

Item 7 (c) of the provisional agenda

Implementing the Amsterdam Declaration: THE PEP Partnerships

Draft

Signs and signals for cyclists and pedestrians

Comparison of rules and practices in 13 UNECE and WHO/Europe member States

Introduction

The Committee may recall that, under THE PEP Partnership programme, a project on signs and signals for cyclists and pedestrians has been initiated by France in order to develop an inventory of regulations and best practices in this field covering a sample of countries in the UNECE and WHO/Europe region.

In cooperation with THE PEP secretariat, two questionnaires have been developed by experts of CETE East and CERTU (technical and research services of the French Ministry of Ecology, Sustainable Development and Energy) addressing separately signs and signals for cyclists and for pedestrians. The questionnaires cover all types of signs, symbols and panels:

- Regulatory signs (danger warning, priority, restrictive, mandatory)
- Road markings and direction, position or indication signs
- Tourism signs
- Service signs

In 2012, the two questionnaires have been transmitted for completion to UNECE and WHO/Europe member States. Based on the replies received, a comparison study has been undertaken. The objectives of the study were as follows:

- (a) Assess current provisions or those under development at the international level for signs and signals for cycling lanes and pedestrian paths;
- (b) Develop proposals for appropriate signs and signals at the pan-European level with a view to promoting sustainable and active modes of transport;
- (c) Establish a compendium of good practices and prepare, as appropriate, concrete recommendations.

A first unedited draft of the comparison study is reproduced below. It summarizes the results of the questionnaires and provides some conclusions on trends and issues for the harmonized developments of signs and signals for cyclists and pedestrians. Annexes to the study (not reproduced here) contain separate national factsheets for the following 13 UNECE and WHO/Europe countries:

Austria
Belgium
Denmark
France
Germany
Italy
Norway
Poland
Russian Federation
Spain
Switzerland
United Kingdom
United States of America

The Committee may wish to **review and endorse**, in principle, the unedited draft text below and recommend its finalization and publication (in English, French and Russian) at the 4. High-level Meeting on Transport, Health and the Environment (4HLM) (Paris, 14-16 April 2014). The country fact sheets are planned to be made available in an electronic version only.

The Committee may also wish to **decide** to transmit the study, following its publication in April 2014, to the UNECE Working Party on Road Traffic Safety (WP.1), guardian of the United Nations legal instruments aimed at harmonizing traffic rules, such as the so-called Vienna Convention on Road Signs and Signals (1968) and the European Agreement Supplementing the Vienna Convention (1971). This way THE PEP could provide an important input towards promotion of active mobility and facilitation of cycling tourism to the activities of WP.1 and its expert group on road signs and signals towards reviewing and possibly amending the Vienna Convention and its European Supplement.

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Informal document no. 7

THE PEP Steering Committee, 11th session, 27-28 November 2013

1. Context

Private car ownership for travel in parallel with a more sedentary lifestyle for different segments of the population, is the source of a real public health issue due to lack of daily physical activity. Walking and cycling can both be used to travel while performing part of the daily physical activity necessary for our health. What's more, trips made on foot or by bike do not emit any pollution. They are an essential feature of the attractiveness of public transport networks as a complement. However, using walking or cycling to travel assumes that the public space is welcoming to these modes of travel and provides paths for them.

While progress can be made via development work, it is clear that even if the proposed public space is welcoming to pedestrians or cyclists, the routes are difficult to decipher for people not familiar with them. In addition, the concept of distance or time taken to get from one point to another is difficult to identify for a user accustomed to making detours when travelling in a motor vehicle: several studies have shown that users have a very limited and non-continuous knowledge of urban space, experiencing the town as an archipelago made up of islands in a sea of unknown spaces that separate them. This eliminates cycling or walking from the mental map of travel possibilities. This is why countries have developed signage to guide pedestrians or cyclists by introducing information about travel time to change mindsets. Signage also gives concrete expression to their rights in the public space.

Signage, as a lever for the development of active modes, is the purpose of this study.

The study has three objectives:

1. To take stock of existing measures concerning signage applicable for cycle lanes or pedestrian footpaths with the travel time on foot, by bicycle, rollerblade or any other active transport mode.
2. To prepare a compendium of best practices for a sample of states participating in THE PEP. The ultimate goal is to provide a document deriving from the THE PEP validation process in the area of signage for green and active transport modes which local authorities or States could use when they wish to develop this type of signage.
3. THE PEP will make this study available to the UNICEE WP1 group for information.

Scope of the study:

The study focuses on the vertical or horizontal police, direction, temporary, and tourist signage of fifteen countries. Direction signing for feeders to or between forms of public transport also comes within the scope of the study. It deals with signs for cyclists, pedestrians and similar (rollerblades, etc.), both in urban and interurban environments.

A diverse sample of countries was selected by the THE PEP committee to give a richer and more comprehensive approach. A questionnaire sent to these countries, complemented by research on the internet, has helped to draw up two factsheets per country (pedestrians and cyclists). As a result of the answers obtained and after discussion with the THE PEP committee, 13 countries have had factsheets written, which were then used in this summary: Germany, Austria, Belgium, Denmark, Spain, the United States, France, Italy, Norway, Poland, the United Kingdom, Russia and Switzerland.

2. Administrative and political organizations

The development of a policy for cyclists and pedestrians is often the result of the determination of influential and motivated people, and of initiatives of user groups such as very active associations and federations.

Political decisions are translated into regulations produced by the various decision-making levels. Whether centralized, federal or confederal, the institutional organization of the countries examined always leaves its mark on the way political will is implemented. Different decision-making levels can play several roles: initiator, driver, controller, financier: the State remains the guarantor of the regulation.

The policy for the development of the use of soft modes appears more or less aggressive in terms of political organization. The uniformity of rules and signals greatly depends on the presence or absence of common rules that any project developer must follow. The 13 countries with a factsheet have different types of organization.

They are the legacy of history and peoples' choice. So the degree of autonomy of each decision-level changes irrespectively of whether the countries have centralized or federal structures. The various constitutions ascribe different competencies to each administrative and political level, even if the organization of the countries appears to be identical, which sometimes makes certain countries difficult to read concerning the division of responsibilities between those involved in a project.

The development of rules and development tools in the areas of cyclists and pedestrians depends largely on the presence or absence of specific policies reflected in particular by the introduction of national, regional or even local schemes, independently of the institutional organization of the country.

Centralized countries such as France and Denmark have adopted policies with national cycling schemes and local variations, as have certain federal states. For example, Switzerland and Belgium have introduced national schemes imposed on lower institutional levels of the federation. Conversely, countries with a centralized organization such as Russia, Italy, Poland and countries with a federal structure such as Spain and Germany either have not engaged national policies, or have only partially done so.

State constitutions ascribe competencies or leave powers to regional, cantonal or local institutions or even associations. Depending on the country, these more or less extensive powers range from mere implementation of the national policy to the ability to legislate in order to establish their own rules.

The heterogeneity of practices is further enhanced by the diversity, within the various administrative and political levels themselves, of the structures in charge of policies for cyclists and pedestrians. Depending on the competencies of these structures: tourism, transport, land use or road safety, the goals will be different.

2. Administrative and political organizations

A bicycle or pedestrian network created using tourism competency will be different from one created from transportation competency. Because of this heterogeneous aspect of institutions, the decision chain for implementing cycling or pedestrian policies is also heterogeneous.

