

**SMARTCITY**  
EXPO WORLD CONGRESS

# REPORT 2021

16 - 18 November

**TOMORROW.**  
**MOBILITY**  
WORLD CONGRESS





# CONTENTS

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- 1. Smart City Expo World Congress (SCEWC) & Tomorrow.Mobility World Congress (TMWC)**
  - a. Key Figures
- 2. Barcelona: Digital Innovation to Build the Future**
- 3. A Sustainable and Inclusive Event**
  - a. Towards Zero Waste
  - b. Towards Inclusivity
- 4. Layout of the Event**
- 5. Partners**
- 6. Tracks**
- 7. Exhibition Area**
  - a. Central Agora
  - b. City Possible Plaza
  - c. Innovation Zone
- 8. Governments**
- 9. Congress**
- 10. Side Events and Activities**
- 11. World Smart City Awards**
- 12. Editions Abroad**
- 13. Co-located Events**
- 14. Knowledge Pills**



**#1**  
**SMART CITY EXPO**  
**WORLD CONGRESS**  
**& TOMORROW.**  
**MOBILITY WORLD**  
**CONGRESS**

# 10 YEARS MOVING CITIES TOWARDS A BETTER FUTURE

There were still masks and distancing and - of course - vaccines and all the required sanitary precautions. But the Smart City Expo World Congress 2021 looked like the Smart City Expo World Congress again. After nearly two years of restrictions due to the pandemic, the event returned to Fira - Gran Via to **celebrate its 10th anniversary** and remind us that the ideas that come from meeting face-to-face, sharing a coffee and collaboratively creating are irreplaceable.

**14,934 attendees** from **120 countries**, **452 exhibitors** and **250 speakers** bore witness to this fact and contributed to making post-pandemic cities more resilient and inclusive, thus forging a better future for all.

Attendees networked in a carefully designed space combining three different areas: **the Congress, the Expo, and Side Events & Activities**. The first was a space for reflection. The other two displayed smart solutions and an Innovation Zone, while also accommodating a Central Agora to listen to selected speakers and discuss issues connected with a market that is expected to reach [USD 434,320 million by 2025](#).

The Congress highlighted the idea that given the current climate emergency, and with 55% of the population living in urban areas, **cities need to lead the way in encouraging a net zero future**. Global speakers like María Fernanda Espinosa, Former President of the UN General Assembly, Ed Gillespie, Futurist and Author of Only Planet, and Jeff Merritt, Head of Urban Transformation at the World Economic Forum, insisted on this point.

Those who couldn't make it to Barcelona were able to join the **digital program broadcast by Tomorrow.City**, which was specially conceived to broaden the discussion by means of additional debates and interviews. A total of **21,210 online attendees** made it clear that hybrid events are here to stay.

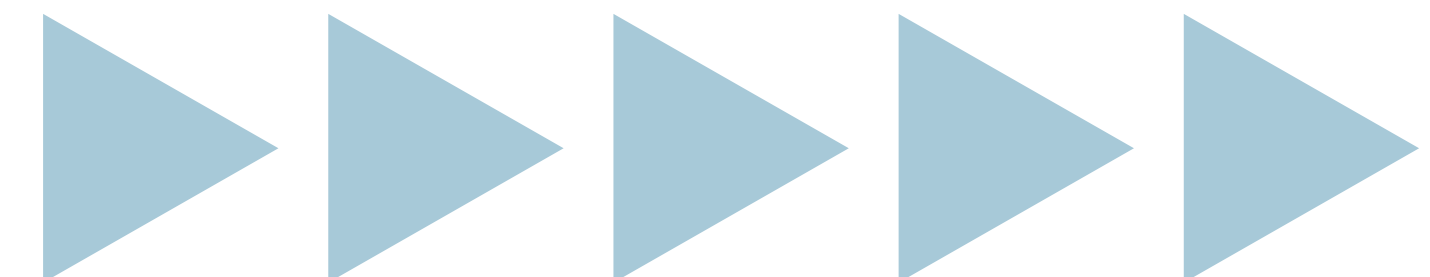
Alongside the presentations in the Expo area, **81 Side Events & Activities** complemented the Smart City Expo World Congress offerings by focusing on revitalizing cities.

This year's event served also as the premiere of the **Tomorrow.Mobility World Congress (TMWC)** and **Puzzle X**. Co-organized by Fira de Barcelona and EIT Urban Mobility, TMWC combines a flagship event with a year-round digital content platform dedicated to sustainable mobility growth. Puzzle X, on the other hand, is the first forum convened to bridge the world of Frontier Materials and the UN Sustainable Development Goals. They both exceeded their initial expectations and will be back in 2022.

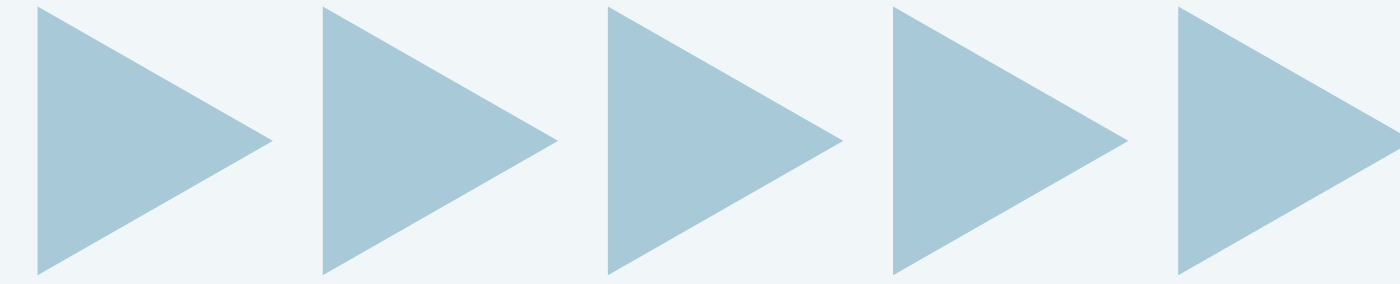
Additionally, the World Smart City Awards made a noteworthy return to the onsite event to recognize **Buenos Aires** for its focus on inclusivity and sustainability and to award the outstanding leadership of professionals like **Benedetta Tagliabue**, architect and director of the international architecture firm Miralles Tagliabue EMBT, and **Carlos Moreno**, Associate Professor & Scientific Director at Paris 1 Sorbonne University.

In the end, the 2021 edition of the Smart City Expo World Congress was a major comeback where attendees could continue thinking about new urban models for a climate-proof and sustainable future. This mindset is central to how citizens think today; after all, **We Are the Cities We Make**.

The event is already hard at work on next year's show, which will take place November 15-17, 2022.

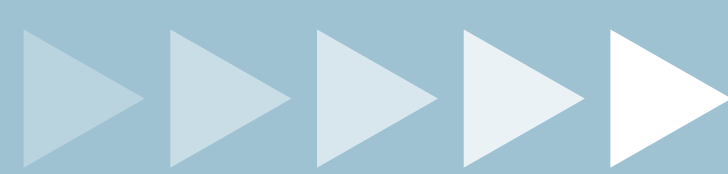


# A MAJOR COMEBACK #SCEWC21 IN NUMBERS



**14,934**

IN-PERSON ATTENDEES



**21,210**

ONLINE ATTENDEES



**452**

EXHIBITORS



**250**

SPEAKERS



**120**

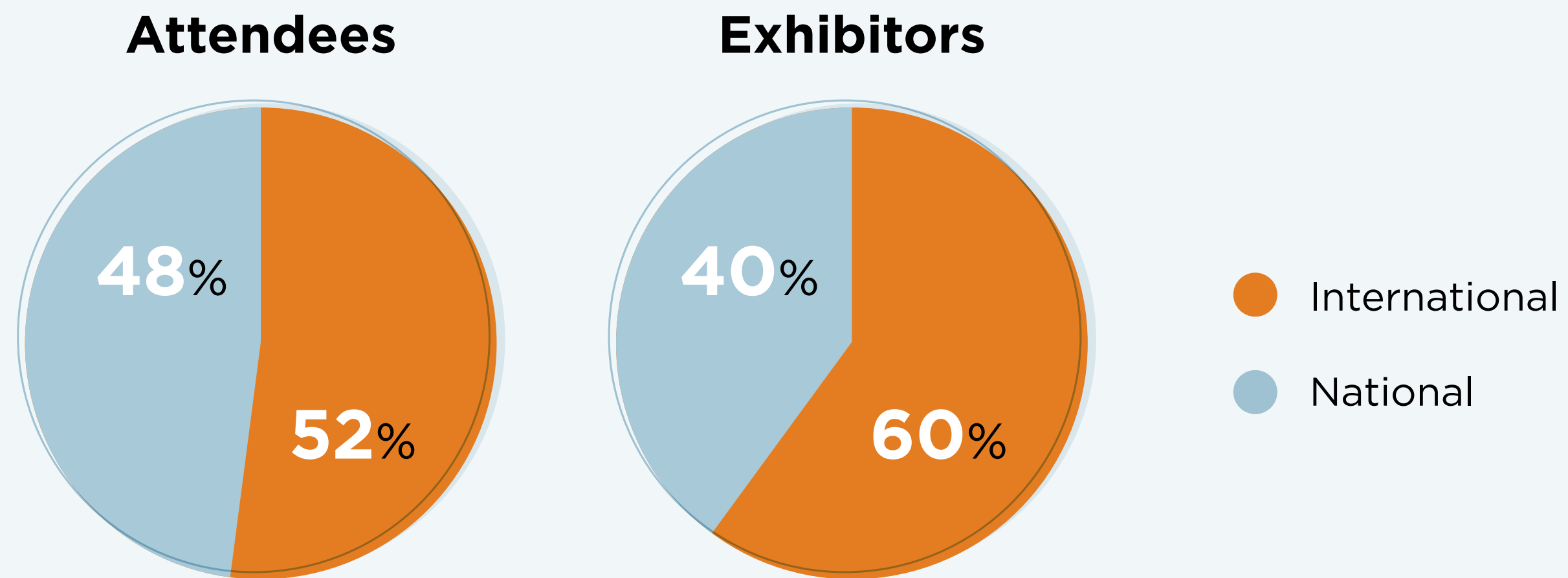
COUNTRIES



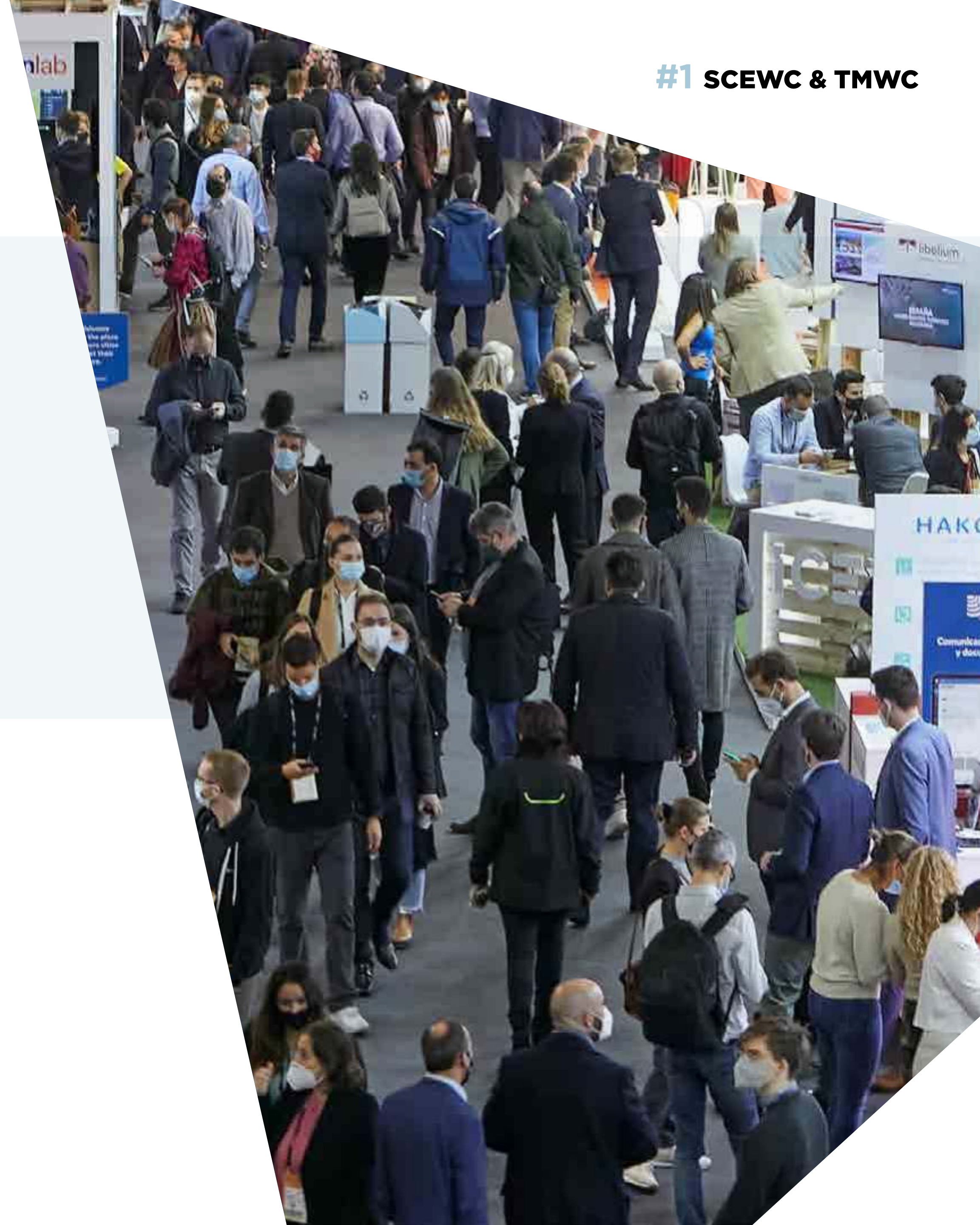
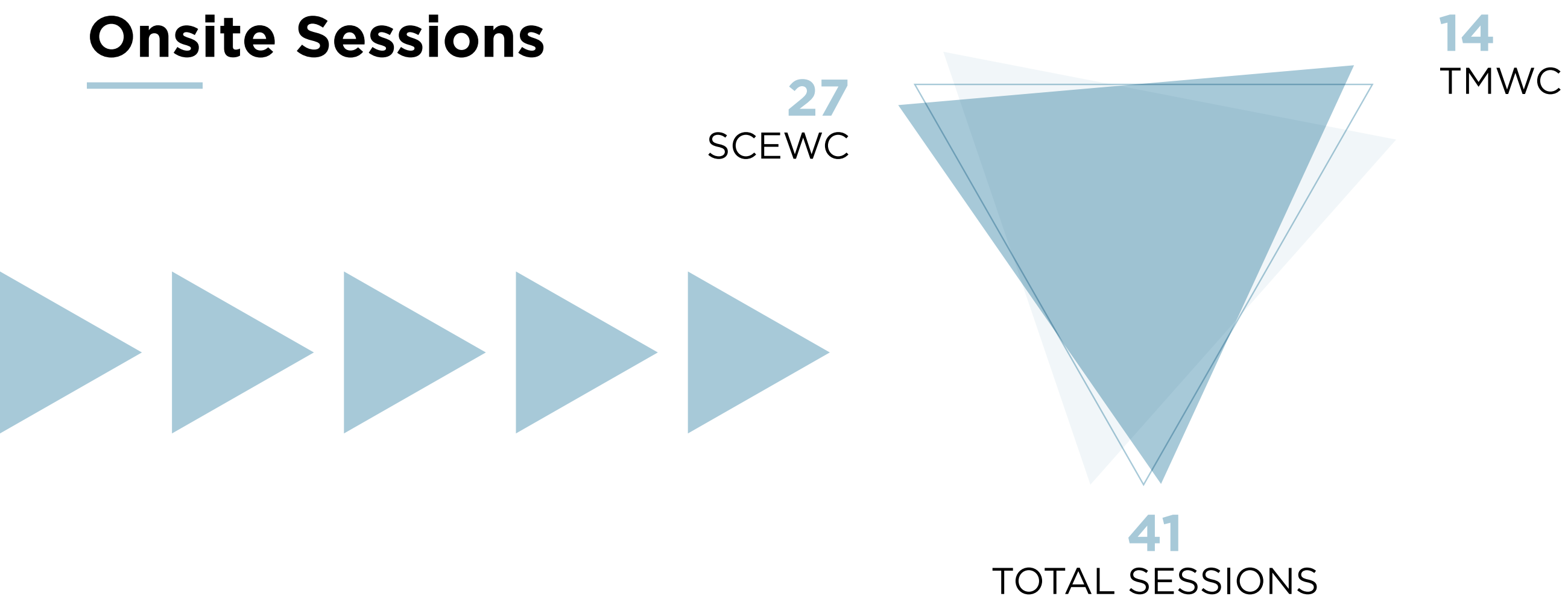
**81**

SIDE EVENTS

## Attendees and Exhibitors from Abroad



## Onsite Sessions

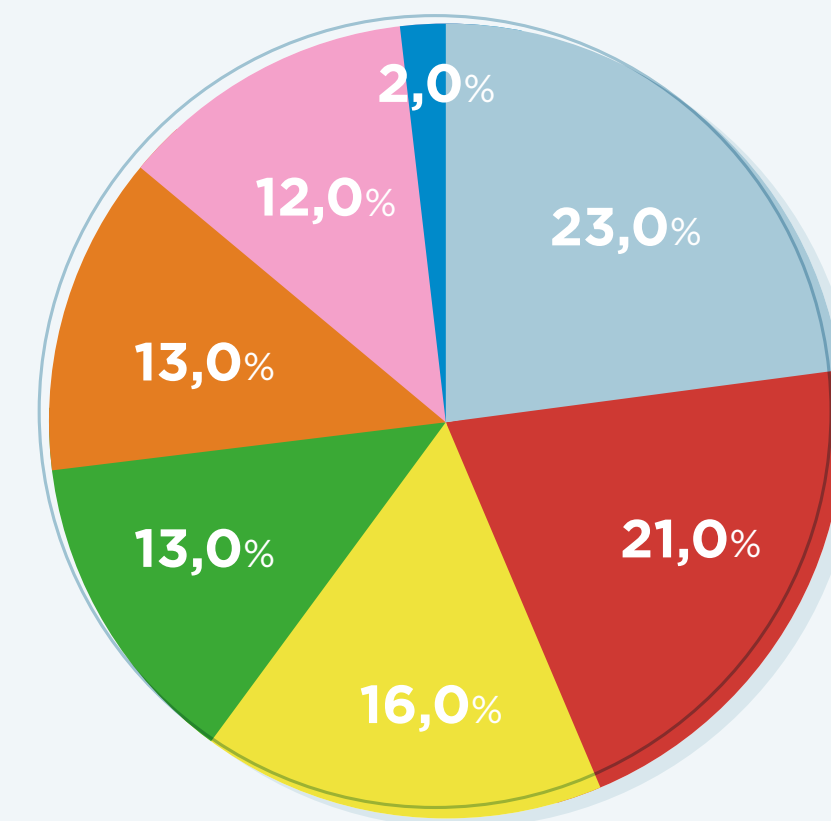


# A Global Community of Urban Leaders

## INTERNATIONAL TOP TEN COUNTRIES

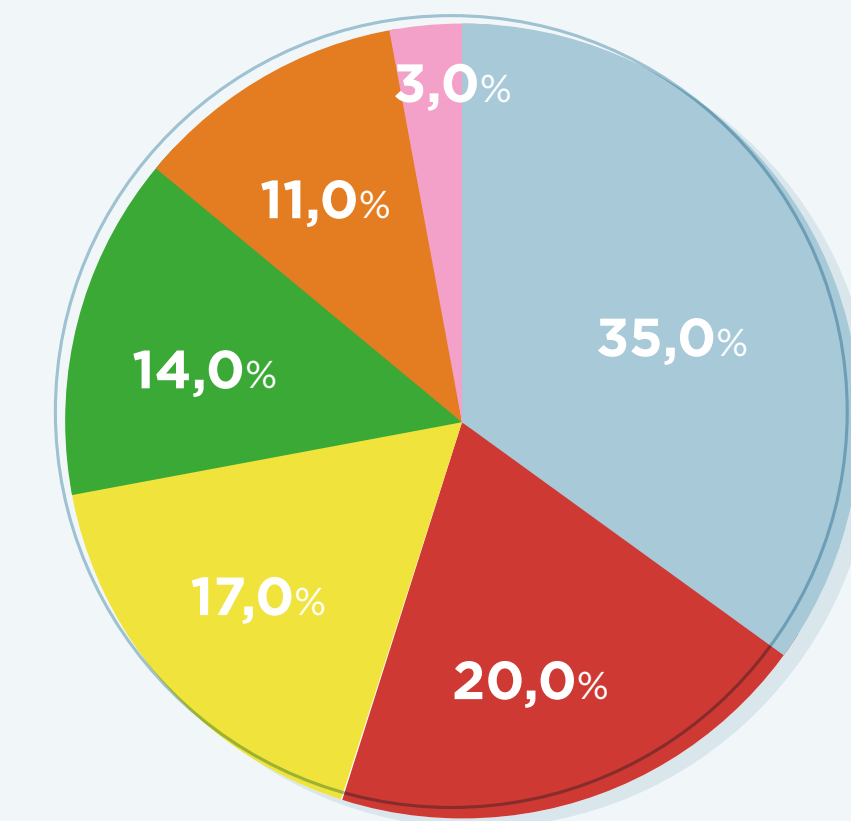
1. Germany
2. France
3. Netherlands
4. Belgium
5. Italy
6. Israel
7. Brazil
8. Portugal
9. United Kingdom
10. United States of America

## ORGANIZATION PROFILE



- Governments
- Large & Global Companies
- Local Companies & SMEs
- Inter-Governmental Organizations, Institutions & Other Entities
- Academia
- Startups
- Media & Culture

## JOB FUNCTION



- High Level Management & Top Public Representative
- Senior Manager
- Technical Profile
- Specialist
- Consultant
- Others

# A Successful Hybrid Event



**22h:09m**  
of content broadcast



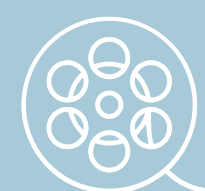
**103**  
speakers



**116**  
sessions



**21,210**  
users



**63 min**  
(average duration watched)



**21,210**  
users

**DAY 16** : **39.04%**  
of users

**DAY 17** : **39.44%**  
of users

**DAY 18** : **21.50%**  
of users



**52,938**  
views of over  
10 seconds

**DAY 16** : **35.11%**  
of views

**DAY 17** : **38.35%**  
of views

**DAY 18** : **26.52%**  
of views



**109**  
countries with  
active users

## TOP TEN COUNTRIES

1. Spain
2. United States
3. Qatar
4. Canada
5. United Kingdom
6. Germany
7. Portugal
8. Italy
9. South Korea
10. Japan

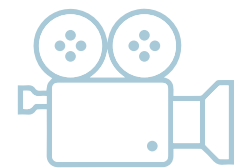


## Widespread Media and Social Media Interest



**246**

ACCREDITED JOURNALISTS



**3,930**

MEDIA ITEMS

Economic value: **€10M**



**33**

MEDIA PARTNERS



**Twitter**

**889,031**

SCEWC+TMWC+TC\*



**Facebook**

**296,816**

SCEWC+TC



**LinkedIn**

**179,520**

SCEWC+TMWC+TC



**Instagram**

**41,048**

SCEWC

**1,406,415**

**Total number of impacts**

\* Smart City Expo World Congress (SCEWC), Tomorrow.Mobility World Congress (TMWC) & Tomorrow.City (TC).

**#2**

**BARCELONA: DIGITAL  
INNOVATION TO BUILD  
THE FUTURE**

# DIGITAL INNOVATION TO BUILD THE FUTURE

2021 has emphasized like never before that the planet needs radical changes to accomplish an environmentally and socially-just transition in line with the 2030 Agenda goals established by the United Nations.

Barcelona has no intention of ignoring this debate and the challenges that go along with it. The city seeks an integrated digital future, one that is more ethical, more collaborative, and more transparent for everyone. This means using digital innovation to improve people's lives, grow opportunities for progress and move towards a more sustainable, connected and socially cohesive city.

At Smart City Expo World Congress 2021, Barcelona showcased 44 projects illustrating its commitment to digital innovation as a tool to build a better future. It also explained the plan for the [Barcelona Green Deal](#), the new vision and strategy of the city for 2030, using a powerful videowall.

The Barcelona City Council's stand also included an electric charging station, an MES Barcelona photovoltaic solar panel, a touch screen for the Check Barcelona app, and a drone for monitoring capacity on beaches - all clear demonstrations of the city's capacity for innovation.

Furthermore, 15 SMEs that reached a turnover of €8,600,000 in 2020 and were selected by Barcelona Activa according to their level of innovation showcased their products to increase their opportunities for internationalization. Among these were Aldebaran, Lovelymaps, Moba, and Yup Charge.

The stand also housed an **agora** where conferences, debates and presentations took place. Among the topics discussed were groundbreaking solutions to improve sustainability, Barcelona's sensor network (which is open to public experimentation), how to use data to offer better services, and how to boost the blue economy.

These topics, along with other crucial themes such as digital inclusion, democracy and digital rights, and urban justice in a post-pandemic world were also highlighted in Congress sessions by representatives from Barcelona's government:

## **We Are the Cities We Make (Opening Session)**

**Jaume Collboni**, First Deputy Mayor

## **Innovative Cities to Deal with Global Challenges**

**Ada Colau**, Mayor



## **Cutting-Edge Urban Technologies**

**Michael Donaldson**, Commissioner for Digital Innovation

## **Clean Technologies for Sustainable Urban Services**

**Miquel Rodríguez**, Commissioner for 2030 Agenda

## **Ensuring Digital Inclusive Cities in the post-COVID 19 Era**

**Laia Bonet**, Deputy Mayor in charge of Digital Transition, Agenda 2030, and International Relations

### Innovation Fueling the Economic Recovery

**Miquel Rodríguez**, Commissioner for 2030 Agenda

### Outcomes From the CIOs Global Meeting

**Michael Donaldson**, Commissioner for Digital Innovation

### Unleashing Digital Connectivity

**Marta Continente**, Director of Innovation and Digital Transition

### Raising the Ambition of Decarbonizing Strategies

**Maíta Fernández-Armesto**, Deputy Manager Urban Ecology

Moreover, Deputy Mayor **Laia Bonet** handed out the City Award at the World Smart City Awards Ceremony.



