



Photo: Itzel Obregón 2016



City of Kaohsiung



EcoMobility Alliance

Report 2016-2017



CONTENT

3 FOREWORDS

5 ABOUT THE
ECOMOBILITY
ALLIANCE

6 ALLIANCE
ACHIEVEMENTS

8 ALLIANCE
PARTNERS

9 WORKSHOPS AND
EVENTS

- EcoMobility Congresses
- EcoMobility World Festivals
- Declarations and protocols

15 PROJECTS:
ECOMOBILITY
SHIFT

17 PUBLICATIONS

19 ECOMOBILITY ALLIANCE CITY
PROFILES

- 20. Almada, Portugal
- 21. Belo Horizonte, Brazil
- 22. Bogotá, Colombia
- 23. Boulder, USA
- 24. Buenos Aires, Argentina
- 25. Burgas, Bulgaria
- 26. Changwon, South Korea
- 27. Curitiba, Brazil
- 28. Freiburg, Germany
- 29. Kaohsiung
- 30. Kochi, India
- 31. Leipzig, Germany
- 32. Medellin, Colombia
- 33. Mexico City, Mexico
- 34. Münster, Germany
- 35. Portland, USA
- 36. Quito, Ecuador
- 37. Rosario, Argentina
- 38. San Miguel de Allende, Mexico
- 39. Shimla, India
- 40. Suwon, South Korea
- 41. Sydney, Australia

42 COMING UP IN THE
ALLIANCE

43 THEMATIC WORKING
GROUPS

Dear EcoMobility Alliance cities and colleagues, the City of Kaohsiung is proud to present the following EcoMobility Alliance Report. As Chair of the EcoMobility Alliance for the past two years, it has been an honor to lead this exciting period of advancement in sustainable transport globally. Our network of cities and partners has grown and progress has been made towards building sustainable mobility paradigms with efficient transport systems that are innovative, intelligent, inclusive, safe and clean.

This report focuses on the efforts that have been made by the City of Kaohsiung along with EcoMobility Alliance Cities and partners to create and implement urban mobility strategies that prioritize people and the environment. Cities have a responsibility to create public policies and action plans that benefit residents by improving transportation options and incentivizing alternative modes of transport that promote sustainable mobility.

We are hosting the 3rd EcoMobility World Festival and Congress which will serve as an exciting demonstration of the transformative potential of an integrated sustainable transport system in our city. Our efforts will lead to the improvement of air quality and create safer and more livable streets by increasing people- and environment-friendly transport options.

We look forward to continuing our efforts as Chair of the EcoMobility Alliance over the course of 2019 and we thank our partners and EcoMobility Alliance Cities for the continuous support. I hereby cordially invite further cities and mobility actors to join our EcoMobility Alliance, to share their expertise and work together on making sustainable urban mobility the norm in our cities.



Chen Chu

Mayor, City of Kaohsiung



Chen Chu, Mayor,
City of Kaohsiung

It is with great pleasure that we present the 2017 EcoMobility Alliance Report which contains the most recent information on ecomobility efforts within our initiative. The document highlights key achievements of the EcoMobility Alliance, progress made, and plans for the future.

EcoMobility must be a key consideration when planning low carbon, healthy, inclusive and livable cities. The EcoMobility Alliance seeks to intensify city to city knowledge exchange, inspiring local leaders to make public transport safer, create public spaces, and increase safety for e.g. cyclists. By facilitating peer-to-peer learning, the Alliance allows cities to help each other and accelerate change.

Local innovation is also driven through cooperation across continents and regions as was shown at the EcoMobility World Festival 2017 in Kaohsiung and the EcoMobility Days 2016 in Quito. In 2017, ICLEI as Alliance Secretariat has been part of the development of the “Shared Passenger Mobility Principles” on which the Kaohsiung Congress outcome document is based.

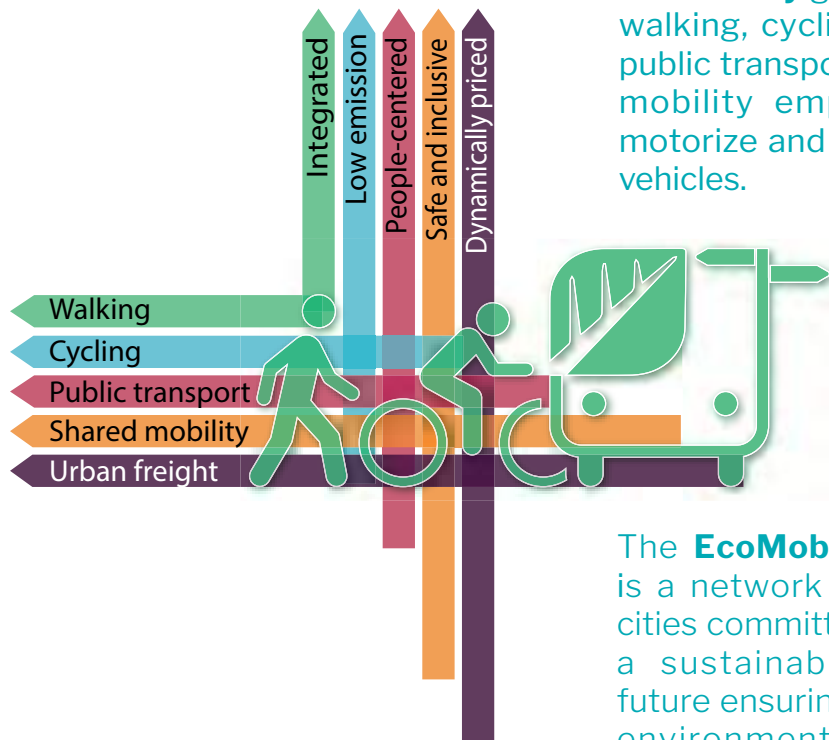
We would like to extend our appreciation to all partner organizations and cities that made these EcoMobility efforts possible. Our most sincere gratitude to the City of Kaohsiung, a city committed to ecomobility, for the generous hospitality and support chairing the EcoMobility Alliance. We hope to have more city exchanges in the future that can accelerate the road towards ecomobility in cities and we invite you to be a part of the debate and a part of shaping the future of mobility.



Monika Zimmermann

Deputy Secretary General, ICLEI

ABOUT THE ECOMOBILITY ALLIANCE



Ecomobility gives priority to walking, cycling, wheeling, public transport and shared mobility employing non-motorize and small electric vehicles.

The **EcoMobility Alliance** is a network of ambitious cities committed to building a sustainable transport future ensuring low-carbon, environmentally friendly people-centered and socially inclusive mobility options.

ICLEI is the world's leading network of over 1,500 cities, towns and regions committed to building a sustainable future. ICLEI's work impacts over 25 percent of the global urban population. Through the EcoMobility agenda ICLEI supports its members in creating people friendly, climate neutral and socially inclusive mobility options that benefit the urban economy.

The EcoMobility Alliance was founded in 2012 with 6 cities and has grown to 22 cities from various regions of the world. These cities and those to join show significant efforts to advance and implement low carbon urban mobility

Through the EcoMobility Alliance, ICLEI brings together cities committed to advancing urban mobility to conceptualize, design and implement people and climate friendly urban mobility options that encourage innovation and entrepreneurship. The EcoMobility Alliance reinforces local governments' commitments to transform their transportation systems and reconfigure mobility patterns, with an aim towards reducing automobile dependency, increasing sustainability, and developing low-carbon, people-centered solutions.

With a focus on passenger and freight mobility, cities are supported in finding solutions for current and future mobility challenges. The initiative enables cities to aspire for better mobility options with an ultimate goal of implementing both large and small easy to implement projects (e.g. performance measurement, electric vehicle policies, green zones etc.), designed through the support provided by ICLEI and its partners.



EcoMobility Alliance cities at the end of 2017



ALLIANCE ACHIEVEMENTS

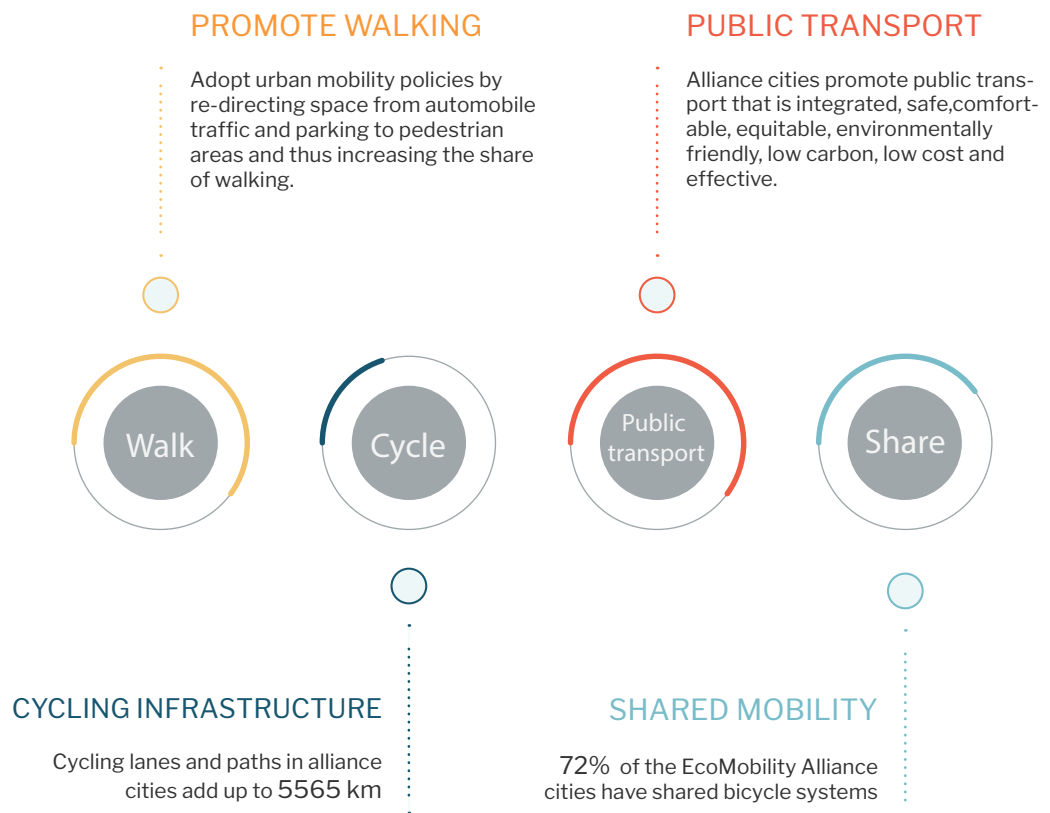
Alliance Cities have attained international recognition by local and international transportation organizations. Between 2016 and 2017, several Alliance Cities received prestigious Sustainable Transport Awards for projects that demonstrated a commitment to sustainability. Noteworthy is the EcoMobility Alliance city of Buenos Aires that was awarded the International Transport Forum's Transport Achievement Award 2017. In addition, the 2016 Enterprising City/State award, organized by the Mobi Prize Committee, went to Medellin, Colombia for its efforts in promoting entrepreneurship in the field of sustainable mobility.

The Alliance has conducted capacity building activities together with Alliance partners in Kaohsiung, Leipzig, Quito, Medellin, Johannesburg, and Suwon. The main target groups for these events were policy-makers from local and national governments.

Additionally, the EcoMobility Alliance is a part of the Paris Process Mobility and Climate (PPMC)-Marrakech Partnership for Global Climate Action Transport representing more than 150 organizations working on sustainable mobility and created in early 2015 to strengthen the voice of the sustainable transport community in the United Nations Framework Convention on Climate Change (UNFCCC) process. The PPMC will engage in global processes on sustainable development and climate change to ensure that implementation arrangements are conducive for action by the transport sector.

The EcoMobility Alliance has also brought forward the mobility concerns of Alliance Cities at various international events such as the International Transport Forum, Metropolitan Solutions, the UN Climate Talks in Bonn, Germany, COP22 and the United Nations Conference on Housing and Sustainable Urban Development (Habitat III).

The applications of these strategies are consistent with the following Sustainable Development Goals (SDGs) developed by the United Nations (UN).



EcoMobility Alliance in numbers 2017

22

EcoMobility Alliance Cities.

+30

More than 30 transport projects in Alliance Cities.

+30

Alliance partners.

77%

of Alliance cities report their GHG emissions.

+51 million

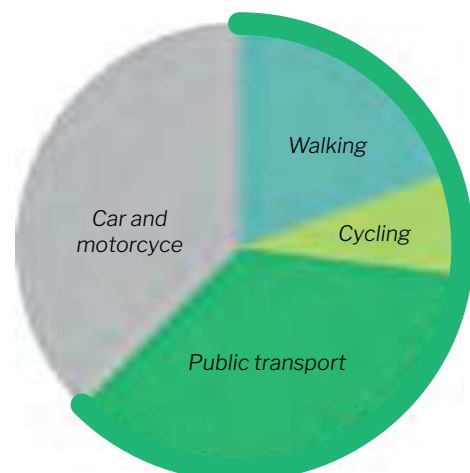
Population influenced by the Alliance.