The division of responsibilities between policy-makers and implementers is more or less clear depending on the political organization. In many countries, the decision maker is not always the payer.

In centralized countries such as France, the central government is often the decision maker and the initiator of the project. It then delegates implementation and financing to local authorities closest to the areas in question, such as Régions and Départements.

In other centralized countries such as Denmark and Norway, the state mainly drives the project, delegating only its implementation in the field and maintenance to local authorities.

In federal organizations, it is mostly States or Regions that have all the competencies for decision-making, implementation and financing within a framework set by the central government.

There are variations to this logic, such as in Switzerland, where, to ensure uniformity throughout the country, the entire framework is determined by the confederation and is implemented by the cantons with the help of highly structured associations.

3. Organization of regulations

Countries have different levels of prescription for regulating the rights and obligation of active modes. Countries such as Switzerland, France, the United States and the United Kingdom already have highly structured regulations both for direction signing (mainly cycle paths and also walking for Switzerland) and for information, while other countries have little or none. However, there is a minimum basis: police regulations.

It was formalized through the Vienna Convention, which all EU countries and the other countries involved in this report have signed. In 1988, Poland was the last country to join.

With some local features, these regulations set out the requirements for the movement of vehicles, whether motorized or not, and especially of cyclists, as well as instructions for pedestrian travel. Generally, these appear in the form of a "highway code" or its equivalent. Deriving from a law, decree or order, they apply to everyone across the country.

However, the signs proposed by the Vienna Convention do not cover all needs, which has led states to invent some, particularly to meet new needs identified. In particular, there are now new needs relating to active modes.

In general, changes in police regulations (instruction, danger, prohibition, etc.) are the sole responsibility of the State. In some federal states, the central government has left the Member States latitude to change to adapt to local conditions within a fixed regulatory framework. For example, in Spain, the Regions have considerable autonomy.

They may, under certain conditions, create signs showing specific instructions.

For pedestrian route signage, three complementary approaches can be distinguished combining rules and recommendations:

- *signage created from the user, defined for hiking and adapted for use the urban environment, with small signs specifying destinations and travel time and a "coded language" using signs (marks) to mark out difficult sections of the route and reassure the user that he has made the right choice,*
- *dedicated signage for hiking routes with the addition of pedestrian signage inspired from road signs as designed for the urban environment*
- *dedicated signage for hiking routes and the creation of specific urban signage, using, for example, street furniture (a totem with or without plans, a 2 or 3 dimensional photo, a directional rose, orientation tables, etc.), sometimes supplemented by road sign variations suitable for pedestrians.*

Pedestrian directional signage

For cycling route signage three complementary approaches can also be distinguished:

- **in urban and suburban areas, signage derived from road signs with the addition of distances and the bicycle symbol on signs of a dedicated colour, sometimes supplemented by "service information relays" with a plan showing services and possible routes**
- **in urban areas, dedicated signage created from the user or inspired by road signs as a complement to the interwoven structured network,**
- **in suburban areas, signage defined for sports routes (mountain bike loops, cycling loops) with a colour code or numbering sometimes supplemented by service information relays with a plan showing the possible routes and services available on the routes.**

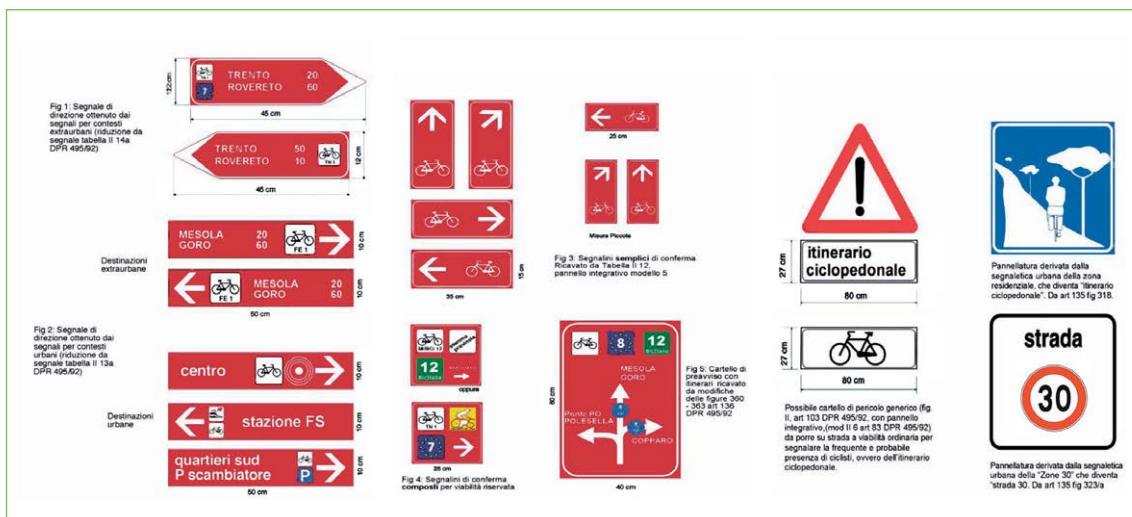
Yclist directional signage

This common basis with variants mainly concerns signage for warning, prohibition, obligation and management of intersections. Directional and information signage is often tailored to the specific features of the country.

While signage for main roads is generally similar in European countries, secondary network signage shows large disparities, in the design of the signs: indications, colours, etc., and in the way it is organized: network implementation, maintenance, etc. Switzerland has the distinction of having adopted green for main roads, while in Europe blue predominates.

The United States have also made a different choice. The same is true for road surface markings: the common colour is white but Switzerland specifically uses yellow for marking active modes.

Some countries like Russia and Poland do not have specific regulations and signage: their commitment to a policy for active modes is too new and they have not yet initiated discussions to create specific rules. All countries with special regulations have at their disposal a wide range of standards and guides giving recommendations drawn up by utilities or by user federations and associations that complement national regulations.




In Italy: direction signing proposed by the FIAB association

3. Organization of the regulations

Special regulations are one of the characteristics of countries that have already begun thinking about green mode travel. Although Switzerland is a confederation of cantons with diverse customs, languages and political orientations, it has managed to define and enforce national legislation for all active modes: bicycles, pedestrians, mountain biking, skating throughout the territory. Other countries such as France, the United Kingdom and Denmark have official regulations concerning direction signing for cyclists.

Formalizing the rule in this way ensures the homogeneity of practices within a territory. Federal countries such as Austria and Germany have basic regulations. These impose the main characteristics of direction signing such as the network hierarchy, the colour of signs, etc.

	Les signes du Club Vosgien® Les signes de balisage du CV sont déposés à l'INPI			
	Rouge (a)	Bleu (b)	Jaune (c)	Vert (d)
Rectangle (1)				
Losange (3)				
Rectangle barré de blanc (8)				
Triangle (2)				
Croix droite (4)				
Chevalet (6)				
Disque (5)				
Anneau (9)				

Le Club Vosgien a édicté des règles permettant de choisir dans la palette le « bon » signe en fonction du type de projet et du réseau existant sur son secteur de compétence, en harmonie avec les secteurs riverains. Dans aucun cas deux signes identiques ne pourront se côtoyer et encore moins se croiser. C'est l'intérêt même de notre système à signes multiples.

