Next steps and activities

HARMONISED EUROPEAN SOLUTIONS FOR TESTING AUTOMATED ROAD TRANSPORT

Álvaro Arrúe – Applus IDIADA

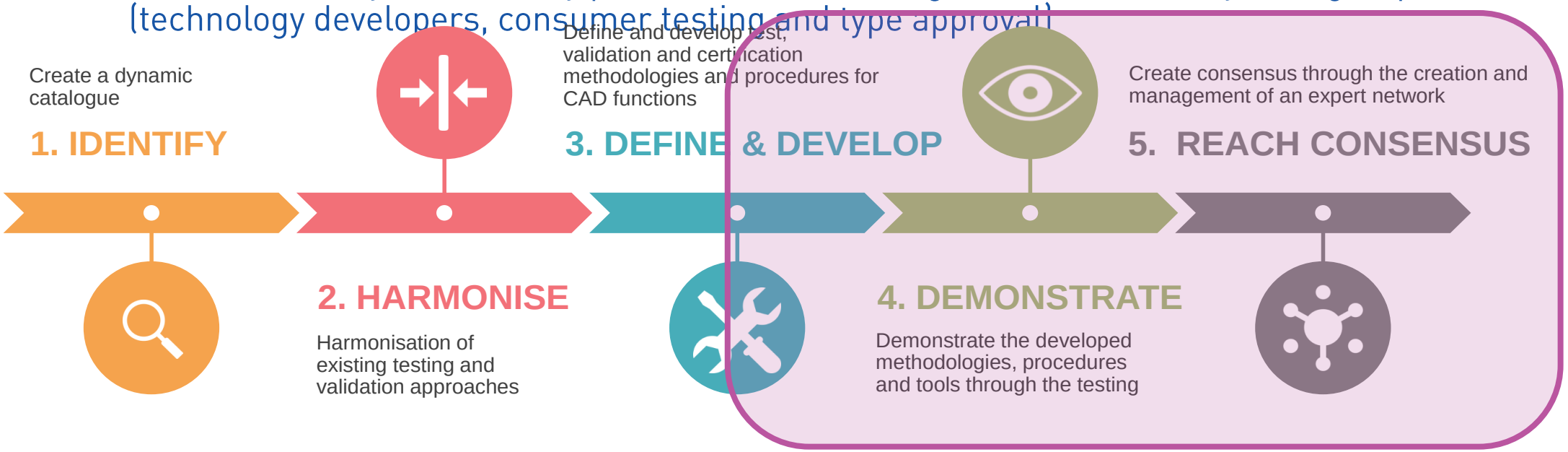
Project coordinator

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

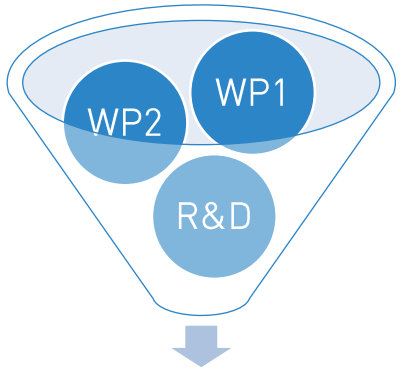
Project's Objectives

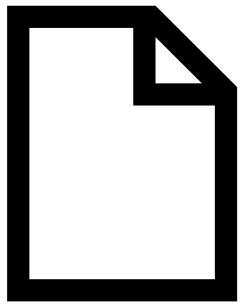
HEADSTART will define testing and validation procedures of CAD functions including:

- 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)



WP2 ⇔ WP3 ⇔ WP4





Methodology

T3.1 Procedure pipeline definition

T3.4 Test data mgmt. and harmonization

T3.2 Test environment spec. and tool dev.

T3.3 Assessment criteria definition

T3.5 Test procedure for defined use cases

WP4 application and demonstration

Define and develop

- ✓ Test environment specification and tool development
  - Including virtual and physical testing
  - Test tool development, adaptation and/or enhancement
  - Query and usage of scenarios from scenario DBs
  - Taking into account development, consumer and type approval testing

Define and develop

- ✓ Assessment criteria definition
  - Definition of indicators for the assessment of CAD functionalities regarding safe operation in defined use cases.
  - Definition of indicators for the assessment of performance of the project KETs
  - Identification of assessment criteria and KPIs from the target user groups point of view.

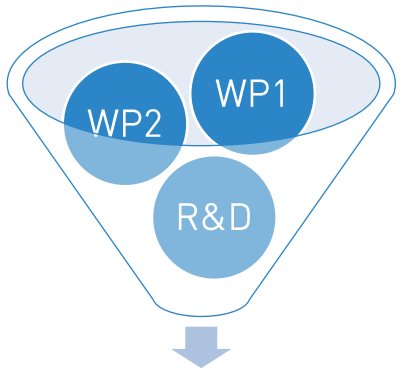
Define and develop

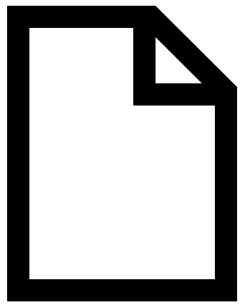
- ✓ Test data management and harmonisation
  - Development of an Environment Content Description (ECD) for harmonisation purposes.
  - Concept definition in the form of annotation models.
  - Investigation and tool development to create, manipulate, store, stream, query and compare content
  - Integration in the whole process

