

## Anastasia Nikolaidou , Greece

**Researcher at the Aristotle University in Thessaloniki**

*Anastasia Nikolaidou studied Civil Engineering at Aristotle University in Thessaloniki, specialising in Transportation Studies. She also has an MSc in Transport Planning. She is currently working on her PhD and is also a Researcher at the same university. She also cooperates with the private sector on local, regional and national projects.*

- 1) Sustainable Urban Mobility Plans (SUMPs) have enabled researchers and planners to successfully identify the specific requirements of different social groups and transport users.***
- 2) Different social groups need to be persuaded and convinced to join public discussions in order for their voices to be heard when drawing up SUMPs.***

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I studied Civil Engineering at Aristotle University of Thessaloniki and specialised in Transportation Studies. When I completed my undergraduate degree, I was accepted on and completed the MSc Transport Planning course. Since then, I have only worked on transport-related projects instead of traditional civil engineering areas. I have been studying my PhD for the last five years, and since 2015, I have also been a Researcher at the Aristotle University of Thessaloniki at the Transport Engineering Laboratory. I have also been cooperating on transport-related projects for the private sector at local, regional and national level.

The majority of my work has centred on Sustainable Urban Mobility Plans as well as transport analyses.

**In your area of expertise, what have been the greatest breakthroughs in transport conditions in terms of gender and diversity?**

In my professional experience, Sustainable Urban Mobility Plans (SUMPs) have enabled researchers and planners to successfully identify the specific requirements of different social groups and transport users, outside the standard groups that usually appear. Thus, I believe SUMPs are a breakthrough in terms of improving transport conditions in terms of gender and diversity. This is the opposite of the traditional transportation analyses that were previously conducted. Public discussions and public engagement have

improved in general in recent years and hopefully further strides forward will be made in this regard.

**What are the biggest challenges in terms of the issues discussed above?**

The main challenges are mainly the lack of related data due to the fact that data collection methods do not currently take gender and diversity dimensions into account. This has been identified as a major issue which researchers need to address thoroughly and accurately.

**What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

Including gender and diversity-sensitive data collection methods would be one of the major steps in this sense, as this would take the identified parameters into account and integrate them into transport analyses. This could then be forwarded into transport planning and finally into the implementation of measures and specific actions.

**As an expert in drawing up SUMPs, what problems have you identified in the process regarding the inability to integrate the needs and challenges of relevant social groups. Are there any women and gender equality issues?**

The initial problem starts with the researchers who, more often than not during public discussions to draw up SUMPs, are unable to identify all social groups. It is not enough just to invite them. They need to be persuaded and convinced to join public discussions in order for their voices to be heard. Moreover, public discussions need to be broad ranging and open so everybody can participate and hear public opinions. Moreover, the lack of time and, in many cases, financial constraints limit researchers' efforts to conduct their tasks appropriately. Another problem is that the public has lost faith and trust in public stakeholders and researchers find it difficult to factor in their opinions, feedback and comments. Finally, researchers often propose SUMPs which are not then correctly implemented by local authorities due often to a lack of funding and other political priorities.

**Which policy recommendations and measures can effectively deal with the previously identified problems?**

More funding and more time would certainly facilitate seamless integration of different public opinions as well as the appropriate development of Sustainable Urban Mobility Plans.

**Change Project is a bike-sharing related project? Can you tell us some more about it and what its outcomes are?**

The Change Project aims to promote the bike-sharing economy through innovative applications. An online platform was designed to optimise bike-sharing among current and potential users throughout the city and also included other actions to promote bike-sharing. In this context, a bike design for disabled groups was developed and then created. The final design will be donated to the Northern Greece Paraplegics Association which has also taken part in the development of the bike design.

**Aristotle University has recently been awarded a grant for a new project on the economic and social impacts of the pandemic. How did this project begin? What is about? What are the expected outcomes?**

As a result of the Covid-19 pandemic, we started a national transport survey in which we asked participants to describe their mobility characteristics. The objective was to compare pre-pandemic and pandemic transportation habits. The survey highlighted the difference in impact for men and women. For example, women began to use private vehicles significantly more than men and mostly as passengers not drivers, due to more limited vehicle ownership and because they didn't drive. Additionally, women limited their mobility because there were fewer people moving around the cities on a daily basis thus moving them into a more isolated and vulnerable environment.

Given the need for a universal approach to transportation issues, a consortium made up of the Transport Department at the Aristotle University of Thessaloniki, a team of Behavioural Analysts from the University of Macedonia and a team of economists from the University of Crete was created. The main objective of the project, which is just about to start, is to apply the methodology of Sustainable Urban Mobility Plans to the context of the pandemic and to assess the impacts of lockdown and other similar measures.



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 824349

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## Andreea Alice Govor, Austria

Education to teach young women the benefits of technical curricula starting at high-school level should be on the agenda.



**Public procurement expert – EU-based multinational railway construction company.**

*Andreea Govor has a Bachelor's degree in Mathematics and a Master's degree in Public Policy from the University of Bucharest. She also has an MSc in Transport Infrastructure Engineering from Bucharest Civil Engineering Technical University. She has worked for an Austrian railway construction multinational for the last 15 years and has specialised in the area of public procurement tenders.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I have a Bachelor's degree in Mathematics from the University of Bucharest and I hold a Master's degree in Public Policy from the same university and another Master's in Transport Infrastructure Engineering.

Over the past 15 years, I have been working for a multinational dealing in railway infrastructure contracting. I began to specialise in public procurement processes 10 years ago and for the last five years I have been the main public procurement expert in the company's Romanian branch, being involved in drawing up tender documents for minor (+ €1 million) and major projects (+ €200 million).

Given my professional background, I was asked to join a team to prepare tender documents on behalf of public authorities (one of the projects is worth over €1 billion).

In terms of my experience with gender & diversity, I

can say that my present job is in a predominantly masculine company and sector, i.e. that of railway infrastructure construction. The majority of my colleagues are men, with women representing less than 5% of key staff (engineers and technical support) and 0% when we talk about workers on construction sites.

As a public procurement expert, I consider myself to be in the ranks of key technical staff and my work counterparts are generally men.

I cannot say anything about cultural segregation as, apparently, this is not the case. On the other hand, I can say that older people are encouraged to join the company as key experts (experienced engineers can keep working up to 70 years of age). The experts I have been in contact over the years have all been men. When we talk about on-site workers, they are generally young people as these jobs are considered to be very labour intensive, with major challenges coming from extreme weather that may occur in the field.



If we talk about professional mentorship and professional relationships, I can say that one of my first bosses was a female minister (before joining this company) who was very demanding with her team but also shared her experience.

In the construction company, my colleagues share their experience and they are building a really good project team. I have never had the feeling that my professional opinion has been disregarded due to gender. My role as a procurement expert (for bidding teams) and as a technical expert (for implementation teams) is respected and my advice is followed by the implementation teams.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

Over the last few years, I have seen an increasing number of women enrolling in transport degrees at technical universities. However, most of them are more interested in road infrastructure and the automotive industry as these two sectors are promoted in Romania as being less labour intensive and affording more opportunities for female engineers. The number of female railway engineers is increasing very slowly.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

The biggest challenges seem to be in the area of mentality and education. As I am dealing mainly with a transport infrastructure industry, I can say that in this area the image that these are tough projects in a harsh working environment is pushing away potential candidates, in general, and young women in particular.

**What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

In our specific field, the communication of modern values should be increased. Education to teach young women the benefits of technical curricula starting at high-school level should also be on the agenda. In addition, financial incentives should be awarded to companies actively involved in these campaigns.



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## Angelos Amditis, Greece

## Intelligent Transport Systems hold the potential to address barriers to women's mobility through gendered, culturally sensitive, smart mobility innovations



**Research Director, Institute of Communication and Computer Systems, NTUA**

*Dr. Angelos Amditis has a PhD in Electrical and Computer Engineering from the National University of Athens. He is currently the Research Director at the NTUA's Institute of Communication and Computer Systems and a member of its Board of Directors. He is a founding member and Director of the ISENSE Group. He is also the Chairman of ERTICO-ITS Europe, Deputy Chairman of the Athens Urban Transport Organisation (OASA), and the current Vice President of ITS Hellas. He is also a member of the Alice Executive Group (Alliance for Logistics Innovation through Collaboration in Europe), and a board member of the Athens Water Supply and Sewerage Company (EYDAP S.A.).*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

Although I have not been directly involved in initiatives related to gender and diversity in the field of transport, I have been following the debate closely and it is clear that the transport industry is still suffering from a lack of gender diversity. Intelligent Transport Systems hold the potential to address barriers to women's mobility through gendered, culturally sensitive, smart mobility innovations and, in this sense, ITS Hellas (the Greek Organisation for Intelligent Transport Systems) constantly seeks to raise awareness on gender equality issues among its members as well as wider issues related to transport inclusivity in general. It aims to ensure that all the actors in the transport system work as an ecosystem to support all needs and promote not only women but also groups of people with different needs.

In addition, at ICCS/NTUA we are participating in the "Innovation Centre for Women - # GIL4W", an initiative recently set up by the Greek Ministry of Labour and Social Affairs which focuses on cooperation between governmental and social actors and asks them to ensure that the adoption of technology and innovation will not increase social and economic inequality.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

The gender dimension of the transport workforce has lately been the focus of many discussions and initiatives. Almost everyone would admit that transport is a male-dominated sector at all levels and progress in closing this gender gap is slow. Despite policy attention and concern, differences between genders remain not only in terms of the employment rate, but also in other dimensions such as part-time work, unpaid care and family

responsibilities, skills, decision-making positions, working conditions and wages.

Since 1979, when the Convention on the Elimination of All Forms of Discrimination against Women was signed, we have seen plenty of international agreements and policy movements advocating the fundamental rights of women. International bodies and other organisations such as the UN and EU have increasingly recognised that equality is not only achieved at social level but also requires an economic effort and they are including gender equality as a holistic part of a modern growth strategy.

Apart from political action, which has been the main force to speed up developments, it has become apparent that technology and innovation can pave the way towards achieving the goal of equality in the sector and ensure inclusive transport and mobility systems and services. ITS deployment and innovation can provide a whole new arena of opportunities to design a more gender-inclusive transport sector. Therefore, it is important that the gender dimension should be taken into consideration as we move towards smart mobility and smart cities.

**Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

Despite the fact that transport projects and policies are often considered to equally benefit women and men, there is a large body of literature that demonstrates that transport is not gender neutral. Today, there are still challenges and barriers limiting women's participation in the transport workforce, and most of them are related to working conditions (e.g., total working hours, time of work and place of work) and gender stereotyping.

There are structural barriers to change such as those related to deeply rooted gender stereotypes, inadequate facilities for workers, inflexible conditions and recruitment practices which reinforce the status quo. Transport is traditionally overrepresented by men, and research into the sector has shown that organisational culture and processes can unintentionally reinforce gender inequalities whilst cultural legacies continue to shape attitudes. A lack of understanding of the impact of female participation in the sector is also one of the barriers that has to be overcome. Structural obstacles are the biggest challenge a strategy has to deal with.





## What road maps need to be set out to increase gender and diversity in mobility at national and EU level?

Women play a critical role as economic agents and gender equality is also instrumental in achieving economic growth and poverty reduction. However, the relationship of gender and transport, and the role it plays in a country's social and economic well-being, has only recently been addressed. A better gender balance at all levels of the transport industry is a prerequisite for more equal, safe and inclusive transport and mobility.

When designing future roadmaps to increase gender and diversity in mobility, this should be seen as part of a larger dynamic picture and more sustainable practice.

Diversity is an element that can help the public and private sector to focus on their future sustainability. Increasing the representation and visibility of women at all stages of transport policy, planning, implementation, and use in projects will make transport more responsive to the needs of all users and even increase the sustainability of transport development. Attracting and retaining more women in the industry's workforce could result in better planning and designing of transport systems and services that cater to the needs of female users.

Policies and strategies should identify and include a broad spectrum of stakeholders and make sure different needs are represented. Structural changes will be required to improve access to employment opportunities for women and people of diverse gender identities, recruitment practices, and working arrangements.

Data collection and analysis of gender segregated data (e.g., gender differences in travel patterns, mode choices and trip purposes) have also recently emerged as an important element in planning and policy design. Their findings can be incorporated into projects and solutions that can guide the way towards greater gender diversity.

I would like to stress the value of gender and social impact assessments as part of the planning process as well as the value of transparent data. Only by understanding the needs of citizens can we create truly equal transport systems and

mobility services.

Planning and design should take into account research findings related to a number of behavioural issues (e.g., the reasons why women do not find the transport sector attractive) in order to implement targeted measures of change to accommodate and include women at all levels of the transport industry. The design of transport projects and services should also include a gender perspective in terms of travel needs, patterns, concerns, priorities, preferences, and personal safety parameters. Research shows that when gender is not explicitly part of the planning process, the solutions are most likely to primarily benefit men.

A central component of any related roadmap should be strategic decisions related to improving access to employment and career opportunities for women in the transport sector. To achieve this goal, there is a need to provide women not only with the relevant skills and training opportunities but also to promote their educational engagement through related academic disciplines (e.g., STEM) in order to meet the future workforce needs of the transport industry.

The whole transport sector should be active participants in the process of establishing future roadmaps. An evidence-based strategy that encourages stakeholder participation and an interventionist approach, such as outlining gender equity requirements in future business contracts, as well as a community-building effort that supports cross-regional and cross-sectoral collaboration and knowledge sharing are key principles for change.

**How can the Greek hub of the pan-European “Transport Innovation Gender Observatory” be sustainable? Could ITS-Hellas or another national transport authority be of assistance? (see: <https://www.tinngo.eu/observatory/national-hubs/>)**

The Greek hub of the pan-European “Transport Innovation Gender Observatory” can develop a framework and mechanisms for a European-wide sustainable strategy for Gender Smart Mobility



that ensures inclusivity and accessibility. Data collection regarding gender mobility, intersectional analysis, and gender action plans are the main tools to reach this target, and it is important that these issues acquire a local dimension within this hub. We need to produce case studies based on the national case scenario and the particularities, best practices and awareness-raising at local level.

