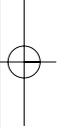
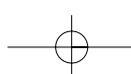
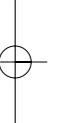
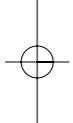
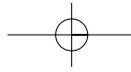


# 4



ALTERNATIVES FOR ACTION AND STRATEGIC OPTIONS:  
THE PEIT 2020 SCENARIO





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**4.1. DEFINITION OF ALTERNATIVES**

The aim of an analysis of scenarios is to establish likely trends in the demand for transport during the period in which the PEIT is in force, and the potential effects of those trends on the environmental, territorial and economic efficiency objectives set in the Plan.

Just two basic scenarios have been defined: the first, described as tendential, assumes a continuation of trends in the demand for transport and in public policies; the second, the environment scenario, aims to optimise the environmental performance of the system, without compromising its functional efficiency. And they provide a third, the PEIT 2020 Scenario, as a process of progressive and realistic approximation to the future environmental situation, whose point of departure draws on guidelines for action that suppose strong endorsement of the purely tendential picture, for both transport demand and for public policies.

In each scenario, the priorities for action are defined for public policies and their likely effects, paying particular attention to the Ministry of Public Works and Transport field of jurisdiction, and identifying barriers and uncertainties as to that scenario’s implementation. Finally, the compatibility of each scenario is compared with the PEIT targets set: the system’s efficiency, social and territorial cohesion, the environment and economic development, and competitiveness.

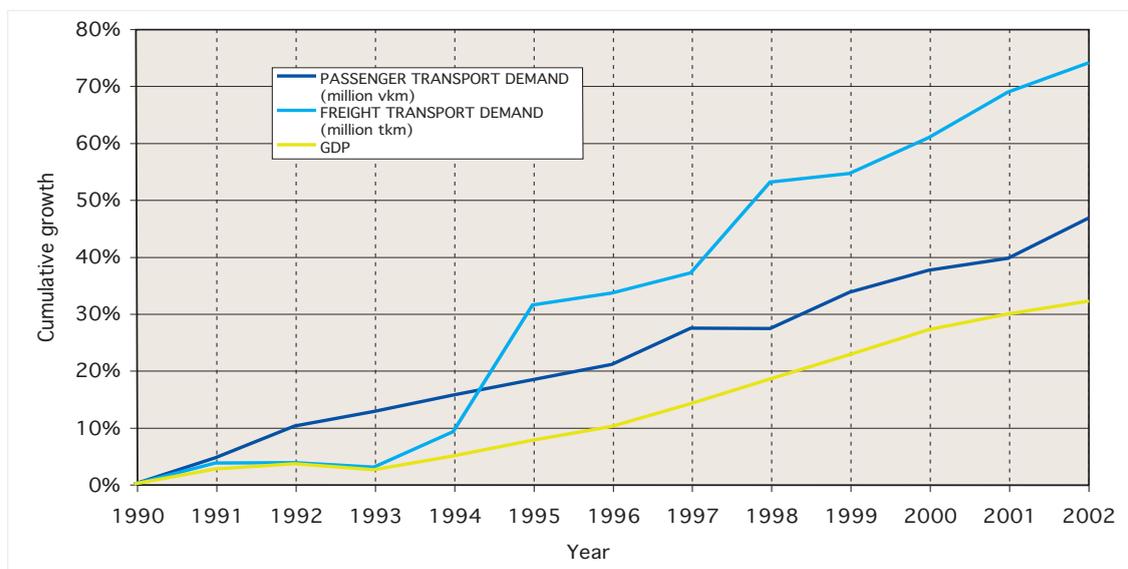
**4.1.1. The trend scenario**

The purpose of this scenario is to provide continuity for and culminate the trends of public policies of recent years. The following table summarises the main components, effects and uncertainties of this scenario.