Define and develop

- ✓ Test procedure for defined use cases
  - Full test protocols and procedures according to the methodology and applied to the project use cases:
    - Highway pilot
    - Traffic Jam Chauffeur
    - Truck platooning
  - Preparation for the demonstration

WP2 ⇔ WP3 ⇔ WP4





Methodology

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WP4 application and demonstration

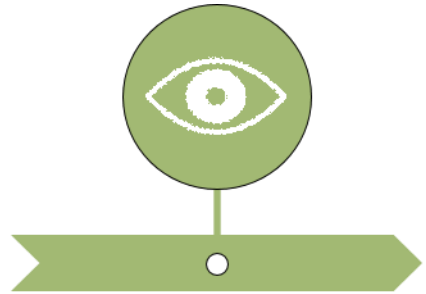
Demonstrate

- ✓ Apply developed method/procedures to selected use cases
  - Actual testing of the use cases with virtual and physical test methods according to:
    - Testing toolchain
    - Project use cases
    - Target groups
  - For this purpose a number of scenarios will be chosen from Scenario DBs

Demonstrate

- ✓ Assessment of test results
  - Evaluation of the methods, procedures and tools will be provided regarding:
    - Scalability
    - Robustness
    - Reproducibility
    - Suitability for assessment of functions based on different KET
    - Applicability for stakeholders

Demonstrate



- ✓ Demonstration
  - Organisation of demo days to show the community the project results
  - Tests will be conducted to provide a look and feel of the project results
  - If possible, open to public demo is considered
  - Including a final event of the project

Closure

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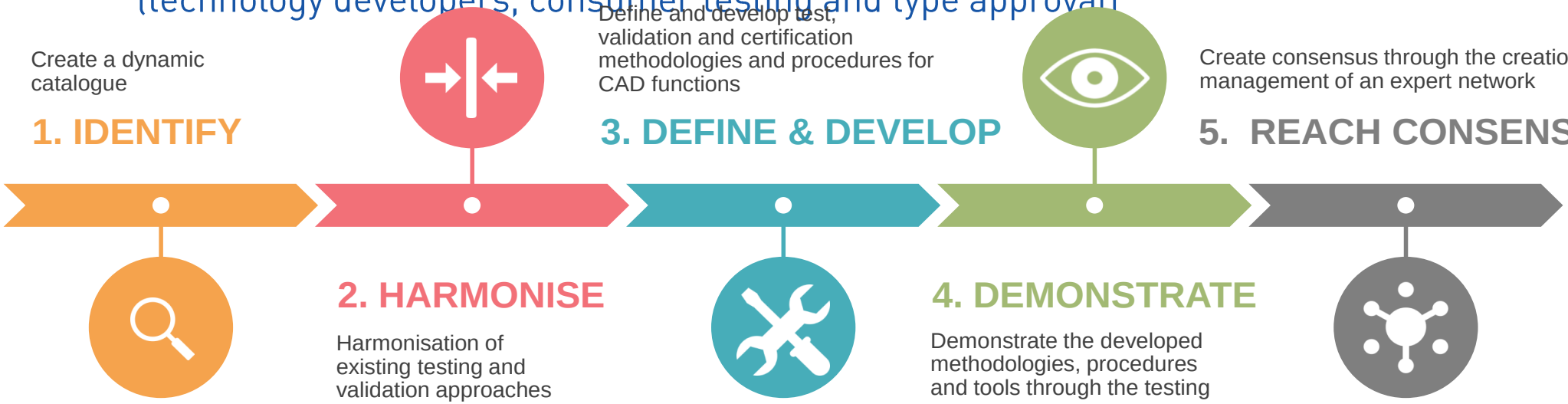

Wrap-up and summary

- ✓ Overview of state-of-the art
  - What are the different initiatives on CAD validation worldwide
- ✓ The HEADSTART methodology
  - Where is it coming from and where it is going
- ✓ How communications, positioning and cybersecurity are treated in the HEADSTART methodology
  - Enablers of highly automated driving

Wrap-up and summary

- ✓ Evolution from methodology to procedure
  - Basis for the development of the testing toolchain
- ✓ Which are the HEADSTART use cases
  - Highway chauffeur
  - Traffic Jam Chauffuer
  - Truck platooning
- ✓ What are we going to do in the next months
  - And we will have (live) demonstrations at the end of the project!
- ✓ How you can contribute to HEADSTART and receive updates of the project progress: Join our expert network! Follow us!

HEADSTART available deliverables

- ✓ Available to be downloaded in www.headstart-project.eu
  - D1.1: State of innovation of existing initiatives and gap analysis
  - D1.2: Stakeholders and user group needs
  - D1.3: Technical and functional requirements for KETs
  - D1.4: Functional requirements of selected use cases
  - D2.1: Common methodology for test, validation and certification
  - D2.2: Criteria to choose optimal scenarios and tests for each KET
  - D2.3: Assessment method for each of the use cases defined
  - D3.1: Guideline of a comprehensive validation and certification procedure to ensure safe CAD systems
  - D5.1: Networking report
  - D6.3: Dissemination and communication strategy
  - D6.5: Dissemination material

www.headstart-project.eu

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  info@headstart-project.eu

- ✓Sign up to our newsletter:

  https://lists.iccs.gr/wws/subscribe/headstart-news

- ✓Get in touch with our partners

On behalf of the HEADSTART consortium

Thank you!

Looking forward cooperating with you!