Project autoEFa

Study on Labour Market Requirements and trainees' preferences on the MOOC

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Introduction

This study has been developed within the framework of the AutoEFa Erasmus+ project, which focuses on the creation of a Massive Open Online Course (MOOC) dedicated to the Automotive Environmental Footprint Guidelines (AutoEFa). The initiative targets both students and industry professionals, aiming to align educational content with the evolving demands of the automotive labour market. The first section of the study provides an overview of emerging technologies and their influence on the skills required in the sector, drawing on recent findings from related initiatives, including the Blueprint project for the automotive industry. These insights offer a contextual basis for understanding the competencies that future training must address. The second section presents the results of a survey assessing learner preferences for MOOC design and delivery, offering data-driven guidance for shaping an effective and engaging online course. Together, these components serve to ensure that the MOOC is responsive to industry needs and pedagogically aligned with learners' expectations, ultimately enhancing its relevance and impact.The survey was conducted by the project consortium between March and June 2025 to collect input from potential trainees regarding how the course should be structured in terms of design and content development, with a focus on understanding perceptions related to content types, delivery methods and preferred pacing. It was distributed by the project partners to students attending technical universities via the link https://ec.europa.eu/eusurvey/runner/9dc6231d-91b8-5415-690e-057db0a4d36e, gathering a total of 159 responses. The survey is attached in Annex.

The EU Digital Survey platform was selected as the tool for designing and distributing the questionnaire due to its alignment with key operational and technical requirements. The platform supports multiple languages, allowing inclusive participation from respondents across different EU member states without the need for external translation tools. The survey was translated into the national languages of the consortium. Besides English, it was available in Czech, Slovak, Polish, Italian and Portuguese.

The survey included the following questions designed to capture participants' preferences:

1. Which type of content do you prefer most in an online course?

2. How important is it for you to have the option to download course materials (e.g., PDFs, audio, videos) for offline use?

3. Do you prefer short modules (5–10 minutes) or longer sessions (20–30 minutes)?

4. Which interactive elements do you find most useful in online courses?

5. How do you prefer to consume MOOC content?
6. Would you benefit from having audio versions of each module to listen to while multitasking or commuting?

7. What pace of learning suits you best in an online course?
8. How useful are visual aids (e.g., infographics, diagrams, charts) for your learning in technical subjects like environmental footprint methods?
9. Would you appreciate optional live sessions or group discussions to enhance understanding?

The results of this questionnaire will feed into Work Package No. 3 to support the development of an educational course in MOOC format.

Labour Market Requirements

The automotive industry is undergoing a profound transformation, shaped by a convergence of structural, technological, and regulatory forces. Between now and 2050, four macrotrends—**digitalization**, **green, sustainability and circular economy**, **resilience of value chains**, **and new business models**—are redefining how vehicles are designed, manufactured, used, and serviced. These shifts not only impact market dynamics but also demand a fundamental rethinking of workforce skills, job profiles, and employment models across the value chain.

Digitalization is rapidly transforming the automotive landscape. The rise of connected vehicles, autonomous systems, and data-driven services is changing how people and goods move. Vehicles are becoming smart platforms that interact with their environment and users in real time, enabling models such as Mobility as a Service (MaaS), predictive Maintenance as a Service, and Tyre as a Service (TaaS). These services rely on massive data flows and digital infrastructure, requiring heavy investment in technologies such as artificial intelligence, 5G networks, edge computing, and advanced vehicle operating systems. Labor profiles are evolving in parallel: traditional roles may disappear, while demand grows for new competencies in data science, AI, cybersecurity, and platform engineering. Industry 5.0 (The fifth industrial revolution), which represents the ultimate result of the automation brought about by Industry 4.0, places humans at the center of this transformation, highlighting the need to upskill workers to collaborate with smart systems and ensure inclusive, resilient workplaces.

At the same time, **sustainability imperatives** are reshaping the entire lifecycle of vehicles. Circular economy principles—such as reuse, remanufacturing, recycling, and eco-design—are becoming embedded in product development, supply chain management, and end-of-life processes. This shift is driven by rising environmental expectations, the need to reduce material dependency, and compliance with legislations like the End-of-Life Vehicle Regulation and the Eco-Design for Sustainable Products Regulation. Major manufacturers are integrating recycled and renewable materials into production, and sectors like the tyre industry are advancing with closed-loop systems and alternative material sourcing. These developments are altering labour requirements across the board, from eco-design and materials innovation to reverse logistics and lifecycle assessment. New technical skills, combined with a deep understanding of environmental standards and digital tools, are increasingly essential to ensure both compliance and competitiveness.

The disruptions of recent years—from the COVID-19 pandemic to geopolitical instability and the transition to electromobility—have exposed the fragility of global automotive supply chains. As a result, **building resilience** has become a strategic priority. Companies are investing in digitally optimized supply chains using AI, predictive analytics, and enhanced traceability tools. Labor needs are shifting accordingly: supply

chain professionals must now combine digital, analytical, and technical skills to manage increasingly complex systems. In production and maintenance roles, particularly in electric vehicle contexts, workers require advanced ICT and engineering capabilities.

Finally, the rise of **new business models** is reshaping how mobility is accessed, delivered, and monetized. Traditional car ownership is giving way to flexible, service-based models. MaaS platforms integrate ride-hailing, car-sharing, public transport, and micro-mobility into single apps that prioritize convenience and sustainability—particularly among younger consumers. Subscription-based offerings like TaaS and predictive maintenance rely on telematics and data analytics to enhance safety and optimize vehicle performance. This transformation is creating demand for new job roles across platform management, customer experience design, digital retail, and remote services. Automotive dealers and distributors are diversifying revenue streams through EV battery leasing, app-based services, and integrated mobility packages. Employees in these settings must adapt to cross-functional roles requiring digital fluency, commercial agility, and the ability to work across tech, finance, and customer service ecosystems.

In summary, these four macrotrends are driving a structural transformation of the automotive industry. As the sector becomes more digital, circular, resilient, and service-oriented, its workforce must evolve in parallel—embracing new technologies, mastering emerging tools, and contributing to a more sustainable and adaptive mobility future.

Key insights into the transformation affecting the automotive industry are also provided by the survey conducted as part of the Blueprint Project TRIREME and published in September 2024. The survey targeted respondents primarily from companies operating in the Education & Training and Research & Development sectors. Participants were asked to evaluate the four macrotrends across several dimensions: awareness, relevance, level of preparedness, and impact. The main findings are summarized below.[1]

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[1] Trireme. 2024. *Survey on Trends Impacting the Automotive-Mobility Ecosystem in 2024*. Deliverable D2.1.