The central government leaves open the possibility of completing and customizing these regulations. So states and regions draw up their own charter. Through these charters, each Region (or State) tries to customize the message as much as possible. These approaches can lead to original and often high quality productions, but they do not contribute to homogenizing signage practices.

Since 2004, France and Belgium have been adopting a series of additional measures in favour of active travel modes. Brought together as so-called "rules of the street" approaches, they reaffirm the principle of caution exercised by the strongest with regard to the most vulnerable users (present in the Vienna Convention), these measures give priority to pedestrians in vehicle/pedestrian zones, and they make widespread use of two-way cycling for all roads in Belgium, and in traffic-calmed zones in France.

In this way they make use of good practices existing in other countries (combined vehicle/pedestrian zones in Switzerland, give-way to cyclists at red lights in the Netherlands, no-trough-road except for pedestrians and / or cyclists in Germany, the cycle street in Germany, etc.).









4. Signage








4.1 Police signage (prohibition, instruction, obligation, etc.)

Regulations related to signage and traffic established in 1968 by the Vienna Convention is the common basis between these countries. Depending on the country, it is the only rule or basis for more complete, specific regulations. Ratified by all, it provides common minimum requirements for the movement of vehicles, but it leaves room for interpretation and customization of rules for the design of signs and their meanings.

Sign E17 was introduced by the European Agreement of 1st May 1971 as a complement to the Vienna Convention. Of the countries analysed in this report, Spain, Norway and the United States have not signed, although Spain and Norway use the sign. The United Kingdom signed the 1971 agreement, but has not ratified it. It uses a sign inspired by the same decor.

Police signage for pedestrians and cyclists in the Vienna Convention

C3c	C3i	D4a	D5	D11a	D11b	E9d	E12a
							
No cycling	No pedestrians	Cycle path compulsory	Pedestrian footpath compulsory	Dedicated cycle and pedestrian lane: separate spaces	Dedicated cycle and pedestrian lane: common space	30 km/h max. speed zone	Pedestrian crossing (position)

E12b	E12c	E17	F9	G20	G21	
						
Pedestrian crossing (position)	Pedestrian crossing (position)	Home zone	Symbol of a location used as the starting point of walking tour	Footbridge or underpass	Footbridge or underpass without steps	Marking showing cycle path crossing

The rules that vary only slightly by country are as follows:

- The bicycle is considered a vehicle, so the cyclist has the same rights and obligations as motorists. In Poland, the Highway Code was amended in 2011 to give better consideration to pedestrians whose status did not exist before. In Austria, cyclists under eight must have permission to travel alone on the road. In many countries, the bicycle is considered as a vehicle in a category separate from that of motorized two-wheelers.
- Signage for warning, prohibition, obligation and management of intersections for the movement of vehicles on roads is basically the same in all countries. Variants are found in speed limits, which vary from one country to another, or the colour of the signs whose background may be white, green, blue, brown or yellow;

4. Signage

- Surface markings are generally white except in Switzerland where yellow is used to indicate developments for green modes, and in the United States where yellow is widely used;

The differences are mainly in police regulations for traffic in specific areas such as pavements, cycle strips and lanes, or in pedestrian areas.

These signs are mainly for bicycle users and pedestrians sharing space with other users.



This signage is usually made up of combinations of elements present in the Vienna Convention that have been slightly modified. If a country wants to create a new regulation, the principle is that it uses the sign in the Convention, if it exists, or a variant thereof.

As society evolved, the desire to communicate and to prescribe different operating modes for public spaces with special operating rules as compared to the general rule led to special signs being invented.

Signs are therefore often found in several countries that do not exist as such in the Vienna Convention. Mostly they respond to the need to express prioritization or special traffic rights.

This police signage (prohibition, instruction, obligation, etc.) can be of three kinds:

- police signage common to pedestrians and cyclists;
- Police signage for pedestrians alone;
- Police signage for cycling alone.

4.1.1 Police signage common to pedestrians and cyclists

We will first present the signage used to identify the operating rules for public spaces (pedestrian areas, residential areas, combined vehicle/pedestrian zones, greenways, areas with limited traffic, shared pavements and quiet roads) , followed by signage relating to crossings (mixed crossing, pedestrian/cycle lights, help with using the crossing , continuity of routes (no through road except for...)).





4.1.1.1. Signage for operating rules of mixed public spaces

• Pedestrian areas

The sign for which provision is made under the Vienna Convention is found in different forms and in many countries (sign D9 including sign D5). However, all countries do not give it the same regulatory meaning. Thus, for some, it is only an indication, while others include requirements as to the speed vehicles must comply with (often around 6 km/h), on access

4. Signage

(limited to service). Depending on the country, the authorisation given to cyclists to ride in a pedestrian area either comes under the general regulations (which is good for cycling), unless otherwise indicated, or is managed on a case-by-case basis. In some countries, the sign shows an adult and a child, with the child in certain cases giving his hand to the adult.

							
Germany	Austria	United Kingdom	France	Italy	Switzerland	Norway	Denmark

• Residential areas

These are provided for in the Vienna Convention (E17a) and are found in several countries. They do not have any restricted access for vehicles. In some countries, the sign also means a speed limit of 7 km/h. Pedestrians often have priority. As their name suggests, they concern homogeneous areas where there is housing, but do not respond to the problem of areas which are used in several different ways (shops and housing, for example) or roads where traffic continues to transit in moderate amounts.

The signs show the presence of homes in the shape of a house or a block of flats. A pavement is rarely shown. Children are present, sometimes playing with a ball. Most countries show a car, but no driver is shown. There are no cyclists on the signs.

					
United Kingdom	Germany, Spain, Austria, Belgium, Poland (E17a)	Italy	Russia	Norway	Denmark

• Combined vehicle/pedestrian zones

These have appeared more recently, and are an extension of the principles of the residential area. These are areas where the pedestrian has priority over all vehicles. They include residential areas, but also the busiest roads, squares and shopping areas. Pedestrians can walk on the roadway. Vehicle speed is limited to 20 km/h, and parking is allowed only in the identified spaces. Cyclists have the right to ride in both directions of traffic. Unlike the pedestrian area, access for motor vehicles is not limited to service needs only.

To show that these are not housing areas, some countries such as Belgium, while keeping the residential area sign, have changed the way it is used.

Switzerland has removed the child playing with a ball. It has also removed the reference to the pavement and displays a speed limit. France has created a special sign: no children are shown (the fact that they play in the street is the sole responsibility of the parents),







4. Signage

the speed limit is shown as in Switzerland, there is a driver in the car, and he is watching a pedestrian go by. A cyclist has been added. Finally, since this is a public space in an urban area, there are no references to housing. Since the pedestrian is walking on the roadway, there is also no longer any reference to the pavement. The French sign was taken up by Austria in March 2013.

		
Switzerland	France, Austria	Spain, Belgium (E17a)

• Greenways

These roads are reserved for pedestrians and cyclists. Motor vehicles are not allowed to run or park on them. France has created a special sign to identify these greenways. This sign is green on a blue background with the symbols of users allowed on them. It therefore stands out from all the other traffic signs. Other countries prefer to vary elements from the Vienna Convention by showing a horse rider. The dominant colour is blue. The areas of the path in which different users are allowed are sometimes separated.

