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GRIMALDI STUDIO LEGALE

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Big Data and B2B platforms: the next big opportunity for Europe

WORKSHOP BRIEF

Second Workshop on "fair and equal data sharing for cooperative, connected and automated mobility"

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Disclaimer

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Introduction

The European Commission and the Executive Agency for Small and Medium-sized Enterprises (EASME) are conducting the study "Big Data and B2B platforms: the next big opportunity for Europe" whose objective is to analyse how to accelerate the growth of the data-based economy and to support the development of B2B platforms in Europe focusing on two sectors: automotive and healthcare.

This study gives particular attention to the opportunities offered by Big Data and B2B platforms for Small and Medium Size Enterprises (SMEs), with the purpose of maximising their innovation potential and contributing to growth and employment in Europe.

Wavestone is leading this study, in partnership with the ICCS-NTUA (National Technical University of Athens, TNO (Netherlands Organisation for Applied Scientific Research), KOMIS and CEPS. GRIMALDI Studio Legale provides legal advice transversally to all work packages.

The study started on the 20th December 2018 and will end on the 19th December 2020, for a total duration of two years.

The sector of automotive is covered by the **Work Package 1 (WP1)** which is centred around the design and implementation of **a pilot** to prove the concept of a possible **solution** that can help **improving fair and undistorted competition,** notably **equal access for all market participants to in-vehicle data,** through the use of **shared data platforms**.

The **second workshop** will be focused on the outcomes of the design phase and will introduce the Implementation phase of the Pilot. The work done so far will be presented: the current status of the infrastructure development, the concept of the use cases that will be executed to test the environment, and a demo of the current status of the data infrastructure. In an interactive working session, participants will debate and work towards reaching a common agreement on specific ordering of ontologies, vocabulary and on identifying potential bottlenecks related to the case studies.

This brief provides an overview of the objectives of the pilot and of the organisation of the work as a refresh for returning participants and as an onboarding for those who did not attend to the first workshop (11 April 2019, Brussels). The brief also includes a status update of the work done so far, and an explanation of the work to be done together in the second upcoming workshop, for your knowledge and preparation.

1 Objectives and scope of the Pilot

The objectives of the Pilot dedicated to the **automotive sector (WP1)** on Fair and equal data sharing for cooperative, connected and automated mobility can be summarised as follows:

- To **prove the concept** of a possible solution that can improve fair and undistorted competition, notably equal access for all market participants to in-vehicle data using a shared data platform.
- To **provide input** for studying and demonstrating the **potential impact of a shared data platform on the European market**, specifically by analysing the opportunities and benefits it offers for independent third-party service providers, notably SMEs, as well as the potential risks of market distortion by the frontrunners (i.e. the winner takes all effect).
- To **provide insights** into a **set of required capabilities** and **economic and technical competences** of third-party service providers and repairers to help further modernise and develop the European market for connected and automated vehicles. To this end, during the

pilot we will focus on competences and other issues such as data privacy, cyber security, liability risks, legislative frameworks for operation, data ownership and IP rights protection.

- To **deliver an architecture** that will **help industry stakeholders** and **policymakers** to formalise a common position based on a set of principles for the creation of shared EU-wide in-vehicle data platforms, available on equal terms to all interested service providers in order to fuel an open data-driven market of innovative products and services.
- To **provide technical input for drafting sector-specific recommendations** to EU and national policymakers, as well as to industry; and for developing an action plan for all stakeholders to overcome existing barriers and ensure a level playing field and fair competition in this market.

