

Málaga, Spain

Group Exercise Leaders in Urban Transport Planning (LUTP) Program

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Instructions

In 2008, the municipality of Málaga, Spain initiated a Sustainable Urban Mobility Plan (SUMP) that was formally adopted by the City Council in 2011 and then updated in 2015. The SUMP was adopted as a ‘special urban plan’ in compliance with the General Land Use Development Plan for the municipality. This document provides background readings to support a series of group discussions that will explore the urban transport situation that motivated the SUMP in Málaga, the priority actions that the city identified in its SUMP, and the process of implementing these priority actions.

The document is broken up into three parts, each with a pre-prepared background reading and a series of discussion questions to be considered:

- **Part 1** presents background information summarizing the urban mobility situation in Málaga around the time of preparation of the initial SUMP. Groups will read this material and then map out the interconnections among the many challenges identified for the city’s urban transport system. Using this mapping, teams will be asked to take on the role of a decision-maker at the time of the Málaga SUMP initiation and to put forward three challenges that should be address in the SUMP.
- **Part 2** summarizes the 80 priority actions that Málaga identified in its 2015 updated SUMP into ten implementation areas. Participants will be asked to consider, one at a time, different urban mobility challenges and consider which implementation areas and actions would be considered the top priority for addressing that challenge. Through these discussions, participants will explore how the priority implementation areas for a SUMP may differ based on the perspective or goal that is taken.
- **Part 3** explores what has happened since the municipality of Málaga adopted the SUMP. It documents progress on implementation of a select set of implementation areas identified in the SUMP’s and explores the critical role of stakeholder engagement—both among government entities and with private sector actors and civil society—for effective action.

Part 1. Urban Mobility Situation Pre-SUMP

Transport Governance

The Kingdom of Spain and its Autonomous Communities

Spain is a member country of the European Union located in the Southwestern part of Europe on the Iberian Peninsula. Spain is bordered to the north by the Cantabrian Sea, France, and Andorra, to the east by the Mediterranean Sea, to the south by the Mediterranean Sea and the Atlantic Ocean, and to the west by the Atlantic Ocean and Portugal. It is situated in an economically strategic position with access to markets in Europe, the Middle East, and (North) Africa. In 2020, Spain was the 14th largest economy in the world by GDP.¹

Spain has a public administration that is highly decentralized. The country is divided into 17 “Autonomous Communities” (regions) and two autonomous cities (Ceuta and Melilla), each with their own government institutions. The Autonomous Communities are then subdivided into provinces. The largest Autonomous Community in the country is Andalusia, situated along Spain’s southern coast. The Autonomous Community of Andalusia comprises 8 provinces: Málaga, Granada, Jaen, Seville, Almeria, Huelva, Cadiz, and Cordoba (see Figure 1).

Figure 1. Map of the 19 Autonomous Communities (regions) of Spain and their provinces.²



¹ The World Bank. “World Development Indicators”

<https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.MKTP.CD&country=#>

² <https://www.nationsonline.org/oneworld/map/spain-administrative-map.htm>

When it comes to transport system governance, responsibilities are divided between the national, autonomous community (regional), and municipal governments, with provincial administration having only a minor role. For example, infrastructure and services for long-distance rail are operated by the Spanish National Railway Network. The Spanish Constitution (1978) grants regions executive jurisdiction over railways and road infrastructure developed within the Autonomous Community and over ports and airports that do not engage in international activities. Municipalities have jurisdiction over land use and transport planning, regulation, infrastructure, and services provision inside its territory. This includes traffic management, parking, and urban public transport (except for some metro rail systems which are administered and operated by the regional government). In fact, Article 137 of the Spanish Constitution grants “local autonomy to the municipalities in managing their own local interest” and the 7/1985 Act Regulating Local Systems (*Ley 7/1985, de 2 de abril, Reguladora de las Bases del Régimen Local*) defines urban public transport as an essential service that falls under the authority of municipalities.

In accordance with the Andalusian Law 2/2003, Article 32, urban transport can be funded with:

- Revenue directly obtained from the service to users and exploitation of other sources belonging to the operating companies
- Taxes that may be applied for specific purposes
- Contributions made by different bodies in accordance with agreements and contracts
- Any other way accepted by the legal system

In Andalusia, public transport is mainly financed with the fees paid by users, funds provided by the municipalities, and subsidies awarded by the central government.³

The Málaga Metropolitan Area Transport Authority

The municipality of Málaga is the capital of Málaga province. However, the metropolitan area of Málaga spans well beyond the borders of Málaga municipality. In fact, the metropolitan area covers a total of 12 municipalities (see Figure 2).

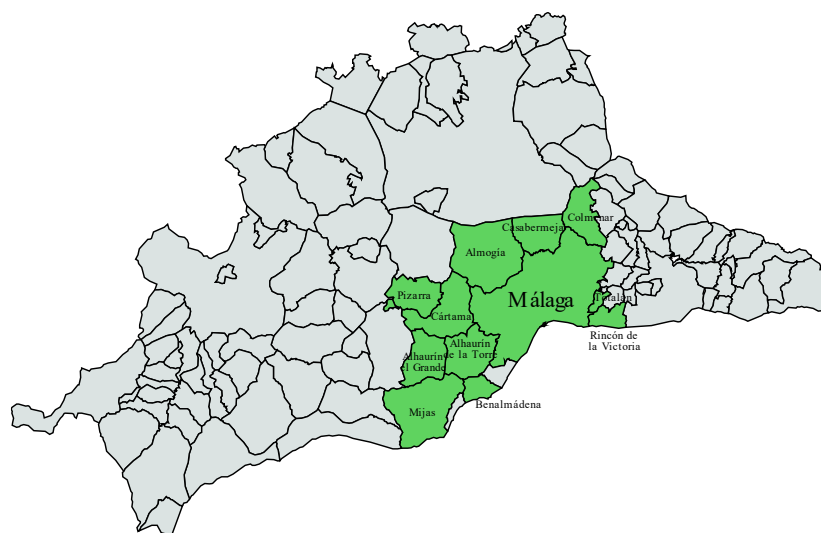
In 2003, the Transport Authority of Málaga (*Consortio de Transportes del Area de Málaga*) was established to coordinate public transport infrastructure and services in the metropolitan region with the ultimate goal to increase the use of public transport for general travel. The Authority includes membership from the government of the Andalusia Autonomous Community (45%), Málaga Provincial Council (5%) and each of the local councils of the 12 municipalities in proportion to their respective populations (50%).

The Transport Authority of Málaga is responsible for drafting, revising, and managing the Metropolitan Transport Plan. The Authority also oversees a zone-based fare policy, which covers all municipal and metropolitan bus services provided within the metropolitan area, and the implementation of an integrated fare payment system. The Authority is

³ Marchante-Lara, Macarena, and Carlos G. Benavides-Chicón, 2013. “A Comparative Analysis of the Provision of Urban Public Transport: Special Reference to Málaga City [Un análisis comparativo de la provisión del transporte público urbano: Especial referencia a la ciudad de Málaga].” *Revista de Estudios Regionales*. 93: 105-130. <http://www.revistaestudiosregionales.com/documentos/articulos/pdf-articulo-2423.pdf>

responsible for the establishment of fees to be received by transport operating companies (both public and private) and the allocation of grants or subsidies received from its various member authorities. Therefore, much of the Authority's influence over public transport infrastructure and service provision comes through setting the criteria used to share revenue and subsidies and the allocation of compensatory payments derived from the integrated fare system. The Authority is also empowered by law to receive other revenues derived from taxes, public charges and any special contributions that may be levied.

