







HARMONISED EUROPEAN SOLUTIONS  
FOR TESTING AUTOMATED ROAD TRANSPORT

Overview of the Project  
Álvaro Arrúe – Applus IDIADA

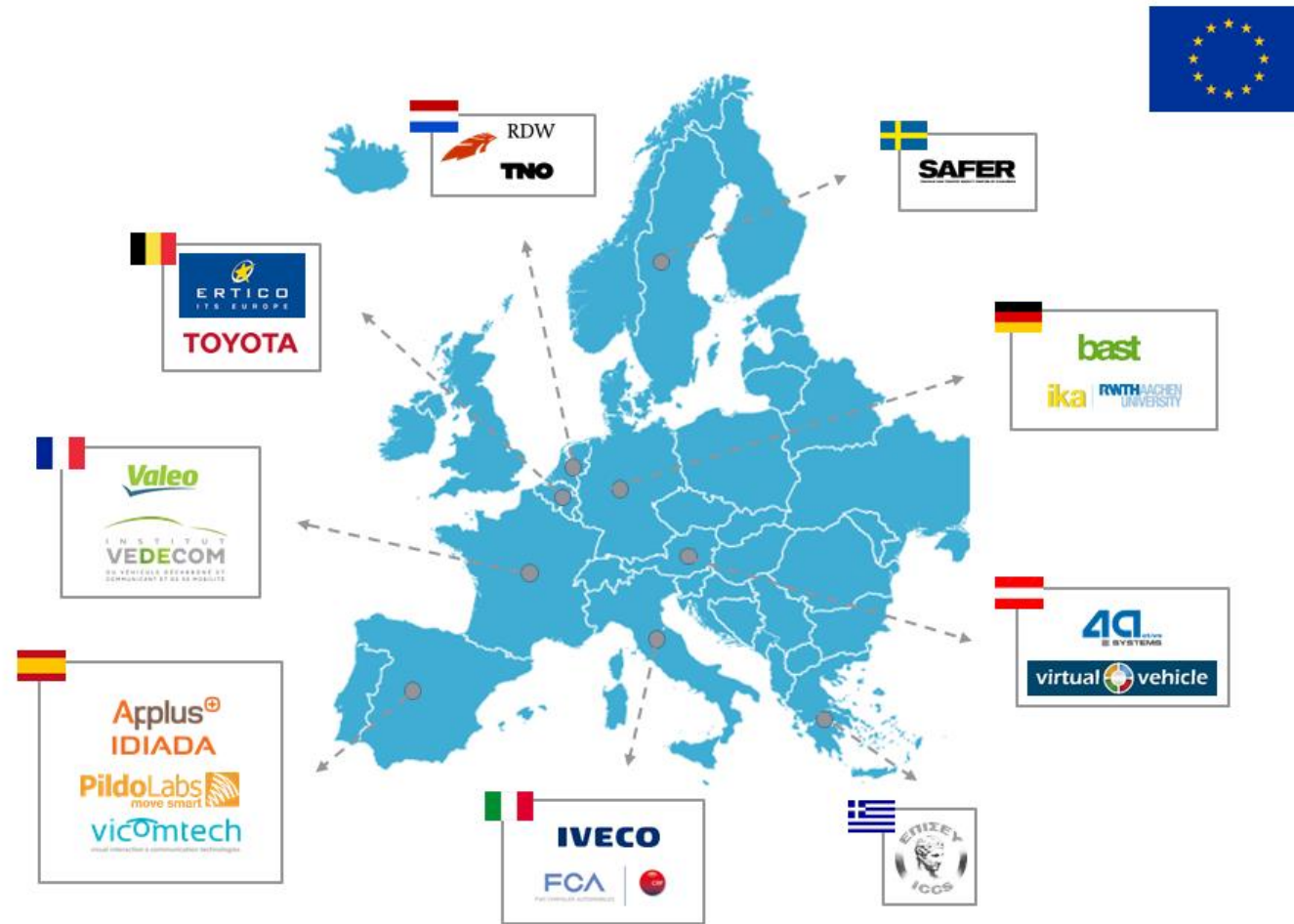


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824309.

