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# Transport Planning Society

## Transport labour market and skills: call for views and ideas

Transport Planning Society response

### About the Transport Planning Society

[The Transport Planning Society \(TPS\)](#) is the only professional body focusing entirely on transport planning in the UK. The aim of the Society is to raise the profile of transport planning and chart a course for the profession.

### Introduction

The skills shortage in the transport sector is a well-documented phenomenon which came to a head last year with the HGV driver crisis.<sup>1</sup> The crisis was a symptom of a larger problem where the transport sector struggles to attract, retain and nurture a diverse range of talent.<sup>2</sup>

We are pleased that the Department for Transport (DfT) realises this and is looking to address the issue in the form of this consultation. The five pillars which the DfT suggest to structure the consultation are sensible and extensive, and with additional stakeholder support should allow for the government to develop a comprehensive strategy.

In replying to the consultation, we wanted to get the views of our stakeholder organisations to form a response which best represented the ideas and thoughts of as many transport planners as possible. As the sole professional body focusing on transport planning in the UK, we believe we have an important and valuable voice to add to this discussion. The responses to the five questions below are an amalgamation of the TPS' stakeholders' views, building on the views expressed by our members and Board of Directors.

## 1. In your view, what skills does the transport sector need in the future?

### Green skills

The need to transition to net zero presents a challenge to the industry as we must make certain we have the necessary expertise and skills to meet our climate targets. Sustainability in the transport sector (and arguably other industries) is currently predominately held within policy teams who

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<sup>1</sup> Jones D. (2021) *Where has the talent gone? A breakdown of the UK's skills shortage in transport and logistics professions*. Cogito [<https://cogitotalent.com/uks-skills-shortage-in-transport-and-logistics-professions/>]

<sup>2</sup> Bekiaris E., Laiou A., Loukea M., Plati C., Pomoni M., Yannis G. (2020) *Future trends in transport workforce based on demographic, behavioural, cultural and socioeconomic factors*. Transport Research Procedia. [<https://www.sciencedirect.com/science/article/pii/S2352146520306566/pdf?md5=56fe8cbbd71be785b79f876fdb90254&pid=1-s2.0-S2352146520306566-main.pdf>]

discuss net zero or sustainability targets and how to achieve them. This is an important first step towards net zero, but as the climate crisis becomes more urgent, the industry must have a broader base of experts either within the industry itself, or externally working in close collaboration, to implement this theory and policy into practice.

Firstly, transport planners need to have an understanding of how their schemes can impact climate change positively or negatively. There also needs to be greater understanding of how to model and monitor for these impacts. This is needed in a high-level sense by transport planners, but it is also important that people offering modelling and monitoring services have the understanding and technical expertise to improve techniques and develop new technology to improve our ability to model and monitor a scheme's carbon impacts accurately.

In particular, the transport industry requires people with engineering or scientific backgrounds to provide more specific advice at all levels of the industry; from planning, design, construction, operation and decommissioning.<sup>3</sup> This can be achieved by funding comprehensive research and by developing education and training programmes that enable the sector to create roles that move beyond a theoretical understanding of net zero and sustainability policy to practical action. These roles must be competitive compared to other industries and include strong career progression as the demand for these skills is only going to increase.

A specific green skill the transport sector needs is meteorology which has two components: climate and weather.<sup>4</sup> Understanding the interaction between transport and climate is important as we need an accurate picture of the impact transport infrastructure and operations are having on the climate to reach net zero, and in turn of the impact that climate change has and will have on transport infrastructure. This is a high priority as the transport sector is currently the largest emitting sector of greenhouse gas emissions, producing 27% of the UK's total in 2019.<sup>5</sup>

Measuring whether society achieves net zero emissions is complex as there is currently no standardised or global way of doing so,<sup>6</sup> and it is even more difficult to obtain accurate information on the effects of particular changes within transport-related industries. Ultimately, it is only by working closely with meteorologists, and having their expertise embedded in the industry, that we will be able to see how changes we make in the transport industry affect the climate.