THE MAIN COMPONENTS OF THE TREND SCENARIO		
PRIORITIES FOR ACTION	IMPACT	BARRIERS AND UNCERTAINTIES
<ul style="list-style-type: none"> <li>• Homogeneous provision of high-performance infrastructures throughout the country.</li> <li>• Identification of large projects of great “symbolic” effect.</li> <li>• Radial logic in each mode.</li> <li>• Increased transport company competitiveness (sector liberalisation).</li> <li>• Intermodal competition.</li> <li>• Technological improvements to vehicles.</li> <li>• Strict compliance with international obligations.</li> <li>• To stimulate the economy’s competitive-ness basically via the construction and transport sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure oversupply.</li> <li>• High and rising investment, maintenance and operating costs.</li> <li>• Enhanced duality and centre-periphery dependence.</li> <li>• Stimulation of transport demand.</li> <li>• Increasing dominance of air transport and the private vehicle for passengers.</li> <li>• Increasing dominance of goods transport by road.</li> </ul>	<ul style="list-style-type: none"> <li>• Economic uncertainty: insufficient resources for investment, and their inefficient use.</li> <li>• Negative environmental effects: land occupancy, fragmentation, emissions.</li> <li>• Negative territorial effects: urban sprawl; increasing centre-periphery duality.</li> <li>• The international competitiveness of local companies to operate elsewhere in Europe (limited intermodal capacity).</li> <li>• Divergence from European policies; growing difficulty in meeting transport policy commitments, particularly in the environment.</li> <li>• Social benefits concentrated in certain groups (users with greater mobility, users of high-quality and higher-cost modes, users of long-distance centre-periphery routes).</li> </ul>

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FIGURE 13. Trends in transport demand



4.1.2. The environmental scenario

The environmental scenario is designed to optimise the system’s environmental performance. Unlike the tendential scenario with its prolongation into the future of the existing transport system, the environmental scenario would, in its formulation in terms of policies and priorities of action, opt for a leading role in fulfilling environmental obligations in the international framework, ultimately fixing more ambitious time schedules and targets than those today accepted in international organisations, and in particular in the European Union, in environment-related matters. It thus means designing and programming a specific process for Spain, a process which is accelerated in comparison with other countries in our social and political context, in essence implying a radical change in the speed of transformation toward a society which is more respectful of the environment. The table below summaries the main components, effects and uncertainties of this scenario.

MAIN COMPONENTS OF THE ENVIRONMENTAL SCENARIO

PRIORITIES FOR ACTION	IMPACT	BARRIERS AND UNCERTAINTIES
<ul style="list-style-type: none"> <li>• Establishment of emission quotas (control, etc).</li> <li>• Short-term internalisation of all costs by the user.</li> <li>• Action on congestion, via prices.</li> <li>• Investment in infrastructures exclusively in categories whose environmental performance is better.</li> <li>• Lower priority for infrastructure projects than for non-infrastructure alternatives.</li> <li>• Enhanced transport regulation.</li> <li>• The establishment of domestic environmental objectives which are more demanding than international obligations, to provide a “booster” effect internationally.</li> </ul>	<ul style="list-style-type: none"> <li>• Territorial imbalances provoked by the existing infrastructure model.</li> <li>• High costs for the reconversion of the sector.</li> <li>• Major short-term changes in the mobility behaviour of individuals and companies.</li> <li>• High modal transfer.</li> <li>• Capacity to control growth in the demand for transport.</li> </ul>	<ul style="list-style-type: none"> <li>• Economic competitiveness with other countries.</li> <li>• The response of the public and companies to major changes in their lines of mobility.</li> <li>• The functioning of the transport system.</li> <li>• Real capacity to implement and supervise new regulations.</li> <li>• Real capacity to influence in the international realm.</li> <li>• The need for parallel development of complementary measures in other sectors’ policies.</li> </ul>

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**4.1.3. The PEIT 2020 scenario**

The PEIT 2020 scenario is defined as a progressive and realistic process of approximation to the environmental scenario, in other words to reach the same objectives, to change substantially the transport-environment relation at a rate which, on the one hand, does not place operation of the transport system or the economic system as a whole at risk and, on the other hand, guarantees an on-going reduction of external factors.

It does of course share with the environmental scenario the objective of internalising the costs of the system; the fundamental difference resides in the rate of this internalisation process. The PEIT 2020 scenario seeks to design a medium- and long-term internalisation for costs. The following table sets out the main components, effects and uncertainties of this scenario.

