



The Blueprint for Sectoral Cooperation on Skills in the Automotive Sector

Skills Intelligence in Automotive Sector

RoadMap update WorkShop

Best practices investigation

Christian Baio
Spin360

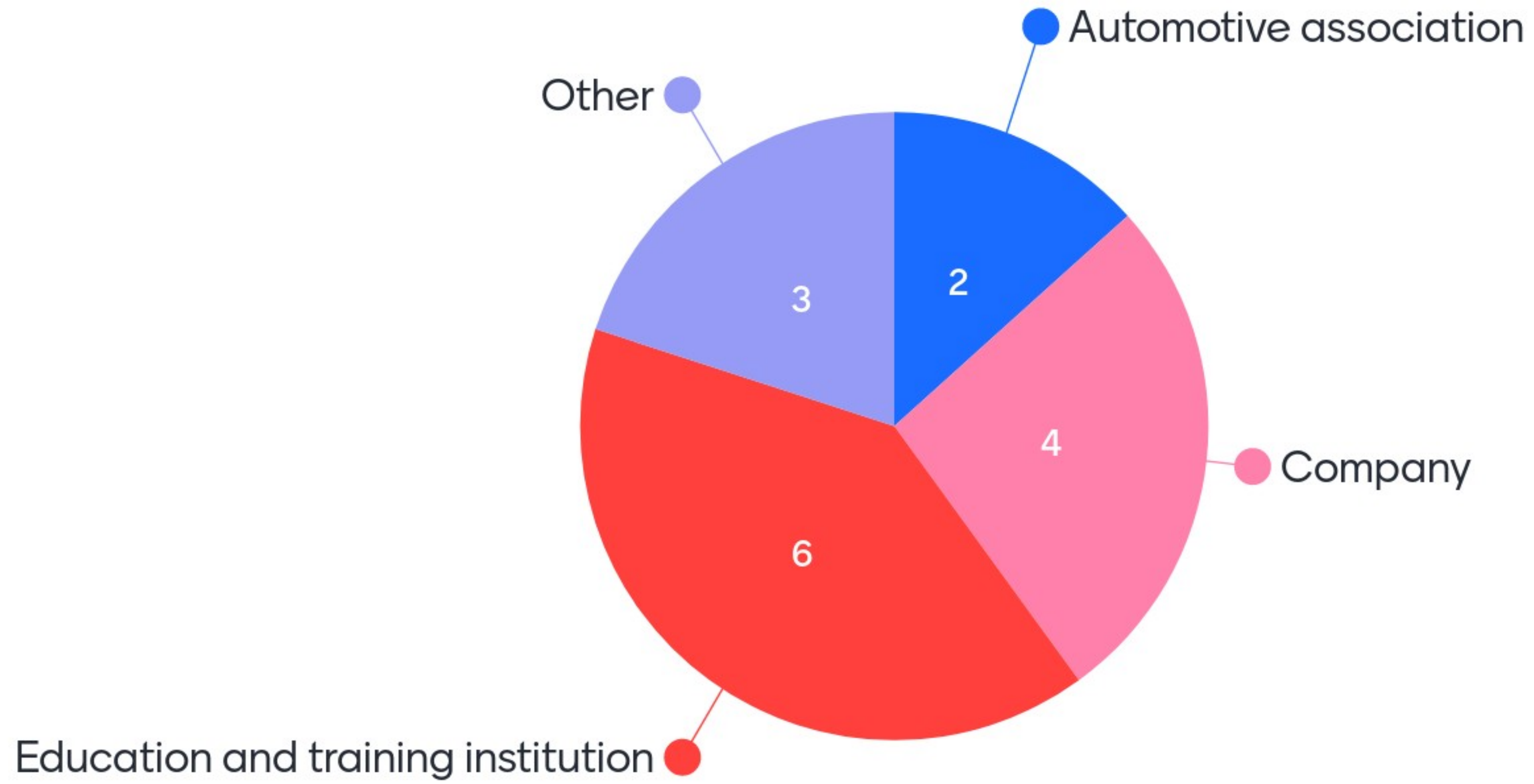
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Who are you?



Where are you from?

portugal - oporto
portugal coimbra
association
lisboa
portugal
viseu
braga
lisbon
belgium

THE BLUEPRINT PROJECT FOR THE AUTOMOTIVE SECTOR



DRIVES: Development and Research on Innovative Vocational Education Skills



January 2018 to December 2021



Project assures cooperation between **24 full partners from 11 EU countries**



Steering Board has extra 10 associated partners, chaired by **ACEA**, co-chaired by **CLEPA, ETRMA**, as full project partners



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OBJECTIVES

Sectoral Intelligence

Analyse key trends in the automotive, covering the whole value chain

Define the skills and job roles needed in the future

Analyse offer side currently available for the trainings/upskilling

Identify skills gaps for foreseen changes

Recognition

Ensure **mutual recognition** of the skills and job roles **across the EU**

Create an EU-wide framework that can be used throughout the EU and implemented in the EU regions – based on commonly used definitions

Regularly **deliver policy recommendations** reflecting the needs of the automotive sector to the European Commission

Training Offer

Create trainings for selected skills and job roles in the automotive sector

Provide as a pilot 1100 trainings across the EU and across the education and training institutions

Provide clear guidance for the education and training providers on skills needs of the automotive industry



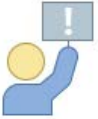
DEMAND AND OFFER STAKEHOLDERS

- SME
- Large enterprise
- Technology centre
- Sectoral/Industrial association
- Trade union
- Labour market intelligence entity
- Public employment service
- Private employment service
- Public authority
- Chambers of Commerce
- Labour ministry
- National statistics office
- Professional School (secondary education, EQF 3-4)
- Higher Education (master & bachelors, EQF 5-8)
- Training and education provider
- Independent trainer

Survey - DEMAND

- To analyze the demand of the automotive sector and its skills needs

March 2019



Survey – OFFER

- Based on the demand, analyze the offer
- What skills are offering, what is in plan, what are the capacities of offered courses

June/September 2019



TODAY'S WORKSHOP

“Demand” point of view
(Automotive sector)

“Offer” point of view
(Automotive sector)

A set of 8 Key Actions, 56
Specific Activities with
indication of main
Stakeholders' role

GAP analysis

RoadMap

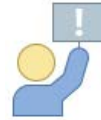
1st RoadMap
update

2nd RoadMap
update

Confirming the 8 Key Actions

8 Key Actions and 56 Specific
activities grouped in **4 main topics**.
Showing European Best Practices
on 4 main topics and **analysis at
Regional Level**

THE PROCESS FOR THE ROADMAP



DEMAND
Point of view

INDUSTRY



OFFER
Point of view

EDUCATION &
TRAINING
PROVIDERS

DRIVERS OF CHANGE, SKILLS & JOB ROLES

TRAINING PROVISION MECHANISMS

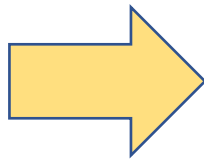
RECOGNITION AND QUALIFICATION FRAMEWORKS

