

ID	Name	Status
D1.1.	State of innovation of existing initiatives and gap analysis	Available
D1.2.	Stakeholders and user group needs	Available
D1.3.	Technical and functional requirements for KETs	Available
D1.4.	Functional requirements of selected use cases	Available
D2.1.	Common methodology for test, validation and certification and criteria to allocate scenarios	Available
D2.2.	Extension of the common methodology for the HEADSTART KETs	Available
D2.3.	Assessment method for each of the use cases defined	Available
D3.1.	Guideline of a comprehensive validation and certification procedure to ensure safe CAD systems	Available
D3.2.	Toolchain for mixed validation - integration of simulation and physical testing	Available
D3.3.	Assessment criteria of CAD functionalities for consumer testing and type approval	Not available yet

Project Deliverables

ID	Name	Status
D3.4	Harmonisation proposals of test results	Not available yet
D3.5.	Specification of test procedure for the selected Use Cases	Not available yet
D4.1.	Demonstrated methods and procedures for the selected UC	Not available yet
D4.2.	Evaluation results of application and demonstration	Not available yet
D4.3.	Video with the results of the impact assessment of HEADSTART and an overview of the demonstrations.	Not available yet
D5.1.	HEADSTART networking mid-term report	Not available yet
D5.2.	HEADSTART networking report	Not available yet
D6.1.	Website	Available
D6.2.	Dissemination and Communication Strategy	Available
D6.3.	Dissemination and Communication strategy: review	Available
D6.4.	Dissemination and Communication strategy: beyond HEADSTART	Not available yet

Project Deliverables

ID	Name	Status
D6.5.	Dissemination material: First year	Available
D6.6.	Dissemination material: Second year	Not available yet
D6.7.	Dissemination material: Third year	Not available yet
D6.8.	Report on efforts towards standardisation	Not available yet
D7.3.	Data Management Plan	Available

✓ Available deliverables can be downloaded from www.headstart-project.eu

Learnings

- ✓ Scenario Databases are a key element for CCAM verification and validation but there is still a lack of harmonization between each other.
- ✓ Need for more harmonization in simulation.
- ✓ Lack of compatibility between physical tooling and simulation tooling.
- ✓ Standards' role is Paramount in establishing common ground and providing technical guidance.

Future work

- ✓ CCAM systems must prove to be reliable in every possible driving scenario, that is, building a strong safety argumentation.
- ✓ Standardization is in infancy, as many standards are under development or have been very recently published and still need time to be synchronized and established as a common practice.
- ✓ Scenario databases are another issue tackled by several initiatives and projects, providing silo solutions. A single concrete approach should be used, dealing with scenarios of any variations, including the creation, editing, parametrization, etc. in a universally agreed manner.
- ✓ Therefore, it becomes necessary to move to the next level of standardization, in the concrete specification and demonstration of a commonly accepted Safety Assurance Framework (SAF) for the safety validation of CCAM systems.
- ✓ Future initiatives from the European Commission inside HORIZON 2021 program are moving in this direction and will tackle all these challenges.

Thank you!

Any questions?

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