Local community-building is crucial to achieve this goal, and this is where ITS Hellas can play a part in helping stakeholders to address local issues, provide national data to back research, support initiatives, and reinforce female engagement in transport.

Intelligent Transport Systems is one of the most dynamic areas of innovation in transport with strong growth dimensions and significant benefits for the economy, end users and the environment. The traditional perception that transport-related jobs require physical strength is becoming increasingly less relevant as technological advances and digital innovations are applied throughout the sector. Smart mobility technologies and applications are the driving force behind many changes and have the potential to change the balance in the gender equality arena. New services and concepts such as shared mobility can impact access, safety, ease and comfort of mobility for women, whose travelling needs are strikingly different from those of men. Smart solutions promise to achieve mobility for all and will place gender equality in a new context.



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## Ann Frye, UK

**Disability and Access Ambassador for Airports, appointed by the UK Minister for Disabled People**

*Ann Frye has a BA (Hons) in French and Italian from the University of London and has over 30 years of experience at senior levels of government in the UK working on meeting the mobility needs of disabled and older people. She was the Head of the Mobility and Inclusion Unit at the Department of Transport from 1981 to 2006 and was responsible for introducing legislation to make transport accessible to disabled people, to promote the mobility of disabled and older people and to promote social inclusion.*

*Ann chairs the sub-group on disabled air travellers (PRMs) of the European Civil Aviation Conference (ECAC) and co-chairs the US Transportation Research Board sub-committee on International Activities in Accessible Transportation and Mobility. She has led Europe-wide projects for the European Commission and the European Science Foundation to develop*

*standards and best practice in accessible buses and heavy rail services. She is currently working with the United Nations and the International Transport Forum on the mobility implications of a global ageing population.*

*She is a Visiting Professor at University College London. She is also a Fellow of the Chartered Institute of Logistics and Transport and of the Institution of Highways and Transportation in the UK and an honorary Transport Planning Professional.*

**1) The more girls and women that we can interest in the transport profession, the more that these problems will start to solve themselves because there will be a balance of voices around the table.**

**2) All the things that are being introduced in the name of smart mobility and sustainability are actually or potentially having a detrimental effect on many disabled and older people.**

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I joined the civil service after I graduated with a degree in Modern Languages and ended up in the Department of Transport. I also started volunteering at a youth club in North London that was a mix of kids with and without disabilities and I got very passionate about the fact that some of

these children were taken to a special school on a school bus. Other than that, they didn't go out and were indoors at home all the time. Luckily, I was the Private Secretary to the head of the department at that time and I started pushing for us to do something about this. So, he asked me to set up a unit specialising in disability, and the issues facing disabled people in the transport world, concentrating on what government could or should be doing. It really went on from there. At its height, my unit had about 60 staff, including

engineers, occupational therapists, scientists and policymakers, and we then spread our remit into issues like gender and diversity at large.

I left the department in 2006 and set up as a one-woman business, primarily focussing on accessibility for older and disabled people, but also, of course, touching on many of the gender issues that are part of that same process.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

I think one of the biggest factors is that we are seeing more and more women as highway engineers, mechanical engineers, and policymakers reaching senior positions where they can actually influence design decisions. When I first started in the transport world, you really didn't see women anywhere at all, and visiting manufacturers as a young woman, it was always sort of running the gauntlet, as well as patronising attitudes. So, I think more women making it into the right professional capacities has been a huge contributing factor.

**Have there been any policies that have been useful for promoting this or anything else in terms of gender?**

I think some of the broader policies, like the STEM programmes, i.e., promoting science and technology in schools. I've done quite a lot of work with London schools on that and with girls when they were doing GCSEs coming up to high-level decisions, there was still a great feeling that transport is oily, it's dirty, it's heavy, it's not a profession for women. So, STEM programmes, which can use women as role models and help to educate young women in transport, planning and engineering, all of these things are fabulously interesting professions with lots of opportunities for them. So, I hope that has helped. But I still sense an underlying feeling amongst quite a lot of girls that transport is a man's occupation and that's really sad.

**What are the biggest challenges to going forward, especially in relation to smart mobility and maybe the smart cities agenda?**

Well, if I can talk a little bit about disability as well

as gender, I think there are a lot of potential tensions and conflicts going on. If you just look at the sustainability agenda, if you look at e-scooters, where do we start on that subject? If you look at electric vehicle-charging points, low traffic neighbourhoods, all of these things that are being introduced in the name of smart mobility and sustainability are actually or potentially having a detrimental effect on many disabled and older people. I mean we don't need to spell out the risks of e-scooters or electric vehicle-charging points with trailing cables to people with low vision or lack of confidence.

So, I think we risk having a model that is suitable for young people in a hurry to get where they want to go that is actually potentially much less conducive to the needs of many women, many older people and many disabled people.

I think there is such a huge political impetus to be green and to be tackling the sustainability agenda, that in quite a lot of cases it is being done almost without looking at the wider picture. Involving women in those decisions leads to better results because if not, there's a real risk that you forget why you're doing this. It's all about the people, the passengers, the pedestrians. And if you're disadvantaging them, then you're doing the wrong thing.

An example I often give is shared space, which is now thankfully being rethought. But many of the shared space schemes are based on the brilliant idea that you take away all the barriers and you let the cars and pedestrians find their own level. However, an awful lot of older disabled people, people who are nervous, stop going to those areas. So, what did the researchers do? They went out on the street after these ideas had been introduced and interviewed the people who are on the street, who all said yeah, that's fine. Nobody has been and interviewed what I would call the displaced people, the people who are stuck indoors because they've lost the confidence to travel. And that's the kind of intuitive engagement that very often I think women are better at than men. Not exclusively, obviously, but very often, there is a need to go back to

grassroots and say, who are we doing this for, instead of what agenda does this follow.

### What road maps need to be set out to increase gender and diversity in mobility at national and EU level?

I think a lot of the road maps and the agendas are there, but very often we don't seem to be learning from them. When I was in the Department for Transport, we identified a lot of things like the fact that women make different types of journeys, they don't go straight from A to B, they do all the dropping the kids off, picking up dry cleaning, all very different journey patterns and journey needs. These are now being announced as brand new 20 years on, so we don't seem to have learnt from the research that was done. So, I think we need to look back at the clear body of research evidence. I think we know what the issues are. What we need to do is move them out of the research pocket and into the policy and delivery pocket.

I think the more girls and women that we can interest in the transport profession, the more that these problems will start to solve themselves because you will get balanced voices around the table. Clearly, women don't have the absolute voice on sensitivity and empathy but very often that's where the more intuitive thinking about people's needs is coming from. So, I would just strongly encourage women and girls to look at the transport professions, whether it's as a mechanical engineer, a highway engineer, or a policymaker.



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## Astrid Linder, Sweden

## Reconsidering standards: female crash test dummies



**Adjunct Professor in Injury Prevention at Chalmers University and Professor and Research Director of Traffic Safety at VTI.**

*Astrid Linder is a Professor and Research Director at the Swedish National Road and Transport Research Institute (VTI), and an Adjunct Professor in Injury Prevention at Chalmers University of Technology in Sweden. She is an Engineer, has a Master of Science in Engineering Physics, and obtained her PhD in Mechanical Engineering. Her research focuses on the prevention of injury in traffic crashes, and she has a long history of advocating for female crash test dummies in the car industry. Astrid Linder has spoken at Tedx and strives to raise awareness on this issue on many platforms.*

***“What drives me is contributing to the prevention of the loss of life and improving health in our transport system.”***

**Interviewer: Tell me about your background**

In 1996, I started as a PhD student at Chalmers University. I was part of a project that developed the world's first crash test dummy for low-severity rear impacts, the BioRID, which is based on the average male. The purpose of the project was to evaluate protection from whiplash injuries. A whiplash injury can be caused in a low-severity impact where the head moves in relation to the torso, creating loads on the neck structures, which can result in disabilities. Whiplash injury is most common in rear-end collisions in cars but is found in impact collisions from all directions.

**I: How did you discover the need for female crash test dummies?**

I conducted a literature review and noticed that, in injury statistics, women were more likely than men to suffer whiplash injuries and that this had been common knowledge for a long time. The oldest reference showing a higher risk for women dates

back to 1969. At the time, I thought that the next step should then be to address women in the same way as men by developing crash test dummies that represent the female population in the same way as men are represented. There are different types of crash test dummies that are used to test different collision directions. There is not a particular need for female crash test dummies, there is a need to address women in the same way as men. This is about equal terms, not about a dummy. Since then, I have contributed to spreading knowledge about this need and have shown how this can be done through scientific studies. However, there are still no crash test dummies that represent the female part of the population.

**I: Why are there no female crash test dummies?**

I believe a contributing reason lies in the regulation of occupational safety in vehicles which says that a crash test dummy representing an average male should be used in passenger safety

tests. Car manufacturers make an effort to protect the whole population, but this cannot be achieved because there are no models representing the female part of the population when assessing occupant safety in a crash.

I did not know this as a PhD student, but now I know that the requirements that society puts on a product which is demanded in the industry is to use an average male model. Society greenlights it if it works on men.

**I: How do people react when you highlight the need for female crash test dummies?**

It covers the whole spectrum of surprise through to “yes, this is how it is”. It depends on your field of knowledge. Things have started to change slightly in the last few years. In 2018, the Swedish Infrastructure Minister, Thomas Eneroth, expressed concern over the situation. The Swedish government has taken the initiative to propose screening of the UNECE international regulatory framework. The government has assigned this process to the Swedish Transport Agency. I have also received information that a bipartisan bill about equal collision safety has been introduced in the USA. This issue has been raised there by different people. So, there are some things happening right now.

**I: Why have we not made further progress, even though Sweden is viewed as a gender-balanced country?**

This probably goes further back in time than the democracy in the Greek square, and it is only 100 years since women got their voting rights in Sweden. From that perspective, it is not so strange that we have not yet made further progress. The law in the European Union says that women and men shall be treated equally, regulation should reflect that.

**I: What do we need to do to achieve change?**

We can all contribute to create the society we want to have. If you have knowledge, then you also have the responsibility to contribute to development. Many need to contribute, and researchers can do more than publishing their results by participating in discussions and encouraging change. There are many who are doing a great job, otherwise we would not be where we are today.

I have also spoken at Tedx and emphasized the importance of delivering the message in different ways and adapting to those you want to reach out to.



## I: What needs to be done at national and EU level?

Standards for how we evaluate our occupational safety system in vehicles are, today, completely unequal regarding how male and female models are represented as humans in crash test dummies, in the evaluation of protection in a collision. The transport system has a technical component that is designed by our standards, for example, how is the handle you grab designed? What is the norm, what is the standard? A classic example are some smartphones, they don't fit in my hand, but a person with a bigger hand would not necessarily notice this. There is much work to be done. A product should be designed after the sizing factor. It can be a man, or it can be a woman. But you have to ask the question, and this is what we have to do each and every time we design something that is to be used by humans.

We need to keep up the good work and be aware of what needs to be done. There are many good forces available. We have a law in the EU, the Treaty of the Union. Several articles in it say that women and men should be treated equally. It was not formulated like this by chance; a huge amount of work was put into this. We have all the support we can ask for, within the EU, when it comes to equal terms for both women and men. The law is unequivocal. There should not be any gap between what we do and what the law says.



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CITTA' DI TORINO



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**Clara Vadillo Quesada, France**

## Gender is inseparable from people's experiences in public spaces



**Active mobility training expert at Académie des Mobilités Actives (Active Mobility Academy)**

*Clara Vadillo has a Bachelor's degree in Social Sciences and a Master's degree in Urban Studies from Sciences Po in Paris. She also obtained a Postgraduate Diploma in the National Autonomous University of Mexico on "Masculinities: Gender, power and politics." She worked for ITDP Mexico as a consultant on non-motorised and public policy and subsequently as a Road safety and public policy Manager. She recently returned to France to join the Académie des Mobilités Actives (Active Mobility Academy) as an Active Mobility Training Expert.*

***There is a lack of public reflection on the restricted access to active mobility experienced by women, children, LGBTQ+, the elderly, disabled people and migrant populations.***

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

After studying political science and urban policy, I wanted to put my knowledge into practice in Latin America, a region to which I am personally very attached. So, I moved to Mexico City where I worked for almost five years developing sustainable and inclusive mobility, linked to road safety and health issues for the NGO Institute for Transportation and Development Policy (ITDP).

In February 2021, I joined the Active Mobility Academy (ADMA) as a training expert. The Academy is funded under the Energy Savings Certificate mechanism (Certificats d'Economies

d'Énergie) by the French Ministry of Ecological Transition, and is jointly coordinated by the French [Federation of Bicycle Users](#) (FUB) and [ROZO](#). Its aim is to provide France with the expertise needed to integrate cycling and walking into all public and private policies. It comes at a pivotal time in France, when the government has set ambitious targets for active mobility, in particular that of reaching 9% of journeys by bicycle by 2024.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

**How has the integration of gender in the field of active mobility evolved? In your local context (Lyon and Paris) in France and in Europe?**



In France, the research community has been studying active mobility from a gender perspective for over twenty years, yet it is only recently that public authorities have taken up this topic, and more attention is now being paid to how women and members of the LGBTQ+ community move and interact in and with public spaces. Unfortunately, this interest mainly exists in the larger French cities, and much remains to be done to integrate gender into cycling and walking policies across the rest of the country.

### **What are the factors that have affected this evolution?**

After decades of promoting a system based on cars that is inefficient in all aspects, more and more stakeholders are convinced of the need to turn to other solutions, which are cleaner and fairer for all. Past public policies and the state of research show us that it is not only important to put forward technical solutions for active mobility, such as the construction of a cycle network, but also to better understand usage: who walks, who cycles, how? And above all, who doesn't, and why?