Figure 2. Map of the 12 municipalities that constitute the metropolitan area of Málaga.⁴



Within the Málaga metropolitan area, local bus service is provided by each municipality. For example, the municipality of Málaga operates buses via a municipal corporation—Malaguena Transport Company (EMT)—governed by a board of directors nominated by the municipal council. Certain aspects of service, such as fare collection, is implemented in coordination with the plans and ordinances of the Transport Authority of Málaga. The Authority directly operates suburban buses that serve longer routes crossing multiple municipal boundaries.

Table 1 reports the revenue and operating costs of municipal area bus services operated by EMT and metropolitan area bus services contracted by the Transport Authority of Málaga in 2008. With regards to local bus services, operating costs of almost €56 million were covered by: fares at 46% (or €26 million), subsidies at 44% (or €25 million), and other sources at less than 10% (or €5 million).⁵ In terms of capital expenditures, in 2008 the municipality of Málaga invested €0.9 million in infrastructures for the metropolitan buses and €6.1 million in rolling stocks for the urban area.⁶

⁴ https://es-academic.com/pictures/eswiki/67/Consortio_de_Transportes_del_%C3%81rea_de_M%C3%A1laga.svg

⁵ Marchante-Lara and Benavides-Chicón, 2013.

⁶ Ministry of Environment, Spain [Ministerio de Medio Ambiente], 2010. "Metropolitan Mobility Observatory Report – 2008 [Observatorio de la Movilidad Metropolitana Informe OMM – 2008]." https://observatoriomovilidad.es/wp-content/uploads/2021/07/Informe_OMM2008.pdf

Table 1. Sources of revenue and operating costs (in million €) for Málaga bus services, 2008.⁷

		Municipal bus	Metropolitan area bus
Revenues	Fares	26.00	7.70
	Subsidies	24.85	4.30
	Other sources	5.05	--
Operating costs		55.90	12.00
Subsidies as share of operating costs		44%	not available

Land Use, Urban Form, and Car-Dependency

Historically the metropolitan area of Málaga was characterized by a densely populated city center in Málaga municipality with a progressively less populated metropolitan area in surrounding municipalities. However, between 2002 and 2008, people began moving out of the denser city center to the periphery; the metropolitan population doubled, increasing more than the urban population. The metropolitan region witnessed an expansion of existing areas and new, sprawling development. This sprawl was triggered by several factors including the lack of land for development within the urban center, rising housing prices, decentralization of many services, and the development and improvement of roads connecting the metropolitan areas.

The metropolitan area of Málaga has a hilly topography for much of its geographical area, favoring dispersed urbanization beyond the main city center (Figure 3). Between 1960 and 1980, Málaga experienced remarkable territorial growth, which resulted in an increase in the movement of freight and people. In 2008, the metropolitan area was 1,258 square kilometers (sq./km) with a population of 972,762 and a population density of 773 inhabitants/sq.km.⁸ In 2019 the area expanded over five times to 7,308 (sq./km) and the population reached 1,685,920. While there was some concentration in metropolitan and coastal areas, the population density decreased to 230 inhabitants/sq.km (still higher than the national average) (see Table 2). To a much lesser extent, the city area also witnessed a small population increase.

Table 2. Málaga metropolitan and urban surface area, population, and density, 2008 and 2019.⁹

	Urban area		Metropolitan area	
	2008	2019	2008	2019
Surface area (km ²)	395	397	1,258	7,308
Population (people)	566,447	578,460	972,762	1,685,920
Population density (people/km ²)	1,435	1,457	773	230

⁷ Ministry of Environment, Spain, 2010.

⁸ Marchante-Lara and Benavides-Chicón, 2013.

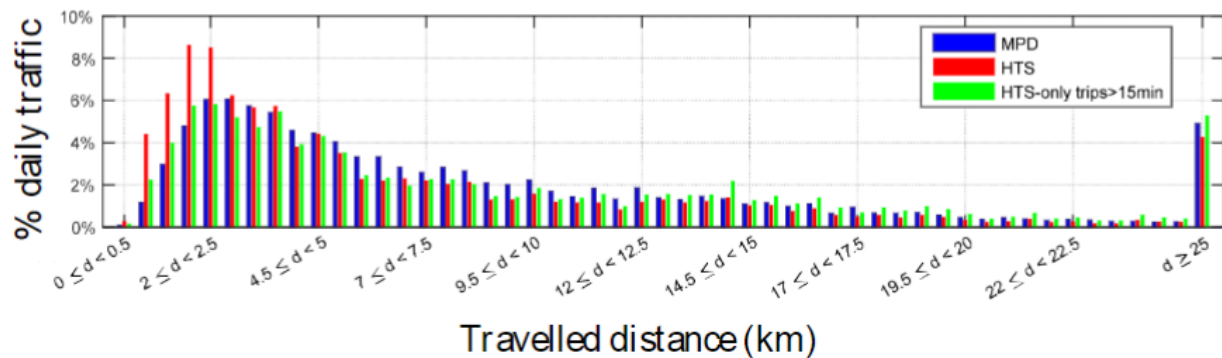
⁹ Marchante-Lara and Benavides-Chicón, 2013.

Figure 3. Málaga city center surrounded by more sparsely populated hills.¹⁰



The low-density expansion of the metropolitan area resulted in longer travel distances (see Figure 4). These longer travel distances, less concentrated travel patterns, and the steeper topographical slopes characterizing much of the metropolitan area beyond the municipal center made travel by public transport less efficient and more expensive to provide. So, investments began prioritizing highways and freeways infrastructure, contributed to the increase of car dependency. Provisions for large transport infrastructure such as freeways (see Figure 5) caused a further fragmentation of the city and reduced the mobility for non-motorized transport.

Figure 4. Distribution of trip distances in the metropolitan area of Málaga from two sources: MPD = mobile phone data corresponding to two weeks in February 2015 and HTS = household travel survey data collected in 2014.¹¹



¹⁰ <https://www.flickr.com/photos/davepinter/27676061256/in/photostream/>

¹¹ Caceres, Noelia, Francisco G. Benitez, and Luis M. Romero, 2020. "Land use inference from mobility mobile phone data and household travel surveys." *Transportation Research Procedia*, 47: 417-424. 22nd EURO Working Group on Transportation (EWGT) Meeting, Barcelona, Spain, 18-20 September 2019. <https://www.doi.org/10.1016/j.trpro.2020.03.117>

Figure 5. Node between MA-20 with A-357.¹²



Car dependency has been strengthened by additional factors such as the political economy associated with the development of dispersed urban sprawls, the lack of proximity services, the subsidies in place to encourage the purchase of automobiles, and the insufficient investments in public and active transport in the urban areas. Additionally, to support a car-centered mobility, public urban spaces have been repurposed for the circulation and parking of motor vehicles.

In 2008, before the beginning of the SUMP implementation, the motorization rate in Málaga was among the highest in Spain.¹³ In 2007 in the municipality and metropolitan areas of Málaga, personal cars accounted respectively for 473 and 487 for every 1000 inhabitants (see Table 3).

