

What is sustainable mobility?

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It is achieved when we realize that, in our societies, not everything must be measured by how fast we can get there, or by the monetary costs currently accepted. At the same time, it will only be attained whenever we manage to have transport alternatives (both personal and freight) that are sufficiently attractive and accessible.

The means of transportation that employ less energy per transported person and tonne are the most sustainable. Each type of mobility consumes energy which pollutes and produces heat.

Politicians, and, in turn, Governments as a whole, are fixated with infrastructures. However, these infrastructures are only one component of the transport system. Public transport, in particular, implies much more.

It takes years to put infrastructures in place, and the solution they offer to the means of transport is not very clear. Therefore, it is convenient to get an initial and total guarantee of service in collective mode for the totality of potential users. When a correct service is in place, there are less excuses to use personal vehicles irrationally and compulsively, as many of us currently do.

Once the principle: **Bus for everyone is** achieved with acceptable frequency (15 to 20 minutes), we may turn to studying the construction of the heaviest infrastructure, indicated for those itineraries with greater number of passengers. Thus, the political desire of constructing may be satisfied.

Managing transport systems requires many full time jobs (such as the ones created by the construction companies who actually build the infrastructures). Some European studies indicate that the creation of jobs and the construction of infrastructures must be separated. Only in this way will decisions about mobility be made with the whole of society's welfare in mind.

The use of vehicles creates costly externalities which we haven't been able to incorporate in our decision making process. Accidents, emissions, noise, energy consumption and space constitute parameters which negatively affect the economy in a society. Certain forces refuse to place sufficient economic value on these externalities. In the debate concerning road safety, no voices are raised regarding that fact that limiting the speed limit (which clearly saves lives and reduces the number of injuries) will have negative effects in the economy because it slows down transportation. In order to achieve a sustainable mobility we have to consider the need to encourage a defensive and economical driving. The idea that internalizing the mentioned externalities within the cost of transportation would ruin our economy is unacceptable, it only avoids complying with the Kyoto Protocol. This is why the people in charge of our society are in favour of buying surplus of emission permits from developing countries.

It is advisable to think in terms of sustainable mobility within a global framework of mobility. We have to work, slowly but firmly, in order to achieve an industrial restructuring of the automotive sector, we have to plan on decreasing vehicle production during the next decade and we have to manage to contain fuel consumption.

We should economically punish the fact that a sole person moves in a vehicle weighing from 500 kg to a tonne. As well as talking about installing a black box in vehicles to improve road safety, we should talk about installing **environmental control boxes** that allow the collection from the owner of the vehicle of a fee based on the efficiency load/weight (within the legal load limits). With this we would manage to obtain a clear grouping of people per vehicle (unlike at present, when most of the vehicles only transport one person). This load fee would also optimize freight transport, since it would reward transportation of full loads and it would make it very costly to circulate empty loaded.

Undoubtedly, collective mobility is safer than individual mobility. A clear and accepted objective in Europe, and, at last, also in Spain, consists on making a priority of the fact that we have to decrease the number of dead and injured people with the corresponding consequences in mobility. A reduction of 50% is needed between the decade 2000-2010. This reduction in accidents is closely linked to a calmer way of thinking about mobility. If we managed to increase the number of persons per car by 50%, the number of injured people would decrease by approximately 30% and energy consumption by 40%. If the average speed were to be reduced in 9 km/h, the number of deaths would

be reduced by close to 50%. In order to save lives as well as to improve the sustainability of mobility and society's economy it is worth making this effort and calming down the driving mode of people and freight.

The railway system must assume the transport of the bulk of freights, both to improve the environment and to save lives. This means that whoever wants to transport his tonnes by road must pay the social cost associated with this means of transportation. There is a strange fear towards applying this concept. We must (again) first put the tonne/km fee on the European Union's agenda, and, afterwards, also on the agenda of international organizations that deal with trade and transportation. In this context, it is also a must to reflect on the passenger/km excess which is released into the atmosphere. It has a devastating environmental effect and it is clearly non-sustainable.

Public transport, in relation to the user, is made up of stops / stations. As long as the vehicle leaves the user at the desired stop in an acceptable period of time, the journey or the speed at which this journey is made will be less important. The great majority of public transport users in the countries from the south of Europe walk to their stops and stations. In more Northern countries, walking is combined with cycling. But in all events, walking access to public transport must be safe and comfortable. Sidewalks must be in good condition and pedestrian crossings must be placed at appropriate spots. There are too many places where the fact that the street and the road must reserve the necessary space and comfort for pedestrians is forgotten. Once this need is fulfilled, we may turn to thinking about drivers of private vehicles.

In the Mediterranean countries walking is part of the culture, and, thus, this sustainable mobility -added to collective transport - constitutes a majority. Those who got to work (as observed in the following graphs) do not behave with as much sustainability. It can generally be said that if two thirds of the trips are made by public transport, on foot and by bicycle, most of the citizens behave in a sustainable way in their daily trips. We have a culture of sustainability in mobility. But we have to strengthen this culture to avoid losing followers and to prevent people from turning to their private vehicle as a means of transportation.

