

GUIDE FOR THE INTRODUCTION OF ROAD SAFETY STANDARDS IN THE PREPARATION OF SUSTAINABLE MOBILITY PLANS



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The Guide for the introduction of road safety standards in the preparation of Sustainable Mobility Plans has been drafted by the Directorate-General for Traffic, with technical assistance from Consultora Alomon S.L. and in collaboration with the Spanish Federation of Municipalities and Provinces.

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Contents

INTRODUCTION	1
Vision Zero and Safe System.....	2
Methodological framework	3
STAGE 1. ASSESSMENT	5
How can the municipality be characterised in terms of road safety?.....	5
What data collection can be carried out?.....	6
Technical inspection	6
How can the assessment be supported through public participation?	9
What are the main road safety problems identified?.....	11
STAGE 2.ACTION PLAN	13
What objectives should be pursued?	13
Approach	13
Measures to be implemented	15
STAGE 3.EVALUATION AND FOLLOW-UP	30
STAGE 4.CONCLUSIONS AND RECOMMENDATIONS	32
BIBLIOGRAPHY	33

INTRODUCTION

In September 2015, the General Assembly of the United Nations adopted the 2030 Agenda for Sustainable Development, a plan of action for people, planet and prosperity that also seeks to strengthen universal peace and access to justice. The 2030 Agenda sets out 17 Sustainable Development Goals (SDGs) with 169 associated targets which are integrated and indivisible, and cover the economic, social and environmental fields.

The Spanish Government has taken measures and action to promote sustainable mobility in line with 3 of the 17 **Sustainable Development Goals**.



In this respect, the *Law on climate change and energy transition* establishes that at least municipalities with more than 50,000 inhabitants and island territories must adopt, before 2023, Sustainable Urban Mobility Plans setting out mitigation measures to reduce transport-related emissions. Furthermore, the *Recovery, Transformation and Resilience Plan* includes assistance and subsidies for municipalities of any size with a view to improving mobility within their jurisdiction.

The **Directorate-General for Traffic (DGT)**, whose main objective is to reduce road accidents, both on highways and in urban areas, on the understanding that mobility and transport cannot be fully sustainable if they are not also safe, cooperates in efforts to promote safety and sustainability by preparing and publishing guidelines so that authorities preparing Sustainable Mobility Action Plans have **standards and tools** with which to incorporate necessary and appropriate road safety requirements into their plans.

This support for municipal authorities is a continuation and update of past efforts (with documents such as the Model Urban Road Safety Plan published in 2007), adopting an approach that incorporates road safety into the broader sustainable development framework, in line with road safety targets under the United Nations Sustainable Development Goals (SDGs).

These **methodological guidelines for the introduction of road safety standards in the preparation of Sustainable Mobility Plans**, drafted in conjunction with the Spanish Federation of Municipalities and Provinces, emphasise the **mobility and road safety nexus**, and it is specifically aimed at municipal and supramunicipal authorities.

This guide is also intended for use by **small and medium-sized municipalities** that are not legally required to prepare Sustainable Urban Mobility Plans (SUMP) but seek to improve road safety, by offering basic guidelines for the adoption of measures within a methodological framework.

Various **stages** will be covered throughout the guidelines to establish general standards for the incorporation of road safety standards in the preparation of the Sustainable Urban Mobility Plans, as well as other measures to enhance mobility: analysis and assessment, establishment of an action plan, evaluation and follow-up, and, lastly, conclusions and recommendations.

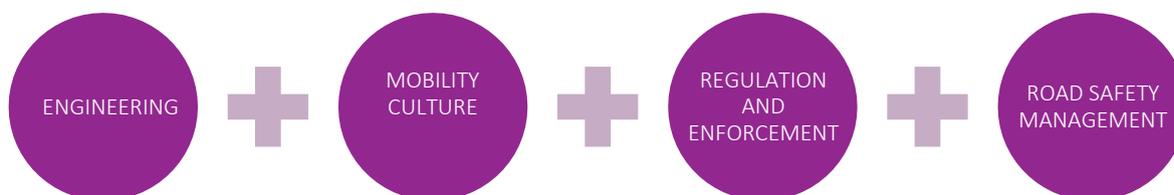
Vision Zero and the Safety System

As an integral road safety strategy in towns and cities, the introduction of road safety standards in the SUMP's and other measures to enhance mobility must always be geared towards **Vision Zero and the safety system**.

The premise of **Vision Zero** is that no loss of life is acceptable.

Vision Zero seeks to adopt **preventive measures** to achieve zero road traffic deaths through a strategy based on a comprehensive safety approach.

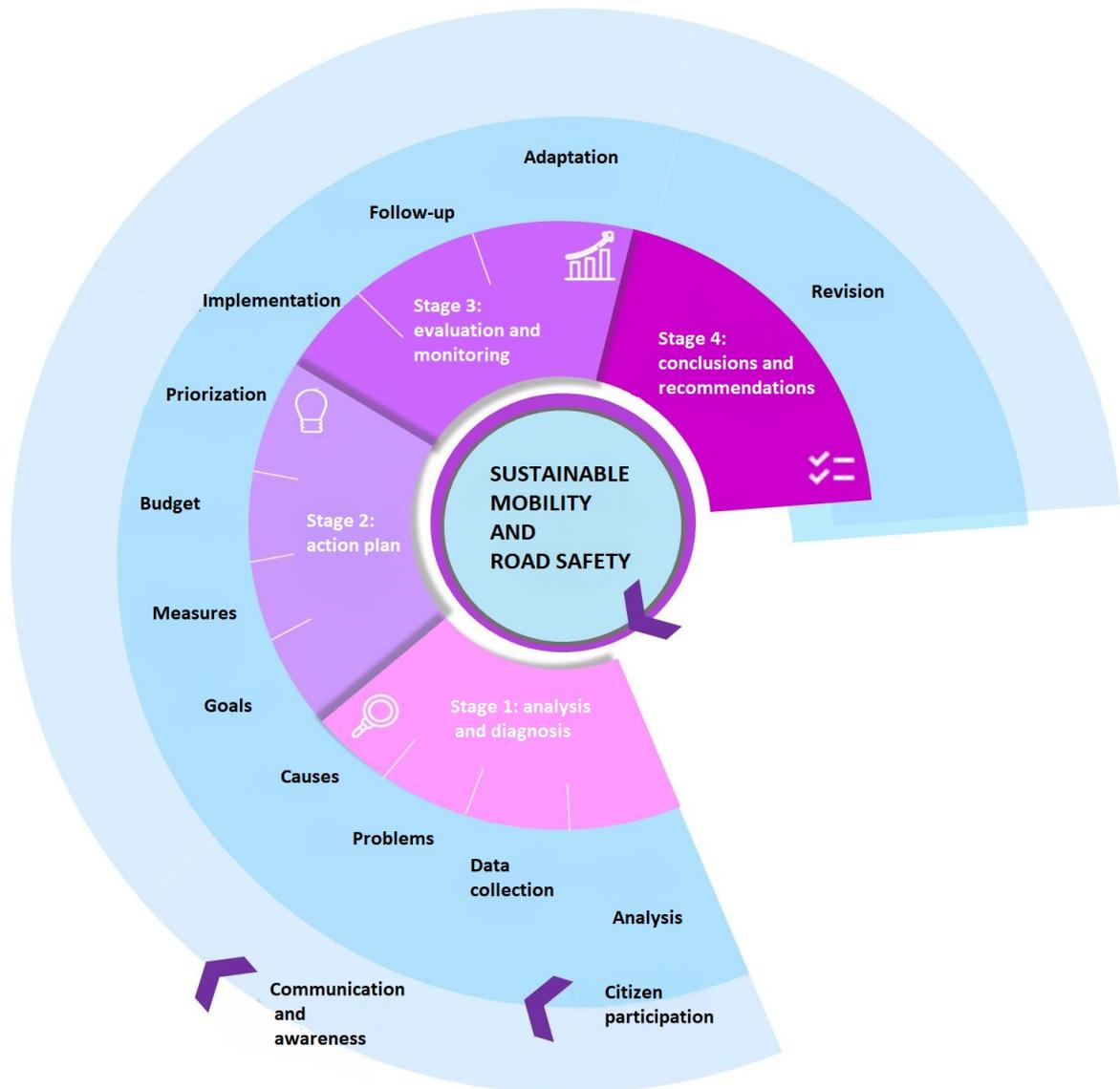
- ❖ **People make mistakes and they should not pay for them with their lives:** the inevitability of human error is acknowledged. The responsibility of the authorities must therefore be emphasised when it comes to creating safe road systems, with a high degree of compliance with the law, thus protecting people's lives and physical integrity. The aim is to undertake shared efforts to prevent dangerous driving and help improve urban coexistence.
- ❖ **Vision Zero is a comprehensive road safety strategy:** It is based on the classic “Three Es” of road safety engineering, enforcement and education adding a system-wide approach to address the interactions between them. Accordingly, it is underpinned by four pillars: engineering, regulation and enforcement, mobility culture, and management.
 - **Engineering:** planning and implementing engineering strategies to achieve safe spaces through the improvement of intersections, “complete streets” and traffic calming.
 - **Regulation and enforcement:** establishing rules that protect people, ensuring compliance with the law by improving enforcement, and promoting good driving.
 - **Mobility culture:** promoting intermodality and the considerate use of streets.
 - **Management:** improving data collection to identify the causes of traffic incidents, preparing prevention strategies and strengthening the institutions responsible.