ATTRACTIVENESS

IDENTIFIED GAPS

ROADMAP WITH 8 KEY ACTIONS AND 56 SPECIFIC ACTIONS

Validated by
Automotive stakeholders



DRIVERS OF CHANGE

Drivers of Change are those factors which bring change in the industry

2 DIMENSIONS OF ANALYSIS:

- IMPORTANCE (0=not important, 5=most important)
- URGENCY (timeframe by 2020 → 5, by 2025 → 3 and 2030 and later → 1)

5 CATEGORIES (and 23 specific Drivers):

1. NEW TECHNOLOGIES AND BUSINESS MODELS
2. CLIMATE GOALS, ENVIRONMENTAL AND HEALTH CHALLENGES
3. SOCIETAL CHANGES AND CHANGE IN THE WAY THAT CONSUMER ACCESS, PURCHASE AND USE THE CARS
4. STRUCTURAL CHANGES
5. GLOBALISATION AND RISE OF NEW PLAYERS

DRIVERS OF CHANGE: IMPORTANCE



acquisition of new skills

continuous training



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DRIVERS OF CHANGE: URGENCY

by 2020, 5 = very urgent by 2025, 3 = urgent by 2030 and later, 1 = not urgent

DEMAND

OFFER

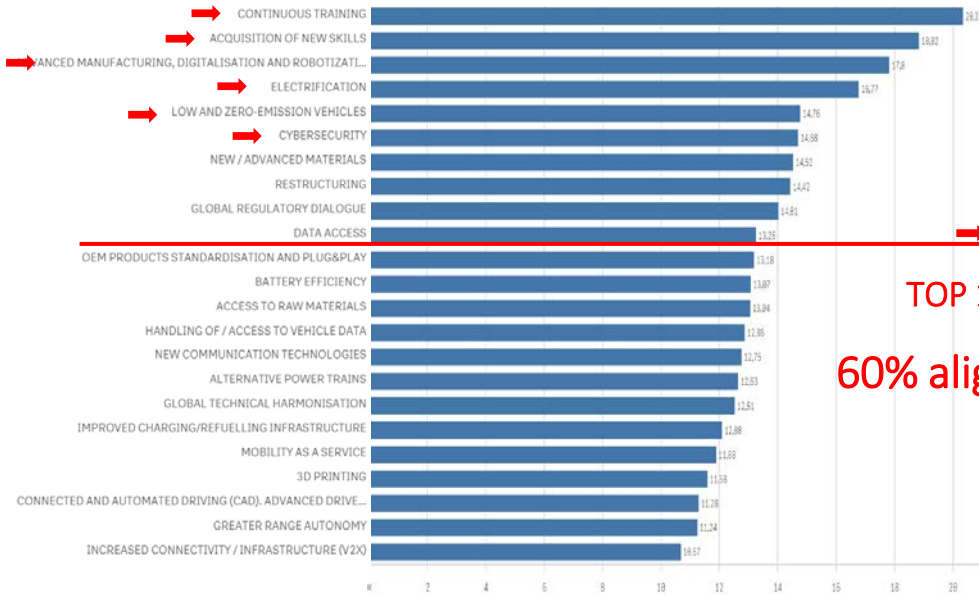


continuous training

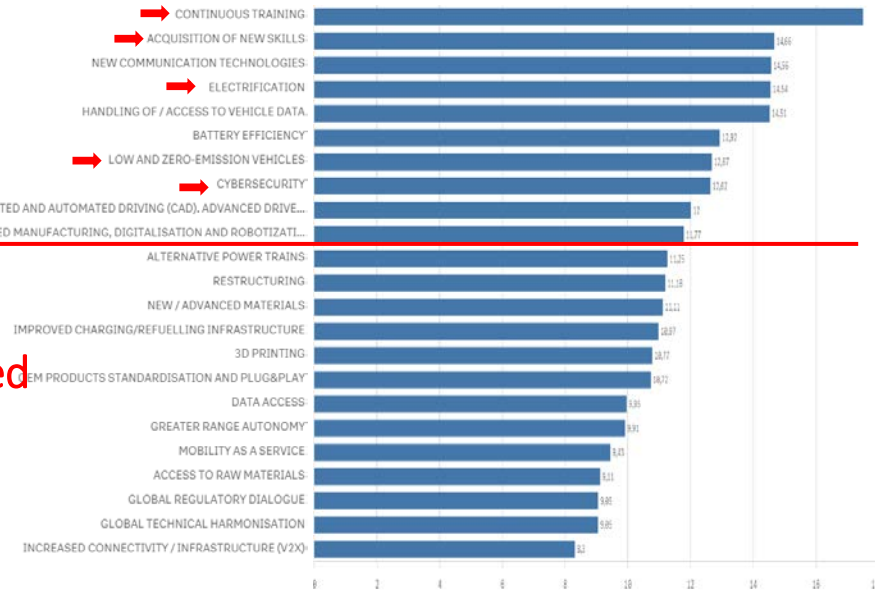
DoC PRIORITY INDEX

It is calculated by total number of available replies for importance and urgency with: *IMPORTANCE x URGENCY*