MAIN COMPONENTS OF THE PEIT 2020 SCENARIO		
PRIORITIES FOR ACTION	IMPACT	BARRIERS AND UNCERTAINTIES
<ul style="list-style-type: none"> <li>• Coordination of transport modes.</li> <li>• Medium- and long-term internalising of costs.</li> <li>• Priority for the termination of networks (homogeneity and balance).</li> <li>• Compatibility of conventional and high-capacity infrastructures: assignation according to efficiency (demand).</li> <li>• Support for and stimulation of inter-operator cooperation.</li> <li>• Active promotion of international agreements.</li> <li>• Coordination of transport network owners and operators.</li> <li>• Permanent monitoring of the system.</li> <li>• Backup for innovation in transport.</li> <li>• Coordination with territorial and urban planning and the promotion of "local self-sufficiency" to reduce mobility needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Modest modal change short- and medium-term; effects perceptible only long-term.</li> <li>• Continuing requirements of operator adaptation to new, increasingly demanding conditions: intermodality, environmental efficiency ...</li> <li>• Progressive impact on the demand for transport, perceptible long-term.</li> <li>• Medium-term, to favour the competitiveness of the national economy as a whole and of companies in the European sphere, by incorporating the impacts and total costs of the transport system into their decisions.</li> <li>• To benefit the competitiveness of national operators at the European level, by operating in the framework of similar mobility policies.</li> <li>• Increased innovation in the sector.</li> </ul>	<ul style="list-style-type: none"> <li>• The need for more precise definition of infrastructure priorities.</li> <li>• Greater resistance to change: the need to improve the channels of participation and dialogue.</li> <li>• Difficulties of integration into the new model for operators able to be less flexible in confronting innovation.</li> <li>• Fulfilment of international environmental commitments by their strict deadlines.</li> <li>• The existence of disproportionate local expectations about the development potential linked to large infrastructures.</li> </ul>

**4.2. THE COMPATIBILITY OF THE SCENARIOS WITH THE PEIT OBJECTIVES**

A comparison follows of the compatibility of each of these three scenarios and the objectives fixed for the PEIT: the system's efficiency, social and territorial cohesion, environmental compatibility and economic development, and competitiveness.

- **Efficiency of the system in terms of quality of service.** The tendential scenario follows guidelines which, in the past, have permitted this efficiency by concentrating it progressively in a reduced set of modes of transport: the private vehicle for passengers, and the road transport of goods. The future continuation of this scenario will require greater investment, and if the desire is for the other modes to compete with the dominant one, to extend this investment to other types of infrastructures, although without abandoning those in place. The environmental scenario seeks greater efficiency in the

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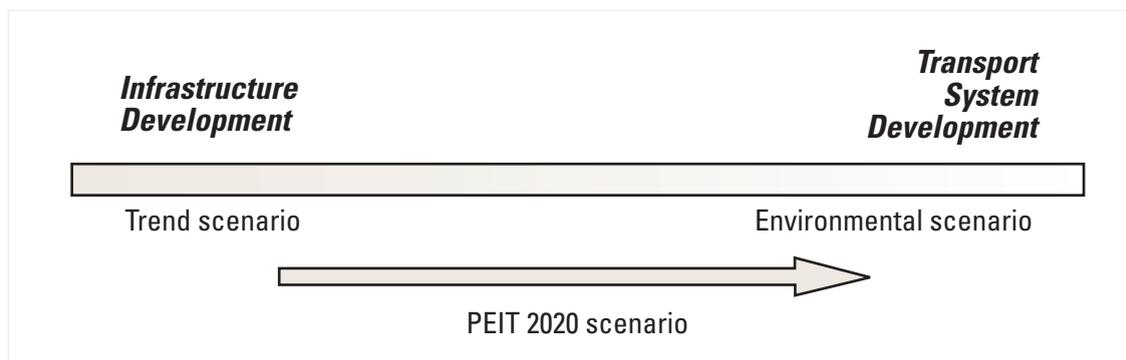
relation between the use of the infrastructures and the flows actually carried, as well as in terms of the use of the resources available in each mode of transport; the problem is that the shift from one situation to the other must be articulated in a way which ensures a smooth transition, without diminishing the efficiency currently achieved: that is the aim of the PEIT 2020 scenario.