This renewed interest in active forms of transport is accompanied by a growing number of movements demanding rights to mobility and to the city. Many of these movements have been led by women. For them, access to mobility and to opportunities (professional, educational, etc.) are much more limited than for men.

One only needs to take a look at the figures for the use of active forms of transport to see that inequalities persist. As we have been reminded in a [recent report published by the National Institute of Statistics and Economic Studies](#), 25.7% of walking trips are made by women, compared to 21.2% made by men. In cycling, these shares are 1.5% and 4%, respectively. In other words, although women walk more than men on a daily basis, they cycle less than men.

These inequalities in cycling are due to a number of factors, which have been pinpointed in the research. For example, women are more risk-averse than men, and are therefore less attracted to cycling when it is (wrongly) perceived as being

dangerous. In addition, women are under-represented in work-related trips, but over-represented in trips for tasks related to caregiving, in particular to accompany dependents. It is easier for women to walk if they have to accompany children or elderly people than to cycle.

### **Have there been any key initiatives (plans, laws, conferences, speeches, etc.) that have marked this evolution?**

The links between gender and active mobility, highlighted by the research community and civil society, are gradually being taken into account by professionals and decision-makers. However, they are still a big unknown for the general public and do not sufficiently encourage public action, in sharp contrast to the efforts made in the area of women's safety on public transport.

In fact, in 2015, the consultation carried out by the High Council for Equality between Women and Men in the Paris region (*Haut conseil à l'égalité entre les femmes et les hommes en Île-de-France*) revealed that 100% of women using public transport had been victims of sexual harassment or sexual assault at least once in their lives. This was no surprise for many women, but it did have a strong impact on raising awareness as to the importance of gender in everyday life; in particular, that gender is inseparable from people's experiences in public spaces. Harassment on the street when women are walking has been widely denounced, but only addressed by government security measures.

Overall, there is a lack of public reflection on the restricted access to active mobility experienced by women, and by all groups for whom public spaces and transport were not designed: children, LGBTQ+, the elderly, disabled people, migrant populations, etc.

### **In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

### **Have you identified any particular issues through your contacts with planning professionals?**

From autumn 2021 onwards, ADMA will be training various groups in order to further develop active mobility in France. Four levels of certification will be issued depending on the degree of specialisation of the training provided and the target audience, which will range from elected officials and experts in local authorities to the general public, and will include planners, design offices, educators and researchers.

After discussions with professionals from these sectors, we have identified a significant need for training on inclusiveness, which is a particularly sensitive issue for the Academy. For us, it is about fighting the preconceived idea that active mobility is the privilege of "young dynamic executives" in metropolitan areas, who are often men, and often white. To do this, we want to highlight the specific needs of user groups who have traditionally been excluded from active mobility.

Our resources and training content will provide the keys to understanding that different groups have different mobility needs, and that the obstacles to walking and cycling are linked to particular experiences and perceptions in public spaces. For example, our first training courses, which will soon be available on the [Academy's website](#), will specifically be dealing with the place of children in the city and active mobility.

### **What are the needs of professionals in terms of gender inclusion in their field, other than training?**

In addition to training, professionals need more human and material resources to establish

accurate diagnoses of the habits of these different groups and to evaluate the impact of active mobility projects and policies. More broadly, these resources could be used in real-life processes to co-design projects with these groups. Unfortunately, this is often seen as being too costly, rather than an essential enabler towards more efficient, more sustainable and fairer mobility.

### **What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

While any policy must respond to local needs and issues, we would also benefit from the establishment of regional guidelines, since we already know what the main obstacles to more inclusive active mobility are. In my opinion, it is essential to address "caregiving" practices in the planning of cities and mobility. This would enable us to adapt infrastructures, services and spaces to meet the needs of children, women and, by extension, all the people who have been ignored for too long by our production and consumption-centred societies which have generated the current inequalities.

Finally, promoting equality and diversity requires diverse people from different backgrounds to work in public policymaking. An effective roadmap should emphasise the diversity of these people in recruitment and elections, so that their knowledge of the use of spaces and mobilities can be translated into systemic changes.



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 824349

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## Col·lectiu Punt 6, Spain

## “We work to transform the mobility system through feminist urban planning”



**Col·lectiu Punt 6 (Blanca Valdivia, Sara Ortiz Escalante, Roser Casanovas, Adriana Cicoletto and Marta Fonseca)**

*Col·lectiu Punt 6 is a cooperative of sociologists, urban planners and architects based in Barcelona, working to apply an intersectional feminist perspective in urban planning. Col·lectiu Punt 6 has over 15 years of experience working on national and international urban planning, mobility and architecture projects, and in participatory processes, capacity-building, teaching and research. In November 2019, the cooperative published "Urbanismo Feminista. Por una Transformación Radical de los Espacios de Vida" (Virus Editorial). The cooperative has published numerous materials and guides to apply a feminist perspective to different aspects of design and planning. In 2021, it published "Movilidad cotidiana con perspectiva de género", a guide to integrate a feminist perspective in mobility and transportation policies. This guide was drawn up by Col·lectiu Punt 6 in coordination with the city of Buenos Aires and CAF Banco de Desarrollo de América Latina. <http://www.punt6.org/wp-content/uploads/2021/09/Guia-Movilidad-Cotidiana-con-Perspectiva-de-Genero-1.pdf>*

[@CollectiuPunt6](http://www.punt6.org)

**Could you briefly tell us something about your background, and the area of your expertise in the field of transport with gender and diversity? What field are you currently working on?**

Col·lectiu Punt 6 is a non-profit cooperative of architects, sociologists and urban planners with more than 15 years of experience in feminist urban planning. We work on architecture, urban

planning and mobility projects in different areas: designing and facilitating community participation processes, implementing urban planning and architecture projects, conducting capacity-building with government employees, other non-profits and neighbourhood organisations; conducting awareness-raising activities such as talks, walks and workshops, and conducting



feminist participatory action research. In the field of mobility, we have experience in active mobility projects (e.g.: study of bench placement; school paths; pacification of streets, and cycling mobility from a feminist perspective), and in public transportation initiatives (conducting safety audits from a gender perspective in train stations; advising regional mobility agencies on incorporating a gender perspective; making assessments and recommendations from an intersectional feminist perspective in public transportation agencies, designing surveys to analyse sexual harassment in public transportation, etc.).

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

Women from different fields (geography, urban planning, architecture, engineering, etc.) have been working for decades to make society aware that women, men and non-binary people use space in different ways, therefore generating differences in how they move. Since the 1990s, studies and laws have promoted the integration of a gender perspective in mobility policies. However, it has been difficult to break down the barriers imposed by men in this field to integrate this perspective. For us, the breakthrough is recognising all the efforts made by women in the past who have worked tirelessly to include a gender perspective in planning. We need to recognise their efforts and continue working to transform transportation systems. It is a long-term objective which is starting to see some changes, but we need to strive to make further changes possible. Women have advocated for decades for more sustainable modes of transportation, as users and activists, but also as academics and policymakers. And more efforts need to be made to radically transform mobility policies.

**Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

The biggest challenge is to change the bottom line used to plan mobility policies. There is still a

strong focus on transportation and infrastructures and not on mobility as an interpersonal, social, economic, and cultural process. In addition, the field of transportation is highly focused on engineering, and mobility infrastructures do not include a complex analysis of who uses them, with whom, and for what purpose. Women are also underrepresented in the field of mobility, both as staff and experts, but also in participatory processes with users. We need to increase the number of women and their diversity in the field of mobility in order to change policies. Without women, many issues are not addressed, and the current androcentric perspective continues to be reproduced. This has negative consequences for most people, since this perspective does not respond to the diversity of needs of people in transportation. First of all, 50% of the population are women, and secondly there is broad diversity in terms of users, such as children, elders, and people with disabilities, who mainly use sustainable modes of transportation.

In addition to increasing the number of women at the different levels of mobility policies, these women need to work to implement an intersectional feminist perspective in mobility policies in order to make real transformations in the system.

**What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

In the work we do, there are three essential elements to integrate an intersectional feminist perspective in the mobility field:

- 1) changing the priorities in the transportation sector, challenging the current productivist and capitalist view that responds to an androcentric model of transportation centring on motorised vehicles, and working towards a mobility system that places people's lives at the centre of the equation, taking women's sustainable mobility patterns and needs as a model. This means looking at mobility beyond the productive sphere and responding to the mobility of care, to trip-chaining and to sustainable modes of mobility (walking, cycling and public transportation).



(2) addressing gender-based violence in mobility systems to contribute to the eradication of violence that people are subject to because of their gender, race, ethnicity, age or abilities. And this should be done at all levels, developing protocols to address sexual harassment and gender violence in public transportation, but also creating mechanisms that challenge and eliminate gender discrimination and harassment within transportation teams.

(3) increasing the number of women in their diversity in the mobility planning and management processes across the board. This means guaranteeing women's access to different types of jobs in transportation, but also ensuring the diversity of women, in relation to class, economic status, levels of education, race, ethnicity, abilities and age.

### What are the main benefits of integrating a gender view in mobility and planning?

To work towards a mobility system that really responds to population diversity, to different needs and therefore to a fairer, more equitable mobility system. In addition, integrating a feminist perspective means learning about and adapting to women's sustainable mobility culture. We don't need to invent anything; we just need to place women and people's lives at the centre of the equation to effectively respond to the current climate emergency.



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## Dana Iuliana Voicu, Romania

There is still a long way to go!

**Ministry of Transport – Personal Adviser to Deputy Minister**

*Dana Voicu has an MSc. in Physics from the University of Bucharest and has been working as a consultant in Business Development Management and Project Management for over 25 years. She is currently a Personal Advisor to the Deputy Minister of Transport and Infrastructure in Romania, though she has worked as an advisor to different ministries since the early 1990s. She is a member of the Management Board of Intelligent Transport Systems and a member of the Romanian Association of Road Transporters.*

**Could you briefly tell us something about your background, and the area of your expertise in the field of transport with gender and diversity? What field are you currently working on?**

I have a degree in Physics, I am fluent in three foreign languages and another two at conversational level, and I am also a qualified teacher, so I have a solid background to understand and successfully tackle areas of transport requiring an integrated multidisciplinary approach such as transport safety management and ITS. Due to circumstances (the needs of my country at a specific time and being the youngest in a newly established institution), I was fortunate to be trained by foreign consultants and to participate in various courses abroad. Over time, I became one of the very few experts able to cover all the areas of integrated safety management, from human factor behaviour, infrastructure and vehicles to enforcement, environment, legal aspects (including insurance) and ITS.

Regarding my experience with gender & diversity, when I started (over 25 years ago), none of my

mentors were women, none of my bosses and/or persons in positions of power that I had to work with (both nationally and internationally) were women with one occasional exception (the Dutch Minister of Transport was a woman on two occasions), and most of my colleagues were also men (with two exceptions: the human factor psychologist and the insurance expert).

Over time, when I moved up to middle management, I had two other women in my team. I never felt that there was any pressure from top management to employ anybody based on gender or any other diversity aspects, nor was I encouraged or discouraged to pay attention to these aspects. I often found myself in situations where I was the only women in the room, sometimes lecturing a large audience, and sometimes even leading those meetings.

Over the years, women started to become more visible in transport in general although, in my specific area of expertise, their numbers have not significantly increased. Though I guess that this is not because of any type of discrimination but

rather because of the difficulty of the domain. There are very few experts in general. In general interactions, at professional level, I did initially feel discrimination, unlike my fellow men, because I had to earn my right to “be taken seriously” time after time. This “right” was never granted to me as I often saw happen with men. There were situations when my expert opinion had to be confirmed by men in order for it to be taken into consideration, or even believed. I was overlooked for promotion more than once.

**From your area of expertise - What have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

There are no breakthroughs about increasing gender and diversity in mobility.

**From your area of expertise - What are the biggest challenges to move forward in increasing gender and diversity in mobility?**

The biggest challenges to move forward are not solely mobility specific. They are at society level in general. As is the case with all “technical fields of expertise” the problem lies in early education. Girls must be encouraged to develop skills and passions that are not “traditionally” seen as girlish. There is nothing wrong in teaching girls how to use a hammer or a screwdriver or build something manually or repair a toy, for example.

**What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

Definitely, educational reform and societal change. I should also state that I am not in favour of “positive discrimination.”



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## Floridea Di Ciommo, Italy

## Something has been done...but there is a lot still to do!

**Co-Director of cambiaMO**

*Floridea Di Ciommo is the Co-Director of cambiaMO, a cooperative research institute based in Madrid. She mainly works on mobility needs, transport poverty and the inclusion of digital mobility services: all her research work has a gender-based focus. Her extensive expertise in the field has led her to highlight that the major hurdle ahead is to make people aware that a change is needed and that more than empowering women to explain their needs, we should work towards having men move aside to leave their place to women. She was hoping that the pandemic would help policymakers and experts realize that women are still underrepresented in the debate and in*

*transport jobs at all levels, but she thinks that there is still a lot of work to be done. At EU Commission level, she believes that it is more crucial than ever to have tools and teams that embrace diversity. However, to achieve this, a method whose infrastructure champions this is needed.*

**Profile**

Floridea Di Ciommo has a PhD in Transport and Urban Planning from ParisTech, and a MSc. in Economics from Bocconi University in Milan. She is currently the Co-Director of the cooperative research centre cambiaMO | changing MObility. She has extensive academic experience on travel behaviour modelling and transport assessment in various academic institutions and with different government authorities.

She is currently working on several national and European research programmes such as Inclusive Digital Mobility Solutions (INDIMO), a United Nations Development programme on Transport Equity Analysis (TEA, TU 1209) centring on transport assessment, and the EU Wise-Act Cost Action on Autonomous and Connected Transport initiative. Thanks to her research expertise on equity, travel demand modelling and gender approaches, she has been chosen to participate in two Transportation Research Board (TRB) standing committees on Traveller Behaviour and Values, and Women and Gender in Transportation, and she is the Chair of the subcommittee on Behavioural Processes: Qualitative and Quantitative Methods.