DEMAND



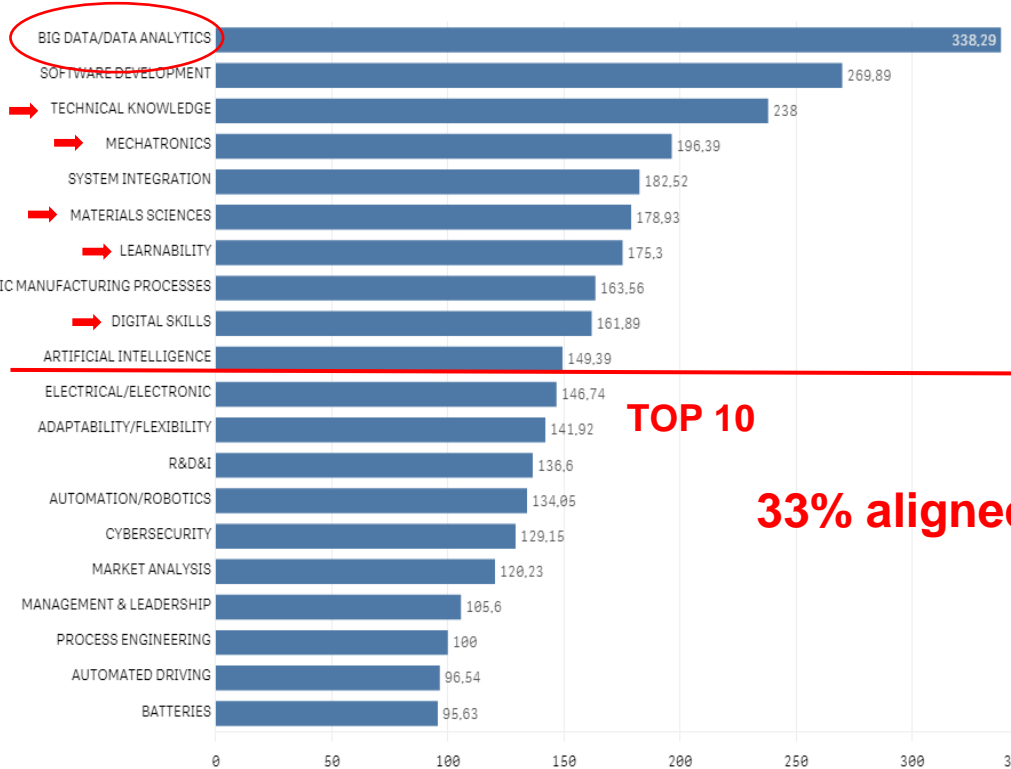
OFFER



TOP 10
60% aligned

SKILLS

DEMAND



OFFER

SKILLS	% GRADUATES (per year)
CONTINUOUS IMPROVEMENT	9,45%
TECHNICAL KNOWLEDGE	9,43%
FOREIGN LANGUAGES	6,04%
COMMUNICATION	5,65%
LEARNABILITY	4,81%
TEAMWORK	4,59%
MATERIALS SCIENCES	4,20%
FUNCTIONAL SAFETY	3,88%
PROCESS ENGINEERING	3,82%
PRODUCT DEVELOPMENT	3,48%
ADAPTABILITY/FLEXIBILITY	3,15%
BEHAVIOURAL AGILITY	3,06%
MECHANICAL	2,96%
DIGITAL SKILLS	2,92%
CREATIVITY	2,81%
ELECTRICAL/ELECTRONIC	2,55%
PROBLEM SOLVING	1,95%
CRITICAL THINKING	1,93%
IOT & CLOUD	1,91%
ENTREPRENEURSHIP	1,89%
MAINTENANCE	1,76%
MECHATRONICS	1,15%
OPTIMIZE ACTIVITIES	1,08%

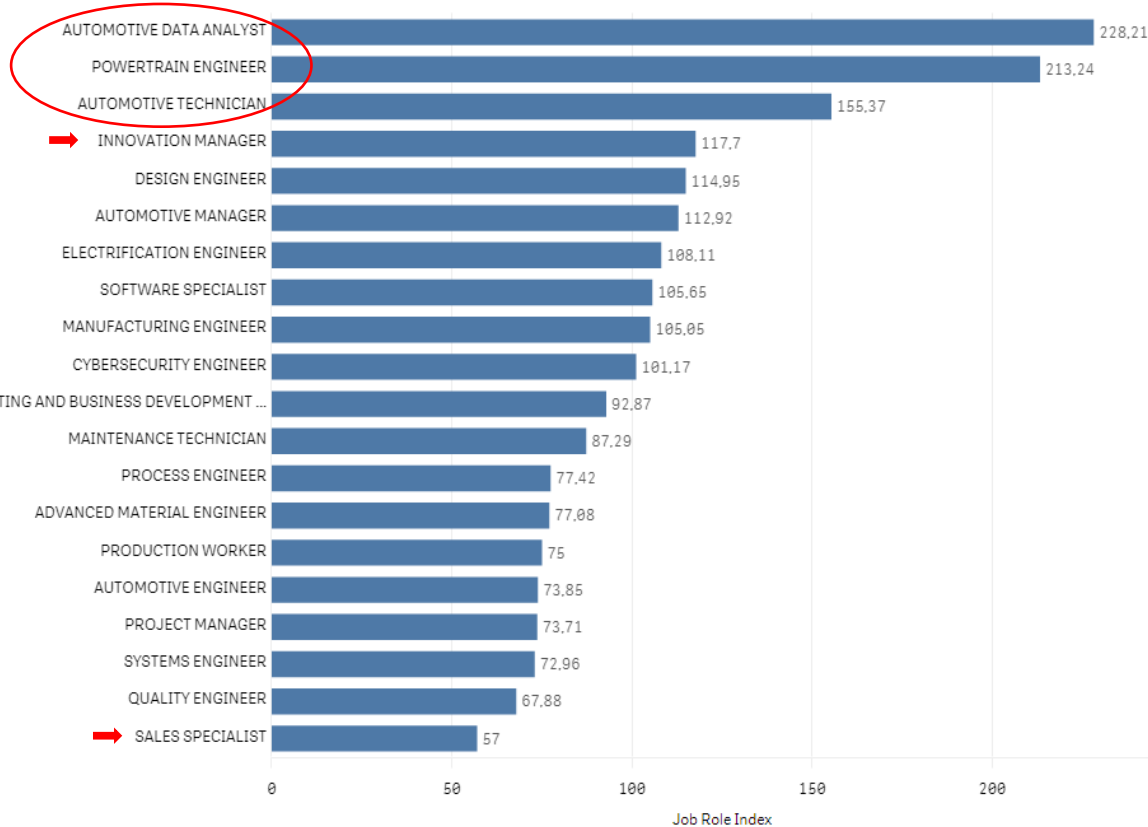
TOP 20

TOP 20 JOB ROLES (DEMAND)

“Automotive” specific
Transversal

Sales & Marketing

Sales & Marketing



SOME CONSIDERATIONS: GAPS

This analysis illustrates and confirms that STRUCTURAL CHANGES (continuous training, acquisition of new skills) are considered as “very urgent” from the DEMAND, whereas they are “urgent” from the OFFER side.

Job Roles and Skills needs to be better evaluated between DEMAND and OFFER

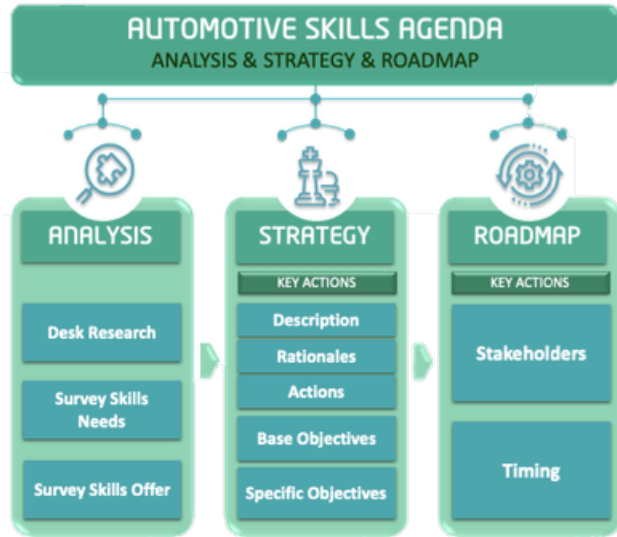
The exchange of information between the main groups of stakeholders should be improved to better understand the real need of urgency

OFFER stakeholders should modify educational processes and content according to the needs of the DEMAND side with a continuous and planned exchange of information.