					
France: greenway	Norway: track for pedestrians and cyclists	Spain: road for cyclists and pedestrians	Belgium: path for cyclists, pedestrians and horse riders	Denmark: path for cyclists, pedestrians and horse riders	Denmark: separated paths for pedestrians, cyclists and horse riders

• Limited access areas

In areas with low emissions, access can be granted to vehicles according to their emissions. This may have an effect on the quality of pedestrians and cyclist mobility via a reduction in traffic, noise and local pollution, as long as few cars meet pollution standards.

Italy has created "ZTL" areas in which motor vehicle access is limited. This regulation sorts vehicles on the basis of local service needs; it is not related to emissions. It aims to reduce traffic by diverting through traffic, regardless of the engine used in the vehicles. The reduced number of motor vehicles tends to favour cycle and pedestrian traffic and increases their comfort and safety. The sign is zone-based (rectangular) with a red circle indicating that vehicles are prohibited, to which is added a plaque listing the exceptions to this prohibition.



This regulation means that through traffic can be excluded while still allowing service access. It does not give absolute priority to pedestrians (unlike the pedestrian area) and helps buses to run at commercial speed; it also means that a relatively high speed can be maintained for "cycle express lanes" to encourage people to use this mode for daily travel over longer distances. In France, Nantes has recently started to use this concept.

• *Separating or mixing pedestrian cycle paths*

This option features in the Vienna Convention (D11a, D11b) but has not been transposed into the national legislation of some countries, such as the United States or France.

This sign shows that cyclists can ride on some pavements, either with separate pedestrians and cyclist flows or sharing the same space without any separation. It usually has a blue background with pedestrian and cyclist symbols.

Pavements shared with separation (D11a)

Poland	United Kingdom	Germany	Spain	Belgium	Denmark	Switzerland	Belgium

Pavements shared without separation (D11b)

Denmark	Spain, Italy	United Kingdom	Switzerland	Belgium	Germany	Poland	Italy

• *Quiet lanes in the UK*

This panel is used on roads without any special development and with a small amount of motorized traffic travelling at moderate speed.

Drivers of motor vehicles are made aware of the high probability of the presence of pedestrians, cyclists and horse riders on this route.

This sign has not been reported to exist in other countries.



4.1.1.2. Signage for pedestrian and cycle crossings

• *Signage for pedestrian and cyclist crossings*







While many countries have signs to indicate the position of, or an alert for, a pedestrian or cyclist crossing, there are few that can indicate a common or adjoining crossing (pedestrian + cyclists).

Austria and Poland have special signage to indicated when the two modes share the same place for the crossing. This sign with a blue background shows a pedestrian and a cyclist on a marked crossing, within a white triangle.

In Austria, it is used to position the crossings and therefore to show motorists what user will first be encountered.

In the same way, many countries have two-phase pedestrian/cyclist lights indicating this possibility of a common or adjoining crossing, such as Britain, Spain, Switzerland, etc. Belgium and France are in the process of testing these subjects. Belgium is testing a three phase light.

4. Signage



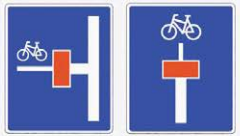


					
Austria	Austria	Poland	United Kingdom: with push button	Spain	Being tested in France

4.1.1.3. Signage to indicate the continuity of pedestrian and cycle routes

- *No-through-road except for pedestrians (and cyclists)*

France and Belgium have recently taken up this signage which existed in several countries such as Denmark, Norway or Switzerland. This panel informs cyclists and pedestrians that the no-through-road applies only to motorized modes and that active modes are not affected.

Making "smart routes" known is part of the promotion of active modes which are becoming competitive for short distances and can make use of shortcuts without traffic.

				
France and Belgium	Denmark	Norway	Italy EXCEPTO BICIS	Germany

- *Signage for ferries carrying cyclists and pedestrians*

Denmark has created special signage informing cyclists and pedestrians of the existence of a ferry intended for them.



4.1.2 Police signage concerning pedestrians

We will first present the signage for pedestrian crossings, and then look at pedestrian route continuities.

4.1.2.1. Signage for pedestrian crossings

- *Signage for a light-controlled pedestrian crossing for tramways or railways (level crossings)*

In France, to differentiate light-controlled crossings for a route dedicated to guided transport (trams and trains) from that of an ordinary road a special light has been created to draw pedestrians' attention to the potential danger.



4. Signage

This light is out at rest when no traffic is present on the track and changes to flashing red when a vehicle passes and must be fitted with an audible signal for the blind and visually impaired.

• Signage for a crossing for the frail or disabled

Britain has created signage to alert unaccustomed drivers to the high probability of frail or disabled people crossing.



• Crossings where a person is present

To help people cross are indicated by a special sign in Germany. It is used to warn motorists when approaching schools, for example.



• Organising pedestrian flow for crossings used by very many people

Russia has created special marking indicating where pedestrian must stand to increase the efficiency of the crossing when pedestrian traffic is very great. This organization makes it possible to increase the "speed" of the crossing.



• Signage indicating skiers crossing

In Norway signage is used to attract drivers' attention to the high probability of encountering skiers crossing the road.



4.1.2.2. Signage to show continuity of pedestrian routes

• Accessibility to routes for people with reduced mobility

Many countries provide signage to draw users' attention to the difficulties facing people with reduced mobility as they move around (under- or over-passes with stairs that cannot be used by people in wheelchairs). They also inform them of the presence of a ramp making the route accessible for them, or a facility to help negotiate a change in level that can also be used by cyclists. In Spain, this signage is also for cyclists.

<p>Belgium, Russia, Poland, Denmark, UK, Spain, Switzerland, Italy: pedestrian crossing with change of level (G20)</p>	<p>France: route accessible only with difficulty for wheelchair users</p>	<p>Spain: cycle crossing with change of level</p>	<p>United Kingdom, Italy: ramp for pedestrians and people in wheelchairs (G21)</p>	<p>Poland: escalator</p>

• Signage indicating pedestrians on the road.

Poland has defined signage to draw drivers' attention to the fact that pedestrians are very likely to be on the road.

This signage is very useful during special events or in areas that do not have safe pedestrian paths (no pavements or unusable ones).



4.1.3 Police signage concerning cyclists

We will first present the signage that identifies the operating rules for public spaces where cyclists ride (cycle lanes, bus lanes open to cyclists, "two-way cycle lanes", cycle streets, cycle runs, rider width limit), and then present signage relating to the priority rules when crossing.

4.1.3.1. Signage for operating rules of public spaces for cyclists

• Indicating a cycle lane

Most countries have signs to indicate the presence of cycle lanes or paths. These signs are based on the D4a sign from the Vienna Convention. France has introduced a square sign meaning that the cycle lane is optional for cyclists, while the round sign makes the facility compulsory (this allows groups of cyclists or cyclists moving at speed stay on the main road when the facility is narrow).

Spain, Norway and the United Kingdom have special signs to explain how roads are partitioned into lanes, including a cycle lane. In France the marking with a bicycle symbol and a dashed separating line are sufficient; this regulation lightens signage and reduce obstructions on pavements.