Methodological framework

The methodological framework to foster the inclusion of road safety standards in the SUMP is addressed from a **circular perspective**, as we must recall that this process must undergo constant follow-up and monitoring.

The **complete methodological framework** is set out below:



The **four main stages** should be followed, with their respective phases:

1. Analysis and Assessment
2. Action Plan
3. Evaluation and Follow-up
4. Conclusions and Recommendations

It is also crucial to bear in mind that, throughout the entire process, citizens must be involved through **public participation**, and outreach activities must be carried out.

Small municipalities and municipalities facing demographic challenges

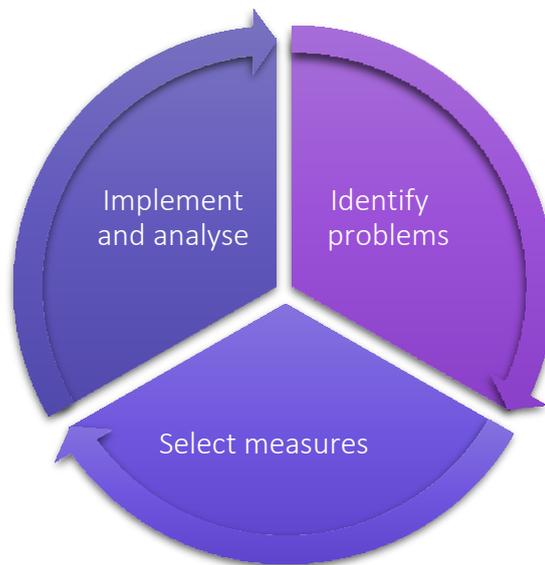
Municipalities facing demographic challenges, which are not required to draft SUMP's owing to their special distinguishing features in terms of mobility, may implement sustainable mobility and road safety measures. Throughout this guide, references and recommendations will be made to these municipalities to enable them to make improvements to road safety in a simple and relevant manner.

What are municipalities facing demographic challenges? Municipalities facing demographic challenges are defined as municipalities with up to 5,000 inhabitants and non-urban municipalities of up to 20,000 inhabitants with no population centres of more than 5,000 inhabitants.

What methodology is applied when improving road safety?

A **simplified methodology** is proposed in these cases:

1. **Identify the main road safety problems:** Through available data, knowledge of the area and interviews with stakeholders.
2. **Determine measures to help mitigate the problems:** For this, the guide provides a framework that links problems with the measures to implement.
3. **Implement the measures and follow up** on them.



STAGE 1. ASSESSMENT

The **analysis of the current situation** is **intended** to provide a snapshot of the reality of road safety in the municipality. The following tasks are proposed for this:



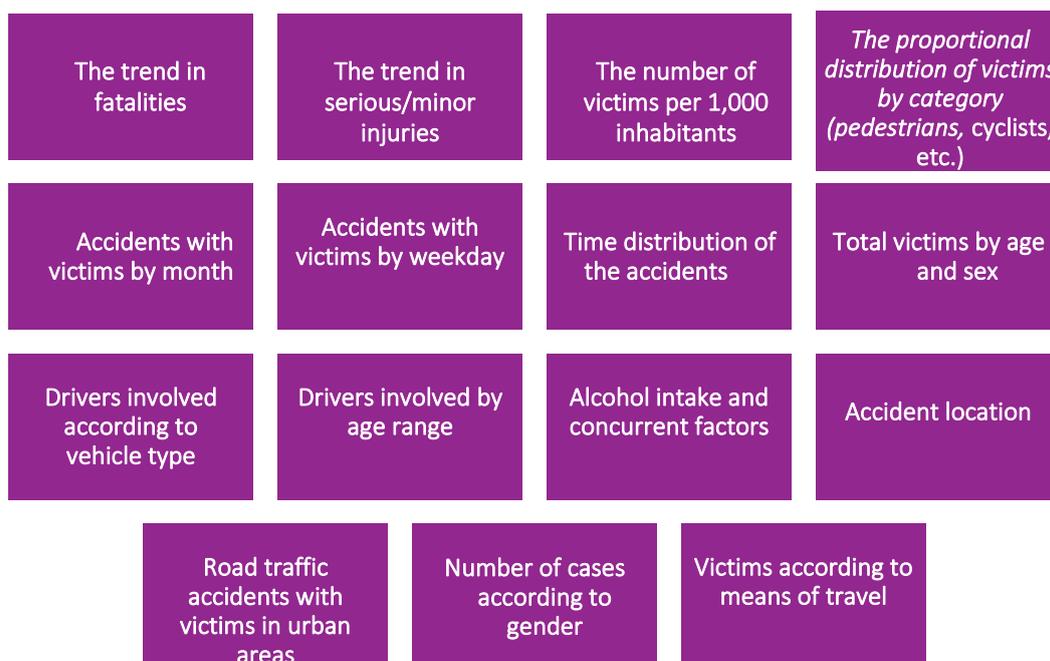
For the regulatory review, the applicable **regulations** at the European, State, autonomous community and local levels should be used as a reference. The list of regulations, as well as **documentary references and methodologies** of interest, can be found in the bibliography.

Small municipalities and municipalities facing demographic challenges

For a small municipality or municipality facing demographic challenges, a **simple preliminary assessment** can be carried out through knowledge of the area (technical inspection), accident data available at the city hall or suggestions from the public and, in particular, interviews with stakeholders. With this, the **main road safety problems** requiring action can be identified. A more complex characterisation of the municipality or specific data collection are not essential.

How can the municipality be characterised in terms of road safety?

An analysis of publicly available road safety information forms the basis. It is recommended to obtain **urban accident data** through publicly available information, such as the DGT and reports drafted by the city hall, trying to obtain as much information as possible, for example:



What data collection can be carried out?

The **data collection campaign** will depend on the characteristics of the municipality, its resources and the existence of a SUMP. The following data collection is proposed:

Task	Application
Technical inspection	This provides a general overview that is essential for knowledge of the area and its issues, both in terms of road safety and general mobility. Technique: Qualitative analysis of general road safety in the municipality, detection of conflict points, analysis of especially sensitive areas, etc.
Traffic counts at critical points and intersections	To ascertain the current situation at key points, mainly high-accident areas. Technique: Count of cars, pedestrians, cyclists, etc. It is advisable to do this at least during peak traffic hours, determining vehicle flows on the selected roads, disaggregating them by turning movements and hourly and daily volumes, in order to conduct the subsequent analysis.
Road safety aspects in mobility surveys	The aim is to determine the population's road safety concerns, both real and perceived. Technique: In the case of municipalities in the process of drafting a SUMP , questions could be included on road safety in the surveys carried out, whether by telephone, in person or electronically.
Specific road safety survey	The aim is to determine the population's road safety concerns, both real and perceived. Technique: A brief survey could be conducted in the case of municipalities that already have a SUMP but wish to extend and improve it by including road safety standards.