Currently, the EcoMobility Alliance works with cities in Asia, Europe, Latin America and North America. Through technical workshops, cities and technical experts come together to develop solutions to mobility. Through the wide network of cities and partners, Alliance cities have greater access to best practices and innovative options for ecomobility. With the Avoid, Shift and Improve (ASI) framework tool, the EcoMobility Alliance enhances new mobility options.



Photo: Itzel Obregón 2016

Alliance Cities combined modal share:



Further achievements can be measured in the Alliance cities through an increase in ecomobile modes of transport i.e. walking, cycling, public transport as well as innovative mobility, the reduction in greenhouse gas emissions due to ecomobility, the reduced dependence on fossil fuels and better air quality in cities.

ALLIANCE PARTNERS

In 2016-2017 the EcoMobility Alliance has successfully partnered with the following organizations. These partnerships have provided technical support either directly or through joint activities involving them.



8-80 Cities



Asian Development Bank



Centre for Green Mobility (CGM)



Cooperation for urban mobility in the developing world (CODATU)



Clean Air Asia, Manila



Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ),



European Institute for Sustainable Transport (EURIST)



European Cyclists Federation



FIA Foundation



Fundación Despacio



International Council on Clean Transportation | ICCT



Innovationszentrum für Mobilität und gesellschaftlichen Wandel (InnoZ) GmbH



Institute for Transportation and Development Policy (ITDP)



National Taiwan University



nextbike



SLoCaT, Partnership on Sustainable Low Carbon Transport



Sharing Opportunities for Low carbon Urban transportAtION (SOLUTIONS)



SMART, University of Michigan



Smart Freight Centre



The William and Flora Hewlett Foundation



Transformative Urban Mobility Initiative (TUMI)



Viva Cities



Walk 21



World Cycling Alliance (WCA)



WRI Ross Center for Sustainable Cities



World's Road Transport Organisation (IRU)



World Wide Fund for Nature (WWF)



Wuppertal Institute for Climate, Environment and Energy



Zaragoza Logistics Center (ZLC)

EcoMobility workshops run by Alliance Cities provide the opportunity for peer-to-peer exchanges. Workshops focus on key issues of common concern and facilitate sharing of expertise among Alliance Cities, Alliance Partners, and experts. Each workshop focuses on a theme agreed by the host cities and the other Alliance Cities.

EcoMobility Alliance cities in action

Kaohsiung, 2 October 2017

During the EcoMobility World Congress 2017, EcoMobility Alliance cities presented activities and achievements within the Alliance which carry out the vision of vibrant cities where citizens and organizations can access goods and services in an ecofriendly manner.



Unexplored aspects of transportation in urban resilience

Resilient Cities, Bonn, Germany, 4-6 May 2017

Built infrastructure - transportation, energy, water and wastewater, health care, and communications systems - are increasingly vulnerable to impacts of climate change worldwide. A session during Resilient Cities 2017 gathered several EcoMobility Alliance cities to discuss how resilience can be strengthened in relation to mobility and transport systems.



Mayors Commitment to EcoMobility in Cities

COP21, Paris, France, 5 December 2015

Visionary city leaders, including those from Alliance Cities, came together at the Cities & Regions Pavilion at COP21 to present the actions they have taken to advance EcoMobility in their cities. The Johannesburg Declaration was further endorsed by city leaders in Paris, and was discussed and mentioned in transport meetings elsewhere at COP21.



TUMI Practitioners' Conference "Strengthening Urban Mobility Governance"

Leipzig, Germany 31 May – 2 June 2017

Under the umbrella of this year's International Transport Forum (ITF) focused on "Governance and Transport", ICLEI's EcoMobility team hosted a workshop as part of the ITF program for urban transport practitioners, together with the German development ministry's (BMZ's) Transformative Urban Mobility Initiative (TUMI) and the City of Leipzig.



EcoMobility Days Quito 2016

Quito, Ecuador, 16-20 October 2016

The EcoMobility Days combined the main elements that the Alliance offers its members, supporting them in enhancing sustainable mobility, good practice exchanges, tools and methodology trainings and offering a space for high-level discussions on the future of urban mobility. In total, over 60 speakers from more than 25 countries exchanged practices, visions of the future of urban mobility and concrete tools during an intense 5-day program attended by over 250 participants.





International EcoMobility Forum 2015

City of Kaohsiung, 24-25 September 2015

The EcoMobility Forum set in motion a larger discussion in Kaohsiung on how cities view the future of urban mobility. Supported by the European Chambers of Commerce, the workshop drew on examples from India, Japan, Europe, and the Americas to demonstrate that future mobility in cities must be focused on ecomobility.



Non-Motorized Transport Workshop

Suwon, South Korea, 2 September 2013

In Suwon, Alliance Cities not only had their own workshop but took part in the broader EcoMobility Congress, held in Suwon at the same time. The events were part of the first EcoMobility World Festival. This workshop was conducted in partnership with the Asian Development Bank and the German Development Agency (GIZ). It brought together over 60 policy-makers and researchers, discussing various measures to implement non-motorized transport.



Creating Livable Cities through Public Spaces & Transport

Changwon, Republic of Korea, 18-23 November 2012

Participants at the first Alliance workshop held in Changwon discussed the importance of people-friendly urban spaces. The workshop concluded that urban spaces can be safe and attractive when they are designed for people rather than automobiles.

EcoMobility Dialogues Workshops 2015

Johannesburg, South Africa, 5-9 October 2015

The EcoMobility Dialogues adopted an innovative approach, discussing specific themes at length to address the topics in a holistic manner and with recognition of both global and local impacts. Alliance Cities and experts also met to consider transport in relation to climate change.



Walking, Cycling, Transit and Health

Sydney, Australia, 21-23 October 2014

This workshop in Sydney took place right after the Walk21Conference, setting in motion the idea of extending the mobility performance measurement scheme to cities in the Alliance. Sydney also took up the challenge of being the first city to conduct the SHIFT assessment for its mobility performance.



Creating a Bicycle-Friendly City

Munster, Germany, 22-24 April 2013

The second EcoMobility Alliance workshop focused on creating a bicycle-friendly city. Participants explored traffic safety solutions with a special emphasis on bicycle safety, and identified requirements to increase cycling. The topic of using helmets as a safety measure prompted animated debate.



The EcoMobility Congress series enables international actors, united by a shared interest in sustainable transportation, to share best practices and spark synergies in a setting that promotes creative collaboration, local initiatives, and the EcoMobility agenda.

EcoMobility World Congress 2017

Kaohsiung, 2-4 October 2015

EcoMobility World Congress 2017 deliberates how sustainable mobility can be livable, shared and intelligent, mirroring what Kaohsiung is demonstrating through the Festival. City mayors from all over the world will share their experience and commitment to implementing ecomobility in their respective cities during a dedicated roundtable allowing high level discussions.

More information is available on the Festival website, including all available presentations from the various speakers.

More information: www.ecomobilityfestival.org



EcoMobility Dialogues 2015

Johannesburg, South Africa, 5-9 October 2015

The EcoMobility Dialogues explored solutions to reduce the dominance of private automobiles in cities and to build an urban transport system that meets the needs of residents while minimizing energy consumption, emissions, material use, and space requirements. The topics of the three dialogues were:

- Reshaping cities for EcoMobility: Strategies and tactics
- Achieving and enabling EcoMobility: New and shared forms of mobility
- Making the commuting decisions safe, sustainable and popular

More information: www.joburg.ecomobilityfestival.org/



The EcoMobility 2013 Congress

Suwon, Republic of Korea, 1-4 September 2013

The Congress highlighted the importance of EcoMobility from a range of perspectives, including local leadership, social inclusion, health, future generations, and practical applications. The Congress underscored EcoMobility as an active concept – something to be applied and developed and shared. The Congress also emphasized the integration, development, and promotion of active modes such as walking, cycling, wheeling, public transport, and shared transport systems.

More information: www.iclei.org/ecomobility2013 or [suwon.ecomobilityfestival.org](http://www.suwon.ecomobilityfestival.org)



The EcoMobility World Festival series was initiated to show that an ecomobile lifestyle can be promoted in cities all over the world. The Festival transforms a neighborhood or a business district in a city into a car-free area for a month. Implementing the festival demonstrates the possibilities of an innovative and forward-thinking urban transportation culture.

EcoMobility World Festival 2017 Kaohsiung

October 2017, City of Kaohsiung

As the host of the third EcoMobility World Festival, Kaohsiung is seeking to become a pioneer in ecomobility, leading by example and providing a platform through the Festival for sharing innovative and intelligent ecomobile strategies and solutions. During the EcoMobility World Festival 2017, the City of Kaohsiung will transform the streets of the historical Hamasen neighborhood into a dedicated space for ecomobile modes of transport such as walking, cycling, and various forms of public transport including shared and light electric vehicles. Kaohsiung will be the second city in Asia to showcase autonomous shuttle buses in a real urban environment and invite the public for test-rides.

Read more: "Going Green – Experiencing the Ecomobile Lifestyle" Bingyu Chiu and Konrad Otto-Zimmermann Jovis Berlin 2018, ISBN 978-3-86859-512-3

www.ecomobilityfestival.org



EcoMobility World Festival 2015 Johannesburg

October 2015, Johannesburg, South Africa

By organizing the 2015 Festival, the City of Johannesburg triggered a behavioral change from private car use towards EcoMobility and kick-started the process of decongesting Sandton, the main business district of South Africa. The city developed infrastructure to promote EcoMobility, publicized Johannesburg as a cycle-friendly city; showed that non-motorized and alternatively powered vehicles are valid means of mobility, increased the patronage of the Rea Vaya Bus Rapid Transport, Metrobus, and other forms of quality public transport, showed the benefits of reduced congestion and EcoMobility for productivity, quality of life, air quality, and emission standards, and promoted walking and cycling as part of a healthy and sustainable lifestyle.

Read more: "Change the Way you Move" Tobias Kuttler and Theresa Zimmermann Jovis Berlin 2016, ISBN 978-3-86859-424-9

Full report:



EcoMobility World Festival 2013 Suwon

September 2013, Suwon, Rep. of Korea

The EcoMobility World Festival 2013 was the world's first month-long presentation of an innovative and forward-thinking urban transportation culture. Instead of using private automobiles, residents in Suwon City used a combination of walking, cycling, and public transport, as well as various other ecomobile modes of transport for an entire month. The four-day EcoMobility 2013 Suwon Congress underscored EcoMobility as an active concept – something to be developed, applied, and shared. The Festival presented a model for an ecomobile neighborhood that can be adapted and replicated in cities worldwide. It illustrated the benefits of human-scaled transport systems and streets on the world stage, and its results will be reflected in Suwon's future urban policy making.

Read more: "Neighborhood in Motion" Konrad Otto-Zimmermann and Yeonhee Park (eds) Jovis Berlin 2015, ISBN 978-3-86859-294-8

Full report:



*Join us for the next
EcoMobility World Festival and Congress
in 2019!*



EcoMobility World Festival 2017 Kaohsiung



EcoMobility World Festival 2015 Johannesburg



EcoMobility World Festival 2013 Suwon

DECLARATIONS AND PRINCIPLES



Various declarations have summarized the recommendations and commitments being results from the EcoMobility World Festival and Congress series. They all help to understand how sustainable and low-carbon development goals shall be translated into realities of urban mobility and local decision making. Thus, they guide all cities towards the future of sustainable urban mobility. (this last sentence can also be left out).

The Declarations also serve as lead statements in the international discussions on mobility, climate change and sustainable urban development. They all call upon local decision makers as well as on other spheres of government, international organizations and financial institutions to support the urgently needed paradigm shift in urban mobility.

The Declarations as well as available translation can be found online at: <https://ecomobility.org/resources/declaration/>

The Kaohsiung Strategies for the Future of Urban Mobility, 2017

Our cities are experiencing unprecedented changes in transportation that are driven by social, economic and technical trends.

The Kaohsiung Strategies on the future of urban mobility shall inspire local governments to transforming their transportation systems and mobility patterns towards reduced automobile dependency and towards becoming more sustainable, low-carbon and people-centered. They call for a dedicated debate on these emerging trends, new technologies, subsidies and necessary bans, including their opportunities, challenges and threats.

The Kaohsiung Strategies, launched in Kaohsiung in October 2017, shall bring a strong message on urban mobility and climate to the UN Climate Conference COP 23 in Bonn in November 2017. They also present ICLEI's call to apply the 2030 Sustainable Development Goals and the New Urban Agenda into local mobility policies.



Shared Mobility Principles for Livable Cities, 2017

The Shared Passenger Mobility Protocol is a set of foundational principles to guide governments, the private sector, and other urban stakeholders toward the best outcomes for all. Safe, inclusive, sustainable and resilient cities depend on transportation that facilitates the efficient and pollution-free flow of people and goods, enabling a dynamic economy while also providing affordable, healthy, and integrated mobility for all people. These Principles have been developed by a group of international experts and organizations, were launched at the Kaohsiung EcoMobility Congress and constitute the basis for the Kaohsiung Strategies.