Furthermore, with changing weather patterns and the increasing urgency of avoiding climate catastrophe it's key we also study the changing climate to guarantee the resilience of our transport networks.<sup>7</sup> This requires working with meteorologists to assess weather patterns and the occurrence

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<sup>3</sup> Makungo R., Musyoki A., Odiyo O J. (2021) *Skills and Knowledge Transfer for Transitioning into the Green Economy*. Green Economy in the Transport Sector. [[https://link.springer.com/chapter/10.1007/978-3-030-86178-0\\_6](https://link.springer.com/chapter/10.1007/978-3-030-86178-0_6)]

<sup>4</sup> National Geographic Society (2022) *Meteorology*. National Geographic Society. [<https://www.nationalgeographic.org/encyclopedia/meteorology/>]

<sup>5</sup> Department for Transport. (2021) *Transport and Environment Statistics 2021 Annual report*. Department for Transport. [[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/984685/transport-and-environment-statistics-2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984685/transport-and-environment-statistics-2021.pdf)]

<sup>6</sup> Office of National Statistics. (2019) *Net zero and the different official measures of the UK's greenhouse gas emissions*. Office of National Statistics. [<https://www.ons.gov.uk/economy/environmentalaccounts/articles/netzeroandthedifferentofficialmeasuresoftheuksgreenhousegasemissions/2019-07-24>]

<sup>7</sup> Deng S., Dou Y., Ji T., Liao H., Yao Y., Yu S., Zhu Y. (2022) *The Impact of Climate Change on Urban Transportation Resilience to Compound Extreme Events*. Sustainability. [<https://www.mdpi.com/2071-1050/14/7/3880/pdf>]

and probability of extreme weather events. That way we can adapt and maintain our transport networks accordingly. Implementing meteorology as a skill within the transport sector can be done through funding studies and research, collaborating across industries, or by creating new meteorology jobs in the sector and encouraging their take-up.

In addition, there will need to be a process of transitioning the skills people obtain in more carbon heavy transport-related jobs, to their net-zero carbon equivalents. For example, mechanics who work with internal combustion engine vehicles would need to gain new skills to work with electric vehicles, but still have a lot of useful transferable knowledge that shouldn't be lost. If the government supported retraining programmes and transition courses, it would support the green transition we need from a skills perspective, but also ensure people aren't left behind or perceive the necessary green transition to not have a place for them and their skills.

Regardless of whether the industry creates new roles to attract these specific skills set, the transport sector should be working across industries and promoting collaboration to fill any future skills gap. Transport professionals should be working with manufacturers, infrastructure design teams, environmental teams and finance departments, to harness the skills and knowledge of as many relevant complementary sectors as possible. This interdisciplinarity requires support from government and educational institutions.

### **Data and technology**

With the world and industry growing more digital by the day its vital data and technology skills continue to be developed throughout all transport careers, while attracting more people with these skill sets into the profession. Particular areas of concern for our stakeholder organisations (keeping in mind this is somewhat anecdotal, although the government has recognised a data skill gap at a larger scale<sup>8</sup>) were data analytics, data visualisation and mathematical modelling. Understanding and evaluating the data behind transport systems allows for accurate preparation of the future, trend spotting and easier logistical planning. Growing uncertainty about the future, be that because of emerging technologies such as connected autonomous vehicles, or because of climate and geopolitical instability, also means that data analytical skills need to be combined with domain knowledge that extends beyond just transport and its operations.

The insight that data can provide to the industry is crucially important, but what is just as important is effective communication skills to go alongside the analyses. Communications are vital in explaining the issues data presents so that they can be broken down and digested by a wider and ever more critical audience. Effective communications can also change the public perception of the transport industry and the role it plays in many aspects of society, which can increase financial investment and broaden the future pipeline of talent.