Table 3. Motorization rate (vehicle/1000 people) for select medium-sized Spanish cities (with populations between 500,000 and 1,000,000 people), 2007.¹⁴

	Municipality		Metropolitan area	
	Cars / 1000 people	Motorcycles and mopeds / 1000 people	Cars / 1000 people	Motorcycles and mopeds / 1000 people
Málaga	473	*134	487	--
Valencia	480	60	484	61
Sevilla	489	137	478	134
Tarragona	460	75	469	73
Bahia de Cadiz	387	170	412	159

¹² Málaga City Council, Government Area of Accessibility and Mobility. PEMUS: Special Plan for Sustainable Urban Mobility in Málaga [*Plan Especial de Movilidad Urbana Sostenible de Málaga*]. Progress Document II.

¹³ Málaga City Council, Government Area of Accessibility and Mobility. PEMUS.

¹⁴ Ministry of Environment, Spain, 2010. *Data for motorcycles and mopeds from: Marchante-Lara and Benavides-Chicón, 2013.

Transport Demand

Mode share

The total number of trips in Málaga municipality on a working day in 2008 accounted for about 1,494,799, of which 41% taken by private motorized vehicles (Car: 35% and Motorbike: 6.2%). About 46% of trips are taken by walking or biking, which could be explained by the favorable Mediterranean climate and also by the effects of the 2007-2009 global financial crisis. Public transport (bus trips) accounts for about 11% of the mode share (Table 4).

Table 4. Modal split and percentage of male-female making trips in Málaga municipality, 2008.¹⁵

	Trips by mode (municipality)		Mode use by gender	
	Trips per day (#)	Share of daily trips (%)	Male (%)	Female (%)
Walking	686,005	46.0	41.4	58.6
Bicycle	6,721	0.4	60.4	39.6
Bus (unscheduled)	21,502	1.4	47.3	52.7
Local bus operated by EMT	144,293	9.7	39.6	60.4
Bus interurban	2,528	0.2	41.5	58.5
Suburban train	1,450	0.1	23.1	76.9
Car	522,256	35.0	57.3	42.7
Motorbike	92,780	6.2	69.1	30.9
Taxi	17,264	1.2	48.8	51.2
Total	1,494,799	100	--	--

Of the total share of trips made by foot, almost 59% are made by women. Women take more trips than men also by bus (about 60%) by train (about 70%) and by taxi (51%). On the other women take fewer trips on motorbike 31%, and by bicycle (almost 40%) compared to their male counterparts (Table 4).

Public transit use

Public transport is a means to foster social inclusion as it provides access to basic needs such as job opportunities, education, and health services. According to a 2008 survey on mobility conducted in Málaga: 94% of the participants reported that the main reason for traveling was work, while the remainder 6% reported “study”; 70% gave recreation as their second reason for traveling.¹⁶

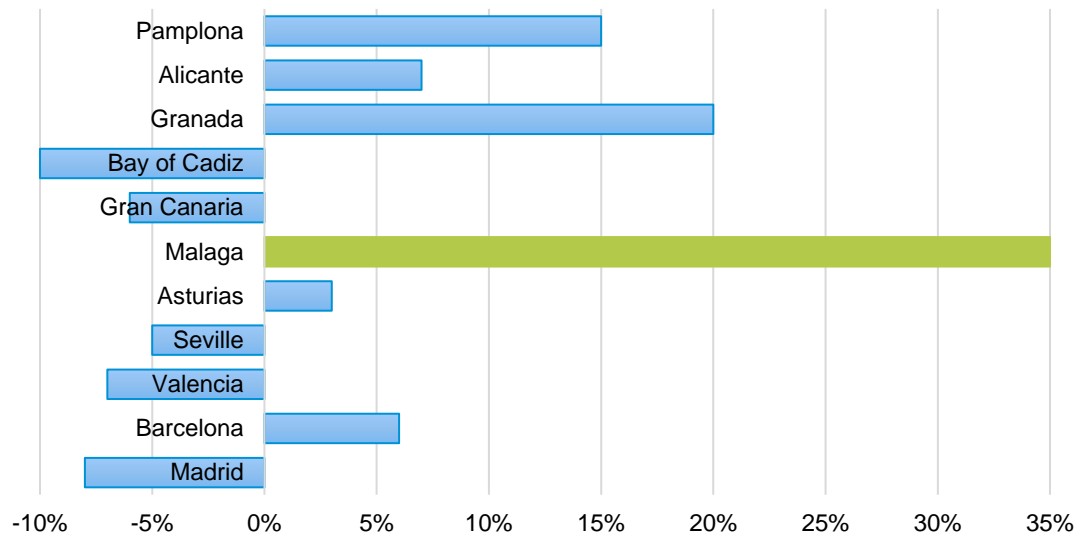
The ongoing changes in size and patterns of the metropolitan areas and narrow and winding hillside roads within sprawls contributed to the challenge in the development of public transport infrastructure facilities. Despite the high motorization rate, between 2002 and 2008, the metropolitan area of Málaga experienced an increase in demand for public transportation compared to similar Spanish cities (Figure 6).

¹⁵ Málaga City Council, Government Area of Accessibility and Mobility. PMUS: Plan for Sustainable Urban Mobility in Málaga [*Plan de Movilidad Urbana Sostenible de Málaga*], pg. 41-42
<https://movilidad.malaga.eu/opencms/export/sites/movilidad/content/galerias/Documentos-del-site/PMUS.pdf>

¹⁶ Survey from the Observatorio Provincial de Sostenibilidad.

In 2008, the total annual trips taken by urban bus were estimated to be 49.3 million, while the total number of bus trips in the metropolitan area were estimated to 9.6 million.¹⁷ Data for the railway and light railway was not available and the metro was still under construction. The average occupancy on municipal buses in Málaga in 2008 was 23.8 trip-km / vehicle-km.

Figure 6, Percentage change in demand for bus service in select metropolitan areas in Spain, 2002-2008.¹⁸



Transport Supply

Bus services

With a total of 353 buses, EMT is the sole bus operator in Málaga municipality (see Figure 7). In 2008, at the urban level, EMT had a bus fleet of 249 vehicles (20 minibus, 175 regular bus and 54 articulated bus) covering 40 bus routes, 3 of which were night routes.¹⁹ The total length of bus lines in Málaga municipality was 610 km and each line was on average 15.3 km long (Table 5).²⁰

At the metropolitan level bus services is provided by private concession operators awarded contracts by the Autonomous Community (region). In total, these concessional operations have a bus fleet of 104 buses covering 73 bus routes with 837 bus stops. The total bus length of 2.191 km and each line is on average 27.9 km long.²¹

¹⁷ Marchante-Lara and Benavides-Chicón, 2013.

¹⁸ Marchante-Lara and Benavides-Chicón, 2013.

¹⁹ Ministry of Environment, Spain, 2010.

²⁰ Ministry of Environment, Spain, 2010.

²¹ Ministry of Environment, Spain, 2010.

Figure 7. Map of municipal bus routes operated by EMT.



Most of the municipal and metropolitan bus routes are radial starting from the city center and heading towards the city periphery. The circular bus routes cover the city center and have more frequent service. Finally, the transverse routes connect the fringe areas of the city.²² Málaga is also the destination of provincial, regional, national, and international bus routes. All these services are provided under the concession model awarded by either the regional or the national administration according to its range.

The daily average hours of operation for buses are 18 (municipality) and 17 (metropolitan area). On average, the frequency of buses in rush hour in the urban area is 9 minutes and 20 minutes for metropolitan areas.²³ The average commercial speed of urban buses and metropolitan buses is respectively: 13,9 km/h and 36 km/h.²⁴ The lack of dedicated bus lanes (4% of dedicated bus lanes on the total bus network²⁵), the exposure to traffic congestion and consequent lower speed of buses reduced attractiveness of the service.