Technical inspection

It is advisable to conduct at least one technical inspection at the start of the assessment. Inspections are carried out with the aim of completing a **qualitative analysis** of mobility and safety in the area of study. In other words, the technical inspection serves to gain knowledge of the area, which is key for any study of this type.

If this is done before the fieldwork, a **qualitative view** is obtained that can define and complement the fieldwork by ensuring that data collection on the ground is carried out with prior knowledge of the functioning of mobility. It would also allow subjective aspects that fall outside the evaluation of the quantitative information obtained to be incorporated into the characterisation of the area.

The inspections allow **primary conclusions** to be drawn on the functioning of the general mobility system and form a **preliminary assessment of road safety**.

How can a technical inspection be organised?

- ❖ Walking audit of the urban centre, analysing pedestrian accessibility, squares and intersections, and potential bicycle/car and pedestrian/car conflicts.
- ❖ Inspections of the areas around schools and other especially sensitive areas.
- ❖ Analysis of intersections or traffic count points selected for data collection with the aim of specifying the counts to be undertaken.
- ❖ Cycling audit of the cycle lanes in the municipality, in order to assess bicycle mobility and safety, both real and as perceived by users of the infrastructure.
- ❖ Driving audit of the highest speed roads in the municipality to determine actual traffic speed.

Traffic and pedestrian counts

Vehicle, pedestrian, cyclist and personal mobility vehicle counts are recommended. Traffic count points are to be located at **conflict points** in the area of study to determine the traffic density in different parts of the city, distinguishing between light and heavy vehicles and to subsequently establish specific measures at those points or assess how it could affect traffic reorganisation.

Surveys as part of the road safety analysis

It is important to bear in mind that surveys (electronic distance measurement (EDM), in person and online) are not only a tool for obtaining highly useful information to give a snapshot of the current situation and understand mobility patterns and their explanatory factors, but they are also an **instrument for public participation and outreach**. The users surveyed will feel they have been heard.

Below is an **example of a road safety questionnaire** that can be used in full for a specific road safety survey or as part of a broader questionnaire such as a household mobility or similar survey:

BASIC INFORMATION (tick as appropriate).

A.1	Gender:
	<input type="checkbox"/> Male <input type="checkbox"/> Female
A.2	Age:
	<input type="checkbox"/> 16-29 <input type="checkbox"/> 50-64 <input type="checkbox"/> 30-49 <input type="checkbox"/> 65 or over
A.3	Do you have a licence and a vehicle?
	<input type="checkbox"/> I have neither. <input type="checkbox"/> I have a licence, but no car. <input type="checkbox"/> I have both. <input type="checkbox"/> I have a car but no licence.
A.4	How many motor vehicles (motorbike or car) does your family unit have?
	<input type="checkbox"/> None. <input type="checkbox"/> 1 vehicle <input type="checkbox"/> 2 vehicles <input type="checkbox"/> 3 vehicles <input type="checkbox"/> 4 or more vehicles

CONCERNING ROAD SAFETY. Consider questions B.1 to B.18 below and indicate to what extent you agree:

		Not at all				Strongly agree	DNK/DNR
B.1	Do you find the speed limits in the municipality reasonable?	1	2	3	4	5	DNK/DNR
B.2	As the driver of the vehicle (passenger car, light vehicle and/or bus), do you use mobile devices while travelling?	1	2	3	4	5	DNK/DNR
B.3	As a car driver and/or passenger, do you use a seat belt and/or child restraint systems?	1	2	3	4	5	DNK/DNR
B.4	As a motorcycle, moped, bicycle and personal mobility vehicle driver and/or passenger, do you use mobile devices while travelling?	1	2	3	4	5	DNK/DNR
B.5	As a motorcycle, moped, bicycle and personal mobility vehicle driver and/or passenger, do you use a helmet while travelling?	1	2	3	4	5	DNK/DNR
B.6	Do you believe that the footpaths are sufficiently wide and is there space to walk along them without occupying the road at any point?	1	2	3	4	5	DNK/DNR
B.7	Are the streets regulated to allow safe transit of people along the road where the footpaths are insufficient (pedestrian priority and speed limits)?	1	2	3	4	5	DNK/DNR
B.8	Do you believe there are sufficient pedestrian crossings?	1	2	3	4	5	DNK/DNR
B.9	Do you consider the pedestrian crossings to be visible and well signposted?	1	2	3	4	5	DNK/DNR
B.10	Is there a clear cycle route? (cycle paths and signage)	1	2	3	4	5	DNK/DNR
B.11	In your view, are the intersections free from visual obstacles? (kiosks, parked vehicles, vegetation, advertising, etc.)	1	2	3	4	5	DNK/DNR
B.12	Are there clear and safe pedestrian routes to public transport stops?	1	2	3	4	5	DNK/DNR
B.13	Do you believe there is sufficient signage for vehicle traffic? (stop, give way, no entry and dual circulation signs, etc.)	1	2	3	4	5	DNK/DNR
B.14	Do you believe there are sufficient road safety lessons in schools?	1	2	3	4	5	DNK/DNR
B.15	Are there problems with congestion or safety at the entrances to schools and other especially sensitive areas (health centres, hospitals, etc.)?	1	2	3	4	5	DNK/DNR

B.16	What are the main road safety issues in the municipality?
	<i>Open question</i>
B.17	Are there high-accident areas? Where? Why?
	<i>Open question</i>

How can the assessment be supported through public participation?

The public participation approach should be **two-way**, not only to inform, but to include, where possible, suggestions from stakeholders in a responsible manner. It is not “a yes to everything”, as the final decision ultimately rests with the competent authorities. Participation should therefore be planned, dedicating resources, identifying objectives and stakeholders, establishing measures and preparing messages and documents.

Of the various options that public participation offers, interviews with stakeholders should be conducted at a minimum.

Interviews with stakeholders

To gain a complete understanding of road safety in a municipality, it is important to have the opinion and local knowledge of certain stakeholders, whose involvement is key when developing it. For example:



City hall technical staff in the fields of mobility, accessibility, urban planning or similar

Local police



Associations: Parent and teacher associations, associations of persons with disabilities, cyclists' associations, etc.

Below is a selection of questions that could be asked in interviews with stakeholders with the **twofold objective** of determining **road safety problems** and **hearing suggestions for improvement**:

Interviews with stakeholders
What are the main road safety issues in the municipality?
What do road traffic accidents occur in the municipality? Where? At what times? How often? What type of vehicles are involved? What is the victim profile? What is the cause?
Are there high-accident areas? Where? Why?
Are the city speed limits respected? If not, specify the streets where speeding occurs.
Are stop and give way signs respected? If not, specify the crossings where this type of offence occurs.
Are there problems with congestion or safety at the entrances to schools and other especially sensitive areas?
Do you believe that too many cars pass through the urban centre?
Are there clear and safe pedestrian routes for people?
Are the footpaths sufficiently wide and free of obstacles?
Are the streets regulated to allow safe transit of people along the road where the footpaths are insufficient (pedestrian priority and speed limits)?
Are there points where pedestrian/cyclist visibility is inadequate? Are the intersections free from visual obstacles? (kiosks, parked vehicles, vegetation, advertising, etc.)
Are there natural crossing points where pedestrian crossings are needed?
Is the maintenance and signage of pedestrian crossings adequate?
Are there safe islands on pedestrian crossings on two-way roads with two or more lanes per direction, or on one-way roads with more than two lanes per direction?
Is there a clear cycle route? (cycle paths and signage)
Are the cycle paths sufficiently wide, free of obstacles and protected with separators to ensure cyclists' safety?
On cycle paths, is the paving adequate and suitably maintained?
Are road safety lessons given in schools?
Do you have specific suggestions to help resolve these problems?