### **HGV Drivers**

As well as highly skilled STEM workers, the most pervasive skills gap faced by the industry at the end of 2021 was the shortage of up to 100,000 HGV drivers in the UK.<sup>9</sup> The concern is that the industry

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<sup>8</sup> Department for Digital, Culture, Media & Sport (2021) *Quantifying the UK Data Skill Gap - Summary version*. Department for Digital, Culture, Media & Sport. [<https://www.gov.uk/government/publications/quantifying-the-uk-data-skills-gap/quantifying-the-uk-data-skills-gap>]

<sup>9</sup> Royal Haulage Association (2021) *A Report on the Driver Shortage*. Royal Haulage Association. [<https://www.rha.uk.net/LinkClick.aspx?fileticket=IC10C-FWmVo%3D&portalid=0&timestamp=1627564639720>]

needs more training and job opportunities for manual labour, transport operative and driving roles.<sup>10</sup> These skills are essential not only to the transport industry, but industry at large in the UK, as we saw last year with the food and petrol shortages. The industry should also provide opportunities for upskilling across the HGV sector, and continued learning and professional development, to make these careers more attractive. Upskilling also creates a flexible workforce which is crucial in times of crisis where people moving across roles with similar skills becomes commonplace.

### **Future proofing the transport profession**

The Covid-19 pandemic highlighted just how underprepared our transport networks were for certain unforeseen circumstances. Whether it's another pandemic, war or the effects of climate change the past few years have demonstrated the need to plan for the future and plan for the unforeseen. Wrapped into this umbrella term of future proofing are a variety of skills including, but not limited to:

- Forecasting<sup>11</sup>
- Stakeholder engagement<sup>12</sup>
- Carbon accounting<sup>13</sup>
- Influencing behaviour/behaviour change<sup>14</sup>
- Business case/appraisal<sup>15</sup>

Each skill will be a necessary component of a transport profession that is equipped for dealing with the uncertainties of the future while also being able to actively plan and encourage sustainable transport options to meet net zero.

## **2. How, in your view, can current qualification and training routes be made more accessible for those who want to pursue a career in the transport sector?**

### **Early engagement**

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<sup>10</sup> Logistics UK (2021) *Survey shows skills shortages are growing across the logistics industry*. Logistics UK. [<https://logistics.org.uk/media/press-releases/2021/october/survey-shows-skills-shortages-are-growing-across-t>]

<sup>11</sup> Tozer D. (2021) *Planning for future transport demand*. UK Research and Innovation. [<https://www.ukri.org/blog/planning-for-future-transport-demand/>]

<sup>12</sup> Celik T., Erkul M., Yitmen I. (2019) *Dynamics of stakeholder engagement in mega transport infrastructure projects*. International Journal of Managing Project in Business. [<https://www.emerald.com/insight/content/doi/10.1108/IJMPB-09-2018-0175/full/html>]

<sup>13</sup> Greenhouse Gas Protocol. (2013) *Technical Guidance for Evaluating Scope 4 emissions – Chapter 4*. Greenhouse Gas Protocol. [[https://ghgprotocol.org/sites/default/files/standards\\_supporting/Chapter4.pdf](https://ghgprotocol.org/sites/default/files/standards_supporting/Chapter4.pdf)]

<sup>14</sup> European Commission. (2019) *Promoting Mobility Behaviour Change*. European Commission. [[https://ec.europa.eu/futurium/en/system/files/ged/promoting\\_behaviour\\_change.pdf](https://ec.europa.eu/futurium/en/system/files/ged/promoting_behaviour_change.pdf)]

<sup>15</sup> Edkins A., McArthur J., Zerjav V. (2021) *The multiplicity of value in the front-end of projects: The case of London transportation infrastructure*. International Journal of Project Management. [<https://www.sciencedirect.com/science/article/pii/S0263786321000296>]

A fundamental barrier to qualifications and training routes in the transport sector is the industry's failure to successfully engage with young people, particularly at the point when they are forming their perceptions around careers.<sup>16</sup> The transport industry is a large and varied sector, but unfortunately young people often have a narrow view of the roles and careers transport can offer, rather than understanding the breadth of opportunities available to them.<sup>17</sup> Better engagement with young people, from the beginning of their GCSE's up to University, can help break this stereotype and open up the sector to youth by giving them the ability to make informed decisions on possible future careers. Engagement could include actively attending schools and running assemblies, to working closely with career services and providing online transport career advice and webinars for students. We are aware that many of our stakeholder members already invest in supporting university careers event, and (in particular younger) TPS members lecture in high schools and sixth form colleges. Their enthusiasm for their own careers hopefully inspires the next generation.