The local government, which officially inaugurated the Smart City Expo World Congress, Tomorrow.Mobility World Congress and Puzzle X, held a Welcome Dinner (observing the mandatory COVID measures). The event was attended by Mayor **Ada Colau** and several representatives of cities, institutions and corporations, who emphasized that the return of the event made face-to-face networking with other cities much easier, facilitating knowledge sharing and providing great international exposure.

The Smart City Expo will continue to support these initiatives by generating synergies, sharing knowledge, spurring reflection, and inspiring new projects to build the city of the future.



**#3**

**A SUSTAINABLE AND  
INCLUSIVE EVENT**

# TOWARDS ZERO WASTE

Waste generation has increased massively around the world in recent decades, and there are no signs of slowing. Measurable and inclusive action in this sector is urgently required, as transforming solid waste and material management systems could reduce global emissions by 20%.

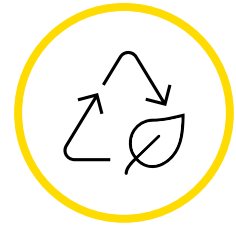
Smart City Expo World Congress and Tomorrow.Mobility World Congress work towards creating **efficient, inclusive, and sustainable cities** - so naturally, these events need to lead by example.

To do so, both events run a dedicated sustainability initiative called **Towards Zero Waste**. This initiative is in line with the **European Commission's Circular Economy Strategy** and is based on the use of fewer materials, the reuse and recycling of products, and the elimination of food waste.

**The following actions were implemented at this year's event in pursuit of sustainability:**



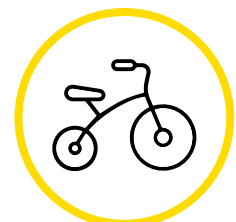
### #3 A SUSTAINABLE AND INCLUSIVE EVENT



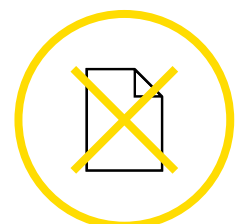
**Reducing and reusing:** Both events reused carpet and other materials from several booths and communal areas. Other items, such as plants, were donated to several local associations.



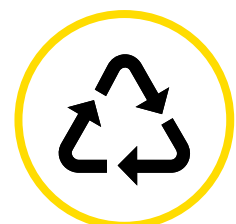
**Avoiding single-use plastics:** The events said goodbye to single-use plastics. All drinks for sale were in glass containers and catering menus avoided plastic packaging, while coffee machines and single-dose capsules were replaced by coffee thermoses. Vending machines were disabled.



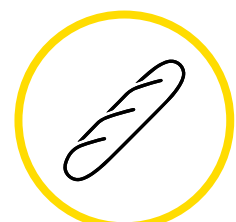
**Reducing CO2 emissions:** Emissions generated by both events were offset by buying *Verified Emission Reduction Carbon Credits* for a sustainable project. Attendees could do the same with the emissions associated with their journey and stay in Barcelona via the *Clean CO2* system. They were also encouraged to use public transportation or bicycles.



**Using less paper:** The events set up QR code points at strategic points throughout the venue for downloading the event app. There were also digital press corners instead of paper magazines, and all paper used at the stands was collected for recycling at the end of the shows.



**Recycling:** Lanyards, passes, and pass holders were made from recycled materials and could be discarded at a collection point to be recycled again. Containers for separating waste were distributed across the venue, with dedicated volunteers to help visitors.



**No food waste:** Leftover food was donated to the NGO *Nutrition Without Borders* to be distributed by community kitchens.

Furthermore, both events were involved this year in a new reforestation initiative in collaboration with **Plant for the Planet**. All money raised from attendees' donations was given to the **Planting for Doñana reforestation project**.

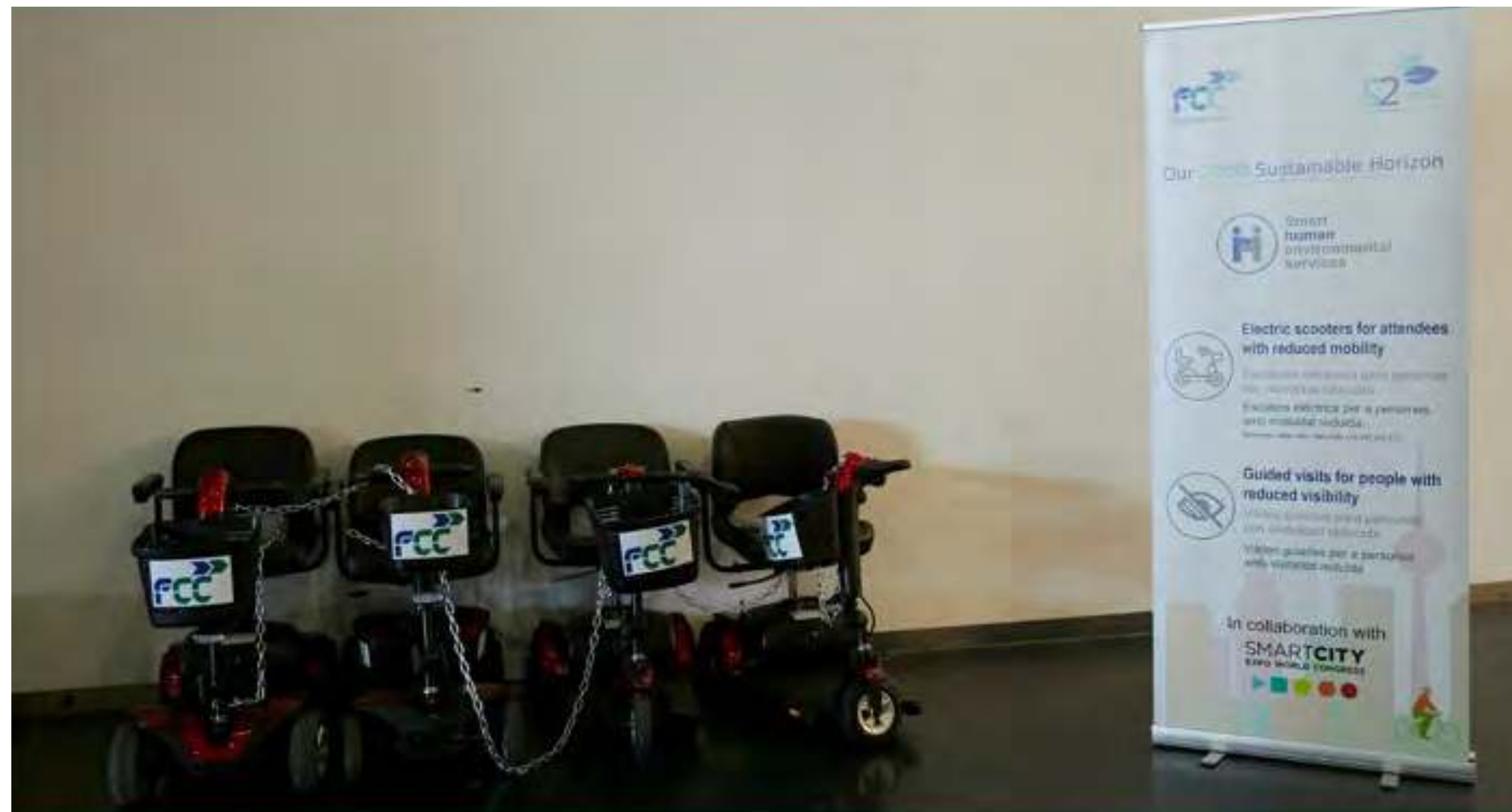
Doñana is one of Spain's most emblematic biodiversity hot spots and one of the most important protected natural areas in Europe.



# TOWARDS INCLUSIVITY

A smart city is not only forward-thinking and sustainable, but fully inclusive, leaving no one behind. Smart City Expo World Congress and Tomorrow.Mobility World Congress strive to integrate inclusivity into everything they do, in addition to creating a space for debate on how to build a fairer and more egalitarian society.

In 2019, they formally named an initiative that had already been in place for several years: **Towards Inclusivity** highlights the actions Smart City Expo World Congress and Tomorrow.Mobility World Congress take to make sure their events are accessible to all, and that everyone feels represented and has a voice.



## The following facilities were available for those attending the event:



Electric scooters were available for people with reduced mobility. There were also reserved spaces for wheelchairs/electric scooters in the food courts and in the audience areas of all Congress rooms. Moreover, guided tours were available for people with visual impairments and full accessibility in all areas of the venue was ensured.



Increasing equal gender representation at the Congress. Specific Congress sessions about gender equality were held.



Dedicated prayer rooms adapted to all needs were available. There were also a variety of lunch menus with kosher and veggie/vegan options.



Simultaneous translation to Spanish was ensured in the Congress rooms.

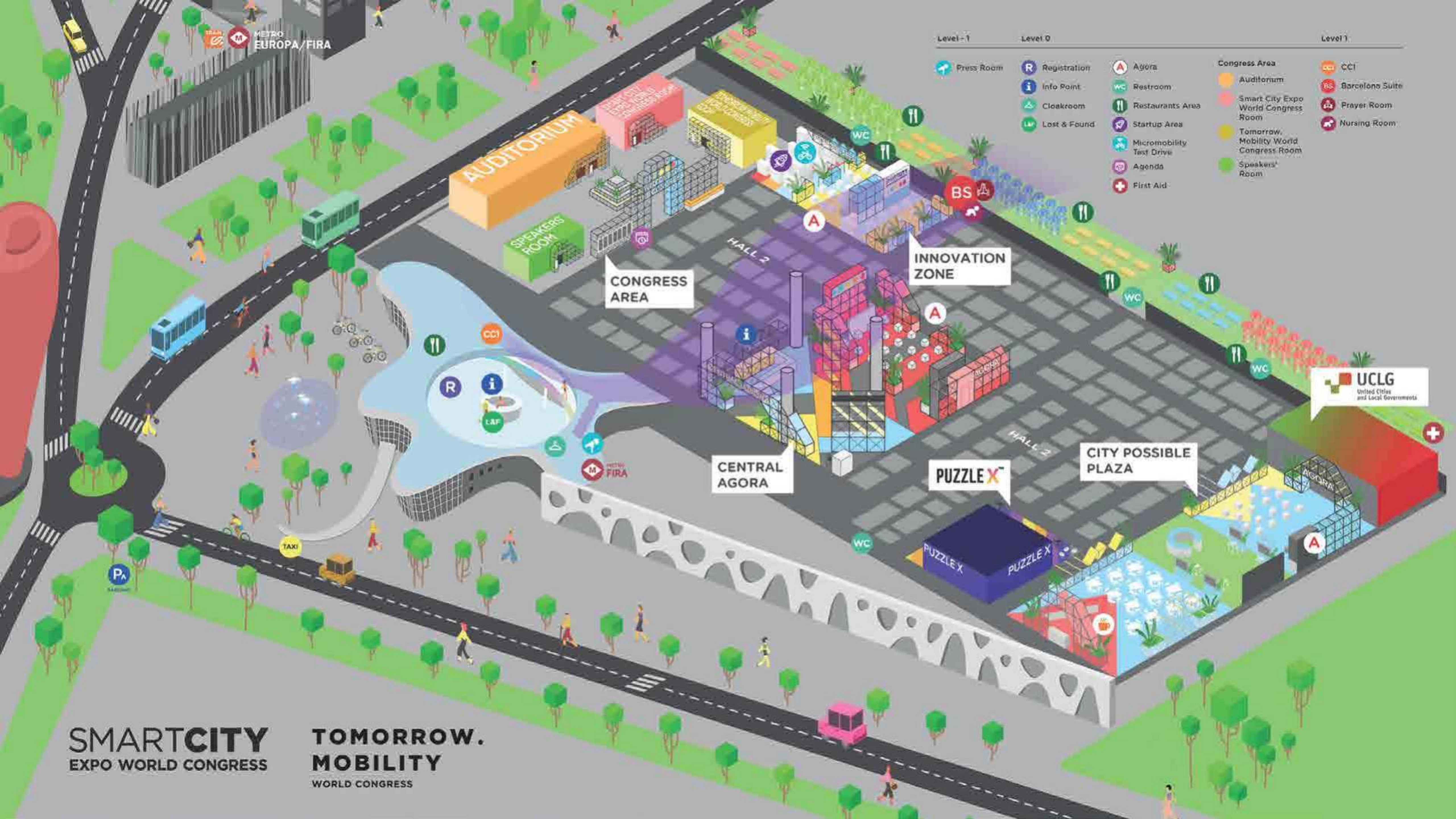


There was a nursing room with diaper changing units.





**#4**  
**LAYOUT**  
**OF THE EVENT**



- | Level -1  | Level 0  | Level 1   |
|---|--|---|
| <ul style="list-style-type: none"> <li> Press Room</li> <li> Info Point</li> <li> Cloakroom</li> <li> Lost &amp; Found</li> </ul> | <ul style="list-style-type: none"> <li> Registration</li> <li> Restroom</li> <li> Restaurants Area</li> <li> Startup Area</li> <li> Micromobility Test Drive</li> <li> Agenda</li> <li> First Aid</li> </ul> | <ul style="list-style-type: none"> <li> Agora</li> <li> Smart City Expo World Congress Room</li> <li> Tomorrow, Mobility World Congress Room</li> <li> Speakers' Room</li> <li> CCI</li> <li> Barcelona Suite</li> <li> Prayer Room</li> <li> Nursing Room</li> </ul> |

**SMARTCITY**  
EXPO WORLD CONGRESS

**TOMORROW.**  
**MOBILITY**  
WORLD CONGRESS

**UCLG**  
United Cities  
and Local Governments

# A FIRST-RATE VENUE TO FOSTER ENGAGEMENT

The venue layout was designed to create a useful and memorable experience for attendees, offering new possibilities while respecting all COVID-related safety measures.

## EXHIBITION AREA

A large showcase where 452 exhibitors displayed groundbreaking products and services aimed at cities.

## CONGRESS AREA

An area for reflection and debate where 250 speakers from all over the world shared their insights in eight key tracks covering all the topics facing post-pandemic cities. The **Tomorrow.Mobility** conversation was also concentrated in this zone.

## CENTRAL AGORA

An open space for debate where key themes such as digital innovation for inclusion, better governance, city logistics and the new challenges of Smart Ports were discussed.

## INNOVATION ZONE

A marketplace where selected startups and organizations could engage with professionals attending from all over the globe and showcase their cutting-edge projects and smart implemented solutions.

## PUZZLE X

A space devoted to the first forum convened to bridge the worlds of Frontier Materials, societal impact, entrepreneurship, venture building, corporate innovation, bleeding-edge material science and United Nations Sustainable Development Goals to facilitate the use of the materials of the future to help our world today.

## CITY POSSIBLE PLAZA

An open space including a place to grab a coffee built in partnership with Mastercard to experience the **City Possible Summit 2021**, which unleashed the superpower of collaboration to explore how leaders around the world are approaching new challenges and building innovative, sustainable, inclusive, and prosperous cities.

## UNITED CITIES AND LOCAL GOVERNMENTS (UCLG)

UCLG gathered its World Council under the title **Smart Cities and Territories, Pillars of the Common Agenda** to define the strategy of the municipal movement and its contribution to the UN Common Agenda. The Council is composed of 342 representatives from 97 countries.



**#5**  
**PARTNERS**

GLOBAL PARTNERS



INDUSTRY PARTNERS



EVENT PARTNERS



SUPPORTING INSTITUTIONS



SPONSORS



HOSTED BY



SMART CITY EXPO WORLD CONGRESS ORGANIZED BY



TOMORROW.MOBILITY WORLD CONGRESS ORGANIZED BY



STRATEGIC ORGANIZATIONS



COLLABORATING ORGANIZATIONS



MEDIA PARTNERS



# GLOBAL PARTNERS

Smart City Expo World Congress 2021 was made possible thanks to a powerful community of corporate and institutional partners willing to work together with the event in pursuit of more sustainable, resilient, and inclusive post-pandemic cities. Their sessions and visions are available free of charge on the Tomorrow.City platform.



Cisco helps communities around the globe connect, protect, and enhance the lives of their people. It builds trustworthy technology that expands equitable access to information, essential services, healthcare and education, and keeps organizations functioning effectively without compromising security and privacy. The end-to-end capabilities of its portfolio help users reimagine and redesign communities to grow quality of life and protect people's physical and financial health, safety and well-being. Learn how to accelerate transformation with Cisco as your trusted partner. We're in this together, and as always, Cisco is securely connecting what's now and what's next to power an inclusive future for all.

**“ The Smart City Expo World Congress is the one place where we have meaningful conversations and we have the ability to think about how to solve them together.**

*Cassie Roach - VP Global Public Sector - CISCO*

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City Possible is Mastercard's partnership and co-creation framework for cities. Since its inception, City Possible has facilitated a community for members to draw on the collective expertise and resources of all stakeholders in order to scale innovative solutions that address urban challenges. Through its City Possible network of more than 300 members, Mastercard is fostering collaboration and co-creation, driving inclusive economic development, and building resilient communities.

**“ City Possible at its core is a community, and that community is designed to create conversations, and to create relationships and collaborations that drive these inclusive solutions - an event like the Smart City Expo World Congress is an important in-person part of that.**

*Miguel Gamiño - Executive VP, Head of Global Cities - Mastercard*

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FCC Environment is the company inside the FCC Group that, for over 110 years, has been delivering environmental services to 66 million people in more than 5,000 municipalities around the world. From waste management and recycling to every municipal service, it annually processes almost 24 million tons of waste as a resource at nearly 200 sustainable facilities, recovering 3.3 million tons of secondary raw materials (SRM) and refuse-derived fuel (RDF) and 360 MW of non-fossil power. Innovation is in FCC Environment's DNA, and it has committed to reaching the UN's Agenda 2030 SDG by developing its 2050 Sustainability Strategy, which includes implementing e-mobility and encouraging the changeover of society to a Circular Economy model.

“ We think that the Smart City Expo World Congress is the global benchmark event for everything related to smart cities, to cities that seek to be sustainable.

*Felipe Urbano de Saleta - Director of Business Development.  
Communications and External Affairs - FCC Group*

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Germany Trade & Invest (GTAI) is the Federal Republic of Germany's agency for promoting trade and investment within and outside of Germany. It advises foreign companies looking to expand their business activities in the German market, as well as providing information on foreign trade to German companies seeking to enter foreign markets. Its services include market-entry strategy development, site identification, site visit support, tax and legal information, funding and financing advice, contact initiation, and support during visits to local partners and networks.

“ Coming back to Barcelona to an event like the Smart City Expo World Congress is just fantastic. Meeting other German institutions, players that are in the field and all those international companies that exchange knowledge as well as getting to know each other is irreplaceable.

*Robert Compton - Project Manager, Energy Efficiency & Smart Cities -  
Germany Trade & Invest*

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Huawei is an independent, privately held company that provides Information and Communications Technology (ICT). It has nearly 194,000 employees, and operates in more than 170 countries and regions, serving more than three billion people around the world.

Everything it develops and delivers to its customers is secure and trustworthy - a company track record that has remained consistent for 30 years.

With integrated solutions across four key domains — telecom networks, Information Technology (IT), smart devices, and cloud services — it is committed to bringing digital to every person, home, and organization, for a fully connected, intelligent world.

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Microsoft enables digital transformation for the era of an intelligent cloud and an intelligent edge. Its mission is to empower every person and every organization on the planet to achieve more.

**“ Events such as the Smart City Expo World Congress really help drive creative problem solving, which is a requirement. No problem in a city is going to be solved by any one party. It’s going to take public and private and civil society coming together, and this event brings all of those parties together.**

*Jeremy Goldberg - Worldwide Director of Critical Infrastructure - Microsoft*

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Smart Ports: Piers of the Future is an event organized by the Port of Barcelona in collaboration with six of the most important ports in the world: Antwerp, Hamburg, Los Angeles, Montreal, Rotterdam, and Busan. These institutions share projects and knowledge related to different areas, such as sustainability, multimodality, agility, resilience, and transparency, with the main objective of offering innovative solutions to present and future challenges faced by ports. The 2021 event was 100% online and the attendees were able to follow it through the Smart Ports TV digital platform. This digital platform will remain active for 365 days and new content will be uploaded during this period.

“ Smart City Expo World Congress is crucial for innovation in ports.  
*Damià Calvet - President - Port of Barcelona*

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# INDUSTRY PARTNERS

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## Deloitte.

Deloitte is the brand under which tens of thousands of dedicated professionals in independent firms throughout the world collaborate to provide audit & assurance, consulting, financial advisory, risk advisory, tax, and related services to select clients.

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## RACC Mobility Club

The RACC provides coverage and top-quality services to meet the needs of more than 10 million people all over the world. It specializes in personal, family, mechanical, urgent medical and household assistance services, and operates the biggest driving school network in Spain. To meet the needs of its members, it makes 1,193,000 call-outs a year and manages over 600,000 insurance policies of various types. The RACC promotes a new culture of mobility that is safer and more environmentally friendly. It has a significant capacity for disseminating information and influencing aspects related to improving road safety and infrastructure and reducing accidents.

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# EVENT PARTNERS



emovis, a subsidiary of Abertis Mobility Services, is a global leader in the implementation and operation of toll-based mobility solutions supported by innovative technology in Europe, the Americas and Asia, enabling millions to seamlessly travel some of the world's most advanced and busy cities and highways. To do this successfully, emovis blends operational excellence with cutting-edge technology and best-in-class customer service to meet society's ever-changing requirements. It is currently operating or developing technological solutions for large tolling infrastructure in countries like the United States, the United Kingdom, Ireland, Puerto Rico, Canada, and Qatar.

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With sales of 10.7 billion euros in 2020, Covestro is among the world's leading polymer companies. Its business lines focus on the manufacture of high-tech polymer materials and the development of innovative and sustainable solutions for products used in many areas of everyday life. In doing so, Covestro is fully committed to the circular economy. The main industries it serves are automotive and transport, construction, furniture, and wood processing, as well as the electrical, electronics and household appliance industries. Other sectors include sports and leisure, cosmetics, healthcare, and the chemical industry itself. As of the end of 2020, Covestro had 33 production sites worldwide and employed around 16,500 people (calculated as full-time equivalents).

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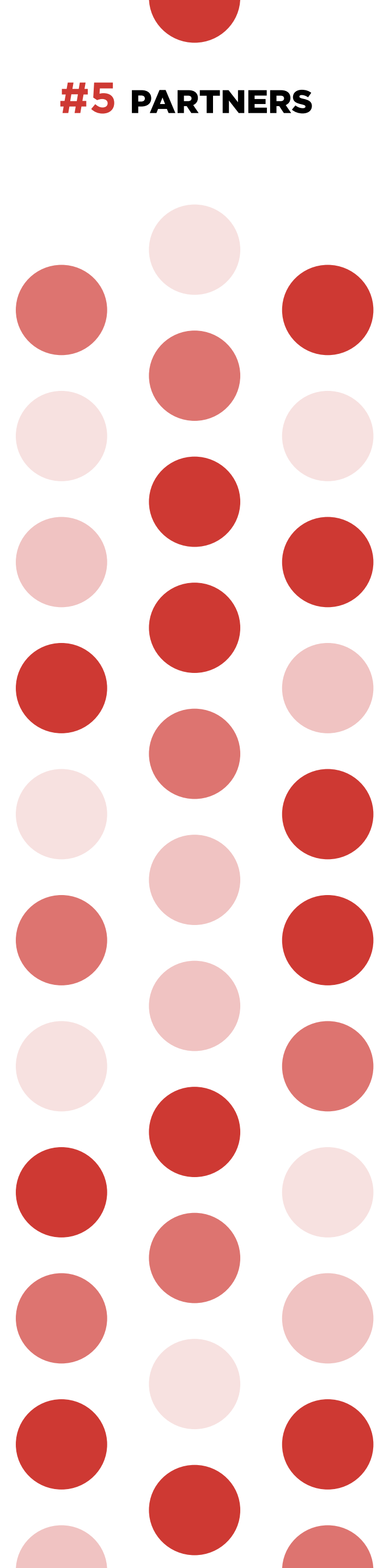
ENGIE is a global reference point in low-carbon energy and services, with 170,000 employees. The group is committed to accelerating the transition towards a carbon-neutral world through reduced energy consumption and more environmentally friendly solutions. Engie tries to reconcile economic performance with a positive impact on people and the planet, building on its key businesses (gas, renewable energy, services) to offer competitive solutions to its customers. As a major provider of energy efficiency solutions, ENGIE helps cities and communities optimize the way they use their resources by providing them with technical solutions and proven expertise in energy infrastructure, space heating, air conditioning and ventilation systems, district heating and cooling networks, public lighting, and telecoms and transportation infrastructure.

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FIWARE is a curated framework of open-source software platform components that can be assembled and, together with third-party components, used to build entire platforms that support the faster, easier, and cheaper development of smart city solutions. FIWARE, as a world leading open-source technology in the digitization market, has become the de-facto standard for smart cities, and as such, helps cities' decision makers and system integrators alike to incorporate standards for stronger interoperability, faster time-to-market, security of investment and replicability (portability). Together with its ecosystems of members, partners, iHubs, evangelists and academia, the FIWARE Foundation is taking the lead in open source collaborative ecosystems, setting new standards on a global scale and acting as an enabling force for inter-city and inter-country collaboration and co-creation.

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## #5 PARTNERS



Keolis is a pioneer in developing public transport systems and works alongside public authorities who want to enhance shared mobility systems to grow the appeal and vitality of their regions. A world leader in operating automated metro and tramway systems, Keolis and its partners and subsidiaries Kisio, EFFIA, Keolis Santé and Cykleo support the core business with innovations offering new and bespoke shared mobility solutions for modes including trains, buses and coaches, trolleybuses, shared car solutions, river and sea shuttle services, bike share services, car sharing, fully electric driverless shuttles, and urban cable cars. In France, Keolis is the second largest provider of parking management solutions through its subsidiary EFFIA, and the country's leader in medical transport since the creation of Keolis Santé in July 2017. The Group is 70%-owned by SNCF and 30%-owned by the Caisse de Dépôt et Placement du Québec (Quebec Deposit and Investment Fund) and employs 68,500 people in 16 countries.\* In 2020, it posted revenues of €6.1 billion. In 2019, 3.4 billion passengers used one of Keolis' shared mobility services. [www.keolis.com](http://www.keolis.com)

\*Australia, Belgium, Canada, China, Denmark, France, Germany, India, the Netherlands, Norway, Qatar, Senegal, Sweden, the United Arab Emirates, the United Kingdom, and the United States.