She used to work in academia at the ENPC-ParisTech, the French Institute of Urbanism, the UPM-Technical University of Madrid where she developed her research work on social capital and travel habits, UPC-BarcelonaTech and at the OECD on accessibility and needs in transport. Her special research focus is understanding the nexus between travel behaviour and equity issues. Now she mainly works in the area of mobility needs (a key issue in times of pandemic), transport poverty and the inclusion of digital mobility services. All her research work has a gender-based focus. She is currently working on defining a new method for mainstreaming gender data through a Diversity Equity Inclusive tool, with her US colleague Sheila Mitra.





### **In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

I am still waiting for these breakthroughs to happen. There is so much work to do. I hoped that the pandemic would open the eyes of policymakers and experts and make them realize that still women are underrepresented in the debate and in transport jobs at all levels. I still receive invitations to talk where I am the only women and often attend events where there are no female speakers at all. It seems that each tragic event makes us more and more invisible, and in transport, where men are the majority, it is so easy to forget about us.

### **Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

The big challenge is to make people aware that a change is needed and that more than empowering women to explain their needs, we should work on having men move aside and leave their place to women. The place for new masculinities is needed.

### **What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

It is more crucial than ever to have EU Commission tools and for teams to embrace diversity and for that to happen, we need a method whose infrastructure champions this.

### **Could you provide examples of transport measures that you think would suit gender and diverse mobility planning?**

There are so many: from the way streets are organised to public transport frequencies at off-peak times, from the assessments and reviews of current policies in transport with a diversity, equity and inclusive perspective to accountability with DEI goals in all the activities undertaken by policymakers and experts at all levels.

### **In your experience, to what extent do you think issues of gender and diversity are considered in the development of SUMPS or master plans, or the implementation of sustainable transport measures?**

Very little. In Madrid for example, cambiaMO made the first gender impact assessment on a major road infrastructure such as the M30 urban motorway. It is the only example I have in mind with a clear gender impact assessment of a transport infrastructure that is similar to a Master Plan or SUMP. Nothing else. And things are not getting any better in terms of diversity and inclusion. This is sad to say, but this is the reality of things!



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Heidi Krömker, Germany

## Travel predictability



### Professor – Technische Universität Ilmenau

*After her degree in Sociology, Professor Dr. Heidi Krömker managed various projects, for instance on “Usability in the software development process”, developing “Rules for designing user interfaces” and the “Introduction of the usability concept in the Siemens Group”. She was head of the User Interface Design Center of the Corporate Technology division at Siemens from 1995 to 2001. Currently, she holds a professorship in “Media production” at the Technical University of Ilmenau, where she has worked for 20 years. Her research focuses on “the design of new media” and “media production processes”.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I am a researcher in the field of Human Computer Interaction in the context of mobility. We have been conducting research projects on intermodality with public transport as the backbone for over 15 years. Our research approach is interdisciplinary with our disciplines ranging from communication science to computer science and engineering.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

The biggest breakthrough is video surveillance in vehicles and at stations to increase safety, especially for women. But there are a lot of other small steps that have also contributed to improvements. These include low-floor buses, additional information for passengers with special needs, such as facility information, multilingual information, and female staff on trains and in stations.

**Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

The biggest challenge is to make travel more predictable for people with special needs, especially in terms of linking different modes of transport. One example of this is making the travel chain predictable across different modes of transport from bicycles to public transport to car-sharing in terms of child seats, nursing facilities or even where to sit.

**What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

I see two levels here.

One centres on **equipping** vehicles for people with special needs, such as including space for wheelchairs, prams and pushchairs, and the **conceptual linking** of the various modes of transport, such as bike-sharing and local and long-distance transport.

The other level concerns the **information** that is

available to passengers about the equipment and the interlinking of the transport modes.

**Please, develop your ideas and reflections in detail. Since this is conceived as an in-depth interview, we need a text of around 1,000 – 1,200 words, always considering that the key point is the relevance of the content.**

I think there is a need for a coordinated framework plan for individual mobility providers with the following content. My considerations are influenced by a very good **master plan that the city of Freiburg** has drafted for the municipal government.

- Goals and guidelines for diversity mainstreaming
- Implementation of tools to operationalize the guidelines for heterogeneous processes at all levels of the organization
- Continuous process monitoring at all levels
- Development of a maturity model

### **Examples of Goals und Guidelines for Diversity Mainstreaming**

- Definition of basic standards, such as special needs situations and specific needs, consideration of cultural identities, acceptance of different ways of life.
- Definition of principles for participation and involvement that promote active and public participation in public life.
- Specifications for the promotion of diversity at work and in jobs by the employer in the area of mobility.
- Support for making work, private and family life compatible
- Binding integration of diversity principles in

training and continuous education

- Crime and violence prevention

### **Implementation of tools to operationalize the guidelines for heterogeneous processes at all levels of the organization**

The abovementioned goals and guidelines must be implemented throughout the organization and become part of quality management. In specific terms, this means:

- Diversity must be a matter for the CEO
- Each unit must implement these goals and guidelines at the action level.
- Each unit has a person responsible for ensuring the implementation of these measures.
- The measures must be documented and continuously monitored.

### **Continuous process monitoring at all levels**

All processes must be examined regularly to see to what extent the goals and guidelines have been achieved and further developed. Examples of this are:

- Good-Practice Yearbooks
- Information days
- Exchange with other modes of transport

### **Develop a maturity model that shows organizational units where they stand.**

Each department must be able to determine where it stands with the implementation of diversity measures. The Maturity Model shows the current status and the options for further development with regard to diversity.



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## Ines Kawgan-Kagan, Germany

## Inclusive mobility is not a matter of image

**Founder & Managing Director at AEM Institute**

*Ines Kawgan-Kagan has a PhD in Traffic Systems and acts as a consultant to municipalities and companies on gender and mobility. She is the Managing Director of the AEM Institute and is a researcher in the mobility research group at Goethe University Frankfurt. She is passionate about innovative mobility, transport and gender and other diversity aspects. Her mission is to promote social justice, equity and equality in mobility. This dimension of sustainability is often left out. She helps companies in the field of transport and mobility to achieve diversity with a special focus on gender. This includes work culture as well as users. Her PhD thesis at the Technische*

*Universität Berlin centred on the gender mobility gap in terms of innovative mobility availability. She is a lecturer and trainer at several institutions and universities. Her interdisciplinary background gives her a holistic view on the topics of mobility, transport and society, and she aims to create awareness on the subject and share her knowledge to shape future mobility.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

When I grew up, my mother worked because my father was at home due to health issues. She worked a lot, but I did not even think that this might have been unusual. We lived in the eastern part of Berlin, and I didn't think this was anything special. But the older I got the more I noticed that there were some invisible limitations because of gender expectations that were linked to being either a girl or a boy. The further I got with my education and career, the more I noticed hidden and even unconscious discrimination that people were not even aware of. This led me to become interested in why we have those expectations in our heads that generate typical male or female ways of handling things. When I was told about the gender gap in the use of carsharing in 2013, I was curious about why it was mainly men that used these services. I expected carsharing to be a pragmatic, environmentally friendly way of urban

mobility and thought it was a more female view on mobility. The people who did wonder what was behind the phenomena were not really keen to find out more about it or even work on closing the gender mobility gap. I thought this was my chance and dedicated my PhD to understanding what the mobility obstacles are for women and what could be done to promote carsharing with BEVs to make it more attractive to women.

Now, I am working on different gender and transport projects. We are working with mobility operators on how to make their services and projects more inclusive and attractive to women and we are advising municipalities and cities on gender-sensitive data collection and analysis and on what kind of measures they can take. Many of them do not know where to start with the issue because they are afraid to recreate gender stereotypes and make things worse. This is where my years of experience provide an advantage in offering the right advice.

## In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?

In my opinion, the greatest breakthrough is that the topic is finally on the agenda. The issues have been well known for decades – except for the new forms of mobility of course – but they never actually made it into regulations or got put into practice. I find a lot of students reaching out for information about the topic for their theses and dissertation projects. This means that a lot of new material is likely to be created over the next few years that can be applied in practical terms. The topic of gender and transport and mobility had traditionally been a niche area in academia and did not even make it into research projects that did not have gender as a focus.

## Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?

The biggest challenge for me is to make people understand that gender and diversity are part of sustainability. “Social aspects” is one of the three cornerstones of sustainability and considering gender in transport is not only a way to create a better image of a municipality or company. Looking at female mobility means looking at the mobility of half of the population. But we are still at the stage where these organisations are surprised when they find out about significant differences in this area.

Unfortunately, people tend to ignore the issues that are related to gender aspects in transport and mobility. They say “Yes, it is a really important topic, but we have different priorities at the moment!” And this “at the moment” becomes a permanent fixture. But the only way to get a commitment on inclusive mobility is to develop and plan the way we have always done and put gender assessment at the end of the process.

This enables you to analyse what impact your plans might have on people who do not meet the male standards. Accordingly, we need to develop official guidelines that address blind spots and make sure that gender is considered right from the start of a project.

## What road maps need to be set out to increase gender and diversity in mobility at national and EU level?

In order to develop these guidelines, we need to compile detailed information about potential biases in all areas of transport and mobility. This, of course, means we need to have the right data to identify blind spots. Unfortunately, the current data sets come from a male-dominated perspective. However, even existing data sets provide a lot of insights if we analyse them according to gender – which currently means men vs women. This is something that younger people especially do not understand. Why do we compare women and men? Shouldn't we get away from this heteronormative way of potentially recreating gender stereotypes? In my opinion, this is not actually an issue. All countries have a general gender gap. As far as I know, there is no country that does not have a gender mobility gap either. In order to eliminate disadvantages and provide gender-neutral or gender-sensitive transport, we need to know what the issues are by looking at male and female mobility. In our society, we have these pre-constructed gender-typical labels that shape our expectations about how women and how men are supposed to be. While we still have these labels, we need to know what they are so we can resolve them and balance out their disadvantages.



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Inés Novella Abril, Spain

## Gender in Transport: A key to improve both the container and the contents



**Associate Lecturer, Universidad Politécnica de Valencia.**

*Inés Novella is an Architect, graduating from the Universidad Politécnica de Valencia in 2008. She has also a Master's degree in Gender Quality and is currently doing her Phd on gender and urban planning. She has worked in an architect's studio and has also lectured on an Equal Opportunities Master's degree. She is currently a consultant, researcher and project manager at the Universidad Politécnica de Madrid, coordinating different consulting and research projects at the UNESCO Chair on Gender Equality Policies in Science, Technology and Innovation, in the university's Urban Planning Department.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I have a Master's degree in Architecture and a Master's in Gender Equality. At the moment, I am currently writing my Phd thesis on gender and urban planning.

I have been doing research and working on consultancy projects dealing with gender in spatial planning, including transportation issues, since 2011.

I have also worked on the implementation of the "mobility of care" concept for different regional and local authorities in their transport and mobility policies.

I perform consultancy work for different engineering companies on the introduction of gender criteria in high-speed train infrastructures, mainly hubs and stations, but also some railway crossings that go through urban areas.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

The most important advance is the awareness of how important trips associated with care and reproductive activities are, and how the volume of these trips has a similar level of importance to employment mobility.

I also think that the work done to include women in the sector as professionals and decision-makers is important, as this entails efforts in both horizontal and vertical segregation.

Safety issues are also important, both in public transportation systems and in public spaces (affecting cycling and walking).

**Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

The real inclusion of women in the mobility industry, particularly in decision-making and in



some specific sectors such as logistics.

I am also worried about the lack of a gender perspective in some sustainability initiatives. It is usually thought that women use the car less than men, but this is not the case for a specific, highly numerous group of women, i.e., the “taxi mums”. This group lives in medium/large-sized cities, outside the city centre, and has children. The only way they can meet all their commitments (work-life balance) is by driving a car. Car-use barriers have a gender impact. They affect women differently from men, not more or less, just differently, based on specific circumstances. It is the same as cycling, we need to introduce a gender perspective when planning this mode of transport.

### What road maps need to be set out to increase gender and diversity in mobility at national and EU level?

- At educational level, we need to start working with girls in the fields that might help them to become part of one of the economic sectors that will offer better jobs in the future. Digitalisation is key, but STEM skills are even more important.
- We also need to combine transportation with urban regeneration. Today’s large cities will never be able to work only with PT if we do not work in terms of spatial planning (densification, poly-centres, etc.).

I think there are two main fields of action: first the inclusion and promotion of women in the transportation sector; and second, the introduction of a gender perspective in the way we plan mobility on very different scales and topics. The ideal horizon would be to coordinate and combine these two fields, but they can be undertaken separately.

In terms of women in transportation, in mobility and logistics (which could be considered as a broader yet related sector) work could be carried out on two levels: the future and the present. It is important to retain the women already working in these sectors, by following gender equality plans and many other strategies already being developed through projects such as TinnGO and Diamond. Specific training is also a key element in retaining and promoting women. This should entail both hard and soft skills. I would also consider quotas as a good tool, at least initially.

As mentioned above, efforts must be made to engage girls and young women in STEM fields related to mobility, transportation and logistics, giving them some engineering and digital skills. Taking into account the fact that women tend to choose professions and studies related to social and caring topics, the fields of transportation, logistics and, in general, STEM subjects, need to be presented differently, highlighting the idea of social welfare, progress and quality of life. Some direct measures such as grants, internships, and mentoring programmes could also be implemented to attract young girls.

I think there are different strategies to be followed for the inclusion of a gender perspective in fields such as mobility, transportation and logistics. All STEM university programmes should include seminars or lessons on gender, so all engineers finish their studies with some knowledge and awareness of this topic. This work can also be done at professional level by specific and tailored training courses. It is very important to pay attention to the content, structure, length and approach of these courses on gender.



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 824349

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## Kristina Gaučė, Lithuania

## Gender inequality issue in transport is strongly culturally influenced

## Representative of the European Platform on Mobility Management (EPOMM) in Lithuania

*Dr. Kristina Gaučė has a Bachelor's degree in Urban Engineering, a Master's degree in Urban Transport Systems and a PhD in Civil Engineering. She was a Senior Lecturer on Mobility Management and Territorial Planning at Vilnius Gediminas Technical University until 2013. She represents Lithuania in the European Platform on Mobility Management (EPOMM), and is a member of the ECOMM (European Conference on Mobility Management) programme committee. She has over 15 years' experience in mobility/transport analysis and urban transport policymaking and she is currently the social partner/adviser on urban transport policy to the Lithuanian Ministry of Environment, the Ministry of Transport and Communication, the city of Vilnius and local public transport operators.*



**As far as I know, you work with innovative solutions related to communication and mobility. Could you give a brief overview of your job and your area of expertise in the field of transport / mobility related to gender and other diversity issues? What field are you currently working in?**

I specialize in the management of complex national and international projects, giving priority to projects focused on innovative, intelligent communication solutions which implement the principles of the UN's Sustainable Development Goals. I am also a representative of the **European Platform on Mobility Management (EPOMM)** in Lithuania, and a member of the ECOMM (European Conference on Mobility Management) programme committee for its annual conference.

More specifically, my educational background is in **urban planning**. My Master's degree was on **urban transport**, and my dissertation was on **mobility** and urban planning. These three themes have all been a constant in what I have done since then, through

my work in mobility management, transport, and territorial and strategic urban transport planning.

**From a professional perspective, do you perceive any challenges for people based on their gender or as members of specific social groups in the field of mobility?**

From the passenger's perspective, Vilnius, for example, is ideal for young men around 30 years of age, who use an electric scooter and mobility-sharing tools. The anthropology of the city itself is favourable to people who are aggressive and not afraid of choices, in a good sense. However, **women tend to have more household chores**, and their travel characteristics are different, so they find it more difficult to fit into this city context.

The sense of safety is also important. Very few females walk round at night without feeling scared. Women are very protective of both

themselves and their daughters. Even small but unpleasant experiences from the past make them more cautious.

From an employee's perspective, the inequality context has very little to do with the fact that this is a transport area. It is actually a cultural-related issue, for example, referring to a young woman as a "girl" in a negative sense, especially for a woman.

Equality. Although the proportion of women and men in Lithuania may seem relatively gender-balanced in terms of achievements, as there are quite a few women who have been successful in this field, this is not necessarily the case. There is a very backward attitude towards women. There are fewer women, but it is unclear whether this is because of the nature of transport itself or because it is harder for women to reach certain professional heights. Inequality itself, in my opinion, is more felt through the age culture, especially in the public sector. It is harder to make your mark because you're seen more through an age filter.

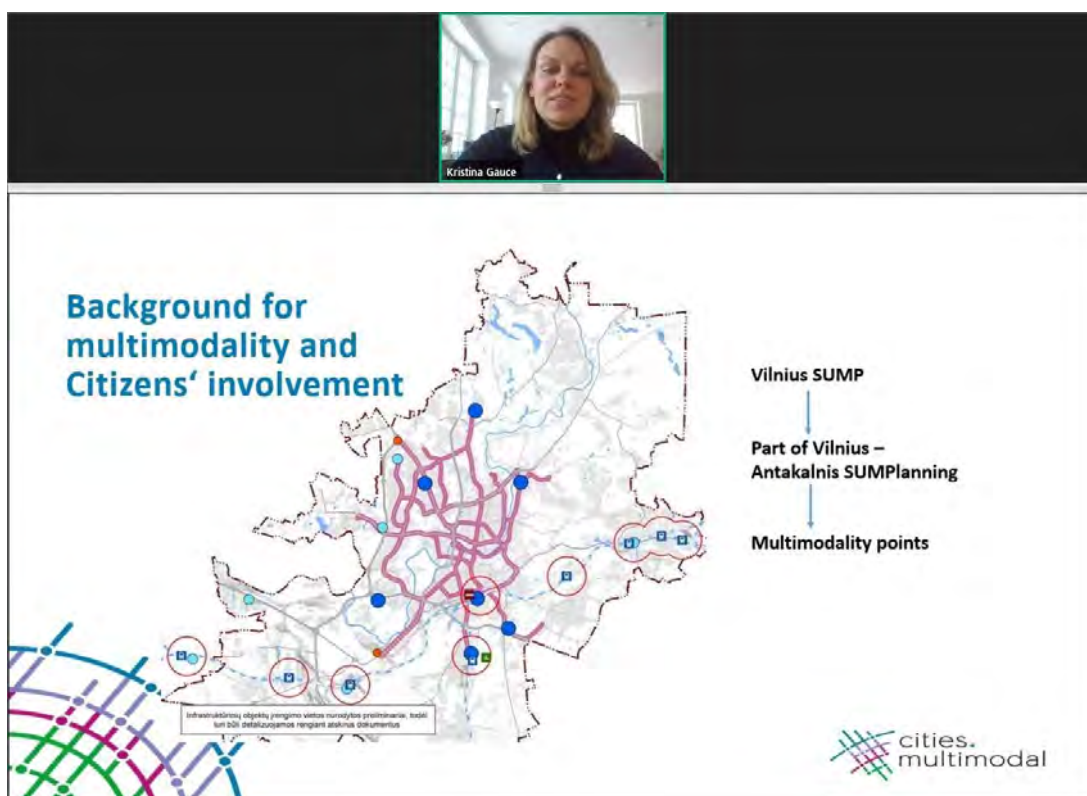
**Do you think that mobility (smart mobility) has the potential to be or become an equally accessible and convenient tool for all social groups? Could you share your views on this?**

I cannot really conclude that it is very unsafe, and the fact is that there is a great deal of exclusion that can be remedied with the help of processes or goods. At the moment, stereotypes and passenger behaviour are more relevant.

**The primary reason for using or not using a transport is price.** On average, about 15% of personal income goes on cars (if used) and about 3% on public transport (if used). Nevertheless, technology and smart solutions can sometimes achieve huge breakthroughs in the field of mobility, though sometimes this can be a drop in the ocean, but it may still be useful. However, I don't believe that this will fundamentally change the basic constants of mobility. There are certain constants in transport: the price of the trip, the number of trips, the duration of the trips. These will essentially remain the same, and they are the essence of the willingness to use mobility. Femininity plays a minimal role here.

**In your work, have you come across any breakthroughs in the field of mobility related to gender and diversity?**

What I really call a breakthrough (I take a bird's eye view of mobility) are the following elements: the advent of the **sharing economy**, i.e. cars and





bikes. Before this, a large part of the community found it difficult to easily reach the busiest public transport hubs. And now it is normal practice in the world to use an Uber, for example, to reach the main public transport connections. Multimodality and its growth through sharing platforms, including micro-gadgets (scooters), is actually changing the overall global picture. New modes of transport have arrived on the market which have changed attitudes from something that everyone wants to own to something everyone wants to share. In addition, shared spaces somehow also change human perceptions so that people don't feel as though they are an obstacle to traffic. Instead, they are equal participants in traffic. Sharing streets, sharing spaces, redesigning spaces to discriminate against cars is a sort of breakthrough. This shows a change in general cultural perceptions and self-identification with the city. It seems to me that there is greater emphasis in this area rather than in certain technological or engineering solutions.

**In your area of competence, what are the main challenges to increasing mobility in terms of gender and specific social groups?**

I would mention a totally measurable challenge: who will pay for it. There is an economic effect and a fear of doing various pilot tests that are costly and whose results are not clear. It is very difficult to summarize these challenges: how to get funding, how to get the right people, how to find a project host, how to coordinate or reach a decision with other target groups and key actors. Challenges also depend on the scale of the

projects (for example, bicycle storage – the leader of the settlements does not agree, the questionable metro issue in Vilnius – they are completely different challenges: starting with legislation that does not exist through to the absence of end users). The barriers depend very much on the situation.

**What plans need to be put in place to increase gender-based mobility at national and EU level?**

The overall indicator of Lithuania's backwardness and the challenge comes from its weak institutional capacity. Europe is developing good practices and tools that work for some individual regions but not for others. We do not have the strength or the knowledge to take advantage of the opportunities offered by the EU, for example. These opportunities exist, but there is no local talent. Theoretically, the bigger the umbrella, the easier it is to improve the situation and implement different solutions, but to do so, specific work needs to be done by specialists who are not necessarily professionals, so the benefits of these initial measures do not have much impact. There is a need to generate capacity at local level, because at a higher level, organization, planning and funding fade into the background in terms of institutional capacity. There are no professional solutions or intellectual power in planning terms. Political commitment is also felt in the nature of the problem.



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**Liliana Magalhães, Portugal**

## Lisbon paves the way towards a more gender inclusive cycling community



**Specialist in Mobility Policy – Innovation and Mobility Solutions Department at EMEL**

*EMEL has been working with citizens to better understand and help reduce the gender gap in cycling within the scope of the TInnGO project. We started with user research to better understand women's perceptions and barriers through a survey and in-depth interviews with female bicycle users and non-users. The following phase consisted of co-creating an action plan to identify solutions for more equal bike access for women and to reduce the current gender gap. This encompassed workshops in which female bicycle users and non-users were invited to co-design and validate solutions, giving them an active voice in the development of policies and measures.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I'm currently working as a Mobility Policy Specialist in the Innovation and Mobility Solutions Department at EMEL. In our department, we work to develop new mobility solutions and to improve existing ones in order to offer citizens the best possible mobility service. Our team is quite diverse in terms of background and experience in the field of mobility as we believe that this is a key aspect to produce the best possible outputs. In my particular case, I have a PhD in Transportation Systems and more than 10 years' experience in transportation research and consultancy. I have authored several articles in peer-review journals, conferences, and have been an invited lecturer. Over the years, I have had the pleasure to work in several fields within the transportation and mobility areas, for instance, in citizen engagement activities as a part of the co-creation process of solutions for mobility issues in the city of Lisbon. Gender and socio-economic

backgrounds were two of the main aspects we addressed, particularly regarding cycling.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

There have been major developments concerning gender and diversity in mobility in the last few years that are worth mentioning. The most important one is the awareness raised recently about gender and diversity in mobility that led to several research projects and studies related to equity. These pioneering works paved the way to understanding the problems and barriers and helped define future solutions which are currently being improved. I do believe that awareness has been one of the greatest breakthroughs since our society became conscious of issues which were ignored and often denied not so long ago. Awareness is an enabler of different individual behaviours which per se encourage small attitudes that lead to major changes. The other

major breakthrough is the fact that gender and diversity in mobility is now being addressed by those involved in planning citizen engagement initiatives. Citizen engagement is gaining pace and the involvement of gender and diversity representativeness ensures that the solutions developed (policies and measures) are more suited to those who need them and are better accepted when implemented as they assume co-responsibility for design.

**Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

One of the biggest challenges I foresee is the fact that one size might not fit all in terms of solutions (policies and measures) adopted in different cities. This means that according to the level of maturity of the mobility systems, for instance, depending on how well-developed bike-sharing systems are, the solutions needed to address gender and diversity might be different. Transferability assessment is fundamental.

**What road maps need to be set out to increase gender and diversity in mobility at national and EU level?**

A national action plan to address gender and diversity in mobility is essential to support the planning process. Moreover, EU guidelines on how to address gender and diversity in mobility are very useful as they give Member States which are not as familiar with these aspects a reference on where to start.

**What have we understood so far from interacting with women to help us understand the gender gap, particularly in cycling?**

In Lisbon, we are working closely with citizens to gather gender-disaggregated data so we can better understand the challenges and help to reduce the gender gap in cycling, specifically in GIRA (bike-sharing system). We began with qualitative and quantitative user research aiming at better understanding women's perceptions, barriers and fears when using different modes of transport. This work included an online survey and in-depth interviews with female bicycle users and non-users from different socio-economic backgrounds. The insights gathered uncovered several aspects which can help to explain the gender gap in cycling, namely, women tend to worry about safety due to a lack of appropriate infrastructure, a reduced sense of personal security at certain times of the day or in certain parts of the city, and the preconceived idea that only unconventional or eccentric women use bicycles in their daily routines, to name but a few.



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**Marine Chevallereau, France**

## Too few local authorities are proactive in including the question of gender in active mobility



**Senior Consultant, OpenCitiz, President of the FéminiCités association.**

*Marine Chevallereau has a Master's degree in "Governing the large metropolis" from Sciences Po in Paris. She works for the consultancy organisation OpenCitiz and is a lecturer at the University Paris 8, as well as President of the FéminiCités association.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I started working on gender and mobility issues when I was at ITDP, the transportation and development policy institute in Mexico City, where I wrote a report on gender and mobility which focused on the evaluation of policies to combat insecurity in public transport. I then participated in the Women for Climate network (launched by C40 Cities) with the city of Paris. The task of the group I was in was to understand what the obstacles to more inclusive and sustainable mobility were, and we worked on the analysis and creation of variables and new evaluation criteria for public policies, in order to take into consideration these mobility and gender challenges.

I am currently working at OpenCitiz, a consultancy

company specialised in territorial and urban strategies. I am also the President of the FéminiCités association which works on the links between gender and urban planning, and on raising awareness about mobility challenges. We also work with local authorities, and we have organised exploratory walks and public speaking training courses to encourage women to take a more active role in dialogue. I am also a lecturer in gender geography at the University of Paris 8, where we also deal with these mobility issues, but more from the perspective of "mobility of care", harassment in public transport, and the differences between low-carbon mobility and classic mobility, and the challenges at stake in each area.

**How do territorial innovation and urban development policies integrate the question of gender in the field of public space and active mobility?**

Very little. It is a topic that we are really pushing on our side and is one that has also become more and more popular over the last few years, partly because it is now compulsory for local authorities to include a gender section in public contracts. However, even if it is compulsory, very few local authorities are actually proactive about it. Some cities are very active on the topic e.g., Nantes, Lyon and Paris, of course, but it is not commonplace.

We tried to work on this with Women for Climate, but it is still very difficult because unfortunately it is not a well-known issue for many people. The fight against street harassment has gained in notoriety, which is great, but it is not the only problem on the agenda. While street harassment is very much a question of education, there is also a problem of urban equipment, and the way it is built. And it's a pity that urban planners and architects who design cities don't take a greater interest in these topics. In fact, we are well aware that the way we design spaces, and the way a metro, bus or bicycle lane are built will have an impact on our feelings of insecurity. However, this is unfortunately ignored on many occasions.

During a small study I conducted with students from the University of Paris 8 a few years ago, I followed them on their daily journeys home from university and I could see that, even in the middle of the day, there were major concerns about crossing specific pedestrian tunnels/underpasses. Some students preferred to take long detours rather than go through certain tunnels that made them anxious or they considered too dark or deserted, which brought up the issue of the five senses: seeing, being seen, hearing, etc., which has a huge impact.

### **What factors have influenced the evolution of gender mainstreaming in public space and mobility?**

From the point of view of elected representatives and local communities, the first factor is ecological. Often, the elected representatives we meet who are not necessarily sensitive to the topic of gender tackle it from the ecological side: "In the context of the ecological transition, we

need more people to take public transport, therefore we need to make it safer".

There has also been increased interest from the media over street harassment, especially thanks to years of activism by associations that have made it a public concern.

In schools, more and more work has been done on how we share public space from a very young age, and I can see these questions of sharing space and equality clearly in the courses I give to students who are quite young and much more aware than I was at the time. In the end, sharing space in the school playground influences the sharing of public and private spaces in young people's lives.

Project calls put out by the State, e.g., the future investment programmes (PIA), "Action cœur de ville", "Petites villes de demain" etc. have contributed to this mainstreaming, as mobility is often a big topic in these programmes. For instance, in the context of work carried out in Villiers-le-Bel (Parisian region), the question of mobility and gender came up throughout these programmes, as did housing, highlighting the fact that there is a tangible link between egalitarian housing, the way in which housing is built, and public space. Indeed, the way we behave in a private space will necessarily influence our behaviour in the public space and vice versa. And I find that reconnecting the two is very interesting because it also links up with the ecological vision, giving a general overview of the urban fabric and the way we live in cities.

### **Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

I think that the major challenge is consultation, and this is the big thing missing in mobility policies. In urban policies, this is starting to move forward a little, as I said, because there are quite a few programmes and efforts being made. But in mobility policies, it's still something that is decided by a few design offices and transport operators. Citizens also need to be involved in



decisions. Of course, I know how difficult it is, with local authorities having less and less money available, due to fewer state subsidies.

It also depends on the capacity of some design offices and operators to self-reflect. But this equilibrium is very difficult to find because there are huge financial stakes involved for the big operators. The biggest challenge is real consultation, i.e. managing to target people properly. Because in any case, when there is no consultation, there is a lack of transport services afterwards.

### How would you compare the situation of gender in mobility between Mexico City and Paris? What conclusions would you draw?

It is a totally different scenario because Mexico City has separate, women-only passenger cars in trains. This was originally a short-term solution supposed to bring equality, but it didn't work. There are also some specific women-only buses and taxis. In Mexico City, it is an issue that has been integrated and they have decided to deal with it in this way, so the bottom line is already very different from Paris. Moreover, Mexico City is much bigger than Paris, the distances are much greater, there is more room for cars, and there is much more informal transport. There are some things specifically for women, but the levels of insecurity are still very high.

The problem with separate-gender transport is that it is a great short-term solution for women's safety, but the idea is to find a long-term solution and we are not there yet. And once again, if informal buses are removed, this takes away means of transport for women. This is a big issue, and it's very complex to find a balance between the need for safety and security, which is obvious, and the need for service, which is currently filled partly by small informal buses.

Paris has a much stronger, more assertive policy of ecological transition. Gender-wise, the RATP has implemented many measures to address insecurity in public transport and they have trained agents to monitor it. However, although they have put some things in place, such as emergency numbers to combat harassment, most users have no idea they exist.

It is just two ways of dealing with things but, in both cases, there are still enormous levels of insecurity which lead to highly costly avoidance strategies.

**Please take note that my opinion is my own and it does not reflect or engage FeminiCités or OpenCitiz officially in any form.**



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## Marion Lagadic, France

## Engaging with intersectional identities is necessary to understand the wide variety of women's mobility experiences

**Scientific Director of 6t**

*Marion Lagadic holds a Master's degree in Urban Policy from Sciences Po in Paris and an MSc degree in Regional and Urban Planning Studies from the London School of Economics. She is currently a PhD student at the University of Oxford working on the link between gender and cycling, using the city of Tokyo as a case study. She is the scientific director of 6t, a Paris-based social sciences research company specialised in mobility.*

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

I am the Scientific Director of 6t, a social sciences research company specialised in mobility and transport. At 6t, I have worked extensively on shared mobility, and shared micro-mobility in particular, (scooters, bicycles etc.) with frequent issues of inclusiveness.

As part of my PhD at Oxford, I study the role that cycling plays in gendered lives and the link between gender inequalities and cycling in Tokyo. Past research on women's cycling practices, based on Western case studies, suggested that gender equality would be conducive to women cycling. While this appeared to be the case in Europe, this result does not hold in Japan. Japan is still marked by strong gender inequalities, and household tasks (housework, family care) are taken on almost exclusively by women. Yet, a majority of cyclists are women.

**What major conclusions would you draw from your study on the link between cycling and gender in the context of Tokyo? Why is there such a difference between Japan and France in terms of women's cycling?**

The study is still ongoing, there are preliminary results though these could change. In the past, research has tended to adopt an infrastructure-based approach in order to find quick operational solutions to make mobility more sustainable and more inclusive. There has been a lot of research based on European countries where women cycle less (e.g., France, UK) and countries where women cycle more (e.g., Netherlands, Denmark). This research has found that women are more risk averse and that providing good infrastructure would lead to an increased number of women cycling. While this reasoning is not wrong since it has been proven in many contexts, it is too euro-centric: conclusions from European case studies cannot be used to draw universal conclusions.

Through my work on the city of Tokyo, I am exploring a cycling practice that is very much driven by women, since 57% of cyclists are female. In Tokyo, cycling is mostly used in relation to household chores, shopping, administration tasks, children, with these representing up to 60% of cycling trips (excluding return-home trips), all in a context where there are few cycle lanes and paths. In Tokyo, there are 70 km of recommended cycling routes compared to around 1,000 km in Paris, even though Tokyo is much larger than Paris. Yet, the urban context is particular, with a lot of narrow streets where cars drive slowly, and many alleys where cars can't even get in. This is perhaps a vernacular form of cycling infrastructure that exists without a proactive public will to promote cycling. My research endeavours to study this specific women-led cycling practice in the context of Japanese society. In Japan, women spend on average about 23 hours per week on household and care tasks compared to five hours for men (and 43 hours compared to eight hours for couples with children). The sharing of these activities is therefore based on a very gendered model.

Compared to past research based on European cases, these results suggest that while infrastructure plays a key role, the complexities of women's modal choice cannot be reduced to the absence or presence of cycling lanes. This gendered cycling practice that I am studying in Tokyo takes place in a particular urban context, where public transport is very efficient within the city, where cycling has been considered very natural since the post-war period, and where Japanese bicycle manufacturers have long been selling bicycles especially designed for mothers with children, called the Mamachari.

The main conclusion is that the relation between gender equality and women's cycling practices is complex and can only be understood by looking at the wider cultural, economic, political context in which women make decisions regarding their daily mobilities. This complex relation is overlooked when the focus is exclusively on infrastructure.

Another important finding while analysing public policies and national/municipal cycling promotion strategies in Japan, is that there are many mentions of work-home commutes and the need to facilitate cycling to work, highlighting the links to the economy. However, women, or the link between cycling and care are never mentioned in these documents. Therefore, public policies are conceived based on imagining the cyclist as an active man rather than a woman who may be working part-time or a full-time mother. The specificity of care- and housework-related cycling trips, mostly taken on by women, is not tackled by policymakers. This research also highlights the importance for communities and governments to think critically about their images of cyclists, and how that influences their decisions because I don't think it was a conscious choice not to respond to that practice, it is rather the result of a policy culture that is very much focused on the link between mobility and economic dynamism, hence the focus on commuting trips.

**As part of your work with 6t, you are studying the impacts of shared mobility services on urban transport ecosystems. How would you say shared mobility services integrate the gender dimension in their activities?**

I believe that today, many operators are aware of the fact that women are poorly represented among their users. The starting point when we think about cycling is that the basic user profile (in Europe and the US) is an upper class, highly educated, relatively young man. This is exacerbated when we look at shared mobility: users of free-floating bicycles or scooters are even more likely to be men, even younger and even more highly educated. There is a selection bias, and the fact that shared mobility services tend to be quite expensive may contribute to this lack of inclusiveness. Many operators are taking up these issues. At 6t, we have carried out a study for the scooter operator Voi on the inclusiveness of shared micro-mobility services. These services must also be placed in the complex context of gendered life, meaning that

women do not have the same constraints as men in their daily lives; they tend to have fewer resources in terms of time and money, and this may also impact on their willingness to try new services as their routines are quite constrained.

However, steps forward are being made. For example, Voi joined the association Femmes en mouvement in France and Women in Transport in the UK. They are trying to interact with professional women who could give them concrete leads beyond adapting their communication strategy. Indeed, as long as inequalities between men and women exist and as long as women face so many constraints on their available resources for mobility, these services will remain less accessible to women than to men. Addressing this specific issue is very difficult.

#### **What avenues of improvement for integrating gender into mobility could be drawn from this study for the French or Ile-de-France context?**

I think that an important first step is to better understand women's mobility and the constraints they face. Nowadays, when designing a new mobility policy, the starting point will generally be to look at household travel surveys to try to collect data on the trends that need to be addressed. This data tends to be presented as a neutral truth, whereas data is never neutral. It is always created with predefined categories, according to a certain vision of the world, whether that person is aware of it or not. When studying mobility practices, often the category of 'constrained trips' will be put forward. Constrained trips include home-work trips, whilst journeys related to grocery shopping or childcare, are not considered to be constrained, though they clearly are. They are constrained due to women's socially enforced care responsibilities, which are as binding as a job contract, if not more so. As a consequence, the constraints faced by women tend to be overlooked, especially when work-related trips are the opposite of what are defined as leisure trips. This is an argument that has been made by the Spanish researcher Inés Sánchez de Madariaga, among others. I think that

we really need to think collectively to truly understand the constraints that women face and have the right data to address them.

Intersectional approaches are also very important because being a woman is one thing; but being a woman of colour or a woman with a low income is not something totally different. And the experience of a woman of colour is not equivalent to that of a white woman, combined with that of a man of colour, for instance. Engaging with these intersectional identities is necessary to understand the wide variety of women's mobility experiences. The most important step is to accept the complexity of this issue, and not try to simplify it in order to find solutions that perhaps fit into a pre-existing mobility plan. Going back to women's mobility practices, Rachel Aldred has shown that in the UK, when the cycling modal share increased, after investment in infrastructure for instance, the profiles of cyclists did not necessarily diversify. The new cyclists tend to have the same profile as before, i.e. men with a high social status. Even if it is an uncomfortable truth, there is no single solution to all mobility constraints, because mobility sits at the core of everyday lives that are classed and gendered.

#### **Based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility in France?**

The first important step that I see is to review the way we produce basic data used for decision-making in order to better take into account the link between gender and mobility practices. I think women's mobility practices should be studied in the context of the society in which they live. For instance, inequalities in the labour market and conservative welfare state provisions will have an impact on women's daily lives and, in turn, on mobility practices. Women's mobility practices can only be understood in light of these structural gender inequalities.





Finally, last but not least is the need to increase female representation among experts, decision-makers, companies that offer these services, and operators so that their experience and their voices are heard and taken into account.



This project received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement N° 824349

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## Nicole Kringos, Sweden

## Female Talent and Innovations will pave the road for Smart Infrastructure



**Professor in Highway Engineering at the KTH Royal Institute of Technology and Director of the KTH Road2Science Competence Centre.**

*Nicole Kringos is the first female professor in Highway Engineering in Sweden, teaching at the KTH Royal Institute of Technology. She is also the Director of the KTH Road2Science Competence Centre. Her research focuses on asphalt roads, the development of computational and multi-scale models for long-term performance predictions, and innovation speed in the transportation infrastructure sector.*

***I make a conscious effort to talk about being a mother and to discuss other subjects that come with being a woman. It is important to show that we do not have to become male to be successful in a male world.***

**Can you tell me about your background?**

I am a structural engineer by training and my interest in asphalt was sparked during my master's studies. I moved to Sweden from the Netherlands 10 years ago, and I am now the Director of the KTH Road2Science Competence Centre and the first female professor in highway engineering in Sweden. I am a mechanics specialist, but in my role at the Road2Science Center, I work closely with industry to raise innovation capabilities. In 2020, I organized a webinar with Caroline Criado Perez, author of *'Invisible women, exposing data bias in a world designed for men'* and in spring 2021, I chaired an international conference on the combined subject of digitization and gender data bias in the infrastructure and mobility sector.

**How does gender equality relate to infrastructure?**

We embark on digitization to enhance efficiency

and to raise systemic sustainability. There is even a belief that if a computer does the job, there is much less bias. Yet, digitization means an inherent dependency on data. However, as data was predominantly collected in the past and given that mobility in the past was mostly represented by male travel, this turns into a problem when designing the future. We know today that women travel in a different way compared to men. We also know that women use digital tools differently to men. So, when design considerations are made by teams of mostly male designers and policy is shaped by mostly male decision-makers, the female perspective is missing throughout the value chain. The infrastructure environment is still quite conservative, risk-averse, and very masculine, and a mismatch between old and modern development expectations often makes young engineers leave the field prematurely.

## How can we improve gender equality in infrastructure?

I see smart roads and the push from electrified and autonomous transport as an important development towards increased sustainability in which transportation infrastructure itself plays a crucial role. But to get there, we need to change the process. Women need to play an important role in this. We are more used to thinking about the entire value chain, handling many challenges at the same time while having a peripheral vision of the needs of other stakeholders. The female perspective is needed now more than ever, not only to bring together stakeholders to make these new collaborations work, but also in driving the novel cross-disciplinary knowledge developments that are required. Women are generally less stuck in a subject area and are less nervous of stepping outside their comfort zone, which is what cross-disciplinary work requires.

Women in general like more complex and creative fields. Women also like the sense of urgency and the fact that new thinking is required, which means they feel more driven to engage in new subjects. Women that make it to the top of male-dominated fields have learned the hard way not to emphasize the fact that they

are women. I think this is a mistake that we need to rectify. I make a conscious effort to talk about being a mother and to discuss other subjects that come with being a woman. It is important to show that we do not have to become male to be successful in a male world.

Road2Science students are consistently exposed to the different careers of a wide variety of individuals in the construction sector, and yes, there are more women than men, because I often feel that women who work in this sector have learned to survive against many bad odds and are actually more interesting people with very interesting stories to tell. Women generally do not hide the mistakes or failures in their careers, they show them as learning points. Our engineering students do not benefit from macho-style career stories, it only makes them more insecure about the choices they have to make and in fact leads them to pursue other careers, which is not what we want.

It is important to enable young children to learn about engineering subjects. They like discovering the world. They like building things, and they like to learn about the laws of nature, as this is part of





understanding their surroundings. Somewhere along the line as they grow up, this approach disappears and they lose interest in STEM subjects, especially girls. Universities need to collaborate with industry and work closer with schools. We need to give teachers a new vocabulary, access to our R&D infrastructures, give them role models and help them teach children about STEM subjects in the contexts of sustainability and to understand why technology is needed. If we could help teachers to use our laboratories and create 'MakerSpace' and project-driven education, I am convinced more women and even other types of men would start to choose engineering subjects.

### **What is your experience in this male-dominated environment?**

I could list many occasions in which I was the only woman in the room and, as such, was confronted with the established old-boy networks. It is of course hard to make a change or transform a perspective within an environment if all the other people there seem to agree with each other. But I never allowed myself to be sidelined. I have always been convinced that good preparation, ensuring you have sufficient knowledge on the subjects you are talking about and the ability to deliver at the end of the day is most important. And there is a certain amount of stubbornness. I prefer to be respected over being liked. It is important to establish a working environment that is grounded in mutual respect and openness, and which welcomes disagreement.

### **Why hasn't Sweden made further progress despite viewing itself as a leading country in gender equality?**

We are still not seeing the numbers of women that we would like to in many engineering disciplines. I think there are many different aspects that contribute to this. The education system in Sweden is very segmented in its approach. I feel too little is being done in primary and secondary education programs to make connections between subjects, to make STEM more relevant to societal challenges and to showcase the career options people have in these fields. Sweden also has something that I call the 'compost syndrome', if we wait long enough the

problem will go away. These two factors do not help gender equality or diversity issues.

### **What have been the greatest breakthroughs in your area?**

I do not think we are there yet. I think we first have to establish a common understanding that we are on our way to a more complex transportation infrastructure system that can no longer go about its business as usual. The push for electrified and autonomous traffic and its associated industries combined with the urgent sustainability goals will drive this awareness. My hope is that we can make changes in the framework of the system, change the rules of the game, enable new risk-sharing structures and, as such, enable traditional stakeholders to take the lead in this change process and establish sustainable partnerships with new stakeholders. If we can reach that stage, the changes in this sector will lead to a more equal and diverse workforce at all levels.





## What is the way forward?

In my opinion, the way forward needs to come in two stages: firstly, all the individual stakeholders need to reevaluate their own roles in the industry and make the required changes in their own structures. Here, I mean academia, industry, municipalities and governmental agencies. The second stage in this is establishing effective dialogues between these partners to discuss the different options and changes that need to be made together. As infrastructure is a common good, we cannot compare its innovation mechanism to other sectors. The infrastructure industry is known for its low profit margins, high start-up costs, short timelines, and large risk aversion. The benefits of innovation need to come to those investing in its development. Companies need to be able to set long-term goals and evaluate costs and profits on similar timelines. This requires discussions on changes in procurement rules, on co-ownership, on investments, on operating standards, and on the legal framework but, most of all, it requires a cultural change. We need to welcome partnerships with new stakeholders that will enable some of these transformations to take place.



POLITECNICO  
DI TORINO



CITTA' DI TORINO



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## Rachael Etebar, United Kingdom

## Women in British Transport Police

**Director of People & Culture, British Transport Police**

*Rachael Etebar (FCIPD) joined the BTP in August 2018 as the Director of People and Culture and is responsible for people, health, safety, wellbeing, diversity and inclusion. She was previously Group HR Director for the Department for Transport and has held a number of senior HR roles within the Civil Service and the private sector.*

*Rachael is a Chartered Fellow of the CIPD and is currently studying for a part-time Masters in Global Diversity Governance at Coventry University.*

***“When you have worked in an old fashioned, very male force, you don't have female role models, so the appointment of a female Chief Constable has really meant something to our people”.***

**Can you tell me a bit about your background and how you came to work in the British Transport Police?**

So, I'm an HR professional and have been for over 30 years. I joined the Civil Service 12 or 13 years ago as a knee jerk reaction to the unethical practices I was seeing and experiencing in the private sector, and I ended up being the HR Director for the Department for Transport. Then, later, I moved into the BTP, which is an arm of the DfT, as its first-ever HR Director. The BTP polices the entire passenger and freight rail network, including the stations and their entire footprint.

**What sort of areas are you currently working on and improving in the gender diversity balance?**

We have three groups of staff in our organization. We have police staff, so the traditional administration roles, where we have very good

gender representation, just slightly under 50%, but quite a lot of senior people, including a female chief constable, as well as seven people on what's called the chief operating group, which is the equivalent of the executive committee, who are female, and lots of department heads too. Then, we have police officers where we have very poor representation. In fact, we've got the worst representation out of all 46 forces in the UK, with just 21.7% of female officers when the average is 33%. Part of our problem is because of the national and geographic footprint we police. There is an awful lot of travel involved and it involves shifts.

Plus, our training centre is in London, so women are not very open to coming to London for 20 weeks to train if they have caring responsibilities.

And our third group of staff are what's called Police Community officers where we have a

slightly better representation. It's in the mid 20s, though this is still very low.

We have made improvements since I started. For example, all the images on our recruitment table when I joined were people in uniform with guns and with dogs. All the language was about chasing the bad guys down and the whole approach was really masculine.

And it gave a false representation of what we actually do, because most police forces spend 80% of their time on bread-and-butter crime. 80% of our time is spent on vulnerability. If you want to run away you go to a train station, if you're homeless, you often go to a train station because it's warm and it's dry. We get a lot of drunkenness with football matches which brings opportunistic crime and rape. And we also get a lot of trafficking of humans on trains and a lot of what's called county lines, which is using young children to carry drugs around.

So, we've done a lot of changing our advertising material to focus on protecting lives, protecting you when you go to a social event, or on your daily commute.

And we try and emphasize this kind of messages in our recruitment. We're in the middle of putting together the first ever part-time police officer recruitment campaign and we just upped our maternity leave so it's now 26 weeks full and 26 weeks half pay.

We are trying to improve this so we can focus on family friendly and we are doing a lot of work at the moment on senior role models and female role models, like the new Chief Constable talking about balancing work and life, and the fact that she leaves when it's her child's school sports day to try and make it more personable.

There are ethical dilemmas, which include tackling sexual harassment. That "boys' club" kind of behavior was rife when I came in. I got patronized myself by people. There was really inappropriate behavior, about sexual relationships, bullying, and harassment. So, we've done a campaign about harassment at work, and we have had a huge rise in complaints, but that's good because I think we're flushing it out. We've

had some high-profile dismissals and we publish who's been dismissed and why they've been dismissed which causes shockwaves. So, it's challenging all these really old stereotypes and old behaviors that kind of have been there systemically for a very long time.

Nowadays, the millennials have very different views about what is gender, what is sexuality and everything else and are not prepared to be treated differently. And there's a real clash of culture between our long-serving normally male officers and these millennials who just won't tolerate it.

We've got our first ever transgender police officer now, who is open and proud to be trans. We've also got our first non-binary police officer and we had a massive debate about uniforms because uniforms are genderised. Men wear a tie, women wear cravats, and men wear the big hat and women wear a bowler hat. So, we've now changed our uniform policies as a result of this person coming in, so people can choose which clothes they want to wear.

I also get questioned as to why we want to gather gender data? Bus users are bus users. I find it very hard to understand where they're coming from, why they don't think we need anything, but I'm trying to say that if you're a transport operator, these data will improve your passenger numbers. It will improve the numbers of people who want to come forward and use your service. It will improve safety.

**Do you get many issues from the women who work within the service about their safety? What concerns do they have?**

Not huge amounts, because obviously we put them through personal safety training. They are trained to keep themselves safe. We also teach them diffusion techniques to talk people down, but we do get women assaulted and we get on average 15 to 20 officers a week assaulted, of which a proportion are women. But there's not a differential in the numbers of women, so we're not seeing women targeted as such.



**Thinking about women as the passengers then, are there any specifics that your staff are trained to look for or be more mindful of with women passengers?**

Absolutely, even though I work for BTP, if I'm on a train late at night, I always let my husband know which train I'm getting.

I would never get in a carriage just on my own or at the ends of the train. I'd be in the middle with other people, and I always worry if I'm going to the station I normally go to which is a little village. I might go to the nearest town because it will be busier, because I don't want to be getting off on my own in a deserted place. I worry if I have to walk to the car park. I worry if it's not well lit. I carry keys in my hand.

I had a conversation about this with my chief constable who said she feels very different when she's going home in a uniform as it feels safe. So, when she goes home in civilian clothes, she's a normal woman with all those fears.

We've got a big campaign going at the moment with the train operating companies about violence against women and girls, we're seeing an increase in rape and sexual harassment, particularly during COVID with the trains less occupied and people travelling at different times of the day compared to their normal commute.

This is a concern, but we have one of the best levels of resolving rape compared to other forces, but it is still only about 28%, which is absolutely shocking.

It's a systemic societal thing. And this is just one of the symptoms of it. Similarly, we get pretty high incidences of domestic abuse on trains often again involving alcohol.

So, our officers are trying to spot and intervene where they can and we've done quite a lot in safeguarding vulnerable women who've been trafficked. East European gangs seem to like to take the women that they're trafficking into prostitution onto trains to move them between areas. It's surprising the things that happen on trains.

So, what would you say then has been the biggest breakthrough in terms of gender and diversity in the workforce? Where would you say you've broken down these barriers?

In us. I think it's the appointment of a female Chief Constable for the first time in our history. We've been established for well over 100 years. But it is a very traditional old-fashioned force. I think the first appointments that the Chief Constable has made have been two women. So, I think that is a real strong signal. And actually, I've been surprised about how many women in the organization have said wow! If the Chief Constable can do it, so can I. Because I think that, if you have worked in a force for a long time which is very old fashioned and very male, you don't have those role models, and it's really meant something to our people, so that's really important.

Now, instead of bringing everyone to London, we're going to try and deliver a load of our content digitally and only do things you absolutely have to have face to face like personal safety training in London, and I'm hoping that will make a real difference to our recruitment. A part of the business case for investing in this new learning development approach was that 30% of candidates drop out. Female candidates drop out of the process once they realize they have to come to London for training. So, if we can turn that round and turn those that want to be police constables into recruits that will have a really big difference on the bottom line.

**So where do you want to go next then? What big idea do you have now after you've been making all these changes?**

I'm basically refreshing all the basics. I've just got a consultant in to go through recruitment top to bottom with the diversity lens about where else we can make changes and nudge things along and make a difference whether for women, ethnic minorities or others.

And we're just about to roll out a new leadership

program, which includes a whole module on diversity and inclusion. I've also completely changed our recruitment processes for senior leaders, which is something I've been wanting to do since I got here. The one I was doing today was chief superintendents, where we made them answer questions about what they've done on diversity and inclusion, what they have done on building stakeholder partnerships, what they've done about creating links with communities. Before, all their questions would have been about the operational things they've done.

I think that kind of softer approach gives level ground for women, because women tend to be better than men at these kind of collaboration approaches, like diversity.

But there's a lot more to do, and not just for us, but in the rail industry in general. I had a survey done last year about why women don't apply to be police officers with the BTP and the whole thing about policing, about am I physically strong enough, about will I get hurt and will I have to work at night came through. However, the whole perception that railways are a dirty dangerous environment also came through really strongly. So, we feel like we're dealing with the stereotyped image of policing and then we're dealing with the image of railways as well.

**So, basically you are trying to change a culture.**

Yes, but it takes years. It really does take years and it takes a concerted effort. I think with the Chief constable on board with it and now the fact that all the Chief Officer group has come into the fold means it suddenly feels like we are all pushing in the same direction.



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## Rūta Juodelytė, Lithuania



**Public Administration Specialist, Equal Opportunities Integration Group of the Office of the Equal Opportunities Ombudsman**

***The accessibility of services should be holistically integrated here and now***

**Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity (racial, ethnic, age, etc.) in the field of transport / mobility? What field are you currently working in?**

I work in the Equal Opportunities Ombudsman's Office. I am a public administration specialist, and I mainly work with municipalities. I am also a project manager as I work in other fields, not only with municipalities. We look more closely at mobility from the perspective of integration. We have not done any special research on this, but we have been in contact with researchers from Spain and staff from the EIGE Institute regarding mobility aspects. In addition, when working with municipalities, we know from experience what is relevant in this matter. But our professional everyday reality centres on practical perspectives, though we have not done any research and we have not analysed that topic in detail. The only area where our mobility service is more significant is related not only to gender issues, but also to people with different disabilities. We are also intensifying our work on issues such as providing information in easily accessible language, the accessibility of public services, public transport accessibility, access to information (websites must be especially adapted for the visually impaired), and we work hard from the perspective of people

with disabilities since we receive complaints, examine them, provide our insights and comments, and make them public.

**In your area of expertise, what have been the greatest breakthroughs with regard to increasing gender and diversity in mobility? And, based on your experience, what are the biggest challenges that need to be addressed with a view to increasing gender and diversity in mobility?**

We hear from people with different disabilities, telling us that websites have not been adapted for the visually impaired, so we are working very hard to make our own website accessible to all groups, by working with colleagues from the Information Society Development Committee. We try to make all the measures available in practice, not just formally.

For specific examples of the challenges, I have experienced some personally. I have found that mobility varies greatly between urban and rural areas (remote areas), where there are more older people and women, and transport is very limited. In winter, people's mobility can be hampered due to the abundance of snow. We, as an organization, are more likely to look at those services in terms of how the municipality should



strive to provide them so that they are real and accessible. However, this depends on certain groups. In cities like Vilnius this may not be such a big problem, but in rural areas it is definitely more of an issue.

Another thing we are talking to municipalities about is public services and public transport for when an industrial facility, such as a factory, which is predominantly staffed by female employees, is set up on the outskirts of a larger city. We discuss the need for transport and mobility to be safe, which means certain conditions must be met, such as close stops, adequate lighting, the absence of bushes around stops, the absence of stops in forests, in order to ensure maximum safety on the way to and from work. Moreover, people working outside the city should also be provided with proper communication so that they do not need to change 15 times on the same trip.

**In reality, do you think that mobility (smart mobility) has the potential to be / become an equally accessible and convenient tool for all social groups? Can you share your perspectives?**

I am not a specialist in organising transport services, but I would imagine that if the municipality wanted to, there are ways to do it. Maybe it wouldn't be a 100% ideal option, but maximum effort could certainly be invested. For example, in the city of Gothenburg in Sweden, residents marked unsafe places on a smart app (e.g. broken lamps, places which were not safe for people) and the municipality responded to the problems to the best of its ability. There is also a need for proper sidewalks. I have my own example of this to demonstrate that this is sometimes a mobility problem as well: 7 years ago whilst I was pregnant I was walking to kindergarten to pick my child up on an unlit sidewalk when I fell into a hole and injured my leg. Today, that road section has still not been fixed, although it is right next to a school with a large flow of children and parents on a busy street. Maybe I haven't been proactive enough in presenting the municipality with the sites that need specific management, but this could be done on the initiative of the municipality. There are some other aspects of safe mobility. You may

not be able to cut down all the bushes in the village and not build all the stops near homes, but then other aspects can be taken into account: for example, a bus driver does not leave the stop until they are sure that the disembarked passenger can continue his or her journey safely (for example, they have crossed the road or mounted a bicycle left at a stop), or the vehicle does not move until the passenger entering the passenger compartment is securely restrained or seated. I know that there are methods that are used, recommended and applied in detail by experts and authorities working in the field of transport.

In terms of other aspects, such as bicycles, national minorities, and immigrants, it seems to me that, at least at the moment, smart apps provide access to a variety of languages, not just those mostly used locally. It seems to me that it is harder to deal with people who have difficulty adapting to new technologies (e.g. not using a computer). I am not saying that there are many such people, but there may be some, even including some young people who have development disorders, for example. I personally never use bike sharing or scooter sharing platforms as I travel everywhere by public transport. It is also a question of whether transport, mobility and shared mobility is suitable for people with different abilities, as this also needs to be taken into account. Bearing in mind that artificial intelligence and automation are developing fast, in the future, buses may no longer be driven by people anymore.

**What actions / policy or strategic plans should be developed to increase gender mobility and between different groups in society at national and EU level?**

The issue of sidewalks is a specific municipal aspect, and as the institution closest to people then this is the body that should be dealing with this. The accessibility of services for people of different ages and abilities should be achieved by establishing public policy to focus on websites and services, to encourage or oblige public and private sectors to be more accessible to all groups

in society. However, at the same time, private businesses need to realize that although people with disabilities are really struggling financially in our country at the moment, when their financial situation improves and the need for personalized services grows, they will suddenly realize that they are not ready to satisfy their needs. I am not saying that they should invest millions to make their services accessible to all with a 10-year horizon, but there should be a minimum. Public policy should shape accessibility issues and solutions as the guidelines and preparation for the future. As far as I know, along with the new EU strategy papers, Lithuania's 10-year vision for the future (strategic document) is associated with large-scale use of automation and artificial intelligence. Given the direction we are taking, the development of mobility services should follow along the same lines. It is clear that artificial intelligence is inevitable, and we will have to live with it. Hence, it is necessary to assess these aspects and include them in the development of services.

Regarding cross-border strategies, I don't know what benefits this could bring, perhaps sharing good practices? In fact, EU-issued directives are giving a major boost to Lithuania in a number of areas. Perhaps initially there would be general dissatisfaction with the decisions taken, but later, society would adapt, and a new norm would settle in, making it more widely accepted and finding less hostility among employers. I believe that thanks to the availability and accessibility of public services (mobility included), something similar can be done and could perhaps be effective. But I strongly believe that both national governments and the European Union should work closely with the private sector, given that in public agencies it is possible to somehow regulate and address equal opportunity issues and violations, whereas as in the private sector

it is much more difficult to have an impact from the perspective of national institutions such as the ones which monitor the implementation of equal opportunities.

**A question for consideration: we have encountered examples of more vulnerable social groups in different parts of the world using special mobility solutions (for example, in Lithuania - the possibility of transportation for socially sensitive groups; in Africa - the possibility for women to choose women-driven taxis). Do you think that such solutions increase the exclusion of these groups from other members of society, or do they just help to solve certain mobility problems?**

From a long-term perspective, ensuring the mobility of these social groups should be a holistic task. But if the state fails to achieve this, for example, because it does not have the necessary funds to renew the public transport fleet by adapting it and making it accessible to all, this type of measures is justified as a temporary solution. In principle, some people, such as people with disabilities, want some privacy, and in the end, we all use individual services such as taxis. This is equally true of private services for these socially sensitive groups. But this does not mean that when applying these solutions, there is no longer a need to adapt public transport to the needs of these people because these solutions are extremely costly and the need for them would be simply too high. If we talk about the accessibility of services, it should be holistically integrated here and now. It should be absolutely normal to see a person with a disability, or of another nationality or skin colour.



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## Tiziana Campisi, Italy

## The future of sustainable mobility: rethinking the post-pandemic phase and promoting gender equity/equality

Assistant Professor, PhD – Kore University of Enna (Italy)



*Tiziana Campisi, who is an Assistant Professor of Transport Systems at the Faculty of Engineering and Architecture, Kore University of Enna, Italy, explains that unfortunately, in many parts of the world there is still a lack of gender equality linked to the use of different types of transport. “To comply with the 2030 Agenda, local government will have to resolve these issues by promoting actions that take into account that female mobility is different. I believe that the right way forward is to start raising awareness among the population from 4-5 years of age at national and European level on the issues of gender balance and diversity in transport”.*

***“In certain countries, studies suggest that women are forced to use taxis due to the absence of gender-responsive design and infrastructure”.***

Tiziana Campisi is an Assistant Professor of Transport Systems at the Faculty of Engineering and Architecture, Kore University of Enna, Italy. She teaches several transport courses on Aerospace and also Civil and Environmental Engineering degrees. She has published more than 50 articles in journals and conferences. The main topics of her publications are road safety, measures to curb transport pollutant emissions, transport demand and supply in urban master plans, urban transport systems, sustainable mobility, democratic planning, micro-simulation application and multicriteria analysis. The focus on vulnerable users is always present in her research, and she has also worked on national and international studies on women's willingness to use different means of transport. She is a member of the *Soroptimist International Club*, a worldwide association of highly qualified professional women. The members come from different professional backgrounds, thus promoting internal debate and a wide, diversified circulation of ideas that leads to the creation of effective projects

and services.

**I: Could you briefly tell us something about your background, and your area of expertise in the field of transport with gender and diversity? What field are you currently working in?**

My research pays particular attention to the evolution of mobility and cities in terms of sustainability and resilience, starting from a bottom-up approach that ensures **participatory planning** and thus integrates the needs of different population groups into the various modes of transport.

I have recently been working on the concept of the **evolution of smart cities in the post-pandemic era**, emphasising the need for gender equity in technology and mobility.

My main research interest has centred on the aspect of gender equality and, in particular, I have addressed the issue of **gender equality in Sicilian transport**, based on the results obtained from a

questionnaire addressed to women of age living in Sicily. The paper is entitled "Gender equality on developing transport system in Sicily: A consideration on regional scale" and has been submitted to the AIP Conference Proceedings, Vol. 2021. The results highlight the critical issues that often lead to different perceptions of safety on board a means of transport and gender equality, considering both the passenger's and the driver's point of view.

I analysed public transport in Dammam (the sixth most populated city in Saudi Arabia) in the publication "Gender-responsive public transportation in the Dammam metropolitan region, Saudi Arabia", defining the most critical issues related to women and the use of public transport today. This study ponders upon the **adequacy of the supporting infrastructures and interior design of public buses given women's needs** and compares them with global best practices. The results suggest that, due to the absence of gender-responsive design and infrastructure, **women are forced to use taxis**, although privacy and a sense of insecurity are also a concern when travelling alone or with children.

I have recently submitted a paper entitled "Gender equality and micro-mobility: mind the gap! A statistical analysis of the Sicily region, Italy" to Social Sciences-MDPI. This paper deals with Sicilian women's approaches to micro-mobility.

Mobility and sustainability are also a matter of welfare, as people's wellbeing certainly has a lot to do with health, work, fair sharing of public spaces, and a more inclusive design of cities and their infrastructures. These issues will be the subject of my forthcoming scientific research.

In order to improve mobility, it was decided that research should focus on certain groups of road users – people with motor disabilities, the elderly, parents with pushchairs, etc., who are more vulnerable to mobility problems, and that **city planning should give priority to their needs** in order to build an inclusive urban environment that is truly accessible to all.

**I: From your area of expertise - What have been the greatest breakthroughs with regard to increasing gender and diversity in mobility?**

Definitely the correlation with gender and age groups, but also the development of non-homogeneity in the use of new means of transport such as micro-mobility.

The development of different forms of mobility provides better access to different areas, such as education centres, and limits the disparity between road users of different age groups and genders. The presence of children and income characteristics are factors that can influence women's mobility choices such as using public transport, owned/shared micro-mobility, and e-bikes and that is why they must be considered.

**I: From your area of expertise - What are the biggest challenges to move forward in increasing gender and diversity in mobility?**

Definitely **the socio-cultural aspect and the motivation to move**.

Particular attention should be paid to the fact that **women often do not travel alone** because of restrictions in some countries or because they are often asked to accompany their children or family members to school or to do chores (shopping, doctor's appointments, etc.). For example, in Saudi Arabia, women's mobility has been somewhat limited and challenged in terms of space and time, and partly due to socio-cultural barriers. The results presented in my research "Gender-responsive public transportation in the Dammam metropolitan region, Saudi Arabia" suggest that, as I have already mentioned, due to the absence of gender-responsive design and infrastructures, women are forced to use taxis, although privacy and a sense of insecurity are also a concern when travelling alone or with children.

**I: What road maps need to be set out to increase gender and diversity in mobility at national or EU level?**

Unfortunately, in many parts of the world there is still a lack of gender equality linked to the use of different types of transport. To comply with the 2030 Agenda, local government will have to resolve these issues by promoting actions that take into account that female mobility is different.



I believe that the right way forward is to start **raising awareness among the population from 4-5 years** of age at national and European level on the issues of gender balance and diversity in transport. The **definition of indicators for gender equality in transport and mobility** and sustained participation of the population and associations in local life and thus in the choices made by government should be taken into account.

The conclusions of my research “Gender equality on developing transport system in Sicily: A consideration on regional scale” highlight that promoting the idea that women drive, greater control of infrastructure with real-time systems and continuous monitoring by managers and police bodies but also reduced tariff policies for mothers and female workers will boost sustainable mobility.

**I: In your experience, to what extent do you think issues of gender and diversity are considered in transport planning and design?**

To date, aspects of inclusiveness in transport planning and design are still not taken into account in some countries (especially in South-Eastern Europe and developing countries).

It is certainly necessary to introduce the concept of gender in legislation and to define user-friendly transport systems for men, women and children.

Urban planning should prioritise the needs of users who are most vulnerable in terms of mobility, such as people with disabilities, the elderly, and parents with pushchairs in order to build an inclusive urban environment that is truly accessible to all.

**I: Could you provide examples of transport measures that you think would suit gendered**

**and diverse mobility planning?**

The implementation of **saddles and baskets in scooters** could encourage women to use them. Furthermore, I believe that other solutions to take into account women's mobility needs could be the implementation of **more parking spaces** for women and **special tariffs for public transport** and shared modes of transport.

As I have already mentioned, safety is probably one of the most sensitive aspects for women, so greater control of the areas in which people move through cameras, geolocation and the implementation of typical IoT systems would properly take into account their different mobility needs.

**I: What role do you think scientific research, i.e. academia, should play in increasing the inclusiveness of transport?**

First of all, by devoting more attention to the issue of gender equity.

Academia and the world of scientific research could also play a role in increasing inclusiveness in transport by regularly organising round tables and conferences on this subject, which could be dealt with at various levels (social, economic, transport, cultural, etc.). Moreover, equal salaries for male and female colleagues are a fundamental starting point. Finally, the academic world should develop and consolidate cooperation networks with associations and clubs that address these issues and generally have gender balance and the needs of vulnerable users as their main objective (e.g. anti-violence centres, Soroptimist Club, Fidapa BPW Italy).



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 824349

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