The Johannesburg Declaration on EcoMobility in Cities, 2015

The Johannesburg Declaration on EcoMobility in Cities combines statements on the future direction of urban mobility with commitments to local action, especially to reduce carbon emissions from urban mobility. The Johannesburg Declaration was brought to the UN Climate Conferences COP21 in Paris, 2015 by the mayor of Johannesburg, Parks Tau.



EcoMobility Impulse, 2013

The Suwon 2013 EcoMobility Impulse provides guiding thoughts, principles, examples, and starting points for concrete improvements in urban planning and sustainable urban mobility. Development.



EcoMobility Shift Assess, Audit and Label

The EcoMobility SHIFT scheme is a total quality management tool created by academia, non-governmental organizations and cities for use and implementation by and in cities. The tool enables cities to measure the performance of urban mobility, to create a baseline and to identify areas for further development, ultimately helping cities to change their urban transport development trajectory and mobility plans.

By using EcoMobility SHIFT and acting upon the resulting assessments, cities will see improvements not only in the areas of transportation and mobility, but also in related areas such as health, economy and the environment, leading to an overall improvement in citizens' quality of life.

The SHIFT scheme uses two procedures: a procedure to assess a city's performance and an audit procedure verify performance. Using the results of both components, a city can establish both short- and long-term improvement paths.

Indicators of the SHIFT Scheme

The SHIFT scheme relies on 20 indicators developed after consultation with various experts and stakeholders in urban transport. The 20 indicators are further classified into 3 criteria, namely Enablers, Transport systems and services, and Results and impacts.

Enablers

- E1: Understanding User Needs
- E2: Public Participation
- E3: Vision, Strategy and Leadership
- E4: Finance for EcoMobility
- E5: Personnel and Resources
- E6: Monitoring, Evaluation and Review

Transport Systems and services

- TSS1: Planning
- TSS2: Low Speed / Car Free Zones
- TSS3: Information Provision & Systems
- TSS4: Mobility Management
- TSS5: Parking
- TSS6: Walking
- TSS7: Cycling
- TSS8: Public Transport Coverage & Speed
- TSS9: Usability of Public Transport
- TSS10: Low Emission Vehicles

Results and impacts

- RI.1 Modal Split
- RI.2 Safety
- RI.3 Greenhouse Gases (GHG)
- RI.4 Air Quality

Benefits for the cities

The SHIFT-scheme provides local authorities with an effective tool to measure, assess and improve urban mobility. SHIFT has been designed mainly to help improve EcoMobility in cities irrespective of the current transport performance.

The assessment stage of SHIFT enables local authorities to understand how best to develop an effective path towards EcoMobility. A city undergoing SHIFT will:

- Become more efficient and more effective, with improved priorities;
- Identify areas for further improvement and thus strengthen the transport plans;
- Analyse and score the performance and the situation in the city;
- Receive feedback on the efforts made by the city leaders to improve transport in the city;
- Become a source of inspiration for other cities.

Performance measurement for your city

The EcoMobility team is available to help cities measure urban transport performance, monitor progress and benchmark outcomes.

<http://ecomobility.org/ecomobility-shift/>



Case Studies 2012–2017

Advanced and sustainable transportation policies can be found around the globe. Several cities have formulated ambitious targets, some have developed outstanding examples, and some have tangible results to present. To record these achievements, the EcoMobility Alliance has compiled the following.

All case studies are available online at <https://ecomobility.org/resources/case-studies/>

- Ahmedabad, India: India's first full Bus Rapid Transit (BRT) System, 2010.
- Bologna, Italy: Reducing car traffic to protect city heritage, 2010.
- Bonn, Germany: Enabling companies to address mobility management, 2013.
- Boulder, Colorado, USA: An example of an integrated transportation system, 2013.
- Bremen, Germany: A role model for car-sharing is targeting 20,000 users by 2020, 2013.
- Bremen, Germany: Rapidly growing intermodal transportation, 2010.
- Changwon, Republic of Korea: The Nearby Useful Bike, Interesting Joyful Attraction (NUBIJA) Project, 2013.
- Curitiba, Brazil: A model of transit oriented planning, 2011.
- Freiburg, Germany: Successfully reducing automobile traffic, 2012.
- Gävle, Sweden: Smart choices require easy access – the challenge of making mobility management a part of everyday life, 2011.
- Hangzhou, China: The world's largest bike sharing program, 2011.
- La Rochelle, France: A leader in e-mobility policy.
- Lund, Sweden: An ambitious city of ideas and innovation, 2011.
- Mexico City, Mexico: Mexico City's Green Plan: EcoMobility in motion, 2013.
- Milan, Italy: The Ecopass pollution charge and Area congestion charge - comparing experiences with cordon pricing over time, 2013.
- Perugia, Italy: Transit alternatives improving sustainable, accessibility in a historic, hilly town, 2013
- Portland, Oregon, USA: Portland-Milwaukie Light Rail Transit Project: Managing Growth Sustainably through Transit Alternatives, 2013.
- Portland, USA: A leader in sustainable development in the United States, 2013.
- San Francisco, California, USA: Using Technology for Smarter Parking Management, 2013.
- Seoul, Republic of Korea: An efficient bus rapid transit integrated with the subway system, 2012.
- Stockholm, Sweden: Congestion tax and public transit decrease traffic volume, 2012.
- Vancouver, Canada: Increasing intermodal EcoMobile transport methods, 2011.
- West Chester, Pennsylvania, USA: On Track Towards EcoMobility in West Chester, 2013.

Coming up early 2018:

- Almada, Portugal , 2017
- Belo Horizonte, Brazil, 2017
- Buenos Aires, Argentina, 2017
- Burgas, Bulgaria, 2017
- Cochin, India, 2017
- Kaohsiung, 2017
- Leipzig, Germany, 2017
- Medellin, Colombia, 2017
- Quito, Ecuador, 2017
- Rosario, Argentina, 2017
- San Miguel de Allende, Mexico, 2017
- Shimla, India, 2017
- Sydney, Australia, 2017



Technical documents

Role of Dedicated Walkways and Cycleways

While economic development is important for cities, it must be balanced with considerations of social and environmental sustainability. In the past, increased economic productivity has been coupled with a prioritization of motorized traffic. However, research suggests that cities need to shift their focus from investing in facilities for motorized modes – i.e. personal cars and motorbikes that cater for the needs of only a small part of the population – to modes that cater for the majority of the population, i.e. public transport, walking and cycling.

Full publication available at:

<http://ecomobility.org/download/role-of-dedicated-walkways-and-cycleways/>

Technical papers

To support cities around the world with technical expertise on particular topics of mobility, experts contributed technical papers on today's key urban mobility topics. Some of the papers include:

- A call to action on green freight in cities
- Ecomobility in the context of rural-urban connectivity
- Promoting sustainable mobility – key theoretical and practical issues
- Soot-free urban bus fleets
- Sustainable development synergies and co-benefits of low-carbon transport measures
- Transferring sustainable transport and EcoMobility solutions
- Transport and climate change

Full documents:



All technical papers can be downloaded from: www.ecomobilityfestival.org/technical-papers/



ALLIANCE CITY PROFILES

Through its EcoMobility agenda expertise and the network of Alliance cities, ICLEI collaborates with cities in Asia, Europe, Latin America and North America. on sustainable urban mobility.

Through capacity building, knowledge building, monitoring and reporting, Alliance cities get greater access to good practices and innovative options that reinforce local governments' commitments to transforming their transportation systems and mobility patterns, aiming to reduce automobile dependency and become more sustainable, low-carbon and people-centered.

EcoMobilityAlliance cities

October

2017



Summary

The City of Almada is one of 18 municipalities within the Lisbon Metropolitan Area with services as a major aspect of the local economy. Transport accounts for 32% of Almada's GHG emissions. In an attempt to reduce this, the city supports a multimodal transport system which aims at supporting energy efficient, low carbon mobility, contributing to increase the quality of life in Almada and foster a vibrant local economy.

Almada has committed to the principles of sustainable development in many ways and has displayed leadership and high achievement in the field of sustainable mobility since the last couple of decades. Numerous successful actions aiming at the improvement of urban mobility have been carried out, to meet the needs of its inhabitants and visitors. Also, the improvement of the eco-efficiency of the transport sector has been a priority, to reduce its energy and environmental impacts.

Almada is a leader in sustainable mobility. Since its first Local Strategy for Sustainable Mobility (2001), the city has improved multi-modal opportunities, introducing a tram system in 2008, accompanied by an urban renewal of the city center, which improved accessibility and positively influenced citizens' mobility behavior. These efforts have been recognized in the 2010 European Mobility Week Award.

Targets & Vision

The City Council of Almada's success is a reflection of its strategic planning which takes an integrated, multi-thematic approach towards a more sustainable city. The City Council is currently implementing its second Strategic Plan for Urban Mobility in Almada (PUMA), (2015 to 2025).

The PUMA targets the following five areas for implementation: Increase efficiency within the mobility system:

- Increase public transportation services;
- Prioritize 'soft' travel modes such as walking and bicycling;
- Improve transportation circulation and regulate parking;
- Improve urban logistics

In 2014 Almada completed their first Sustainable Urban Logistics Plan (SULP).



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Achieved results



Walking:

- Creation of new pedestrian and mixed areas
- 20 km/h speed limit within the city center
- Introduction of traffic calming measures and safe routes for students that walk or cycle to school.



Cycling:

- Addition of 31 km of cycling routes and bike parking improvements at 70 locations
- Developed 4 Bicycle Parks (Almada's Bici-Parks) in underground car parks
- Promoted shopping delivery by bicycle (online platform)



Public Transport:

- Enhanced 4 Multimodal Interfaces
- PT network consisting of 3 tram lines, more than 60 bus lines, 3 boat stations, 1 train station (suburban and national trains)
- Studying the feasibility for a BRT system

**ALMADA,
PORTUGAL**

CITY STATISTICS

2011 census



Population
174,030



Area
72 sq. km

MODAL SPLIT

As of 2017



Walking 17%



Cycling 1%



Public Transport
36%



Personal Car 46%

TARGETS

Reducing GHG in Almada by 80% by 2050

More on Almada:



ecomobility.org

**BELO
HORIZONTE,
BRAZIL**
CITY
STATISTICS

2015 census



Population
2,502,557



Area
331 sq. km

MODAL SPLIT

As of 2012



Walking 34.8 %



Cycling 0.4 %



Motorcycle 4%



Public Transport
22.6 %



Taxi 1.2%



Personal Car
31.4%

TARGETS

Increase the modal share of public transit to 32% and cycling to 6% by 2030

Reduce GHG emissions 20% by 2030 (from 2007 levels)

More on Belo:



Summary

Belo Horizonte, the capital of the largest state in the Southeastern part of Brazil, has the third largest urban area of the country with relatively high mobility demands. In addition, the city is increasingly designed using people-oriented urban development policies that prioritize the people over private vehicles and is a model of Latin American ecomobile city.

The City's main challenges are: the reduction of greenhouse gas emissions from urban transportation; the increase of non-motorized and public transportation and; the reduction in the number of traffic accidents. Economic gains in Belo Horizonte have resulted in an increase in private automobiles and motorcycles, and a decrease in the use of public transportation.

To reverse these trends, the city has constructed new public transportation facilities such as the new BRT system developed in 2014 and added bicycle paths and pedestrian lanes to improve non-motorized mobility. From developing bus rapid transit system to improving walkability and cycling conditions, Belo Horizonte strives to provide ecomobility.

Targets & Vision

Transport is featured in the 2030 Strategic Plan (Plano Estratégico de Belo Horizonte 2030) and the 2017 Belo Horizonte's Urban Mobility Plan (PlanMob-BH). The PlanMob-BH includes programs related to sustainable urban mobility in its 8 priority areas: active mobility, collective mobility, individual mobility, calm circulation, urban logistics, sustainable city, universal accessibility and management, supervision and operation. Main goals of the PlanMob-BH are:

- By 2020, operate a network of public transport that includes metro lines and BRT, which will run in existing road rights of way with full deployment of the conventional bus system to serve a bus feeder routes.
- Increase modal share of public transport from 43,3% in 2012 to 47% in relation to the total motorized transport by 2030.
- Increase cycling modal share from 0.4% in 2016 to 6% by 2030;
- Implement low-speed zones (30 km/h), exclusive bus lanes, improvement of sidewalks, and new bicycle lanes;
- Promote road safety



Achieved results



Walking:

- Added 8,000 km of walkways
- Improved comfort and safety on 7.5 km of sidewalks through the Mobicentro project reducing 18% in traffic accidents in the project area



Cycling:

- Created an additional 89.9 km of bike lanes
- Added a bike sharing system called, Bike BH (2014), with 34 stations in the city's downtown and 6 stations in the Pampulha region, totaling 400 bikes
- Creation of Belo Horizonte's Bike Promotion Program: Pedala BH (2005)



Public Transport

- Built up a bus and BRT system of 2,100 km with a total fleet of 3,066 vehicles
- The city added 28.1 km of Metro/subway
- Improved bus system serves 155,000 passengers per hour

Summary

Bogota is the largest city in Colombia as well as the economic and political capital of the country. Since 2006 when motorization reached record levels, the city has transformed its urban transport through infrastructure changes and new policies to support sustainable mobility in Bogota.