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The PTV Group takes a holistic approach that integrates all aspects of traffic, transport, and logistics to create and promote sustainable mobility. The PTV Group provides software solutions and consulting services to empower mobility and transport for a cleaner and smarter future. Its best-in-class software for intelligent traffic management and transport optimization enables decision-makers in politics, cities, industry, and trade save time and money, make roads safer, and protect the environment. PTV's software simulates and demonstrates today how tomorrow's mobility, with all its ecosystems and dimensions, can be realized - from strategic transport planning to micromobility for the first/last mile.

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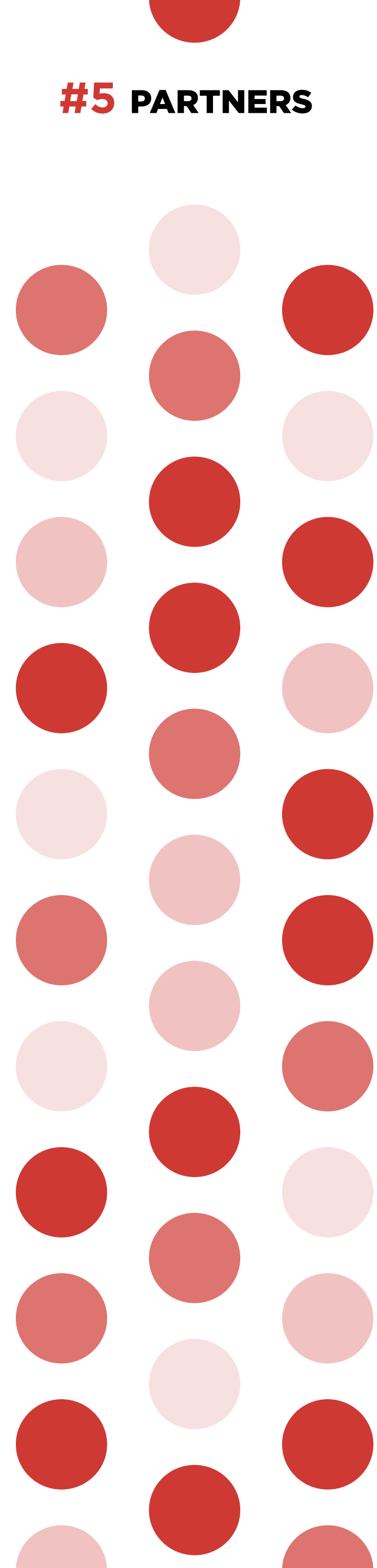
Renfe is Spain's leading rail operator in passenger and goods transport. It is committed to safe, efficient, and quality rail transport. It sets itself apart from other transport options and adapts to the needs and demands of the most crucial element in this entire structure: its customers. With more than 5,000 trains running every day in Spain, over 500 million passengers a year, 18.3 million tons transported each year, nearly 15,000 employees, and exceptional rates of punctuality, quality, and satisfaction, Renfe is working to consolidate its leadership in Spain and extend its international reach, with a presence in countries as wide-ranging as the United States, France, Mexico, and Saudi Arabia.

[GO TO WEBSITE](#)



Founded in 2007, Ubiwhere is a software company focused on the research and development of innovative technological solutions, oriented to the areas of smart cities, telecommunications and Future Internet. The diversified team of more than 80 employees is one of the pillars of the company's success, and is prepared to face the greatest challenges of the market. Ubiwhere cooperates with a broad technological network at the national and international levels that values and recognizes the company's large-scale contribution to its creative and innovative projects. Ubiwhere holds several certifications: ISO 9001:2015, NP 4469:2019 and NP 4457:2007. We have the desire to change the world, which is why we create, design, and implement solutions that improve people's quality of life.

[GO TO WEBSITE](#)



# SUPPORTING INSTITUTIONS

#5 PARTNERS



The European Commission is the EU's executive body. It represents the interests of the whole European Union. The Commission's main roles are to propose legislation which is then adopted by the co-legislators, the European Parliament, and the Council of Ministers; enforce European law (where necessary with the help of the Court of Justice of the EU); set objectives and priorities for action, outlined yearly in the Commission Work Program, and work towards delivering them, as well as managing and implementing EU policies, the budget, and representing the Union outside Europe. The European Commission has its headquarters in Brussels, Belgium, and some services are also based in Luxembourg. The Commission has Representations in all EU Member States and 139 Delegations across the globe.

[GO TO WEBSITE](#)



ICEX Spain Trade and Investment is a public corporation at the national level aimed to promote the internationalization of Spanish companies to support their competitiveness and add value to the economy, as well as attracting foreign investment to Spain. ICEX Spain Trade and Investment renders its services through a network of 31 Provincial and Regional Divisions in Spain along with almost 100 Economic and Trade Offices around the world. It also boasts 16 Business Centers worldwide, offering Spanish companies temporary infrastructure and acting as incubators for internationalization. Every year, ICEX organizes around 1,200 promotional activities in foreign markets and answers over 90,000 queries on internationalization.

[GO TO WEBSITE](#)



SmartCAT is the strategy of the Government of the Generalitat de Catalunya, and extends the concept of the Smart City to a country-wide level to carry out a program that integrates and coordinates local and supralocal initiatives, supports companies, and deploys Smart initiatives throughout the region. SmartCatalonia aims to make Catalonia an international "Smart Country" of reference, using digital information and technology to bring innovation to public services, drive economic growth and promote a smarter, more sustainable and more inclusive society.

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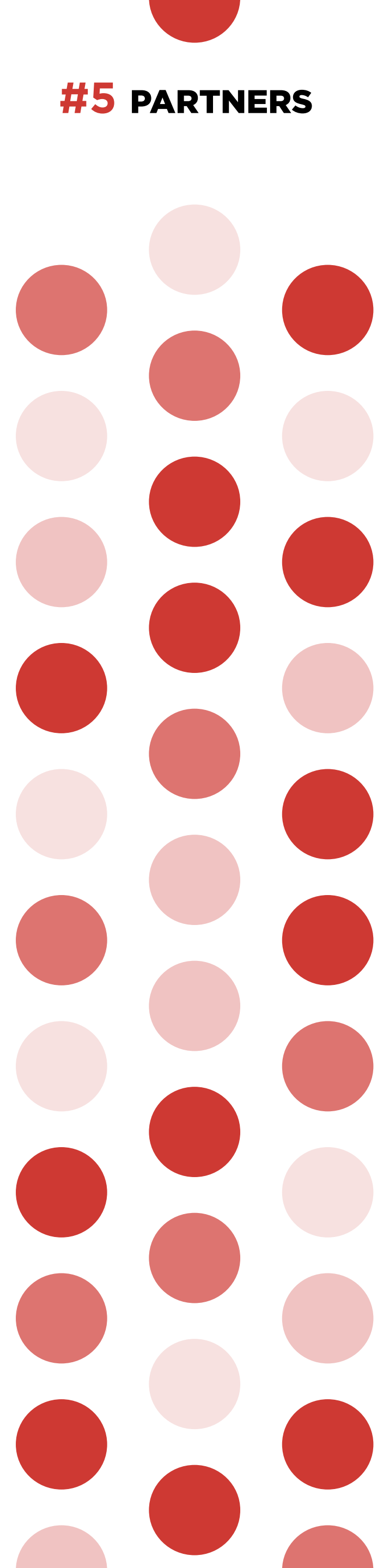
The Diputació de Barcelona (Barcelona Provincial Council) is a local public authority that provides technical, economic, and technological support to the 311 municipalities in the province of Barcelona, fostering quality local services throughout the region. Its mission is to ensure progress and well-being for all citizens in the territory by providing services to people, either directly or, above all, in cooperation with the municipalities themselves. To this end, the Diputació de Barcelona is determined to become a Smart Region: a community of Smart Villages and Smart Cities in which technology and citizens are the main drivers of change to achieve social, environmental, and economic development for all, in line with the Sustainable Development Goals (SDGs).

[GO TO WEBSITE](#)



The Barcelona Metropolitan Area (AMB) is the public administrative body for the metropolitan area of Barcelona, which occupies 636 km<sup>2</sup> and encompasses 36 municipalities with more than 3.2 million inhabitants. The metropolitan area is a territorial, social, demographic, economic and cultural entity formed during the last century as a product of the growth and connection of urban systems around the city of Barcelona. This is the largest metropolitan conurbation in the western Mediterranean, and generates half of Catalonia's GDP. The new public metropolitan administrative body replaces the three entities in place until 2011: the Union of Municipalities of the Metropolitan Area of Barcelona, Environmental Agency, and Transport Metropolitan Agency. This new AMB rationalizes and simplifies metropolitan governance by creating a single administrative body.

[GO TO WEBSITE](#)



## #5 PARTNERS



EUROCITIES is the network of major European cities, with over 140 members across 39 countries, representing more than 130 million people. It works in all areas of interest for cities, from culture to mobility, the environment to social affairs, and economic development to smart cities. It facilitates learning experiences between cities and represents cities' interests before the European Union. EUROCITIES is committed to working towards a common vision of a democratic, sustainable future in which all citizens can enjoy a good quality of life.

[GO TO WEBSITE](#)



The effects of rapid urban growth combined with the impact of climate change are creating new challenges for cities, which require better usage of information. To manage these challenges and deliver improved urban services, cities need to better leverage technology, people, and processes. IDB works to improve lives in Latin America and the Caribbean through financial and technical support for countries striving to reduce poverty and inequality. It helps improve health and education, and advance infrastructure. As the leading source of development financing for Latin America and the Caribbean, it conducts extensive research and provide loans, grants, and technical assistance. It is committed to achieving measurable results and the highest standards of increased integrity, transparency, accountability, and sustainability.

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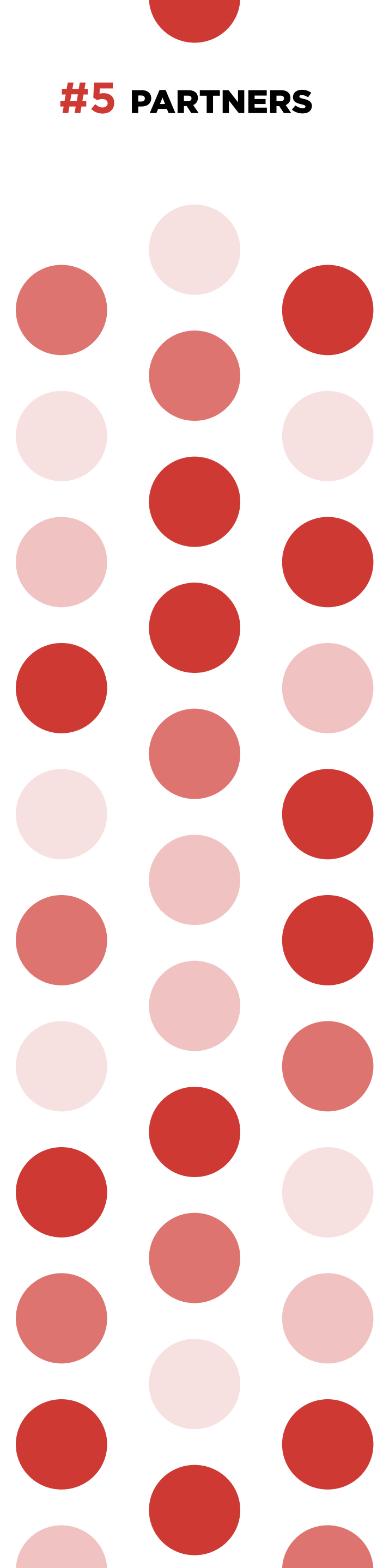
Metropolis brings together the governments of 141 urban agglomerations located around the globe. Founded in 1985, the association is today the focal point of expertise on metropolitan governance. Bringing the voices of metropolises to the global agenda and building capacity to deliver public policies and services, Metropolis contributes to find common answers to the challenges of metropolization. It provides global leadership and advocacy to build a case for the importance of sound metropolitan governance, and its programs give metropolitan communities the tools they need to make better decisions.

[GO TO WEBSITE](#)



United Cities and Local Governments (UCLG) is the global organization of local and regional governments and their associations that represents and defends their interests on the world stage. UCLG's network of members represents 70% of the world's total population and is present in all regions: Africa, Asia-Pacific, Europe, Eurasia, Latin America, the Middle East and West Asia, and North America; it is organized into 7 regional sections, 1 metropolitan section and 1 Forum of Regions. This network includes over 240,000 towns, cities, regions, and metropolises, and over 175 associations of local and regional governments in 140 countries. Among UCLG's key areas of political interest are local democracy, climate change and environmental protection, the achievement of the Sustainable Development Goals, local finance, urban development, and city diplomacy in peace building.

[GO TO WEBSITE](#)



## #5 PARTNERS



UN-Habitat is the United Nations program working towards a better urban future. Its mission is to promote socially and environmentally sustainable human settlement development and the achievement of adequate shelter for all. In October 2016, at the UN Conference on Housing and Sustainable Urban Development - Habitat III - member states signed the New Urban Agenda. This is an action-oriented document which sets global standards of achievement in sustainable urban development, rethinking the way we build, manage, and live in cities. Through its cooperation with committed partners, relevant stakeholders, and urban actors, including all levels of government as well as the private sector, UN-Habitat is applying its technical expertise, normative work, and capacity development to implement the New Urban Agenda and Sustainable Development Goal 11 - to make cities inclusive, safe, resilient, and sustainable. The City Resilience Global Program is UN-Habitat's technical partner for urban resilience. The program helps cities increase their resilience by diagnosing the state of their urban system, driving actions, sharing, and building knowledge for policy making.

[GO TO WEBSITE](#)



The World Bank Group comprises five institutions managed by their member countries. Established in 1944, the World Bank Group is headquartered in Washington, D.C. It has more than 10,000 employees in more than 120 offices worldwide. The World Bank is a vital source of financial and technical assistance to developing countries around the world. It is not a bank in the ordinary sense but a unique partnership to reduce poverty and support development.

The World Bank Group has set two goals for the world to achieve by 2030:

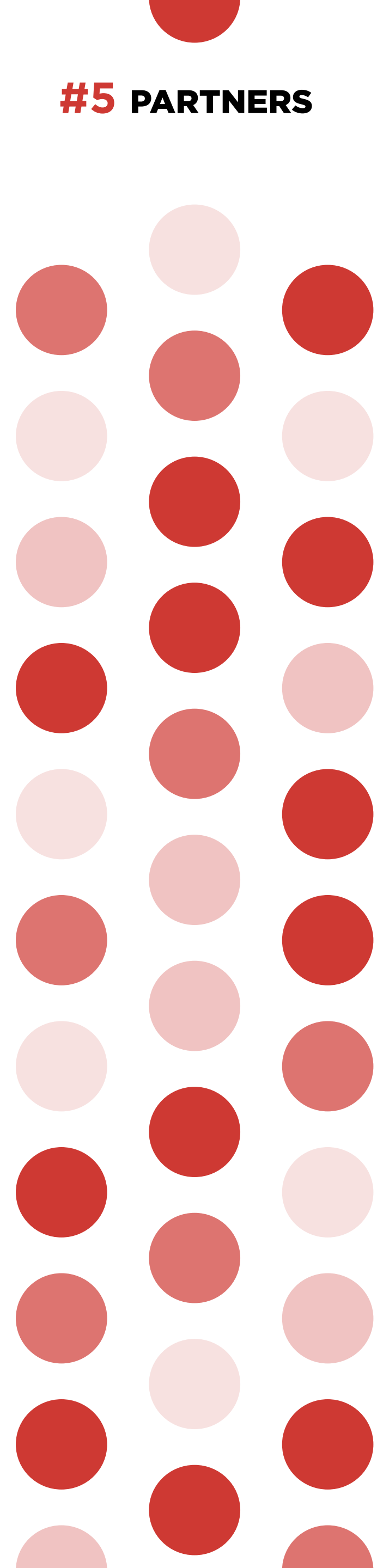
- 1) End extreme poverty by decreasing the percentage of people living on less than \$1.90 a day to no more than 3%.
- 2) Promote shared prosperity by fostering the income growth of the bottom 40% for every country.

[GO TO WEBSITE](#)



The World Economic Forum is the International Organization for Public-Private Cooperation. The Forum engages the foremost political, business, cultural and other leaders of society to shape global, regional and industry agendas. It was established in 1971 as a not-for-profit foundation and is headquartered in Geneva, Switzerland. It is independent, impartial, and not tied to any special interests. The Forum strives in all its efforts to demonstrate entrepreneurship in the global public interest while upholding the highest standards of governance. Moral and intellectual integrity is at the heart of everything it does.

[GO TO WEBSITE](#)







**#6**  
**TRACKS**

# THE HEART OF THE DEBATE

In 2021, SCEWC focused on eight main tracks: **Enabling Technologies, Energy & Environment, Tomorrow.Mobility World Congress, Governance, Living & Inclusion, Economy, Infrastructure & Buildings, and Safety & Security.** These tracks were at the heart of the debate on how to improve life in post-pandemic cities, both in the Congress and the Expo area.



## Enabling Technologies

### SOME HOT TOPICS

- Artificial Intelligence
- Internet of Things
- 5G & WIFI6 (6G)
- Cloud Computing
- VR/AR & Digital Twins
- Big Data



## Energy & Environment

### SOME HOT TOPICS

- New Energy Models
- Food & Agriculture
- Climate Emergency
- CleanTech
- Waste & Water Management
- Green Spaces



## Tomorrow.Mobility World Congress

### SOME HOT TOPICS

- Micro Mobility
- Public Transport
- Automotive
- Mobility Service Providers
- Last Mile & E-Delivery
- Smart Infrastructures



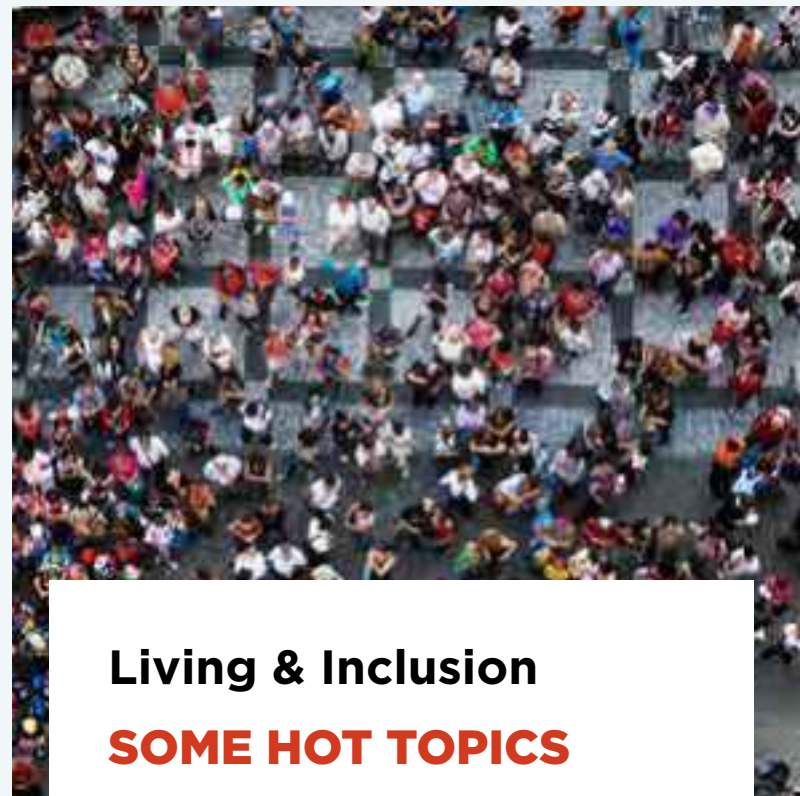
## Governance

### SOME HOT TOPICS

- Multi-stakeholder
- PPP
- Cross-sector Governance
- Citizen Engagement
- Alliances
- Co-creation

# THE HEART OF THE DEBATE

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## Living & Inclusion

### SOME HOT TOPICS

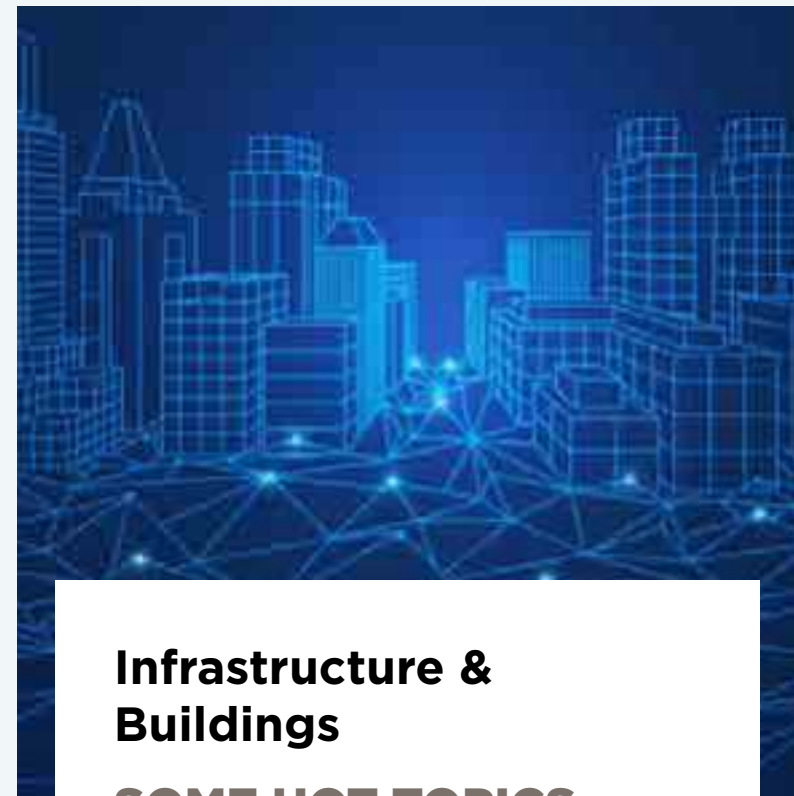
- Social Inclusion
- Future of Education & Work
- Health
- Cities for All
- Housing



## Economy

### SOME HOT TOPICS

- Financing Schemes
- Economic Models
- International Projection
- Talent Attraction
- Innovation Ecosystems
- City-to-city Cooperation



## Infrastructure & Buildings

### SOME HOT TOPICS

- Smart Buildings
- Sustainable Construction
- Innovative Materials
- Critical Infrastructures
- Digital Twins
- Urban Planning



## Safety & Security

### SOME HOT TOPICS

- Cybersecurity
- City Ethics & Privacy
- Urban Safety
- Data Security
- Digital Rights
- Emergency Response

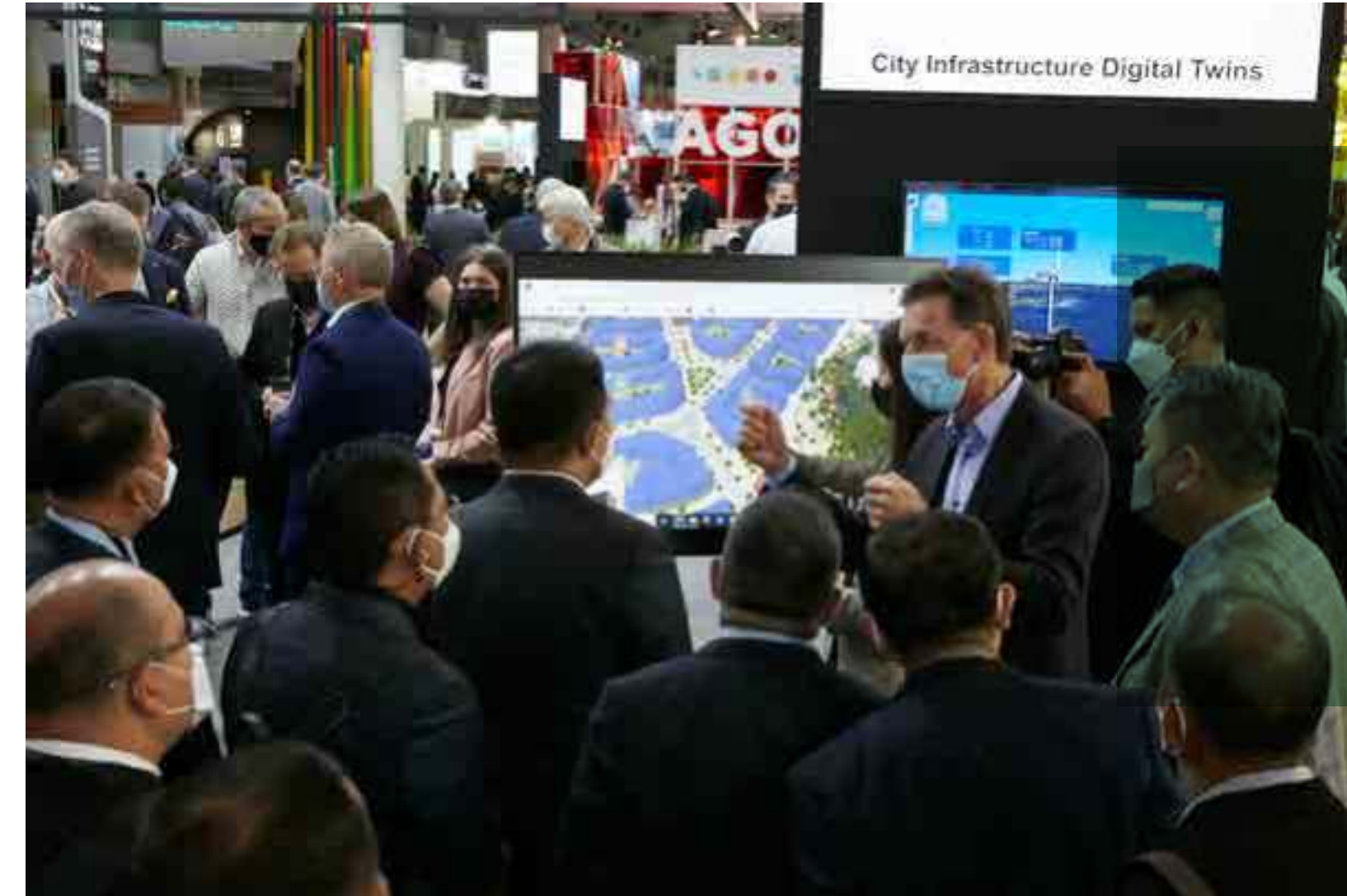
**#7**  
**EXHIBITION**  
**AREA**

# A DYNAMIC MARKETPLACE

Smart City Expo World Congress 2021 featured a large exhibition area to showcase all the latest smart urban solutions.