What are the main road safety problems identified?

When identifying problems and causes, answers should be sought to the following questions:

- ❖ What is the trend in the accident rate in the municipality?
- ❖ What is the most common type of victim?
- ❖ Where do the accidents occur?
- ❖ What causes these accidents?
- ❖ What type of vehicles are involved?
(cars/motorbikes/buses/lorries/bicycles/scooters)
- ❖ Which groups are affected?
- ❖ When do these accidents occur?

By analysing the information obtained, it will be possible to identify the main road safety problems in the municipality and their causes, so that preventive or corrective measures can be taken.

Small municipalities and municipalities facing demographic challenges

In small municipalities, the main causes of road safety issues are:

- ❖ The deeply rooted habit of using cars to travel short distances.
- ❖ Also, the habit of “parking at the door” causes circling traffic and even widespread parking violations (leaving the car parked on the footpath).
- ❖ High rate of traffic passing through the urban centre, including heavy vehicles.
- ❖ Speeding.
- ❖ Lack of regulation on streets with very narrow or inexistent footpaths, which function as a shared space without regulated speed or pedestrian priority.
- ❖ An ageing population, with a greater need for footpath space and universal accessibility.
- ❖ Poorly maintained paving.
- ❖ Crossings or intersections with poor visibility.

By way of conclusion, the **most common road safety problems in Spanish municipalities** and their causes for inclusion in a Sustainable Urban Mobility Plan are listed:



Road safety problems

- **Accidents:**
 - Road accidents
 - Road accidents involving pedestrians (collisions)
 - Road accidents involving cyclists
- Perceived **lack of safety** by users of the network

Causes

- Existence of high-accident areas
- High rate of car use to travel short distances
- High rate of traffic passing through the urban centre
- Speeding
- Speeding outside schools, health centres and civic centres, and the immediate surroundings
- Conflict points at the entrance to residential areas
- Poor visibility of pedestrian crossings
- Lack of visibility at intersections
- Circling traffic in search of parking
- Bad parking
- Inadequate cycle paths: gaps, narrow sections, obstacles etc.
- Ambiguous right of way
- Lack of public awareness of driving hazards
- Lack of respect for traffic regulations and general public misinformation

STAGE 2. ACTION PLAN

The Action Plan proposed here is a guide that provides a series of measures for improving road safety to be considered when drafting and implementing sustainable urban mobility plans and actions.

What objectives should be pursued?

The end goal or target of this Action Plan will be to reduce the number of accidents on town and city streets through actions that, on the one hand, help protect road users and, on the other, calm and reduce motorised traffic, which has the greatest impact on the accident rate.



Approach

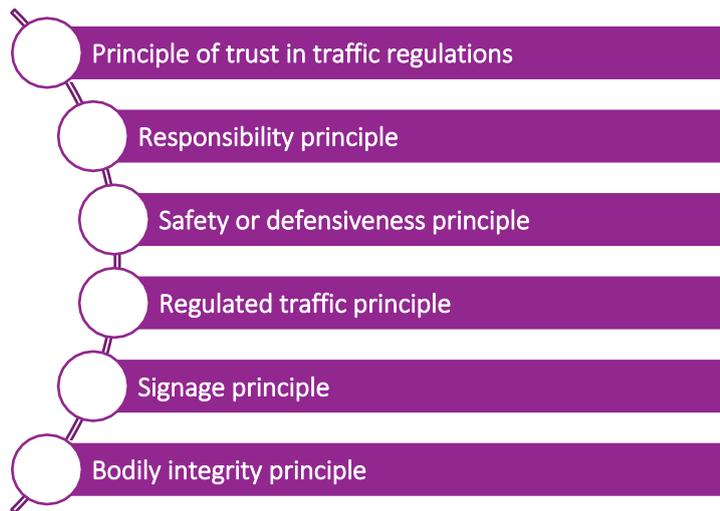
To design and implement sustainable mobility and road safety measures that help achieve the stated aim, the changing trend that is happening in the design and layout of towns and cities must be borne in mind.

Pedestrians and cyclists have traditionally been seen as vulnerable road users. In this sense, all road safety and sustainable mobility measures have always been geared towards separating them from motorised traffic to protect them from potential accidents. These separation measures have merely served to limit autonomy, space and shared use of streets for people who walk or travel by bicycle or personal mobility vehicles.

In recent times, the approach has shifted completely, based on the premise that these users should no longer be “vulnerable”. Accordingly, the measures to be taken are focused on giving towns and cities more and better space to walk and travel by non-motorised means, where doing so is safe, by limiting and regulating spaces intended for cars, which are the most dangerous vehicle in terms of causing accidents.

It is not a question of protecting pedestrians, cyclists and other users of sustainable means by limiting their space, but by giving them greater prominence on the street.

The rights of each individual to occupy and use public space are contingent upon the rights of others to use the same space. Therefore, to ensure the **safe use of public roads**, it is not enough simply to recognise the need to comply with the laws governing their shared use; values and principles must also be adopted. A list of these **basic principles** is set out below:



- ❖ **Principle of trust in traffic regulations:** all public road users who behave responsibly have the right to expect other users to do so too. However, it should be borne in mind that users should anticipate irresponsible behaviour by others.
- ❖ **Responsibility principle:** all drivers and public road users have the responsibility to comply with the regulations. In doing so, they avoid becoming a danger or obstacle to others, and they must accept the consequences of their actions.
- ❖ **Safety or defensiveness principle:** anticipating traffic rules violations by assuming that other users may act carelessly. **Caution**, one of the fundamental traffic rules, is derived from this.
- ❖ **Regulated traffic principle:** drivers must remain in control of their vehicle at all times. Thus, drivers must be fully focused on driving, without distractions, to avoid losing control of the vehicle and causing harm to others as a result.
- ❖ **Signage principle:** this complements the trust principle, as it states that if there is no sign indicating any change to normal traffic flow, the driver can be confident that there is no obstacle and, if there were, it would be signposted.
- ❖ **Bodily integrity principle:** also known as the personal safety principle. This refers to circumstances that “require” someone to act against the rules because complying would put his or her personal safety at risk.

Measures to be implemented

Measures that can be included in a SUMP to address the road safety issues identified are set out below. Each measure is then described in a summary sheet:

ROAD SAFETY ISSUES	MEASURES									
	1 Traffic control and organisation	2 Traffic calming	3 Parking management	4 Safe public transport stops	5 Signage	6 Improving safety in pedestrian areas	7 Improving cyclist safety	8 Improving intersections	9 Regulations and penalties	10 Education and awareness
1. Existence of accident black spots	●	●			●	●	●	●	●	
2. High rate of car use to travel short distances	●	●	●			●	●			●
3. High rate of traffic passing through the urban centre	●	●			●	●			●	
4. Speeding		●			●	●		●	●	●
5. Speeding around especially sensitive areas	●	●	●		●	●			●	●
6. Conflict points at the entrance to residential areas		●			●					
7. Poor visibility of pedestrian crossings		●	●	●		●		●		
8. Lack of visibility at intersections		●					●	●		
9. Circling traffic in search of parking			●							
10. Bad parking			●						●	●
11. Inadequate cycle paths: gaps, narrow sections, obstacles etc.				●			●			
12. Ambiguous right of way				●	●		●	●	●	●
13. Lack of public awareness of driving hazards										●
14. Lack of respect for traffic regulations and general public misinformation									●	●