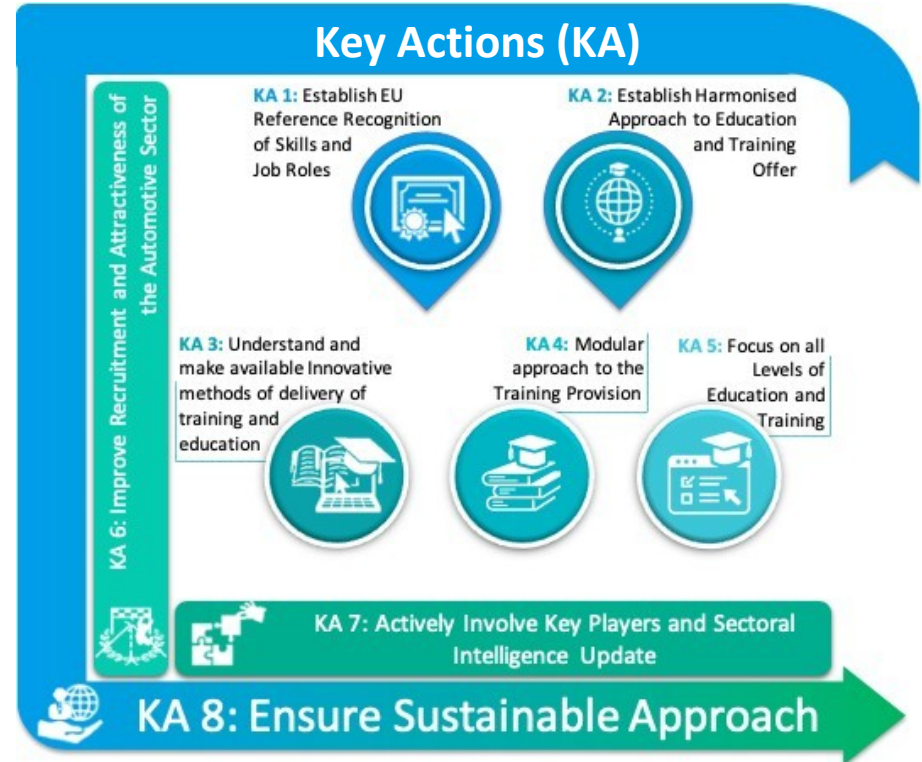
It is moreover important to provide reference definition of skills and job roles relevant for automotive-mobility ecosystem with an online database of available training courses



AUTOMOTIVE SKILLS AGENDA – STRATEGY & ROADMAP



- The analysis led to the strategy and roadmap for the Automotive sectoral skills agenda
- First release May 2020
- Updates in December 2020 and December 2021



ROADMAP 8 KEY ACTIONS



KEY ACTION 1:

ESTABLISH EU REFERENCE RECOGNITION OF SKILLS AND JOB ROLES



KEY ACTION 2:

ESTABLISH HARMONISED APPROACH TO EDUCATION AND TRAINING OFFER



KEY ACTION 3:

UNDERSTAND AND MAKE AVAILABLE INNOVATIVE METHODS OF DELIVERY OF TRAINING AND EDUCATION



KEY ACTION 4:

MODULAR APPROACH TO THE TRAINING PROVISION



KEY ACTION 5:

FOCUS ON ALL LEVELS OF EDUCATION AND TRAINING



KEY ACTION 6:

IMPROVE RECRUITMENT AND ATTRACTIVENESS OF THE AUTOMOTIVE SECTOR



KEY ACTION 7:

ACTIVELY INVOLVE KEY PLAYERS AND SECTORAL INTELLIGENCE UPDATE



KEY ACTION 8:

ENSURE SUSTAINABLE APPROACH

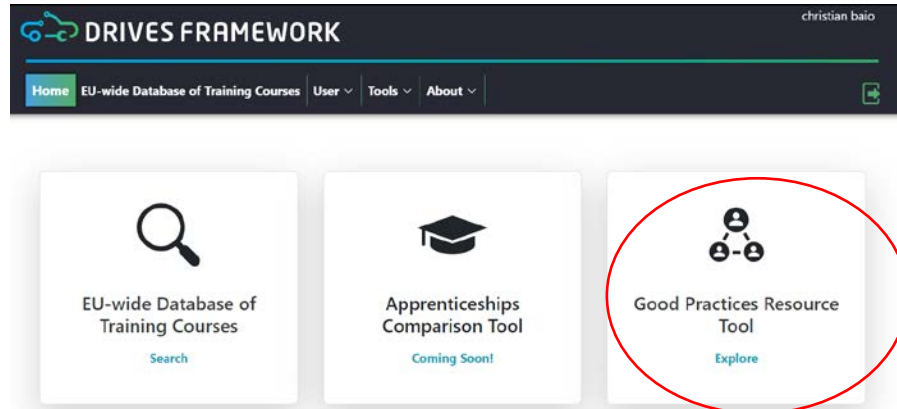
ROADMAP 56 SPECIFIC ACTIVITIES

CODE	SPECIFIC
KA 1-1.1	1.1. Define the importance of national/regional standards definitions and the rules for their recognition within EU ontology
KA 1-1.2	1.2. Define and assure coherence with ESCO definition
KA 1-2.1	2.1. Establish a common methodology to the harmonisation of skills ontology in order to facilitate identification and description of skills
KA 1-2.2	2.2. Establish a common methodology to the harmonisation of job roles ontology in order to facilitate identification and description of job roles
KA 1-4	4. Adoption of the reference framework by the key stakeholders, including large, medium and small industry
KA 1-2.3	2.3. Establish framework that functions as intermediary body facilitating encounters between different stakeholders
KA 1-3.2	3.2. Establish or connect with skills domain groups of industry experts tasked with updating new and emerging job roles
KA 7-7.1	7.1. Create “skills domains working groups” among (as minimum) VET providers and industry representatives to focus on the analysis of drivers of change and their consequences on VET evolution
KA 7-7.2	7.2. Promote discussion within the “domains working groups” on the evolution of job roles and its consequences on VET and training, VET provision mechanisms and their effectiveness for industrial stakeholders, skills recognition
KA 7-7.3	7.3. Promote discussion within the “domains working groups” on the evolution of the sector, its technologies and drivers of change
KA 7-8.2	8.2. Ensure the feasibility of the activities listed in this Roadmap through the involvement of regional, national and EU institutions – this support should include also financial means.
KA 8-1	1. Establish Automotive Skills Alliance
KA 1-3.4	3.4. Work with research think tanks and data collection agencies for
	3.5. Utilise existing automotive employer groups

56 SPECIFIC ACTIVITIES GROUPED

Based on the gap highlighted between «Demand» and «Offer» it is possible to group the 56 specific activities into 4 main common topics:

1. STANDARD DEFINITION
2. FACILITATING ENCOUNTERS BETWEEN DIFFERENT STAKEHOLDERS
3. INTELLIGENCE
4. TRAINING PROGRAMMES



...and using project DRIVES outcomes to match them with the **Good Practices** already on going in Europe



WORKSHOP ACTIVITY

For each of the 4 main common topics, we are going to show existing practices **already in place in the automotive sector across Europe**. The workshop next activities will be an occasion also to see if such best practices are:

- **Already successfully in place** in your region;
- **Not implemented** in your region **but potentially interesting**;
- Not relevant for your region – and if so, if there are **other themes** that shall be addressed.

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INSERT THE CODE: 46 87 15 37



WORKSHOP ACTIVITY

PLEASE GO TO WWW.MENTI.COM

INSERT THE CODE: 46 87 15 37

- Already successfully in place in your region;

YES

- Not implemented in your region but potentially interesting;

NO but they are potentially interesting to be implemented in the future

- Not relevant for your region – and if so, if there are other themes that shall be addressed.