The Urban Development Institute (IDU) and the Secretary of Mobility (SDM) head mobility projects, and infrastructure development. In recent years the city has developed various transport projects to promote non-motorized transport and improve public transport.

As a result of these efforts, the City has become known worldwide for its notable public transport system of buses and BRT, which meets the transport needs of most citizens. This network was developed using integrated urban projects and transit-oriented development (TOD) giving priority to humans over private vehicles. This has resulted in an urban structure that supports an intermodal transport system, public space, and related urban infrastructure.

Targets & Vision

The vision of Bogota is to develop sustainable and integrated mobility. IDU's mission is to develop integrated urban projects that improve mobility conditions in Bogotá, considering equity, integration, security, and accessibility, through the construction and conservation of sustainable mobility infrastructure projects and public space.

Bogota's planning instruments for mobility are outlined in The Mobility Master Plan (PMM) that includes the following main objectives:

- Improving accessibility and connectivity;
- Contributing to smart growth considering interaction between land uses and modes of transport improving accessibility and;
- Prioritizing the most sustainable transport subsystems;
- Articulating, in an efficient and competitive way, transport system with appropriate technologies;
- Ensuring road safety for all;
- Implementing passenger transport to optimize traffic flows and favor low carbon mobility;
- Reducing the levels of environmental pollution from transport and incorporating environmental criteria for an eco-efficient mobility system;



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**BOGOTÁ,
COLOMBIA**

CITY STATISTICS

2015 census



Population
7,900,000



Area
478 sq. km

MODAL SPLIT

2012 survey



Walking 46%



Cycling 4%



Public Transport
36%



Personal Car 13%

TARGETS

Reduce 20% of carbon emissions by 2020

Reach 25% of renewable energy by 2050

Key documents can be found in the link below:



ecomobility.org

Achieved results



Walking:

- Improved 379,420 m2 of pedestrian corridors through the Safe Environmental Pedestrian Networks (RAPS)



Cycling:

- Constructed 376 km of bicycle paths and segregated lanes
- Planned bike sharing to be introduced in 2018



Public Transport:

- Added 2200 Buses to the fleet
- Added 388 km Bus Rapid Transit to the public transport system
- Constructed 30 km Metro/ subway
- 15% of green bus fleet (990 green and 230 hybrid buses)

BOULDER, USA

CITY STATISTICS

2014 census



Population

105,112



Area

66.9 sq. km

MODAL SPLIT

2012 survey



Walking 20%



Cycling 19%



Public Transport 5%



Shared mobility 20%



Personal Car 36%

TARGETS

Reduction of 16% in GHG emissions 2035 (2013 baseline) (Transport Master Plan 2014)

Improve air quality and reduce GHG emissions by 80% by 2050

Reduce the number of single occupant vehicle mode share to 20%

More on Boulder:



Summary

The City of Boulder has been a long-standing leader in offering travel choices and has the vision of further developing a multimodal sustainable transportation system. The city focuses their efforts on better roads, new bicycle facilities, improved trails, cleaner vehicles and better transit services.

Significant challenges exist in the Transportation Master Plan goals for regional travel, particularly to increase mode share for transit and biking for nonresident employees who commute to Boulder for work, as well as to achieve Boulder's Toward Vision Zero goals to improve safety for people using all modes of travel and reduce serious injury and fatal crashes.

Lessons learned through implementation of Boulder's TMP over more than 27 years include the incentive of high frequency, direct transit service and the power of access management including SUMP (shared, unbundled, managed and paid) parking and travel demand management to accomplish mode shift. Most recent lessons learned through city's 'Living Lab' program to pilot innovative street designs address public outreach, communications, data collection, analysis and reporting, and project installation.

Targets & Vision

Boulder's Transportation Master Plan (TMP) is integrated with the city's comprehensive plan, Climate Commitment, and overall Sustainability Framework (2014), with focus areas consisting of Complete Streets, Regional Travel, Transportation Demand Management, Funding, and Integrated Sustainability Initiatives. Boulder's TMP includes an action plan which highlights key initiatives (immediate, near term, long term) in support of their community's multimodal transportation vision.

TMP objectives for 2035 include:

- Reduce vehicle miles of travel (VMT) in the Boulder Valley by 20%
- Reduce single occupant vehicle travel to 20% of all trips for residents and to 60% of work trips for nonresidents
- Achieve a 16% reduction in greenhouse gas emissions and continued reduction in mobile source emissions of other air pollutants;
- Expand fiscally viable transportation options for all.
- Move "Toward Vision Zero" for fatal and serious injury crashes: continuous
- The City of Boulder's Climate Commitment, as well as the TMP, includes objectives to improve air quality and reduce GHG emissions by 80% by 2050:



Achieved results



Walking:

- Boulder's Transportation Master Plan calls for pedestrians and walking to be the primary mode of travel within the community. Recently, the city launched the "Boulder Walks" program to further promote walking
- Boulder's citizens walk three times more than the national average.



Cycling:

- Developed an extensive local bikeway system (163 centerline miles of on-street bike lanes and 60 miles of off-street/ multi-use paths)
- Designated as a "Platinum level" community by the League of American Bicyclists organization.
- The city partners with Boulder B-cycle to provide bike sharing within Boulder



Public Transport:

- Developed Local and regional partnerships to operate Boulder's uniquely branded Community Transit Network.
- Boulder's local transit routes have grown 300 % since 1990.

Summary

Buenos Aires is the capital and the largest city of Argentina. It is also the second-largest metropolitan area in South America. Every month, between 195 and 200 million passengers use the various modes of urban and suburban transport in the city. The transport sector currently accounts for 35% of the total CO2 emissions in Buenos Aires and 90% of these are from private motorized vehicles.

Main challenges the city faces include traffic congestion, the lack of pedestrian dedicated areas, and an inefficient public transport infrastructure. These issues led to the Sustainable Mobility Plan (2009) that focused on creating a safer city with a reliable, connected and accessible public transport system. Among the successes driven by the plan is the extension of the cycling network, creation of a public rental system and design of pedestrian improvements. The project "Legible City" addresses the accessibility issue by providing information through a clear and coherent way-finding system.

Buenos Aires has been designing urban development centered on mobility, sustainability and quality of life for its residents. Buenos Aires is now leading the way as a model city for ecomobility within Argentina and among city leaders around the world. Acknowledgement of their efforts has come from the International Transport Forum's Transport Achievement Award 2017 presented to the city for its new Metrobus corridor.

Targets & Vision

Through Buenos Aires' Sustainable Mobility Plan (2009), the city prioritizes public transportation and promotes active mobility, such as cycling and walking, so that everyone can enjoy commuting in the city. The main pillars of the mobility plan are:

- Public transport priority: Encourage the use of public transport which carries 40-50 people in the same space occupied by two cars carrying 3-4 people per car.
- Healthy mobility: Promote healthy mobility in bicycle paths and pedestrian infrastructure in the whole city of Buenos Aires.
- Traffic ordinance and road safety: Reduce and prevent road accidents through awareness and enforcement.
- Intelligent Traffic System (ITS: include new tools such as smart signaling, electronic ticketing, integrated timetables and fares, for the management of traffic that facilitate movement within the city of Buenos Aires.



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Achieved results



Walking:

- 100 blocks of low-speed local traffic of 10 km per hour
- Wrote a Street Design Manual for Buenos Aires
- Created a 100 city block Pedestrianisation and Improvement Scheme



Cycling:

- Added 192 km of bike paths and lanes
- Ecobici bike sharing system since 2010 with 200 stations, 2,500 bicycles, and more than 5 million trips.



Public Transport:

- The new bus system transports over 1.4 million people every day and decreases travel time by 50%. As a result, car traffic has dropped in the city center by 85% and annual CO2 emissions are down by 5.612 tons.
- There are 8 corridors that make up the BRT system: Metrobus Juan B. Justo, 9 de Julio, Sur, Norte I, AU 25 de Mayo, San Martín, Norte II and Del Bajo.

Buenos Aires, Argentina

CITY STATISTICS

2010 census



Population
2,891,000



Area
203 sq. km

MODAL SPLIT

2010 census



Walking 24.9%



Cycling 1.2%



Public Transport
48.2%



Motorcycle 0.6%



Personal Car
19.5%



Shared Mobility
5.4%

TARGETS

Reduce 30% of GHG emissions by 2030 according to the 2015 baseline scenario (BAU)

More on Buenos Aires:



ecomobility.org

BURGAS, BULGARIA

CITY STATISTICS

2016 census



Population

202 766



Area

253.6 sq. km

MODAL SPLIT

As of 2016



Walking 2%



Cycling 3%



Public Transport 37%



Personal Car 58%

TARGETS

Reduce 25% of CO² emissions by 2020

Achieve 26% of renewable energy sources share in the energy mix

More on Burgas:



Summary

Burgas is the second-largest city on the Bulgarian Black Sea Coast, the fourth-largest in Bulgaria. The city has shown commitment to improving its urban mobility by implementing mobility projects that favor people and environment.

Although there is a high use of private cars, (58%), several projects have been implemented that will transform Burgas into a more sustainable city with an efficient and sustainable transport system. Some of the ongoing projects include: increasing the accessibility to urban areas, renovating and increasing the appeal of public transportation, introducing integrated intelligent control systems, creating a sustainable transport system which favors clean non-motorized transport modes.

In addition, Burgas offers long term policy in ecomobility, social and health impacts, air quality, noise levels and social safety and security. The city is one of the first cities to successfully conduct the EcoMobility SHIFT assessment and audit scheme to measure its urban mobility performance in Europe.

Targets & Vision

Key policies towards sustainable transport in a long-term perspective are present in the 'Strategy for Sustainable Energy Development of the Municipality (2011 – 2020)' and Action Plan (2011 – 2013). Additionally, Burgas launched the ambitious project titled 'Integrated Urban Transport (2010)' to foster the use of low environmental impact transport. More recently, the 'Sustainable Urban Mobility Plan (SUMP) (2014-2020)' identifies the main areas Burgas wants to improve:

- Improve energy efficiency in public transport and diversification of modes of transport
- Create a lower emissions transport system by increasing the use of bio fuels and flexible high-speed public transport;
- Improve accessibility
- Prioritize alternative modes of transport in order to reduce the negative impacts on the environment (pollution, noise...)
- Increase road safety for non-motorists and traffic safety, by adding calming strategies
- Prepare an efficient freight vehicles schedule.



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Achieved results



Walking:

- Built two pedestrian overpasses over busy crossroads for safe pedestrian passage
- Built a new underground street that expands pedestrian zones in the city center
- Improved access to public transport with 73% of city areas located within 400 meters of a bus stop or rail station



Cycling:

- Added 50 km of cycling lanes
- Provided a public bike sharing system "Velo Burgas" with 120 bicycles, 9 bike stations, and 3 information centers
- Supported the new automatic self-service municipal bike share system. The system is automatized, equipped with an ICT and accessible at all times, seven days a week and serves more than 20 000 people



Public Transport

- Introduced an integrated intelligent control system of public transport with integrated ticketing system and real time information
- Developed 20 km of bus lanes (more than 60% of segregated ones)
- Created a 15 km network of bus rapid transit lines (BRT) and a traffic light system for bus priority
- Recently created a BRT central station, two bus terminals, public transport stops and reconstructed the main suburban transport terminal
- Renovated the bus fleet (67 new buses and 22 trolleybuses)

Summary

The historic City of Changwon is located in the Southeast area of the Korean Peninsula, with its current administration resulting from the merging of 3 cities in 2010. Trends such as a high investment in roads, rapid growth in car ownership, and high automobile-dependent mobility prompted a movement in 2002 towards alternative transport solutions.

The city has become an environmental model and leading international city. Its public transport (consisting of buses, rail and ferries) and promotion of sustainable transport are reflected in its projects and awards. The Green Capital City Changwon Project (2006), developed as a walkable, bicycle-friendly city that promotes electric mobility.

In 2008, the city introduced Korea's largest bike sharing system and created more than 600 km of bicycle infrastructure. Changwon has supported other cities to achieve ecomobility by chairing the EcoMobility Alliance (2012-2015). In 2014 the city won "best sustainable transport" awarded by the Korean Ministry of Land, Infrastructure, and Transport and was nominated 5 times for best "public transport evaluation".

Recently the City increased the number of electric vehicles through a comprehensive policy framework and incentives. Policy reforms such as a reduced parking fee (almost 50%) for electric vehicles gives preferential treatment to electric vehicle owners.

Targets & Vision

Changwon identifies climate change as the most important problem facing the planet and views adaptation and mitigation as top priorities – for the welfare of its population and for the survival of its local industries and economy. To mitigate climate change Changwon places importance on urban mobility. With an aim to become Korea's environment capital, Changwon is scaling up low-carbon transport, renewable energy, and energy efficiency.

Highlights of the Green Capital City Changwon Project (2006) include:

- The Bicycle Capital City project 2007 with the aim of increasing cycling as a mode of transport by 20%.
- Reach 10,000 electric vehicles by 2020 initially by converting the municipal fleets.