**A total of 452 companies, institutions, cities, countries, and research centers** participated in this dynamic marketplace and showcased the latest advances in sustainable urban development. It was the perfect space to get up to date with the most innovative solutions in the smart city field, explore what's new in the sector and connect with thousands of international attendees, as well as a broad online audience that joined the event digitally.

Three main areas were showcased on the Exhibition floor: the **Central Agora**, where a large variety of side events took place; the **City Possible Plaza**, where the **City Possible Summit** reflected on how post-pandemic cities can meet old and new challenges; and the **Innovation Zone**, where mobility solutions to reinvent tourism were displayed, **36 startups** presented their products, and many others pitched their groundbreaking ideas.



# FLOOR PLAN 2021

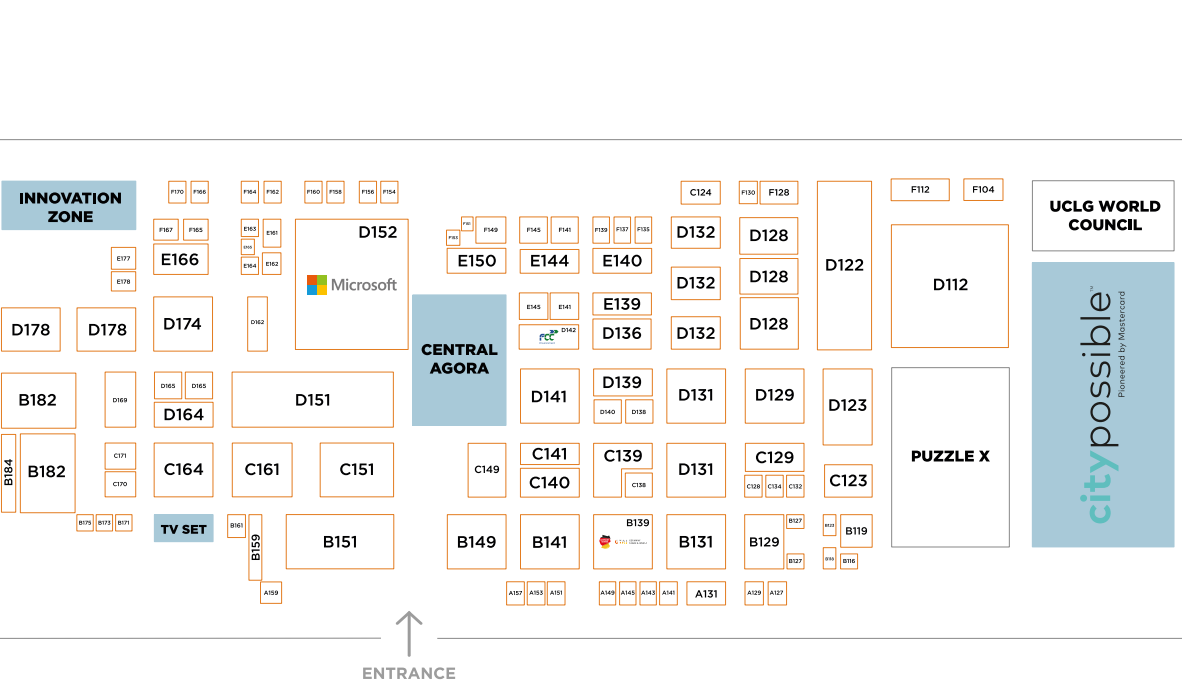
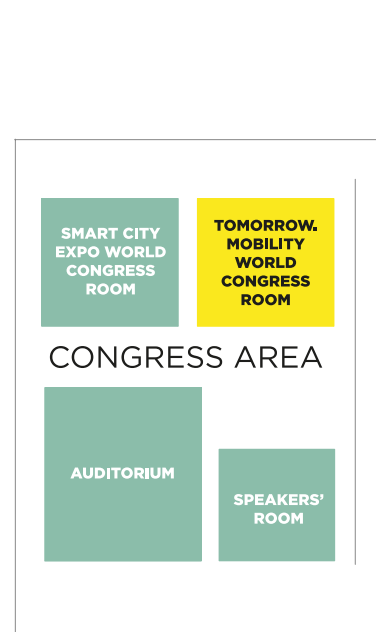
**EXHIBITOR LIST**

Name	Stand
<b>3D SCANNERS</b>	C149
<b>A</b>	
AA MOBILITY	D112
ABB MANAGEMENT	
SERVICES LTD.	D152-19
ABERTIS MOBILITY SOLUTIONS	C171
ACCENTURE	D152-9
ACTION TRACKER	D112
ADASKY + ISCL	C140-5
ADDDX INTERNET SERVICES	B151
ADEUNIS	D132, E140
ADTEL	D112
ADVANTAGE AUSTRIA SPAIN	D139
AEMES SMART	C141
AIRLY	D149
AITENDERS	D132, E140
AJUNTAMENT DE BARCELONA	D151
AJUNTAMENT DE L'HOSPITALET	C161
ALCATEL LUCENT	
ENTERPRISE	D132, E140
ALDEBARAN	D151
ALLIANZ SMART CITY DORTMUND	B141
ALYCE	D132, E140
AMAZON WEB SERVICES	B151
AMB (AREA METROPOLITANA DE BARCELONA)	D141
AMB INFORMACIÓ I SERVEIS	D169
AMC 4.0	D141
AMTU	D112
ANTOPOLIS	D128
AOIFE SOLUTIONS	D131
APP&TOWN	D112
APPARTME	C149
ARCELORMITTAL	D132, E140
ARGOS TEAM ACCESS	D132, E140
ARTEC DESIGN	D123
ATENE KOM	B149
ATOS INFORMATION TECHNOLOGY	B151
AUVE TECH	D123
AWEX	D128
AXESS	D139
AXILION LTD	D152 - 11
AXIS	D152 - 12
AYUNTAMIENTO DE MADRID -MADRID INNOVATION	E150
<b>B</b>	
BABLE	B131
BADEN-WÜRTTEMBERG INTERNATIONAL (BW-I)	B131
BASQUE MOBILITY & LOGISTICS CLUSTER	E164
BATONROUTE - MOBILITY SOLUTIONS	D131
BAVARIAN PAVILION	B149
BAYERN INNOVATIV	B149

BAYERN INNOVATIV MOBILITÄT	B149
BAYERN INNOVATIV THINKNET 6G	B149
BEABLOO	D152 - 18
BECLUSE	C149
BEE SMART CITY	B141
BELGIUM PAVILION	D128
BENTLEY SYSTEMS	D152 - 8
BERCMAN TECHNOLOGIES	D123
BERLIN PARTNER	B131
BIKEEP	D123
BIMDATA IO	D132, E140
BISLY	D123
BIT GENOMA	D112
BONISYS	B131
BSC	D112
BT DIGITAL AUTOMATION S.R.L.	D178
BUSINESS FRANCE	D132, E140
<b>C</b>	
C2RO	C124
CAFA TECH	D123
CANADA	C124
CAPELON	B151
CAPMAR	D151
CARNET AUTONOMOUS DRIVING CHALLENGE	B184
CASMAR	D162
CEPTON	F170
CHECKTOBUILD	E150
CHILE - PROCHILE	E145
CIRCULSOUND	D151
CITEGESTION SA	D152 - 15
CITIES TODAY	F153
CITIZENLAB	D128
CITY OF ESSEN	B141
CITY OF GELSENKIRCHEN   CONNECTED CITY	B141
CITY OF KARLSRUHE - ECONOMIC DEVELOPMENT CORPORATION	B131
CITY OF STOCKHOLM	F128
CITY POSSIBLE BY MASTERCARD	CITY POSSIBLE PLAZA
CITYBEACON_NGDI SOLUTIONS	D152
CLEANHAND	D123
CLIMATEVIEW AB	D152 - 22
CLOUD COUNTSABLE	C124
CODIT HOLDING	D152 - 4
COGNATA	C140 - 6
COMMEND INTERNATIONAL	D139
COMMUNAUTÉ DE COMMUNES DU GRÉSIVAUDAN	D132, E140
COMMUNAUTÉ URBAINE DE DUNKERQUE	D132, E140
COMPETENCE CENTER 5G NRW	B141
CRESCENT	D128
CRITICAL	D112
CROWDSCAN BV	D152 - 14
CSIT	C124
CTRL4 ENVIRO	D151

CUBIC TRANSPORTATION SYSTEMS	D152 - 10
CYCOMEDIA TECHNOLOGY	D152 - 1
<b>D</b>	
D2D3	D128
DAFUER	C139
DATEN-KOMPETENZENTRUM STAEDTE UND REGIONEN DKSR	B131
DAWEX	D132, E140
DBT-CEV	D132, E140
DEEP TREKKER	C124
DEFCON8	E150
DELOITTE	B141
DEPARTMENT OF INFORMATION ENGINEERING, UNIVERSITY OF FLORENCE	B151
DEXMA SENSORS	D131
DIGITAL LAB ARCELORMITTAL	D132, E140
DIGITALSTADT DARMSTADT	C139
DILAX INTELCOM IBERICA	B159
DIPRO TECHNOLOGIES	D131
DIPUTACIÓ DE BARCELONA	C151
DIRECCIÓN GENERAL DE TRÁFICO	D131
DITECH SRL	D178
DOTT	B161
DRONEFUTURA	D112
DYVOLVE	F156
<b>E</b>	
EAGLE INC.	C124
EASILIC	D132, E140
EASYSMILE	E141
EBIS	C149
E-BLOCK ENERGY TRADE	D131
EDAG ENGINEERING	B151
EDGEWAY	D132, E140
EINESTADT	A153
EIT URBAN MOBILITY	D174
ELICHENS	D132, E140
EMAX	D128
EMBIT SRL	D178
E-MILES	F135
EMNIFY	B131
E-MOBIL BW	B131
EMT - MADRID	E150
ENCANTADO DE COMERTE	E150
ENE TELECOM	D112
ENERGIEAGENTUR.NRW	B141
ENERGREEN	C149
ENGIE	E144
ENGINEERING INGEGNERIA INFORMATICA S.P.A.	B151
ENVELOPE	D123
EOS CONNECTIVITY (LSENDRA)	D151
ESRI ESPAÑA SOLUCIONES	D128
GEOSPACIALES	D152 - 2
ESTONIAN PAVILION	D128
ETECNIC ENERGY & MOBILITY	D112
EURECAT	D112

EXPERIENCES	D178
EYEVI TECHNOLOGIES	D123
<b>F</b>	
FAIRVILLE	D128
FCC ENVIRONMENT	D142
FECAV	D112
FERROCARRILS DE LA GENERALITAT DE CATALUNYA	C164
FIWARE	B151
FLAGWORLDS SPRL-NEAREO	D128
FLANDERS INVESTMENT & TRADE	D128
FLOWBIRD	D140
FLUXGUIDE AUSSTELLUNGSSYSTEME	D139
FOODXAIN	D141
FRANCE VILLE DURABLE	D132, E140
FREEBIKE	CITY POSSIBLE PLAZA
FUNDACIÓN TECNIALIA RESEARCH & INNOVATION	D152 - 3
EUTUREPROOFED	D128
FYMA	D123
<b>G</b>	
G2 MISURATORI S.R.L.	D178
GAINCUBE SOLUTIONS	C139
GBCI	
GENETEC EUROPE	D152 - 13
GERMANY TRADE AND INVEST	B139
GIGITECH	D128
GLADTOLINK	B112
GLOOH MEDIA	D128
GO ZERO WASTE	D112
GOCREATE	A145
GORYCKI & SZNYTERMAN	C149
GOVERNMENT OF CATALONIA	D112
GRAFFITI FOR SMART CITY	D178
GRAPE SOLUTIONS	B173
GREENVENTORY	B131
GRENOBLE METROPOLE	D132, E140
GRUPPOSTIG FABBRICA SRL	D178
GUANGDONG RONGWEN TECHNOLOGY GROUP	C129
<b>H</b>	
HAKOM TIME SERIES	D139
HASELHORST ASSOCIATES CONSULTING	B141
HEINRICH & REUTER SOLUTIONS	B129
HELP SEEKER	C124
HEMERA ANALYZERS	D132, E140
HERZ ENERGIE TECHNIK	D139
HESSEN TRADE & INVEST	C139
HEXAGON	D131
HONEYWELL INTERNATIONAL INC.	D152 - 16
HOP IN TECHNOLOGY	C124
HOP UBIQUITOUS S.L.	B151
HVB BRUSSELS	D128
HYDROSCAN	D128
<b>I</b>	
I2CAT	D112



ENTRANCE

I3I.YOUR IOT PARTNER	A127
IABG	B149
ICE - ITALIAN TRADE AGENCY	D178
ICEX ESPAÑA EXPORTACIÓN E INVERSIONES	D131
IDC	E139
IES SYNERGY	D132, E140
IMES3D	D141
IMOTION ANALYTICS	D141
INCINITY S.R.O.	F166
INDIA PAVILION	B127
INECO	E178
INESO COMPANY	D132, E140
INICIATIVA BCN OPENDATA	D151
IN-MOVE	B159
INTECSOFT	B129
INTENT TECHNOLOGIES	D132, E140
INTILION	B141
IOT AONCHIP	D151
IOT CONNECTD	B131
IOT FACTORY	D128
IOTSENSE	F162
IQUADRAT	D151

IRAN SMALL INDUSTRIES AND INDUSTRIAL PARKS ORGANIZATION (ISIPO)	C134, C132
IS CLEAN AIR ITALIA S.R.L.	D178
ISRAEL SMARTCITY INSTITUTE	C140 - 3
IT ELLIGENT	D131
ITERATEC	B141
ITK ENGINEERING	B131
ITRON	D152 - 17
ITS PRODIGY SRL UNIPERSONALE	D178
IXORIGUE	D112
<b>J</b>	
JULI.ESMART.BE	D128
<b>K</b>	
KEENAT	D132, E140
KEEPTRACE	D132, E140
KENTYQU	D132, E140
KEOLIS	F149
KEY SMART CITY BY WEB DREAMS	D131
KIDO DYNAMICS	B171
KOREA TELECOM	C141
KREISVERKEHRSGESELLSCHAFT OFFENBACH	C139
KUNAK	D131

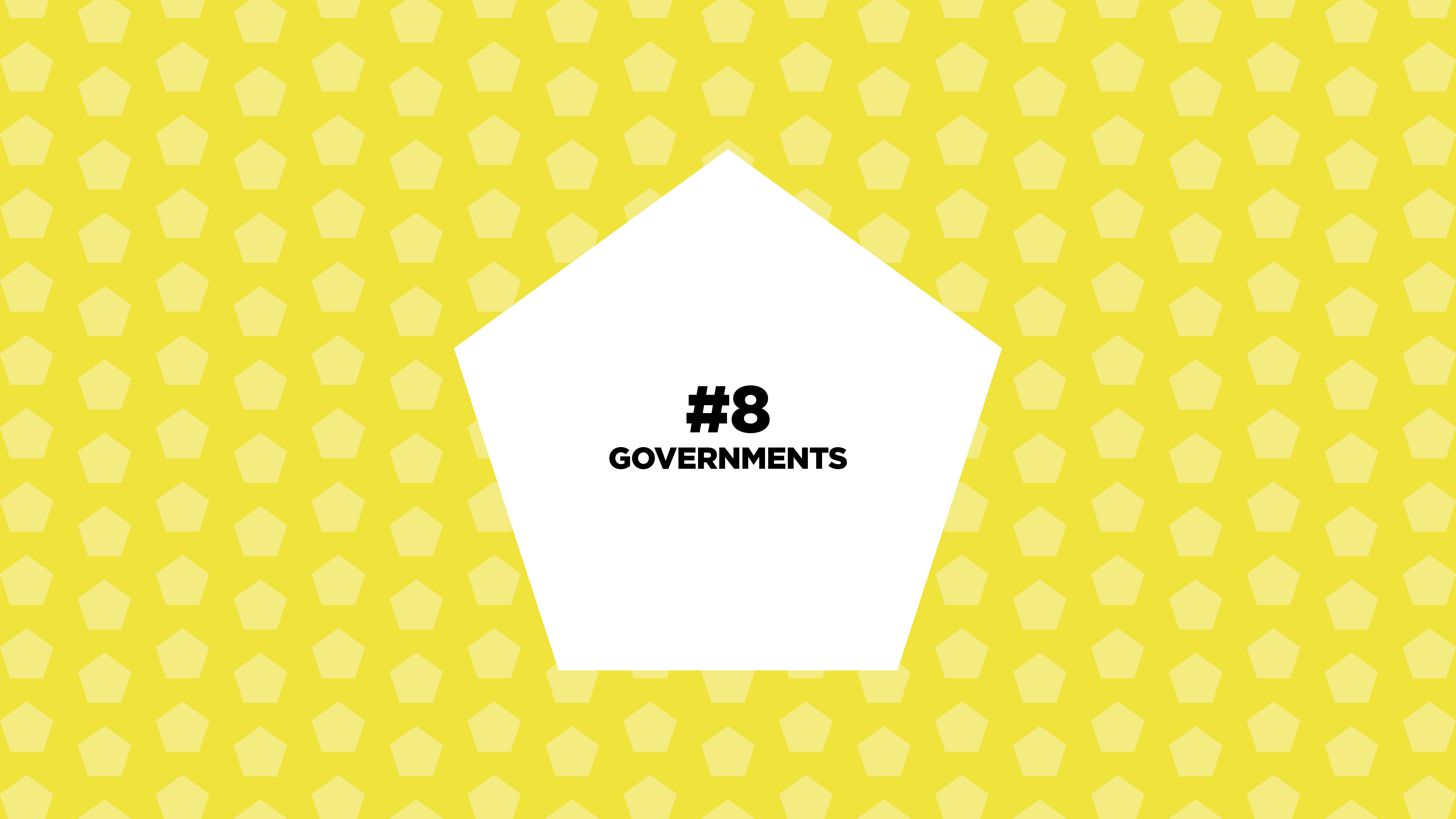
<b>L</b>	
LACROIX - CITY	D128
LACROIX CITY	D132, E140
LANDESHAUPTSTADT MÜNCHEN	B149
LECTOR VISION	D131
LED ROADWAY LIGHTING	C124
LETSGO CITY	D128
LIANGDAO	B149
LIBELIUM	D131
LINKEDIN	D152
LIQUID AVATAR OPERATIONS	C124
LOBELIA (PT)	D151
LOGISTICA TÁNDEM	D141
LOVELYMAPS	D151
LUCIAN S.R.L.	D178
LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY	F154
<b>M</b>	
MACQ S/A	D128
MALOPOLSKA OPEN EYES	C140 - 4
MEEP	D131

MEGA SISTEMAS	D131
MESSE BERLIN	B131
MESSE MÜNCHEN	B149
METROPOL REGION MÜNCHEN	B149
MICROSOFT	D152
MINALOGIC	D132, E140
MIBU SRL	D178
MOBA	B151
MOBIOGAM	D128
MONOGOTO	C140 - 2
MONOLITIC	D112
MOTILDE	E141
MOTIONTAG	B131
MOTOROLA	C123
MS.GIS INFORMATIONSSYSTEME	D139
MULTITEL	D128
<b>N</b>	
N+P INFORMATIONSSYSTEME	B129
NATIX	B151
NERGAL	C128
NEURAL LABS	A159
NEUROMOBILE	D131
NEXT VISION LAB	D178

NEXUS GEOGRAPHICS	F165
NIELSEN CONCEPT	D132, E140
NIVID TECHNOLOGIES	E139
NOMMON SOLUTIONS AND TECHNOLOGIES	D131
NORDIC + PAVILION	D122
NRW.GLOBAL	B141
<b>O</b>	
OPENDATA SOFT	F145
OPNS	D128
OPTION	F158
ORBIWISE	A129
<b>P</b>	
PAL ROBOTICS	D112
PANTONIUM	C124
PARKADIS	D141
PASOS DE PEATONES	D131
PBSC URBAN SOLUTIONS	D164
PENTA D.O.O	E161
PENTRIBE INTERNATIONAL	D139
PERSPECTIV AI	D112
PIEMONTE AGENCY FOR INVESTMENT AND EXPORT	D178
PLAIN CONCEPTS SL	D152 - 23
PLANETWATCH	D132, E140
PLANRADAR	D139
POLISH MOBILITY	B141
POM WEST-VLAANDEREN	D128
PTV GROUP	B159
PUMBA	C140 - 7
<b>Q</b>	
QUOTA RENT	E150
<b>R</b>	
RECIRCULAR	E150
RED.HAT	B151
RENFE	B159
RHOENCLLOUD	C139
RWI SYNTHETICS	C124
<b>S</b>	
S O NAH	B141
SALVI LIGHTING	E166
SAS ELLONA	D132, E140
SAS INSTITUTE	D152 - 5
SAVENOW	B149
TOTAL ENERGIES	D132, E140
TOULOUSE METROPOLE	D132, E140
TRACTO-TECHNIK	A131
CORPORATION (WFS)	B129
SEAT	A182
SEDLIA	A157
SELUX	D132, E140
SHOTL	D131
SIARQ	D112
SIEMENS AG ADVANTA SOLUTIONS	D152 - 7
SIMBIM (PT)	D151
SIRUS NV	D152 - 6

SISTER	A143
SITAEI S.P.A.	D178
SITIP	D112
SKYPROXIMA	D178
SMART CITY CLUSTER	D131
SMART CITY GEMEINDE EICHENZELL	C139
SMART CITY INFRASTRUCTURE FUND	A141
SMART CITY INNOVATION UNIT BOCHUM	B141
SMART CITY INSTITUTE HEC LIEGE	D128
SMART ENDS	D128
SMART POINT	D131
SMART SENSE	F139
SMARTCITY CORPORATION SRLS	D178
SMARTDATASYSTEM (PT)	D151
SOL MOTORS	A149
SMARTMICRO	A149
SPARROW ANALYTICS	A129
SPIN	E165
SPINLAB ACCELERATOR	B129
SPOTAR	B141
SPRIX TECHNOLOGY	E162
STEGOTRONIC	B159
STRATEGIC BIM SRL	D178
SUBNET SOLUTIONS INC	C124
SUNSPEKER	D178
SUPERHANDS	D123
SYLFEN	D132, E140
<b>T</b>	
TECHNOLOGIESTIFTUNG BERLIN	B131
TECNOSENS SPA	D178
TEGEL PROJEKT	B131
TERMO SUN ENERGIAS	D139
TERRAGO TECHNOLOGIES	E139
TERRANIS	D132, E140
TGI MARITIME SOFTWARE	D132, E140
THE MAXIMAL IMPACT FOUNDATION VZW	B151
THE NETHERLANDS	D129
THINGTIA	D151
TICC	D141
TIER MOBILITY	F164
TOBITS SOFTWARE LABORATORIES	B141
TONDO	C140 - 3
TOTAL ENERGIES	D132, E140
TOULOUSE METROPOLE	D132, E140
TRANS PLAN	C124
TRANSPORTS METROPOLITAINS DE BARCELONA	D165
TRIDONIC	D139
TRIGENIA S.R.L.	D178
TRILUX	A151
TRIMBLE	D152 - 24
<b>U</b>	
U.S. COMMERCIAL SERVICE	E139
UBIWHERE	D136

UCLG	F100
ULURBAN LIGHTING INNOVATIONS	B131
ULURBAN MOBILITY INNOVATIONS	B149
ULURBAN SOFTWARE INSTITUTE	C139
UITP	E177
UNBLOCK THE CITY	D131
UN-HABITAT (UNITED NATIONS HUMAN SETTLEMENT PROGRAMME)	F104
UNIVERSIDAD FRANCISCO DE VITORIA	F137
UNIVERSITE CÔTE D'AZUR	D132, E140
URBANBIKE	F167
UPC TECNOLOGY CENTER	F112
- CIT UPC	F112
URBAN RESILIENCE	D131
URBOTICA	C170
USA PAVILION	E139
UVAX CONCEPTS SL	F162
<b>V</b>	
VADECITY	F130
VELCA	E150
VELODY	



**#8**  
**GOVERNMENTS**

# A GLOBAL MEETING POINT FOR GOVERNMENT AGENCIES

For its 10th anniversary, Smart City Expo World Congress gathered representatives of more than 120 countries to share experiences and promote new initiatives for urban transformation.

Among them were representatives from cities such as Buenos Aires, Medellin, Milan, Montevideo, New York, Paris, Philadelphia, Quito, Rio de Janeiro, Stockholm, Tehran, Tel Aviv or Tunis.