# HEADSTART project facts

- ✓ **Call identifier:** ART-01-2018
- ✓ **Type:** RIA
- ✓ **Duration:** 01.2019 – 12.2021 (36 months)
- ✓ **Budget:** 6M€
- ✓ **Consortium:** 17 partners
- ✓ **Coordinator:** Applus IDIADA, Mr. Álvaro Arrúe, Project Manager
- ✓ **Dissemination Manager:** ICCS, Dr. Angelos Amditis, Research Director
- ✓ **Website:** <https://www.headstart-project.eu>
- ✓ **Social media:**
  -  / HEADSTART\_EU
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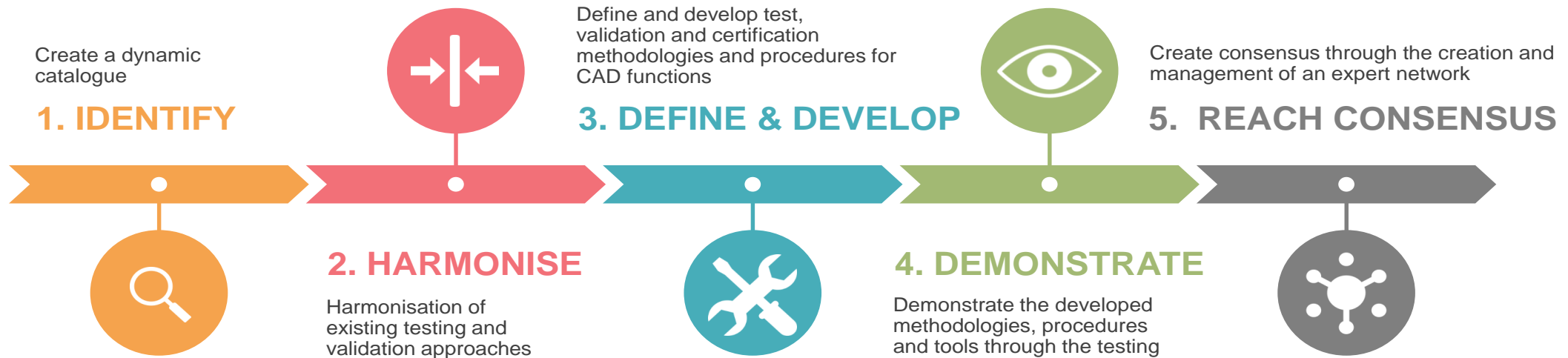
# HEADSTART Consortium