Engaging with schools and colleges could also help increase the diversity of the transport sector as it would reach children and young people who have no connections to the industry. We should also be targeting specific geographical areas to access underrepresented communities in the industry. In addition, the industry must profile people from a minority background working in the sector which would have a continual positive effect by attracting a more diverse workforce. If potential future employees from underrepresented backgrounds see role models already in the industry it will increase the chances of them pursuing a career in transport.<sup>18</sup> Having said that, research is required to understand better what the real obstacles are to diversifying the transport workforce, increasing access to that wider talent pool.

### **Entry level schemes and qualifications**

As well as engaging young people, the sector must continue to attract new starters into the sector by ensuring there are good quality and competitive entry level schemes, such as apprenticeships and graduate schemes, for people of all ages. Such schemes could benefit from engaging with graduates of a wide variety of degrees, as many degree level skills are transferrable to transport planning, even if there is not an obviously direct content link, such as geography. Whilst there is evidence of good practice in the industry, such as HS2's commitment to 2,000 apprenticeship opportunities during the lifespan of the project,<sup>19</sup> the availability of similar apprenticeships for certain roles in the industry

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<sup>16</sup> Magnuson C., Starr M. (2000) *How Early Is Too Early to Begin Life Career Planning? The Importance of the Elementary School Years*. Journal of Career Development. [<https://journals.sagepub.com/doi/abs/10.1177/089484530002700203>]

<sup>17</sup> Department for Transport (2021) *Aviation and maritime careers: young people's perceptions*. Department for Transport. [<https://www.gov.uk/government/publications/aviation-and-maritime-careers-young-peoples-perceptions>]

<sup>18</sup> Karunanayake D., Nauta. (2011) *The Relationship Between Race and Students' Identified Career Role Models and Perceived Role Model Influence*. The Career Development Quarterly. [<https://onlinelibrary.wiley.com/doi/abs/10.1002/j.2161-0045.2004.tb00644.x>]

<sup>19</sup> HS2. (2022) *HS2 undergo huge recruitment drive to mark National Apprenticeship Week*. Global Railway Review. [<https://www.globalrailwayreview.com/news/131698/hs2-major-recruitment-national-apprenticeship-week/#:~:text=HS2%20has%20committed%20to%20creating,placed%20to%20smash%20its%20target>]

such as transport planning are much less well known. One way apprenticeship numbers could be increased is by making them easier to access and pursue for SMEs.<sup>20</sup>

Current qualifications and training routes should be made more accessible through the introduction of formal qualification processes, not simply voluntary ones, especially for transport planning. A fixed training scheme would raise the status of transport planners which would make the role more attractive, increase diversity in the sector, and provide a transparency of skills which in turn would help highlight their expertise. At the very least we should be increasing the value of voluntary charterships, such as CTPP (Chartered Transport Planning Professional), by recognising them when commissioning project teams for example.

This has been done in Scotland,<sup>21</sup> where those with the CTPP qualification attract a fee bonus, encouraging employers to support their staff in attaining the qualification. Whilst holding these qualifications might not change an individual's skill, it does ensure increasing industry professionalism, and increases the status of transport planners, bringing their expertise and lengthy training requirements in line with other professions that have benefited for much longer from chartered member status and the existence of a professional body representing their interests.

### **Flexibility**

To encourage a versatile workforce, continued development of skills, and varied careers, there should be more links between different roles across the transport industry to allow for cross sector flexibility. This would help remove barriers for those already in the industry looking for a career change, increasing retention, and could help attract workers from outside the industry.

For example, where there are crossovers, accreditation links between different institutions such as the RTPI (Royal Town Planning Institute) and RICS (Royal Institute of Chartered Surveyors) would make it easier for workers to move across the industry. This would increase workers' satisfaction but also retain skills where current accreditation may even lead to losing experience to the industry. If training and chartership were more modular, someone could potentially start out in Transport Planning and change career to become a Chartered Surveyor, if they could acquire skills and progress with their chartership in a way where they could return to these in the future. This would make a return to Transport Planning more appealing and could also encourage Chartered Surveyors to move across to Transport Planning.