- **Social and territorial cohesion.** Social and territorial cohesion goes well beyond the possibilities for action in the field of transport, but mobility policies may prove more or less complementary to other policies which may have more decisive effects. In this sense, the implementation of policies which favour not just transparency of transport costs but also access to non-private modes represents relevant support for social cohesion, facilitating on the one hand accessibility of services and, on the other, pointing to revenue transfers which may occur. On the other hand, while the three scenarios may claim interest in the search for territorial rebalance, the risks that the drive to invest in infrastructures and services is not translated into significant real advantages for territories where the density of occupation and relative level of development is less, are clearly greater in the trend scenario, because it favours the dynamics of concentration, and because its greater emphasis on infrastructures than on services tends to undervalue the specific integration requirements of weaker areas, apart from the fact that most decisions are irreversible and cannot be corrected if results do not come up to expectations.
- **Environmental compatibility.** It is in this field where the differences of the three scenarios are more clearly patent. The tendential scenario incorporates environmental objectives subsequently, either with corrective measures, or by placing its confidence in the potential coming input from technological advances, while not discounting the possible application in the future of price mechanisms which may integrate environmental costs. The environmental scenario incorporates these environmental objectives in advance, developing transport policy addressed as a priority to the fulfilment of those objectives, with an outstanding role for the correct imputation of transport costs, including external factors, and not discounting measures to rationalise and limit demand. The PEIT 2020 scenario attains the environmental objectives over a longer term, while seeking not to place their effective attainment in jeopardy.
- **Economic development and competitiveness.** While the three scenarios may claim that they deal with and are open to these objectives, there are major differences between them. In the tendential scenario, concern for greater insertion in Europe comes up against a clear lack of alignment of transport policies with those of the EU and a majority of Member States. On the other hand, there is a growing need for financial resources in this scenario, and its efficiency in relation both to the transport system itself and to other public policies is questionable. Finally, attention to R&D+i and the startup of innovative measures in the tendential scenario will, according to past experience, be reduced, and limited largely to contributions which can be made in terms of technological advances which may ensure the medium-term viability of traditional transport policy.

In short, a good part of the PEIT's objectives are incompatible with the tendential scenario on the 2020 horizon. With the environmental scenario there is an accelerated convergence of transport policy with environmental targets, which may possibly introduce significant strains into the system, particularly in relation to its short-term efficiency, and in respect of the expectations for territorial cohesion, which are also objectives fixed for the PEIT. For these reasons, a committed scenario is chosen, PEIT 2020, which facilitates transition from current transport policy to a sustainable and environmentally compatible scenario in the horizon year.

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FIGURE 14. The pattern of priorities in the alternative scenarios



### 4.3. PEIT 2020: STRATEGIC OPTIONS

To achieve the PEIT-2020 scenario, the content of the Plan is based on the following options and criteria for action in the major questions raised today in transport policy:

- **The level of investment and its financing.** The alternatives are to choose between a policy for the maximisation of resources used in infrastructures, a policy of rationalisation, at all stages using the resources strictly necessary for the system's correct operation, or a policy of stability, levelling out investment fluctuations, subjecting each action to strict prior evaluation and allowing for medium- and long-term programming. On the other hand, a number of possibilities are opened up to obtain and use the resources: these range from maintaining the current situation (self-financing of infrastructures for modes of transport which collect charges from their users, and budget financing of the rest), to the progressive spread of the self-financing model in each category, while not discarding the introduction of formulas for the transfer of resources between categories in order to develop intermodality and favour those which most benefit the environment. The PEIT 2020 Scenario seeks to stabilise the Ministry of Public Works and Transport investment levels, progressively shifting toward a situation where the entire transport system is self-financed, and to develop formulas for the transfer of resources between modes of transport, provided that this enhances the intermodality of the system as a whole.
- **The quality and accessibility parameters offered by the system.** In the present situation, road is considered "the universal accessibility mode", and categories of transport which are alternative to the use of private vehicles or the transport of goods by road fail to offer an alternative global offer. This means that it is the infrastructures –particularly road infrastructures– rather than the services offered which citizens take as reference for the standard of quality offered. The alternative is to progressively raise the standard of quality of public services actually offered, making it necessary in turn to set strategies to promote passenger and goods intermodality. The PEIT 2020 Scenario opts for accessibility based on the presence and quality of public services and not just in the provision of infrastructures.
- **The role of Spain in international and European transport.** Spain's geographical situation in Europe allows for flexibility when it comes to defining its role in the European and world system, which other countries cannot draw on, either because of their central location (transit countries), or their position away from major international flows. Between promoting this country as a "doorway to Europe" alternative to the major sea and international transport nodes, or the choice of a marginal location which, while

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avoiding problems and the impacts of major international transport flows, also means relinquishing opportunities for the development of the logistics sector, a realistic option has to be established which makes it possible for Spain to develop as an international logistic platform compatible with the growth of transport chains which are respectful of the environment. This is the option adopted by the PEIT 2020 Scenario.