In Málaga, 96% of the municipal population had a bus stop within 300 meters and 74% of the population in the metropolitan area lived within 300 meters of a bus stop.²⁶

²² Marchante-Lara and Benavides-Chicón, 2013.

²³ Ministry of Environment, Spain, 2010.

²⁴ Ministry of Environment, Spain, 2010.

²⁵ Ministry of Environment, Spain, 2010.

²⁶ Ministry of Environment, Spain, 2010.

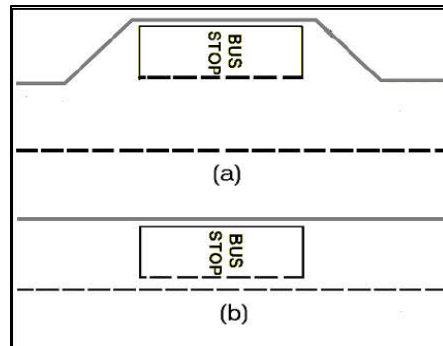
Table 5. Characteristics of bus systems in Spanish municipalities and metropolitan areas, 2008.²⁷

	Málaga	Valencia	Sevilla	Granada	Terragona	
Municipality	Bus routes/lines (#)	40	60	40	28	22
	Total line length (km)	610	879	535	345	--
	Mean line length (km)	15.3	14.6	13.4	12.3	--
	Bus stops (#)	1,774	2,045	1,640	--	--
	Public operators (#)	1	1	1	0	2
	Private operators (#)	0	0	0	3	4
Metropolitan area	Bus routes/lines (#)	73	57	52	56	90
	Total line length (km)	2,039	2,126	1,689	1,502	--
	Mean line length (km)	27.9	37.3	32.5	26.8	--
	Bus stops (#)	837	1,942	1,931	--	--
	Public operators (#)	0	0	0	0	0
	Private operators (#)	10	8	8	13	8

Box 1. Lay-by bus stops and lack of accessibility for passengers with reduced mobility

In the 1990s, Málaga began implementing lay-by bus stops to promote smoother traffic flow (see Figure 8). This kind of bus stop configuration took significant public space away from pedestrians and often did not allow for the installation of bus shelters and information boards. In 2008, only 13% of local bus stops in the municipality offered real-time information on bus arrivals and none of the metropolitan area bus stops provided such service. This situation contributed to the reduction in the reliability and the perception of the quality of the public transport service.

Figure 8. a) lay-bys bus stop (b) parallel bus stop.²⁸



Furthermore, cars often parked in the bus lay-by or double parked, making the lay-by inaccessible; these behaviors, while being illegal, were rarely enforced. With such obstructions, buses were forced to stop in the middle of the road, exacerbating traffic congestion and making it unsafe for bus users to board the bus. People with disabilities faced even greater challenges boarding the bus.

Before the implementation of SUMP, to improve accessibility and to comply with the 2007-2011 Strategic Plan for Universal Access, EMT allocated 17.2 million towards the implementation of measures and infrastructures in favor of people with reduced mobility (PRM). In 2008, 100% of the urban buses were equipped to support people with reduced mobility however, no data was reported for Metropolitan buses, light railways, and railways.²⁹

²⁷ Compiled from multiple reports: Ministry of Environment, Spain [Ministerio de Medio Ambiente]. "Metropolitan Mobility Observatory [Observatorio de la Movilidad Metropolitana] Report, 2004 – 2019."

²⁸ Dorn, Lisa and Jenny Stannard, 2006. "Simulator performance differences between experienced and novice bus drivers." *Advances in Transportation Studies*.

²⁹ Ministry of Environment, Spain, 2010.

Rail services

In 2008 at the time of SUMP initiation, Málaga benefited from regional and commuter rail service and was in the process of constructing two metro lines (planned in 1990 and opened in 2014). Regional and commuter rail service operated by Renfe, Spanish National Rail, connected Málaga city center with the international airport and nearby cities of Benalmadena and Feungirola along the Costa del Sol. These lines provide service not only to commuter travelers but also to tourist aiming at visiting Málaga from settlements along the coast.

Málaga now has two metro lines servicing corridors in the western part of the city: the coastal corridor and the *Teatinos* corridor. These lines connect active residential and economic areas with the city center. There is a third line planned, which cross through the city center to serve the Eastern coastal corridor of the city.

Active mobility infrastructure

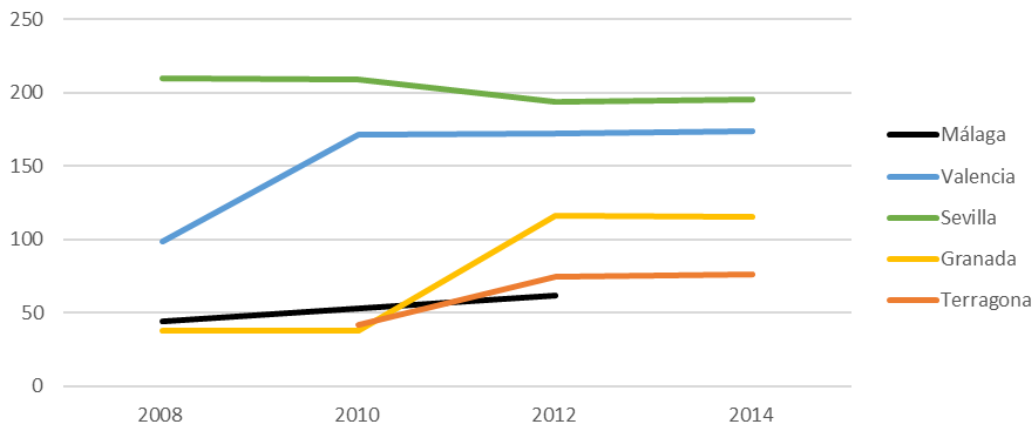
The Mediterranean climate combined with the city center being almost flat makes Málaga city the perfect place to engage to active mobility, however, up to 2007 Málaga was reticent about building cycling infrastructures compared to other Spanish cities (Figure 9). In 2008, bike-share infrastructure facilities were in place in many Spanish: Barcelona and Sevilla championed the shared service with respectively 6,000 and 670 available bikes and 8,500 and 148 designated bike parking. The first bike sharing in Málaga was launched in 2008.

Cycling infrastructures such as safe lanes, designated parking areas, bike facilities, and sharing services can contribute to the safety of riders and their comfort, and at the same time reduce traffic congestion, and pollution while improving the overall wellbeing of citizens. However, one of the main drawbacks of building cycling infrastructures was the uncertainty of attracting users.

As of 2008 Málaga had 25 km of segregated bike lines: one of the shortest compared to other Spanish cities such as Sevilla (146,9 km), Valencia (80 km), Pamplona (55 km). Cyclo-lanes or non-segregated lanes are not available.³⁰

³⁰ Ministry of Environment, Spain, 2010.

Figure 9. Bicycle lane density (km bike lane per million inhabitants) in select municipalities, 2008-2014.
 "Bicycle lanes" include all types of lanes conceived for bicycles, including shared roadways.³¹



Parking and parking enforcement

Due to the increase in population and car dependency, the neighborhoods developed in the 1970s and 1980s subtracted public space to sidewalks or green areas, in the attempt to resolve the lack of parking spots. However, on-street parking promoted the phenomenon of “multiple cars chasing the single space,” contributing to traffic congestion and noise and local air pollution.