Here is a detailed list of some of the public representatives who participated in the event:

## High-Level Government Representatives

### GAURANG RATHI

*IAS Chief Executive Officer*  
Aligarh Smart City, India

### ROBERTO NAVES E SIQUEIRA

*Mayor*  
City of Anápolis, Brazil

### ANÍBAL GAVIRIA CORREA

*Governor*  
Government of Antioquia, Colombia

### GUSTAVO MENDANHA MELO

*Mayor*  
City of Aparecida de Goiânia, Brazil

### NARESH KUMAR

*Chief Secretary*  
Government of Arunachal Pradesh, India

### SHASHVAT SAURABH

*IAS Secretary*  
Government of Arunachal Pradesh, India

### MUHAMMAD ADITYA MUFTI

*Mayor*  
City of Banjarbaru, Indonesia

### ADA COLAU BALLANO

*Mayor*  
City of Barcelona, Spain

### JAUME COLLBONI

*First Deputy Mayor for Economy, Labor, Competitiveness & Finance*  
City of Barcelona, Spain

### LAIA BONET

*Deputy Mayor in charge of Digital Transition, Agenda 2030, and International Relations*  
City of Barcelona, Spain

### MICHAEL DONALDSON

*Commissioner for Digital Innovation*  
City of Barcelona, Spain

### ANKIT ASTHANA

*IAS Chief Executive Officer*  
Bhopal Smart City, India

### SANJAY KUMAR SINGH

*IAS Commissioner*  
Bhubaneswar Municipal Corporation, India

### OIHANE AGIRREGOITIA

*Deputy Mayor of Citizen Participation and International Relations*  
City of Bilbao, Spain

### DELPHINE JAMET

*Deputy Mayor in charge of General Administration, Evaluation of Public Policies and Data Strategy*  
City of Bordeaux, France

### PETRA DZUROVCINOVA

*Chief Innovation Officer*  
City of Bratislava, Slovakia

### DIEGO FERNÁNDEZ

*Secretary of Innovation & Digital Transformation*  
City of Buenos Aires, Argentina

### VICTOR DA SILVA COELHO

*Mayor*  
City of Cachoeiro de Itapemirim, Brazil

### BRUNO CUNHA LIMA

*Mayor*  
City of Campina Grande, Brazil

### PITÁGORAS ALVES DA SILVA IBIAPINA

*Mayor*  
City of Candeias, Brazil

### JORDI PUIGNERÓ

*Vice President and Minister of Digital Policies and Public Administration*  
Government of Catalonia, Spain

### MARIA GALINDO

*General Director Digital Nation and Urban Agenda*  
Government of Catalonia, Spain



**VERÓNICA GONZÁLEZ**

*Chief Resilience Officer*  
City of Ciudad Juarez, Mexico

**EDUARDO PIMENTEL**

*Vice-Mayor*  
City of Curitiba, Brazil

**ASHOK KUMAR BYANJU SHRESTHA**

*Mayor*  
City of Dhulikhel, Nepal

**FRITZ RETTBERG**

*Chief Innovation Officer*  
City of Dortmund, Germany

**PATRICE VERGRIETE**

*Mayor*  
City of Dunkirk, France

**PETER ADELSKAMP**

*Chief Digital Officer*  
City of Essen, Germany

**ABDESLAM EL BEKKALI**

*Mayor*  
City of Fès, Morocco

**JAN JAMBON**

*Minister-president*  
Government of Flanders, Belgium

**BARTOS ZEWICZ**

*Deputy Mayor*  
City of Gdynia, Poland

**PASCAL CLOUAIRE**

*Deputy Mayor in charge of Innovation*  
City of Grenoble, France

**KRISTINA SINEMUS**

*Minister for Digital Strategy and Development*  
Government of Hessen, Germany

**KUNAL KUMAR**

*Joint Secretary & Mission Director, Ministry of Housing and Urban Affairs*  
Government of India

**PRATIBHA PAL**

*IAS Commissioner*  
Indore Municipal Corporation, India

**SAFRIZAL ZA**

*Director General of Regional Administration, Ministry of Home Affairs*  
Government of Indonesia

**THOMAS UMBU PATI**

*Directorate of Urban Area & State Boundaries, Ministry of Home Affairs*  
Government of Indonesia

**GENSLY**

*Head of Sub-Directorate of Urban Area & State Boundaries, Ministry of Home Affairs*  
Government of Indonesia

**ALEKSANDAR GJORGJIEV**

*Deputy Mayor*  
City of Kavadarci, Macedonia

**ILSUR METSHIN**

*Mayor*  
City of Kazan, Russia

**BERRY VRBANOVIC**

*Mayor*  
City of Kitchener, Canada

**UĞUR İBRAHİM AKTAY**

*Mayor*  
City of Konya, Turkey

**JEFIRSTSON RICHSET RIWU KORE**

*Mayor*  
City of Kupang, Indonesia

**NÚRIA MARÍN MARTÍNEZ**

*Mayor*  
City of L'Hospitalet de Llobregat, Spain

**DIAMANTOS KONSTANTINOS**

*Vice-Mayor*  
City of Larissa, Greece

**PABLO HERMOSO**

*Mayor*  
City of Logroño, Spain

**FRANCISCO DE LA TORRE PRADOS**

*Mayor*  
City of Malaga, Spain

**ULISSES MAIA**

*Mayor*  
City of Maringá, Brazil

**DANIEL QUINTERO CALLE**

*Mayor*  
City of Medellin, Colombia

**ARIANNA CENSI**

*Deputy Mayor for Transport*  
City of Milan, Italy

**PIERO PELIZZARO**

*Chief Resilience Officer*  
City of Milan, Italy

**HAIM BIBAS**

*Mayor*  
City of Modiin-Maccabim-Reut, Israel

**CAROLINA COSSE**

*Mayor*  
City of Montevideo, Uruguay

**AAWATIF HAYAR**

*Minister of Solidarity, Social Integration & Family*  
Government of Morocco

**JOHN FARMER**

*Chief Information Officer*  
City of New York, USA

**FATIMETOU ABDEL MALICK**

*President*  
Region of Nouakchott, Mauritania



**ARMAND BÉOUINDÉ**

*Mayor*  
City of Ouagadougou, Burkina Faso

**ARNAUD NGATCHA**

*Deputy Mayor*  
City of Paris, France

**INES SELETTI**

*Deputy Mayor for Education and Technologic Innovation*  
City of Parma, Italy

**TIZIANA BENASSI**

*Deputy Mayor for Environmental Sustainability Policies*  
City of Parma, Italy

**MARK WHEELER**

*Chief Information Officer*  
City of Philadelphia, USA

**MARJAN JUNCAJ**


*City Manager*  
City of Podgorica, Montenegro

**VIKRAM KUMAR**

*Commissioner*  
Municipal Corporation of Pune, India

**GISSELA CHALÁ**

*Vice-Mayor*  
City of Quito, Ecuador



**AMIT KUMAR**

*Chief Executive Officer*  
Municipal Corporation of Pune, India

**ISABELLA MENEZES DE ROLDAO FIORENZANO**

*Vice-Mayor*  
City of Recife, Brazil

**ĀRIS DZĒRVĀNS**

*Chief Digital Officer*  
City of Riga, Latvia

**CLÁUDIO CASTRO**

*Governor*  
State of Rio de Janeiro, Brazil

**BAS BOORSMA**

*Chief Digital Officer*  
City of Rotterdam, Netherlands

**JAN HOSKAM**

*Vice-Mayor*  
City of 's-Hertogenbosch, Netherlands

**CAROLA GUNNARSON**

*Mayor*  
City of Sala, Sweden

**ANA PAULA MATOS**

*Vice-Mayor*  
City of Salvador de Bahía, Brazil

**ANDI HARUN**

*Mayor*  
City of Samarinda, Indonesia

**KIP HARKNESS**

*Deputy City Manager*  
City of San Jose, USA

**KARIN EKDAHL WÄSTBERG**

*Director of Innovation*  
City of Stockholm, Sweden

**NORAINI ROSLAN**

*Mayor*  
City of Subang Jaya, Malaysia

**ALIONG MUS**

*Mayor*  
City of Taliabu, Indonesia

**PEP BUDI VILALTELLA**

*Chief Innovation Officer*  
City of Tarragona, Spain

**HAMIDREZA GHOLAMZADEH**

*Deputy Mayor for International Affairs*  
City of Tehran, Iran

**SEYED MOJTABA SHAFIE BAHNAMIRI**

*Deputy Mayor for Traffic & Transportation*  
City of Tehran, Iran

**RINAT GUY**

*Chief Innovation Officer*  
Tel Aviv Municipality, Israel

**ARVIND KUMAR**

*IAS Principal Secretary (Municipal Administration & Urban Development)*  
Government of Telangana, India

**KONSTANTINOS ZERVAS**

*Mayor*  
City of Thessaloniki, Greece

**ERION VELIAJ**

*Mayor*  
City of Tirana, Albania

**SOUAD BEN ABDERRAHIM**

*Mayor*  
City of Tunis, Tunisia

**JOSÉ MANUEL RIBEIRO**

*Mayor*  
City of Valongo, Portugal

**REMIGIJUS SIMASIUS**

*Mayor*  
City of Vilnius, Lithuania



## City and Country Pavilions

Over 30 cities, regions and countries built their own pavilions to showcase their visions for the implementation of smart solutions, promote local companies and gather insights from other stakeholders. Delegates organized a myriad of activities in compliance with COVID-related safety measures so that they could establish significant partnerships and different forms of collaboration with global firms and institutions.

In addition, a number of government authorities from around the world and major global institutions - such as the United Nations Human Settlements Program (UN-Habitat) and the International Association of Public Transport (UITP) - identified areas of common ground and aired their views regarding diverse areas of interest at the event.



The following cities, regions and countries exhibited at Smart City Expo World Congress 2021:

- Austria**
- Baden-Württemberg**
- Barcelona City Council**
- Bayern**
- Belgium**
- Berlin-Brandenburg**
- Canada**
- Catalonia**
- Chile**
- Denmark**
- Estonia**
- Finland**
- France**
- Germany**
- Hessen**
- India**
- Iran**
- Italy**
- Latvia**
- L'Hospitalet de Llobregat**
- Madrid**
- Malopolska**
- Metropolitan Area of Barcelona**
- Nordrhein-Westfalen**
- Norway**
- Provincial Council of Barcelona**
- Saxony**
- Spain**
- Stockholm**
- Sweden**
- The Netherlands**
- United States of America**



**#9**  
**CONGRESS**

# ENVISIONING A BETTER FUTURE FOR CITIES



The pandemic is giving us the opportunity to reimagine everything - cities included. Is it possible to realize a greener, 15-minute, feminist city? How are cities rewriting their stories for the post-COVID era? How are they contributing to the recovery? If **We Are the Cities we Make**, what is the role of residents in building more resilient urban spaces? The debates that took place at the Congress helped answer these questions and envision better future cities.

The 2021 edition of the Smart City Expo World Congress focused on the following eight main tracks, laying the groundwork for in-depth discussions: Enabling Technologies; Energy & Environment; Tomorrow.Mobility World Congress; Governance, Living & Inclusion; Economy, Building & Infrastructures; and Safety & Security. All were addressed using a variety of different formats, from roundtables to dialogues and interviews, allowing us to approach critical topics from a fresh perspective.

In parallel, a digital version of both the Smart City Expo World Congress and the Tomorrow.Mobility World Congress ran on a channel especially designed for the occasion. Importantly, these programs were not streaming broadcasts of what happened at the onsite congress, but independent shows specifically conceived for the online audience.

More than 250 thought-provoking leaders and global innovators, such as María Fernanda Espinosa, Former President of the UN General Assembly, Maimunah Mohd Sharif, Executive Director of UN-Habitat, Jan Jambon, Minister-President of the Government of Flanders, Ed Gillespie, Environmental Entrepreneur, Futurist and Author, and Ada Colau, Mayor of Barcelona, made it clear that cities are leading the way in the response to COVID-19 and foreseeing new realities.

The general sentiment was that **technology and collaboration are critical in aiding the post-COVID recovery.**

Both the Auditorium and the Thematic Rooms were at their full capacity during all three days, with COVID safety measures strictly maintained. Some of the themes that pervaded the agenda included how to foster a greener economy, how to enhance cybersecurity in view of increasing ransomware attacks, how intelligent IoT can help tackle environmental problems, and how to preserve privacy and ethics in city management.

# CONGRESS TAKEAWAYS

## Post-Pandemic Cities Need to Collaborate



- Some speeches at COP26 might have left us feeling hopeless, but **there are places where actions are being taken** to fast-track a green and equitable future for all.
- Technology is a critical foundation if we are to create an economy that is green, inclusive and resilient. It's also crucial to enabling the post-COVID recovery.
- Using the Next Gen funds coming from Europe where they're most needed is a considerable challenge for cities.
- Multilateralism is still crucial within the particularly challenging current global scenario.
- Mobility is an uphill battle for cities. In the current context, cities have made it clear that investment in public transport is still needed, apps don't move people miraculously towards sustainable mobility, and autonomous mobility should be electric and shared.

“ You have to go really slowly when you have a terrible urgency. Now, it's time to reflect. ”

*Benedetta Tagliabue, Founder and Head Architect  
Miralles Tagliabue EMBT*

# CONGRESS SESSIONS

## Auditorium

### Welcome to SCEWC21

Tuesday, November 16



#### Speakers

**Ugo Valenti** / Director - Smart City Expo World Congress - Fira Barcelona - Barcelona - Spain

**Maria Tsavachidis** / CEO - EIT Urban Mobility - Barcelona - Spain

It's been a long ride since the Smart City Expo World Congress (SCEWC) began in 2011. Back then, "we were mostly thinking about creating utopian cities or sci-fi cities," said Ugo Valenti, Director of the event, in his welcome address. Fortunately, "we have learned a lot since then," he added. In 2020, amid the pandemic, SCEWC introduced Tomorrow. City, a new platform for reflecting on the cities of the future that is now considered the "Netflix" of smart cities. This year, the event was back to its usual in-person format, while also offering a special online program designed specifically for the online audience. "Together, we are the cities we make and we create a better future," stated Valenti, who also highlighted that, despite the COVID situation, SCEWC21 showcased 450 solutions in the exhibition area, brought together over 300 speakers - more than 50% of them female - and co-located two major events: PuzzleX, a frontier materials show that will help build a better world, and the Tomorrow.Mobility World Congress. In this regard, Maria Tsavachidis stressed that "we cannot wait for the future to happen ten years from now. We want Tomorrow.Mobility to be a platform for change that brings together innovators and those who have the power to implement ideas," she stated. "Let's enjoy this time together in this physical space, because this is where the magic happens. Let's make the change we need," she concluded.

“ The physical space is where the magic happens. ”

*Maria Tsavachidis*

## We Are the Cities We Make

Tuesday, November 16



### Speakers

**Jaume Collboni** / First Deputy Mayor - Barcelona City Council - Barcelona - Spain

**Maimunah Mohd Shariff** / Executive Director - UN-Habitat - Nairobi - Kenya

**Aníbal Gaviria Correa** / Governor - Government of Antioquia - Medellín - Colombia

**Jan Jambon** / Minister-president - Government of Flanders - Brussels - Belgium

**Jordi Puigneró** / Vice President and Minister of Digital Policies and Public Administration - Government of Catalonia - Barcelona - Spain

In these challenging times, innovation is more necessary than ever, and cities are the places where actions speak louder than words, something Jaume Collboni was crystal clear about. The first deputy of the Barcelona City Council emphasized that Barcelona has a plan - the Barcelona Green Deal - to implement a green and economic transition and advance the 2030 Agenda. He also insisted that the city wants to be the epicenter of “tech humanism” worldwide, to improve life for all. Maimunah Shariff followed up by stressing that amid the pandemic, cities need to be prepared and build resilience by thinking in a manner that is “multihazard and multisectoral,” not leaving anyone behind. “Digital inclusion, digital rights and digital capacities need to be taken seriously,” she added. Anibal Gaviria echoed that sentiment, saying that respect for life is the 21st century challenge for cities. In this regard, he proposed increasing life expectancy globally to 90 years. Jan Jambon focused on technological progress, remarking that “technology alone won’t fix society,” as it’s always “a means to an end.” However, “data can be the new gold when it’s unlocked,” he stated, “which is a matter of trust.” The most crucial element in achieving that goal is collaboration, and on this note he pointed out that the collaboration between Flanders and Catalonia is growing stronger. Jordi Puigneró ended the session by saying that when thinking about the smart cities of the future, the Catalan government has two goals in mind: digital and connected cities, but also cities that are resilient and able to fight climate change. The minister added that the extra duty for the year ahead is bringing happiness to residents: “Let’s make residents happier by making our cities smarter,” he concluded.

“ We need people-centered smart cities. ”

**Maimunah Shariff**



## How to Accelerate the Green Transition

Tuesday, November 16



### Chair

**Júlia López** / European Regional Director - C40 Cities - Madrid - Spain

### Speakers

**Claudio Castro** / Governor - State of Rio de Janeiro - Brazil

**Benedetta Tagliabue** / Founder & Head Architect - Miralles Tagliabue EMBT - Barcelona - Spain

**Juan Álvarez** / Head of Green Mobility - FCC Environment - Madrid - Spain

**Gissela Chalá** / Vice Mayor - City of Quito - Ecuador

Despite the gloomy speeches at COP26, there are places where advances are being made. Where are they, and what can be done to accelerate the green transition? Claudio Castro acknowledged that it's not only possible to develop a green economy but absolutely necessary, and he pledged that Rio de Janeiro would be more sustainable in the coming years. Benedetta Tagliabue claimed that public space is a crucial point where we must focus our attention. What if our outside space was as safe as our homes? "The outside space should provide this beautiful, secure attitude. It's a very focal point in making our cities better," she said. In turn, Juan Alvarez highlighted FCC Environment's huge effort to develop green vehicles that previously did not exist in the market in order to achieve a 100% eco, zero-emissions fleet by 2050. Yet Gissela Chalá wondered whether it's possible to get rid of fossil fuels and insisted that people are the priority, as is education. In closing, Tagliabue made it clear that a lot of work still needs to be done in order to determine the best urban design for the future.

“ When there is an urgency, as at present, we should go slowly, as we need to reflect. ”

*Benedetta Tagliabue*

## Cities' Development Through Innovation and Partnerships

Tuesday, November 16



### Chair

**Yolanda De Aguilar** / General Director - FYCMA - Málaga - Spain

### Speakers

**Francisco de la Torre** / Mayor - City of Málaga, Spain

**Pablo Hermoso de Mendoza** / Mayor and RECI President - City of Logroño - Spain

**Carles Ruiz** / Mayor and Co-President Red Innpulso - City of Viladecans - Spain

**Juan Carlos Abascal** / Mayor and Co-President Red Innpulso - City of Ermua - Spain

During this pandemic, being able to dispatch the Next Gen funds coming from Europe is crucial. Speakers stressed the need for city councils and networks to work together and encourage good practices. All agreed that a legal framework allowing these funds to be implemented in a more flexible way is urgently needed. Carles Ruiz stated, “we are in a moment of very profound change that will transform the way we live, the systems of production, and relationships.” Yet these changes bring uncertainty about the future, and in the face of uncertainty, “we must create mechanisms for collective innovation,” he stated. Pablo Hermoso de Mendoza followed up by remarking that the challenge facing cities is global, and within this global agenda a local agenda must be developed triggering the needed cultural change to understand the years ahead. Juan Carlos Abascal and Francisco de la Torre echoed this sentiment, insisting that “mayors should govern change.” “We have to rethink all the challenges from different perspectives, practice empathy and respect,” said Abascal. Yolanda de Aguilar wrapped up the session by making it clear that the drivers for cultural change are innovation and technology, along with sustainability.

“ Intelligence is not in technology, but in people’s use of technology. ”

**Carles Ruiz**

## Leveraging Emerging Technologies for Urban Challenges

Tuesday, November 16



### Chair

**Natalia Olson-Urtecho** / Co-Founder - The Disruptive Factory - Palo Alto - USA

### Speakers

**Kristina Sinemus** / Minister for Digital Strategy and Development - Government of Hessen - Wiesbaden - Germany

**Sameh Wahba** / Global Director - Urban Disaster Risk Management, Resilience and Land Global Practice - World Bank - Washington, DC - USA

**Daniel Quintero** / Mayor - City of Medellín - Colombia

**Cassie Roach** / Vice President, Global Public Sector - Cisco - Denver - USA

What works and what doesn't when technologies for solving urban challenges are applied? How can best practices be shared? These were the questions Natalia Olson-Urtecho asked the panelists to start off the conversation. Daniel Quintero, who pointed out that Medellín was considered "the city of no future" in the '90s, made it clear that simple actions can have enormous impact. "Giving children a computer can change their lives," he said. He also pointed out that Medellín is becoming an innovation city that is connecting people. "We have the technology and the talent," he insisted. Sameh Wahba followed up by emphasizing that technology is a crucial underpinning for making the economy "green, inclusive and resilient." Natalia Olson-Urtecho wondered, however, whether it's possible to bring the stakeholders together to achieve those goals. Kristina Sinemus acknowledged that sharing best practices with other cities is critical and underlined that in Germany, there are best practices programs to optimize city services. When made available on an internet platform, other cities can use these experiences, so this is how collaboration works, she said. Similarly, Cassie Roach explained how Cisco is working with 44 countries to foster partnerships between the private and the public sectors and clarified that "digital skill sets are going to be the new gold." However, "we need our workforce to move to the next level," she added. On this note, Daniel Quintero insisted that educating people is fundamental to enabling them to deal with the transformation of their sectors. Olson-Urtecho wrapped up the session by insisting that it's all about a collaborative approach and thinking outside the box.

“**Technology is critical for helping the post-COVID recovery.**”

**Sameh Wahba**

## Ed Gillespie: Climate Technology and the Future of Work

Tuesday, November 16



### Speaker

**Ed Gillespie** / Environmental Entrepreneur, Futurist and Author - London - United Kingdom

Buddhists say the wise learn from the past but the brave learn from the future. But what are the real questions the future is asking? Ed Gillespie made plain that this is a moment in time when a shift is needed. Climate change is a pressing issue that comes with an ecological crisis. And it's not just about carbon: "We've built an economy that is not underpinned by the necessary natural capital," said Gillespie. To this point, 50% of global carbon emissions from lifestyle come from 10% of the global population. Server farms storing data could represent 25% of global electricity demand by the middle of this decade. And all of this has an impact: "Disruptive, painful, non-linear change is coming," he insisted. In this regard, sustainability alone is not enough: "It's a steppingstone towards what has to be a regenerative economy." The World Economic Forum talks about the Great Reset, which involves fairness, investment, and innovation. This is not plain sailing, however, given that currently, 80% of employees are either not engaged or actively disengaged at work. According to Gillespie, the factors that will shift the future of work are "the locations in which we work, the time and the hours that we work, and social health." "Our work should be our well-being," he stated. Still, this requires reimagining our culture and way of working. In this respect, Gillespie asked for "a heart-led technology, in service of something deeper than the wants and mores of the mind." The futurist concluded that "between tech optimism and fatalism there is humor and humility to keep on asking ourselves uncomfortable questions" rather than looking away.

“ Sustainability, which is the buzzword of our times, is just a steppingstone towards what has to be a regenerative economy. ”

*Ed Gillespie*

## Inclusion, Rights and Ethics at the Core of the Digital Transition

Tuesday, November 16



### Chair

**Alice Charles** / Lead Cities, Infrastructures and Urban Services - World Economic Forum - Geneva - Switzerland

### Speakers

**Fatima Barkan** / Director of the Women's Department - Ministry of Solidarity, Social Inclusion and Family - Morocco

**Aníbal Gaviria** / Governor - Government of Antioquia - Medellín, Colombia

**Renata Ávila** / CEO - Open Knowledge Foundation - Rijeka - Croatia

**Jeremy Goldberg** / Worldwide Director Critical Infrastructures, Cities and Transportation - Microsoft - Albany - USA

The COVID-19 pandemic has drawn attention to the stark inequalities we face in our cities. Alice Charles set the scene to start off the session: 463 million people were unable to access remote learning due to inadequate technology, digital infrastructure, and conditions at home during the lockdown. In the US alone, there are nearly 30 million people with no high-speed internet access. Globally, women are 23% less likely than men to use mobile internet. How can the digital transition be advanced while ensuring inclusive societies, digital rights, and the ethical use of data? Fatima Barkan stressed the need to put residents at the center of the digital transition and make them “the main actors of the city transformation.” Aníbal Gaviria reminded us that humanity’s main challenge continues to be inequality, as 940 million people still don’t have access to electricity. In turn, Renata Ávila noted that “a positive agenda of the digital future we want” was missing from the general conversation, and pointed out that the Open Knowledge Foundation believes in a “fair and open digital future.” Jeremy Golberg elaborated on the fact that digital transformation and urban innovation for a better future have a bigger impact when people are at the forefront. Therefore, smart cities need to solve real problems for their residents. “Microsoft is working on facilitating thriving people and businesses by providing accessible solutions for all,” he stated. Alice Charles wrapped up the session by saying that we can all do our small part so that inclusion, rights, and ethics are at the core of the digital transition.

“ The main challenge of humanity is still inequality. ”

**Aníbal Gaviria**

## Mark Major: Delivering on the Promises of Sustainable Urban Mobility

Thursday, November 17



### Speaker

**Mark Major** / Senior Advisor - SLOCAT Partnership on Sustainable Low Carbon Transport - Girona - Spain

“The 19th Century was about empires, the 20th Century about nation-states, and the 21st is about cities.” Mark Major started his presentation by noting that there are over four billion people living in cities, and thus it’s important to think about the context of urban development on a global scale. Eighty percent of greenhouse gas emissions come from cities. “This is the time when incrementalism is over,” he stated, while acknowledging that saying what to do is quite easy, whereas thinking about how to do it is a most challenging issue. The transition we need for urban mobility in cities involves thousands of actors. At the end of the day, to achieve transformation in transport “we need to put equal effort into the avoid measures, the shift measures and the improve measures,” he said. In this regard, he considered the 15-minute city idea to be very appealing. In addition, he argued that modes of transport need to be “not only possible but preferable,” noting that “the reason people cycle in Copenhagen is because it’s the easiest way to get around Copenhagen.” Moreover, he advocated for a change in the whole economics of transport and emphasized that technologies need to be affordable and available at scale. Finally, contrary to what many people think, he said he was optimistic about the future. “If we could go from the first powered flight in 1903 to the first man on the moon in 1969, we can move from chaotic use of urban space to a more sustainable option in 29 years,” he said. “Don’t believe anyone who says this is not possible,” he concluded.

“**Cities are machines for accessibility.  
That’s the reason they exist.**”

*Mark Major*

## Ada Colau & Francesca Bria: Innovative Cities to Deal with Global Challenges

Thursday, November 17



### Chair

**Liliana Arroyo** / Researcher in Digital Social Innovation - ESADE - Barcelona - Spain

### Speakers

**Ada Colau** / Mayor - City of Barcelona - Spain

**Francesca Bria** / President - Italian Innovation Fund - Rome - Italy

Next Generation Funds coming from Europe are a lifeline for many governments currently grappling with the economic and social crises caused by the pandemic. Yet how do we ensure they really cover residents' needs? This was the starting point for the dialogue between Mayor Ada Colau and Francesca Bria, who made it clear that "it's time for action. Cities are the link between Europe, the states and making things happen." "Business as usual is no longer an option," they further noted. Francesca Bria added that cities must also make sure that "this time the digital transition has a direction, to serve people and the ecological transition." The president of the Italian Innovation Fund insisted that Europe needs to push for more technological sovereignty, stating "this can be done with a 400 billion investment." She also acknowledged, however, that the smart city is not about technology but about solving real problems for its residents. In this regard, she cited the New European Bauhaus, a creative and interdisciplinary initiative creating a space of encounter for designing future ways of living, situated at the crossroads between art, culture, social inclusion, science, and technology. "This is what Europe can show the world," said Bria. Colau followed up by elaborating on the smart city concept: Those who most need the technological opportunity are those who must lead the digital transition, she stated. Liliana Arroyo echoed that sentiment by underlining that resilience is intimately linked with the social fabric, and therefore a people-centered approach is crucial. The mayor of Barcelona wrapped up the session by asking states for new governance with a municipal and feminist spirit.