## **3. What, in your view, are effective ways to attract young people and career changers into a career in the transport sector?**

### **Transport's image problem**

The transport industry has an image problem which causes young people, and particularly women, to disregard it as an attractive career. A white paper conducted by the Women in Transport All Party Parliamentary group found that 70% of women believed the transport industry to have an image

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<sup>20</sup> Total People (2022). *Apprenticeship funding for SMEs*. Total People. [https://www.totalpeople.co.uk/apprenticeships-for-employers/sme-solutions/#:~:text=Apprenticeship%20funding%20for%20SMEs&text=If%20you%20are%20a%20business,funding%20and%20co%2Dinvestment%20processes]

<sup>21</sup> Transport Scotland (2021) *Graduate Training Scheme*. Transport Scotland. [https://www.transport.gov.scot/careers/graduate-training-scheme/]

problem.<sup>22</sup> There are several ways you can solve this problem, many of which are addressed later on in the white paper.<sup>23</sup> They can predominantly be categorised as:

1. Introducing policies which help improve employee wellbeing:
  - a. Mentoring programmes and peer support
  - b. Staff support networks (internal and external) perhaps for specific minorities
  - c. Flexible and hybrid working practices
  - d. Mental health training for managers
  - e. Regular one to one meetings
2. A government and industry led communications campaign to celebrate, promote and raise awareness of the transport profession

The younger generation of employees are much keener for their employers to focus on mental health and employee wellbeing when compared to previous generations.<sup>24</sup> Studies have found that up to 70% of millennials and Generation Z now believe mental health to be the greatest challenge their generation faces.<sup>25</sup> While traditional workplace problems are still equally as important, such as wages and job security, as these factors ultimately have their toll on mental health, the younger workforce are more and more concerned with employers having the right support mechanisms and policies in place. The same survey found that 64% of young workers now consider flexible working important when applying for a job.<sup>26</sup> To attract young people into organisations and encourage retention and progression, the industry needs to cultivate an inclusive and supportive workplace culture that has accessible routes in for all. Many careers in the transport industry, including transport planning are well suited to flexible working, so this could be easily achieved.

The second point revolves around how we tell the story of the transport profession to generate excitement in potential employees. These aren't always the natural skills that technical leaders and decision makers in the industry possess, so it will require external support from the government and from specialist consultancies. This is something we as a society do for the Transport Planning profession with our Transport Planning Day campaign.<sup>27</sup> There are many other campaigns to draw on other professions, but also linked to transport-related themes such as World Bicycle Day or World Car Free Day.<sup>28</sup>

## Raising awareness

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<sup>22</sup> Field J., Haddad H., (2021) *Gender Perceptions and Experiences Working In Transport*. Women in Transport. [[https://static1.squarespace.com/static/59773e3edb29d6ba1e61186d/t/60de31d509a3c07993b4c263/1625174489655/WIT\\_APPG\\_REPORT\\_07.pdf](https://static1.squarespace.com/static/59773e3edb29d6ba1e61186d/t/60de31d509a3c07993b4c263/1625174489655/WIT_APPG_REPORT_07.pdf)]

<sup>23</sup> Ibid.,

<sup>24</sup> Crush P. (2021) *Mental health challenge for 70% of young employees*. Employee benefits. [<https://employeebenefits.co.uk/mental-health-challenge-70-young-employees/>]

<sup>25</sup> Ibid.,

<sup>26</sup> Ibid.,

<sup>27</sup> Transport Planning Society. (2020) *Transport Planning Day 2020*. Transport Planning Society. [<https://tps.org.uk/transport-planning-day-and-campaign/transport-planning-day-archive/tp-day-2020-announced>]

<sup>28</sup> Living Streets. (2022) *World Car Free Day*. Living Streets. [<https://www.livingstreets.org.uk/about-us/our-work-in-action/world-car-free-day>]

A part of this image problem is the lack of awareness young people have of the types of career transport can offer. Raising awareness of the industry will require an effort to target the people who are providing the younger generations with more and more of their information which is increasingly becoming social media influencers.<sup>29</sup> These influencers (except a few who we cover later on) tend not to talk about transport in the same way they do with sectors like AI or VR etc.<sup>30</sup> There are good examples of industries and companies making use of influencers to raise awareness amongst youth which can be drawn on, the most obvious of which being the fashion industry.<sup>31</sup>