In 2008, Málaga had 6,505 underground parking lots that were publicly managed and priced at €2.85 per hour. No data was available on the number of public, on-street parking spaces that were available (free of charge or metered).³² A parking regulation system was in effect from 1987, with the aim to limit the maximum parking time in areas with high turnover. The maximum time limit was 150 minutes in most spaces throughout the municipality but was reduced to 30 minutes in more central areas. Residents in the area, people with disability, and electric vehicles were exempt or had looser time limits.

The Sociedad Municipal de Aparcamientos y Servicios, S.A. (SMASSA) is a public-private company responsible for the parking management and on-street parking in Málaga. Parking enforcement is managed either by SMASSA or by the local police.

Urban Transport Challenges

Road traffic congestion

Before the implementation of SUMP, cars served 35% of all passenger trips (Table 4) and 65% of motorized trips (Table 9). With such high private vehicle use, areas of the municipality with concentrated economic activity—including the city center, university area, and industrial parks—experienced significant congestion during peak periods. Lack of a clear road hierarchy and traffic control policy covering freight vehicles meant that commercial vehicles used the main road system during peak periods, further aggravating traffic congestion.

³¹ Compiled from multiple reports: Ministry of Environment, Spain [Ministerio de Medio Ambiente]. “Metropolitan Mobility Observatory [Observatorio de la Movilidad Metropolitana] Report, 2004 – 2019.”

³² Ministry of Environment, Spain, 2010.

Congestion contributed to other issues, such as worsening of air quality and noise pollution as well as increasing road traffic fatalities and injuries.

Local air pollutant and other emissions

Many local air pollutants have been definitively linked to respiratory problems and cardiovascular diseases. Particularly problematic air pollutants include particulate matter (PM 10 and PM 2.5) and tropospheric ozone (O₃). The World Health Organization (WHO) recommends a maximum number of days for the pollution emission to exceed maximum levels. The chart shows the number of days the emissions exceeded in the city of Málaga and the maximum values recommended by WHO (see Table 6).

Table 6. Number of days that local air pollutant emission (PM10, PM 2.5 and O₃) exceeded WHO recommended maximum levels at select environmental stations in Málaga, 2013.³³

	PM 10	PM 2.5	O ₃
Campanillas	24	--	85
Carranque	23	11	62
El Atabal	28	--	--
WHO max days	20	10	25

Increasing car traffic resulting from urban sprawl in Málaga contributed to poor air quality. Air pollutants have many sources, citizens however, are particularly exposed to the emissions generated by motorized road traffic as they are widespread throughout the city and concentrated where the population lives³⁴. In the effort to improve the air quality in the city and improve the quality of life for the citizens, the government passed a law (34/2007 November 15, quality of air and environmental protection) to regulate the traffic in the city and implement measures to fully or partially restrict traffic especially targeting the older vehicle with higher emissions of pollutants.

Before 2005, almost 74% of Málaga's municipal bus fleet used diesel, 25.9% biodiesel and only 0.1% compressed natural gas. However, to reduce local pollutant emission from bus operations, EMT progressively changed its fleet. In 2008, Málaga was already one of the few cities in Spain to have almost 100% of the urban bus fleet operating at least Euro V emissions standard-compliant vehicles: 78% biodiesel, 20% Euro V, 1% electric, and 1% Euro IV).³⁵ However, at the metropolitan level, only 21.2% of the metropolitan bus fleet had reduced emission.

Noise pollution

Noise pollution present in large cities affects the quality of life of citizens; it can interfere with daily activities such as sleeping, resting, working, studying, and communicating. A survey conducted in Málaga in 2008 found that 64.8 percent of residents identified a road transport-related source of noise as a major disruptor. Among the main causes of city noises, respondents listed: road traffic (22%), trash collection (20%), public works on the road (20%), gathering and work activities (19%), buses (11%), and neighbors (8%).³⁶

³³ Málaga City Council, Government Area of Accessibility and Mobility. PEMUS

³⁴ Málaga City Council, Government Area of Accessibility and Mobility. PMUS

³⁵ Ministry of Environment, Spain, 2010.

³⁶ Ministry of Environment, Spain, 2010.

Road traffic fatalities and injuries

Despite growing private vehicle ownership and use in Málaga, the incidence of road traffic crashes remained relatively stable between 1999 (when the municipality registered 1,365 incidents of which 31 resulted in death and 1,772 in injury) and 2006 (with 1,195 incidents of which 22 resulted in death and 1,485 in injury).³⁷ Throughout this period four out of every five road traffic crashes resulting in an injury or fatality involved a car. However, car users were less likely to be the victims of injuries or deaths compared to less-protected road users, such as pedestrians or users of mopeds or motorbikes (see Table 7).

In general, before 2010, the speed limit in urban areas was 50 km/h, while on single carriageway roads it was 90 km/h; however, if the road footpath is wider than 1.5 meters, the speed limit was raised to 100 km/h.³⁸ The speed limit on the motorway was 120 km/h.³⁹

Table 7. Distribution of road accidents by mode (%) in Málaga, 2008.⁴⁰
(a) With at least one person injured

	2004	2005	2006	2007	2008
Walking	15.1	15.2	14.9	14.6	15.0
Moped	25.5	24.8	23.9	22.4	19.3
Motorbike	10.9	13.7	16.1	18.9	19.5
Car	41.3	39.3	37.6	36.6	38.0
Other	7.1	15.2	14.6	15.0	14.8

(b) With at least one person killed

	2004	2005	2006	2007	2008
Walking	38.1	42.0	40.2	41.0	42.0
Moped	19.4	17.6	18.0	14.5	12.3
Motorbike	10.7	14.4	15.3	21.7	21.5
Car	25.1	18.7	20.9	17.0	19.4
Other	6.7	7.2	5.6	5.8	4.9

³⁷ Ministry of Environment, Spain, 2010, Table 32.

³⁸ Blanco, Patricia R., 2013. "Slowing down the cities." *El País*. January 2.
https://english.elpais.com/elpais/2013/01/02/inenglish/1357132774_629057.html

³⁹ Marbesol Rent a Car, 2018. "Analysis of traffic offences in Spanish roads from 2012 to 2017"
<https://www.marbesol.com/blog/wp-content/uploads/2018/09/Analysis%20Of%20Traffic%20Offences%20In%20Spanish%20Roads%20-%20Marbesol.pdf>

⁴⁰ Ministry of Environment, Spain, 2010.

Discussion Questions

As a group, let us assume the role of policymaker in the municipality of Málaga at the time of SUMP initialization. Part 1 has identified several urban transport challenges, including congestion, inequality in access, air and noise pollution, and road safety.

How are these challenges interrelated? Are there common causes/contributing factors behind these challenges? Are there challenges that exacerbate the negative impacts of one another?

Given your discussion of the interconnections between different challenges and their contributing factors, what should be the main goal in the Málaga SUMP?

What additional data might you want to collect to better determine the main goal for the SUMP?



Part 2. SUMP Priorities

In 2008, the municipality of Málaga initiated a Sustainable Urban Mobility Plan (SUMP) with goals to reduce congestion, improve air quality, and achieve a more livable city. The plan was formally adopted by the city council committee in 2011. However, due to continued changes in economic and social conditions and resulting travel demand patterns as well as the approval of new urban development plans for the metropolitan area, the SUMP needed to be updated a few years later and approved with the name of Special Plan for Málaga Sustainable Urban Mobility. The city council committee formally adopted the updated SUMP in 2015.