The Changwon Urban Transport Masterplan 2030 sets the following strategies to reduce car-dependent mobility in the city:

- Strengthening inter-district connectivity
- Transit oriented development including a network of railways and buses.
- Promotion of non-motorized transport by improving user safety and accessibility
- Improve traffic management system through modernization of the traffic management system



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Achieved results



Walking:

- Creation of the *Imhang-line Greenway 2010*, which turned an unused railway into 5.5 km of green pedestrian space



Cycling:

- Introduced public bicycle system NUBIJA in 2008 currently with 25,000 bikes
- Improved cycling infrastructure and promoted its use through the Bicycle Capital project (2007)
- Developed 603 km of bike lanes along 209 routes



Public Transport:

- Currently has a bus network of 80 vehicles with express and local route

**CHANGWON,
SOUTH
KOREA**

CITY STATISTICS

2015 census



Population
1,100,000



Area
744.26 sq. km

MODAL SPLIT

2012 City of
Changwon



Walking 11.9%



Cycling 10%



Public Transport
31.6%



Taxi 9.9%



Personal Car
41.2%

TARGETS

Increase modal share of public transport from 31.6% to 33.9% and that from cycling from 4.1 to 15% by 2030

More on
Changwon:



ecomobility.org

CURITIBA, BRAZIL

CITY STATISTICS

2010 census



Population
1,751,907



Area

430.9 sq. km

MODAL SPLIT

as of 2016



Walking 20%



Cycling 5%



Motorcycle 5%



Public Transport
45%



Personal Car 22%

TARGETS

Contribute to the national target of reducing projected emissions between 36.1% and 38.9% by 2020.

More on Curitiba:



Summary

Curitiba is one of the largest cities in Brazil and is a model for cities around the world for its urban development strategy. For over 40 years, Curitiba has successfully integrated transportation and land-use planning into the overall city plan.

Curitiba is regarded as an excellent example of Transit Oriented Developments (TODs) where residential, business and recreational areas are built in high-density areas close to public transport stations. TOD proposes land use mix to reduce the travel distances. Easy access to public transportation is prioritized when people choose housing and businesses locate in commercial buildings.

The public transportation system in Curitiba is exceptional in its affordability, enclosed prepay stations and the integration of transfer terminals. With a pedestrian friendly community, an efficient low-emissions Bus Rapid Transit (BRT) system and lower car parking availability, Curitiba has successfully reduced single vehicle travel of its residents.

Targets & Vision

Curitiba has the vision of being a worldwide model in innovative solutions and excellence in urban mobility management. Today, public transportation is the priority in Curitiba's long-term structural plan for urban development. Curitiba's long term plan promotes urban density along existing bus routes.

Air quality is one of the major quality of life concerns for Curitiba and its citizens. Environmental preservation, safety of users, and a good condition bus fleet are important.

The objectives of the urban mobility plan include:

- Coordinating land use and urban mobility management;
- Reducing the environmental and socioeconomic costs of urban mobility;
- Ensuring that urban modes of transport are complementary and combined;
- Balancing the provision of services;
- Ensuring equity in relation to the use of public roads and public spaces by citizens;
- Maximizing the movement of goods and loading and unloading operations;
- Seeking to make the right to urban accessibility universal.



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Achieved results



Walking:

- Expanded pedestrian areas and deployed traffic calming measures (Via Calma de Curitiba with an extension of 6.3 km with 30 km/h speed limit)
- Revitalized 31 km of streets to improve pedestrian mobility
- Created "parklet" areas for pedestrian public space from former roadside parking.



Cycling:

- Built 300 km of cycling lanes
- Introduced bike racks (28 sets) on streets and 20 parking stations



Public Transport:

- Curitiba's BRT model has been replicated in more than 150 cities worldwide with 74 km, 7 corridors, fare integration and 179 buses serving 566,500 passengers per day
- Added 250 bus lines
- Promoting 100 % electric buses since 2014.
- Accessibility ensured within 93.91% % of the bus fleet.
- B100 Biodiesel Project (2009) is a 6 freight corridor run by biodiesel vehicles

Summary

Freiburg, Germany, is known for its advanced environmental practices, including transport. The city's long history promoting non-motorized transport has resulted in a large number of ecomobile commuting routes. Investments in systems kept them modernized. Today, Freiburg stands as an example of sustainable mobility. Sustainable thinking is visible in its design and its urban transport and mobility policy is recognized worldwide.

In the last years the share of trips made by bicycle improved strongly from 27% in 1999 to 34% in 2016 and the walking share from 23% in 1999 to 29% in 2016. Concerning infrastructure, some successful projects were made to promote ecomobility including the extension of bicycle network, especially the set up of two high-priority and high-comfort bicycle routes and the current extension of pedestrian zone.

Freiburg's public transport approach is to keep prices low, increase the services, extend the use and become one of the most competitive systems in Germany. The past 10 years show a 100 % increase in public transportation use. Freiburg's success in public transport is due to priority given to ecomobility over single occupant vehicles resulting in the lowest automobile density for any city in Germany (423 vehicles per 1,000 persons).

Targets & Vision

Since December 2006, transport is featured in the Transport development plan (VEP) 2020 and is in coordination with Land Use Plan 2020. The VEP 2020 sets the successful promotion of public transport and cycling, including the construction of new urban railroads and the further development of the bicycle traffic network. The objectives and most important implementation steps of the VEP are:

- Reduction of (motorized) traffic through integrated urban and traffic planning
- Relocation of the car transport to the means of transport of the environmental consortium
- Compatible handling of non-relocatable car transport including parking management system, car-sharing network and controlled development of the road network.

Finally, Freiburg expects to increase sustainable mobility by promoting public transport and low-carbon facilities, encouraging bike use, enhancing traffic demand management and developing intelligent transportation systems.



**FRIEBURG,
GERMANY**

CITY STATISTICS

2015 census



Population
222,203



Area
153.1 sq. km

MODAL SPLIT

2016 survey



Walking 29%



Cycling 34%



Public Transport
16%



Personal Car 21%

Achieved results



Walking:

- Designated large areas of the city pedestrian zones and appropriately redesigned including 1 km within the historic city center.
- Implemented speed limits of 30 km/h or lower in 90% of residential areas.



Cycling:

- Developed 420 km of cycle lanes with parking, way-finding and cycling map
- Created 9,000 bike parking spaces in the city center and at "Bike & Ride" locations at public transport stops.



Public Transport:

- Around 70% of all residents live near a public transport stop (500 meters of their home).
- Transport system currently has 135 km of buses, 35km of tram and 250km of suburban rail.
- Recent extension of the tramway network in 2013 and 2015.

TARGETS

50% less CO2 by 2030, carbon-neutral by 2050

More on Freiburg:



ecomobility.org

CITY OF KAOHSIUNG

CITY STATISTICS 2014 census



Population
2,779,000



Area
2,946 sq. km

MODAL SPLIT as of 2017



Walking 4.5%



Cycling 5.4%



Motorcycle 61.3%



Public Transport
7%



Personal Car
20.5%

TARGETS

Reduce GHG emissions by 50% in 2030 through strategies including the promotion of low carbon transportation

Reach 1,000 km of bike lanes by 2018

More on Kaohsiung:



Summary

The City of Kaohsiung is an international metropolis. It is an industrial, commercial city and port situated on the south coast with a population of about 2.77 million people. Kaohsiung County merged with the City of Kaohsiung in 2010, leading to rapid urban development and population growth increasing the demand for transport and the need for a change in modal share towards more sustainable transportation. As a result, the City developed a comprehensive public transport system within the city consisting of Bus Rapid Transit (BRT), Light Rail Transit (LRT), Metro Rail Transit (MRT), shuttle buses and DRT (Demand Responsive Transit).

Kaohsiung has improved pedestrian and cycling infrastructure including it's a public bike sharing system. To provide a seamless public transport service, the public transportation system provides Metro Rail, Light Rail, and Bus Rapid.

During the last decade the City has made concerted efforts to move away from fossil-fuel-powered vehicles, introducing an electric bus fleet, solar power boats, solar power bus stations and eco-friendly transfer stations. Due to its effective policies and actions, Kaohsiung can serve as a model for other cities interested in adopting and implementing ecomobility principles. This leadership is indicated by the city being the current chair of the EcoMobility Alliance (2016-2018).

Targets & Vision

The City of Kaohsiung is committed to prioritizing ecomobility and providing systems and infrastructure that cover the metropolitan area. The city promotes and develops strategies for creating a low-carbon, sustainable, people-centered transportation environment. To ensure this, the City has set policies which promote sustainable transportation within the city through five major policy goals: integration, reliability, ecomobility, efficiency, and transportation networking. A number of the City's targets for 2018 include increasing green transport infrastructure coverage to 36 %, ensuring a fully-operational Light Rail Transit (LRT) and extending bicycle lanes to one thousand kilometers.

Forthcoming actions include:

- Establishing port-city unified transportation system;
- Providing two-fold barrier-free transportation;
- Promoting three major low-carbon transportation tools;
- Establishing four major smart corridors;
- Developing five major public transport systems;
- Reinforcing of seven tourist transport systems.



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Achieved results



Walking:

- Scooter ban policy to protect pedestrians' right-of-way and safety
- Green pavement for distinguished pedestrian walkways



Cycling:

- Developed 755 km of bike lanes
- Public-bike rental system with 160 stations and a fleet of 4500 bikes



Public Transport:

- System consists of 163 bus routes and route network optimization program, 27 electric buses, 22.1 km light rail and 42.5km metro system
- 1380 public transportation trips per capita

Summary

Kochi, also known as Cochin, is the largest and densest agglomeration in the Indian state of Kerala and is characterized by multiple islands and canals. The City is the center of all commercial activities in the region and is among the emerging 440 global cities, which will contribute 50 % of global GDP by 2025 according to The McKinsey Global Institute.

Kochi's transport network consists of buses, railways, and water based modes. Buses account for the largest amount of trips- more than 40% despite comprising of only of 2% of the total vehicles in the city. Construction of the new metro (Phase 1-June 2017) has pushed efforts to promote ecomobility and seamless connectivity for all.

Road congestion, a lack of an integrated public transport system and high road accident rates have characterized the challenging traffic conditions of Kochi City for years. Due to current inefficiencies in public transport such as a lack of travel information and limited system coverage, public transport share has declined at a rate of 5.6% per year since 2005.

Targets & Vision

Kochi has a vision of providing seamless transport through institutional & policy, physical, operational & technological integration. Kochi is also targeting "Smart Mobility through Zero Carbon Footprints" in 2015, which works towards the following targets:

- Promoting alternative modes of transport (walking and cycling);
- Ensuring better accessibility and safety to everyone;
- Boosting the economy and the development of the city through smart mobility and;
- Making Kochi's public transport completely pollution free by 2020 through electric mobility and non-motorized transport.

The City is creating the Comprehensive Mobility & Parking Master Plan to provide a transport vision plan for the next 25 years. Key points include: decrease road congestion, increase driver and pedestrian road safety, improve quality of life, economic development and parking management measures. Additionally, Kochi Metro Rail Limited (KMRL) has prepared the Non-Motorized Transport Master Plan, for safe, accessible and comfortable footpaths, improved conditions for cycling and bicycle parking facilities.

Finally, Kochi is creating the Kochi Metropolitan Transport Authority (KMTA) to design, plan and finance an integrated network with common guidelines and standards across all modes which are supported with strong policies.



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Achieved results



Walking:

- Developed an 800 m street revitalization project for pedestrians and non-motorized vehicle users



Cycling:

- Established a free of charge public bike sharing system as of June 2017



Public Transport:

- Constructed a 25.6 km metro rail system (18.4 km operational) with 22 elevated stations
- Implemented an efficient bus system with 1400 buses and 9 boats
- Developed world's 2nd largest water transport system with 78 km route and 38 piers
- Implemented an integrated ticketing system

**KOCHI,
INDIA**

CITY STATISTICS

2011 census



Population
2,119,724



Area
440 sq. km

MODAL SPLIT

UMTC, 2016



Walking 12%



Cycling 3%



Motorcycle & auto rickshaw 26%



Public Transport
49%



Personal Car 10%

TARGETS

Achieve a pollution free public transport system by 2020

More on Kochi:



ecomobility.org

LEIPZIG, GERMANY

CITY STATISTICS

2017 census



Population
585,000



Area
297.6 sq. km

MODAL SPLIT

as of 2015



Walking 25.4%



Cycling 17.3%



Public Transport
17.5%



Personal Car
30.5% (driver)
Personal Car 9.3%
(passenger)

TARGETS

Modal share
increase goal for
2025: 70 % for
non - motorized,
shared and public
transport and 30
% for motorized
private vehicles
(as driver and as
passenger)

Cycling modal
share increase
goal of 20 % by
2020

More on Leipzig:



Summary

Since the 1990's, Leipzig has developed a state-of-the-art transport system with a vision for sustainable mobility. Leipzig's sustainable transportation system, pedestrian-friendly city center, and well-planned urban development make it a model European compact city.

Leipzig is currently the fastest growing city in Germany with a challenge of integrating new comers' travel behaviors (about 40,000 per year) into a sustainable mode of travel. The new travel demands requirements to improve public transport infrastructure, introduce high commuter capacity vehicles and set high standards for handicapped accessibility. The city center has been now redesigned, giving priority to pedestrians and becoming a livelier place, accommodating people including families and the elderly, with large pedestrian areas, rest zones, and bicycle routes while adopting car access reduction strategies.