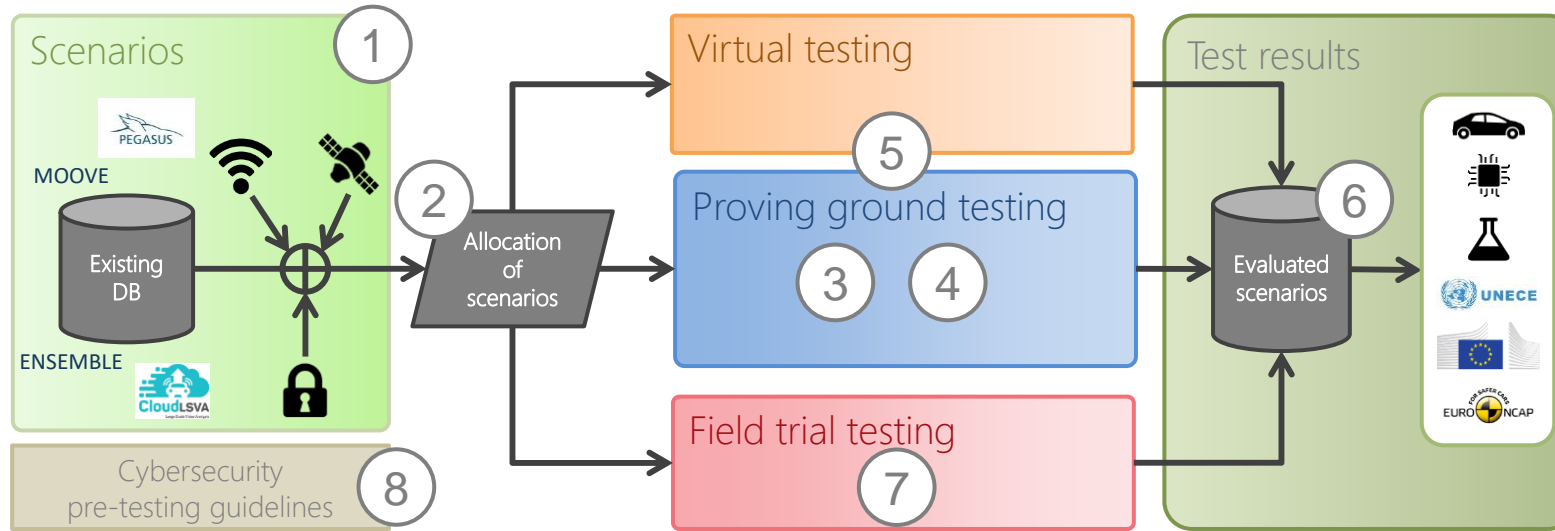
# Project's Objectives

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)



# Project's Concept



- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>① Integration of positioning, communications and cyber-security in CAD test scenarios</li> <li>② Comprehensive procedure for the allocation of test cases per testing platform</li> <li>③ Selection criteria and specification for proving ground test scenarios taking into account criticality</li> <li>④ Proving ground testing and evaluation</li> </ul> | <ul style="list-style-type: none"> <li>⑤ Correlation between simulation and proving ground results</li> <li>⑥ Harmonised, open result compilation and sharing</li> <li>⑦ Field trial test methodology description</li> <li>⑧ Cyber-security principles and integration in the testing methodology</li> </ul> |
|---|--|

# Test sites

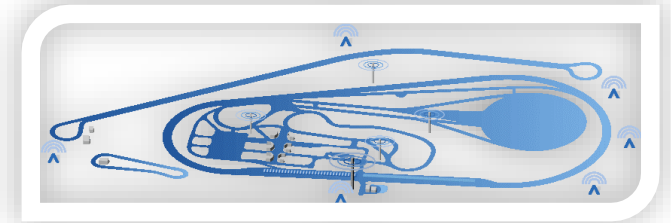
IDIADA test site, Spain



LELYSTADT test site, the Netherlands



Aldehnoven test site, Germany



AstaZero test site, Sweden



DITCM test site, the Netherlands



# Highlights

HEADSTART will publish all its outputs. During its initial 6 months of project **HEADSTART** has:

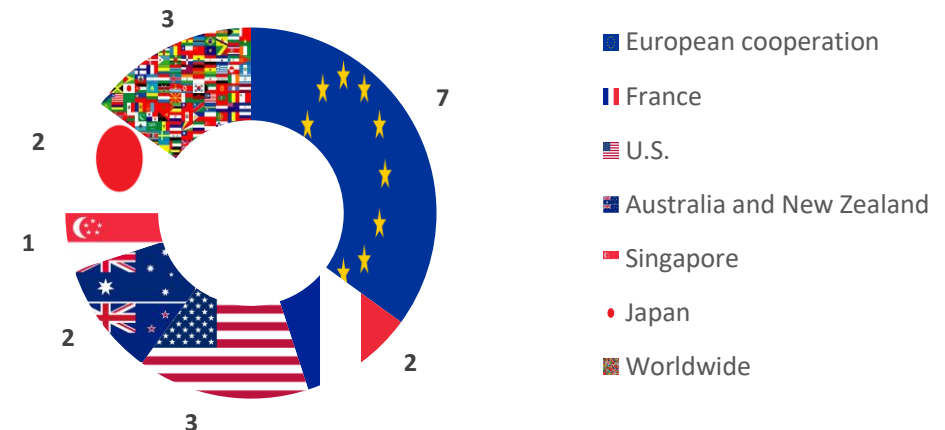
- ✓ Compiled worldwide state-of-the-art on scenario based validation and testing initiatives
- ✓ Analyzed and summarized CAV testing needs of several stakeholders including:
  - OEMs and TierXs
  - Type approval authorities and technical services
  - Commercial testing initiatives
  - Academia
- ✓ Created the expert network with its 6 subgroups
- ✓ In the following months a harmonized methodology that includes KETs will be finalized.