The SUMP revision was seen as an opportunity to involve citizens in the decision-making process. The result was a new mobility model for Málaga that prioritizes the accessibility of people to jobs and other opportunities and goods to markets over vehicle movements. The updated SUMP identified 80 strategic actions that were organized into 10 areas of implementation:

1. Mobility by foot
2. Mobility by public transport
3. Mobility by bicycle
4. Mobility by private vehicles and road hierarchy
5. Intermodal integration
6. Parking supply and demand
7. Freight transport and urban distribution of goods
8. Safe mobility
9. Citizen participation
10. Territorial planning

Table 8. The 80 strategic actions of the 2015 updated Málaga SUMP organized by 10 areas of implementation.

Areas	Actions
1. Mobility by foot	1.1. Implementation of vehicle access control systems in protected environments (Low Emissions Zones) 1.2. Configure and prioritize the network of pedestrian routes in the city 1.3. Implementation of pedestrian priority zones and residential areas 1.4. Promotion of thematic routes 1.5. Encourage pedestrian flows by regulating traffic lights 1.6. Removal of architectural barriers and improvement of pedestrian accessibility 1.7. Measures to improve pedestrian road safety

Areas	Actions
2. Mobility by public transport	<ul style="list-style-type: none"> 2.8. Expansion of the lanes for buses and taxis 2.9. Maintenance and improvement of the existing bus and taxi lanes 2.10. Public transport management improvement 2.11. Improvement of the transport network in the function of tourists 2.12. Planning the extensions of the metro network 2.13. Optimization of the urban bus network (accounting for: energy efficiency, air quality, line distribution, urban and interurban service, multimodality, and accessibility) 2.14. Implementation of an integrated fare system 2.15. Traffic lights prioritization in favor of public transport 2.16. Improvement of information to the public transport user 2.17. Implementation of new technologies applied to public transport 2.18. Improving the accessibility of public transport stops and stations 2.19. Promoting the use of public transport 2.20. Optimization of the use of exclusive platforms for public transport 2.21. Optimization of the taxi service 2.22. Organization of a horse-drawn carriage service
3. Mobility by bicycle	<ul style="list-style-type: none"> 3.23. Development of additional cycling routes to expand the Málaga cycling infrastructure network 3.24. Maintenance and improvement of the existing cycling routes 3.25. Provision of urban furniture (e.g., bike racks) and technological measures for bicycles and electric scooters 3.26. Expansion and improvement of the bike sharing system 3.27. Improve the integration of bicycles with other means of transport in neighborhoods and city centers; reduce speed limit to 30 (“zone 30”) 3.28. Increased road safety for cyclists and riders of electric scooters 3.29. Creation of parking garage spaces for bicycles and electric scooters 3.30. Establish designated spaces for “shared mobility” (at public transport stations and other transport hubs) to promote multimodal transfer 3.31. Provision to support the use of bicycles 3.32. Awareness and outreach campaigns to encourage respect for the coexistence of all means of transport and the use of bicycles and electric scooters 3.33. Expansion of the bicycle lane network 3.34. Creation of lanes for bicycles, electric scoters, and mopeds

Areas	Actions
4. Mobility by private vehicles and road hierarchy	4.35. Reassign network order based on the new management and hierarchization of road space 4.36. Promote the rational and sustainable use of private motorized vehicle 4.37. Implementation and expansion of infrastructures for e mobility 4.38. Rearrangement and reconfiguration of roads for vehicular traffic in the interior of the neighborhoods 4.39. Implementation of technological measures in the road network for mobility management 4.40. Improvements in traffic management 4.41. Regulation of event-generated mobility 4.42. Implementation of speed deterrent 4.43. Establishment of low-emission zones 4.44. Implementation of lanes for buses, electric vehicles, and high occupancy vehicles 4.45. Measures to encourage the use of carpooling
5. Intermodal integration	5.46. Implementation of modal interchanges associated with sustainable modes of transport (e.g., pedestrians, bicycles, and shared mobility) 5.47. Implementation of park & ride at strategic points to favor the transfer from private vehicles to mass transport 5.48. Integration of modal interchanges with other services for citizens 5.49. Implementation of technological measures for user information throughout the urban and metropolitan environment
6. Parking supply and demand	6.50. Parking management to discourage private vehicle access to protected areas of interest 6.51. Parking buildings for residents 6.52. Establish a comprehensive system of regulation and management of parking on public roads, with road rearrangements and a social pricing system 6.53. Reorganization and regulation of parking in commercial areas 6.54. Parking plan for two-wheeled vehicles (e.g., mopeds and motorcycles); increase the number of parking spaces for motorcycles and implementation of reserved spaces in municipal parking buildings 6.55. Management and regulation of parking areas reserved for specific uses

<p>7. Freight transport and urban distribution of goods</p>	<p>7.56. Revision of loading and unloading zones: adaptation to demand and integration into the new city model</p> <p>7.57. Creation of multifunctional zones</p> <p>7.58. Implementation of a control system to manage access of heavy vehicles in the city</p> <p>7.59. Management of urban distribution of goods in the city.</p> <p>7.60. Development of an App for the reservation of parking spaces.</p> <p>7.61. Promote of the use of E-vehicles for freight in the city center and allow them access to restricted or pedestrian areas.</p> <p>7.62. Promote the distribution of goods downtown at night.</p> <p>7.63. Regulation of loading and unloading in pedestrian zones.</p> <p>7.64. Adaptation of local regulations to the new proposals.</p> <p>7.65. “Last-mile connectivity”—Creation of distribution micro-platforms and logistics points</p>
<p>8. Safe mobility</p>	<p>8.66. Actions to improve pedestrian safety.</p> <p>8.67. Safe school roads.</p> <p>8.68. Road safety inspections in educational centers.</p> <p>8.69. Increase in the number of speed cameras</p> <p>8.70. Awareness and respect campaign.</p> <p>8.71. Installation of traffic lights with countdown timers</p> <p>8.72. Implementation of traffic calming measures.</p> <p>8.73. Campaigns to improve discipline on the roads</p> <p>8.74. Implementation of traffic enforcement measures such as "red light cameras" to take photos of vehicles that entered an intersection after the traffic signal turns red</p>
<p>9. Citizen participation</p>	<p>9.75. Dissemination of information on sustainable mobility</p> <p>9.76. Training in sustainable mobility, aimed at specific population groups</p> <p>9.77. Promotion of transport to work plans</p>
<p>10. Territorial planning</p>	<p>10.78. Management of the network of access to the city, to direct traffic through the roads outside the urban core</p> <p>10.79. Establish methodological guidelines and technical criteria on construction methods for road space in relation to urban design and functionality in mobility to encourage walking, cycling and public transport, based on multimodal criteria</p> <p>10.80. Implement in newly urbanized areas the infrastructures to promote cycling, personal mobility vehicles and collective transport with dedicated spaces in the main road axes</p>

Discussion Questions

Málaga's SUMP includes an extensive list of actions organized into implementation areas. However, resources are often limited, requiring clear prioritization of actions for implementation to meet sustainable mobility goals. This discussion will consider how to consider multiple goals/criteria in prioritizing SUMP actions.