Spain	Norway	United Kingdom	Russia: cycle facility	France: indication of a non-compulsory cycle lane






• Indicating a bus (or other) lane accessible to cyclists

This provides cyclists with a safe space in urban areas where available road space is often limited space.

4. Signage

All signs have a blue background; some countries include several users, while others prefer to add a plaque.













Some signs show how lanes are assigned and the direction of traffic flow. Many countries complement this vertical signage with BUS ground markings together with the cycle logo.










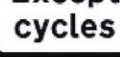
				
France	United Kingdom: bus + cycle lane	United Kingdom: start of a bus+taxi+cycle lane	Belgium: lane reserved for buses and bicycles	Belgium: Special site that can be negotiated, reserved for regular public transport service vehicles and bicycles. The bus site is not part of the roadway

• **Permission for cyclists to travel in the opposite direction** from the rest of the general traffic in a one-way street

The same principle has been adopted in most countries: a no-entry sign together with an "except for cyclists" plaque in the language of the country, often with a cycle symbol to show the direction reserved for cyclists.

This principle is used for other prohibition signs.

					
SAUF 	SAUF 	unntatt 	EXCEPTE 	EXCEPTE 	EXCEPTE 
France	Norway	Belgium			


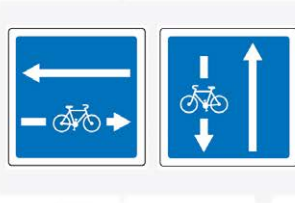



				
undtaget 	frei 	eccetto 	Nie dotyczy 	Except cycles 
Denmark	Germany	Italy	Poland	United Kingdom

Cyclists riding in the opposite direction can be indicated by a sign on blue background (with the traffic flow direction and the users shown) to alert motorists of the authorization given to cyclists.

When the direction reserved for cyclists is shared with buses, some countries prefer to indicate all users of the reserved lane to better alert other road users of their presence, especially at intersections.

Others have a policy of including only a single user (often the largest) on the sign to simplify reading, at the risk of less noticeable and more vulnerable road users being forgotten.

4. Signage

				
Switzerland	France	Italy	United Kingdom	Belgium

• Signage to indicate "waiting lanes" for cyclists

Many countries use ground markings to indicate waiting lanes for cyclists at intersections. Belgium uses signs in addition to this marking to allow cyclists to get into position in front of motor vehicles when the traffic lights are red to facilitates their manoeuvres.






• Cycle streets

Belgium has taken the sign used in the Netherlands to indicate no overtaking a cyclist in order to introduce the concept of a street where the cyclist is allowed to ride in the middle of the lane and where motor vehicles have to stay obediently behind him, providing better riding comfort.

Cyclists have priority over motor vehicles, which are prohibited from overtaking them in these cycle streets. Spain also has cycle streets in its regulations: the maximum speed is 30 km/h and priority is given to the cyclist. This regulation means that cyclists can use urban routes on which safety and comfort are guaranteed; cars are tolerated, so to speak.

This concept is similar to the German "cycle street" reserved for cyclists (possibly also available to vehicles of residents, who must then drive at less than 30 km/h) which is indicated differently.

		
Belgium	Spain	Germany

• Indicating the width limit for cycles

Poland has developed a sign stating that access is denied to cycles measuring more than 90 cm wide. This signage may be particularly useful when a section of the cycle facilities is narrow, especially when the use of tricycles is being encouraged, e.g. for local delivery of goods.



• **Indications of places where** cyclists should reduce speed are necessary where cycle routes for cycle racing have been created in Spain.



• Indicating the difficulty of a cycle route

Switzerland has defined a plaque to indicate that the route is for mountain bikes.



- **Rollers** can be used in Germany, in 30km/h zones or on roads and trails when a special plaque is used in conjunction with signage.



4.1.3.2. Signage rules for priority at cycle crossings

- **Indicating an intersection with a cycle route**

Italy, like France, indicates a potential danger, but the sign does not indicate where the cyclists may be coming from. The danger message, which is essential is indicated by the triangular shape of the sign.

Some countries "guide" the cyclist; however, while this gives better information, it maintains the ambiguity when crossing a two-way track (with cyclists coming from the right and from the left). Germany has a plaque that alerts drivers of the likely presence of cyclists crossing; arrows indicate from which direction they may appear.

Germany: cyclists arriving from both sides	Norway, Denmark, Italy: cyclists arriving from both sides	Italy, France, Russia, Spain United Kingdom, Norway, Belgium and Austria	Switzerland	United Kingdom

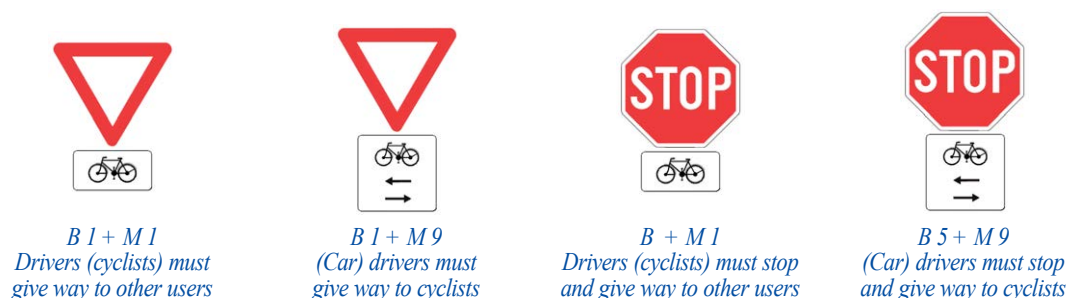
- **Indicating the start of a two-way cycle track**

Germany has a sign to indicate a two-way track. This is usually located in the crossroads.

Germany	Denmark, Norway	Italy

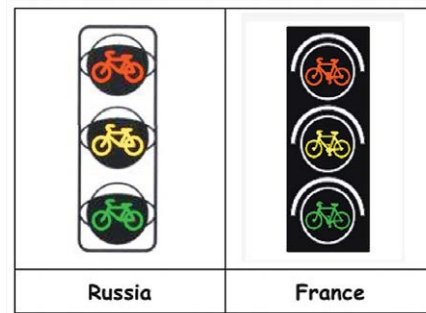
- **Managing end of priority**

Belgium has developed signage to indicate the priority systems for both cyclists and drivers of other vehicles. This signage allows non-priority users to know who the priority users are, or to specify who the loss of priority is addressed to.



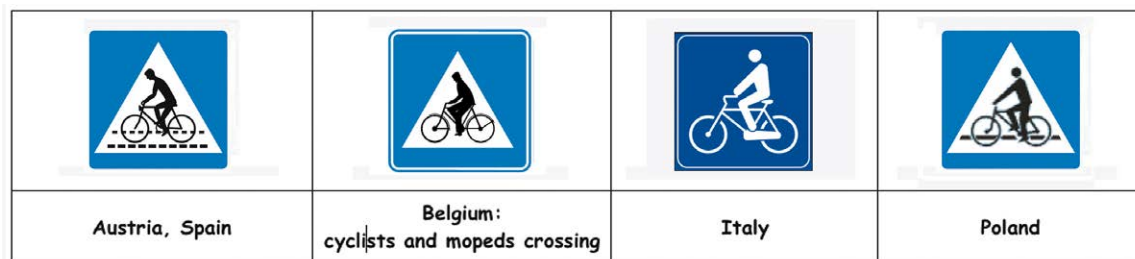
4. Signage

In most countries there are also special three-phase lights for routes used by cyclists only, two are shown here.