# D1.1. State of innovation of existing initiatives and gap analysis

- ✓ Currently under review by INEA – Dissemination allowed by the PO under conditions:
  - Clearly state that it is still under review
  - It covers only SotA before its delivery → But comments are welcomed!!!
  
- ✓ The objective is to assess the different worldwide activities in CAD validation



Localisation of the Initiatives





# D1.1. State of innovation of existing initiatives and gap analysis

## ✓ Results on State-of-the-art

- Terminology and taxonomy
- Scenario concepts for safety assurance (PEGASUS, MOOVE, SAKURA, ENABLE-S3, Streetwise....)
- Projects related to safety assurance (KETs, test definition and activities....)
- Initiatives related to safety assurance (use cases, KETs, consumer testing, OEMs, associations, policies...)
- Tools for safety assurance (annotation, recording, simulation, dummies...)
- Legislation and boundary conditions
- Methodologies for safety assurance

## ✓ Gap analysis

- Legislation gaps
- KET's are not considered in Safety assurance methodologies for CAD

## ✓ Annexes

- Glossary of terms, Legislation documents

# Cooperate with HEADSTART project

## EXPERT GROUP PARTICIPATION

- Join as associated partner and our expert group
- Join the discussion group of your interest:
  - Cyber-security
  - Communications (V2X)
  - Positioning
  - Scenario selection
  - Consumer testing (NCAP)
  - Type approval
- Provide needs and requirements and evaluate project (intermediate) results

## JOINT TESTING ACTION

- ✓ Joint cooperation between both projects for testing validation and certification purposes
- ✓ Align your project with the harmonized methodology and tools developed within HEADSTART
- ✓ Become one of our use cases!

Please let us know about your interest and join our distribution list.

Website: [www.headstart-project.eu](http://www.headstart-project.eu)

Contact: [info@headstart-project.eu](mailto:info@headstart-project.eu)

# Workshop on new approaches for 'Scenarios selection' 'Consumer Testing'



## Summary of results

- Overview of initiatives worldwide
  - Euro NCAP, JARI, etc...
- Use case prioritization by stakeholders
- Prioritization of test instances by type of testing needs (development, consumer testing, type approval)
- Discussion on type approval (sub) procedures

# Your opinion matters! Take part in the HEADSTART online surveys!

Take part and identify the real stakeholder's needs! Help HEADSTART design the most appropriate strategy!

<https://www.headstart-project.eu/2019/06/03/your-opinion-matters/>



6 available surveys:

- Consumer Testing needs
- Safety Assessment & Safety-Case
- Testing methodologies, tools & procedures
- Use Cases & Scenarios and
- Testing goals for KETs
- Type approval and certification

# HEADSTART Partners



# Stay connected with HEADSTART

- ✓ Visit HEADSTART website

[www.headstart-project.eu](http://www.headstart-project.eu)

- ✓ Follow our Social Media:

 [@HEADSTART\\_EU](https://twitter.com/HEADSTART_EU)

 HEADSTART-PROJECT

 HEADSTART project (Group)

 @HeadstartEUproject

- ✓ Reach us via an e-mail:

[info@headstart-project.eu](mailto:info@headstart-project.eu)

- ✓ Sign up to our newsletter:

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

- ✓ Get in touch with our partners



# HEADSTART

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Thank you!

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*Any questions?*

**Álvaro Arrúe**

Project Manager CAD

[Alvaro.arrue@idiada.com](mailto:Alvaro.arrue@idiada.com)

**Applus<sup>+</sup>**  
**IDIADA**



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