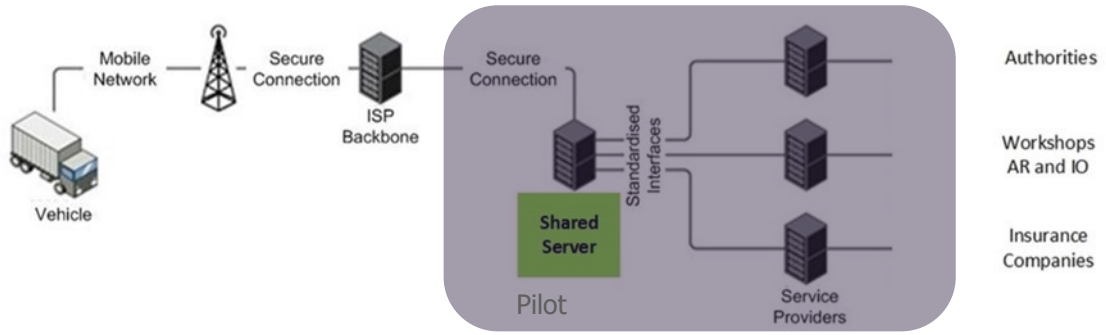
The pilot is implementing **scenarios that based on the "Shared server solution"**[1].

The "**Shared Server solution**" is a technical architecture proposed by the study "Access to In-vehicle Data and Resources"[2]. It is based on the concept of a **"data server platform**" where relevant vehicle data are transferred to an external server and made available to service providers.

This study will pilot a scenario based on the **Shared Server solution** architecture

The concept entails a connected vehicle that communicates to shared servers via mobile networks. Subsequently, data from all vehicle manufacturers will be sent to a shared data server from where service providers can access data via a standardised interface, as shown in Figure 1.

Figure 1. Shared server solution



Source "Access to in vehicle data and resources" study

The "Shared Server solution", must be **operated by an independent provider**, which is commissioned by a consortium of interested stakeholders (ideally including OEMs). Data available at the standardised interfaces should be of the same quality as the data of OEM backend. **Shared server will give equal access to in-vehicle data** and will make the party accessing the **data anonymous** from the point of view of the manufacturers thereby allowing fair competition.

From a technical point of view, **in-vehicle data are 'Big Data'** in terms of volume and velocity. In our scenario, huge data sets from individual vehicles will be streamed down to a platform for sharing among SMEs and third parties in a fair and equal way.

The scope of the pilot is placed under **the following framework:**

- It covers the Shared Server operator tasks as well as the role of potential service providers that exploit the data which are being provided by the Shared Server.
- The pilot is exploring the user's consent management, the data streaming capabilities, the exploitation of data on rest or aggregated data by services providers.

[1] https://ec.europa.eu/transport/sites/transport/files/2017-05-access-to-in-vehicle-data-and-resources.pdf
[2] https://ec.europa.eu/transport/sites/transport/files/2017-05-access-to-in-vehicle-data-and-resources.pdf

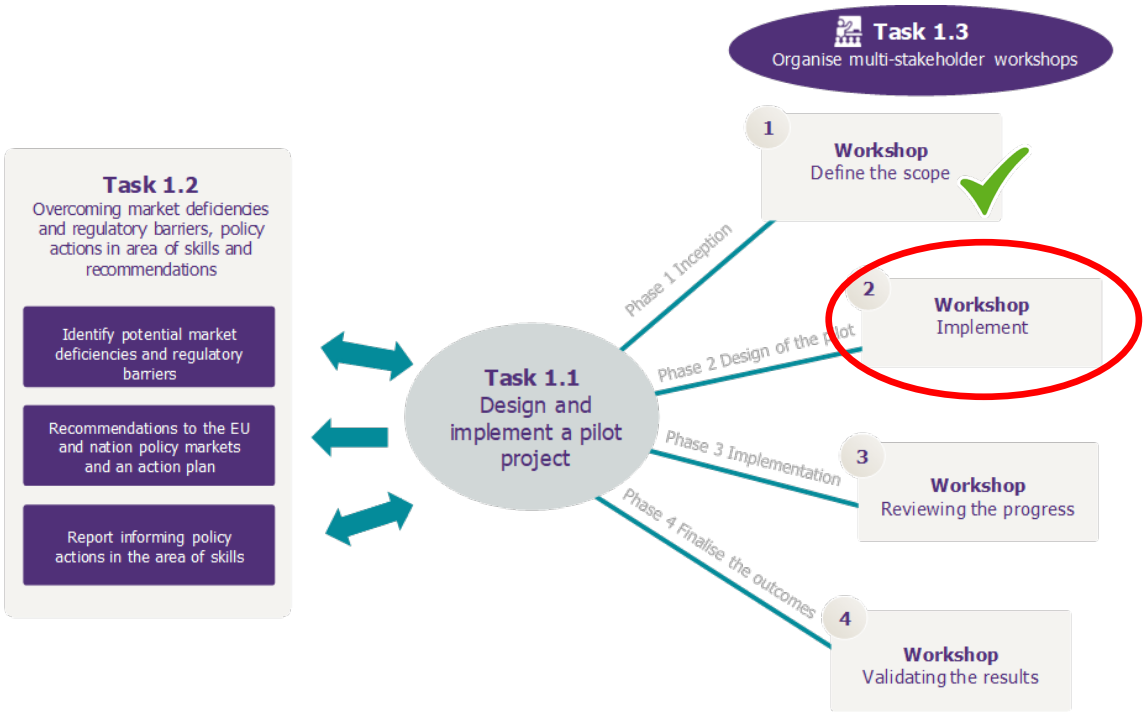
- From the side of service providers are examined potential groups of services for their feasibility and efficiency taking into account technical and liability issues.