A strong draw which transport has to offer is the diverse range of opportunities and countless number of exiting projects which potential employees can be involved in, whether at a local or national level. Communication campaigns to raise awareness and address the image problem should utilise this. This could be through VR tours of current sites, experimental videos using drone technology or one on one interviews with young and diverse employees already working on the project etc. <sup>32</sup>

Another way to adapt the image of a career in transport and raise awareness for young people is to emphasise the role transport can play in combatting climate change, improving mental / physical health and creating a fairer society. The social, environmental and economic benefits of a good transport network go much beyond simply getting people from A to B. For a generation of workers who care increasingly more about climate change, social and economic justice and mental health,<sup>33</sup> the story of transport not for transport's sake but to improve the ills of a society is a potential way to encourage future talent.

## Incentives

Any effort to attract a diverse, young workforce should be able to show some tangible incentives to choosing a career in transport. Some ideas used in other industries include:

- Financial bonuses for starting an apprenticeship scheme
- Financial bonuses from completing the scheme
- Clear career path shown from employers with flexibility and personalisation depending on the employee
- Graduate jobs which offer the ability for further study
- Bespoke mentoring programmes for all entry level jobs
- The ability to:
  - Shape and improve the public realm, cities and rural areas

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<sup>29</sup> Dorfler F., Li C., Mei W., Pagan N. (2021) *A meritocratic network formation model for the rise of social media influencers*. Nature communications. [<https://www.nature.com/articles/s41467-021-27089-8>]

<sup>30</sup> Viral Nation. (2021) *Why Influencers Are The Future of VR and AR Marketing*. Viral Nation. [<https://www.viralnation.com/blog/why-influencers-are-the-future-of-vr-and-ar-marketing/>]

<sup>31</sup> Fear-Smith N. (2021) *How are Fashion Brands Utilising Social Media Influencers?* Talking Influence. [<https://talkinginfluence.com/2021/01/15/how-are-fashion-brands-utilising-social-media-influencers/>]

<sup>32</sup> Tesla (2022) *Flying Through Giga Berlin*. Youtube. [<https://www.youtube.com/watch?v=7-4yOx1CnXE>]

<sup>33</sup> Babington – Ashaye Y. (2016) *What do young people care about? We asked 26,000 of them*. World Economic Forum. [<https://www.weforum.org/agenda/2016/11/what-do-young-people-care-about-we-asked-26-000-of-them/>]



- Have a beneficial impact on physical and mental health, equality and sustainability through even a single project or policy
- Tackle climate change and environmental degradation
- Connect communities

There are numerous employers in the transport planning profession that have started to implement programmes with incentives like these, for example Integrated Transport Planning's new SUNRISE graduate scheme.<sup>34</sup>

### **Gaming & different communication channels**

As mentioned, the way younger generations now consume media and get their information is very different to what has been in the past, and for the current cohort of decision-makers. Gaming has exploded as the digital revolution has continued with more children (and adults) now gaming than ever before.<sup>35</sup> The opportunities to highlight what the transport profession has to offer through the gaming world are endless. Games like Minecraft and Sim City are perfect to attract pre-teens while the Grand Theft Auto Online Content Creator mode would be more suited for teenagers and young adults.

These sandbox games allow users the freedom to experiment and naturally understand the excitement of transport planning, and engineering more generally, without it being forced upon them.<sup>36</sup> It also teaches users a number of skills like problem solving, creativity and reasoning which can be directly applied to STEM careers later in life. With a joint effort between the transport industry and game developers there is real potential to create something which could inspire the next generation of gamers to consider a career in transport. There is even the possibility to carve roles that join the two, such as using gaming software or virtual reality in transport design, engagement and consultation.

Another hugely popular communications channel which should be utilised by industry is TikTok. Francis Bourgeois, a young trainspotter and train enthusiast, has 2.4 million followers on TikTok<sup>37</sup> and 1.6 million followers on Instagram. His videos have gone viral on social media for his genuine and authentic love for trains which has resonated with millions of young people. Francis, and other less known influencers, with the right nurturing, could be the spearhead of a recruitment campaign which highlights how passionate some young people can be for transport, and that this passion can be more than just a hobby.