NO, they are not very relevant for the region (if so, why?)



STANDARD DEFINITION

- Providing a **reference definition** of skills and job roles relevant for automotive-mobility ecosystem
- Establish a **common methodology** to the harmonisation of skills ontology in order to facilitate identification and description of skills
- Providing **unified and harmonized databases and information resources** of skills and job roles to allow easy comparison
- **Adopting the reference framework** by the key stakeholders



Cedefop European Database on Apprenticeship Schemes

Brief description: apprenticeship information resource developed by CEDEFOP. **This database enables different EU countries apprenticeships to be compared.** As a result of the range of information collected and its broad focus the comparisons can be made on a country level or a scheme level

Benefits:

- Country fiches: navigation and understanding of apprenticeships from a national context.
- Scheme fiches: this focuses on specific country schemes identifying their features. As some countries have more than one scheme it separates them so that individual schemes and their characteristics can be examined
- Comparison tables: comparison of countries and schemes. It can help identify countries with similar schemes and characteristics
- Map: visual representation of the number of apprenticeship schemes within a country
- Advanced search: this feature provides indicators which can be selected based on interest

German/Spanish dual certificate

Brief description: The German Chamber of Commerce in Spain worked in partnership with Volkswagen to create the **first German/Spanish dual certificate**. The programme was developed by a group of experts who analysed the **competences covered in both countries as a basis for the development of a three-year curriculum** for Volkswagen incorporating best practices from both countries. Programmes were developed covering five different job roles. SEAT is also now fully involved in the Dual Certification programme.

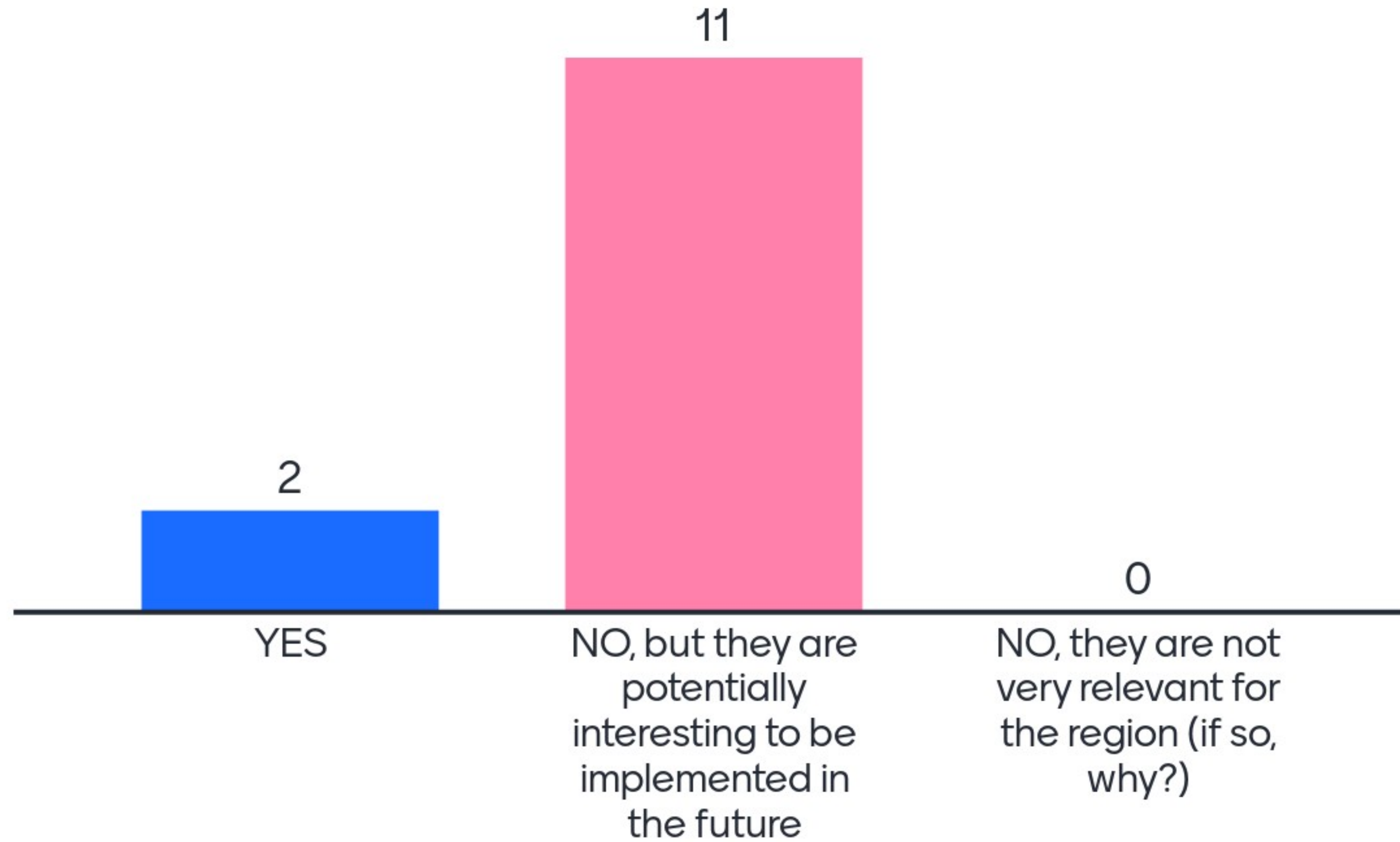
Benefits:

- Each student completing the exam is awarded both the German and Spanish certificate
- It increases talent development locally and supports the development, presence, and strength of participating German companies internationally
- It creates good vocational opportunities and opens alternative pathways for students

Challenges:

- Engage with the relevant local authorities
- Ensure the quality of the programme by making sure personnel across the whole company understand what Dual Training comprises and tutors are properly informed/trained

1. STANDARD DEFINITION: do you already implement related best practices in your region?



FACILITATING ENCOUNTERS BETWEEN DIFFERENT STAKEHOLDERS

- Establishing or connecting with **skills domain groups of industry experts** tasked with updating new and emerging job roles and skills
- Consolidating an **active automotive community** focused on skills with relevant participation of stakeholders, with particular reference to companies, national associations and VET providers
- **Organising events** aimed at facilitating exchange between key stakeholders

*Sustainable and pragmatic collaboration in **Automotive Skills Alliance** on European as well as regional level: different WorkingGroups established and inclusive approach to others*

z.l.ö. - zukunft.lehre.österreich – Austria

Brief description: To strengthen the image of apprenticeship, z.l.ö. - zukunft.lehre.österreich., which is an independent, non-profit and **cross-sector initiative** (largest apprenticeship initiative in Austria with **more than 130 member companies**) aims at **highlight the advantages, possibilities and opportunities of an apprenticeship** and permanently improving the reputation of dual training in Austria. This is achieved through **a wide range of promotional, networking and other activities.**

Benefits:

- Additional value for its member companies: collaborative initiatives with skilled professional providers
- Tackle skill shortages
- Identify demands from different stakeholders

Challenges:

- Effective marketing campaign
- Synergies among the different stakeholders
- Finding positive testimonials for the future generation of apprentices