Málaga's SUMP was motivated by: (1) reducing congestion, (2) improving air quality, and (3) reducing road traffic fatalities and injuries. For each of these three goals, consider the perspective of a group of citizens that cares strongly about that goal. Given that perspective select and rank the top 3-5 implementation areas from the list of 10 included in Málaga's SUMP. Are there any critical implementation areas missing that would better support this goal? For each of the top 3 ranked implementation areas, identify one strategic action within the list that you, in your specific role, would lobby policymakers to implement right away.

- For goal (1) reducing congestion, consider the perspective of a group of middle-class employees who lives in the municipalities of Almogía, Pízarra, and Cartama but drive to a business center in Málaga municipality each day for work.
- For goal (2) improve air quality, consider the perspective of local school children who walk to school along roadways every day and are beginning to suffer from asthma and other respiratory issues linked to high exposure to local air pollutant emissions.
- And for goal (3), consider the perspective of an elderly resident living near the city center of Málaga municipality who is walking to the local market or health center or the perspective of a person cycling to work. Elderly residents often find it difficult to navigate curbs, walk slowly when crossing intersections and can feel rushed by short pedestrian crossing signal lengths, may feel unsafe when having to travel next to high-speed vehicles or cross many lanes of multi-directional traffic, and need spaces for more frequent rest.

Part 1 laid out other urban mobility challenges faced by the municipality of Málaga, but not identified explicitly as goals of the SUMP. One example of this is inequality in access and social exclusion for certain travelers, such as women. Consider the perspective of a group of female domestic workers living at the periphery of the metropolitan area in a lower-income neighborhood, who travel across town to higher-income residential areas for work. They often do not have access to a vehicle in their household and must travel by public transit during non-peak hours across the city with multiple transfers between routes. With this perspective, select and ranks the top 3-5 implementation areas from the list of 10 included in Málaga's SUMP. For each of the top 3 ranked implementation areas, identify one strategic action within the list that you, in your specific role, would lobby policymakers to implement right away.

In organizing and documenting the discussion, teams are encouraged to fill out the below table:

	Goal 1: Reduce Congestion	Goal 2: Improve Air Quality	Goal 3: Reduce traffic fatalities and injuries	Goal 4. Improve Access for Women
Rank 1	[list here the top-ranked implementation area from Málaga's SUMP or group's own brainstorming + near-term, priority action]			
Rank 2				
Rank 3				
...				

How do the priority areas differ based on the perspective or goal that you take?

Are there any priority areas that contribute to all or most of the goals of the SUMP and could, therefore, be areas of collective buy-in from multiple stakeholders and citizen groups?



Part 3. SUMP Action Implementation

The Málaga City Council Government Area of Accessibility and Mobility is responsible for the implementation of the SUMP through 2023, with the support of other council departments and stakeholders. While the implementation of the SUMP is still ongoing and has seen both successes and setbacks, three key factors for success have emerged from Málaga’s experience thus far.

First, having a clear implementing unit with a mandate to act and dedicated resources for implementation have been critical success factors for SUMP measure implementation in Málaga. While some input studies were contracted out to consulting firms, the SUMP’s themselves were authored by individuals in the municipal government. This was critical for ensuring local buy-in throughout the SUMP formulation and implementation process and to better enable coordination with other planning efforts in the municipality. The integration of the SUMP of Málaga into the General Land Use Urban Plan of the city, as a special plan, makes it a document of mandatory compliance by law ensuring land use planning coordination as well as guaranteeing that resources are allocated appropriately for the implementation of sustainable mobility measures identified in the plan.⁴¹ The City Council is financing the SUMP, prioritizing interventions that are achievable and measurable.

While clear ownership of SUMP implementation lay with Málaga City Council Government Area of Accessibility and Mobility, coordination across levels of government and among different planning and operating entities within government was a critical factor in implementation of the SUMP. Many of the SUMP actions are defined within the jurisdiction of the municipality; however, in some instances, they coordinate with the planning initiatives in place at the metropolitan, provincial, regional (Andalusia), and/or national level. By bringing in stakeholders from other governments and ensuring that SUMP actions were implemented in accordance with other plans, Málaga was able to unlock additional political and financial support for its initiatives.

A third factor contributing to successful implementation of SUMP actions in Málaga was citizen engagement. Throughout the SUMP process—from initiation through implementation—the Málaga City Council promoted the citizen’s engagement through several channels:

- To better analyze the needs of citizens a “Mobility Sector Council” was constituted at the municipal level as a place for citizens to debate, discuss ideas and make suggestions on mobility matters. The council also hosted “debates tables” (town halls) with open discussions between stakeholders representing sectors involved in mobility such as local police, the Metropolitan Transport Authority, consumer’s associations, representatives from bicycle, motorbike, taxi and heavy transport associations.
- In line with the European Commission digital agenda initiative, Málaga City Council opened several digital channels for citizens to publicly write and address their

⁴¹ Civitas, 2017. 2Move2 | Moving together for a better mobility: Final project brochure. <https://movilidad.malaga.eu/opencms/export/sites/movilidad/.content/galerias/Documentos-del-site/RESUMEN-2MOVE2.pdf>

ideas, initiatives and concerns directly to the Administration. Channel offers a space for debate, and foster dialogue with the local institution. The “Social Council of the city of Málaga” for instance is a channel for civil society to influence political decision of the City Council on social, economic, and planning matters.

- Upon the approval by the local government board of the SUMP “Advanced document”, the plan was shared with interest groups, companies, and the general public for reviews, comments, and suggestions.
- Finally, to promote transparency and citizens’ participation the City Council planned outreach campaigns and awareness campaigns on sustainable mobility and road safety as specific actions included in the SUMP. And implementation area 9 of the SUMP was dedicated to citizen participation.

In the following sections, we will consider progress made in two critical implementation areas of the Málaga SUMP: (1) mobility by foot and (3) mobility by bicycle.

Progress Implementing SUMP Actions

When it comes to implementation area 1—mobility by foot—Málaga implemented several measures to improve the safety of pedestrians and the livability of citizens. The historic city center has been repurposed thinking of the pedestrian as the main users of the urban space and to limit interactions and conflict points between pedestrians and motorized transport. While the pedestrian area have expanded in the city center, hotels and residents are granted access with motorized vehicles. Málaga City Council is considering the idea of further expanding the historic city center.

Additionally, the following measures have been applied:

- The implementation of zones with reduced speed limits to 20 and 30 Km/h (“Zone 20” and “Zone 30”) to promote safety for NMT, improve the air quality, reduce noise and overall establish a more friendly and calm environment.
- The increase in the number of pedestrian areas and the removal of architectural barriers to favor walking and grant universal access.
- The development of squares and parks for the leisure of citizens and pedestrians.
- In order to improve the pedestrian environment with individuals with reduced mobility, the city installed pedestrian traffic lights with acoustic signaling and a radio control system. Additionally, the city increased the parking spaces intended for people with reduced mobility.

When it comes to implementation area 3—mobility by bicycle—the SUMP establishes the objective to reach a bicycle mode share of 9% for all passenger trips by 2025. Yet, at the time of SUMP initiation, cycling represented only 0.4% of trips. This share has increased to 1.7% of trips by 2014, encouraged by the implementation of the following measures:

- The increase in the supply of bicycle lanes that in 2014 reached 35 km; it is planned to reach a 100 km long bike lane network before 2020.
- The implementation of a bike share service with 22 stations and 400 bicycles and 900 new bicycle racks

- The implementation of a public bike share scheme combined with public transport available for residents as well as tourists. The effort resulted in 39,500 registered users, 2,700 bicycle trips/day, and an average single bicycle use of 8 times/day.