TRAFFIC CONTROL AND ORGANISATION

Description of the measure		
<p>In many cities, traffic organisation causes vehicles to pass almost inevitably through the city centre, not only for internal trips but also to connect with other municipalities in the area. Also, it is usually the shortest route for internal trips, which results in a high volume of transit traffic.</p> <p>Reorganising traffic is proposed, resolving issues of highly unsafe spaces owing to congestion, high volumes of transit traffic, high traffic speeds, etc. The aim is to reduce traffic transiting through the urban centre to make it friendlier, safer and more accessible for pedestrians.</p>		
Problems it solves	Benefits	Indicators
<ul style="list-style-type: none"> - High rate of car use to travel short distances. - High rate of traffic passing through the urban centre. 	<ul style="list-style-type: none"> - Fewer accidents. - It encourages travel on foot and by other sustainable modes of transport. - It improves the quality of public space. - It improves air quality in urban centres. 	<ul style="list-style-type: none"> - Plan for reorganising vehicle flows (dimensionless) - No. of direction signs relocated
Actions		
<p>Bypass: Building bypasses around urban centres to avoid dense traffic on certain roads as a result of vehicles “crossing” the city from one point to another.</p>	<p>Loops: Traffic loops are established on the main roads of the municipality to prevent vehicles from crossing from one side of the urban centre to the other by redirecting them towards bypasses.</p> <p>Costs: €1,000 - €3,000 for temporary signage adjustment until permanent signage is installed.</p>	<p>Prioritisation: Establishing a network according to the urban planning, sustainability and mobility standards set out in the SUMP and to existing conditions in the municipality. For this, categories are required that allow and promote walking and travel by public transport and other sustainable means (bicycles, scooters, etc.), and that regulate traffic to make travel by any means safer, more sustainable and more inclusive.</p>
Introduction priority	Ease of introduction	Cost-effectiveness of introduction



TRAFFIC CALMING

Description of the measure

Traffic calming is intended to reduce traffic density and speed, improve critical accident nodes, and ensure safety and accessibility for non-motorised modes of transport. It is important to achieve as low an actual speed as possible in urban areas to reduce traffic incidents and ensure that those that do occur cause less damage and fewer fatalities. Traffic calming measures help reduce vehicle speeds, discourage the use of cars and allow safer crossings. Tried and tested measures such as speed control devices, chicanes, lane narrowing, pedestrian islands, roundabouts, winding roads and other roadway interventions should be included to enhance urban road safety.

The aim is to ensure responsible car use by promoting a more habitable urban centre, with a better quality of life for its inhabitants.



Problems it solves

- Speeding.
- High-accident areas.
- Points with poor visibility.

Benefits

- It improves driver and pedestrian safety.
- It promotes harmony with other road users (cyclists, pedestrians crossing, scooters, etc.).
- Reduction in sound and emission levels.
- Adaptation of urban roadways to the needs of persons with reduced mobility.

Indicators

- No. of traffic calming measures implemented.
- M² of residential area.
- M² of low emission zones.
- No. of residential street signs.
- No. of 30 zone signs.
- M² of lane narrowing.
- M² of paving changes.
- No. of raised pedestrian crossings.
- No. of speed bumps.
- No. of streets with calming green wave.
- M² of winding streets.

Actions

Residential area	Controlled access zones for residents or low emission zones	Winding roads Realignment involves artificially reducing the length of a straight section by	Calming green wave It is advisable to use green waves on long streets with several intersections with
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TRAFFIC CALMING

<p>Residential streets are identified by an S-28 sign, a speed limit of 20 km/h and pedestrian and cyclist priority. Ideally, the speed could be reduced to 15 km/h for greater harmony. In these cases, it is advisable to install entrances or “gates” indicating a change in street type, such as a raised pedestrian crossing and kerb extensions that “force” vehicles to reduce their speed. Cost: €200/unit (signpost)</p>	<p>where only loading and unloading, and access by residents and municipal and emergency services (police, ambulances, firefighters, etc.) is permitted. It seeks to eliminate transit traffic passing through the city centre, protecting this area for residents. Non-residents will not be able to use these roads to cross the city in both directions or to park. Access roads to these areas is marked by vertical signs. Cost: €200/unit (signpost)</p>	<p>introducing curves that shift the original axis of the roadway. This can be done by placing obstacles in the centre (of two-way streets) and alternating obstacles at the side. Another solution is to alternate parking on each side of the roadway, in which case it is free. It can be combined with lane narrowing, which must be signposted sufficiently in advance. Not recommended for roads with high traffic densities.</p>	<p>traffic lights, for which there is evidence that vehicles generally exceed the speed limit. For it to work properly, the green light should last for between 10 and 25 seconds. It is advisable to place explanatory signs at the start and throughout the section displaying a speed limit of 30 or 40 km/h. Cost: €200/unit (signpost)</p>		
<p>20 zone The speed limit for motorised vehicles is 20 km/h. Access points are identified with appropriate start and end signs (“20 zone” sign). Cost: €200/unit (signpost)</p>	<p>Paving changes (texture and/or colour) This is a very effective and widely accepted as it is identified as a pedestrian area. It can significantly reduce speed depending on the road type and condition. Approximate costs: - Asphalt: between €8.00 and €24.00 per m² - Paving: between €10.00 and €60.00 per m²</p>	<p>Speed bumps These are raised features built into the road, creating an obstacle that forces vehicles to reduce their speed. There are different types of raised features: speed cushion, rubber speed bumps, etc. Approximate costs: - €2,000 per unit for speed cushions - €300 per unit for rubber bumps</p>	<p>Raised crossings and continuous pavements This is a widespread and moderately economical solution that yields positive results in reducing traffic speed and in pedestrian safety.</p>		
<p>Introduction priority</p>		<p>Ease of introduction</p>		<p>Cost-effectiveness of introduction</p>	
<p> - +</p>		<p> - +</p>		<p> - +</p>	



SAFE PUBLIC TRANSPORT STOPS

Description of the measure		
<p>One of the keys to sustainable mobility is public transport. Therefore, improving safety at and around stops is one of the objectives that should be pursued to promote this sustainable mode of transport.</p> <p>Particular attention should be paid to easy access to the stop and the bus itself, as well as signage, through paving and information designed according to accessibility standards for persons with functional limitations. Where there is insufficient space around the stop to accommodate people safely, the use of boarding platforms may be considered, which are also designed to prevent illegal parking in the space reserved for the bus.</p>		
Problems it solves	Benefits	Indicators
<ul style="list-style-type: none"> - Road accidents between pedestrians and cyclists. - Road accidents between pedestrians and cars. 	<ul style="list-style-type: none"> - Increased use of public transport. - Improved access to public transport for persons with reduced mobility. 	<ul style="list-style-type: none"> - Accessible stops (smoothing out height differences, pavement, access space, etc.)
Actions		Indicative budget
<p>Pedestrian crossing</p> <p>At bus stops near an intersection, pedestrian crossings should be placed after the stop to avoid collisions.</p>	<p>Bicycle traffic</p> <p>In the area around bus stops, it is important to pay attention to the design of cycle paths and adapt the area to pedestrian transit.</p>	<p>Pedestrian crossing €800. Pavement-level cycle path €250 per linear metre.</p>
Introduction priority	Ease of introduction	Cost-effectiveness of introduction



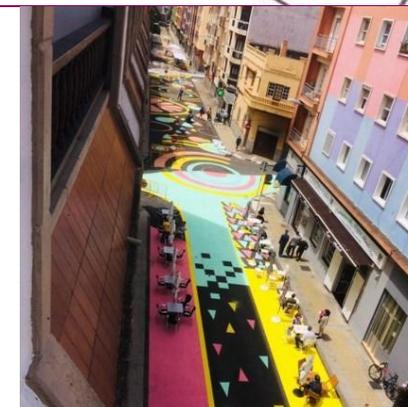
IMPROVING SAFETY IN PEDESTRIAN AREAS

Description of the measure

Road and personal safety risks can discourage people from taking certain routes on foot. Pedestrian mobility can in some cases serve as a deterrent to car use and as a means of calming traffic, while providing friendlier and more accessible routes within the city.

The proposal is to improve the quality and safety of pedestrian spaces and enhance their overall appeal by improving connectivity, widths, accessibility and safety; adding new pedestrian crossings; enhancing signage; and installing street furniture that contributes to a better urban landscape.

A complete, connected, safe, accessible and comfortable network of pedestrian routes that encourages travel by foot can be designed.



Calle Heraclio Sánchez in La Laguna, a pedestrianised street with tactical urbanism measures.