### **Early-stage education**

As discussed in question 2 a successful strategy to engage and inspire the next generation of talent should attempt to engage with the younger generation as early as possible.<sup>38</sup> The various avenues of

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<sup>34</sup> International Transport Project. (2022) *ITP Graduate opportunities for 2022*. International Transport Project. [<https://tps.org.uk/opportunities/vacancies/vacancy-details?id=374>]

<sup>35</sup> Finances Online. (2022) *Number of Gamers Worldwide 2022/2023: Demographics, Statistics, and Predictions*. Finances Online. [<https://financesonline.com/number-of-gamers-worldwide/>]

<sup>36</sup> Hoade O. (2020) *Using Minecraft to create the next generation of engineers*. Polestar. [<https://insights.polestarcf.com/post/102g8dv/using-minecraft-to-create-the-next-generation-of-engineers>]

<sup>37</sup> Francis Bourgeois (2022) TikTok [<https://www.tiktok.com/@francis.bourgeois?lang=en>]

<sup>38</sup> Magnuson S., Starr M. (2000) *How Early Is Too Early to Begin Life Career Planning? The Importance of the Elementary School Years*. [<https://journals.sagepub.com/doi/10.1177/089484530002700203>]

STEM, which includes transport, should be a focus from early-stage education up to GCSE's. One part of this is the technical side of the profession which will be explored in science and maths classes however more can be done to ensure that transport problems are part of the STEM curriculum for class. But there is also the social value of transport which must be discussed as part of a human geography curriculum or the rich history behind our transport systems which could be a component of history classes. If pupils understand the benefits of and the history associated with our transport network, we should expect those pupils to take an interest in transport and potentially see it as a viable career.

To get transport onto the school curriculum in this way, from a place where it is virtually invisible, there needs to be a concerted effort to lobby governments from the industry, education establishments and trade bodies to convince them of the importance and necessity to make these changes.

When targeting children and young adults at school special consideration must be given to not discourage girls from pursuing a career in transport. The evidence which shows girls being deterred from careers in STEM is indubitable,<sup>39</sup> and transport is no exception to this. We've already established that the industry has an image problem. Institutions and teachers need to understand the reasons as to why girls may be put off STEM, such as a lack of role models and faulty conceptions of what futures careers may look like, and address these as early as possible.<sup>40</sup>

#### **4. What, in your view, are the barriers to further increasing diversity, inclusion and social mobility in the transport sector?**

##### **Lack of diversity at senior levels**

Few women work in the transport industry, but even fewer women rise to the top. An International Transport Workers Federation report found that women occupy less than 20% of managerial positions across global transport supply chains.<sup>41</sup> Finding data for ethnic diversity within the industry is more difficult but the picture is much the same as the gender makeup.<sup>42</sup>

The lack of diversity at senior levels means that for non-white males that are looking into the industry or those that have just entered it, there are very few role models from similar backgrounds to look up to and aspire to. Offering a clear path for career progression is key to attracting a younger workforce. If employees are unable to see anyone like them in leadership roles, they will inevitably imagine substantial barriers for them to eventually get to those positions. This is not only the case for board rooms and leadership teams, but also for relevant for events and talks. We must be able to see and hear underrepresented voices resonating all throughout the transport industry.

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<sup>39</sup> AAUW (2022) *The STEM Gap: Women and Girls in Science, Technology, Engineering and Mathematics*. AAUW. [<https://www.aauw.org/resources/research/the-stem-gap/>]

<sup>40</sup> Choney S. (2018) *Why do girls lose interest in STEM? New research has some answers — and what we can do about it*. Microsoft. [<https://news.microsoft.com/features/why-do-girls-lose-interest-in-stem-new-research-has-some-answers-and-what-we-can-do-about-it/>]

<sup>41</sup> Acker A., Ng W. (2020) *The Gender Dimension of the Transport Workforce*. International Transport Forum. [<https://www.itf-oecd.org/sites/default/files/docs/gender-dimension-transport-workforce.pdf>]

