

52nd ASECAP DAYS

Challenges of Future Mobility | The Role of Road Infrastructure







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Rebranding the Motorway Industry Attracting young professionals to tackle the future of new mobility solutions

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390m multi-span arch bridge, Tsakona Arcadia





Salt warehouse, Malakasa Attica



Category	Trends/Technologies	Relevant Skills/Disciplines
Traffic Management	Predictive Analytics, Smart Signals	Data Science, Software Development
Road Maintenance	Robotics, Al- powered Inspection	Robotics Engineering, AI, Computer Vision
Safety	Automated Enforcement, Hazard Detection	AI, IoT, Sensor Technology, Software Engineering
Vehicle Operations	Connected and Autonomous Systems	Telecommunications Engineering, Software Engineering
Tolling	CO2 tolling, Dynamic Pricing, Performance- based heavy vehicle fee, free flow	Electronics, Software Development, Data Analytics, Telecommunications
EV charging corridors	harging ridorsFast-charging infrastructure, Grid Integration, Smart Charging SystemsElectrical Engineering, Energy Systems, Smart Grid Technology	
Sustainability	Integrated Mobility, Green Public Transit, Low Emission Zones	Software Development Environmental Science,Data Analytics, Policy Design



Build for the future



Enhance Motorway Efficiency and Safety



Integrate New Technologies and Digitalization



Advance Sustainable Mobility and Infrastructure



In ASECAP member countries an investment of over 71,861 M€ has been estimated to improve the network, 68% allocated to sustainability, 24% to safety, and 8% to digitalization

Source: PwC investments study for Asecap





Labour Market Trends and the ICT Talent Gap

Future of Jobs- WEF 2025	EUROFO	
Digitalization is a top driver of job change	Country	
63% of employers: skills gap is main barrier	Austria	+181
Challenge spans 52/55 economies and 19/22 sectors	Belgium	59%
Talent outlook worsening: 42% expect decline		
Only 29% expect improvement	Germany	
Europe Focus	France	I
Key trends: Digitalization, Climate	Estonia	18
54% expect talent chartages to increase	Ireland	
Source: World Economic Forum, Future of Jobs (2025)	Italy	2 mill
	Portugal	Сι
	Spain	
	Greece	ICT

Source Eurofound (2023), European Foundation for the Improvement of Living and Working Conditions



UND 2023- ICT Labour Shortages by Country

Key Data / Insight

1% ICT vacancies (2013-2019); 70% of IT firms face severe shortages

of firms struggled to hire in 2020; only 2.1% of ICT grads are women

124,000 unfilled ICT jobs in 2019

ICT was the sector with highest shortages in 2021

3,000 ICT personnel forecasted as needed by 2028

1 in 3 hard - to- fill vacancies are in ICT

lion jobs (2021 – 2025) will need intermediate digital skills

urrent shortage (2023) of 15,000 ICT professionals

CT specialists make up 4.2% of workforce (EU avg: 4.8%); shortage of 1.39 million ICT professionals

specialists comprise 2.4% of workforce, 7 out of 10 companies report vacant IT positions

Labour Market Trends and the ICT* Talent Gap



From 2013 to 2023, the number of ICT specialists in the EU increased by 59.3 %, almost 6 times as much as the increase 10.7 %) for total employment.



In 2024, 5% total EU employment are ICT specia lists







In 2021, more than 60 % of EU enterprises that recruited or tried to recruit ICT specialists had difficulties in filling ICT vacancies.

Source: Eurostat 2023-2024



Source: Digital Economy and Society Index (DESI) 2022



Critical shortage of ICT specialists; women

EU target: 20 million ICT specialists by 2030 -10 million in 2023

Rising demand for experts in engineering, artificial intelligence, data analytics

* Information and Communication Technology, abbreviated as ICT



- Core Values: Sustainability, diversity, authenticity, environmental responsibility
- Workplace Preferences: Purpose driven roles, digital innovation, collaborative culture
- Motivational Drivers: Social Impact, Work Life balance, flexibility, meaningful work

The age spread of today's workforce has never been wider, and the experiences that define each generation have never been more different, shaped by a variety of pivotal events



Employer Branding Gaps: Motorways vs Innovation Industries

Industry/Sector	Example Companies / Areas
Core Technology (Software/IT/Hardware/ AI)	Google, Microsoft, Amazon , Meta, Intel, NVidia,
Finance & FinTech	Major Banks, Revolut, Trading Firms
Healthcare & Biotechnology	Roche, Novartis, Siemens
E- commerce & Logistics	Amazon, Zalando, Delivery Hero, Maersk, DHL
Manufacturing (Industry 4.0)	Siemens, Bosch, BMW, VW, Airbus, Henkel
Green Energy & Sustainability	Vattenfall, Ørsted, Enel, Sustainable TechStart- ups
Telecommunications	Nokia, Ericsson, Deutsche Telekom, Vodafone, Orange
Consulting & IT Staffing	Accenture, Deloitte Digital, Sigma
Public Sector / Education / Research	Government Agencies, EUInstitutions, CERN
Entertainment / Media	Spotify, Netflix, Ubisoft



Why the Motorway Industry Struggles (facts?)