Problems it solves

- Road traffic accidents involving pedestrians.
- Existence of high-accident areas.
- Speeding.
- Poor visibility of pedestrian crossings.
- Lack of visibility at intersections.
- Speeding outside schools, health centres and civic centres, and the immediate surroundings.
- Conflict points at the entrance to residential areas.

Benefits

- It promotes pedestrian mobility.
- It improves the city's image.
- It improves the population's access to facilities and attractors.
- Sound and air pollution, accidents, etc. are reduced.
- Historical cities become more attractive to tourists.
- People better identify with a space that brings them tranquillity, comfort, etc.
- It provides meeting spaces that give cities life.
- Increased social interaction through pedestrians' appropriation of pedestrianised space.
- It increases commercial activity, and thus improves the area's economy.

Indicators

- Inventory and total length of safe pedestrian routes.
- No. of new pedestrian crossings.
- Surface area of new footpaths.
- Surface area of pedestrian areas/routes with tactical urbanism measures.
- Number of new trees
- Number of items of street furniture
- Number of parking spaces removed next to pedestrian crossings.
- Number of especially sensitive areas improved.
- Area of intervention in especially sensitive areas.

Actions		
<p>Pedestrianisation</p> <p>Within the policy for revitalising historical centres, there is a clear emphasis on the partial or total pedestrianisation of certain urban communities or spaces, in order to recover the dynamism lost due to the pervasiveness of cars and ensure accessibility and road safety. This can be done through tactical urbanism, which reduces the cost considerably.</p> <p>Approximate costs: €500,000 for the pedestrianisation of the central square (in a municipality of 23,000 inhabitants, for example), including demolitions, installations, street furniture, landscaping, waste management, and health and safety. €180/m with tactical urbanism.</p>	<p>Improving pedestrian routes</p> <p>This involves creating a network of pedestrian routes to the main trip attractors, with corrective measures for existing physical barriers and proper signage. A network of pedestrian routes may comprise different types of streets and priorities: conventional streets with roads and footpaths, squares, pedestrian streets, streets with pedestrian priority, etc. To improve the walkability of pedestrian routes, particular attention should be paid to intersections, available walking space, accessibility, visibility, comfort and signage.</p> <p>Cost: €75/m² for footpath extension</p>	<p>Improving visibility</p> <p>Removing car parking spaces and street furniture at least 6 metres before the pedestrian crossing in the direction of the traffic is recommended, providing a larger sight triangle for both drivers and pedestrians in this conflict zone. It is advisable to extend this measure to include vehicle entrances for properties and garages, as well as blind corners, in order to increase safety when vehicles are merging with traffic or turning.</p>
<p>Improving pedestrian permeability</p> <p>Pedestrian crossings should be provided roughly every 100 metres, located based on the urban layout and land use so that they can be placed around natural pedestrian routes, thus ensuring crossings that are both safe and convenient for pedestrians. It is recommended that they be used to complement traffic calming measures.</p> <p>Cost: €800 for improving or building a pedestrian crossing.</p>	<p>Especially sensitive areas</p> <p>Applying the principles of creating safe routes: traffic restrictions, removal of parking spaces, pedestrian areas, well-lit access points and signage, etc. in all especially sensitive spaces, such as schools, public buildings, shopping centres and other places with high pedestrian traffic.</p> <p>€4,000 / €40,000 for especially sensitive area project improvement/implementation</p>	<p>Paving maintenance</p> <p>Failure to maintain footpaths, the presence of obstacles and inaccessible or poorly visible ramps and steps cause pedestrian accidents such as falls. Taking action to improve paving and regular maintenance are therefore recommended.</p> <p>Cost: €155.43/m² for paving repairs.</p>
<p>Construction of refuge islands</p> <p>Building safe routes around schools, with pedestrian areas, safe crossings and pedestrianisation is key to improving road safety in these areas.</p> <p>Approximate cost: €3,750.00 for a pedestrian island in the middle of the road</p>	<p>Improving street and crossing lighting</p> <p>This improves lighting for marking out safer routes. The installation of energy-efficient lighting, taking care to avoid bothering residents, is recommended.</p> <p>Approximate cost: €1,921.00 per lamp-post.</p>	
<p>Introduction priority</p> <p></p> <p>- +</p>	<p>Ease of introduction</p> <p></p> <p>- +</p>	<p>Cost-effectiveness of introduction</p> <p></p> <p>- +</p>



IMPROVING CYCLIST SAFETY

Description of the measure

Cyclist safety means the greater separation of cyclist traffic from motorised road traffic.

Cyclists are encouraged to play an important role in a new mobility model, which involves increasing trips by foot and by bicycle, to the detriment of cars. Setting up a convenient, safe (real and perceived), comfortable and suitable **network of cycle paths** is therefore one of the goals of any SUMP. The basic standards of the network are: convenience, uniformity, clarity and ease of interpretation, direct routes (detour factor < 1.2), layout within the road section, intersection design, choice of separators and signage.

On urban roads with a speed limit of 50 km/h and/or high traffic densities, the preferred option would be to separate cyclists in a dedicated lane. Establishing two-way lanes at road level with separators is recommended. In traffic-calmed areas, cycle streets should be promoted for better conviviality.



Cycle path on a road in Seville

Problems it solves

- Road traffic accidents involving cyclists.
- Inadequate cycle paths: gaps, narrow sections, obstacles etc.
- Existence of high-accident areas.
- Speeding.
- Lack of visibility at intersections.

Benefits

- It promotes mobility of cyclists and personal mobility vehicles.
- Health benefits.
- It improves the city's image.
- It improves the population's access to facilities and trip attractors.
- Sound and air pollution, etc. are reduced.

Indicators

- Length of cycle path built.
- No. of correctly designed intersections.
- No. of correctly designed roundabouts.
- No. of markers or separators installed.
- Length of sufficiently wide safety buffer.

Actions		
<p>Delineators and separators</p> <p>Delineation features for cycle paths include: High metal railings. In places where the safety buffer between the road and the cycle path is very small.</p> <ul style="list-style-type: none"> - Low metal railings or concrete boundary marks, where the buffer is somewhat larger. - Studs on the ground to mark bicycle paths without priority in pedestrian areas. - Installation of kerbs, set either vertically or horizontally, or purpose-designed separators. <p>Solutions that offer a larger buffer than the high railings, combined with strict widths, are generally recommended.</p>	<p>Cycle street design standards</p> <p>Standards for enhancing cycle street safety include:</p> <ul style="list-style-type: none"> - Reassigning road space through road markings and/or delineators. - Establishing physical traffic calming measures. - These paths could be legally assigned to the category of “residential streets” and be signposted accordingly (S-28 sign). <p>Signage indicating the street’s status as a cycle street should be placed at its entry points and, if it is extensive, reminder signage should be placed along the street.</p>	
<p>Treatment of intersections and roundabouts</p> <p>The design of cycle paths on their passage through intersections must strike a balance between functionality and safety. In this case, whether it is a cycle track, path or lane, the safest option on the approach to an intersection is to bring it to pavement level next to the corresponding pedestrian crossing. As a recommendation, the cycle track should, wherever possible, be kept separate from the roadway along the main carriageway so that no set-backs are required when approaching intersections.</p> <p>The preferred alignment of cycle tracks through roundabouts should maximise separation from traffic. The placement of a two-way cycle path that completely encircles the roundabout is recommended. This seeks to minimise additional cycling detours for all roundabout manoeuvres, thereby reducing the sinuosity of the route.</p>	<p>Road markings</p> <p>Horizontal signage comprises road markings painted on the paving of the cycle path, distinguishing between:</p> <ul style="list-style-type: none"> - Longitudinal markings: to channel traffic by separating the different lanes. - Transverse markings: to indicate stop points or caution areas. - Signage for regulating traffic using road markings and symbols: Bicycle and wheelchair pictograms, as well as certain warnings such as traffic lights, narrowing, etc. - Arrows and other symbols. <p>It is a good idea to indicate cycle path crossings over roads with a highlight colour across the full width of the road. Along sections of cycle paths that come from repurposing some road width, it is advisable to mark any safety buffers that may appear with hatching, forming a functional ensemble with the separators chosen in each case.</p>	
<p>Introduction priority</p>  <p>- +</p>	<p>Ease of introduction</p>  <p>- +</p>	<p>Cost-effectiveness of introduction</p>  <p>- +</p>



IMPROVEMENT OF INTERSECTIONS

Description of the measure

Intersections are particularly hazardous elements of infrastructure, where a higher number of conflict points arise due to the crossing of paths. At some intersections, visibility is compromised by the layout of urban furniture and structures. If we add speeding into the mix, the ability to anticipate a real conflict is reduced and, if one arises, the consequences are worse. In short, intersections are hazardous points on the city roads, as the concentration of conflicting manoeuvres and the mix of different users at crossings create risk-prone situations.