1 Digitalization

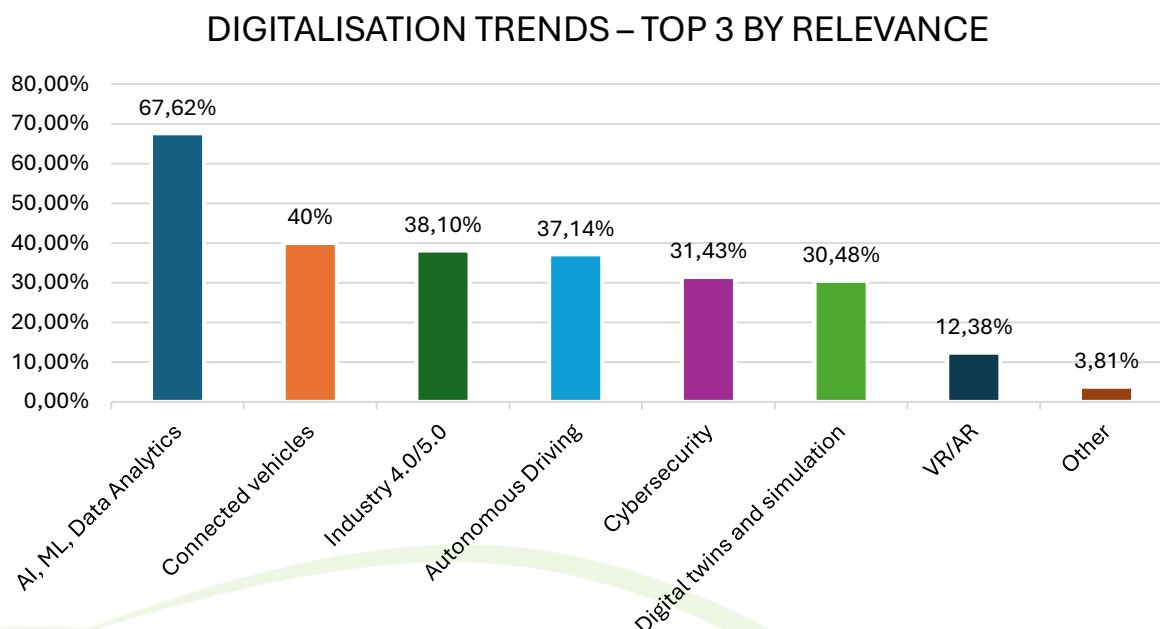## DIGITALISATION TRENDS – TOP 3 BY RELEVANCE

Figure 1 Relevance of digitalisation trends for development of organisations in the near future

Respondents were asked to identify between one and three digitalisation trends they consider most critical for the successful development of their organisation. **"AI, ML, Data Analytics"** was the most frequently selected, with 67.62% of respondents including it among their top three. This was followed by **"Connected Vehicles"** (40%) and **"Industry 4.0/5.0"** (38.1%). Other frequently mentioned trends included **"Autonomous Driving"** (37.14%), **"Cybersecurity"** (31.43%), and **"Digital Twins and Simulation"** (30.48%). Conversely, trends considered less relevant by respondents included **"VR/AR"** (12.38%).

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AWARENESS OF DIGITALISATION TRENDS

Trend	Least aware	Less aware	Moderately aware	More aware	Most aware
Connected vehicles	10,48%		20,95%	36,19%	31,43%
Autonomous Driving	11,43%		24,76%	24,76%	38,10%
AI, ML, Data Analytics	10,48%		22,86%	38,10%	25,71%
Cybersecurity		17,14%	13,33%	29,52%	34,29%
Digital twins and simulation		16,19%	20%	33,33%	23,81%
Industry 4.0/5.0	10,48%		15,24%	39,05%	30,48%
VR/AR		14,29%	26,67%	35,24%	19,05%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

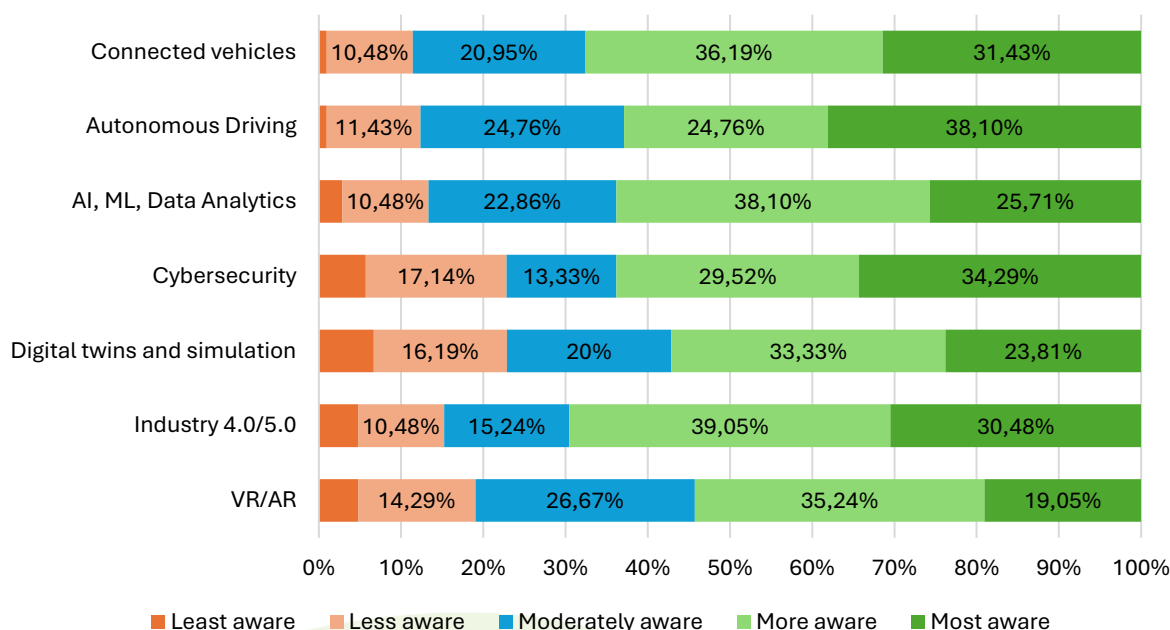■ Least aware ■ Less aware ■ Moderately aware ■ More aware ■ Most aware

Figure 2: Awareness of digitalisation trends currently influencing the automotive-mobility sector

Respondents rated their awareness of digitalisation trends currently influencing the automotive-mobility sector on a scale from 1 (least aware) to 5 (most aware). The majority indicated they were either "More Aware" or "Most Aware" of the trends, suggesting a generally solid understanding of the various sub-categories within digitalisation and its sub-trends. However, a slightly lower level of awareness was observed for **"Cybersecurity"** and **"Digital Twins and Simulations"**, with each registering just over 20% of respondents in the "Less Aware" or "Least Aware" categories.

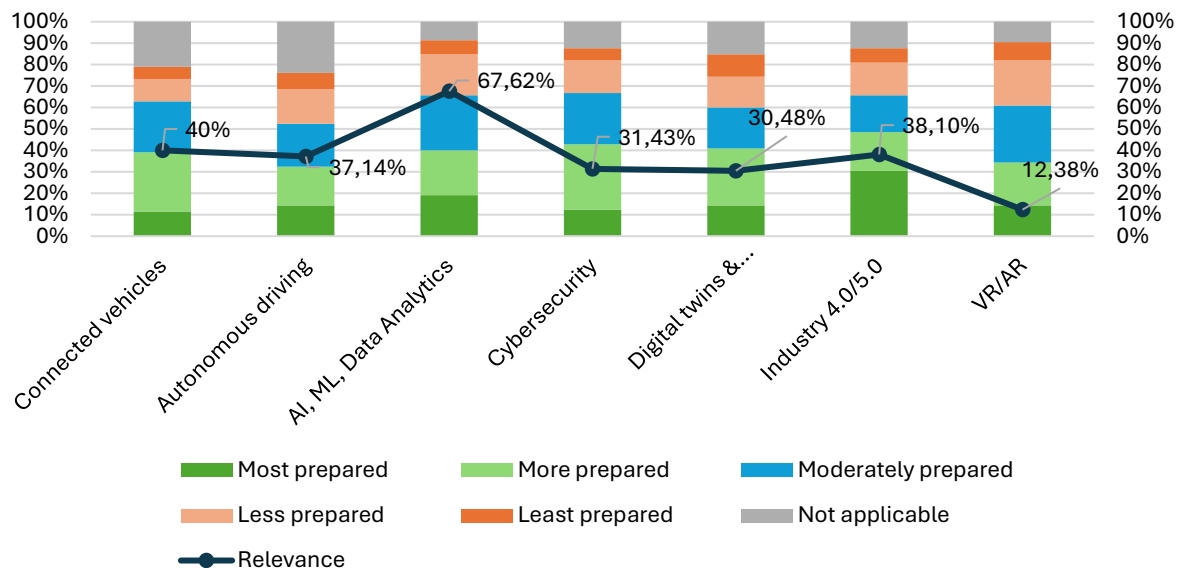## DIGITALISATION – RELEVANCE & PREPAREDNESS

Figure 3 Comparison of relevance and preparedness for digitalisation trends

The **"AI, ML, Data Analytics"** trend stands out as the most relevant, selected by 67.62% of respondents. However, it is paired with only moderate levels of combined preparedness (40%). In contrast, **"Industry 4.0/5.0"** demonstrates the highest level of preparedness—48.58% of respondents rated themselves as either "More Prepared" or "Most Prepared"—despite a lower relevance score of 38.10%.