“ The digital transition needs to have a direction to serve people and the ecological transition. ”

*Francesca Bria*

## Climate Neutrality by 2030: Mission Possible?

Thursday, November 17



### Chair

**Maria Tsavachidis** / CEO - EIT Urban Mobility - Barcelona - Spain

### Speakers

**Matthew Baldwin** / Deputy Director General, DG MOVE and Mission Manager for the area of climate neutral and smart cities - European Commission - Brussels - Belgium

**Anna Lisa Boni** / Secretary General - Eurocities - Brussels - Belgium

**Olga Kordas** / Program Director - Viable Cities, KTH - Stockholm - Sweden

**Arianna Censi** / Deputy Mayor for Mobility - City of Milan - Italy

**Kirsten Dunlop** / CEO - EIT Climate KIC - Amsterdam - Netherlands

COP26 taught us that the world is currently not on track to limit global warming to 1.5 degrees. We have made progress in recent months, but “to achieve net zero by 2050 we would need to reduce emissions every year by the same amount as during 2020,” said Maria Tsavachidis, kicking off the panel. How do we see climate neutrality unfolding under these circumstances? Matthew Baldwin explained that the European Green Deal pledges to reduce greenhouse gas emissions by at least 55% by 2030 as a steppingstone on the way to full climate neutrality by 2050. We can’t get there, however, without innovating, he noted, and cities are where we can make it happen. The EU wants to reach 100 climate-neutral cities by 2030 and mobility is a core part of this. In this regard, he advocated for reducing “our dependence on privately owned, conventionally fueled cars” and pointed to the need to “create incentives for people to do things differently.” Anna Lisa Boni developed the reducing-the-place-of-cars-in-cities standpoint and agreed that the climate-neutral cities mission is crucial because “it brings ambition, innovation and action.” Olga Kordas stressed the importance of multilevel governance to foster “systemic transformation” and avoid “graveyards of pilot projects.” Arianna Censi stressed that Milan’s top priority is the improvement of air quality. Kirsten Dunlop, in turn, said that cities really don’t need any more sense of accountability for the challenges of climate, health or a fair transformation. So, what the European mission provides is a space to pull together many different solutions connected in some way so that they can form “a new design for life.” But how is this financed? “We really need portfolio finance, which is not financial portfolios,” she concluded.

“If we can reduce our dependence on privately owned, conventionally fueled cars, we can start to bring down emissions quite quickly.”

**Matthew Baldwin**



## Smart Cities and Territories, Pillars of the Common Agenda

Thursday, November 17



### Chair

**Emilia Saiz** / Executive Director - UCLG - Barcelona - Spain

### Speakers

**Mohamed Boudra** / President - UCLG - Al Hoceima - Morocco

**Themsibile Nkadimeng** / Deputy Minister of Cooperative Affairs - Government of South Africa - Johannesburg - South Africa

**Carola Gunnarson** / Mayor - City of Sala - Sweden

**Gissela Chalá** / Vice Mayor - City of Quito - Ecuador

**Berry Vrbanovic** / Mayor - City of Kitchener - Canada

**Souad Abderrahim** / Mayor - City of Tunis - Tunisia

The United Communities and Local Governments (UCLG) organization is a truly diverse group comprising over 170 countries, with 250,000 members around the world sharing a common goal: serving residents. During the pandemic, what priorities must be considered? This was the initial question of Emilia Saiz, who also emphasized that “digitalization is taking a different space, both in our lives and in public decision making.” Mohamed Boudra insisted that technology needs to be at the service of residents in order to develop sustainable and equitable actions. Themsibile Nkadimeng followed up by stressing that COVID’s silver lining in Africa was that it boosted cross-governmental collaboration and access to data “in a good way.” “Now, we need to put in place COVID-sensitive budgets,” she added. Carola Gunnarson agreed that digitalization is absolutely crucial for organizations but also noted that “we need to take into account the gender perspective.” Souad Abderrahim elaborated on this issue by noting that Tunis works to strengthen women’s digital capabilities. In his reply, Berry Vrbanovic clarified that “being a smart city means investing in technology with purpose and impact,” focusing on exploring how to improve the lives of residents. Finally, Gissela Chalá wanted to recognize the “major losers of the pandemic, the women who live in rural areas.” She also asked for the restitution of collective rights to advance smart cities. Emilia Saiz closed the session by noting that local and regional governments have an extraordinarily strong role to play in reshaping our society.

“ **BB The question is whether we let technology shape our cities, or whether we lead the way to shape our future BB.** ”

**Mohamed Boudra**

## Visions Towards Social and Environmental Justice

Thursday, November 17



### Chair

**Xolile George** / CEO - SALGA - Johannesburg - South Africa

### Speakers

**Nuria Marín** / Mayor - City of L'Hospitalet de Llobregat - Spain

**Carlos Moreno** / Associate Professor & Scientific Director - La Sorbonne - Paris - France

**Hastings Lawrence Chikoko** / Regional Director for Africa - C40 Cities - Johannesburg - South Africa

**Ana Paola Matos** / Vice Mayor - City of Salvador de Bahía - Brazil

In a globalized world, social inequalities go hand-in-hand with environmental challenges. How can we build suitable alternatives to address both social and environmental equity? Nuria Marín emphasized that cities are the places where we need to battle against both inequalities and the climate emergency. She also underscored that the only way to get through the current COVID crisis is “collaboration between all the stakeholders.” Carlos Moreno followed up by insisting that the 15-minute city can help rebalance inequities. “If we want to develop more equity, fight poverty and social exclusion, we cannot continue to live in cities with the same paradigm for the next 70 years,” he stated, which entails exploring new approaches to reduce our CO2 emissions and reconquer the public space. Ana Paola Matos emphasized that Salvador de Bahía is fighting inequality by providing its residents with security and housing access and also underlined the importance of moving from “policies to tactical steps.” Lastly, Hastings Lawrence Chikoko reminded the audience that the climate emergency is by nature unjust and “most climate solutions leave out people who are suffering most.” Therefore, climate change should be seen as a social and economic issue rather than an environmental one. Collecting data from informal settlements to ensure that everyone in cities is helped might seem difficult, but if we’ve been able to get data from Mars and the moon, it should be possible, Chikoko insisted. Xolike George closed the session by again pointing out the need for collaborative partnerships to tackle the issues related to inclusion and equality.

“ **The smart city is much more than a concept. It’s building a place for people to live.** ”

**Ana Paola Matos**

## Cities and Global Governance: Towards an Inclusive Multilateralism

Thursday, November 18



### Chair

**Martine Dennis** / Journalist - London - UK

### Speakers

**Maria Fernanda Espinosa** / Former President - UN General Assembly - Quito - Ecuador

**Emilia Saiz** / Executive Director - UCLG - Barcelona - Spain

In the current pandemic scenario, global dialogue and multilateral responses seem to be crucial to addressing global challenges. Arguably, however, multilateral institutions have failed us, as we're not getting the answers we need. Is the current multilateral architecture dead? Maria Fernanda Espinosa shed light on this issue: "We cannot live without international cooperation, without international solidarity, without international law. That's what multilateralism does." Emilia Saiz elaborated on that point: "Our governance mechanisms, being at local, national or international levels, are obsolete." Yet multilateral organizations are realizing that the kind of innovation taking place in cities is what they need to actually make things work, she said. In this regard, she argued for a seat for local and regional governments at the UN General Assembly to shape policies "that are greater than us at this moment." Maria Fernanda Espinosa agreed that the voice of local and regional governments is vital to overcome "the implementation deficit" of multilateralism. She also expressed her conviction that we need to restore the social contract. The best way to do this, she stated, is "to transform the relationship between society, the economy and politics." Yet this is not straightforward, noted Emilia Saiz. At base, we need to "change the notion of citizenship and link it with a new generation of human rights," she stated. At the end of the day, it's all about trust, noted Maria Fernanda Espinosa. Therefore, "we can make a difference as long as we remain accountable," concluded Emilia Saiz.

“**Mayors around the world are the most multilaterally driven.**”

*Emilia Saiz*

## Revitalizing our Cities, Relaunching Local Economies

Thursday, November 18



### Chair

**Martha Thorne** / Dean - IE School of Architecture and Design - Madrid - Spain

### Speakers

**Miguel Gamiño** / Executive Vice President and Head of Global Cities - Mastercard - New York - USA

**Cassie Roach** / Vice President, Global Public Sector - Cisco - Denver - USA

**Soo-Jin Kim** / Deputy Head of the Cities, Urban Policies and Sustainable Development Division - OECD Centre for Entrepreneurship, SMEs, Regions and Cities - Paris - France

**Ajay Nagabhushan** / Secretary to Government for Urban Development - State of Karnataka - Bangalore - India

In the midst of this pandemic, cities are striving to relaunch their local economies. How can they guarantee that their actions positively impact urban areas, both from a social and an environmental perspective? According to Miguel Gamiño, the pandemic is “a tremendous opportunity to harness the moment to make cities more livable, more sustainable and more resilient.” Cities are now forced to be more responsive to the realities of what people need. In this regard, the concept of digital equity is key. Cassie Roach added that to move from the cities of today to the cities of the future, one of the critical elements will be trust. In this sense, she committed to three moral obligations: connecting everyone, being good stewards of technology and protecting the planet. Ajay Nagabhushan followed up by emphasizing the lessons learned from the lockdowns and said that being in government means prioritizing where to take actions and immediately implementing them. In turn, Soo-Jin Kim acknowledged that cities have taken the brunt of the crisis but noted that they are now bouncing back by accelerating transitions such as the digital transition, the transition towards a low carbon and more circular type of economy, and the transition towards a broader transformation to a more inclusive urban future. All panelists agreed that there are trade-offs in terms of the priorities and the dynamics cities will have to manage. “We need to think about the relaunching of our economies in a holistic way,” said Soo-Jin Kim. It’s all about “being respectful with all those nuances in every community and taking time to understand them,” said Miguel Gamiño. Every city has its unique selling point to be aligned with the community, concluded Ajay Nagabhushan.

“ Trust will be the currency in the digital age. ”

**Cassie Roach**

# CONGRESS SESSIONS

# SCEWC ROOM

## Cutting-Edge Urban Technologies

Tuesday, November 16



### Chair

**Charbel Aoun** / Smart Cities and Spaces Director - NVIDIA - London - UK

### Speakers

**Sonia Jorge** / Executive Director, Head of Digital Inclusion - Alliance for Affordable Internet - Washington - USA

**John Paul Farmer** / CIO - New York - USA

**Michael Donaldson** / Commissioner for Digital Innovation - Barcelona City Council - Spain

**Miriam Berhane Russom** / Principal Program Manager - Microsoft Azure IoT - Redmond - USA

**Juanjo Hierro** / CTO - Fiware Foundation - Madrid - Spain

**Menno Van Rijn** / Senior Consultant and Project Lead - IOTA Foundation - Berlin - Germany

**Verónica Algora** / Head of Maintenance and Integration TI - INECO - Madrid - Spain

Today, the evolution of leading-edge technologies opens up a wide range of possibilities in urban management: reporting emergencies in real time, applying machine learning to big data, augmented reality in urban environments that facilitates accessibility and information, and much more. How can these technologies be leveraged to improve our urban environments? What is hampering their full deployment?

### Takeaways:

- Half of the world's population is still offline. The gender gap remains one of the largest. A4Ai estimates that \$428 billion is required to reach universal internet access by 2030.
- The gains from investing to expand access to ICT far outweigh the cost.
- Public investment participants should channel investments into areas that the private sector sees as non-commercially viable.
- Some questions concerning cutting-edge technologies such as facial recognition shouldn't be left to technology, as they are societal questions.
- Web 3.0 represents the next generation of internet technologies. Distributed ledger technologies allow cities to guarantee more privacy and avoid data breaches.

“**Connectivity is the foundation for cutting-edge technology, digital economies, and digital societies.**”

**Sonia Jorge**

## Clean Technologies for Sustainable Urban Services

Tuesday, November 16



### Chair

**Alex Ivancic** / Partner and Senior Consultant - Aiguasol - Barcelona - Spain

### Speakers

**Renu Raj** / Director - Directorate of Urban Development - Government of Kerala - India

**Lina Enarsson** / Project Manager - City of Stockholm - Sweden

**Louis-Frédéric Robin** / Head of Low Carbon Cities - Engie - Courbevoie - France

**Jaromir Beranek** / Chairman of the IT and Smart City Committee - City of Prague - Czech Republic

**Miquel Rodríguez** / Commissioner of 2030 Agenda - Barcelona City Council - Spain

Cities are major centers of natural resources consumption and generate a significant environmental impact. This highlights the importance of ensuring highly efficient resource management models, especially with regard to energy, water, and waste management. All of these contribute positively towards tackling the climate emergency and turn cities into better places to live. How do clean technologies contribute to making urban services more sustainable?

### Takeaways:

- The future must be green and sustainable. There is no alternative.
- Clean technologies aim at improving the efficiency of civic services while favoring a clean and sustainable environment. Energy and mobility projects are the most widely developed in EU cities.
- It's important to develop integrated solutions for stakeholder engagement.
- To facilitate the upscaling of existing services, cities need to update regulations, finance retrofitting, combine interventions with short and long payback periods, consider the introduction of a CO2 tax, and ensure citizen involvement.
- Residents must be able to ask for what they need to allow them to be climate smart in their behaviors.

“ **Digital is not a gadget anymore. Now we have the technology to ensure that every solution will be impactful enough to meet citizens' expectations.** ”

**Louis-Frédéric Robin**

## Staying Ahead of the Next Societal Challenge

Tuesday, November 16



### Chair

**Mar Santamaría** / Co-founder - 300,000 km/s - Barcelona - Spain

### Speakers

**Salvatore Martello** / Mayor - Lampedusa and Linosa Municipality - Lampedusa - Italy

**Diego Fernández** / Secretary of Innovation and Digital Transformation - Buenos Aires - Argentina

**Malu Molina** / Special Advisor for Sustainable Development - Sao Paulo Municipal Government - Brazil

**Pastora Valero** / Senior Vice President Public Policy and Government Affairs - Cisco - Brussels Belgium

**Mark Wheeler** / CIO - City of Philadelphia - USA

The next societal challenge is here. Some challenges are classic, such as the ageing population, improving healthcare systems and building more egalitarian societies. Others are recurrent, such as the future of education and the future of work, which need to be periodically rethought. In any case, new and innovative solutions must be sought. What are the new avant-garde approaches to facing societal challenges?

### Takeaways:

- Fostering urban justice and equality worldwide requires a coordinated, flexible, and timely response, and local communities can contribute a lot to this discussion.
- Urban mobility is about people and dignity. The Right to the City must be protected.
- Technology is creating a new order that we're still not entirely aware of.
- The next big thing in cities is not a refrigerator automatically ordering food from a supermarket, but the delivery of decentralized services via blockchain; successful ideas emerge collaboratively.
- Humans are always the most complex issue, so preparing teams to be nimble is one of the best steps governments can take to develop successful projects.

“ We have the legitimacy to promote global change based on our local reality. ”

**Salvatore Martello**

## The State of Urban Governance: Emerging Gaps and Collaborative Solutions

Tuesday, November 16



### Chair

**Rushi Rama** / Smart Cities Lead - C4IR Japan - World Economic Forum - San Francisco - USA

### Speakers

**Jean Barroca** / Global Public Sector Digital Modernization Leader - Deloitte - Lisboa - Portugal

**Victòria Alsina** / Minister of Foreign Action and Open Government - Government of Catalonia - Barcelona - Spain

**Erol Özgüner** / CIO - Istanbul Metropolitan Municipality - Turkey

**Alejandra Torres** / Secretary of Planning, Modernization, and International Relations - City of Cordoba - Argentina

Cities have accelerated the adoption of smart technologies during COVID-19 and are still struggling to keep pace with the governance changes these technologies require. How can authorities combine technology developments with an ethical and responsible framework, considering the impact that roll-outs have on society?

### Takeaways:

- According to a study conducted by Deloitte, cities still lack foundational policies for sound technology deployment and they need support and strong leadership to fix this.
- To address the existing gaps and move beyond the perspective of policy leaders, cities need to develop new skills, define principles as collaboratively as possible, and promote knowledge sharing and alignment between national and local policies, as well as strong governance models that enhance the effectiveness of these policies.
- Governments should promote experiments to rethink how they are doing things and move forward. “This is a good way to spend money in the public sector.”
- The required legal modifications need to be undertaken to tackle digital transformation.
- The number of data breaches in 2021 soared. Before deploying new technologies, it’s crucial to create a cybersecurity architecture to avoid DDoS and ransomware attacks.

“**To move forward and make the most of collective intelligence and human-driven AI, we all need to become public entrepreneurs.**”

**Victòria Alsina**



## Ensuring Digital Inclusive Cities in the post-COVID 19 Era

Wednesday, November 17



### Chair

**Eva García** / Senior Research Fellow - Global Cities Program - CIDOB - Barcelona - Spain

### Speakers

**Anna Lisa Boni** / Secretary General - Eurocities - Brussels - Belgium

**Miana Carneiro** / Researcher - CEPCEP - Portuguese Catholic University - Lisbon - Portugal

**Laia Bonet** / Deputy Mayor in charge of Digital Transition, Agenda 2030, and International Relations - Barcelona City Council - Spain

**Delphine Jamet** / Deputy Mayor in charge of General Administration, Evaluation of Public Policies and Data Strategy - Bordeaux - France

**Marcos Ros** / Member of the Committee on Culture and Education - European Parliament - Murcia - Spain

The pandemic accelerated the digital transformation of Europe's cities at an unthinkable pace. But how can this digital transformation occur hand-in-hand with inclusion? What defines digital inclusion today? How do we measure the digital divide? Which skills are needed today and in the future? How can cities contribute to reaching Europe's digital targets?

### Takeaways:

- The COVID-19 pandemic has aggravated this dual exclusion, which consists of poor access to digital tools and limited skills for getting the most out of them.
- In 17 EU states, less than half the population has the necessary digital skills to play an active role in the digital economy and society.
- Decentralized digital inclusion policies are needed to ensure that the digital divide doesn't increase inequalities in our cities.
- There are three key intervention areas to improve this situation: connectivity (access to broadband), usage capability (digital competences), and quality of use (a design to meet all users' needs).
- The EU advocates a common framework for the development of digital skills with a common system of validation and certification.

“ The practices that foster training and skills development must be scaled up across Europe's cities. ”

**Anna Lisa Boni**

## Defining the Latest on Green and Blue Infrastructures

Wednesday, November 17



### Chair

**Areti Markopoulou** / Academic Director - IAAC - Barcelona - Spain

### Speakers

**Eduardo Pimentel** / Vice Mayor - Curitiba - Brazil

**Jorge Pérez Jaramillo** / Advisor of Urban Planning - Government of Antioquia - Medellín - Colombia

**Agostino Santoni** / Vice President - Cisco South Europe - Milano - Italy

**Mauro Ferrando** / Chairman of the Board of Directors - Porto Antico di Genova - Italy

**Martin Brynskov** / Chair - Open and Agile Smart Cities - Brussels - Belgium

Much of the environmental impact of cities lies in their buildings and urban infrastructures: starting with their construction, continuing throughout their useful lives, and ending with their demolition. Green buildings and blue infrastructures are those that have a low environmental impact and leverage digital technologies to monitor their use and ensure a sustainable impact. What are the latest developments that combine technologies to make urban infrastructure buildings greener and bluer?

### Takeaways:

- In the current situation, cities must reconcile urbanization with nature.
- Greener proposals need to lead to a healthier and more equal society.
- The 15-minute city must include a good experience for residents.
- Cities need to focus on data as a guide to sustainable digital transformation.
- People, processes, technology, and politics are the four key dimensions of developing greener and bluer infrastructures.

“ We need to know how to build our societies around data. ”

**Martin Brynskov**

## Innovation Fueling the Economic Recovery

Wednesday, November 17



### Chair

**Esteban León** / Head of City Resilience Global Program - UN-Habitat - Barcelona - Spain

### Speakers

**Carlos Soberanis** / Architect - City of Guatemala - Guatemala

**Fatima Camara** / First Deputy Mayor - City of Bamako - Mali

**Hila Oren** / CEO - The Tel Aviv Foundation - Tel Aviv - Israel

**Jung Hoon Lee** / Member of Smart City Committee - Seoul Metropolitan Government - South Korea

**Miquel Rodríguez** / Commissioner of 2030 Agenda - Barcelona City Council - Spain

**Claudia Andrea García** / Director Department of Planning - Government of Antioquia - Medellín - Colombia

Innovation is a central element in any urban socioeconomic recovery framework. Traditional models of economic growth are obsolete in the face of new urban socioeconomic challenges. Hence the renewed focus on the innovation ecosystem as a cornerstone to developing added-value sectors such as green and blue economies. The main challenge here is how to attract (and retain) human talent in the context of teleworking and industrial relocation.

### Takeaways:

- There is a positive relationship between innovation and development. One euro invested in innovation can generate 18 euros in GDP.
- One of the main lessons of the pandemic is that cities need to be flexible in their response to uncertainty and make sure they address the real issues.
- Every city needs to know what its Unique Selling Point (USP) is and keep in mind its DNA to support the well-being of residents. As Jane Jacobs said, “urbanity is first and foremost a human experience.”
- The “VUCA” (volatility, uncertainty, complexity, ambiguity) world we’re living in highlights the need to create change by adopting innovative solutions such as a city coin to support small businesses or digital tools that provide food security.
- The future of cities will be determined by the future of mobility and energy.

“ The ergonomic city is the city where the public space supports the well-being of its residents. ”

*Hila Oren*

## Digital Services Transforming Urban Life

Wednesday, November 17



### Chair

**Sandra Baer** / CEO - Personal Cities - Washington, DC, USA

### Speakers

**Leonie Van Den Beuken** / Program Director - Amsterdam Smart City - Netherlands

**Octavi de la Varga** / Secretary General - Metropolis - Barcelona - Spain

**Daniel Quintero** / Mayor - City of Medellín - Colombia

**Rocío Dantart** / IoT Regional Sales Leader - CISCO - Madrid - Spain

**María Galindo** / Director General for Digital Nation and Urban Agenda - Government of Catalonia - Barcelona - Spain

**Didier Nkurikiyimfura** / Chief Technology and Innovation Officer - Smart Africa - Kigali - Rwanda

The digitalization of government, the growing offer of digital services and the greater connectivity of cities are changing the way residents, companies and governments interact, opening up numerous possibilities for access to information (big data), as well as new and more efficient services. What are the latest trends in digital services that are transforming urban life?

### Takeaways:

- City leaders must understand and anticipate the needs of their community; in this regard, technology is an enabler.
- The use of technology must be responsible, affordable, accessible, understandable, and transparent.
- City councils need to promote trust to obtain data from residents, and cybersecurity is critical in that sense.
- Digital disruption is a mixture of all the challenges cities will face in the years ahead.
- A smart city is an efficient city, one that manages its resources for the benefit of its residents in order to improve and maximize their quality of life and meet the challenges posed by the environment.

“ A smart city is a city that is more conscious about itself and about what is going on. ”

*Daniel Quintero*

## Unleashing Digital Connectivity

Thursday, November 18



### Chair

**Esteve Almirall** / Director of the Center for Innovation in Cities - ESADE - Barcelona - Spain

### Speakers

**Remigijus Simasius** / Mayor - City of Vilnius - Lithuania

**Chen-Yu Lee** / Director - Taipei Smart City Project - China

**Martin Ssekajja** / ICT Director - Kampala Capital City Authority - Uganda

**María Pilar González-Blanco** / Deputy Director for Communications - Madrid City Council - Spain

**Marta Continente** / Director of Innovation and Digital Transition - Barcelona City Council - Spain

**Ricardo Vitorino** / Head of R&I - Ubiwhere - Coimbra - Portugal

A smart city requires data, technology and infrastructure, but a good part of its success depends on the connectivity of the region, local government, residents, and economic sector. Connectivity enabled through 5G or Wi-Fi 6 may improve access to information, services, and data. What new possibilities arise with the unstoppable improvement of digital connectivity? What remarkable initiatives in this field are local governments spearheading?

### Takeaways:

- Connectivity - and especially 5G - is key to achieving economic development and creating better quality employment.
- Collaboration with the private sector and global alliances are necessary to improve digital connectivity, especially in developing countries.
- We should speak about real integration rather than connectivity, and intelligent and integrated communities rather than smart cities.
- Assessing the needs of residents, collecting data, applying it to e-services and promoting a sharing mentality, as well as IT education, are key to the development of the “sensible city.”
- The protection of sensitive data while developing connectivity is crucial.

“ 5G technology should be deployed in a transparent, accessible, and equitable way. ”

**Marta Continente**

## Meeting Urban Safety Challenges

Thursday, November 18



### Chair

**Simina Lazar** / Network Lead - ASToN Network - Paris - France

### Speakers

**Denise Gilmore** / Senior Director of the Division of Social Justice and Racial Equity - City of Birmingham - Alabama - USA

**Hendrik Blokhuis** / Director Global Public Sector for Europe, Middle East, Africa, and Russia - Cisco - Amsterdam - Netherlands

**Anniina Autero** / Senior Project Manager - City of Tampere - Finland

**Evgeniya Lodvigova** / Vice Mayor - City of Kazan - Russia

**Pontus Westenberg** / Program Management Office, Innovation, people-centered smart cities, public participation, and technology partnerships - UN-Habitat - Barcelona - Spain

Urban safety includes both the objective problem of security and the subjective individual or collective sense of safety. Digital technologies may contribute to improving the need to feel safe in the urban environment, be it with cybersecurity tools, surveillance solutions or emergency response. How can cities be places where residents feel safe and can thrive? How do we maintain residents' ownership and agency?