Improving infrastructure conditions at critical nodes helps contain congestion involving vehicle traffic and improve road safety conditions, thereby reducing the number of road accidents. This measure is intended to promote road safety by improving conflicting intersections.



Improved pedestrian visibility in Seville

Problems it solves

- Existence of high-accident areas.
- Speeding.
- Violations arising from ignoring stop and give way signs.
- Poor visibility of pedestrian crossings.
- Lack of visibility at intersections.
- Road accidents involving cyclists.
- Road accidents involving pedestrians.
- Ambiguous right of way.

Benefits

- The perception distance between pedestrians and drivers, and vice-versa, is increased.
- The ability to anticipate in conflict situations is increased.
- Respect for right of way is increased.
- The safety of two-wheel vehicle users is increased.

Indicators

- No. of pedestrian crossings with better visibility.
- No. of pedestrian crossings with roadway improvements in their vicinity.
- No. of raised intersections.
- No. of intersections with safe filtering for two-wheel vehicle users.

Actions		
<p>Removal of obstacles at the edges of intersections</p> <p>Improving visibility is intended to increase the distance at which vehicles see the intersection and the pedestrians and cyclists crossing it, and to increase pedestrians' viewing distance, especially of manoeuvres at the intersection, in order to cross safely.</p> <p>Removing vegetation at the edges of the intersection or changing the location of visual obstacles at the edges, such as vertical signage or safety barriers, is recommended. If enhancing visibility proves impossible, the layout of the intersection should be improved (although this is a more costly measure).</p>	<p>Adaptation of roads in areas near pedestrian crossings</p> <p>In order to improve the coexistence of motor vehicles and vulnerable users, it is vital that the speed of traffic on roads near pedestrian crossings be reduced. Various steps are recommended to achieve this: setting back the stop line from the pedestrian crossing to create a safety buffer between the stopping point and the crossing point; prohibiting lane changes near the crossing so that drivers pay greater attention; and narrowing the road at pedestrian crossings, building a refuge island where appropriate. If there are traffic lights at the crossing, they should be programmed to allow crossing in one go.</p> <p>Approximate cost: Paint €1.80 per linear metre.</p>	<p>Raised intersections</p> <p>The use of raised intersections is recommended, where intersections are understood to mean areas for crossing vehicle lanes, as well as raised pedestrian crossings in locations where additional traffic calming is required. Instead of crossing pedestrians having to step down, vehicles have to navigate a sloped surface. This feature becomes a speed reduction point, and emphasises that the car is crossing the pedestrian area and not the other way around, as there is continuity of the pavement. In order to extend the traffic calming effect upstream of the intersection and make the special area more noticeable, the use of lateral road markings (zigzag lines, dragon's teeth, a broken edge line, etc.) or differentiated paving (coloured, textured, cobbled, etc.) is recommended.</p> <p>Approximate cost: €250/m²</p>
<p>Safe filtering for two-wheel vehicle users</p> <p>Where there is a motorcycle stop box, bike box or cycle crossing, it is recommended to have a lane at least 1.5 metres wide for a minimum length of 15 metres upstream to allow the relevant two-wheel vehicles to approach safely. It is recommended to use rumble strip road markings (with raised or milled surfaces) to encourage drivers to keep to their lane. It is recommended to install signage indicating that the reserved lane or strip may be used only by the vehicles for which it is intended, and only when the traffic light is red.</p> <p>Approximate cost: Paint €1.80 per linear metre.</p>		
Introduction priority	Ease of introduction	Cost-effectiveness of introduction
 <p style="text-align: center;">-</p> <p style="text-align: center;">+</p>	 <p style="text-align: center;">-</p> <p style="text-align: center;">+</p>	 <p style="text-align: center;">-</p> <p style="text-align: center;">+</p>



REGULATIONS AND PENALTIES

Description of the measure

Public space is for everyone, and it must be shared appropriately by different users in a fair and balanced manner, ensuring universal accessibility and safeguarding the rights of persons with mobility differences. This should be the starting point for the **mobility ordinance**, leaving behind the traditional traffic ordinance, a concept that falls short of addressing current concerns in relation to urban mobility and sustainable cities.

Small municipalities and municipalities facing demographic challenges: In this type of municipality and in rural areas, active mobility can be prioritised, giving pedestrians priority in all urban centres and setting the speed limit at 20 km/h under the new ordinance.



Problems it solves

- High rate of car use to travel short distances.
- Speeding.
- Lack of respect for traffic regulations and general public misinformation.

Benefits

- Promotion of active mobility.

Indicators

- Drafting of the new municipal mobility ordinance.
- Approval of the new mobility ordinance at the plenary meeting.
- Speed surveillance and spot check campaigns.

Actions

New mobility ordinance

City halls must have an up-to-date mobility ordinance that promotes and fosters active mobility (walking, cycling and using personal mobility vehicles) to successfully implement the new mobility model for the city. The drafting of the new mobility ordinance should be guided by the principle of graduated priority among different modes of travel, taking into account the vulnerability of users and the lesser environmental impacts, in order to ensure people's health and safety, improve air quality and protect the environment. The ordinance should also progressively reduce the dominance of cars in favour of walking, public transport, cycling and other forms of sustainable mobility, while also ensuring the efficiency of essential commercial deliveries.

It is also advisable to consider contributions from interest groups, which could be obtained through public participation, when preparing the ordinance.

Monitoring and enforcement measures

Monitoring and enforcement campaigns should be carried out periodically, with penalties for violations of key aspects of road safety, such as speeding, drink-driving and parking offences. Measures might include:

- Installing speed cameras on roads with high traffic density and speed.
- Conduct regular speed checks at specified points.

Introduction priority



-

+

Ease of introduction



-

+

Cost-effectiveness of introduction



-

+



ROAD EDUCATION, UNDERSTANDING AND AWARENESS

Description of the measure

Growing concern about climate change and pollution, and the impact they have on people’s lives, requires action involving not only decision-makers, but the whole of society. Education, understanding and awareness campaigns are therefore key to the success of sustainable development policies.

A road safety education and awareness campaign has the threefold aim of informing, promoting public participation, and shaping attitudes and habits.

To achieve these goals, the campaign must have a considerably broader and more complex scope than the usual publicity campaigns in the media. Accordingly, an extensive series of measures, grouped into the following action lines, are proposed:

INFORMATION / SOCIAL PARTICIPATION / TRAINING / PROMOTION



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Problems it solves	Benefits	Indicators
<ul style="list-style-type: none"> - Lack of public awareness of driving hazards - Lack of respect for traffic regulations and general public misinformation - Speeding around schools and especially sensitive areas. 	<ul style="list-style-type: none"> - It promotes walking and the use of bicycles and scooters to travel to and from school. - It improves the population's access to facilities and trip attractors. - It promotes active mobility among young people and affords them greater autonomy. 	<ul style="list-style-type: none"> - Hours of road education courses given. - Schools participating in road education courses. - No. of schools participating in “Safe Routes to School” programmes. - No. of “Walking to School”/”Biking to School” routes. - No. of families involved. - Schools involved in sustainable mobility projects (educational games).