During the pilot issues regarding the proper data subset of the in-vehicle data that could be shared with third-party service providers and feasible solution for providing them via common and open interfaces are investigated.

2 Organisation of the work

Firstly, the pilot will be developed by, designing and implementing a pilot project to prove the concept of a possible solution that can help improve fair and undistorted competition, notably equal access for all market participants to in-vehicle data through the use of a shared data platforms. This task corresponds to (**Task 1.1, WP1**). **Secondly**, potential market deficiencies and regulatory barriers will be identified through a dedicated report, to get to trial appropriate measures to support SMEs to participate in that market under fair conditions. As part of this task, sector-specific recommendations to the EU and national policymakers and industry will also be developed. Finally, as a specific area of policy attention, a set of relevant policy actions in the area of skills will also put under observation so to link the work of WP1 to other ongoing initiatives and support the creation of a comprehensive framework for digital skills at European level (**Task 1.2, WP1**). Four workshops will be organised and carried out throughout the project, one for each phase of the pilot, to discuss the progress, and validate with selected experts the intermediate and final results of the work done under WP1 (**Task 1.3, WP1**). Figure 1 is an overview of the work structure and indicates the current phase we stand in today.

Figure 2 Task organisation of WP1



Source: Study authors

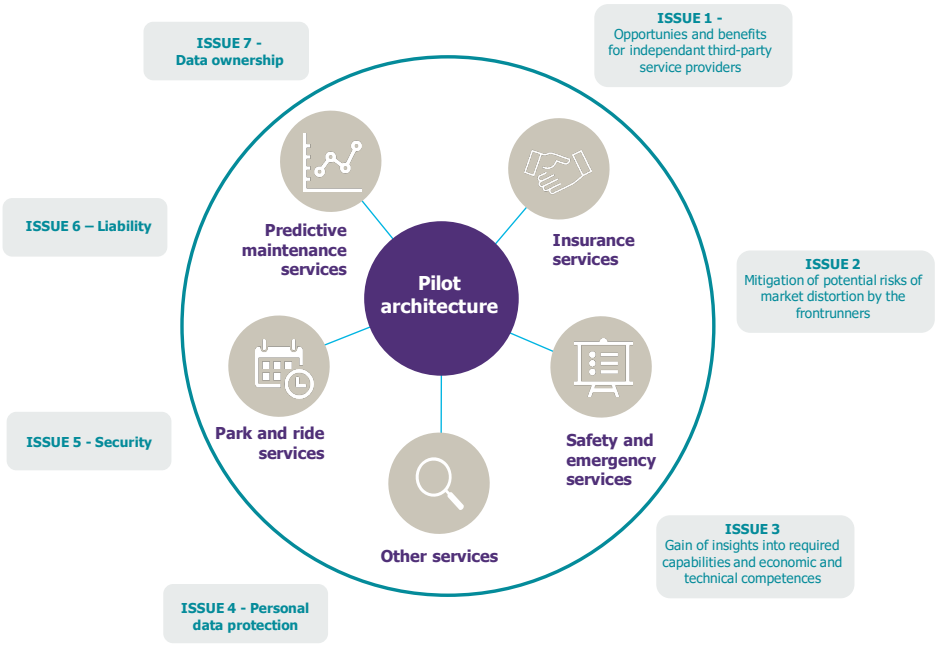
3 What we have done so far

Based on the understanding of the Shared Server Solution architecture for the provision and exchange of Big Data, a **number of issues** were identified during the Inception phase of the pilot up to the execution of the first workshop, including for example i) opportunities and benefits offered by the Shared Server architecture for independent third-party service providers, ii) Mitigation of potential risks of market distortion by the frontrunners (i.e. the winner takes all effect), iii) insights into required capabilities and economic and technical competences of third-party service providers and vehicle repairers, iv) personal data protection, anonymisation, user consent, and security, vi) liability, and data ownership, and a way to address each during the pilot implementation was proposed.

These issues served as a basis for discussing **specific Shared Server requirements** extracted from the literature[3,4,5], and discussed during the first workshop (more information can be found in the First workshop report at the section 'Views on the Shared Server architecture, tamper-proof access and data reliability'). The requirements were finally grouped according to the following groups: i) operator, ii) architecture, iii) user, iv) restrictions, v) competition, vi) development and approval of services, and vi) attribution of liability and further analysed in view to execute the next pilot's phases.

A number of **services** to be potentially provided under the Shared Server architecture was proposed and grouped according to different categories based on the domain they are applied within, the data needed, and latency required for their implementation and rollout, namely: i) Safety and emergency ii) Insurance services iii) Maintenance iv) Parking and v) Other services.