Junior Automotive Apprenticeship Advisory Board (JA3B)

Brief description: an initiative led by Gestamp - multinational company involved in the global automotive industry, in collaboration with the Universidad de Mondragon and sponsors in Spain. JA3B is an **event hosting young people** from 14 to 18years-olds from different European countries, organized to design and think collaboratively about the future of the automotive industry, not only in the professional field but also in academia. **Its aims include discussing participants experiences of the automotive sector, its future challenges and the development of a strategic action plan to make it an exceptional place to work.**

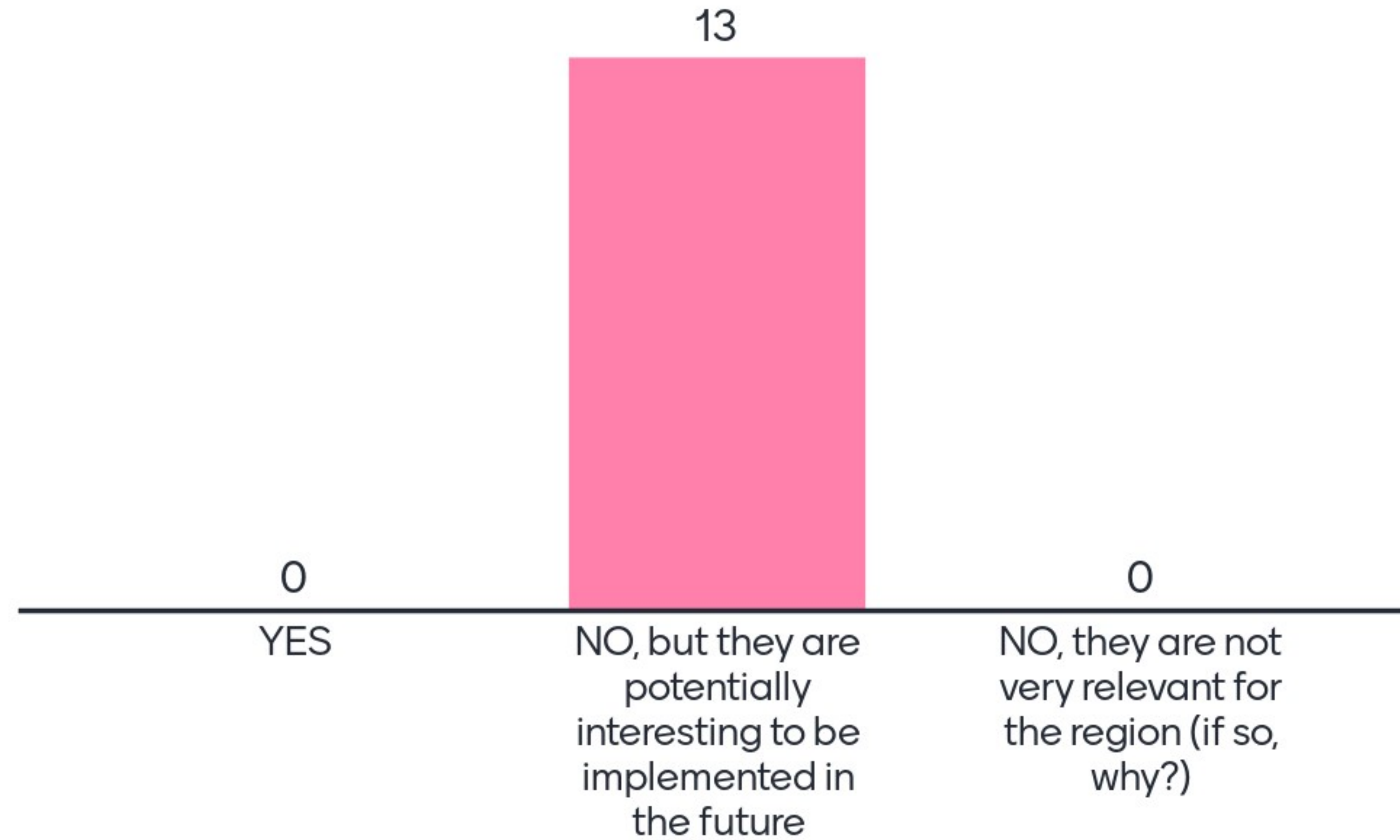
Benefits:

- Companies get first hand impressions from European youth regarding the attractiveness of employment in the automotive sector.
- Nurture a sense of European citizenship through sharing common practices and challenges.

Challenges:

- Finding sponsors to finance student's travel and accommodation expenses to the event
- Strong time investment from organizers

2. FACILITATING ENCOUNTERS BETWEEN DIFFERENT STAKEHOLDERS: do you already implement related best practices in your region?



- **Presenting trends and future foresight** to education and training providers for a better vision of future needs and possible changes
- Provide easily accessible **data reflecting the current situation of the sector**
- **Updating existing curricula** to address the challenges and skills changes

Work of ASA WG3, focused on skills intelligence from Demand side (skills needs, identification of the needs, etc.) and Offer side (training and education offer, skills gaps, preparation of curricula, new/updated training courses, etc.)



High Value Manufacturing Catapult – Skills Foresighting Process

Brief description:

The future skills foresighting process in the UK is an example of a structured process of **engaging with research organisations and employers to understand new organisational capabilities needed in the automotive sector in 3 to 5 years time and then engaging with employers and educators to** identify the competencies (knowledge and skills) needed to implement the capabilities. The Foresighting process consists of engaging with these 3 sets of stakeholders with each stage creating an output used in the next stage. Research organisations are by definition looking at future challenges and capabilities; employers know how these capabilities will be developed and which job types will be impacted and, of course, educators are experts in turning the capabilities into competency statements and, ultimately, training courses.

Benefits:

- Good engagement with all stakeholders
- Competency statements that have been honed to ensure the content is focussed on future needs
- Identifying organisational capabilities as the foundation for the new competencies.
- Taking a structured approach which means each stakeholder adds value to the process.

Challenges:

- Process development
- Factoring in existing resources (such as existing qualifications content and the National Occupational Standards and the communication of the results of the Foresighting process where it's proven to be difficult to report outputs in a simple form.

Skills Escalator

Brief description: The MIRA Technology Institute (MTI) - facility based in the West Midlands Region in the UK, is helping to **create specialist skills in some of the new emerging technology areas within the automotive sector**, including electrification and driverless cars, with the goal of ensuring a sustainable supply of future technical specialists and engineers. The MTI offers **flexible delivery designed to meet the needs of individuals and businesses**. Training courses offered cover Automotive Engineering; Business and Leadership; Connected and Autonomous Vehicles; Electric and Hybrid Vehicles and Vehicle Safety and Security and Cyber Security.