For Leipzig, the first priority is improving the quality of life of its citizens and plans to achieve this through the benefits of environmentally friendly modes of transport: such as safe bicycle infrastructure, pedestrianized streets, limited access for cars and parking management. The adoption of sustainable transit systems in Leipzig has underpinned improving air quality in the city, and as such higher levels of health within the population.

Targets & Vision

The city of Leipzig targets to consolidate and improve its current modal share by the promotion of walking, cycling and public transport, as well as car-sharing, shared mobility as well as mobility information services. The modal share in Leipzig is changing in the 21st century, shifting from motorized vehicles as cycling; walking, sharing and public transport becomes more important. In order to propel citizens to choose these sustainable and more eco-friendly options, the City of Leipzig has considered the development of progressive regulations and planning methods to achieve this goal.

Leipzig has the bold target of reaching a modal share goal for 2025: 70 % for walking, cycling and public transport and 30 % for motorized private vehicles (cars as driver or passenger). Some of the main actions to ensure this target are reached by 2020 described in the "Stadtentwicklungsplan Verkehr und öffentlicher Raum" from 2015 include:

- Improving shared mobility (26 mobility stations at public transport stops for car and bike sharing) and car sharing has more than 12,000 members in Leipzig.
- Improving public transport infrastructure (stops handicapped accessible, new trams) better-connecting rail and tram or bus, separating bikes from tram tracks.
- Enlarging pedestrianized area in the city center. The concept of car reduced downtown or limited access for cars in the city.



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Achieved results



Walking:

- 2500 Kilometers of walkways
- 93 % of residential streets are speed limit 30 km/h or less
- Pedestrianized streets in the city center grew over 40 % (2008 to 2013)



Cycling:

- 461 km of bike lanes and an additional 500 - 600 km of bike paths through green areas of the city
- 6,000 bicycle parking stands and 2 bicycle garages with 1,700 spaces
- Over the last 20 years increase of more than 510 % of trips by bike in the city (1994 to 2015).
- The bicycle rental is operated by the private company nextbike and is cooperating with the Leipziger Verkehrsbetriebe GmbH (public transport company of the City of Leipzig)



Public Transport:

- Achieved 0,63 public transportation trips per capita per day
- Developed a system of 157 buses, 245 trams/light rail, 7 S-Bahn lines and 10 regional train lines

Summary

The city of Medellín, the second largest city in Colombia, provides an array of transport options to citizens. Medellín has proven that urban mobility plays a very important role in creating social cohesion, and integrated mobility systems increase the access to goods and services in a city. The city was, in 1991 the early nineties a highly inequitable city with a deplorable transportation, the most violent city in the world and system and has managed today it managed to turn transform into a livable city through urban development interventions that change the way people move through the city.

Metro, tram, cable cars, BRT, buses, public bicycles and integrated services are part of the Multimodal Integrated Transport System to improve mobility, supported by physical and logistical measures and the restructuring of public transport to have an efficient, convenient, safe, affordable, inclusive and sustainable system, with operational and fare integration.

The improvement in the quantity and quality of public spaces and mobility options with innovative transport modes such as shared bicycles and a bus rapid transit system has help transform Medellín into a livable city. With the implementation of a cable car system and escalators, disconnected areas now have better access to jobs and services in the city. The city is currently encouraging entrepreneurship in urban mobility to make the existing transport system even more innovative.

Targets & Vision

Medellín aims to improve the quality of life of citizens by achieving better mobility by improving functionality of its integrated multimodal transport system. The master plan (2006–2020), entitled “Trust in the Future”, was created by the METRO agency in 2006 and includes several sub master plans for infrastructure, business, technologies, operations and system expansion. The sub master plans guide the mobility projects for the region, articulating the metropolitan and regional projections to mobility and life quality for the inhabitants. Recently, the PMSM (2014-2020) (Secure Mobility Plan) evaluated Medellín’s roads’ safety and designed five intervention areas to strengthen actions and measures to achieve a comprehensive intervention to benefit road’s users, vehicles and road infrastructure. The Integral Urban Project (PUI) is an instrument for planning and physical intervention in challenging areas characterized by a high degree of marginalization, segregation, poverty, and violence.

Finally, the Metropolitan Master Bicycle Plan (PMB2030), plans to achieve a total of 10% bicycle share of all trips in the region by 2030.



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Achieved results



Walking:

- The city currently has 4.100 km of walking lanes
- Creation of 1.6 million square meters of new park space with 25 parks and 11 urban promenades as part of the Urban Integral Project of the city.
- Implements car free Sundays and holidays (Ciclovía) to allow walking, running, cycling or practice sports with a total of 60 kilometers in different parts of the city
- Developed, through the Safer Roads cooperation, signalization in 35 educational institutions



Cycling:

- Created 45 km of bike lanes
- Launched the public bike system EnCicla with 385 bicycles
- 25 bike parking stations with capacity for more than 300 bikes



Public Transport:

- Created a comprehensive mass transportation system consisting of two Metro rail lines (34.5km), four Metrocable cable-car lines, two Metroplús elongated bus lines, a Tranvía tramcar line (4.2 km) and feeder Metro buses.
- Reduced the average travel time from 90 min to 30 min by integrating the transport modes,
- Inaugurated BRT project, “Metroplús”, fully integrated (physically and fare-wise) with the existing mobility systems.
- Implemented a tram system with wheels to address the topographical challenge.

MEDELLÍN,
COLOMBIA

CITY STATISTICS

2015 census



Population
2,464,000



Area
380.6 sq. km

MODAL SPLIT

2017 EcoMobility
Alliance City
questionnaire



Walking 26.10%



Cycling 0.50%



Public Transport
29.40%



Motorcycle 10.9%



Personal Car
14.70%



Taxi 7.40%

TARGETS

Achieve 10% bicycle modal share in the region by 2030 (PMB2030)

More on Medellín:



ecomobility.org

MEXICO CITY, MEXICO

CITY STATISTICS

2010 census



Population
22,500,000



Area
7,954 sq. km

MODAL SPLIT

2013



Walking 0.8%



Cycling 0.8%



Public Transport
71.3%



Motorcycle 0.2%



Personal Car
21.5%



Taxi 5.4%

TARGETS

30% reduction in GHG emissions by 2020 (2014-2020 Mexico City's Climate Action Program (PACCM))

More on Mexico City:



Summary

Mexico City is one of the world's largest mega cities, with more than 22 million inhabitants, and the financial, political and cultural capital of Mexico. A city with more than 23 million trips daily and 5.5 million automobiles in circulation poses a huge challenge for sustainable mobility. The city is one of the largest and once most polluted cities in the world and traffic is a big challenge with residents commuting to and from work for an average of 2.5 hours per day.

Mexico City is transforming its mobility paradigm to one with people at its core and demonstrating that a shift toward environmental sustainability is possible. The administration has decided to divert investments from motor vehicle infrastructure to sustainable mobility users i.e. for pedestrians, cyclists, and public transport users.

Targets & Vision

Improving the city's public transportation system is a major priority since the system contributes to roughly half the city's total GHG emissions. The legislation in Mexico City provides guidelines to promote sustainable mobility, improve road safety and invest in a transportation system that focuses on moving more people than moving automobiles. The 2014 Mobility Law of Mexico City states the following key points:

- Change the legal framework towards people oriented mobility to change the budget
- Redefine parking lot regulations
- Care for the modal share and road safety of the people who travel in the city.
- Create and review specialized areas for public policies aimed at mobility.
- Planning instruments to ensure more mobility with fewer cars

The transportation and mobility strategy, part of the city's Green Plan, offers an integrated approach to improve transportation infrastructure and awareness-raising campaigns. Mexico City's bicycle mobility strategy is structured under four main projects: culture and education (Muevete en bici); new user trainings (BiciEscuela); infrastructure and equipment and the public bike system (EOBICI).

In addition, the Integral Mobility Program and the Climate Action Program have established guidelines that align with the definition of EcoMobility and seek to create an integrated transport system, promoting non-motorized mobility in order to develop a sustainable city. Finally, Mexico City has adopted the Vision Zero policy to promote road safety by aiming for Zero fatalities.



All rights reserved Mexico City

Achieved results

Walking:



- Expanded the Muévete en Bici (Move by Bike) car free event since 2008 to cover 55km of city streets
- Set speed limits to 50km/h on main roads and 30km/h on side streets

Cycling:



- Infrastructure consisting of 170 km of cycling lanes, 2 large bike hubs and 3,000 bike racks
- Achieved increase of bicycle trips by 35% in the past 5 years
- Reached the 5th largest public bike share system in the world with 6,500 bicycles and 452 stations

Public Transport:



- Developed a comprehensive system of 32 km of BRT, reaching more than 120 km of corridors and 6 lines, 199 dedicated bus lanes, 13 lines of light rail, 202 km of metro and 26 km of suburban rail

Summary

Münster, one of the largest cities in Germany, assumes important functions for a region including the service, trade and administration center of the Westphalia region. The city was awarded the title of “Most livable city worldwide” in 2004 and holds the titles “Climate Capital of Germany”, “Most child-friendly city” and “Cycling Capital”.

The modal share consists of 71% use of environmentally friendly means of transport such bicycle, bus and train, as well as car-sharing or walking. Cycling is the most common means of transport in Munich as the result of the consistent, long-term cycle traffic planning and 70 years of policy promotion. The city has been awarded the ADFC best cycling city in 2016 for the sixth time in a row since 1991. In addition, challenges to mobilize citizens that live in the outskirts with distances of eight to ten kilometers have been covered by cycling (20%).

Apart from the success in cycling, traffic planning in Münster considers all types of traffic with an integrative approach as the guiding principle of the city's sustainable urban transport planning for many years. The City also makes an effort to inform citizens and visitors ways to choose an environmentally and climate-friendly modes of transport. A new campaign for climate friendly mobility shows examples how to move flexibly and environmentally friendly within the city.

Targets & Vision

The city of Münster targets to improve its current modal share by the promotion of walking, cycling, and public transport, as well as car-sharing and lifts as well as mobility advice services. The goal of the city is stress-free cooperation of all traffic participants on Münster's streets.

The 3rd Urban Transport Plan (Nahverkehrsplan Stadt Münster) (2016) defines the guidelines for operating quality(networks, lines, cycles, service times) and quality transport (personnel, vehicles, infrastructure, communication and information) for city bus and regional bus services. The goals of the Münster Mobility concept 2025 include:

- Increase public transport at the modal split in Münster to 15% which in turn contributes to the overall objectives of the Münster2020 climate protection concept.
- Reduce the level of fine particulate matter and NO2 emissions in the vicinity of residential buildings in the urban area through the air quality plan.
- Develop a Noise Action Plan with measures designed to reduce the impact on road traffic affected by noise.
- Provides accessibility in public transport in order to ensure the participation of people with reduced mobility or disabilities.
- Consider gender issues as public transport is more often used by women than by men.



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Achieved results



Walking:

- Provided barrier-free crossings, which ensure road safety for pedestrians
- Added ability to block circuit of light signal systems in order to save the pedestrians from long waiting times at the traffic lights by crossing the road without interruption
- Elected to be “Most livable city worldwide” in 2004
- Regulated all residential areas to be 30 km/hr zones



Cycling:

- Münster has defended its title as the most bicycle-friendly city in Germany by The German National Cyclists' Association (ADFC) since 1991
- Has 470 kms of cycling lanes
- Realized a 20 min per day average commuting time by bicycle
- Built the largest bike station in Germany with 3,300 parking places with capacity for over 500,000 bicycles



Public Transport:

- Established eight train routes and 18 regional bus lines

**MÜNSTER,
GERMANY**

CITY STATISTICS

2015 census



Population
302,178



Area
302.9 sq. km

MODAL SPLIT

2013 city of
Münster



Walking 22%



Cycling 39%



Public Transport
10%



Personal Car 29%

TARGETS

Reduce CO2 emissions by 40 % by 2020 (compared to 1990). (Climate Protection 2050)

Raise the share of renewable energy use to 20 % by 2020

More on Münster:



ecomobility.org

PORTLAND, USA

CITY STATISTICS

2016 census



Population
639,863



Area
376.5 sq. km

MODAL SPLIT

2015 U.S.
Census



Walking 6%



Cycling 7%



Public Transport
13%



Personal Car 65%

TARGETS

Vision Zero (2015) has the goal to eliminate traffic deaths and serious injuries by 2025.

Portland Bicycle Plan for 2030: 25% bicycle mode split for all trips by 2030

More on Portland:



Summary

The city of Portland, USA, is one of the largest in its region. It is known for cycling and has currently the highest percentage of bike commuters in US cities and is a leader in innovative transport. Portland is supporting a transportation system that makes it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs. To achieve this, the Portland Bureau of Transportation is a community partner in shaping a livable city. It is in charge to plan, build, manage and maintain an effective and safe transportation system that provides people and businesses access and mobility.

Portland has a comprehensive public transportation system including buses, streetcars and light rail. Along with the system, the city has established an urban growth strategy that outlines plans for focusing growth in concentrated neighborhoods near public transit stations.