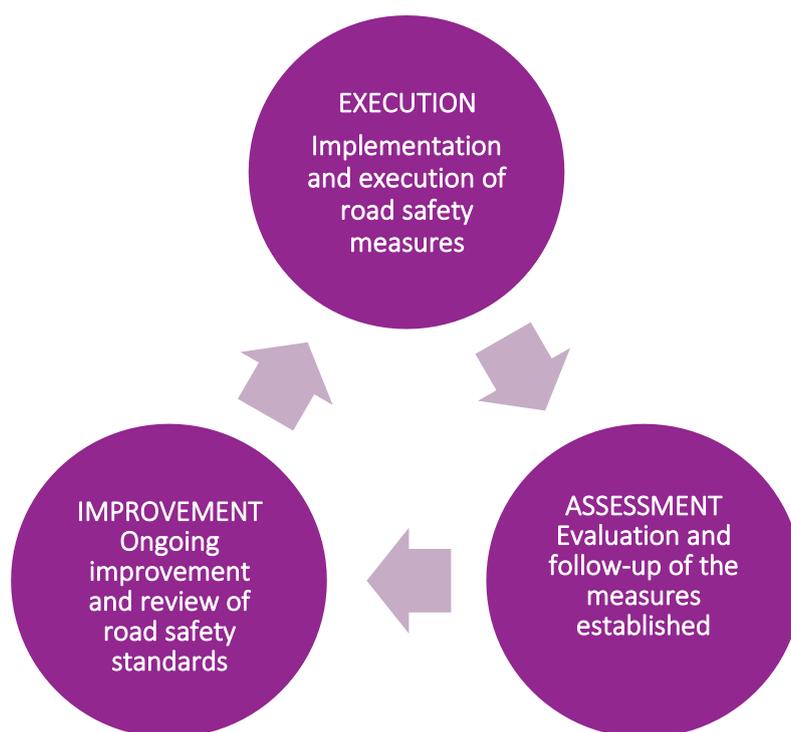


ROAD EDUCATION, UNDERSTANDING AND AWARENESS

Actions		
<p>Road Safety Education Days at schools and secondary schools</p> <p>Traditionally, some activities related to traffic, road signs and driving on closed circuits have been carried out in schools and secondary schools. These should be complemented with activities focusing on sustainable mobility, the importance of reducing motorised travel, and the impacts on health and the environment, etc.</p> <p>Approximate cost: Yearly allocation of €1,500.</p>	<p>Safe Routes to School</p> <p>Young people’s mobility is extremely unsustainable. In all cities, and even small towns, travel to and from school causes traffic jams: up to 10% of the trips that congest our cities and our lungs are school runs. There are various proposals to promote sustainable mobility in children’s travel. One of the solutions that has been tested in many European countries for decades is organised escorted travel on foot or by bicycle along home-school routes and Safe Routes to School, known as “walking buses” and “cycling buses”.</p> <p>Approximate cost: Yearly allocation of €1,500.</p>	<p>Educational games</p> <p>Play is the best way to learn. One proposal is therefore to develop different activities, games, etc. with schools to promote sustainable mobility when travelling to school, such as walking, cycling or car-sharing. The DGT currently has tools such as the “Walking to School” project, comprising a repository of games, songs and stories so that schools can work with children. They also include the Snake game and the STARS EU programme.</p>
Introduction priority	Ease of introduction	Cost-effectiveness of introduction

STAGE 3. EVALUATION AND FOLLOW-UP

A **follow-up and evaluation plan** is needed to periodically review the **fulfilment of the road safety objectives** contained in the SUMP. The aim is to understand the impact and degree of implementation of the measures proposed in the action plan. It is therefore essential to create a series of instruments to **follow up on and monitor** the implementation and roll-out process of the measures, with the possibility of evaluating the results quantitatively and qualitatively, and planning suitability checks for each, within a **continuous cycle of execution, evaluation and improvement**:



As a follow-up and evaluation mechanism, a **follow-up report** is envisaged that contains a **system of monitoring indicators** that will show the degree of implementation of the measures and their effectiveness.

Ideally, the report will be produced **annually** in the first few months of each year, evaluating the preceding period. If this is not possible, a report should be prepared at least at the end of each of the SUMP implementation phases. An **analysis of the fulfilment of the objectives** and, in particular, of the degree of implementation of the measures planned and their contribution to the Plan's targets, should be conducted in the intermediate phase (medium term). Any necessary adaptations and adjustments will be made to achieve the objectives to a satisfactory level in the Plan's horizon year (long term).

The report should be drafted by a **committee comprising city hall technical staff ideally qualified** in areas such as road safety, emergencies, sustainability, mobility and the environment. Its composition may change depending on the city hall's internal organisation.

It is important to select easily measurable indicators rather than having an extensive list. The indicators should be quantifiable and provide information on the elements and factors that influence road safety and the objectives set. They should be tailored to the municipality's characteristics and the availability of information, showing the current situation, so that they are best suited to describing and characterising the implementation process and the objectives pursued.

In short, an indicator must also have a series of attributes, specifically:

- ❖ **Availability:** basic data for building the indicator should be simple to obtain.
- ❖ **Simplicity:** the indicator should be easy to prepare.
- ❖ **Validity:** it must be able to measure the phenomenon in question (and not others).
- ❖ **Specificity:** it should specifically measure what is intended, to enable a proper evaluation.
- ❖ **Trustworthiness:** the information sources used must be reliable.
- ❖ **Sensitivity:** the indicator must have the capacity to identify different situations, even in areas with different specific features.
- ❖ **Scope:** it should be comprehensive and summarise the largest possible number of factors that affect the situation described.

To make it easier to select and list the **follow-up indicators**, indicators have been included in the tables for the measures proposed. The most meaningful **indicators for road safety-related outcomes** are listed below for inclusion in an adequate evaluation of the context and subsequent developments.

OUTCOME INDICATORS	
Modal split percentage	%
Average daily traffic detected	Veh. /h
Victims of road accidents	No.
Number of victims per 1,000 inhabitants	-
Road accident fatalities	No.
Serious road accident injuries	No.
Minor road accident injuries	No.
Involvement in road accidents by vehicle type: Cars, motorbikes, vans, lorries, buses and special vehicles	%
Private vehicles involved in road accidents	Unit
total bicycle accidents/segregated and non-segregated roadways	No.
pedestrian road accidents	No.
accidents on raised and non-raised pedestrian crossings	No.
Number of pedestrian accidents/falls	-
Number of collisions	No.
Number of people seriously injured in collisions	No.
Number of people suffering minor injuries in collisions	No.
Use of seat belt and child restraint systems	%
Helmet use by drivers and passengers	%
Use of mobile devices by drivers	%
Vehicles travelling within the road's speed limit	%
Accident hot spot (5 or more accidents per year at a maximum of 15 m)	No.

STAGE 4. CONCLUSIONS AND RECOMMENDATIONS

As the final stage of the process, it is recommended to prepare a document setting out the conclusions drawn, as it may be used to establish the basis for **future action**.

This document should include both the outcomes of the follow-up indicators as a guide for the procedure followed throughout the action plan and all the road safety standards introduced in the SUMP.

How to prepare the conclusions of the road safety plan/programme in the SUMP is shown below:



Lastly, below is a checklist to ensure that road safety standards have been included in the SUMP.

VERIFICATION OF THE INCLUSION OF ROAD SAFETY STANDARDS IN THE SUMP	YES	NO
Has the accident rate been included in the mobility analysis?		
Have the main road safety issues been identified in the assessment of the current situation?		
Have road safety standards been considered in the SUMP Action Plan?		
Have traffic control and organisation measures been included?		
Have parking management measures been included to enhance pedestrian and driver safety?		
Have measures to improve road safety around public transport stops been proposed?		
Have measures to improve road signage been proposed?		
Are efforts being promoted to improve safety in pedestrian areas?		
Are road safety measures being promoted in areas around schools?		
Are measures to improve cyclists' safety included?		
Have measures to improve intersections been considered?		
Has the ordinance been reviewed and updated to promote sustainable mobility?		
Have education, awareness and outreach measures on the importance of road safety been included?		
Have road safety indicators been listed in the evaluation and follow-up plan?		

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