



GRIMALDI STUDIO
LEGALE



WAVESTONE



4th Workshop
Pilot on **Fair and equal data sharing for cooperative, connected and automated mobility**
Presentation of the digital skills needed in the automotive sector

Big Data and B2B platforms: the next big opportunity for Europe
EASME/COSME/2018/004

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EASME - European Commission
Executive Agency for Small and
Medium-sized Enterprises



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The ongoing work
on the
identification and
study of the
needed skills for
cooperative,
connected and
automated
mobility

From the Blueprint to the DRIVES project

Blueprint for Sectoral Cooperation on Skills



Running from January 2018 until December 2021

24 partners from 11 EU countries

Its broad objectives are to:

- Analyse key trends, covering the whole value-chain
- Define future skills and job roles
- **Identify skills gaps for foreseen changes**
- Analyse the current offering of training/upskilling/reskilling
- Provide clear guidance for education and training providers

Our task: To do refinements on DRIVES project regarding CAV and Services



JOB ROLES RANKING 1/4

% [BASED ON NORMALISED JOB ROLES RANKING (N° OF TIMES THE JOB ROLE IS NOMINATED)]

Ranking	Job Role Name	%
1	AUTOMOTIVE DATA ANALYST	6,4%
2	POWERTRAIN ENGINEER	4,9%
3	AUTOMOTIVE TECHNICIAN	4,4%
4	INNOVATION MANAGER	3,9%
5	CYBERSECURITY ENGINEER	3,4%
5	DESIGN ENGINEER	3,4%
5	MARKETING AND BUSINESS DEVELOPMENT MANAGER	3,4%
6	AUTOMOTIVE MANAGER	2,9%
6	SOFTWARE SPECIALIST	2,9%
6	MANUFACTURING ENGINEER	2,9%
7	ELECTRIFICATION ENGINEER	2,5%
7	PROCESS ENGINEER	2,5%
7	SYSTEMS ENGINEER	2,5%
7	MAINTENANCE TECHNICIAN	2,5%
8	ADVANCED MATERIAL ENGINEER	2,0%

Soft Skills increase the competitiveness of a sector

What are the most important? (European Youth Portal)

- Communication skills: active listening, non-verbal communication, asking questions, being clear and succinct, clarifying and summarising, being empathetic, praising feedback, developing trust and rapport and being present.
- Creativity: is a major source of ideas when you are “thinking outside the box”. Looking at something in a new way or perceiving patterns that are not obvious.
- Analytical skills: form the base for developing solutions to any kind of problem.

Could be acquired by formal training, self-training (e-learning) even with alternative ways such as volunteering.

Bancino, R., & Zevalkink, C. (2007). Soft skills: The new curriculum for hard-core technical professionals. Techniques: Connecting Education and Careers (J1), 82(5), 20-22.

Jónsdóttir, I. (2016). Hard or soft skills?: how the Erasmus plus project leaders view the relative importance of skills when it comes to conducting their projects



Hard core technical skills - Recap from the 3rd Workshop – 11 groups

Network experts
Network architects
Network and telecommunication engineers
4G, 5G specialists
Network administrators
Network technicians

System experts
System architects
System engineers
Embedded systems engineers
Hardware and sensor engineers
Cloud specialists
System administrators
Hardware technicians

Data engineers
Data architects
Big data, and data engineers
Data scientists
Data analysts
Database administrators

In high demand
Algorithms and theory specialists
AI and machine learning specialists
Cybersecurity specialists

Software development
Software architects
Software engineers
C Programmers
Java Programmers
Python Programmers
R Programmers

Transport and mobility engineers
Transport engineers
Road safety specialists
Automotive data analyst

Technical leads
Technology officer

Web developer
Mobile app developer
Full stack developer
Business analysts
Digital service designers
User interaction designers

Creative staff
Creative officer

Lawyers
Lawyers focused on
IPR
Personal data protection
Liability
Contract management
Digital services

Automotive technicians
Electrification engineer
Electric motors engineer
Battery engineer
Powertrain engineer

Support staff
Sales support staff
After sales support staff



Hard core technical skills - Recap from the 3rd Workshop- Asking for

Q1. Needs of the sector

Focusing on the development of services for cooperative, connected and automated mobility, which are likely to **be in high demand** in the next five years?

Q2. Shortage

Estimating a lack of particular roles and skills. Which of those skills would be unlikely to satisfy the demand **in the medium term**?

Q3. Hiring vs. Training

Deciding between hiring new or training existing personnel to fulfil particular needs, for which of those skills would be **likely to hire** new talents rather **than train** the existed personnel?

A questionnaire to the experts – What are we expecting to learn ?

A questionnaire would be discussed with experts from SMEs which are active in the sector, people from academia as well as experts from prestigious organisations with a broad view on automotive and mobility.

- **Group of skills on high demand by the sector.**
- **Group of skills that is expected to be in shortage.**
- **Potential skills shift within a group, ie.**
 - Database administrators would shift to big-data engineers
 - Data analysts shift to data scientists.
- **Potential upskilling of the technicians in a group, ie.**
- **Reskilling and upskilling pathways**

Working complimentary to the big initiatives on skills we aim at

- Presenting **the skill set needed for a typical Service Provider** as resulted by the pilot and studying the specific role.
- Showing **complementary roles and alliances needed for the service provisioning**, such as data providers and data brokers, legal consultants and automobile workshops.

If the volume of companies seeking to hire for the necessary technical and soft skills rises too rapidly, full-time salaries and contractor rates will skyrocket, and most organizations **will be unable to compete with global platforms and tech giants for the talent they seek.**