To encourage non-motorized transport, the city has developed the program, "SmartTrips" citizens are encouraged to use alternative transportation choices such as walking, biking or carpooling. Finally, the City of Portland offers financial incentives to employees who bike, walk, carpool or use public transit to commute to and from home. As a result, approximately 8 % of commuters bike to work, the highest proportion of any major US city and about 10 times the national average.

Targets & Vision

Portland currently has long term plans for parking management, multimodal transportation, and city plans. The City of Portland's foundational plans include the Portland Plan, the Comprehensive Plan, the Transportation System Plan and the Climate Action Plan. The Portland's Transportation System Plan (TSP) last updated in 2007. The TSP addresses local transportation needs for cost-effective street, transit, freight, bicycle, and pedestrian improvements and encourages driving less. Main objectives include:

- Push forward plans that will direct future growth toward centers and corridors;
- Incorporate equity and human health considerations into land use and transportation plans;
- Adopt a multimodal approach and related "complete streets" approaches;
- Financially realistic;
- Partnerships with regional and state agencies;
- Build on existing plans.

3 bicycle plans have guided Portland's growth as a bike-friendly city for nearly 40 years by establishing policies, goals and a bikeway network that aim to make the bicycle an integral part of daily life. The plans were adopted by City Council in 1973, 1996 and 2010. The city also has a Freight Master Plan which balance freight mobility needs with community impacts and other transportation modes. Finally, Portland has a "Vision Zero" charged with developing a community action plan to dramatically reduce serious and fatal crashes on Portland's roads. Portland aims to reduce vehicle-miles traveled per resident in the metropolitan area by 10 % in 20 years and 20 % in 30 years.



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Achieved results

Walking:

- Over 100 schools served by Portland's Safe Routes to School Program
- 28 Sunday Parkways events (car free days with activities)
- Developed Crosswalk guidelines for Portland to identify and implement enhance safety interventions.



Cycling:

- Bike share system BIKETOWN with 1,000 bikes and 100 stations.
- Developed 563 miles of bikeways including 302 km bike lanes
- Publicly-installed 6500 bike racks



Public Transport:

- Deployed 610 buses on a network of 80 bus routes
- Developed 93.5 km of light rail system
- 11.6 km streetcar system

Summary

Quito is the capital city of Ecuador and is the one which is closest to the equator. It is also one of the highest capitals in the world (2850 m above the sea level). Quito is active in the creation of a sustainable mobility within the urban area, which allows everybody to feel safe and comfortable by using different and interconnected ways of transport.

This is a significant contributing factor to the considerable 23.0% share of private transport utilization in the city's modal split. Moreover, while today 35% of roads in Quito are exceeding their capacity by traffic, it is estimated that this figure will continue to grow if the trend remains the same. Another problem that affects greatly the mobility of the city is its unarticulated urban form and lack of urban compactness. Quito is working to create sustainable mobility mainly based on public transportation system to make everybody feel it is inclusive, convenient, and comfortable to use different and interconnected systems of public transport there in Quito, while at the same time developing urban plans to structure a multicentral city where the number and time of motorized trips are reduced. This approach also helps the City reduce traffic congestion and air pollution in Quito.

Targets & Vision

The mobility goals for Quito are the creation of an integrated and accessible public transportation being articulated by the first metro line (in construction) acting as an axis to which the cable car system, existing BRTs and other modes such as bicycle routes and pedestrian are connected. Moreover, the city targets the enhancement of the public transport system quality standards; the increase of the share of public transport in the city's modal split through expanding the capacity and coverage of the system; the integration of transfer points (interconnectivity of the system), and also the promotion of utilizing renewable energies for the public transport fleet in order to reduce greenhouse gas emissions in mobility sector are achieved. At the same time, urban development plans to locate more families where urban nodes are created around the metro stations to ensure greater demand of the service while providing better living conditions for the people of Quito. The major targets that the City are as follows:

- Improve the capacity of public transport and fill the gap between the supply and demand for transportation.
- Enhance interconnectivity of the public transport system, improve the quality and safety.
- Prioritize, promote, and consolidate road safety to minimize the road accidents, and therefore the number fatalities.
- Reduce the greenhouse gas emissions from the mobility sector through promoting and improving public transportation and reducing car dependency in Quito.
- Completion of ongoing construction of the city's first metro line, which consists of 22 kilometers of tunnels and 15 stations, with estimated capacity of transporting some 400,000 passengers daily in this linear formed city.
- Creation of a cable car system for those varied topographical suburbs as a complementary component to the public transportation system.



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Achieved results



Walking:

- Maintaining the quality of sidewalks to quality standards



Cycling:

- Development of 45 km of cycling lanes which has promoted cycling in some neighborhoods of the city
- Public Bike sharing system, BiciQuito, in 2012 with 658 bicycles and 297 electric bikes



Public Transport:

- Construction of the 23 km long metro system with 15 stops to be completed in 2019
- Increased the bus fleet, including 80 double-articulated buses (Euro III), which have improved the capacity and the quality of public transportation

QUITO,
ECUADOR

CITY STATISTICS

Projection based
on 2010 national
census



Population
2,671,191



Area

372.39 sq. km

MODAL SPLIT

2011 Estudio
de movilidad -
Proyecto Metro
de Quito



Walking 15.4%



Cycling 0.3%



Public Transport
61.7%



Personal Car 22.6%

TARGETS

By 2025, maintain modal share of public transport to at least 70%.
By 2022, decrease the average travel time in transport by at least 5% in relation to the base year 2015.
By 2019, implement at least 20 km of high quality pedestrian networks and increase to 20,000 the number of trips per day by public bicycle. (PMDOT 2015-2025)

More on Quito:



ecomobility.org

ROSARIO, ARGENTINA

CITY STATISTICS

2010 census



Population
1,194,000



Area
178.69 sq. km

MODAL SPLIT

2008 census



Walking 19.6%



Cycling 5.2%



Public Transport
40.3%



Personal car
34.8%

TARGETS

National NDC target of reduction in GHG emissions (including actions related to transport modal shift) of 15% by 2030 below Business as Usual Scenario (BAU).

More on Rosario:



Summary

Rosario, with a metropolitan population of 1.2 million citizens, is the third largest city in Argentina. Rosario is the heart of the major industrial corridor, as well as a major railroad terminal and shipping center for Argentina. Therefore, Rosario takes upon the challenge of inclusion by addressing the movement of people, vehicles, and loads. The city is leading on sustainable urban transport and promoting a better life for citizens through public transport investments and prioritizing non-motorized transport.

The city's entire urban mobility is regulated, planned and evaluated by the Ente de la Movilidad de Rosario (EMR) which has an integrated approach and has the objective of achieving sustainable mobility through active mobility policies. To achieve this, the EMR highlights the need to develop a behavior change in a collective way, through mechanisms of citizen participation and consensus as well as counting on the contribution of specialists that allow the implementation of technically sound policies and legitimized by the community.

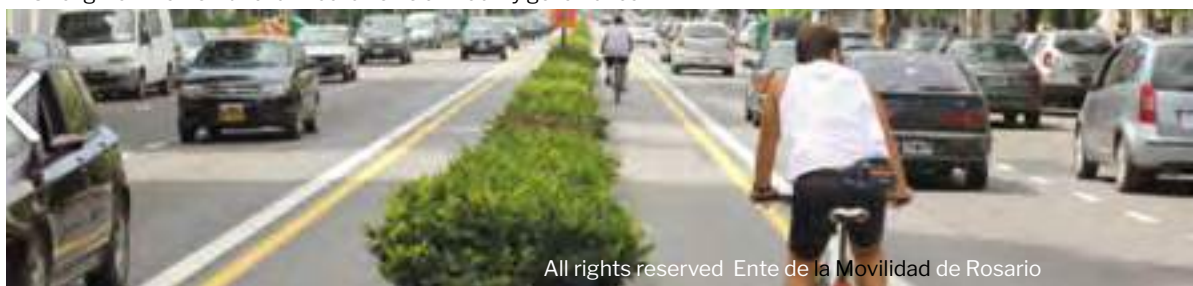
A two-time Sustainable Transport Award finalist, Rosario is an ecomobility front runner. Some of the interventions to improve sustainable urban mobility include the implementation of exclusive public transport lanes, investments in cycling infrastructure and integrated ticketing. Advances are monitored and evaluates through the Center of Monitoring of the Passenger Transport of Rosario (CM).

Targets & Vision

Rosario has a long standing tradition of planning that makes the City a pioneer in diverse, strategic policies. The City's main sustainable mobility vision is outlined in The Mobility Pact (2010) which has three main strategies: promoting mass public transport, promoting non-motorized transport, and discouraging the use of individual motorized transport

The Integrated Mobility Plan (PIM) 2010 was a result of a participatory process including citizens, institutions, and local and international experts to prioritize pedestrians and cyclists. The PIM consists of a series of projects and actions that are already under way to achieve a mobility model that optimizes a fast, comfortable and safe mobility, improving the quality of life and favoring development. The PIM also promotes social inclusion and encourages sustainable modes of transport. Some of the objectives include:

- Develop a quality and inclusive Integrated Transportation System, with rail transport, tramway and exclusive transportation corridors and electric transport;
- Prioritize the bicycle through use and maintenance, expansion and renewal of infrastructure;
- Include the pedestrian as the protagonist of mobility in the city, expanding the urban infrastructure;
- Promote the balanced use of individual motorized transport;
- Organize loading and unloading urban freight operations;
- Promote the use of clean-renewable energies;
- Strengthen the connection between urban planning and mobility planning;
- Promote the development of technologies applied to mobility;
- Improve information, awareness raising, education and road safety;
- Strengthen the institutional mechanisms of mobility governance.



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Achieved results



Walking:

- 20 km of streets available for car free Sundays with events.
- Repaired 2,2 km of sidewalks to improve walkability
- Reduced parking spaces near transit to discourage car use and create open space



Cycling:

- Constructed 120 km of cycling lanes
- Developed public bike sharing system with 280 bicycles in 18 stations
- Added parking facilities for 2000 bicycles in the city



Public Transport:

- Added 25 km of exclusive bus lanes to make transit more accessible
- Constructed a BRT system of three corridors, which covers 10 km and benefits 200,000 passengers daily.
- Created a Mobility Monitoring Centre, which enables monitoring of traffic flows, occupancy lanes and parking areas, traffic lights and compliance with routes and schedules.
- Developed 63 lines of public transport including buses, trolley buses, and trams
- A system of dynamic information for users, which includes the "Tarjeta sin Contacto", helping the user with mobility planning.

Summary

Within the state of Guanajuato, San Miguel de Allende is located in Mexico's hilly central highlands. It was included in UNESCO's World Heritage list in 2008 and is known for its state of preservation, authenticity, and integrity. Within the city the bus system takes the largest share in transportation of people and reaches an extensive number of neighborhoods.

While walking has been always one of the most common modes of mobility in San Miguel de Allende, the City seeks to make it safer and more pleasant to walk and cycle. One major focuses of the City is to decrease the car dependency of intercity mobility, while giving priority to cyclists and pedestrians, and secondly to public transportation.

The city has consistently promoted mixed-use neighborhoods, which facilitates walking. The most convenient mode of travel in the city center is walking, especially after the implementation of pedestrian zone policy in some streets. Mobility challenges that the City needs to face include traffic congestion, air pollution, and the need to upgrade and improve public transportation systems in the city.

Targets & Vision

The city of San Miguel de Allende is committed to promoting sustainable urban mobility within the city. The City has started efforts to ensure this transition while maintaining distinctive touristic characteristics. The Mobility Plan for the city of San Miguel de Allende (May 2017), and the Mobility Act for the State of Guanajuato (approved in March 2016), are considered the cornerstones of future mobility measures and targets in San Miguel.

Based on the Mobility Act, pedestrians' well-being takes center stage, followed by cyclists, and then public transportation service. Under these two cornerstones, the targets of mobility are as follows:

- Ensuring an efficient and integrated mobility system while minimizing motorized traffic flow in the historic centre through the construction of park and ride facilities with an integrated public transport system;
- Providing a quality public transportation system (including night service) with proper geographic coverage;
- Improving parking management features including park and ride facilities, parking meters with preferential rates for citizens, and public parking lots rate regulations;
- Converting the tourist tram to a "hop on-hop off" system by developing more stops;
- Replacing the bus fleet with newer, less polluting units, and for some routes with smaller vehicles;
- Construction of peripheral ring to preventing heavy vehicles through neighborhoods and promote ecomobility;
- Ensuring safe transit of pedestrians in sidewalks and walkways;
- Promoting cycling by developing more cycling lanes and establishing a public bike rental system;
- Awareness raising for ecomobility and coexistence of different modes of transport in the city.



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Achieved results



Walking:

- Expansion of some sidewalks, mainly in the historic city center has promoted walkability within the city.
- Improving sidewalk safety and quality conditions.
- Created a large pedestrian zone in the historical city center.



Cycling:

- Improvement of cycling existing routes which has promoted cycling.
- Creation of first two km of exclusive cycling lanes.



Public Transport:

- Developed 10 bus routes and bus fleet of more than 150 vehicles.