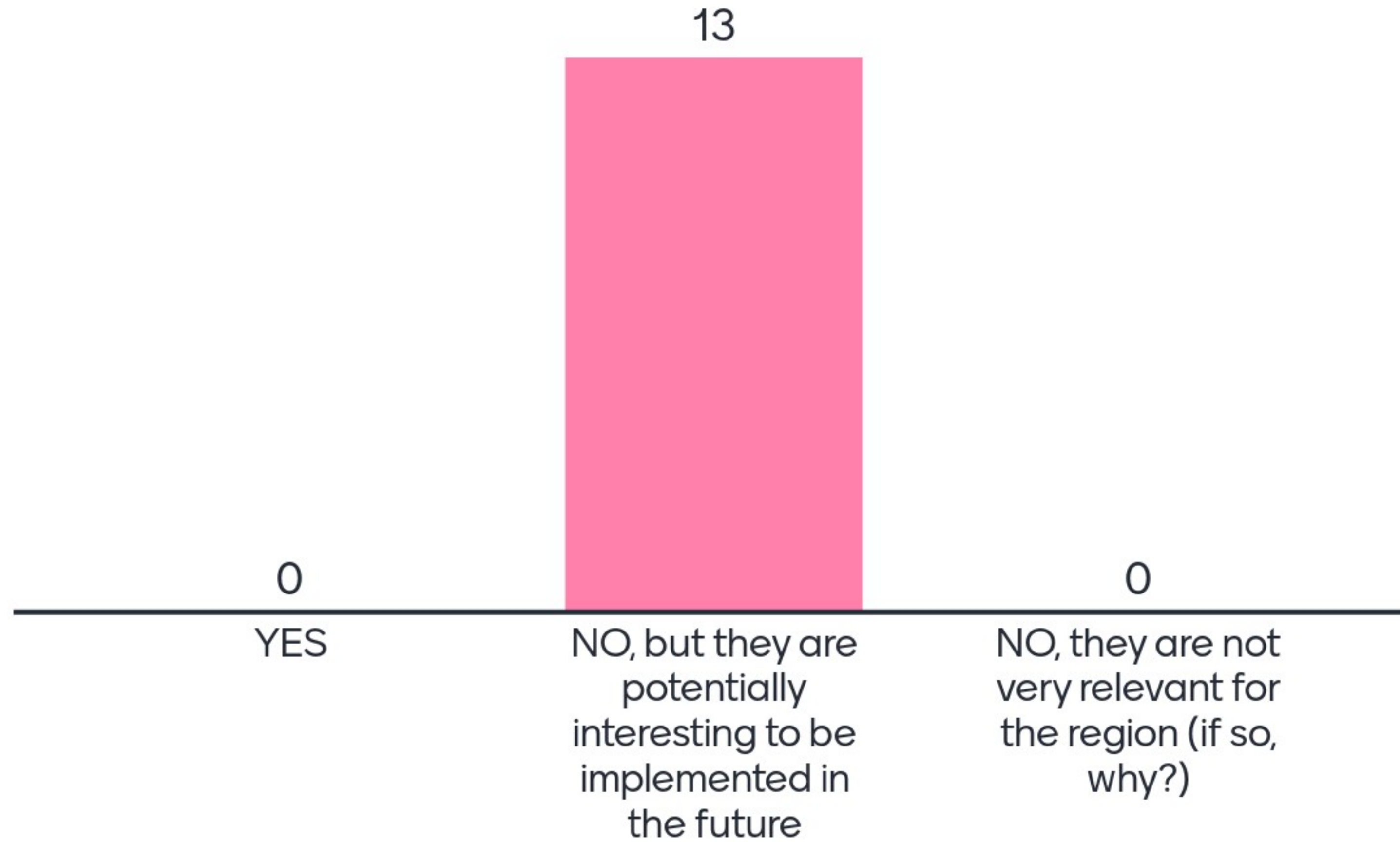
Benefits:

- Enables students to progress through different levels and move seamlessly between training partners within MTI rather than having to seek training outside of the initiative
- Accessing automotive training whether they are starting at ground level or need higher level qualifications
- Highly attractive for learners
- Beneficial for employers to be able to access all the skills training that they need from a single organisation

Challenges:

- Ensuring effective collaboration between industry and education
- Matching the pace and agility of industry with the longer lead times in curriculum development in the education sector

3. INTELLIGENCE: do you already implement related best practices in your region?



TRAINING PROGRAMMES

- Developing specific **training activities/programmes** for workers with **lower level of skills to upgrade their skills** and create clear progression pathways between different training levels
- Stimulating preparation of **new modular training** and education plans and curriculum
- Developing **initiatives in connection with guidance for young people** as well as teachers and families
- Setting up **training programmes with train- the-trainers approach** focused to technical skills, digital skills and soft skills

DRIVES as direct support of up/reskilling activities prepared DRIVES Learning Platform with set of MOOC courses available free of charge for individuals and companies or also for training providers to be used in their courses

TU Graz Life Long Learning

Brief description: TU Graz University in Austria supports companies in **bringing their staff up to date with the latest developments** in science, commerce and technology. Furthermore, companies can talk to lecturers and adapt the courses to their individual needs. Together with selected partners, TU Graz offers a continuing education programme with several types of courses. **The courses are designed for university and college graduates, experts from industry and TU Graz students.** Upon completing these courses, trainees receive either a certificate of attendance, confirming that they have taken the course, or a TU Graz certificate, if the course ends with an examination.

Benefits:

- Employees are constantly trained in the latest technology or can learn completely new engineering skills without having to create in-house training facilities
- Training is up-to-date and relevant for industry needs
- Integrating scientists into the programme in order they can present the latest research findings

Challenges:

Training employees on the latest state-of-the-art technology. In some SMEs expert training on very specific topics is difficult or costly to install. The TU Graz LifeLongLearning (TUG LLL) programme supports companies that do not have a corresponding in-house training programme to be able to convey new approaches and technologies quickly and in a resource-optimised manner.

Azubi Car – Skoda Auto

Brief description: The Azubi Car initiative is an example of a programme at the Skoda Vocational School in the Czech Republic that **gives learners the opportunity to design and manufacture their own concept car** (students build their dream car). Skoda hires all the students who successfully complete the programme. Learners work under the supervision of 7 vocational teachers for support and also to ensure safety. Parts are supplied by Skoda auto, with minor exceptions (e.g. car seats).

Benefits:

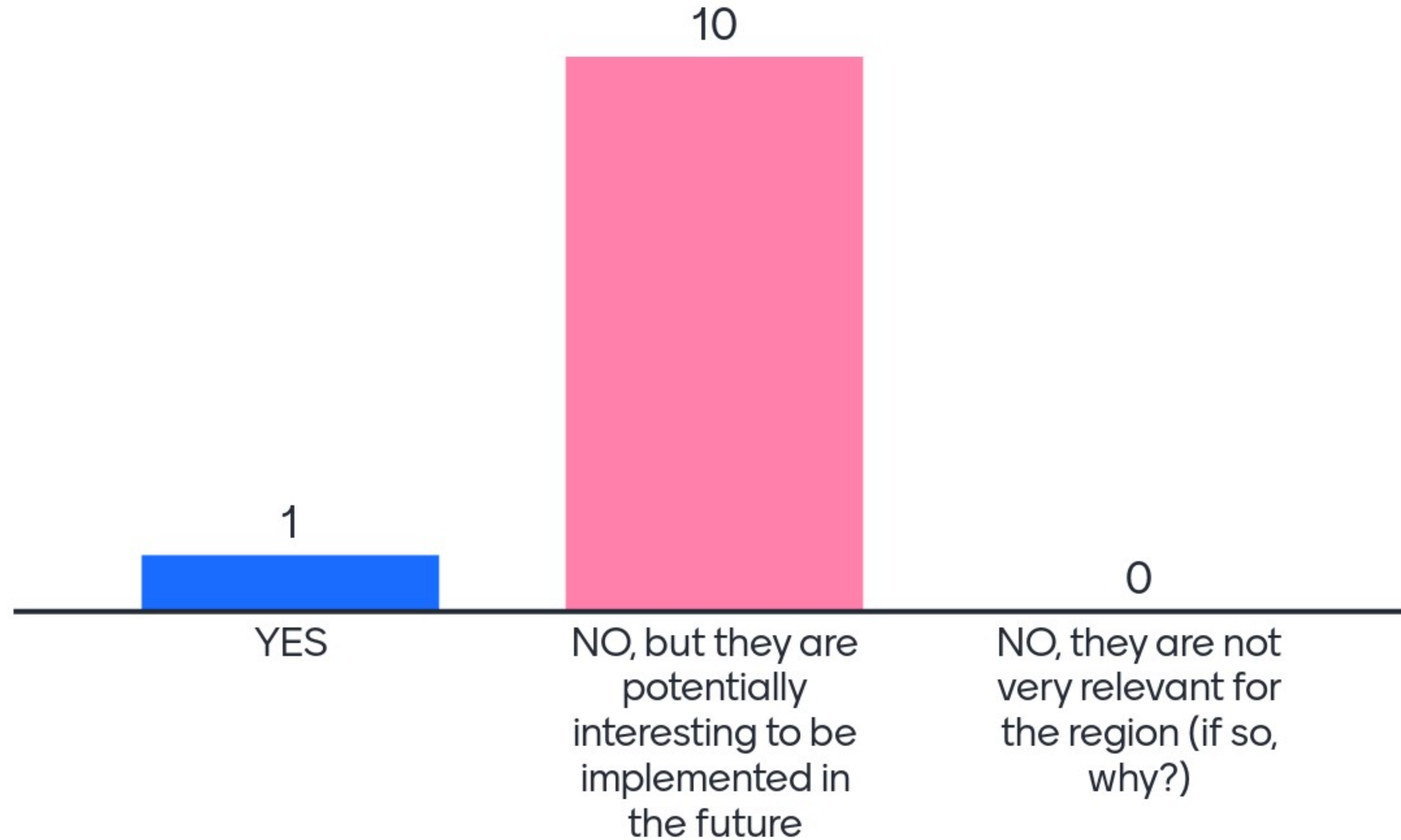
- Opportunity to undertake unique complex work
- Think differently, communicate, organize, solve problems, work in teams and gain personal experience on what they have learned in a real-life situation and apply the knowledge gained
- Meet designers directly
- Possibility of future career within Skoda

Challenges:

Logistics behind getting the parts from the Skoda auto

Time constraints, not only in relation to production, but also in the planning phase and in relation to designing a concep.

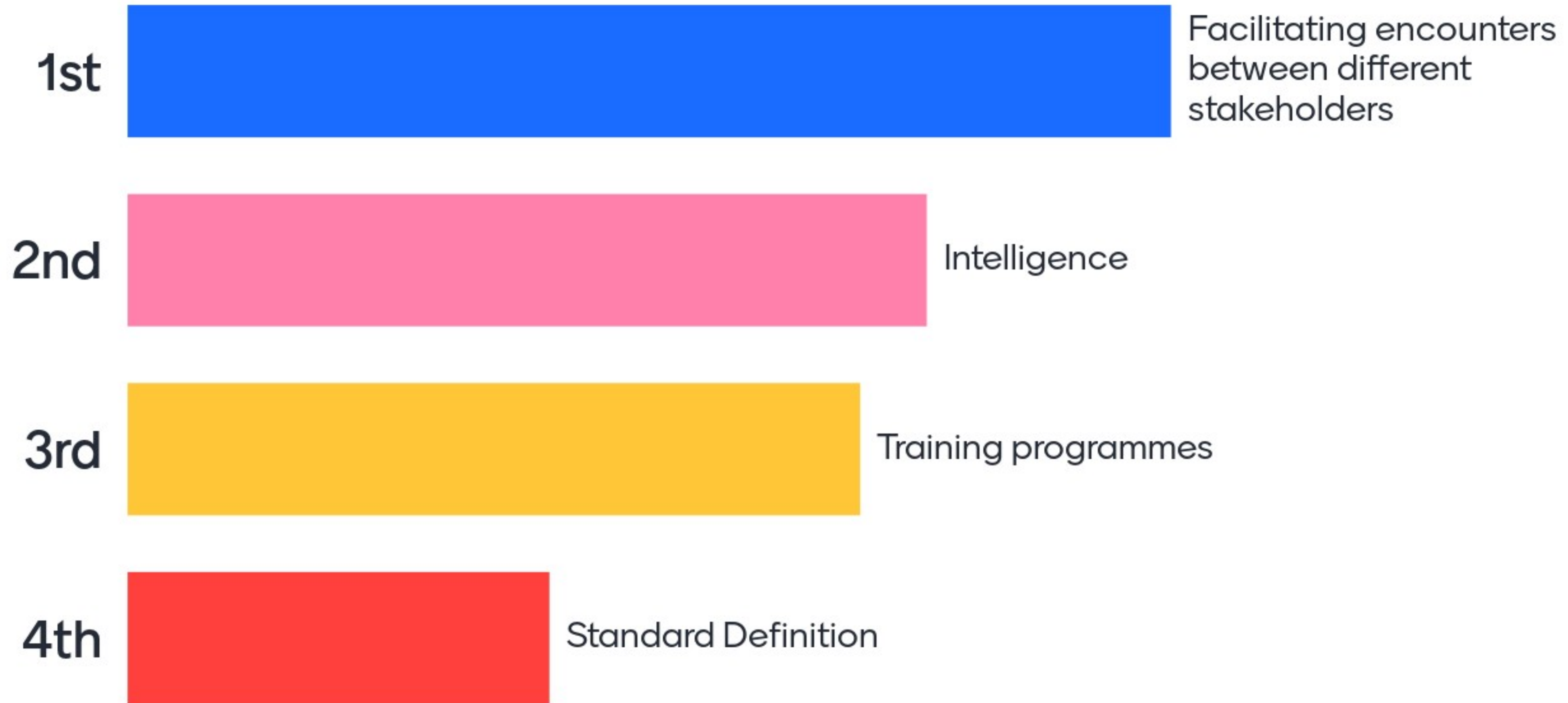
4. TRAINING PROGRAMMES: do you already implement related best practices in your region?



... A LAST QUESTION ...

-

Which of the below key themes would you consider more important/relevant to implement in your region?



NEXT STEPS

- We share with you this presentation and the results
- DRIVERS RoadMap will be updated using your suggestions (outcomes end 2021)
- Your feedback will be used by ASA (<https://automotive-skills-alliance.eu/>)







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