### Takeaways:

- Security is a necessary condition for safe and sustainable development.
- UN frameworks support a people-centered approach to smart cities. Similarly, a people-centric approach to safety is necessary, as cities want residents to have freedom but also to feel secure.
- An identified security trend is AI facial recognition, which has potential but also risks. Cities need to clarify how they want to use this technology and be aware of its impact on people.
- Security is perceived as negative, as people feel that they are not trusted and are being controlled. A constant dialogue with residents is necessary to counter that perception.
- Trust should be the foundational element underpinning all digital services and platforms used in cities. Cities can build trust by being open and transparent about what they do and taking a holistic approach to the entire supply chain.

“ Trust is the new currency going forward. ”

*Hendrik Blokhuis*

## Raising the Ambition of Decarbonizing Strategies

Thursday, November 18



### Chair

**Maíta Fernández-Armesto** / Deputy Manager - Urban Ecology - Barcelona City Council - Spain

### Speakers

**Tatiana Gallego** / Chief Housing and Urban Development Division, Climate Change and Sustainability Department - Inter-American Development Bank - Washington - USA

**Carlos Mario Marín** / Mayor - City of Manizales - Colombia

**Vikram Kumar** / Commissioner - Pune Municipal Corporation - India

**Emily Tan** / General Manager City Solutions - Royal Dutch Shell - Singapore

**María Almató** / Manager of Coatings and Adhesives - Covestro - Barcelona - Spain

Cities are major consumers of energy and generate most GHG emissions. It is therefore vital to implement cooling and heating systems based on renewable energies and explore the use of new energy sources such as hydrogen to minimize emissions and decarbonize energy use. How can we increase the ambition and impact of decarbonization strategies? How can existing solutions and technologies be leveraged to address the decarbonization challenge?

### Takeaways:

- As of 2019, only 16% of global primary energy came from low-carbon sources. To reduce emissions, cities need to focus on clean energy use and energy efficiency by promoting a consumption behavior change.
- There is a consensus that focusing on low carbon mobility and non-conventional energy sources is a key solution for the present and the future.
- More than 80% of the energy consumed in the EU should be renewable by 2050. Artificial photosynthesis, green hydrogen and wind energy can contribute to that goal.
- Similarly, the use of CO<sub>2</sub> and biomass in the production of polymers improves car manufacturing.
- Integrated urban solutions, the use of blockchain technology, and collaboration between the government, the private sector and the community are key factors for success.

“ We all have a role to play in finding holistic decarbonizing solutions. ”

**Tatiana Gallego**

# CONGRESS SESSIONS

## TMWC ROOM

### Just Move - And Stay Healthy!

Tuesday, November 16



#### Chair

**Mark Nieuwenhuijsen** / Research Professor, Director of the Urban Planning and Health Initiative and Director of the Air Pollution and Urban Environment Program - ISGlobal - Barcelona - Spain

#### Speakers

**Carlos Moreno** / Associate Professor & Scientific Director - La Sorbonne - Paris - France

**Bronwen Thornton** / CEO - Walk21 - Cheltenham - UK

**Henk Swarttouw** / President - European Cyclists' Federation - Brussels - Belgium

**Eugeni Rico** / Mobility Strategy Department - Barcelona City Council - Spain

**Bani Anvari** / Director of Intelligent Mobility Lab - UCL - London - UK

**Emanuele Pizzatti** / Principal - Anchor Group - Zurich - Switzerland

**Gonzalo Alcaraz** / Senior Manager Membership and Innovation - International Road Federation - Geneva - Switzerland

Electric vehicles may own the headlines, but our feet remain the most environmentally friendly means of travel. Walking is also beneficial for both mental and physical health, but despite these facts, it is still perceived as too slow. How can we increase active mobility in cities? We need a modal shift from private motorized vehicles to active mobility resulting in a decrease in noise and air pollution and an increase in healthy city living.

#### Takeaways:

- The transport sector has not seen the same gradual decline in emissions as other sectors. It is still a major cause of air pollution, especially in urban areas.
- The transition to electric vehicles is too slow to achieve emissions goals. Because of this, we need to improve public transport, cycling and walking.
- Walking is central to how we should imagine our communities and our transport systems, but the perception is that it's too slow.
- We need a new urban narrative to rebuild the social fabric and develop a mix of uses to achieve well-being, sociability, and a new ecological attitude.
- Safety plays a significant role in encouraging change.

“ We need to radically change our urban lifestyle to fight climate change and rebuild the social fabric. ”

**Carlos Moreno**



## Using EU Recovery Funds to Promote Transition to Green Mobility

Tuesday, November 16



### Chair

**Carlo van de Weijer** / General Manager of the Eindhoven AI Systems Institute - Eindhoven University of Technology - Netherlands

### Speakers

**María José Rallo del Olmo** / Secretary General Transport and Mobility - Government of Spain - Barcelona - Spain

**Manuel Szapiro** / Director of the EC Representation in Barcelona - European Commission - Cheltenham - UK

**Xavier Flores** / Director General Infrastructures and Mobility - Government of Catalonia - Barcelona - Spain

**Carles Casas** / Strategic Planning and Prospective - Ferrocarrils de la Generalitat - Barcelona - Spain

**Arnaud Hary** / Business Development Director emovis - Abertis Mobility Solutions - Paris - France

**Eduardo Valencia** / Director of the Mobility Think Tank #VEHICLES7YFN - AMETIC - Barcelona - Spain

The decarbonization of both public and private urban modes of transport is a crucial factor for achieving the EU's political goal of being climate-neutral by 2050. The post-COVID EU Recovery Funds are key to fuel this transition. What are they used for?

### Takeaways:

- Mobility can drive rather than delay the green transition. It's time for changing the change.
- Tools for green mobility in cities already exist. The solutions are there. Their implementation depends on the legal framework and political will.
- Tolling solutions are to be reevaluated after the pandemic. Technology is there to serve cities' goals.
- The public and the private sectors need to work together to develop alliances, such as the EU Battery alliance, scale up production and investigate the circular economy.
- Spain and Catalonia are using EU Recovery Funds to promote sustainable mobility and a net zero economy by creating low emission zones, fostering electric mobility, encouraging the use of public transport, and improving short-distance railway services and the digital management of the sector.

“ We need to collectively create an enabling framework that will allow industrial alliances and ecosystems to thrive. ”

**Manuel Szapiro**

## Urban Logistics: I Want It All and I Want It Now!

Tuesday, November 16



### Chair

**Josephine Darlington** / General Manager of the Eindhoven AI Systems Institute - Eindhoven University of Technology - Netherlands

### Speakers

**Petr Suška** / Member of the Board and Smart City, Innovations and Project Management Section Director - City of Prague - Czech Republic

**Frédéric Reutenauer** / Vice President, Regional Managing Director Southern Europe - PTV Group - Karlsruhe - Germany

**Susana Val** / Director - Zaragoza Logistics Center - Spain

**Carlo van de Weijer** / General Manager of the Eindhoven AI Systems Institute - Eindhoven University of Technology - Netherlands

**Mariona Conill** / Sustainable Mobility Section - AMB - Barcelona - Spain

**Przemysław Zawodny** / Deputy Director and Chief Research Officer - Lukasiewicz Research Network - The institute of Logistics and Warehousing - Poznan - Poland

Due to the COVID-19 crisis, online shopping increased as consumers were simultaneously driven by fear and convenience to e-commerce solutions. The market responded and the cost to cities in terms of carbon emissions and traffic congestion is real. How do we best respond to the “I want it all and I want it now” society? How can cities manage local logistics challenges such as the increase in local deliveries - should they nudge, innovate or regulate?

### Takeaways:

- Cities seek ways of fulfilling their climate commitments, but need to find a balance in terms of the economy, society, and the environment.
- Under certain circumstances, e-commerce is becoming more sustainable than buying in a physical shop, although this is not a black and white issue.
- Cities need to give an advantage to solutions that reduce the carbon footprint - such as reusable packs or smart lockers - while protecting their public spaces.
- In the future, we will be able to get whatever we want to order within 30 minutes or it will be free. This “pizza economy” model can be sustainable with strategic distributed inventory planning and small-size transport modalities such as cargo bikes and low-emission vehicles.
- Cities should consider public transport to move goods.

“ Future logistics will be faster and also more sustainable thanks to the return of the corner shop, strategic distributed inventory planning and small-size transport modalities such as cargo bikes and LEVs. ”

*Carlo van de Weijer*

## Europe's Transition to Zero Carbon Mobility

Tuesday, November 16



### Chair

**Yoann Le Petit** / Business Development Manager - EIT Urban Mobility - Netherlands

### Speakers

**Wiebke Pankauke** / Deputy Head of Unit for Future and Urban Mobility Systems - European Commission - Brussels - Belgium

**Lola Ortiz** / Head of Mobility Planning - Madrid City Council - Spain

**Stefano Borgato** / Transport Planner - TRT Trasporti e Territorio - Milan - Italy

**Mariola Panzuela** / Zero Emission Program Manager - C40 Cities - London - UK

**Henrik Gudmundsson** / Senior Consultant - Concito - Copenhagen - Denmark

**Maria Attard** / Director, Head of Geography - University of Malta - Malta

The climate emergency has led Europe to commit to a 40% reduction in carbon emissions by 2030 and to becoming a climate neutral continent by 2050. Mobility plays a key role in reaching these targets, while cities account for 70% of global carbon emissions. Achieving carbon neutral urban mobility is of paramount importance, as is assessing different strategies to make the journey affordable and ensure maximum benefits at the lowest possible cost.

### Takeaways:

- The first major milestone of the EU Green Deal is a 55% reduction in transport emissions by 2030 (compared to 1990 levels). This represents a major opportunity for European industry to create markets for clean technologies and products.
- The EU Sustainable and Smart Mobility Strategy to cut emissions 90% by 2050 is an action plan comprised of 82 initiatives, including more stringent air pollution emission standards and support for public charging points (1M in 2025).
- The C40 Green and Healthy Streets Declaration has been signed by 36 cities so far and includes two big commitments: procuring only zero emission buses by 2025 and ensuring a major area of the city is a ZEA by 2030.
- In the end, financial incentives, charging infrastructure and political will are key to propel the transition and prioritize sustainable and equitable mobility.
- Cities also need to work together and share knowledge: it's about moving people, not vehicles.

“ The climate crisis will be won or lost in cities. ”

**Mariola Panzuela**

## Europe: The New Green Unicorn El Dorado

Wednesday, November 17



### Chair

**Fredrik Hånell** / Director Business Creation - EIT Urban Mobility - Stockholm - Sweden

### Speakers

**Jinél Fourie** / Director Central Public Policy and Southern Europe Policy - TIER Mobility - Berlin - Germany

**Jacob Bangsgaard** / CEO - Ertico - Brussels - Belgium

**Adam Rottenbacher** / Chief Operating Officer - EIT - Budapest - Hungary

**Karin Ebbinghaus** / CEO - Elonroad - Lund - Sweden

EU unicorns - start-up companies with a value of over \$1 billion - are key to spurring innovation across Europe. Europe aims to become a leading global innovation powerhouse and to double the number of unicorns in the EU to approximately 250 by 2030. Therefore, it's key for ecosystem leaders and politicians to work together to build a new generation of innovators and entrepreneurs, helping them scale up and become tech champions.

### Takeaways:

- EIT is an impact-driven organization.
- Startups move at an amazingly fast pace. The knowledge EIT provides is highly valuable, as they don't have to go through the struggle of reinventing the wheel.
- To build planet- and people-centric cities we need to reduce private car dependency and build a transport network that accommodates a growing population and democratizes public spaces and services to make cities better places to live.
- Mobility as a Service (MaaS) has immense potential in post-COVID cities.
- European instruments and programs should seek synergies and work together for the benefit of Europe's innovators and entrepreneurs.

“ **Mobility innovation and data can be leveraged to achieve the vision of planet- and people-centric cities.** ”

**Jinél Fourie**

## Autonomous Futures: Who Exactly Is in Charge Here?

Wednesday, November 17



### Chair

**Gareth MacNaughton** / Innovation Director - EIT Urban Mobility - Edinburgh - UK

### Speakers

**Peter Shearman** / Head of Innovation, UKI, Emerging Tech and Incubation - Cisco - London - UK

**Álvaro Andrade** / Head of Innovation - ALSA - Madrid - Spain

**Rosa Blanco** / Leader of ADAS, Automated Driving and Connectivity Department - CTAG - O Porriño - Spain

**Maximilian Werner** / Research Area Mobility and Innovation Systems - Fraunhofer IAO - Stuttgart - Germany

**Pedro Vidal** / Executive Secretary of Traffic Management Unit and ITS - Ministry of Transport, Government of Chile - Santiago de Chile - Chile

**Tamara Goldsteen** / Program Manager Mobility - City of Helmond - The Netherlands

The rollout of connected autonomous vehicles (CAV) has been proposed to be THE game changer in urban mobility in terms of pollution, carbon emissions, and road safety issues. The recent addition of a “c” for “collaborative,” making the accepted acronym “CCAV,” is not enough to allay fears of unresolved business, technical, social, and environmental issues.

### Takeaways:

- Connected and autonomous mobility will play a key role in reducing emissions, increasing safety, and improving the overall well-being of residents.
- The complexity of the urban environment and, particularly, pedestrian behavior, still represent major challenges for autonomous vehicles.
- In a connected system, every individual walking on the street is an actor moving in the system. We cannot focus on the technology alone.
- The infrastructure and third-party services can help autonomous vehicles avoid frequent obstacles.
- The acceptance of autonomous cars is quite promising. Younger generations want flexibility and are open to sharing ownership, as it means sharing costs.

“ There is no perfect vehicle for all use cases. ”

**Maximilian Werner**

## Shocking - The Electrical Future Is Already Here!

Wednesday, November 17



### Chair

**Henrik Morgen** / Director Innovation Hub North - EIT Urban Mobility - Copenhagen - Denmark

### Speakers

**Jan Šamal** / CEO - Nimble Energy - Prague - Czech Republic

**Farhan Farrukh** / Researcher Smart Energy Technologies - Smart Innovation Norway - Oslo - Norway

**Aleksander Rajch** / Director of External Affairs - Polish Association of Alternative Fuels - Warsaw - Poland

**Tore Harritshøj** / CEO and EIT UM SB Member - Spirii A/S - Copenhagen - Denmark

**Chresten Træholt** / Associate Professor - Technical University of Denmark - Lyngby - Denmark

**Arturo Pérez de Lucía** / General Manager - AEDIVE - Madrid - Spain

Electrification is widely seen to be at the core of the decarbonization of the transport sector and hence the EU's political goal to be climate neutral by 2050. Already today, multiple types of electric vehicles are available - from small scooters and drones to large trains and barges, electric solutions cover both people and goods transport. But when will they be widespread, what charging solutions do we need, and who is financing this transition?

### Takeaways:

- The electrical future is already here, but our thinking is lagging behind. Passenger cars are just half the story.
- Electrification cannot happen without a shift in the energy system.
- We need to create a new game-changing industry with new ownership models, shared mobility, charging on demand, autonomous driving, robotaxis, and vertical transportation.
- Incentives are key: In Norway, 77% of all new cars sold in October 2021 were electric thanks to tax incentives, commuting incentives and fast charging stations every 50 km.
- An open roaming platforms approach is necessary to secure multiple offerings and competitive pricing, providing a good user experience.

“ **Electrification is not a hardware game. It's a user experience game.** ”

**Tore Harritshøj**

## How Can Innovation Boost Micromobility in Cities?

Thursday, November 18



### Chair

**Miquel Nadal** / Secretary - FIA High Level Panel for Road Safety - Barcelona - Spain

### Speakers

**Cristian Bardají** / Director of the Mobility Area - RACC - Barcelona - Spain

**Tatiana Samsonova** / Policy Analyst - OECD - Paris - France

**Filippo Brunelleschi** / Country Manager Spain - SPIN Mobility - Madrid - Spain

**Remco Evers** / Innovation Manager - Achmea - Apeldoorn - Netherlands

**Wolfgang Inninger** / Head of Project Center Traffic and Mobility - Fraunhofer - Prien - Germany

**Sergi Saurí** / Research Director - Polytechnical University of Catalonia - Barcelona - Spain

Micromobility is coming back strong in the wake of pandemic lockdowns, but its integration into cities and transport networks still struggles, as cycle lanes become overcrowded, parking regulation conflicts arise, and first/last mile integration with public transportation is lacking. How can innovation in the form of geofencing, AI, etc., help tackle all these issues and enable the promise of an affordable, safe, and clean means of transportation?

### Takeaways:

- Micromobility is seen as the new kid on the block in the sector: it's a problem solver but it also has downsides in terms of safety and coexistence with other modes of transport.
- As a substitute for walking and cycling, micromobility may also have important implications in terms of physical activity.
- Many cities have put in place bans and strict regulations on new mobility services, making it difficult for micromobility companies to operate and grow.
- In the end, cities need a strategy to integrate micromobility and active models into the urban mobility system.
- Cities also need to continuously evaluate the situation and make use of data to work with sharing providers.

“**Micromobility complements public transport. Yet public support is needed if we want those services to be affordable and usable.**”

**Tatiana Samsonova**

## Urban Air Mobility: The Next Big Thing

Thursday, November 18



### Chair

**Daniel Serra** / Director Innovation Hub South - EIT Urban Mobility - Barcelona - Spain

### Speakers

**Vassilis Agouridas** / UIC2 Leader - Airbus Urban Mobility - Munich - Germany

**Eduardo Domínguez** / Chief Commercial Officer - Vertical Aerospace - Bristol - UK

**Christelle Al Hadad** / Research Associate and PhD Candidate - Technical University of Munich - Germany

**Miquel Colom** / CEO - Singular Aircraft - Cornellà de Llobregat - Spain

**Gonzalo Velasco** / Business Plan and Innovation Director - Ferrovial Airports - Madrid - Spain

**Tiago Lopes** / Sector Expert - European Investment Bank - Luxembourg

Different Urban Air Mobility (UAM) programs and city pilots are being launched and implemented in the European Union with the goal of creating an environment where solutions can be tested and experiences continuously shared. Yet it is key to ensure that the resources in place are being managed and used properly. Why should cities and regions be involved in UAM?

### Takeaways:

- Urban Air Mobility implies having devices flying above populated areas. Safety and citizen engagement are major concerns.
- Residents need more information to understand the benefits of Urban Air Mobility.
- Cities need to develop the capacities to deal with the challenges posed by Urban Air Mobility and look for synergies between air and ground mobility.
- The role of labs, research centers and accelerator programs like that from the EU are key, as Urban Air Mobility introduces a new status quo that brings many opportunities.
- Transitioning urban mobility to a third dimension requires digitalization, new infrastructure and new interfaces.

“ **Urban Air Mobility is about a new social business ecosystem.** ”

**Vassilis Agouridas**



## Public Transport After Covid

Thursday, November 18



### Chair

**Jerome Pourbaix** / Principal - Arthur D. Little - Brussels - Belgium

### Speakers

**Marta Subirà** / President - FGC - Barcelona - Spain

**Karen Vancluysen** / Secretary General - POLIS - Brussels - Belgium

**Kaan Yildizgöz** / Senior Director Membership, Marketing and Services - UITP - Brussels - Belgium

**Carina Arvizu** / Development Director - Tren Maya - Mexico City - Mexico

**Arnaud Julien** / Chief Innovation, Data and Digital Officer - Keolis - Paris - France

**Boyd Cohen** / CEO - IOMOB - Barcelona - Spain

**Ignacio Barrios** / CEO - Kido Dynamics - Lausanne - Switzerland

The pandemic led many of us to avoid public transport. Lockdowns, the rise of remote working, and stay-at-home orders have all meant a reduction in the volume of people commuting. Higher car ownership and use is no small challenge, either. What will it take to get us back on board?

### Takeaways:

- The COVID pandemic has proven the importance of public services and the immense human capacity for resilience.
- Cities must continue to invest in public transport but also accept that there are gaps that will need to be covered through public-private partnerships.
- The focus in public transport should be on attractiveness, capacity, and integration.
- Being more intermodal is a way of becoming more resilient.
- Cities need to reconcile mobility and urban planning and support multimodal mobility.

“ We need to be sure that public transport is the backbone of MaaS. ”

**Karen Vancluysen**

# CONGRESS SESSIONS

# SCEWC DIGITAL PROGRAM

## The Difference is in the Details

Tuesday-Thursday, November 16-18



What goes on behind the scenes also provides valuable information to the audience, as well as entertaining them and making them aware that there is a team behind the scenes pulling the strings. Unwinding is also part of an event like the Smart City Expo World Congress. The SCEWC Digital Program entered the speakers' room and even the unseen parts of the digital program itself for the first time, motivated by the celebration of the event's tenth anniversary.

The program touched on what cities should do from now on, obviously, but also sought out the details that usually don't pop up during the onsite Congress sessions due to a lack of time, such as the quality of the air we breathe in cities, how to encourage urban circularity, how to foster cybersecurity, and how to make the impossible possible with artificial intelligence.

Interviews, debate, live online connections with other cities and with correspondents on the Expo floor enriched the debate.

WATCH VIDEO



**“ Investment in digital technologies is a necessary condition but not sufficient. ”**

*Soo-Jin Kim, OECD*

# CONGRESS SESSIONS TOMORROW.MOBILITY DIGITAL PROGRAM

## A Glimpse of Today's Reality for Better Mobility Tomorrow

Thursday, November 18



The key question pervading all the content offered at the Tomorrow.Mobility World Congress was how cities can shift to more sustainable mobility. The digital program, which enriched the debate taking place across the venue, gave more insights on this topic. It also touched on how to support the transition to zero emission transportation, how to link public transport with bike and scooter sharing schemes, how humans can interact with autonomous vehicles, and how regulatory frameworks and city planning can help advance innovation.

Through a dynamic program combining interviews from the onsite studio with connections to correspondents describing the ground-breaking innovations showcased at the Expo, the Tomorrow.City Digital Program talked to experts and innovators to highlight the fact that cities are more aware than ever that the pandemic has been a shock to the industry, but also that doing business as usual is no longer possible. The lockdown encouraged people to change habits and cities used that period to test new mobility services. Now they need help to shift to good mobility plans, as those able to build them enjoy the highest odds of success.

WATCH VIDEO



**“ We need the sustainable modes to join forces.  
We need to become more multimodal and intermodal. ”**

*Karen Vancluysen, Secretary General, POLIS*



**#10**  
**SIDE EVENTS**  
**& ACTIVITIES**

## SIDE EVENTS

An extensive program of inspiring side events led by organizations and companies making strides in urban development were scheduled during the event, driving attendees to the heart of key urban issues. The 80+ side events featured in 2021 took place in three main areas - the Central Agora, the City Possible Plaza, and the Innovation Zone.

### CENTRAL AGORA

Living up to its name, the Central Agora featured non-stop open debates on key issues such as the role of Smart Ports, and sustainability as the “new smart,” offered by La French Fab, as well as more technical topics such as data spaces and local digital twins for cities and communities.



Port de Barcelona

The transformation of maritime transport and logistics thanks to different applications of digital technology is crucial due to the global supply chain shortage caused by the pandemic. The challenges of Smart Ports was the crucial issue this open side event addressed.



There is no single model for a sustainable city, but there are objectives that can be shared. Under the title Sustainable Is the New Smart, La French Fab explained the French approach to tackling the growing impact of climate change and presented operational solutions as well as a logical framework for action.



## CITY POSSIBLE PLAZA



Under the theme **New Possibilities in a Changed Urban World, the City Possible Summit** at Smart City Expo World Congress unleashed the superpower of collaboration to explore how

leaders around the world are approaching the challenges cities face due to the pandemic and global threats like climate change, which have grown more acute over the last year.

In a space especially designed to host debates, but also experience innovation in action and even unwind for a little while by grabbing a coffee, the City Possible Summit delved into the New Mobility Landscape, how small businesses can turn into vehicles to spark a recovery in pandemic-ravaged economies, defining smart resilience and how to cope with cybersecurity challenges.

The City Possible team also showcased diverse Mastercard products such as **Mastercard City Key™**, a resident engagement platform helping cities provide benefits and services access to residents; **Mastercard City Insights**, a marketplace for data insight apps and services for cities; and **Mastercard Mobility & Transit**, a suite of solutions helping cities advance public and private transportation infrastructure.

Furthermore, willing to harness the best of both the onsite and the online worlds, the City Possible Summit presented a digital version, which was directly streamed from the SCEWC. As Miguel Gamiño, Executive VP and Head of Global Cities at Mastercard put it: “We’re able to do this hybrid event with our partnership with Smart City Expo World Congress. So, we’re streaming all this content to our digital audience but we also have a packed crowd here in person and the speakers are coming digitally and in person too. It’s our first version of this hybrid event but I think it’s something that is here to stay and we’re going to do everything we can to continue to make that platform, that hybrid engagement, better and better.”



## INNOVATION ZONE

The Innovation Zone honored disruptive ideas by featuring 36 exhibiting startups selected according to the maturity of their project and their impact. The companies pitched their projects to investors, corporations, cities, and potential partners.

Following are the firms with the most interesting projects, as well as the most outstanding sessions in this area:

### **AUVE TECH:**

Auve specializes in the development and manufacturing of autonomous transportation systems. It offers a full-scope service that encompasses the autonomous vehicles, their integration into various environments, and fleet management. The company showcased the world's most compact and flexible level 4 autonomous shuttle that slots into the existing infrastructure and is already operating on public roads.

### **VONZU:**

VONZU is a technological solution that enables the orchestration of the entire supply chain by integrating retailers and logistics operators into a single cloud-based platform. VONZU digitalizes and automates each step of the shipping and delivery process so that goods are distributed in a more integrated, sustainable, and profitable way. Its project has already been implemented in more than 25 cities and every minute almost five deliveries are made using its software. In addition, it incorporates algorithms to reduce the environmental footprint of this activity (vital within the 2030 Agenda). The company is headquartered in Barcelona, underlining the noteworthy



**DASHBIKE:** The first data-protection-compliant safety camera for cyclists. It includes distance measurements, GPS, a gyroscope, lights, and many other sensors to record all the movements of a bicycle. In addition, it is loaded with countless sensors to capture a huge number of details about the context. While it may seem like a no-brainer, it more than likely can play a role in the future in terms of accidents (insurance and potential liability claims), addressing future legislation if placed in public vehicles (automatic legislation) and elite training among non-professional athletes.