Figure 3. Services to be provided including a link with the issues identified



Source: Study authors

A **prioritisation of these services** according to the perceived importance and potential for improvement under a Shared Server architecture, was carried out during the first workshop (more information can be found in the First workshop report at the section 'Proposed set of services').

[3] Policy Position on car connectivity by FIA, 2016
[4] C - ITS / WG6, ANNEX 4: FIA – interim solution Data Server Platform; Shared Server 2015-09-03
[5] C - ITS / WG6, ANNEX 17: FIA Answers on ACEA responses and further explanation of the "Shared Server Concept", FIA explanation of the Shared Server Concept V1.0.docx, 2015-11-20

Open **issues on liability** (Contractual and extra-contractual), **data ownership** and the current EU legal framework as well as **competition barriers** were also analysed during the Inception phase of the pilot and discussed during the first workshop (more information can be found in the First workshop report at the section 'Liability, ownership and competition barriers').

During the Design phase followed by the first workshop until the upcoming second workshop, the pilot development was focused on identifying and addressing the main issues arising from the pilot implementation of the Shared Server architecture, touching upon the issues of data transmission, semantic interoperability and standardisation. Furthermore, the services identified during the first workshop were coupled with pilot data and reviewed in view to reach feasibility and efficiency. The issues of data privacy were further explored through the investigation of user registration flows and methods for services and service providers registration.

More specifically, the design covers the Shared Server operator tasks as well as the role of the potential service providers that exploit the data which are being provided by the Shared Server.

During the design phase has been recognised the architectural elements of the implementation as well as the Azure platform's components that could deliver a robust solution.

A realistic data set has been elaborated for further experiments giving outcomes about the computational efficiency and latency barriers. Based on well-known suggestions by FIA and ACEA we are proposing a subset of the in-vehicle data that could be shared with third-party service providers.

We drafted a solution on the user's and the provider's registration flow focusing on the user's consent management needs over data streams and data on rest.

From the side of service providers have been drafted flows of potential groups of services taking into account technical and liability issues. We have been also designed as a feasible solution for providing them via a common and open interface.

4 The first workshop ('Define the scope')

The first workshop of the pilot took place on 11 April 2019 and brought 37 experts around the table. Its main objective was to introduce the participants to the Pilot concept and scope, present its state of play and the work done so far, and gather the participants' views to incorporate them in the next pilot's phases. Taking stock of the work covered and hence finalising the Inception phase of the study Pilot for the automotive sector.