• *Indicating a road crossing reserved for cyclists*

Austria, Spain and Poland have a sign to indicate that a cycle path crosses a roadway. In Belgium this signage also applies to mopeds. This signage, similar to that used for pedestrian crossings, is to alert drivers of an impending cycle crossing.



• *The cycle give-way sign when turning right at traffic lights*

Adopting the Dutch practice of authorizing a right turn at red traffic lights, France uses a special plaque mounted on the traffic light post to indicate this, instead of using a text, as is the case in Holland, which may be incomprehensible to foreigners.

This is also used in Belgium. This regulation allows cyclists not to stop when the lights are red if they want to turn right or go straight (at a T-junction), but they must give way to pedestrians crossing, as well as to users for whom the lights are green, hence the choice of a red give-way triangle.



The way the signage, the services and the marking are formalized is less well defined. These plaques can be easily adapted to local contexts.

So this category has a wide variety of plaques. In many countries, regulations allow for the creation of these special plaques.

4-2 Directional signage

Unlike police signage where many similarities are to be observed between countries, directional signage is very heterogeneous.

Analysis shows that three main types of direction signing are used: direction signing using directional signs, direction signing using marks and direction signing using plans. The directional signing can may draw very directly on the ordinary road signs, by adding a pictogram, or be more tourist-oriented or utilitarian (loops, etc.).

In the latter case, it is generally not codified.

4.2.1. Directional signage using directional signs

The formal rules for direction signing using a system based on directional signs is one of the measures taken by countries that are developing or wish to develop an ambitious policy for cyclists and pedestrians.

Drawing up such a set of regulations requires the involvement of all parties, especially institutions holding legislative and police powers.

It is often initiated by the central government and imposed on local authorities, as in Switzerland, Denmark and France.

In other countries, the central government establishes a regulatory framework and leaves the way open for local authorities to define their own rules, though these must be framed, which also guarantees that the messages will be homogeneous to a certain extent. This situation is found in countries with a federal structure such as Germany, Austria and Spain.

4.2.1.1 Direction signing for pedestrians using directional signs

Switzerland has introduced general regulations. Using its network hierarchy, its regulations are used to provide direction signing for all types of pedestrian routes.

Other countries have also included pedestrian direction signing in their regulations.

Common aspects of pedestrian direction signing:

- a colour or choice of colours,
- formats,
- the pedestrian symbol, sometimes with details about the accessibility of the route,
- journey times.

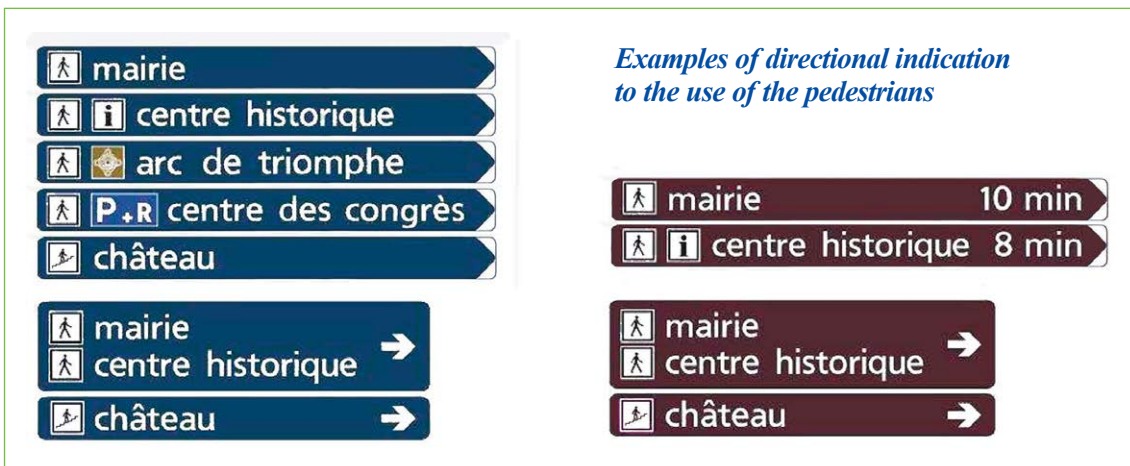
Illustration of the swiss system

○	Meta ravvicinata	45 min
Luogo di posa	Meta intermedia	1h 30 min
628 m	Meta intermedia	3h
○	Meta d'itinerario	4h 30 min

The sign is variable in size: the speed at which the pedestrian travels means that the size of the characters is of less importance.

The colour of the sign or the presence of the pedestrian symbol generally makes them easy to identify.

However, the sign must be sufficiently readable taking into consideration its location (if it is on the other side of the street, for example).



There are several approaches to pedestrian direction signing:

- as feeders to public transport (train, metro, etc.) or car parks,
- as routes from public transport (train, metro, etc.) or car parks,
- as the link between two modes of public transport (from a metro to a tram or to a bus, for example),
- as access to areas of interest for pedestrians (public buildings, etc.).

Note that some countries like Switzerland are taking strong action as regards intermodality by including urban and interurban travel on foot. The starting points for hikes, for example, are indicated in the urban environment as soon as one arrives in the rail station, a feature rarely found in other countries where it seems that the only possible starting point for hiking is the car from a car park.

4.2.1.2 Direction signing for cyclists using directional signs

With the development of EuroVelo cycling routes, the Consolidated Resolution on Road Signs and Signals (RE2) introduced the EuroVelo route information panel in Annex XIa and examples for incorporation of the EuroVelo route information panel in Annex XIb.

This resolution is shown in national regulations and is often added to for major cycle routes such as the network of cycle routes and greenways in France or the Ravel and LF networks in Belgium.

This directional signage is organized in a similar way to road signs.

Graphic charters specify the dimensions, shapes, fonts and colours to be used.

Common aspects of cycle direction signing:

- the bicycle symbol,
- the route logo,
- towns or places nearby,
- distances.



4. Signage

Switzerland has introduced general regulations. Using its network hierarchy, its regulations are used to provide direction signing for all types of cycle routes.

In the absence of official rules or in addition to these, some countries have charters for cycle directional signage. They are often initiated by villages, towns or regions for local routes such as urban networks and loops for tourists or by associations for regional or national networks.

These are high quality systems and provide the necessary information to users. But this signage often has very local and customized features that make it more difficult to contribute to the creation of connected and homogeneous networks over a larger area. It is not uncommon to see one route overlaying another with different direction signing.

The two approaches for cycle direction signing:

- the first considers the bicycle as a vehicle like any other and only gives direction signing for its routes if they are separate from road routes; this choice satisfies the objective of not saturating users' vision with too much information,
- the second seeks to ensure continuity of the main cycle routes, including when they are superimposed on road routes; the objective is to guide a cyclist from one end of the route to the other and make it easier for him to obtain information.

In Italy



In Norway



In Spain



In France



In Austria



In the United Kingdom



In the USA



In the urban environment, in order to have an impact on mindsets, some cities like Nantes choose to include travel time by bicycle.