<sup>42</sup> Laker L. (2020) *Diversity in transport needs to accelerate*. Smart Transport. [<https://www.smarttransport.org.uk/insight-and-policy/latest-insight-and-policy/diversity-in-transport-needs-to-accelerate>]

Hiring and promoting women and ethnic minorities into managerial roles will also increase the likelihood that inclusive internal policies will be introduced, as well as more inclusive transport schemes. This should cultivate and support the pipeline of talent of future leaders from underrepresented groups.<sup>43</sup> Those from these demographic groups understand the struggle and extra barriers they have had to face, so they are best placed to introduce company practices which look to alleviate and eradicate these barriers.

### **Challenging perceptions in the industry**

We have established that the industry is perceived as male and pale and that this can put those who don't fit this description off from seeing it as an attractive place to work. Another perception that the industry struggles with is its ageing workforce. A disproportionate number of UK transport workers are aged between 45-54, with a relatively small percentage aged below 30.<sup>44</sup>

The demographic makeup of the industry leads to many of the perceptions which were found in Women in Transport's White Paper. For example, 93% of respondents (women) agreed it had a macho culture, only 19% thought women and men were treated fairly and 35% found it difficult to progress their careers. These perceptions are one of the largest barriers the industry face in attracting a diverse and inclusive workforce and they must be challenged wherever possible (see question 3 for how to do this).

## **5. How, in your view, can barriers to diversity, inclusion and social mobility in the transport sector be reduced?**

Most of our answers to question 3 can also be applied here, but we develop one further point below.

### **Attracting older employees**

Despite our answer to question four, it is still important that the transport sector attracts older employees as the skills shortage cannot ignore this talent pool. Many in the later stages of life may lack the qualifications which are required for entry jobs today so the focus should be on transferable skills and experiences. Interview and induction processes must have the structures in place to allow for these kinds of candidates to be successful and flourish.

Comprehensive policies and support for work returners will be key in attracting older candidates, both those with directly applicable qualifications and without. Some policies which will help include:

- Adequate parental leave
- Long-term sick leave
- Options for carers
- Job sharing programmes

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<sup>43</sup> Desai K. (2022) *Four ways to accelerate the diversity agenda*. Passenger Transport. [<http://www.passengertransport.co.uk/2022/03/four-ways-to-accelerate-diversity/>]

<sup>44</sup> CIPD. (2019) *Ageing gracefully: The opportunities of an older workforce*. CIPD. [[https://www.cipd.co.uk/Images/megatrends-ageing-gracefully-the-opportunities-of-an-older-workforce-1\\_tcm18-64897.pdf](https://www.cipd.co.uk/Images/megatrends-ageing-gracefully-the-opportunities-of-an-older-workforce-1_tcm18-64897.pdf)]

This isn't a comprehensive list. It's also worth noticing that policies like these aren't only attractive to older employees but also the younger ones who are more concerned with employee wellbeing.<sup>45</sup>

## Conclusion

To tackle the skills shortage and create a transport workforce that is fit for the future we need continued collaboration between industry and government as well as wider stakeholders, such as educational establishments. This consultation is a welcome first step but must be followed by action. Two-way stakeholder engagement is necessary to develop a thorough strategy that is wider than just the transport sector itself. We hope our thoughts will help with this and will be happy to provide further information if necessary.

We have outlined below five key recommendations for developing skills and careers across the transport industry which encapsulate the main points made throughout our response.

### Key recommendations

- Focus on green & technological skills
- Engage early in the education system
- Challenge the industry's image problem
- Always keep EDI at the top of the agenda
- Establish and create an inclusive work culture
- Formalise chartership / any qualification process

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<sup>45</sup> Orlando C. (2021) *Mental health among young employees: let's start doing more to improve workplace practices*. Institute for Employment Studies. [<https://www.employment-studies.co.uk/news/mental-health-among-young-employees-let%E2%80%99s-start-doing-more-improve-workplace-practices#:~:text=The%20most%20recent%20Youth%20Voice,and%2053.3%20per%20cent%20experienced>]

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