The workshop covered: 1) **the analysis** of the **main features of Shared Server architecture** where relevant vehicle data are transferred to an external server and made available to service providers, 2) the **proposal of the set of services** to be provided by the Shared Server to service providers, and 3) the **discussion about liability, ownership and competition barriers** related to data sharing.

More information about the outcomes of the first workshop can be found in the first workshop report.

5 The second workshop ('Implement')

5.1 Objectives of the second workshop

The second workshop's main objective is to update the participants about the work done so far during the Design phase of the pilot, review the proposed use cases, experiment with data and pilot platform

capabilities, and most importantly to gather the participants' views on critical design aspects in view to incorporate them in the next pilot's phases.Working together during the second workshop

The second workshop is organised in two parts: In the first part of the workshop (**Presentations**), the study team will present key issues encompassed in the Design phase, organised around the following subjects:

- **Summarising** the **main requirements** of the pilot as they were concluded during the first workshop and subsequently elaborated by the study team. Conflicting requirements will be addressed by alternative scenarios for transmitting the in-vehicle data to the OEMs and the Shared Server, tackling the liability issues indicated during the first workshop.
- **Recognising** that the **lack of standardization of the semantics** of in-vehicle data is a barrier to the rapid development of services by third parties; **possible solutions** will be proposed to tackle the complexity and variety of the in-vehicle data among the different manufacturers and types approval of the vehicles.
- **Considering** that **service providers** would ask **for fast-moving data (streams)** as well as for "data in rest" that are stored for later use, an architecture that could sufficiently meet these needs will be proposed.
- **Recognising** the **major importance of road safety** and **vehicle security**, the appropriate subset of the in-vehicle data will be proposed offering great monetisation opportunity when they will be used by innovative services.
- **Examining** several **forms of these services** regarding the **velocity** of the required data, the **computational needs** and the **latency barriers**; an initial assessment of the feasibility and efficiency of these services will be implemented.
- **Underlining** that **in-vehicle data** have been considered as personal data, several **privacy issues** will be examined and a design that could feasibly address the needs of the user's consent management on fast-moving data will be proposed.
- Towards the end of the first part of the workshop, the **components of the Microsoft Azure platform** will be **demonstrated**. The Azure platform will be used during the next phases of the implementation for two distinct roles of the Shared Server and the Service Provider demonstrating runs from the pilot data set.

The second part of the workshop, the **"World Café"**, will aim to co-create the next phases of the pilot by leveraging on the participants' views and inputs. Group discussions will be carried out around the three content blocks of the workshop:

A. Shared Server Solution architecture needs and the pilot design,
B. Review of proposed services and data and,
C. Privacy and Azure components group discussion.

Each group discussion will be guided by a set of pre-defined questions, and a moderator and a rapporteur will be orchestrating the discussion with the participants. Participants will be asked to confirm critical design aspects of the pilot or to contribute on clarification of the pilot features giving valuable feedback for the upcoming implementation phase. The participants will be split into three groups that rotate, so that each participant can contribute to each discussion group. Finally, all groups will reconvene to analyse the conclusions together.

A report identifying potential market deficiencies and regulatory barriers is being prepared in the scope of this study.

The report will look at the entire 'regulatory stack' for the automated vehicles sector as well as at horizontal areas that affect more generally the development of data analytics and data-driven services. At the same time, it will consider how emerging technological solutions could mitigate existing barriers in the short- to medium term. Finally, policy recommendations to overcome the detected barriers will be prepared.

We would like to kindly invite you to take part to an expert interview to help us assess the barriers identified so far, and potentially suggest additional barriers as well as policy and technological solutions to overcome such obstacles.

In case you have not yet received the invite to these interviews and you would like to contribute, we would greatly appreciate if you could inform Felice Simonelli felice.simonelli@ceps.eu, and Nadina Iacob nadina.iacob@ceps.eu.

We would like to take this opportunity to thank you for your participation in this important study.