4. Signage

Based on an average speed of 12 km/h on clearly identified, properly adapted routes, the city uses fixed signage with travel times in the city centre, fixed signage with travel times and distance in suburban areas and variable message signage to compare travel times by mode for known user destinations, showing the advantage of the bicycle at peak times over other modes of transport (e.g. between the central business district and the first ring: bus 17 min, cycle 10 min, car 25 min).



4.2.2. Directional signage using marks

4.2.2.1 Pedestrian direction signing using marks

The pedestrian walks at a speed at which small marks are sufficient. He is mainly looking for the answer to two questions:

- am I on the right route? (*he wants to be reassured*)
- at this point where several options are available, which way does my route continue?

Unofficial marking systems have been developed to mark pedestrian routes. Marking may be made with the paint on the ground, on trees or other supports and by plaques with geometric figures. Different colours and figures provide users with route identification, a guide and a direction. This principle has the advantage of simplicity. It provides immediate identification such as, for example, the major hiking trails in France. This type of marking is primarily set up and maintained by associations because it requires little technical expertise and is inexpensive. It adapts to most situations and it is easy to upkeep.

<p>Marques au sol</p> <p>200 mm</p> <p>45 mm 60 mm 45 mm</p> <p>In Austria</p>	<p>GR GRdP PR</p> <p>Suite du sentier Tournant Erreur de parcours</p> <p>In Belgium (Wallonia)</p>	<p>GR® GRP® PR</p> <p>In France</p>
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The smallness and limited intrusiveness into the visual landscape of these marks mean that a high level of continuity can be maintained at intersections or in confined spaces. This directional signage is not restricted to use over long distances: there are also some in the urban environment. This signage is generally for tourist or hiking use, but it could also be useful to mark continuities in commercial routes between major hubs.

The codes usually consist of:

- one or more strokes of colour to assure the user that he is on the right path,
- a mark to indicate arrival at an intersection, or the need to turn off,
- a mark to indicate that one should not leave the route at this point (e.g. a cross)

4.2.2.2 Cyclist direction signing using marks

There are various practices based on the principle of reassuring marks during sections of the route and as the route continues at intersections. Brussels uses chevrons to indicate a route; in addition to signs and cycle logos.

The user knows that if he follows these marks he is on one of the main routes that he identified when preparing his trip.



photo credit: IBSR

Cycle route continuity mark in Brussels

4.2.3. Directional signage with plans

Plans are used in all countries, and are an effective tool to guide and direct pedestrians and cyclists, or motorists in urban areas. They are also essential on information and service relay signs. These signs are placed at strategic points along the routes: the start of routes, car parks, crossroads, bus shelters etc. They give users an overview of their route and indicate its main features. They can also provide information on local services such as accommodation, where to eat and health.

To read a plan, one has to stop and take note. There is much information, requiring some time to understand it. Whether you are a cyclist or a pedestrian, the plan requires a space where you can stay for as long as it takes to read, work out the lie of the land and make a decision when there are several options. Plans cannot therefore be placed just anywhere and often require other forms of additional direction signalling.

4.2.3.1 Pedestrian direction signalling using plans

Examples of "utility" direction signalling using plans are rare. During the Olympic Games, to help the large numbers of pedestrians move around in London, the city marked out part of its network using plans to help locate and totems for guidance.



4. Signage

In town, plans are the only way to show the pedestrian his position, and indicate the streets in the neighbourhood and all the points of interest nearby or further away.

This cannot be achieved by direction signalling alone. It is therefore particularly important that they should be easy to read for everyone.

To take account of the need to work on people's mental maps, distorted by motorized travel modes (traffic plans with their hierarchy of roads and one-way streets force users to make detours and thus distort the perception of distance), the indication of travel time is a very important factor in providing awareness of how near places are on foot.

Legible London: the principles

These standardized signs take the form of totems providing high visibility in two formats, and using highly contrasting colours for optimum readability. These totems are new "stations" devoted to walking, providing, as it were, an extension of the transport services on offer largely catered for by public transport stations.

They include, from top to bottom:

- the "pedestrian" symbol;*
- the address of the sign;*
- a set of information giving directions to particular sectors or places;*
- a so-called "15-minute" orientation map, in which a circle shows the limits of the area reachable by walking for 15 minutes, and showing how close the neighbourhoods are to each other;*
- a more detailed so-called "5-minute" local map, showing the pedestrian his destination within a circle corresponding to a 5-minute walk;*
- a list of streets as on ordinary maps, because people are attached to this conventional mode of accessing information;*
- at the bottom of the sign, the usual "North-South" orientation.*

It should be noted that these maps are designed to be effective tools for understanding, identifying and guiding, particularly suitable for pedestrians. They provide keys to understanding that facilitate and encourage the natural process of developing their own mental map: "heads-on" orientation, with maps oriented to face the same direction as the user is facing, information on accessibility and ease of use (steps, pavement widths, pedestrian crossings), travel time on foot, inclusion of 3D views of buildings or key places (makes map reading more intuitive), bus stops, metro stations and taxi ranks, "you are here" markers.

These maps are placed on the sign at a height of between 90 cm and 1.80 m above the ground.

The orientation of the plans, using the geographer's approach (north at the top of the plan) is often at odds with the vertical positioning of the plan: the pedestrian can see the part of the city which lies behind his back presented at the top of the plan, which is counter-intuitive. The use of photos or drawings showing facades visible from the place where the map is located can help orientation.

Using bus shelters as media to guide pedestrians by combining maps, distances, direction signing and marks may be a way to improve the way public transport operates. When users are not familiar with a place, they do not know what the walking distance to the next stop is. Rather than wait 15 minutes outside peak times, a pedestrian may well choose to do 5 minutes on foot; similarly, at peak times when buses are overcrowded, pedestrians may choose to walk for short journeys, thereby restoring some comfort and relieving the existing line for other users. This is also one of the challenges of Legible London.

This direction signing may also indicate an alternative route to allow incidents to be managed (for example, in Paris for metro lines 9 and 10: instructions tell pedestrians how to walk from one station to another station on a different line when one of these is momentarily paralysed by an incident).

4. Signage

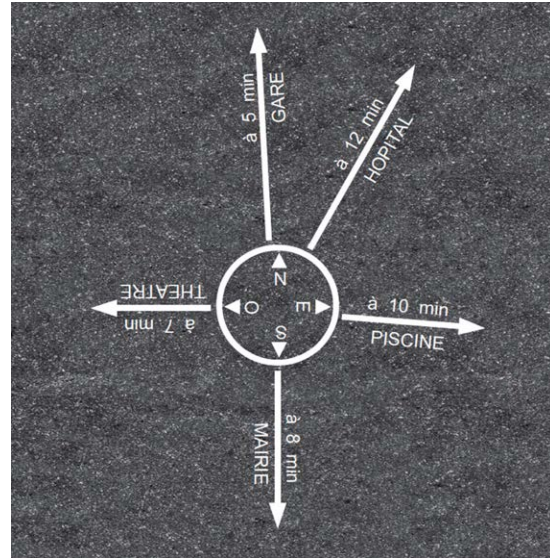
On some sites, the horizontal orientation table plays a complementary role, allowing users to find their way.

The urban equivalent is rarely to be found.

Discussions are, however, under way on the subject, with projects for directional roses for wayfinding.

It is easier to read information on the ground that when it is displayed higher up on signposts.