Perceived as outdated, slow- moving, or low in creativity

Lacks digital storytelling or youth - driven branding

Low visibility of career paths or personal impact

Sustainability concerns (materials, pollution)

Perceived as outdated?

- EU- funded innovation projects (C- Roads, SAFE- UP)
- AI-powered traffic management systems, smart road sensors, and pilot 5G-enabled corridors introduced by operators
- EU Commission strategy, e.g. via TEN-T modernization and Digital Transport Corridors







Is there a Lack of Digital storytelling?

• Motorway companies expand on media platforms to feature:

- Behind-the-scenes tech innovation
- Day- in- the- life of young engineers (IBTTA bridge the gap between generations)
- Green and new tech mobility missions
- Sa fety Campaigns for motorways: Asecap "S(H)e Works I Care", IBTTA Global Road Sa fety Week, should a lso target next-gen professionals with purpose-focused branding



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Low visibility of career paths or personal impact?

Roles nowadvertised, include Smart Infrastructure Analyst, ITS Systems • Engineer, Roadway Data Scientist— reflecting a major shift in job branding and new evolving roles

 Internship pipelines, university partnerships, and European transport mobility clusters show clear advancement pathways

Projects like ERTICO's Women in Mobility, European Youth Forum and the Intelligent Transportation System Society promote career visibility, networking and upskilling









What about Sustainability concerns?

- The PwC/ASECAP report calls for over 71 billion EUR investment, with 68% allocated to sustainability including EV charging corridors, low-emission zones, and recycled materials
- European Green Deal, Fit for 55, and AFIR regulations directly shape motorway operators' sustainability goals
- Today, Real-world initiatives include:
 - Solar-powered noise barriers
 - Smart rest areas with renewable energy
 - Carbon-neutral targets





Rebranding the Motorway Industry - Framework

1. Reposition the Image - Purpose and Social Impact

2. Redesign the Experience- Digital Transformation and Innovation

3. Reimagine the Culture - Inclusion, Flexibility, and Learning



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Reposition Image: Purpose and Social Impact

- Promote the motorway network as a public good — vital to safety, equity, smart connectivity and territorial cohesion

- Present motorway jobs as purpose-driven, contributing to Vision Zero, community access, and climate goals

- Embed cultural branding by championing new ideologies — like green mobility for all, decarbonized transport, and open access to safe infrastructure. Resonate with the values of crowdcultures, especially young professionals

- Promote the story behind every job post, not only requirements and responsibilities



Redesign Experience: Digital Transformation and Innovation

- Align motorway digital transformation with userexperience design thinking: simplify, visualize, and persona lize every point

- Elevate ICT roles as mission-critical to road safety, reducing emissions, and modernizing public infrastructure and transportation

- Develop modular, tech-forward job titles and narratives (e.g., "Mobility Systems Developer", "Resilience Data Analyst") while addressing the impact of the Responsibilities

-Leverage social media, not with passive branded content, but through cultural participation: support real employee voices, user-made stories, and cause-based partnerships





Reimagine Culture: Inclusion, Flexibility, and Learning

employee-driven innovation - Enable by fostering intrapreneurship: challenges, open cross-team experiments, and idea incubators

-Highlight personal impact: share metrics and stories showing how motorway professionals have directly influenced safety, climate resilience, and digital transformation

- Establish internal influencer programs and social media ambassadors: empower young professional team members to express the workplace culture authentically

- Frame the industry as a home for purpose, personal growth, and innovation. Implement customized training and development on an ongoing basis (badges, certifications)







Conclusion

The future of mobility demands more than infrastructure, it requires a purpose-driven vision

By prioritizing impact, inclusivity, and innovation, we can transform our industry to attract new talent and lead the way towards a better, greener, and smarter transportation future

Insights Nea Odos – Kentriki Odos

- Developed and operate three photovoltaic parks, including Greece's largest hybrid EV charging station at MSS **SEIRIOS**
- Installed over 250 Automatic Incident Detection (AID) cameras across 17 tunnels and deployed more than 115 AIpowered surveillance systems at key ramp locations to improve safety — including animal detection and ghost driver prevention
- Implemented a comprehensive "Go Green" strategy, featuring a waste and recycling policy and the introduction of EV vehicles into the Nea Odos/Kentriki Odos fleet
- Invest in people through continuous training, upskilling programs, and structured feedback systems for personnel at all levels
- Work Culture a workplace that values visibility, purpose and a supportive environment where people are heard, can grow, contribute, and lead change

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