**SAN MIGUEL
DE ALLENDE,
MEXICO**

CITY STATISTICS

2015 census



Population
171,857



Area
1,558 sq. km

MODAL SPLIT

2015 census



Walking 34%



Cycling 1%



Public Transport
41%



Personal Car 24%

TARGETS

Prioritize active mobility.

More on San Miguel de Allende:



ecomobility.org

SHIMLA, INDIA

CITY STATISTICS

2015 census



Population
169,578



Area
35.34 sq. km

MODAL SPLIT

As of 2011



Walking 42%



Cycling 1%



Public Transport
49%



Taxi 1%



Personal Car 7%

TARGETS

Increase the modal share of public transport to 60% by 2031 (CMP 2012 report)

Summary

Shimla is situated on the north-western ranges of the Himalayan Mountains in India and often referred to as "Queen of Hills". The city is a political, administrative, tourist and education hub of the northern region of India. Like many other urban areas in India, Shimla has a high rate of urbanization; which has brought several challenges including traffic congestions and air pollution. Additionally, Shimla has specific geographical characteristics, a hilly place with steep slopes and narrow roads, which call for the adoption of innovative approach to steer the city toward sustainable mobility.

To tackle these challenges, the City has started to adopt sustainable transport strategies in order to minimize the impacts as well as promote convenient and sustainable modes of transportation for both citizens and visitors. Particular attention is taken to improve pedestrian infrastructure across the city, especially by improving vertical mobility, as 42% trips are walking trips and enhance mobility for all modes. The city also has put efforts in delivering quality public transport system and established traffic and parking management through smart ICT based interventions.

To guarantee meeting its commitment to providing sustainable mobility, the city has become part of some international collaborations or networks, including the EcoMobility Alliance, in order to ensure that the ecomobility principles take center stage at developing the new urban mobility for the city.

Targets & Vision

The city has also passed a comprehensive mobility plan (CMP), with planning horizon of 2031, which steers the actions and targets of the City's urban mobility toward sustainability. Use of natural terrain of the land to provide transport options for the users and provide faster and more inclusive public transport infrastructure for the citizens. In this respect, the CMP aims to:

- Promote sustainable modes of transportation, such as cycling and public transportation
- Reduce fuel consumption, and therefore air pollution, traffic congestions through modal shift from road to aerial and underground movement;
- Avoid development of additional road network to meet the growing demand for transport;
- Provide modes of public transport to all;
- Promote cycling, through creating cycle tracks and a bicycle sharing system.

Based on such vision and objectives, the City has planned to develop new road links, bypass roads and tunnels; improve the bus service in terms of both quality aspect and capacity, develop cable car (ropeway) system; introduce separate pedestrian crossing facilities; launch the city's bicycle sharing scheme and infrastructure; improve freight mobility infrastructure; and also improve the road design through developing off-street parking sites as well as expanding pedestrian paths in order to increase road safety both for pedestrians and drivers.



Achieved results

More on Shimla:



Walking:

- Developed 3.85 km of pedestrian only streets
- The city has an extensive network of 93.88km of pathways



Cycling:

- Plans to introduce bike sharing system in 2018 and proposes bicycle tracks within 3 routes & 6 stations



Public Transport:

- Grew bus fleet to 308 vehicles
- Constructed 410m of cable cars and 3.6 km under construction

Summary

The city of Suwon is the provincial capital of Gyeonggi-do in South Korea only 30 km from the capital. The city currently has the challenge of population and car increase along with the deterioration of the transportation environment. Suwon faces these challenges through its urban innovation method which includes the reorganization of public transportation, car free roads, introduction of trams and dissemination of low carbon vehicles. These efforts were appraised in 2015, with the “best sustainable transport” awarded by the Korean Ministry of Land, Infrastructure, and Transport.

Suwon's public transport system consists of buses and subway lines. Its bus system is considered a national example as it carries almost 30% of all commutes. To further expand the modal share of public transport the city plans on further investing in subway.

In transitioning towards a human-oriented and compact city, Suwon has also made talk of pedestrian priority a reality by designating pedestrian areas and taking measures to revitalize walking culture. Suwon hosted the first 2013 EcoMobility World Festival, closing a neighborhood to cars for a month, and made long term improvements to its cycling and walking infrastructure, including wider sidewalks, cycle lanes, and the creation of five “pocket parks”.

Targets & Vision

Suwon has been introducing green transportation as part of its strategy to reach its greenhouse gas emissions reduction goals of reducing 40 % of emissions from 2005 levels by 2030. The Good Governance Committee and Civil Transport Evaluation provide the transport policy towards more ecomobile and cost-effective solutions and vision for 2030. The city practices participatory governance including budget planning to improve equity and accurate service provision.

The second Public Transport Master Plan (2012-16) aims to increase public transport modal share to 52% by 2030. Some of the strategies to achieve this goal are:

- Integration and multi-modality of public transport, putting efforts to zero or single transfer;
- Ecomobility at the heart of transport policy, the city aims to replace 50% of its official fleet to electric vehicles by 2018.
- Make transport convenient and safe for all users, ensuring the right to mobility for vulnerable users.



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Achieved results



Walking:

- Introduced car-free areas in 10 districts with participation from 70 thousand citizens and plan to expand to 20 districts by 2018.



Cycling:

- Developed 112.3 km of bike lanes
- Expects inauguration 3,700 city bikes / 300 bike stations by 2019



Public Transport:

- 280 buses on 35 routes
- Designated several districts with roads dedicated to public transport only to provide more space for ecomobility

**SUWON,
SOUTH
KOREA**

CITY STATISTICS

2013 census



Population
1,170,878



Area
121.04 sq. km

MODAL SPLIT

2010 Population
and housing
census



Walking 23.6%



Cycling 1.6%



Public Transport
31.7%



Personal Car
33.7%

TARGETS

Increase public
transport modal
share to 52% by
2030.

Reduce CO₂
emissions by
2030

More on Suwon:



ecomobility.org

SYDNEY, AUSTRALIA

CITY STATISTICS

2016 census



Population
208,374



Area

26.15 sq. km

MODAL SPLIT

2011 travel to work



Walking 25.3%



Cycling 2.9%



Public Transport
29.5%



Personal Car 26.5%

TARGETS

Increasing the share of walking in modal split to 60% by 2030

Constructing 200 km cycling network by 2030

Reducing greenhouse gas (GHG) emissions by 44% (against a baseline of 2006 levels) in the period of 2016-2021.

All City fleets and 20% of all private cars in the City to be low emission vehicles by 2030

More on Sydney:



Summary

Located in the state of New South Wales (NSW), Australia, the City of Sydney is as cultural, commercial and research hub. Around 600,000 tourists, commuters, and students commute through the City of Sydney each day. Sydney is expected grow by 60% between 2006 and 2036. Considering this increase in transportation demand, the City encourages people to travel by public transport, bike or foot to ensure that the city remains sustainable and attractive while still meeting the needs of businesses.

Beginning in 2007, the City of Sydney began a comprehensive community consultation process in order to co-create a long-term vision of a future Sydney. The result of this process is the Sustainable Sydney 2030 – Community Strategic Plan, which strives to make Sydney a green, global and connected city by 2030, and establishes priority actions which reflect the desires of the community. From a revitalized, people-friendly City Centre to an integrated transport network with numerous green corridors, a people-focused approach to ecomobility is at the heart of the Sustainable Sydney 2030 vision.

Sydney's transport system features a comprehensive network of train, bus and ferry services. Light rail lines, airport links, sightseeing buses and taxi services complement the network. Since 2009, the city has built separated bike lanes and shared paths. The city has also been collecting data on the use of this infrastructure and has recorded an average 82% increase in commuters over the past two years, with the largest growth being where infrastructure is built (over 300% in some locations). Additionally, the city has been working to provide pedestrian priority on key corridors, as well as encouraging the use of car share.

Targets & Vision

Based on the vision of the Sustainable Sydney 2030 Plan and in order to make Sydney ecomobile, the City of Sydney has strategically targeted improvements in three key areas: walking, bicycling, and public transportation. The Sustainable Sydney vision has identified the following five key interventions:

- A livable, people-friendly City Center that is re-connected to the iconic Harbour area;
- An integrated sustainable transport network which minimizes traffic congestion;
- A living green network full of green corridors, a dedicated pedestrian and bicycle paths;
- Activity hubs which serve as vibrant community spaces in each of the City's villages;
- Sustainable development renewal initiatives to revitalize infrastructure

Finally, the city has also been encouraging cycling through some actions including improvement of cycling infrastructure, incentive programs, trainings, public awareness raising; the city now sees more cyclists on the streets than ever before.



All rights reserved Sydney Cycleways

Achieved results



Walking:

- The City currently allocates over \$15 million per year on walking infrastructure
- Road safety campaigns and initiatives have helped to contribute to a 28% reduction in traffic accidents involving pedestrians (2009- 2013)
- In 2016 Legible Sydney, a pedestrian Wayfinding Strategy and Design Manual
- Newly activated city laneways include public artworks and infrastructure upgrades to encourage walking
- Temporarily closing one or more streets in a local centre on Sundays or holiday seasons
- Implemented traffic calming measures



Cycling:

- Increase of cyclists by 98 % from 2010 to October 2016
- Over 7000 people cycle daily to work
- Annual Sydney Rides Business Challenge
- Created 70 km of cycleways
- Established 950 bike lockers at over 130 interchanges across the public transport network



Public Transport:

- Suburban rail system with 815 km and 300 stations serving a million passengers per day
- Light rail of 12.8 km
- 650 on-street parking spaces assigned to car sharing vehicles
- Introduced new fleet of 38 double decker buses
- Sydney Metro will deliver 31 metro stations served by automated trains along more than 66 km of new metro rail. First phase in 2019 and second by 2024

COMING UP IN THE ALLIANCE



Photo: Itzel Obregón 2016

The EcoMobility Alliance will expand its work in the next years to include more cities and more regions. The Alliance will bring global best practices to the cities and enable decision makers to have greater access to technical and political expertise, knowledge exchange, ways to address climate change and promote people-friendly mobility in their cities.

EcoMobility Alliance cities are at various stages of their journey towards a more sustainable future. Each has distinct challenges and needs that are unique to the context for that city. Their efforts to improve mobility in their cities will be enhanced by reaching out to other Alliance cities and Alliance partners and through learning from international initiatives.

Increased awareness of ecomobility and knowledge on alternatives to traditional transport planning shall improve their capacity to develop sustainable urban mobility action plans.

The EcoMobility Alliance will be structured into three types of actions:

Local Improvements, Joint Initiatives and Global Outreach .

Local improvements

1. Innovation and mobility improvements in Alliance cities

The EcoMobility Alliance helps participating cities to improve their current mobility situation through access to information, tools and partners. By facilitating peer-to-peer learning, the Alliance allows cities to help each other and accelerate change. Local innovation is also driven through cooperation across continents, while ICLEI's EcoMobility Agenda offers an overarching methodology for improving urban mobility.

2. Performance measurement

EcoMobility Alliance cities have the opportunity to measure their urban transport performance with the EcoMobility SHIFT assessment tool, a verified tool developed by ICLEI. The service is available to all Alliance cities, and technical support can be provided by ICLEI and partners where necessary. Cities can measure their progress on urban mobility, with the goal of benchmarking their performance.



Joint initiatives

3. Thematic working groups

With help from ICLEI, participating cities identify areas of joint interest and are invited to form thematic working groups. This targeted sharing of experiences and knowledge allows for collaborative actions, fundraising and cooperation with partner organizations. Thematic areas for the working groups include known challenges such as urban road safety, non-motorized transport and bus rapid transit, as well as new items such as shared mobility, urban logistics, e-mobility, intelligent transport systems (ITS) in fare collection and information dispersal.



EcoMobility Alliance cities gathered for the EcoMobility Days Quito, October 2016, Quito, Ecuador

4. Joint program of activities in selected areas

While cities cooperate in thematic working groups based on their own interests, the EcoMobility Alliance will also select 2-3 joint working areas for collective action, such as urban freight (EcoLogistics), the quantifying of mobility-based health impacts, and greenhouse gas reduction strategies in cities. The aim of these working areas will be to translate theory into practice and thus achieve tangible results.



Global outreach

5. Showcasing the progress of EcoMobility pioneers

Alliance cities are constantly developing and implementing solutions that improve the mobility options available to their citizens. By recording and sharing these experiences, the Alliance accelerates the replication of good practices both locally and globally. In partnership with experts and related organizations, the Alliance will continue to author case studies, briefing sheets, working papers and position papers on cities and their innovative urban mobility programs.

6. City voices at a global level (see page 7)

The Alliance will bring the collective voice of participating cities to the global stage in discussions and debates on sustainable urban transport. ICLEI will contribute to and facilitate city's individual presentations while also sharing the best practices of all Alliance cities at different events. Through this representation, the Alliance will highlight the commitments and actions undertaken by cities for EcoMobility. It will also outline the frameworks required by cities to progress further, as well as the need for competencies, capacity, knowledge, fiscal opportunities and direct access to finance.



EcoMobility Alliance cities gathered for the EcoMobility Days Quito, October 2016, Quito, Ecuador



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