As an essential citizen's right, mobility trends and how to create European unicorns were a crucial part of the conversation in the Innovation Zone:



The EIT Urban Mobility High-Level City Event brought together EIT Urban Mobility's city partners from all over Europe with the aim of strengthening the sense of community, sharing bold targets for achieving a more sustainable future in urban mobility, and setting out the common objectives for reaching the climate neutrality goals in Europe by 2035.



In this RACC Mobility Institute members-only event, mobility trends data from Madrid and Barcelona was presented and a debate on how to improve user experience followed.





Finally, in a session closed to the Congress, the United Cities and Local Governments met to enrich the debate.



United Cities and Local Governments (UCLG) gathered its World Council at the Smart City Expo World Congress to define the strategy of the municipal movement and its contribution to the UN Common Agenda. Under the title Smart Cities and Territories, Pillars of the Common Agenda, 342 representatives from 97 countries debated on how to strengthen **the voice of regions and rewrite a social contract to confront the future.**



# ACTIVITIES

## BROKERAGE EVENT

The Brokerage Event returned to the Smart City Expo World Congress with industry leaders and public stakeholders supporting the most innovative business ideas. The 8th edition of the Smart City Brokerage Event was hybrid, combining onsite and online B2B meetings.

Organized by ACCIÓ, a department of the Catalan Government's Ministry of Enterprise and Labor, with the support of the Enterprise Europe Network, the largest business support network worldwide, this side event gathered 614 participants who set up 863 meetings to discuss projects and collaborations. Participants had an international profile, coming from countries such as Belgium, Germany, Iran, the Netherlands, and Turkey.





**#11**  
**WORLD SMART**  
**CITY AWARDS**

# AWARDING INNOVATIVE IDEAS

In these challenging times, with climate change accelerating, smarter, inclusive, and more sustainable cities have become a pressing need for a better future. The 11<sup>th</sup> edition of the **World Smart City Awards** celebrated the most innovative ideas and projects nurturing sustainable development in urban areas around the world. These initiatives helped areas cope with the unforeseen circumstances created by both the COVID-19 pandemic and climate-related disasters, enhancing quality of life.

This year, awards were given in **eight different categories** covering key smart cities issues, as well as **a new category recognizing significant contributions from contemporary professionals**:

- **City Award:** Awarded to cities for developing global strategies combining projects, initiatives, and policy implementation for their citizens.
- **Innovation Recovery Award:** Awarded to projects with the potential to contribute to the successful transformation, adaptation, or response of our cities to the Covid-19 pandemic, or others that may occur in the future.
- **Leadership Award:** Awarded to exemplary living individuals who have made significant contributions to advancing smart cities projects worldwide during the last 10 years.
- **Enabling Technologies Award:** Awarded to the most innovative and successful projects developed in the fields of data and technology.
- **Governance & Economy Award:** Awarded to the most innovative and successful projects implemented and developed in the fields of governance and finance.

- **Living & Inclusion Award:** Awarded to the most innovative and successful projects implemented and developed in relation to inclusive and sharing cities.
- **Energy & Environment Award:** Awarded to the most innovative and successful projects implemented in relation to energy and sustainability.
- **Safety & Security Award:** Awarded to the most innovative projects implemented in relation to security and safety in urban environments.
- **Mobility Award:** Recognizes the most innovative and successful projects addressed at improved urban mobility.

The winners were selected from among projects submitted from **46 different countries**. All candidates were evaluated by a panel of prominent experts based on innovation, potential impact, and feasibility.

The winners were announced on November 17 at a ceremony that attracted both onsite and online participants from the public and the private sectors, putting the awarded projects in the spotlight on a recognized international platform and in front of a large, diverse audience.

# 2021 WINNERS

## ENABLING TECHNOLOGIES AWARD

Digital Urban European Twins, Digital Flanders Agency (Belgium)

*Forging a new era of decision making in cities: the case of DUET*

DUET was recognized because it leverages the concept of digital twins to advance urban planning in smart cities. Its interoperable platform helps local stakeholders improve both operational decisions and long-term policy planning. The solution is being co-created with policy makers and citizens in three locations in Europe.



## GOVERNANCE & ECONOMY AWARD

World Economic Forum

*The G20 Global Smart Cities Alliance on Technology Governance*

The G20 Global Smart Cities Alliance was recognized for uniting governments, private-sector partners, and citizens around principles for the responsible use of smart city technologies. The Alliance establishes global policy norms to accelerate best practices, mitigate risks, and foster openness and public trust.



# 2021 WINNERS

## LIVING & INCLUSION AWARD

**Chengdu Municipal People's Government (China)**

*Innovative implementation of online governance for creating a smart city*

Chengdu was awarded for online governance focused on key areas such as government services, operations, public services, risk prevention and control, industrial development, optimizing and re-engineering business processes, improving the quality and efficiency of urban services, governance, and development to create a pan-city of wisdom, livability, and tolerance.



## ENERGY & ENVIRONMENT AWARD

**City of The Hague (Netherlands)**

*Living Lab Scheveningen: the urban innovation testbed*

The Living Lab Scheveningen is a digitally connected urban environment where digital innovations are applied in the public space to help solve complex societal challenges together with citizens, businesses, and the public sector. The project was recognized as it aims at creating a sustainable, safe, and pleasant living environment.



## 2021 WINNERS

### SAFETY & SECURITY AWARD

#### Albuquerque Bernalillo County Water Utility Authority (USA)

*Desert water utility authority future-proofs infrastructure with IoT and cybersecurity*

The Albuquerque Bernalillo County Water Utility Authority was recognized for being prepared to confront cyberattacks on its critical infrastructure with a modernized network, IoT technologies, and security solutions, ensuring operators see everything from changes in water conditions to cyber and physical threats.



### MOBILITY AWARD

#### Port de Barcelona (Spain)

*Smart Mobility Analytics (SMA): A solution for handling mobility in a passenger cruise terminal*

The Port de Barcelona was recognized for its SMA solution, which is an Intelligent Mobility System based on cameras and AI logic that provides real-time information to all stakeholders managing transport flows, thus reducing traffic congestion (people and vehicles) at the terminal during the landing operation.



## 2021 WINNERS

### RECOVERY INNOVATION AWARD

**Wuhan Municipal People's Government (China)**

*Smart City empowers Wuhan's revitalization after COVID-19, spurring innovations for megacity governance*

Wuhan was recognized for spurring innovations for smart governance. As one of the first batch of pilot cities for smart cities in China, Wuhan, based on the new generation of information technology, continuously promotes the wide application of big data intelligence in urban governance, and promotes economic recovery & urban development after the pandemic.



### LEADERSHIP AWARD

**Carlos Moreno**, Associate Professor & Scientific Director - Paris 1 Sorbonne University

**Benedetta Tagliabue**, Architect & Director, Miralles Tagliabue EMBT

Carlos Moreno was recognized for his 15-Minute Cities vision and for bringing new perspectives to addressing urban challenges.

Benedetta Tagliabue was honored for bringing beauty and liveability to cities through the redesign of public spaces and urban buildings.





# 2021 WINNERS

## CITY AWARD

City of Buenos Aires (Argentina)

Buenos Aires was honored for its Integrated Municipal Solid Waste Management Plan, developed starting in 2012 to promote waste reduction and encourage waste segregation, thereby reducing waste disposal in local landfills. The main goal is to develop circular economy models for each waste current.



**#12**  
**EDITIONS**  
**ABROAD**

## LOCAL EDITIONS AROUND THE GLOBE

The Smart City Expo is a worldwide, ever-growing movement. Since 2013, the event has expanded from its home base in Barcelona to cities all around the world, with local events adapted to the specific needs and interests of their host regions.

In 2021, Smart City Expo celebrated spin-off events in **Mérida (Mexico)** and **Shanghai (China)**, pointing the way to a new normality.



### SMARTCITY EXPO LATAM CONGRESS

**October 5-7, Mérida**  
**October 12-14, Online**

The 6<sup>th</sup> onsite edition of the [Smart City Expo Latam](#) Congress was held October 5-7 at the Centro de Exposiciones Siglo XXI in Mérida, Yucatán, México. The event, which also featured

an online program that lasted until October 14, was organized by the Smart City Expo World Congress and Fira Barcelona México and hosted by the Government of the state of Yucatán. With the motto *REthink, REactivate, REbuild*, the three-day conference and expo focused on work and established alliances for the resilience and reactivation of Latin America.



### SMARTCITY EXPO SHANGHAI

**October 14-15, Shanghai**  
**With virtual support from Tomorrow.City**

The Chinese spin-off event of the Smart City Expo World Congress celebrated its second edition in the

city of Shanghai on October 14-15. Organized by the SCEWC, Fira de Barcelona and INTEX, with the support of CCPIT, the two-day conference and expo took place in the Shanghai Postal Museum.

With the motto *The Smart is Rising*, [Smart City Expo Shanghai](#) presented an open and sustainable platform where global smart city projects and the future trends of many cities were showcased, promoting innovative thinking and development.

Regional experts, academics and industry leaders joined the event to share their knowledge, with technological innovation to improve cities, benefit people from all countries, share opportunities and create a better future for all.

In 2022, Smart City Expo will continue expanding with local editions taking place around the world.

# SMARTCITY

EXPO CURITIBA

March 2022  
Curitiba, Brazil

# SMARTCITY

EXPO DOHA

March 2022  
Doha, Qatar

# SMARTCITY

EXPO LATAM CONGRESS

June 2022  
Merida, Mexico

# SMARTCITY

EXPO USA

September 2022  
Miami, USA

# SMARTCITY

EXPO SHANGHAI

October 2022  
Shanghai, China





**#13**  
**CO-LOCATED**  
**EVENTS**

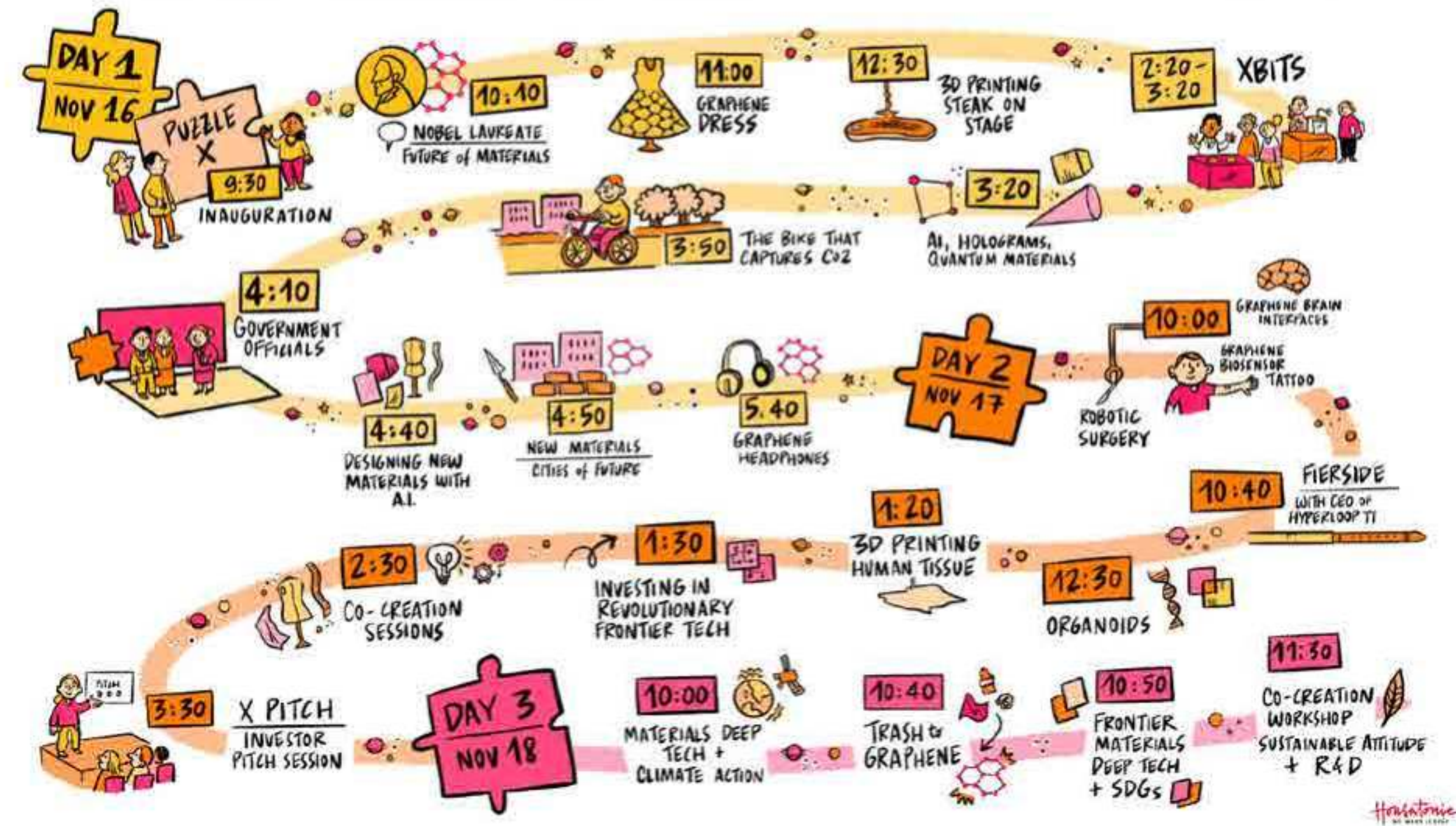
# PUZZLE X™

16 - 18 NOVEMBER

Puzzle X was the first event convened to bridge the world of Frontier Materials, societal impact, entrepreneurship, venture building, corporate innovation, bleeding-edge material science and the United Nations Sustainable Development Goals to facilitate the use of the materials of the future to help our world today.

The forum discussed what the Frontier Materials of the 21st Century are and how they will transform industries, create new ones, and change the shape of human life in the next few decades.

The thought-provoking debate touched on what Frontier Materials are doing for sustainable cities, climate action, and innovation for good health, and dove deep into the role of carbon and whether it is the enemy, light weighting and fuel reduction, carbon capture and the heavy cost of data and supercomputing, carbon circularity, IOT, recycling, sanitation innovation, and ultra-precise machine-brain interfaces, implants and next-gen sensors and diagnostics.





## 15 - 18 NOVEMBER

**Circular Economy Hotspot** is the annual event where cross-sectoral delegates and companies from all over the world meet to discuss the most pressing issues and solutions pushing the circular economy forward. Previously held in the Netherlands, Luxembourg, Scotland and Belgium, the event combined guided tours of local companies and a Congress delving deep into the current state of the circular economy in Catalonia and Europe.

**The Brokerage event**, which took place within the framework of the Smart City Expo World Congress, was a unique opportunity to create global synergies and promote the circular economy in all sectors.

The Circular Economy Hotspot in Catalonia event also strengthened the **Circular Catalonia hub**, a meeting point for companies, institutions, and people ready to implement solutions and strategies to consolidate the circular economy in the region.





**#14**  
**KNOWLEDGE**  
**PILLS**





“We cannot live without international cooperation, international solidarity, international law, especially in the current global scenario.”

**Maria Fernanda Espinosa,  
Former President, UN General  
Assembly**



“We are at a pivotal moment of recovery. We need people-centered smart cities.”

**Maimunah Mohd Sharif,  
Executive Director, UN-Habitat**



“Data can be the new gold if it’s unlocked, which is a matter of trust.”

**Jan Jambon,  
Minister-President, Government of  
Flanders**



“Next Generation funds are a huge opportunity at a much-needed time. Cities can contribute to ensure that they are used where they are needed to achieve the green transition and the digital transition, the Green New Deal.”

**Ada Colau,  
Mayor, City of Barcelona**

“It’s a collective success that after the shock of the COVID pandemic we meet to celebrate the 10<sup>th</sup> anniversary of the Smart City Expo World Congress.”

**Jaume Collboni**  
**First Deputy Mayor, City of Barcelona**

“This is the one place we get to do it every year, where we have the top conversations.”

**Cassie Roach**  
**VP, Global Public Sector, Cisco**

“This event brings public, private and civil society together. If you’re looking for a smart city event, this is the one you should make the time for.”

**Jeremy Goldberg**  
**Worldwide Director Critical Infrastructure, Microsoft**

“The SCEWC is a super important in-person event to create relationships and collaborations that drive inclusive solutions.”

**Miguel Gamiño**  
**Executive VP, Head of Global Cities, Mastercard**

“Let’s make our citizens happier by making our cities smarter.”

**Jordi Puigneró, VP and Minister of Digital Policies & Public Administration,**  
**Government of Catalonia**

“What if your outside space was as safe as your home? The outside space should provide this beautiful, secure attitude. It’s a very focal point to make our cities better.”

**Benedetta Tagliabue**  
**Architect & Founder, Miralles Tagliabue EMBT**

“Technology is a critical underpinning to make the economy green, inclusive and resilient. It’s critical for helping the post-COVID recovery.”

**Sameh Wahba**  
**Global Director, Disaster Risk Management, Resilience and Land Global Practice,**  
**World Bank**

“There are no beautiful or ugly cities. There are cities that are fair and cities that aren’t.”

**Gissela Chalá**  
**Vice Mayor, City of Quito**

“Cities are the link between Europe, the States and making things happen.”

**Francesca Bria**  
**President, Italian Innovation Fund**



16-18 NOVEMBER 2021

ONLINE AND AT BARCELONA CITY

www.smartcityexpo.com

#SCENC21 @in@you

# WE ARE THE CITIES WE MAKE

CITIES NEED TO LEAD THE WAY!

EMPOWERING CITIZENS & ENABLING MORE EFFICIENT & INCLUSIVE URBAN SERVICES

# SMARTCITY

## EXPO WORLD CONGRESS

10 YEARS LEADING THE URBAN REVOLUTION

REFLECTING ON HOW TO BUILD A SMART SOCIETY FOR INNOVATIVE & SUSTAINABLE CITIES SINCE 2011...



YOUR HELP/ACTION CAN MAKE A DIFFERENCE. EVERY SMALL ACTION MATTERS. WE CAN GO FURTHER ONE MORE TIME!

GAME-CHANGERS ON STAGE

LEADING BY EXAMPLE

MEANINGFUL

USEFUL

### TOWARDS ZERO WASTE



NO SINGLE-USE PLASTICS  
ALL DRINKS ARE SERVED IN GLASS BOTTLES. OUR CATERING MENU AVOIDS PLASTIC CUTLERY AND WRAPPING.

CARBON NEUTRAL  
ALL CO<sub>2</sub> EMISSIONS DURING THE EVENT ARE OFFSET BY BUYING VERIFIED CARBON TRADING'S CARBON CREDITS. YOU CAN OFFSET THE CARBON IMPRINT RELATED TO YOUR PARTICIPATION IN THE EVENT VIA THE CLEAN CO<sub>2</sub> PLATFORM.

CIRCULAR VENUE DECORATION  
ALL VENUE DECORATION IS CRAFTED BY LOCAL CREATORS. FURNITURE, TABLES, CHAIRS, AND OTHER DECORATIONS ARE MADE FROM RECYCLED MATERIALS.

LESS PAPER  
ALL INFORMATION OF THE EVENT IS AVAILABLE ONLINE. PRINTED MATERIALS WILL ONLY BE USED FOR ESSENTIAL PURPOSES.

REDUCING & RECYCLING  
RECYCLING BINS ARE AVAILABLE WITH A TEAM OF VOLUNTEERS HELPING WITH WASTE SELECTION.

NO FOOD WASTE  
LEFTOVER FOOD IS DONATED TO THE LOCAL CHARITY WITHOUT BARRELS.

### Fira Barcelona

WE BUILD CITIES BUT THE CITIES BUILD US, TOO!

- DOHA MARCH 2022
- CURITIBA MARCH 2022
- LATAM CONGRESS JUNE 2022
- SHANGHAI OCTOBER 2022

### 2021 ABROAD EDITIONS

SUSTAINABILITY AND INCLUSIVITY AT THE CORE OF THE EVENT

### TOWARDS INCLUSIVITY

- DISABILITIES:**
  - Electric parking available for those with reduced mobility
  - Full accessibility in all areas
  - Guided tours for those with hearing impairment
  - Color-coded maps, signposts, and tactile floors
- GENDER:**
  - Increasing equal gender representation at the congress
  - Specific content sessions for gender equality
- BELIEFS:**
  - Diversity prayer room adapted to variety of beliefs
  - Vegetarian, halal, and kosher food
- LANGUAGES:**
  - Simultaneous translation to Spanish in the congress rooms
- BABY CARE:**
  - Nursing room with diaper changing tables

### PLANT FOR THE PLANET

HELP US PLANT SOME TREES TO COMPENSATE THE PLASTIC ALL MONEY RAISED WILL BE GIVEN FOR THE PLANTING FOR DOHHA TRUSTEES PROJECT. EARLY BIRD TICKETS COMBAT THE CLIMATE CRISIS!

### WORLD SMARTCITY AWARDS

AIMING TO RECOGNIZE & SUPPORT INNOVATIVE CITY STRATEGIES, PROJECTS & IDEAS, THAT CAN POTENTIALLY MAKE AN IMPACT IN CITIZENS' LIVES & TURN OUR CITIES INTO MORE INCLUSIVE AND SUSTAINABLE PLACES TO BE.

### 2021 BUENOS AIRES

- 2011 - YOKOHAMA
- 2012 - AMSTERDAM
- 2013 - RIO DE JANEIRO
- 2014 - TEL AVIV
- 2015 - PETERSBURGH
- 2016 - NEW YORK
- 2017 - DUBAI
- 2018 - SINGAPORE
- 2019 - STOCKHOLM
- 2020 - SHANGHAI

THE SMART CITY EXPO IS A WORLDWIDE EVER-GROWING MOVEMENT SINCE IN 2013 THE EVENT HAS BEEN EXPANDED FROM ITS HOME BASE IN BCN TO CITIES ALL AROUND THE WORLD WITH LOCAL EDITIONS ADAPTED TO THE SPECIFIC NEEDS & INTERESTS OF THEIR HOST REGIONS.

PARTNERSHIPS  
CREATING AND NURTURING AN INTERNATIONAL INNOVATION COMMUNITY

A CURATED LIST OF EVENTS AND WORKSHOPS, INCLUDING DIGITAL SESSIONS, THAT BROADENS THE MAIN PROGRAM AND GIVES ANSWER TO SPECIFIC CHALLENGES.

TAKE A LOOK BACK TO OUR PREVIOUS EDITIONS AT OUR DIGITAL CHANNELS.

SEE YOU NEXT YEAR!

### SMARTCITY LIVE 2020

BY SMART CITY EXPO WORLD CONGRESS

2020

WITH +80 SESSIONS AND HUNDREDS OF INSPIRING SPEAKERS YOU CAN VIEW THE BEST OF THE SESSIONS ON DEMO ONLINE

### CITIES TO LIVE IN



CITIES MADE OF DREAMS

Smart Society for innovative and sustainable cities

### Smart thinking [2012] Solutions



SMART CITIES CHANGE THE WORLD

### 2014

SMART CITY EXPO WORLD CONGRESS

CHANGE THE WORLD

### JOIN THE URBAN INNOVATION

### 2015



CITIZENS CHANGING CITIES

### 2016

### 2017

EMPOWER CITIES EMPOWER PEOPLE



### 2018

@dby/pau



ATTENDEES  
IN PERSON 14934  
ONLINE 21.210



EXHIBITORS  
452



SPEAKERS  
+ 350



COUNTRIES  
120



SIDE EVENTS  
81

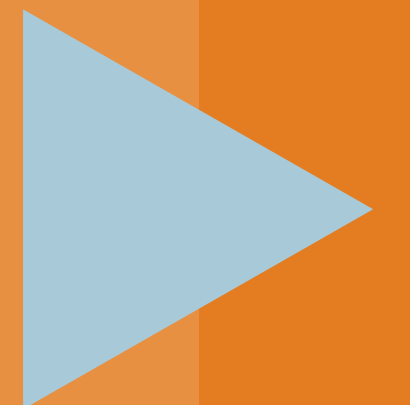
### BARCELONA

EXPO: A THREE-DAY EVENT WITH A MARKETPLACE WHERE HUNDREDS OF GLOBAL COMPANIES & ORGANIZATIONS CAN ENGAGE WITH WORLDWIDE PROFESSIONAL ATTENDEES AND SHOW THEIR PRODUCTS & SOLUTIONS.

CONGRESS: INTERNATIONAL EXPERTS COME TOGETHER TO SHOW THEIR INSIGHTS AND LEARN BEST PRACTICES BOTH ONLINE AND IN PERSON AT

### MAIN TOPICS:

- ENABLING TECHNOLOGIES**
  - Artificial Intelligence
  - Internet of Things (IoT)
  - Cloud Computing
  - Big Data / VR / AR
  - Digital Twins
- ENERGY & ENVIRONMENT**
  - New Energy Models
  - Food & Agriculture
  - Climate Emergency
  - CleanTech / Waste & Water Management
- GOVERNANCE**
  - Multi-stakeholder
  - PPP
  - Cross-sector Governance
  - Citizen Engagement
  - Urban City 4.0
- LIVING & INCLUSION**
  - Social Inclusion
  - Diversity & Education
  - Health
  - Cities for All
  - Housing
- ECONOMY**
  - Financing Schemes
  - Economic Models
  - Institutional Protection
  - Talent Attraction
  - Innovation Ecosystems
  - City-to-City Cooperation
- INFRASTRUCTURE & BUILDINGS**
  - Smart Buildings
  - Sustainable Construction
  - Innovative Materials
  - Critical Infrastructure
  - Neutral Cities Urban Planning
- SAFETY & SECURITY**
  - Cybersecurity
  - City Ethics & Privacy
  - Urban Safety
  - Data Security
  - Digital Rights
  - Emergency Response
- TOMORROW MOBILITY WORLD CONGRESS**
  - Mobility
  - Public Transport
  - Automotive
  - Mobility Service Providers
  - Smart Infrastructure
  - Last Mile & E-Delivery



## **See you next year: November 15-17, 2022**

Meanwhile, watch unique content about smart cities on [Tomorrow.City](https://tomorrow.city), and don't forget to catch up on discussions on our website and social media.

[www.smarcityexpo.com](https://www.smarcityexpo.com)



# SMARTCITY

EXPO WORLD CONGRESS

Organized by:



# TOMORROW.

# MOBILITY

WORLD CONGRESS

Organized by:

