



Summary | Annual Conference  
Madrid, 10 - 12 April 2024  
„Sustainable mobility and air quality in city centres“



Photo: Ayuntamiento de Madrid

On the invitation of IMPACTS president Lola Ortiz Sanchez, the annual IMPACTS conference in 2024 took place in Madrid. **“Sustainable mobility and air quality in city centres”** served as the umbrella theme for the conference.

Of course, sustainable mobility is an issue not only for city centres. However, there are various reasons why this conference has taken this special focus:

- In the centres quite a lot of transport related problems can be observed clustered in a small area (air pollution, noise, traffic safety...).
- Almost all inhabitants of a city come to the centre more or less regularly, it's heart, pulse and show facade of a city all in one. The focus of politics and public is on the city centres: What happens there is interesting for everyone.
- Public space is rare in city centres – but everyone wants a share of it: pedestrians, cyclists, public transport, delivery, private cars. And due to climate change more green spaces and trees are needed.

In the past years, our city centres have already changed a lot. The conference used the opportunity to discuss a broad range of topics based on the experiences of the IMPACTS member cities, combined with several site visits:

- Developing emission free city centres: Low emission zones and other approaches
- Just “pull” or also “push”: Do we need more and stronger regulation to make urban mobility sustainable?
- Solutions for high capacity roads: benefits for city centres?
- Car free/car reduced zones in city centres: experiences and learnings

Madrid was the perfect place to do this, regarding some fundamental changes that have taken place in the city during the last years.

## Opening and introduction

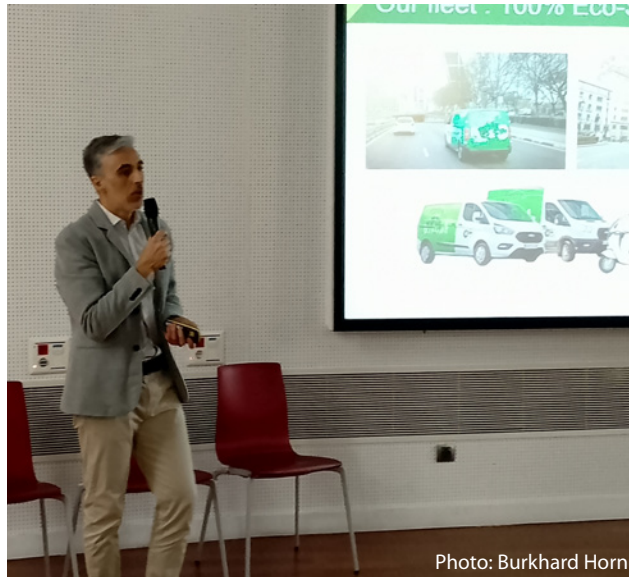
Representing the City of Madrid, the conference in the Palacio de Cibeles was officially opened by **María José Aparicio Sanchiz**, General Coordinator for Mobility within the municipality, and **Lola Ortiz Sanchez**, General Director of Planning and Mobility Infrastructures and IMPACTS president, not only welcoming the participants of the conference but also already giving first insights into the big challenges Madrid is facing regarding sustainable mobility and the strategies and programs the city is working on with a special focus on public space.

The keynote speech to set the frame for the discussion during the following days was split up in two inputs with a different focus on the topic of the conference. **Naiara Vegara**, Vice President of the METROPOLI Foundation, started with a very strategic view giving some insights into the studies of METROPOLI how to design future cities. Being an innovation centre with projects and cooperating institutions all over the world, METROPOLI has a broad experience regarding the design of sustainable cities. The “Madrid Innovation Lab” with a focus on Madrid’s development until 2040 is a public-private collaboration between Comunidad de Madrid, Madrid Capital and Metropoli as the research platform to promote the identification and



Photo: Burkhard Horn

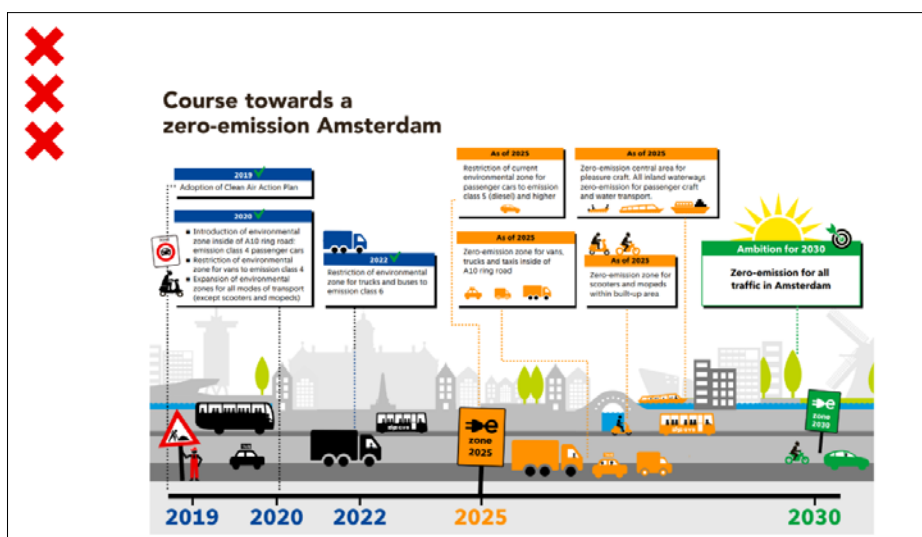
implementation of projects to foster a sustainable future of the city. A key concept of these studies is the multiple scale of thinking that ranges from a European perspective (Madrid's role as capital of Spain) to the neighbourhood next door and its needs for livable public spaces. Especially interesting and important: How do we deal with our metropolitan area, the suburbs and the towns with strong commuting relations?



**Alfonso Molina**, Innovation project manager Citylogin, had a much more specific focus talking about urban logistics and the project CITYlogin and showing new ways of delivery in the city. "Logistics as a service" (LaaS) means more than just last mile delivery with emission-free vehicles. It's about the complete urban logistics chain including consolidation centres, micro hubs and other aspects, with impact on environment, street design and quality of life. The evaluation results so far are impressive: they show a substantial benefit regarding more efficiency and less emissions.

## Session 1: Developing emission free city centres: Low emission zones and other approaches

The first session (chaired by **Pedro Fernandez**, City of Madrid) with inputs from the IMPACTS member cities Amsterdam, Gothenburg, Rome and Barcelona dealt with air quality in city centres with different regulatory, technological and strategic approaches to improve the situation towards low respectively zero emission transport.



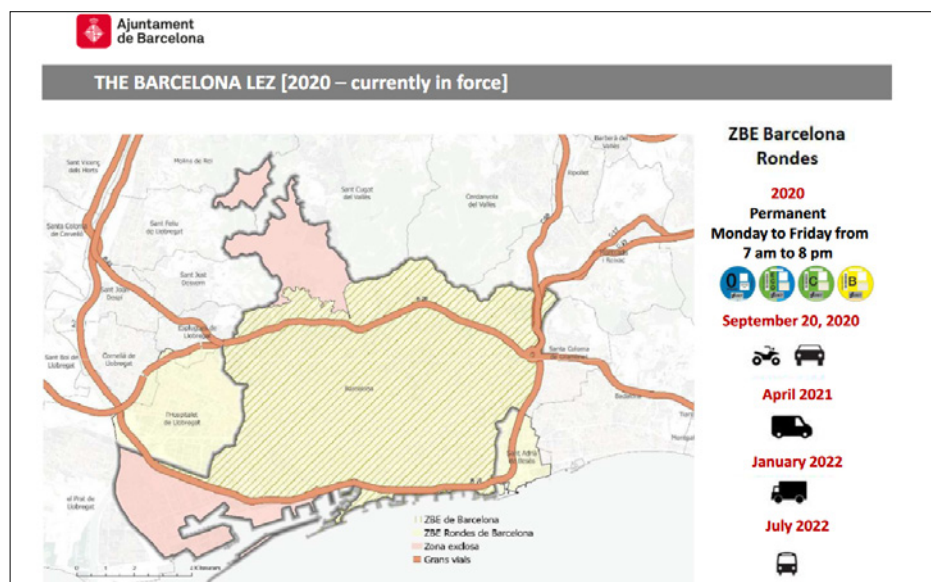
(Input **Jillian van der Gaag**, Amsterdam, more information see next page)



**Jillian van der Gaag**, working as Senior Policy Advisor Emission Free Mobility at the City of Amsterdam, started the session with her input on “The approach to an emission free mobility system of Amsterdam (vision, strategy, implementation, successes and challenges)”. The focus of the presentation was on Amsterdam’s low emission zones, their history and strategy for its further extension and implementation until 2026 regarding the different kinds of vehicles (with mopeds as a special challenge), aiming at zero emission mobility until 2030. The regulation is accompanied by additional measures in the fields of communication and stimulation. To reach the goals will still be challenging on issues like availability of vehicles, budget or national legislation.



**Mikael Ivori**, Senior Advisor in Urban Transport Administration of the City of Gothenburg, gave a specific view on the electrification of urban transport in Gothenburg. Starting with a short look into history (with the first electric trams in Gothenburg in 1902) it was pointed out that especially the electrification of buses and ferries is quite a success story. For heavy goods vehicles and private vehicles, the challenges are still quite high, from necessary regulation to equally necessary incentives, but also regarding the availability of electric power (“One big challenge is to have electricity – where it’s needed and when it’s needed”). Finally: electrification is actually a socio-technical transformation also dealing with changes in the socio-economic system.



(Input **Adrià Gomila, Barcelona**, more information see next page)

In the third input, **Adrià Gomila**, Mobility Director at the City of Barcelona, explained with his presentation “Evolution of the Low Emission Zone in Barcelona” the results of this regulatory measure. With a high level evaluation and very detailed data it could be proven that this measure has been a success with a strong reduction of traffic based emissions and also a remarkable increase in the number of electric cars in the city. However, the new limit values for emissions set up by the EU are a big challenge and make a thorough update of the regulations for Barcelona’s LEZ necessary.

Finally, **Fabio Nussio** from the Service Mobility Agency for the City of Rome gave insights about the strategic framework for sustainable mobility in Rome regarding the upcoming “Jubilee 2025”, where millions of pilgrims are expected in Rome: “Experiences with Low emission zones and other approaches to improve air quality in Rome”. The main strategy is the implementation of Rome’s Sustainable Urban Mobility Plan (SUMP), adopted in February 2022 (with an extension regarding the metropolitan area adopted in December 2022). There is a focus on four issues: strong improvement of Public Transport, promotion of active mobility and multimodality, promotion of the MaaS approach „mobility as a service” (from private car use to multimodality) and strong demand management policies with ITS support (dealing with issues like restricted access to the city centre and low emission zones). Progress is visible but still needs support by communication campaigns and incentives. A special challenge is the alignment of incentives (like better public transport) and regulatory measures.

## 2) Promote active mobility and multimodality

*Recover urban space: Flavio Biondo square (Trastevere station)*

From on-street parking to a multimodal hub with:

- Central area dedicated to PT;
- Special routes to connect the station and PT stops;
- Green areas, pedestrian areas, bicycle parking spaces and parking spaces for car/bike sharing and charging of electric vehicles.
- Presence of parking spaces for loading and unloading goods, Kiss & Ride area.
- Dedicated lighting project





SESSION 1 - Experiences with Low emission zones and other approaches to improve air quality in Rome



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## Panel discussion – the role of regulation

To close the morning meeting the first session was followed by a panel discussion with the headline “‘Push’ or ‘pull’: Do we need more and stronger regulation to make urban mobility sustainable?” moderated by IMPACTS Secretary Burkhard Horn.



The panelists (Simone Rangosch, Zurich; Lola Ortiz, Madrid; Eugenio Patanè, Rome; Àngel López, Barcelona, and keynote speakers Naiara Vegara, APUR, and Alfonso Molina, Citylogín) picked up on Naiaras's keynote and the presentations of the first session and discussed the challenges from the view of their cities along these questions:

- In the centres a lot of transport related problems like traffic safety, noise or air pollution happen within in a small area. What seems to be the biggest challenge?
- The focus of politics and public regarding mobility and public space is on the city centres: What happens there is interesting for everyone as almost everyone comes to the centre as the heart of the city at least from time to time. Can this focus cause a problem? Could this lead to a neglect of other parts of the cities where action might be more needed?
- As public space is rare in city centres (and pedestrians, cyclists, public transport, delivery and private cars all want a share of it) and regarding the strong demand for more green spaces and trees due to climate change: How do we prioritize? Would that work without regulatory measures?
- Traffic in city centres is not only caused by the people living there. City centres are an important destination for people coming from the outskirts of the city or the region beyond. What kind of cooperation with the neighbouring municipalities and regions do we need to get acceptance for the measures we think necessary, especially if they cause restrictions for car traffic?
- Of course, the city centres will always be important for different kinds of commercial traffic, be it delivery or necessary services like waste collection. What are the experiences in this matter? Is it enough to talk about delivery or are there other important issues regarding commercial traffic?
- Our city centres are always "special" – in their structures, their problems, their needs and the solutions. Still – can we learn from what we are doing there also for other parts in our cities?

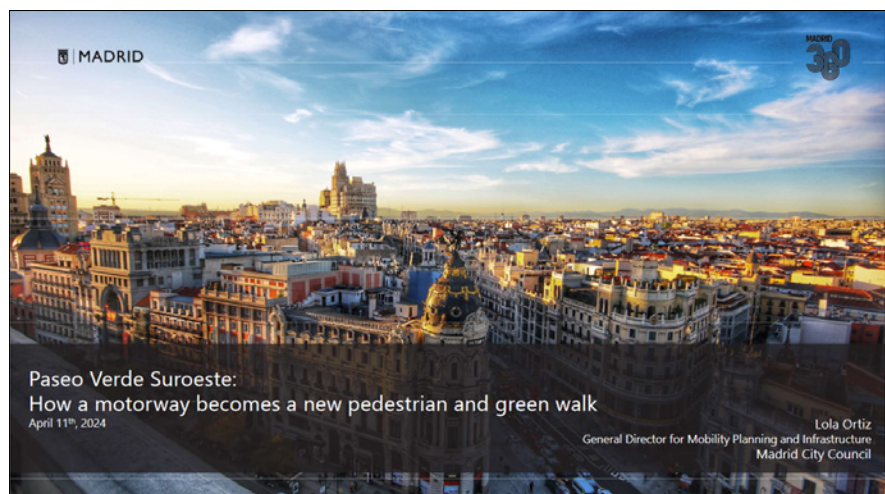


It's no surprise that all cities represented in the panel share the challenges mentioned. All panelists agreed that a focus on the city centres must not lead to a neglect of the other parts of the cities – and actually that does not necessarily seem to be the case. The main strategies set up (like a SUMP) aim on the whole city. The bigger problem is the strong cooperation with the region which is so urgently needed (like shown in the keynote of Naiara Vegara or described by Simone Rangosch for Zurich regarding the comparatively detailed issue of speed limits where a serious conflict between city and region is evident). From the political view, regulation is always more difficult to implement than a new cycling route or more attractive fares in public transport. Still, regulatory measures are crucial for the success of sustainable transport planning especially in the city centres. Therefore, it makes sense to focus on participatory communicative measures that lead to more acceptance by the public.

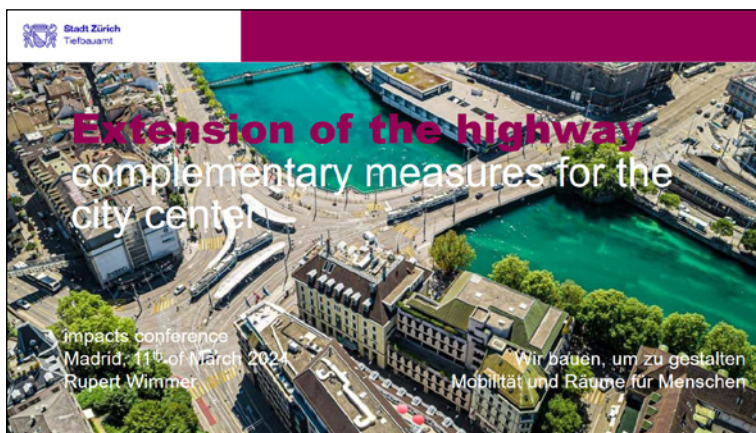
## Session 2: Solutions for high capacity roads: benefits for city centres?

The second session, chaired by **Brendan O'Brien**, Dublin City Council, dealt with the question how to deal with high capacity roads near to the city centres (also referring to the site visit at "Madrid Río" following): How can we reduce the negative impacts of those roads on people and environment? Is it reasonable to invest huge amounts of money and concrete to build tunnels or new bypasses in less sensitive areas? Should the focus be more on the refurbishing of the existing streets within the currently given space with more room for sustainable traffic modes and greenery? Are there other approaches? Have maybe all solutions their justification due to the specific circumstances?

**Lola Ortiz Sanchez**, City of Madrid, General Director of Planning and Mobility Infrastructures, started the session by presenting an almost visionary concept: *"Paseo Verde Suroeste: How a motorway becomes a new pedestrian and green walk"*. The approach is similar to the already realized project of "Madrid Río": A highway with currently 80.000 vehicles/day is relocated underground creating space for pedestrians, cyclists, parks and other aspects of livable public spaces above, including new facilities for renewable energy generation. The situation for public transport will be improved likewise.



**Rupert Wimmer, City of Zurich**, Department for Civil Engineering, Head of transport and urban space planning, presented another approach. Based on the new strategy “Urban space and mobility 2040” (with the goal to reduce the car traffic within the city by 30%) he talked about “*Complementary measures in the city centre to the extension of a highway with focus on the masterplan around the main station*”. Using the opportunity of new capacities in the road network (additional lanes for a highway in the western part of Zurich) the city reduces space for cars in the city centre (not only around the main station). A main goal is to cut off currently existing connections for through traffic (having the mentioned highway as alternative). Although the benefit for the city by this redesign of public space is clearly visible there is still much opposition against this strategy. This underlines the necessity of participation and good communication.



Finally, an example from Amsterdam presented by **Willem van Heijningen**, Strategist at the Directorate Infrastructure Traffic and Transport, showed the risks and problems of traffic experiments: “*Temporary closure of high capacity road Weesperstraat in Amsterdam*”. This measure (carried out in 2023) had some of the positive effects hoped for (for the residents in the pilot area) but also negatives effects for the people living in the surrounding area (caused by deviation) and some specific groups and needs (emergency services, logistics sector, waste collection...). This caused a lot of political trouble, leading (besides other learnings about strategy and communication) to one very general question: How radical can we be or act (as change is very urgent)? Can an incremental approach be more successful in the end?





**Site visit: Madrid Río**

The first day of the conference closed with a site visit to “Madrid Río” guided by **Antonio Tocino de la Iglesia**, Director Gerente of the organization responsible for carrying out the project “Madrid Calle 30”, and **Pedro Fernandez**, City of Madrid. Before the start of the tour **Javier Berges**, Director of facilities at “Madrid Calle 30” gave a short introduction: “*Madrid Río: How a motorway ring becomes a linear park along our river*” showing both the history of this impressive project and the environmental and social benefits (besides the creation of a huge new park with lots of space for recreation and the reconnection of the city centre with the neighbourhoods in the West). To see the improvement of public space in many ways on site was very impressive for all participants of the conference.



Photos: Burkhard Horn

**Site visit: Sol new pedestrian Area and Canalejas Mobility Hub**

The second day of the conference started with a sunny morning and a walking tour through parts of the city centre, led by **Pedro Fernandez**. The tour (including lots of information about the history of Madrid) started at Puerta del Sol, one of the main plazas of Madrid and actually the heart of the city centre. Formerly the point where roads from all parts of the country met it is now a lively pedestrian area and (under ground) one of the most important stations of public transport in Madrid.

The second focus of the tour was on the Canalejas mobility hub in the city centre (near metro station "Sevilla") presented by **Sergio Fernández Balaguer** (head of department at the Madrid Public Transport Company EMT). This underground mobility hub at the edge of the pedestrian zone offers a broad range of individual shared mobility options (bikes, scooters, cars...) including charging facilities and space for bike parking, attached to a large car parking garage.





### Session 3: Car free/car reduced zones in city centres

The third and last session (chaired by **Àngel López**, Mobility Coordinator in the Barcelona Municipality) focused on the question of the reduction of private car traffic in the city centres by strategic and regulatory measures. Six IMPACTS member cities presented their different approaches with short presentations (using the challenging format “Pecha Kucha”):

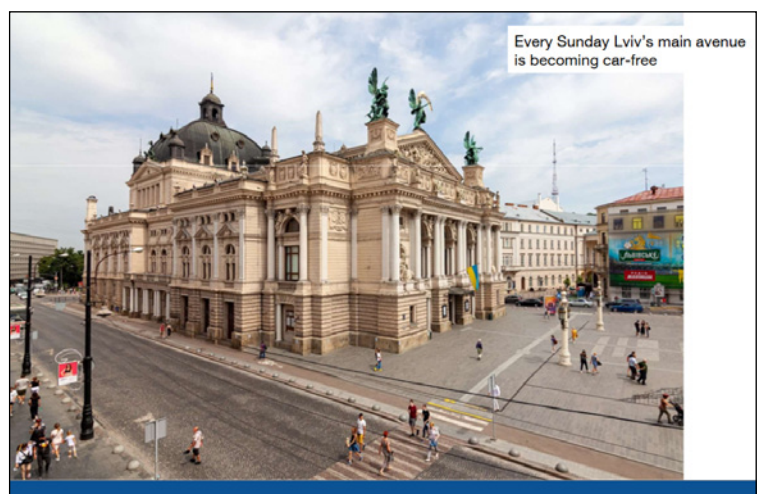
**Brendan O’Brien** (Dublin City Council, Environment and Transportation): *“Dublin City Centre Transport Plan 2023”*

- Reduction of through traffic
- Redesign of inner city streets and quays with focus on pedestrians and cyclists
- Positive outcomes (like reduction of car traffic in the city core by up to 60%, better public transport, reduced emissions)



**Orest Oleskiv** (City of Lviv, Head of transport office): *“Central pedestrian zone in Lviv and the plans for its further expansion”*

- Car-free zone in the city centre established in 2014
- Car-free main avenue at the edge of the pedestrian zone every Sunday
- Further extension of car-free zones in progress (despite the ongoing assault on Ukraine by Russia)





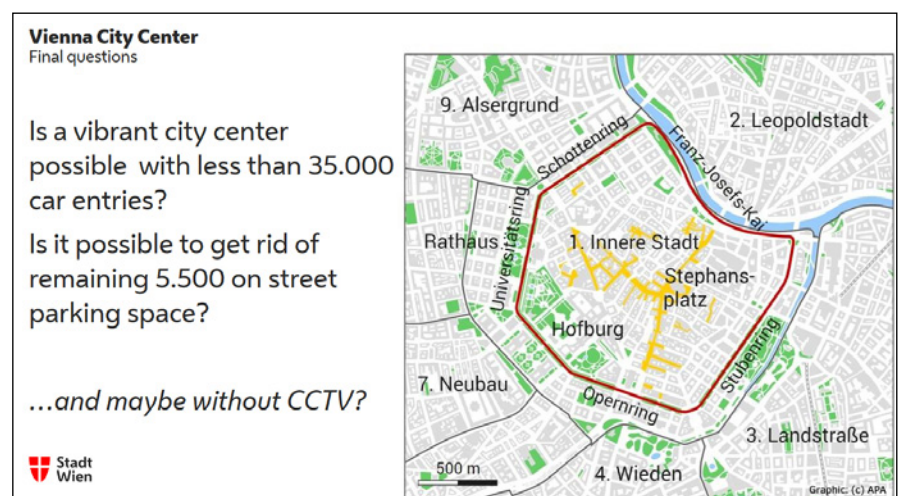
**Dr. Tina Wagner** (City of Hamburg, Director-General of Transport): *“Redesign of major roads as part of the strategy on Central Business Districts (CBD) in Hamburg”*

- Redesign of streets in the city centre based on inner city concept from 2020
- Phase 1: temporary measures for trying out different elements of redesign and their effects, phase 2: final reshaping (examples: Jungfernstieg, Steinstrasse)
- Learnings: patience needed, good participation and communication crucial, integrated approach necessary



**Gregor Stratil-Sauer** (City of Vienna, Deputy Head of Mobility Strategies): *“Traffic calming in the city-centre of Vienna”*

- First pedestrian zones 1970-1990 (benefit of metro construction)
- Additional traffic calming since 2015 (variety of measures)



- 2020: new concept to reduce car entries into the city centers (including reduction of parking space, more space for greenery, use of CCTV for surveillance), implementation not yet started



**Cécile Honoré** (Deputy Head of the PEPQA (Public Space Sharing and Air Quality) Department, Paris Mobility Agency): *“Two actions by the City of Paris to calm public spaces: implementation of a limited traffic zone in the historic center; feedback on school streets”*

- Ban of through traffic of private cars in Paris’ historical centre (long preparation including intense communication, implementation in autumn 2024)
- Planning and implementation of school streets (starting with tactical urbanism tools, followed by final redesign combined with more greenery, until now more than 50 streets completely reshaped)
- Learnings: dialogue has to be continued, enforcement is crucial

**Javier Carvajal Naranjo** (City of Madrid, Head of Mobility Planning Department): *“Pedestrian areas in the city centre of Madrid”*

- Vision: zero emission zones in 21 districts of Madrid (not only city centre)
- Focus on shopping streets, school zones and historic quarters
- Redesign of central plazas (like Puerta del Sol, Mercado de San Miguel or Plaza de España)





## Closing Remarks

Madrid's Deputy Mayor for Urbanism, Environment and Mobility **Borja Carabente** closed the conference together with **María José Aparicio Sanchiz**, **Lola Ortiz Sanchez** and **Pedro Fernandez** thanking everybody for their participation and the various contributions. He pointed out that Madrid will continue its path towards more sustainable mobility within the city. **Burkhard Horn** thanked the City of Madrid for the great hospitality and congratulated for the very impressive and visible progress Madrid has made regarding sustainability and livability. He emphasized the importance of the discussions and the open exchange of views and experiences between the IMPACTS member cities which has once again been proved by this conference. Not all important questions and issues could be discussed in detail. The IMPACTS conference in Rome in 2025 will provide the next opportunity to continue and deepen this exchange.

All presentations mentioned in this documentation can be found on the IMPACTS website free for download (<https://impacts.org/conference/sustainable-mobility-and-air-quality-in-city-centres-madrid-2024/>).



Photo: IMPACTS