Despite these significant investments, bicycle mode share stalled at 1.2% in 2018 (see Table 10) and private car use remained persistent (see Table 9).

Table 9. Evolution of motorized mode share in Málaga municipality, 2008-2018.⁴²

Málaga Modal Split (motorized mobility)					
Mode	2008		2018		Percentage change (%) 2008-2018
	Trips per day (#)	Percentage (%)	Trips per day (#)	Percentage (%)	
Bus (unscheduled)	21,502	2.7	1,513	0.2	-2.5
Bus, EMT	144,293	18.0	140,729	15.9	-2.1
Bus interurban	2,528	0.3	12,106	1.4	1.1
Commuter rail	1,450	0.2	7,566	0.9	0.7
Car	522,256	65.1	615,880	69.8	4.7
Motorbike	92,780	11.5	63,555	7.2	-4.3
Taxi	17,264	2.2	9,079	1.0	-1.2
Metro	0	0.0	31,778	3.6	3.6
TOTAL	802,072	100.0	882,206	100.0	--

Table 10. Evolution of mode share for all passenger trips (motorized and non-motorized) in Málaga municipality, 2008-2018.⁴³ By 2018, two additional modes of transport were available in Málaga municipality that were not available in 2008: electric scooters and metro rail

Málaga Modal Split (motorized and non-motorized)					
Mode	2008		2018		Percentage change (%) 2008-2018
	Trips per day (#)	Percentage (%)	Trips per day (#)	Percentage (%)	
Walking	686,005	45.9	605,288	40.0	-5.9
Bicycle	6,721	0.4	18,159	1.2	0.8
Bus (unscheduled)	21,502	1.4	1,513	0.1	-1.3
Bus, EMT	144,293	9.7	140,729	9.3	-0.4
Bus interurban	2,528	0.2	12,106	0.8	0.6
Suburban train	1,450	0.1	7,566	0.5	0.4
Car	522,256	34.9	615,880	40.7	5.8
Motorbike	92,780	6.2	63,555	4.2	-2.9
Taxi	17,264	1.2	9,079	0.6	-0.6
Metro	*0.0	*0.0	31,778	2.1	2.1
Electric scooter	*0.0	*0.0	7,566	0.5	0.5
TOTAL	1,494,799	100%	1,513,219	100.0	--

⁴² Table 9 shows an increase in the use of private cars (5.8%), bicycles (90.8%) and interurban buses and trains (0.6% and 0.4% respectively). Pedestrian mobility was reduced by almost 6%. The reduction in pedestrian mobility however can be explained by the fact that in 2008 data was collected considering pedestrian travel time to be at least 5 minutes whereas in 2018, the duration of pedestrian travel time had to be at least 10 minutes.

Source: Málaga City Council, Government Area of Accessibility and Mobility. PMUS

⁴³ Málaga City Council, Government Area of Accessibility and Mobility. PMUS

Coordination Among Government Entities and Plans

For example, in 2012, the Andalusian bike plan was approved to promote the use of bicycles. The Andalusian Bike Plan fell within the framework of actions of SUMP and included measures such as the development of bicycle lanes on existing roads, bicycle parking, and encouraging bike connections to public transport ('intermodality'). To foster synergies, the Andalusian government and the Málaga City Council agreed to install 68,58 km of bike lanes within the municipality and the Andalusian government agreed to finance 74 percent of it. The plan considers the natural barriers within the Málaga metropolitan areas (such as the mountains, the river, and the sea) and pinpoints access points to connect the coast to the metropolitan fabric to the east coast through relatively flat routes. The cycling connection is extended to the nearby city of Fuengirola and in proximity of commuter/suburban rail stations.

Citizen Engagement and Community Value-Add to SUMP Walking and Biking Initiatives

Representatives of residents of the historic city center developed a total of 12 proposals related to parking for residents, restricted access and pedestrianization. Incorporating these community-led proposals into SUMP implementation helped build public support for the program and improve the sensitivity of actions to the local context. For example, the municipal sports foundation of Málaga suggested prioritizing bike lanes close to facilities, such as schools and sport areas.

Outreach to citizens through their place of employment was another key feature of the Málaga SUMP. The Regional Technological Park of Andalucía (*Parque Tecnológico de Andalucía, PTA*), located 13 km west of Málaga, houses 600 different companies and more than 16,774 employees. To provide a valid alternative to private cars and reduce the single occupancy trips of the employees and visitors, a mobility management initiative⁴⁴ was launched in partnership with the PTA management body. The city administration and the regional government of public transport operators worked together with the PTA management body to implement a bus line connecting the PTA with Málaga city center, with a 10 to 15 minutes frequency. Additional measures implemented to improve mobility include, the PTA financed bike loan program to facilitate mobility at no cost within the compound.⁴⁵ Other measures implemented includes carpooling services through a interactive carpooling matching tool, to reduce single occupancy trips and a mobility center that provides information to visitors and employees on how to reach the PTA with alternatives means of transport.

To promote efficient and sustainable transport to the younger generations, the municipality launched the "Safe Routes to School" campaign, which rolled out monitored routes for students to go to school by walking, biking, and bus.⁴⁶ The initiative was supported by a mobile app "Trazeo" that tracked progress and keep parents and teachers informed in real-time. In the first year, over 500 students joined the initiative. These

⁴⁴ Travel Plans for working commuters are common in Spain and even compulsory for biggest employers. These plans are arranged by the companies and, in some cases, benefit from subsidies from the public administration.

⁴⁵ https://thepep.unece.org/sites/default/files/2020-04/Mobility%20Management_WEB.pdf

⁴⁶ <https://civitas.eu/mobility-solutions/strategic-campaign-on-electro-mobility-and-safe-routes-to-school>

campaigns helped engaged the youth as well as their parents, building awareness of alternative transport modes to the private car.

Discussion Questions

The discussion above demonstrated examples of how the Málaga City Council Government Area of Accessibility and Mobility has engaged other government counterparts and stakeholders in the implementation of its SUMP implementation areas 1 and 3.

- Were the institutional and funding/financing structures well set-up to implement the SUMP?
- Given the progress made so far in terms of project implementation but also travel patterns (see Tables 9 and 10), how would you rate the SUMP implementation? What, if anything, could they have done differently to have made a larger impact?
- What other stakeholders not mentioned in the text above could be important to consult specifically when it comes to investments in pedestrian and bicycling infrastructure?

Now, let us step away from Málaga and return home to our own cities. For your cities, what entity within existing institutions has the mandate and resources to implement SUMP? What more could be done in the context of SUMP preparation that could better enable and empower that implementing unit?

Next, choose a different implementation area identified in the Málaga SUMP that may be relevant for your cities (other than implementation areas already discussed in Part 3: mobility by foot and mobility by bicycle). For the chosen implementation area, identify:

- What other government entities would need to be consulted in SUMP formulation and partnered with during implementation? Think both in terms of other government departments in your municipality, but also entities at other levels of government (such as metropolitan or regional level)
- What existing plans for urban development, transportation, or other related area would need to be considered in identifying complementary actions for the SUMP?
- At what stage during the SUMP process should discussions with key stakeholders take place?
- What stakeholders should be consulted during formulation and implementation of SUMP actions in this implementation area? Are there any stakeholder groups that may be strongly supportive of improvements in this implementation area? Are there any stakeholder groups that may be adversely affected or create opposition to improvements in this implementation area? What might you do as part of stakeholder engagement during the SUMP process to build greater public support and avoid conflicts?