The **"Cybersecurity"** trend shows a stronger preparedness rate (42.86%) but only moderate relevance (31.43%), suggesting it is an area where organizations are relatively well-equipped, even if it is not seen as a top strategic priority. Meanwhile, **"VR/AR"** is considered the least relevant trend (12.38%) but still shows moderate preparedness (34.29%), indicating it is not currently a major focus.

Overall, while highly relevant trends such as **"AI, ML, Data Analytics"** and **"Autonomous Driving"** are seen as strategic priorities, they reveal a gap in preparedness. In contrast, areas like **"Industry 4.0/5.0"** and **"Cybersecurity"** appear to be better aligned in terms of both relevance and readiness.

2 Green, sustainability and circular economy

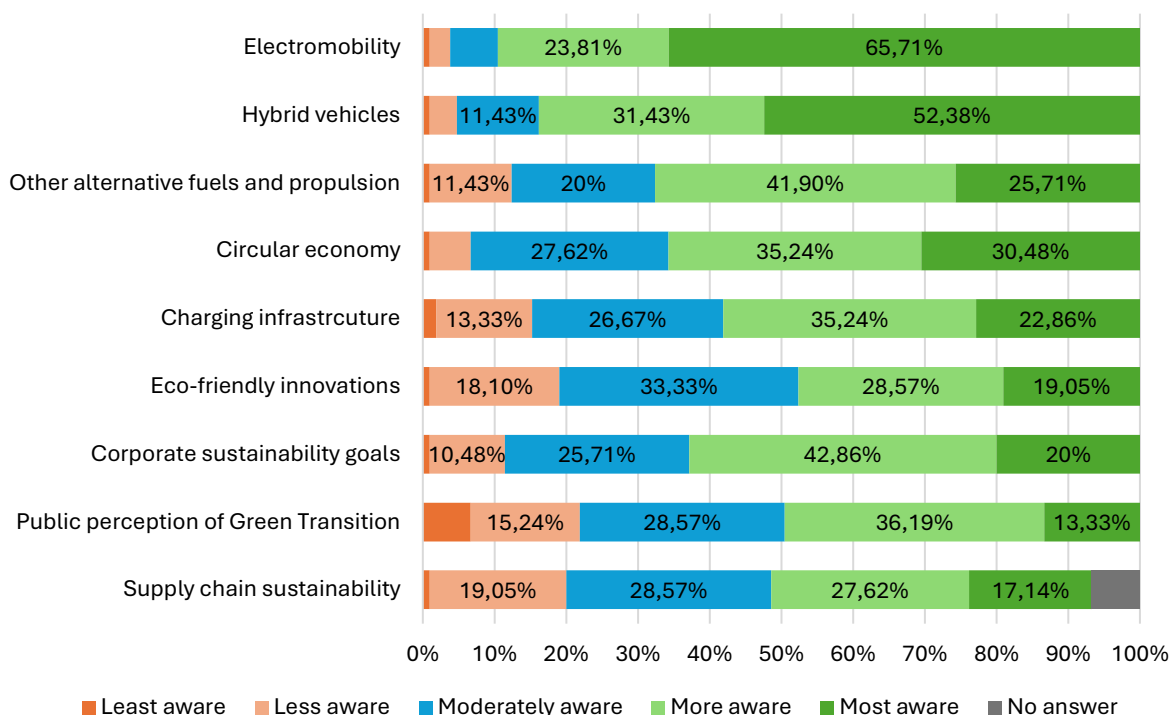### AWARENESS OF GREEN AND SUSTAINABILITY TRENDS

Figure 4: Awareness of green and sustainability trends currently influencing the automotive-mobility sector

Respondents reported high levels of awareness across all analysed trends, with even the lowest-rated trends reaching 40–50% awareness. When including those who identified as "Moderately Aware," overall awareness levels generally rose to around 80%. However, certain trends stood out for having a higher share of respondents indicating lower awareness levels ("Least Aware" and "Less Aware"), specifically **"Public Perception of the Green Transition"**, **"Supply Chain Sustainability"**, and **"Eco-Friendly Innovations"**, each with a combined lower awareness rate of approximately 20%.

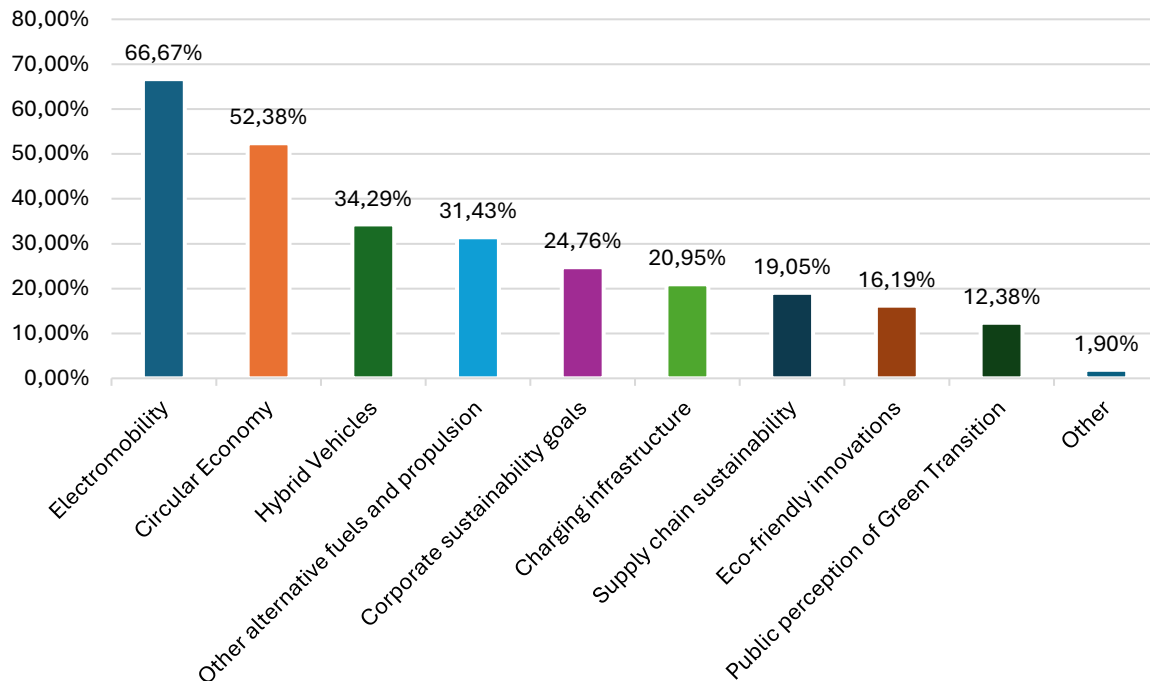## GREEN & SUSTAINABILITY TRENDS – TOP 3 BY RELEVANCE

Figure 5: Relevance of green and sustainability trends in the near future

Figure 5 highlights the strong relevance of the trends **"Electromobility"** and **"Circular Economy"**, selected by 66% and 52% of respondents, respectively. Other categories showing notable levels of relevance include **"Hybrid Vehicles"** and **"Other Alternative Fuels and Propulsion"**, each selected by over 30% of respondents.
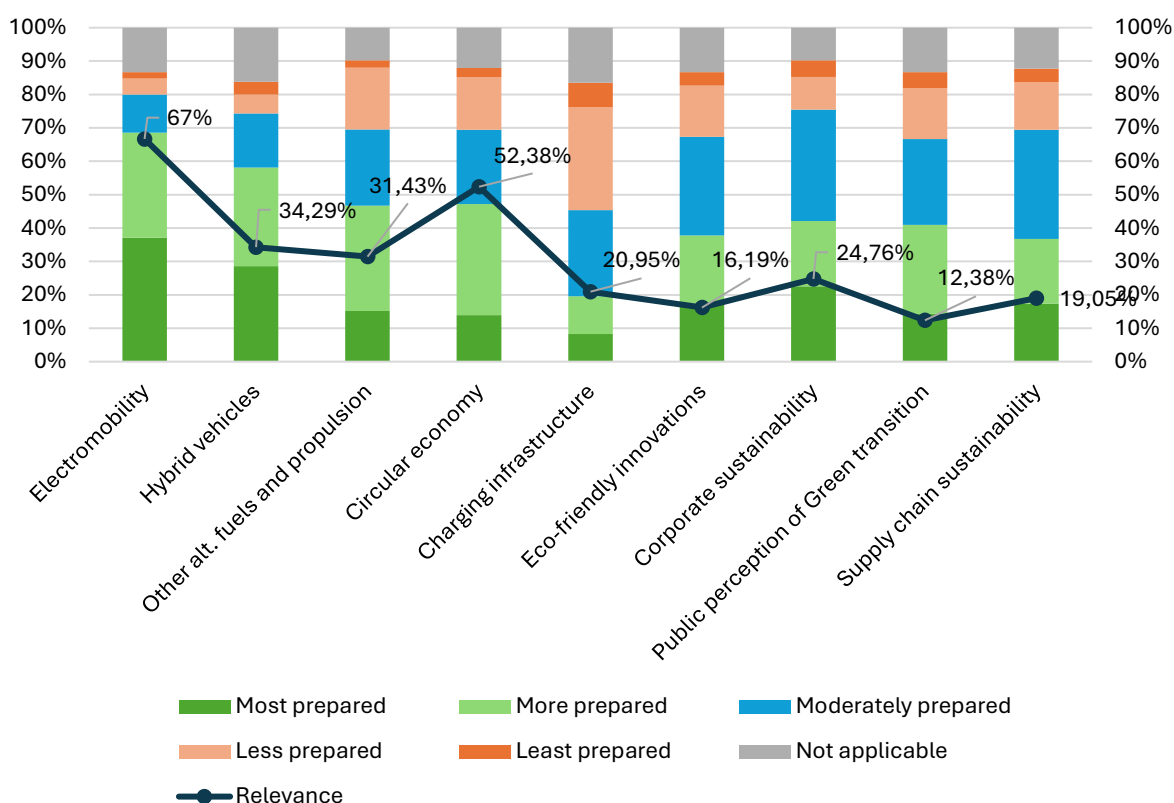
GREEN TRENDS – RELEVANCE & PREPAREDNESS

Figure 6: Comparison of relevance and preparedness for Green and Sustainability trends

"Electromobility" stands out with the highest perceived relevance (67%) and a strong level of preparedness (68.57% combined). **"Hybrid Vehicles"** also show a solid preparedness level (58.09%), though their relevance is lower at 34.29%. **"Circular Economy"** ranks high in relevance (52.38%) and demonstrates moderately high preparedness (48.58%), suggesting a well-aligned focus in this area.

In contrast, **"Charging Infrastructure"** reveals a notable gap, with only 18.1% reporting higher levels of preparedness and 20.95% marking it as relevant. Similarly, **"Corporate Sustainability"** (24.76%) and **"Supply Chain Sustainability"** (19.05%) are rated as moderately relevant but show limited preparedness, indicating areas that require greater strategic attention.

Trends such as **"Public Perception of the Green Transition"** (12.38% relevance) and **"Eco-Friendly Innovations"** (16.19%) rank low in both relevance and preparedness, reflecting a relatively low level of prioritization among organisations.

Overall, the trends of **"Electromobility"** and **"Circular Economy"** demonstrate the strongest alignment between perceived importance and organisational readiness.

3   Resilience of value chain

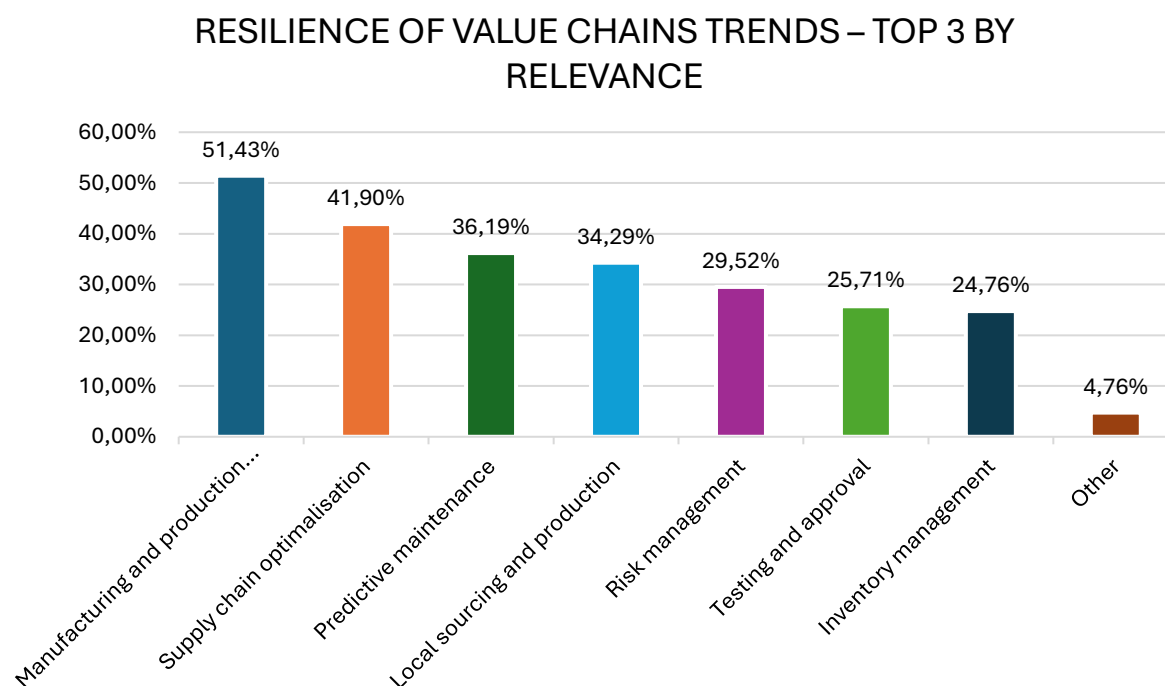## RESILIENCE OF VALUE CHAINS TRENDS – TOP 3 BY RELEVANCE

Figure 7: Relevance of trends related to the resilience of value chains in the near future

Respondents were asked to select between one and three trends aimed at increasing the resilience of value chains that they consider most relevant for the successful development of their organisation. **"Manufacturing and Production Technologies Innovation"** received the highest relevance, chosen by over 51% of respondents. This was followed by **"Supply Chain Optimisation"**, selected by nearly 42%, **"Predictive Maintenance"** (36.19%), and **"Local Sourcing and Production"** (34.29%). The remaining trends—**"Risk Management"**, **"Testing and Approval"**, and **"Inventory Management"**—were each selected by less than 30%, indicating a comparatively lower perceived relevance among respondents.

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Figure 8: Word cloud: Impact of Resilience of value chains trends on job roles and skills in the near future

Respondents were asked to name which job roles and skills they believe will be most impacted by the trends aimed at increasing value chain resilience in the near future. The responses highlighted several key roles: **"Logistics Personnel"**, **"Supply Chain Management (SCM)"**, and **"Inventory Management Specialists"**, underscoring the critical importance of supply chain efficiency for resilience. Additionally, roles in **"Product Development and Management"**, **Engineering**, and **Manufacturing** were identified as pivotal for adapting to these evolving trends, indicating a strong focus on operational innovation.

The growing reliance on technology and automation was reflected in mentions of **"Cybersecurity Specialists"**, **"Automation and Robotization Specialists"**, and **"Software Engineering Roles"** as essential to strengthening supply chain resilience. Meanwhile, the continued emphasis on sustainability was evident with references to **"Green and Digital Skills Experts"** and **"Environmental Specialists"**.

Finally, leadership roles such as **Chief Officers**, along with **"Strategic Planning"**, **Management**, and **Finance"** positions, were also highlighted, emphasizing the need for top-level oversight and effective planning to navigate these changes.

4 New business models
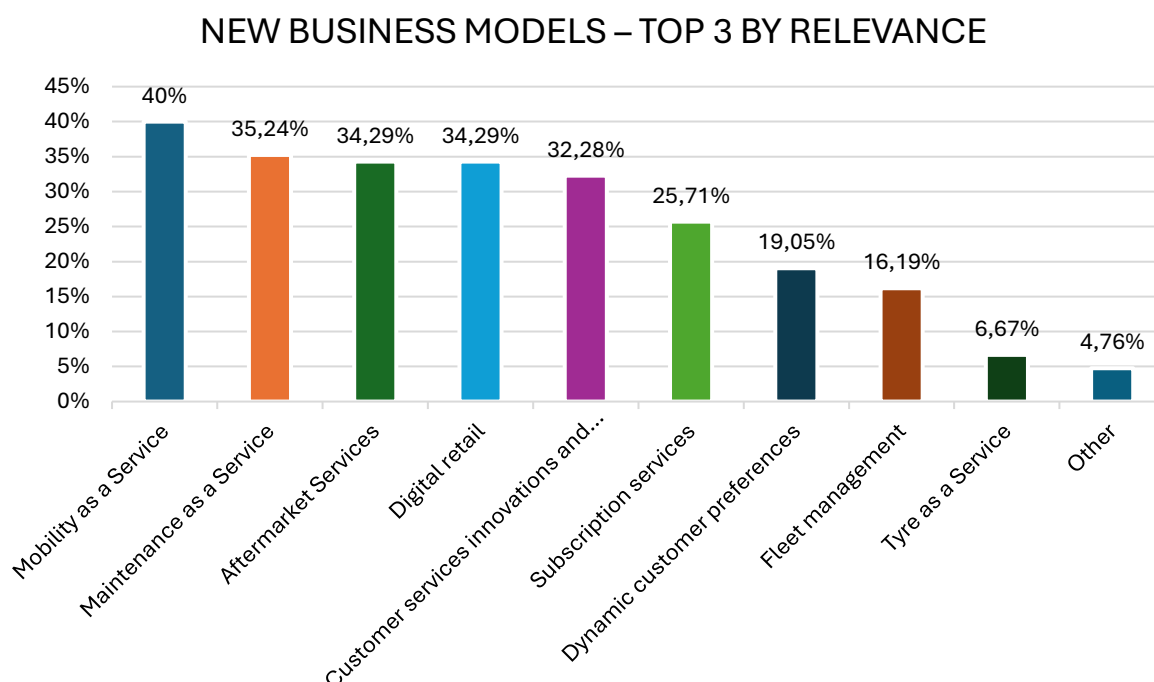
NEW BUSINESS MODELS – TOP 3 BY RELEVANCE

Figure 9: Relevance of New Business Models trends in the near future

Respondents were asked to select between one and three new business model trends they consider most relevant for the successful development of their organisation. **"Mobility as a Service"** emerged as the top trend, chosen by 40% of respondents. This was followed by **"Maintenance as a Service"**, selected by over 35%, and both **"Digital Retail"** and **"Aftermarket Service"**, each chosen by slightly more than 34%. **"Customer Services Innovations and Adaptations"** were selected by 32.28%, with a notable drop in relevance to **"Subscription Services"** at nearly 26%. Among the less prominent but still significant trends, **"Dynamic Customer Preferences"** and **"Fleet Management"** were considered top three relevant by 19.05% and 16.19% of respondents, respectively. Finally, **"Tyre as a Service"** was the least relevant trend overall, selected by only 6.67% of respondents
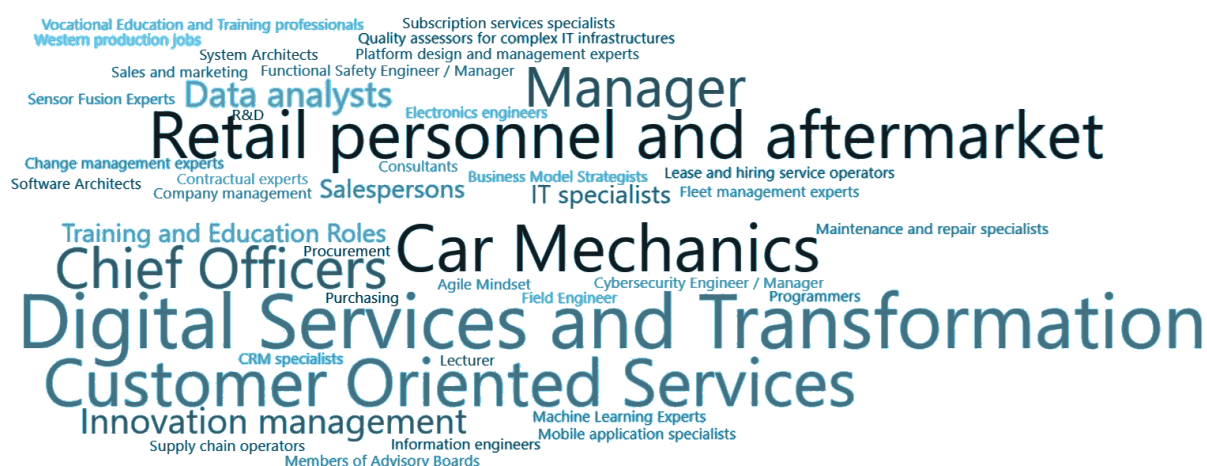
Figure 10: Word cloud: Impact of New Business Models trends on job roles and skills in the near future

Respondents were asked to name which job roles and skills they believe will be most impacted by the emerging new business model trends in the near future. The most frequently cited roles were those related to **"Digital Services and Transformation"**, highlighting the critical role of digitalisation in shaping future business strategies. Closely following were **"Car Mechanics"** and **"Customer-Oriented Services"** roles, reflecting the direct impact on maintenance and customer-facing functions adapting to these new models.

Leadership roles, including **"Chief Officers"** and **"Company Management"**, were also frequently mentioned, emphasizing the vital role of executive leadership in guiding organisations through these changes. Additionally, **"Data Analysts"** were identified as key contributors, underscoring the increasing importance of data-driven decision-making.

Other notable roles included **"Salespersons"**, **"Retail Personnel and Aftermarket Specialists"**, and **"Managers"**, indicating the influence on sales operations and overall management. Technical positions such as **"Cybersecurity Engineers"**, **"Machine Learning Experts"**, **"Software Architects"**, and **"System Architects"** were also highlighted, pointing to the growing demand for technological expertise to support digital and operational transformations and to accommodate evolving business frameworks.

Report on MOOC Training Preference

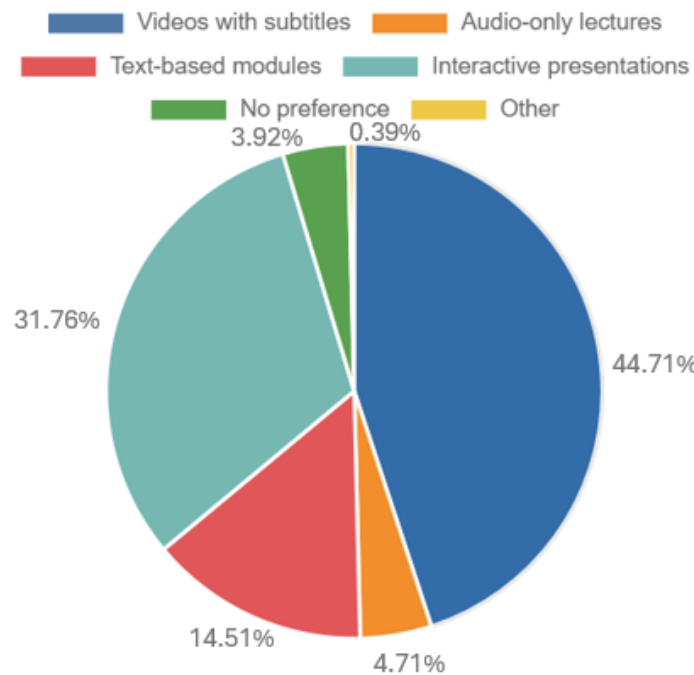## 1 Which type of content do you prefer most in an online course?

Figure 11: Type of content

This question sought to determine which **content formats** students find most effective for MOOC development, providing crucial guidance for instructional design. The results indicate a strong preference for **videos with subtitles** (44.71%), highlighting the importance of **visual and accessible multimedia content** that supports varied learning needs, including language comprehension and hearing impairments. **Interactive presentations** followed with 31.76%, emphasizing the value students place on **engagement and active participation** within the learning experience. Only 14.51% of respondents preferred **text-based modules**, suggesting a shift away from passive reading in favor of more dynamic content. Notably, **audio-only lectures** received minimal interest (4.71%), indicating that formats lacking visual components may be less effective for most learners. These preferences will directly influence the **MOOC's content strategy**, prioritizing **multimedia-rich and interactive resources** to boost learner engagement, comprehension, and overall course satisfaction.

2 How important is it for you to have the option to download course materials (e.g., PDFs, audio, videos) for offline use?
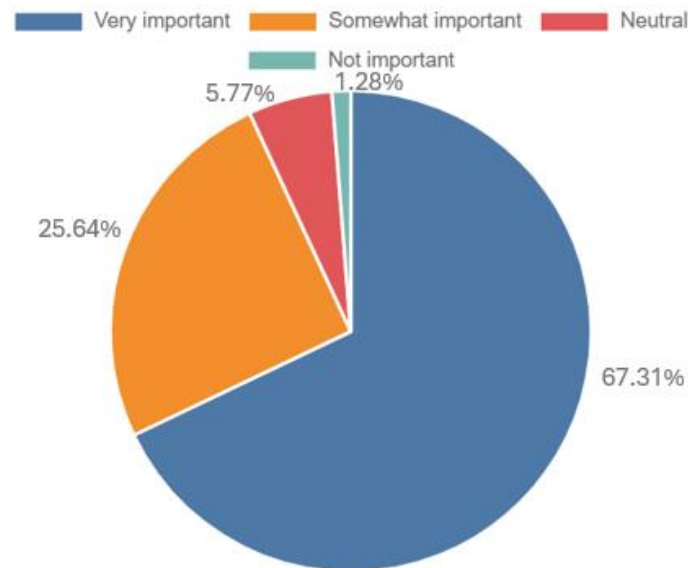

Figure 12: Course materials download

The second question focused on evaluating the **importance of having the option to download course materials**, a feature that supports flexibility and offline access. The responses reveal a **clear consensus** among participants: **67.31%** rated this feature as **"Very important"**, and an additional **25.64%** considered it **"Somewhat important"**, demonstrating a strong overall demand for **downloadable resources**. Only a small minority were **neutral (5.77%)** or found it **unimportant (1.28%)**, suggesting that offline accessibility is a nearly universal expectation among learners. This underscores the need to support **asynchronous and low-connectivity learning environments**, where internet access may be limited or intermittent. In response to these findings, all MOOC participants will be given access to **GuideAutoEFa**, a comprehensive set of study materials that will be available for **free download**.

3 Do you prefer short modules (5–10 minutes) or longer sessions (20–30 minutes)?
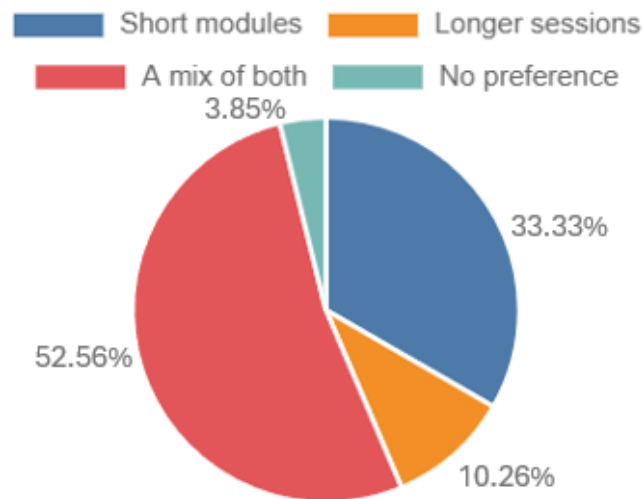

Figure 13: Lenght of the modules

This question examined students' preferences concerning the **duration of MOOC modules,** with the goal of aligning content length with learner expectations and attention spans. The results reveal that a **majority (52.56%)** favor a **blended format**, combining both short (5–10 minutes) and longer (20–30 minutes) modules. This suggests that learners value **variety and flexibility** in pacing, allowing them to tailor their learning experience to their time availability and concentration levels. Additionally, **33.33%** of respondents showed a clear preference for **short modules**, indicating a strong interest in **concise, easily digestible content** that supports microlearning strategies. In contrast, only **10.26%** preferred **longer sessions**, which may reflect limited time resources or lower engagement with extended content formats. These insights will directly influence the **structure of the MOOC**, prompting the inclusion of **modular, adaptable training units**. By incorporating varied lengths, the course design will better accommodate diverse learning styles and **enhance accessibility and engagement across different user contexts**.

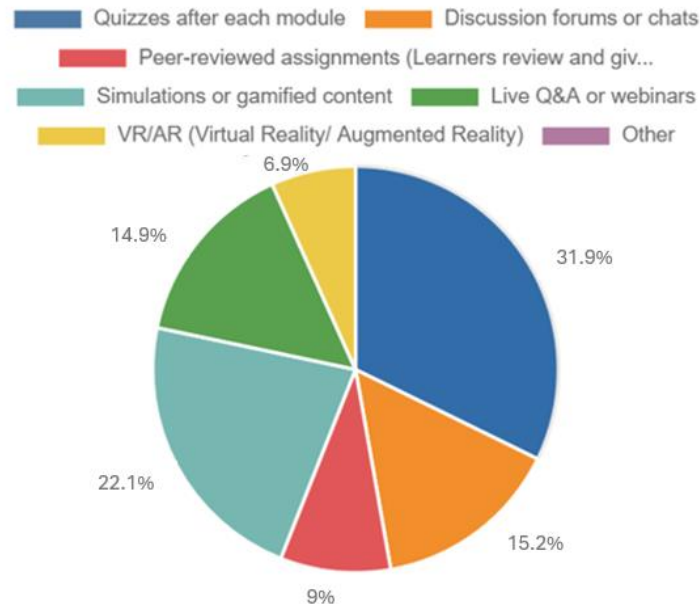# 4 Which interactive elements do you find most useful in online courses?

Figure 14: Interactive elements

This question explored students' perceptions of the most valuable interactive features in online learning environments, aiming to understand which tools best support engagement and learning. The results indicate a clear preference for **quizzes following each module**, which received the highest share of responses at **31.9%**, suggesting that students value regular self-assessment and feedback as a key component of their learning process. This was closely followed by **simulations or gamified content** (22.1%), highlighting a strong interest in immersive and motivating formats. **Discussion forums or chats** (15.2%) and **live Q&A sessions or webinars** (14.9%) also ranked relatively high, indicating the importance of real-time or peer-to-peer interaction. In contrast, more complex or resource-intensive elements such as **peer-reviewed assignments** (9%) and **VR/AR technologies** (6.9%) were less favored, possibly due to perceived effort or accessibility issues. The absence of "Other" selections and skipped responses reinforces that the predefined options aligned well with the participants' expectations. These findings suggest that students prioritize features that offer **immediate feedback, interactivity, and clarity**, with implications for the design of future online courses aiming to boost engagement and learning effectiveness.

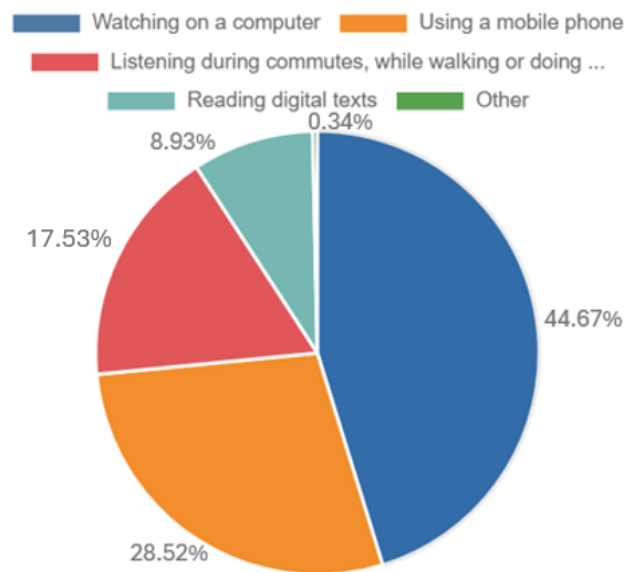# 5 How do you prefer to consume MOOC content?

Figure 15: Content consumption

This question investigated how students prefer to engage with content in the MOOC environment, offering insights into device usage and learning contexts. The majority of participants (**44.67%**) reported a preference for using a **computer**, indicating a tendency toward more traditional, stationary learning setups that may support focus and multitasking. **Mobile phones** followed as the second most preferred method (**28.52%**), reflecting a shift toward flexible, on-the-go access to course materials. Notably, **17.63%** of respondents expressed a preference for **audio-based learning**—such as listening to content while commuting, walking, or exercising—highlighting the growing demand for **multi-modal, time-efficient learning formats**. Only **8.93%** preferred **reading digital texts**, suggesting a possible decline in text-heavy content consumption or a need to adapt reading materials into more interactive or audio-visual formats. These findings imply that course designers should prioritize **device-responsive content**, integrate **audio components**, and maintain compatibility with both **desktop and mobile platforms**. The results also point to the importance of supporting **context-aware learning experiences**, enabling students to engage effectively regardless of time and setting.

6 Would you benefit from having audio versions of each module to listen to while multitasking or commuting?
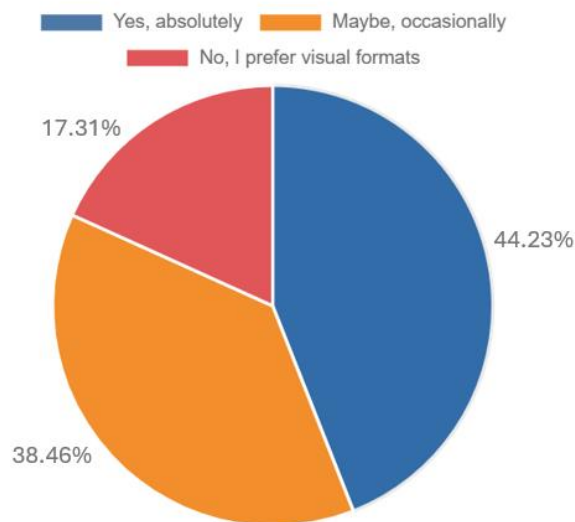

Figure 16: Option for audio versions

This question investigated students' interest in having **audio versions of MOOC modules** available for multitasking or learning on the go. The results show that **44.23%** of respondents would **highly value** this feature, with an additional **38.46%** indicating they would find it **occasionally beneficial**. These figures suggest a strong overall demand for **flexible, audio-based learning options** that support **mobile and time-efficient study habits**. Conversely, **17.31%** of participants expressed a preference for **visual content**, indicating that while audio is appreciated, it should **complement rather than replace** visual materials. As a result, incorporating downloadable or streamable audio versions will enhance **accessibility, personalization, and learner autonomy** within the MOOC structure.

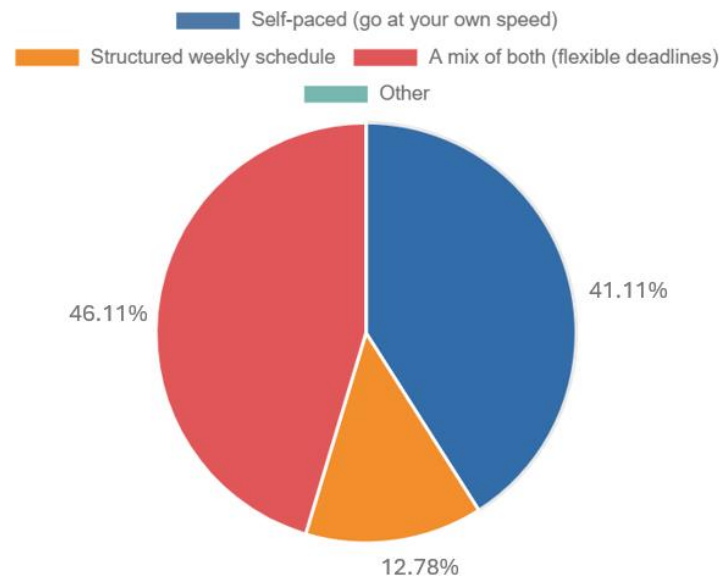## 7   What pace of learning suits you best in an online course?

Figure 17: Pace of learning

This question explored students' preferences regarding the **pace of learning** within the MOOC, offering insights into how structure and flexibility should be balanced. The responses reveal that **46.11%** favor a **hybrid model** that combines a **structured weekly schedule with self-paced learning**, suggesting that learners value **guidance and consistency**, while still appreciating the **freedom to adapt their progress** to personal circumstances. Close behind, **41.11%** preferred a **fully self-paced format**, emphasizing the need for maximum flexibility and learner autonomy. In contrast, only **12.78%** selected a **fully structured weekly schedule**, indicating limited interest in rigid timelines. These findings underscore the importance of designing the course to accommodate **diverse learning rhythms**, blending structure for those who benefit from regular pacing with the flexibility needed by independent learners. Consequently, the MOOC will be organized to support **adaptive progression**, ensuring it remains inclusive and effective for a wide range of participants.

8 How useful are visual aids (e.g., infographics, diagrams, charts) for your learning in technical subjects like environmental footprint methods?
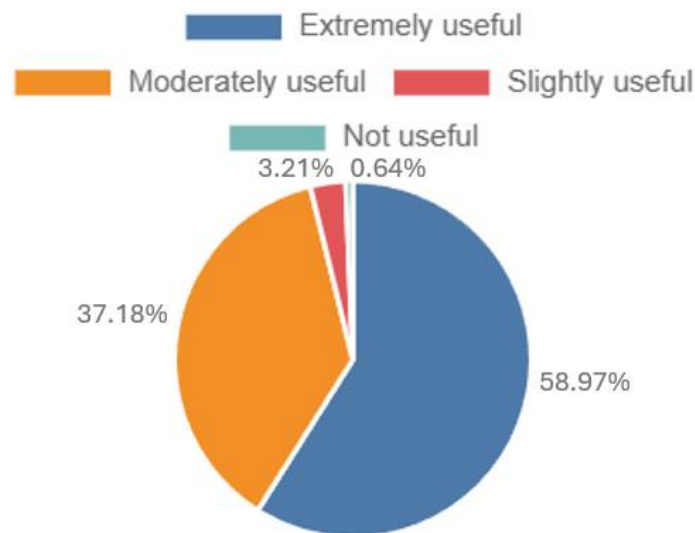

Figure 18: Presence of visual aids

This question evaluated how students perceive the **value of visual aids**—including infographics, diagrams, and charts—in enhancing their MOOC learning experience. A clear majority (**58.97%**) rated such elements as **"Extremely Useful"**, while an additional **37.18%** found them **"Moderately Useful"**, highlighting a strong consensus on their instructional benefit. Only a small minority (**3.21%**) considered visual aids **"Not Useful"**, suggesting that most learners recognize their role in **clarifying complex information** and improving **content retention**. These results emphasize the need to integrate **visual learning tools** consistently throughout the course. Doing so will support **diverse cognitive styles**, reinforce key concepts, and make abstract or technical topics more accessible. Consequently, the MOOC will incorporate **well-designed visual elements** as a standard part of its content strategy to enhance comprehension and learner engagement.

9 Would you appreciate optional live sessions or group discussions to enhance understanding?
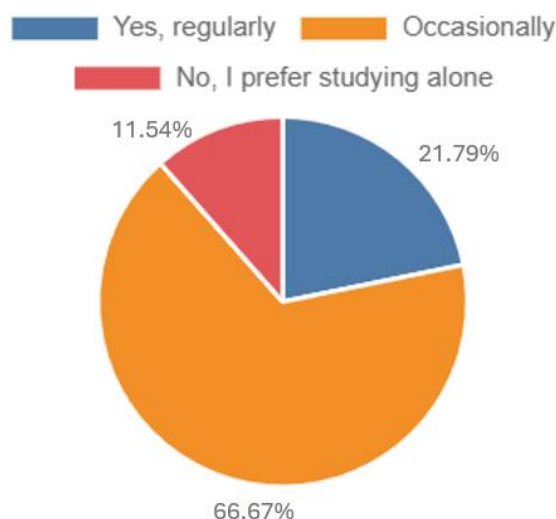

Figure 19: Option for live sessions or group discussions

This question focused on identifying students' **preferred learning methods**, with particular attention to **live sessions and group discussions**. The results reveal that **66.67%** of respondents prefer these interactive formats to be used **occasionally**, suggesting that while they appreciate opportunities for collaboration and real-time engagement, they may find frequent sessions demanding or less essential. A smaller segment (**21.79%**) sees **high value** in live and group-based learning, indicating that this subset thrives in **social and synchronous environments**. Meanwhile, **11.54%** of participants expressed a preference for **independent study**, highlighting the need to accommodate **autonomous learning styles**. These findings point to the importance of offering **optional or flexible participation** in live components, ensuring that the course supports both **interactive engagement and self-directed progress**. As a result, the MOOC is recommended to integrate **occasional live sessions and discussions** while prioritizing **asynchronous access**, balancing collaboration with learner autonomy.

Conclusion

The survey results offer meaningful guidance for shaping the autoEFa MOOC to align with learners' expectations and habits. The majority of respondents showed a clear preference for video-based content with subtitles (44.7%) and interactive presentations (31.8%), emphasizing the importance of engaging, multimodal content. A significant portion (67.31%) also expressed that the ability to download materials for offline use is very important, suggesting that flexibility and accessibility are key to user satisfaction.

Regarding module length, most learners favored a mix of short (5–10 min) and long (20–30 min) formats (52.56%), reflecting diverse learning styles and time availability. Quizzes, gamified content, and discussion forums ranked highest among preferred interactive features, while more advanced tools like VR/AR were less favored.

In terms of content consumption habits, the majority (44.67%) preferred to study using a computer and nearly a third (28.52%) preferred the use of mobile phones. Notably, over 80% would benefit from audio versions of the modules either regularly or occasionally, reinforcing the need for content format variety.

A key finding relates to the preferred pace of learning: 46.11% of learners favored a hybrid model that blends a structured weekly schedule with the ability to learn at their own rhythm, while 41.11% preferred a fully self-paced approach. This indicates a clear preference for flexibility and learner autonomy in course progression.

Students also showed strong support for visual aids, with nearly 96% rating them as extremely or moderately useful, particularly in technical subjects. Finally, while learners value live sessions and group discussions, most prefer them only occasionally (66.7%), highlighting the need for a balance between structured and self-paced learning options.

These findings will play a crucial role in designing a learner-centered MOOC that is both technically sound and pedagogically effective, meeting the diverse needs of the target audience in the automotive field.

Annex

autoEFa: MOOC Format Preference Questionnaire

Fields marked with * are mandatory.

The automotive industry is undergoing an unparalleled transformation. Between the push for sustainable mobility and rapid technological innovation, companies need new kinds of talent: people who are skilled, adaptable and ready for the future. AutoEFa https://www.project-autoefa.eu/, an Erasmus+ project, is here to help you be part of that change.

We're developing a free, interactive online course (MOOC) on Environmental Footprint Methods, methodologies used for assessing the environmental performance of products and organizations. Once completed, you'll earn a digital badge to showcase your new skills.

Before we launch, we want to hear from you! This short questionnaire will help us shape the MOOC's format so it's not only informative, but also engaging and accessible, designed around how you prefer to learn.

* Which type of content do you prefer most in an online course? (Select all that apply)

- ☐ Videos with subtitles
- ☐ Audio-only lectures

- [ ] Text-based modules
- [ ] Interactive presentations
- [ ] No preference
- [ ] Other

Please specify

[   ]

*How important is it for you to have the option to download course materials (e.g., PDFs, audio, videos) for offline use?

- ( ) Very important
- ( ) Somewhat important
- ( ) Neutral
- ( ) Not important

*Do you prefer short modules (5–10 minutes) or longer sessions (20–30 minutes)?

- ( ) Short modules
- ( ) Longer sessions
- ( ) A mix of both
- ( ) No preference

*Which interactive elements do you find most useful in online courses? (Select all that apply)

- [ ] Quizzes after each module
- [ ] Discussion forums or chats
- [ ] Peer-reviewed assignments (Learners review and give feedback on each other's work)
- [ ] Simulations or gamified content
- [ ] Live Q&A or webinars
- [ ] VR/AR (Virtual Reality/ Augmented Reality)
- [ ] Other

Please specify

[   ]

*How do you prefer to consume MOOC content? (Select all that apply)

- [ ] Watching on a computer
- [ ] Using a mobile phone
- [ ] Listening during commutes, while walking or doing sport (e.g., as podcasts
- [ ] Reading digital texts
- [ ] Other

Please specify

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* Would you benefit from having audio versions of each module to listen to while multitasking or commuting?

- ⊙ Yes, absolutely
- ⊙ Maybe, occasionally   3
- ⊙ No, I prefer visual formats

* What pace of learning suits you best in an online course? (Select all that apply)

- ☐ Self-paced (go at your own speed)
- ☐ Structured weekly schedule
- ☐ A mix of both (flexible deadlines)
- ☐ Other

Please specify

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* How useful are visual aids (e.g., infographics, diagrams, charts) for your learning in technical subjects like environmental footprint methods?

- ⊙ Extremely useful
- ⊙ Moderately useful
- ⊙ Slightly useful
- ⊙ Not useful

* Would you appreciate optional live sessions or group discussions to enhance understanding?

- ⊙ Yes, regularly
- ⊙ Occasionally
- ⊙ No, I prefer studying alone