Care should nevertheless be taken not to position the indication on the ground at a place where it could be obscured by crowds of pedestrians.



4.2.3.2 Cycle direction signalling using plans

The need for the rider to be able to stop and read a plan means that plan cans can only be a part of a wayfinding system.

The cyclist needs enough space to stop safely or park his bike and then read the plan, find where he is and remember the relevant information.

The plan remains important, however, especially when setting out on a cycling trip, to indicate all the services on a route or near an urban area.



• *Lessons learnt for direction signing*

This inventory shows that the practices for direction signing are those that present the most significant differences between countries in terms of quality, design, use and maintenance.

Several factors help explain what contributes to this diversity of special signage:

- Entrenched traditions: the population of countries such as Switzerland, Germany and Belgium will spontaneously use active modes to move around. There are a number of reasons for this: education about green modes, many dedicated facilities, special services, financial incentives, etc.
- The work of user associations: hiking clubs in Germany, France and Poland, national cycling federations, etc. Direction signalling has often been entrusted or given over to user associations who have actively taken it on. They have created charters and guides, and they ask for and propose regulations.
- Non-centralized expertise: the Swiss cantons, the Länder in Austria and Germany, and the main Regions in Belgium;
- Comprehensive national signage for all walking and cycling networks: Switzerland and Denmark, for example;
- In some countries, there is no specific regulatory framework;
- Local political will, national green mode development schemes: having adopted national schemes, including major national and international routes (long-distance footpaths in France or the Ravel in Wallonia), set up national or federal master plans to support them, some states have developed regulations either from that applied to road traffic or by creating special regulations.
- A heavy tourist demand: the development of pedestrian and cycle routes is closely related to tourist demand. Many routes are the result of previous widely used practices, such as the Way of St James, the Loire route or the Danube by bike. Green modes are often combined in strategies to promote tourism under the "environmental" heading. The strong tourism demand related to hiking has prompted mountainous countries like France, Switzerland and Austria to develop a significant number of routes and services for pedestrians, while the countries with the lowest terrain have focused their efforts more on cycle routes.

5. Implementation

Whether political organizations are centralized or federal, the role of central government is at the most to prescribe and plan national policy in favour of active modes, with a financial contribution to the projects.

It delegates the carrying-out of such projects to local authorities such as the Regions in Spain, the cantons in Switzerland, the Länder in Germany and Austria, départements, intercommunal authorities and towns in France and Poland.

Management and maintenance are often left to local authorities or even associations.

So the extent of these delegations is variable.

It is usually based on the respective levels of funding for each entity involved.

In Germany, the Länder have almost total delegation: planning, implementation and funding.

It must therefore be concluded that there are as many methods as there are countries.

6. Major trends

This study of 13 countries shows that the orientation, direction signalling and information systems are more or less heterogeneous according to the type of route. The major cross-border walking and cycling routes are already relatively homogeneous, as regards both the types of signals and the information provided to users.

They form large networks that have their own charters.

But the more the routes become local, the greater the temptation to customize the signage where a large amount of heterogeneity is observed; but this is not detrimental to the quality of the messages provided.

Countries do not all have the same degree of completeness and accuracy in their regulations. Those who have adopted national schemes for the development of cycle and pedestrian route networks are ahead and have generally already developed special regulations.

It can be observed that these regulations often draw heavily on countries that are adjacent or which have the same culture.

The main similarities are as follows:

- **All countries have at least the highway code as basic regulations;**
- **Similar network hierarchies from national and international main routes complemented by regional and local loops;**
- **The use of identical colours: yellow for marking pedestrian routes in Alpine countries, red for the cycle network in Switzerland, Italy and Bavaria, green in France, Austria, Belgium and Saarland, blue in England and Denmark.**
- **Way marking using simple marks for the long-distance footpath network in France, marks imported and adapted in Austria;**
- **The use of identical cycle and pedestrian logos;**
- **In urban areas, cycling networks designed as alternatives to the car; still few marked pedestrian networks.**
- **In rural areas, tourism is what drives the development of routes.**

The demand for homogenization on major routes is greater than on local networks.

Users there are mainly serious travellers using modern tools such as websites for travel planning or satellite guidance for location and guidance. This homogeneous signage makes research and travel easier for them.

On local loops, customized signage is not always perceived as a disadvantage because the user adapts to it easily. It may even be an asset for better identification of the route.

Whether for major routes or local loops, the common demand is for quality and consistent messages: adequate, continuous way-marking, clear indications at the main points, reliable distances and times, information on local services and good equipment maintenance.

7. Conclusion: some ideas to remember

This study shows how effective the Vienna Convention has been in defining common signage that can be understood by all inhabitants of Europe.

The work done by the WP1 group on signage for the EuroVelo routes, with the choice of a common identifier, shows the value of harmonization.

However, this study also shows that there are currently no proposals to address some needs related to the development of active modes. Given the success of the existing signs, it may seem desirable to complete signage for the active modes in this convention.

The police signage section identifies principles for signs that could be incorporated.

This study also shows that **the authorities of a country can stimulate the development of active travel modes (walking and cycling) either as stand-alone or as complementary modes to other transport modes.**

As guarantors of national regulations, they are in a position to give a signal and legally allow voluntary communities or associations, depending on the culture and tradition of each country, to act by implementing rules favourable to the development of walking and cycling that apply to movement within, and management of, public space.

This involves creating a **toolbox** that can also be used to educate residents by keeping a certain amount of homogeneity and developing the economic activity which may be generated by tourism:

- **in police signage, by creating new rules in the highway code of each country, by transcribing items from the Vienna Convention and drawing on practices found in other countries, and, finally, by creating the signage corresponding to these rules.**
- **in directional signage as regulations or as recommendations by combining three types of informational systems: direction signing, way-finding marks, plans.**

Finally, at international level, this study shows that countries are not lacking in imagination to respond to new needs.

It may be a source of inspiration to promote signage that would use symbols that can be understood by all, even by those who cannot read or who do not speak the language of the country.

As such, it calls for further work on the exchange of good practices on the subject of pedestrians and cyclists as practised by THE PEP.

8. Annexes on CD-ROM: factsheets by country

The sources used to compile the factsheets that were used to prepare this document are listed by country at the end of each factsheet.

Our thanks go to our contacts in each country for the information they have given us.

- 01-Austria: Pedestrians
- 01-Austria: Cyclists
- 02-Belgium: Pedestrians
- 02-Belgium: Cyclists
- 03-Denmark: Pedestrians
- 03-Denmark: Cyclists
- 04-France: Pedestrians
- 04-France: Cyclists
- 05-Germany: Pedestrians
- 05-Germany: Cyclists
- 06-Italy: Pedestrians
- 06-Italy: Cyclists
- 07-Norway: Pedestrians
- 07-Norway: Cyclists
- 08-Poland: Pedestrians
- 08-Poland: Cyclists
- 09-Russia: Pedestrians
- 09-Russia: Cyclists
- 10-Spain: Pedestrians
- 10-Spain: Cyclists
- 11-Switzerland: Pedestrians
- 11-Switzerland: Cyclists
- 12-United Kingdom: Pedestrians
- 12-United Kingdom: Cyclists
- 13-USA: Pedestrians
- 13-USA: Cyclists

The factsheets for Germany, France, Switzerland and Norway have been validated by the authorities of these countries.