- **Definition of the major axes or corridors within a hierarchical intermodal transport system.** The objective of territorial rebalancing of the transport system can be tackled through two strategies. The first involves a densification or meshing of each of the modal networks. The second comprises the integrated treatment of all transport networks and services, irrespective of who owns them or of their nodal character. From this latter standpoint, the system's definition is based on the reinforcement of the nodes articulating and connecting the various networks, and the definition of a series of transport corridors channelling the main flows into transport categories which provide alternatives to the private vehicle or the transport of goods by road, avoiding excessive concentration of the radial system. This approach makes it possible to limit requirements in terms of high-capacity infrastructures, and concentrate resources in the territory's capillary accessibility. In this way, zones which are still poorly equipped or which depend excessively on a single mode can be dealt with on a priority basis, along with the border regions, which have to develop their networks independently of the needs and pressures of long-distance transnational flows. The PEIT 2020 Scenario has chosen an intermodal and hierarchical conception of the transport system, offering balanced accessibility throughout the territory, resolving existing bottlenecks.
- **Cooperation with transport operators.** In a context of increasing liberalisation, it becomes necessary to consider the role the Administration must play: as a passive regulator, acting at the most in support of agreement initiatives throughout the sector; as an active regulator guaranteeing compliance with the rules in place, and fair competition in all modes, or as a determined promoter of intermodality, favouring the transformation of these agents into genuine logistic operators, the integration and harmonisation of smaller operators in transport chains, and the consolidation of intermodal operators or an enhancement of their role in the European and international scenarios. In the PEIT 2020 Scenario, the authorities develop an active policy to promote the *Europeanisation and intermodality* of our transport operators, in a strategy agreed with the public operators, and a system of incentives and backup to all those involved.
- **De-coupling and management of transport demand.** The alternatives range between non-intervention, waiting for the economic, territorial and social guidelines driven if applicable by policies other than those for transport to define trends in the demand for mobility, and intervention which may vary between action in the quest for a relative de-coupling (to promote absorption of the growth in demand by the categories of transport which are the best environmental performers) or an absolute stance (seeking a genuine reduction of the elasticity between economic growth and transport). At the same time, in this latter case, there may be more or less voluntary action, dealing with the guidelines determining the demand for mobility, or directly with the mobility itself. The PEIT 2020 Scenario deals with this question with a prudence arising from the many uncertainties which still exist on this matter, but based on the conclusion that the continuing increase in the intensity of transport in the Spanish economy, perhaps necessary in previous phases in the process of convergence and socio-economic development, now tends to represent a threat to the global sustainability of the model, including from the standpoint of competitiveness and economic efficiency. For this reason, there is a commitment to

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explore actively the possibilities for action and, whenever possible, to begin coordination with our European partners in an orderly process able to achieve a progressive decoupling first relatively speaking and, long-term, in absolute terms between economic growth and the transport demand, so progressively enhancing the efficiency of transport use in this country's economy, that is in terms of transport consumption per unit of income generated.

- **Intervention in urban mobility.** With the explained importance of the contribution from the State Administration to urban mobility in terms of infrastructures and financial resources, a choice can be made between a continuance of policy, of contribution according to existing availabilities and case-by-case and project-by-project negotiation, or a policy of coordination with other Administrations based on a definition of common targets through Sustainable Mobility Plans (PMS) which are compatible with the PEIT's approaches. In this case, the General State Administration will direct its action according to the attainment of certain sustainability targets by the Authorities with jurisdiction in urban mobility, so facilitating this sector's input in meeting targets such as the reduction of emissions or improved air quality. The PEIT 2020 Scenario foresees enhanced coordination and objective criteria for action in the urban environment which are based on the principles of sustainability.
- **Definition of the institutional planning and coordination framework.** While the existing legislative framework includes specific obligations on the public powers in the planning of some transport infrastructures (as in the Roads Act), there are no provisions concerning the framework for overall mobility planning. Some Autonomous Communities are beginning to work along these lines, with the passage and implementation of their own "Mobility Act". This formalises the principles of transparency, participation, management by objectives and inter-institutional cooperation, overcoming the voluntary aspects of the present situation. In a context of progressive European integration of transport policy and an increasing commitment to a system of government open to citizens, the formalisation must be considered of a planning framework, including development, monitoring and review systems, the definition of objectives, or inter-institutional cooperation mechanisms. The PEIT 2020 Scenario involves a formalisation of strategic transport policy planning, within the scope of the competences of the Ministry of Public Works and Transport, by creating the right legislative framework, and fomenting new systems of coordination based on joint responsibility in reaching the Plan's targets.

Three time-frames are fixed in achieving this PEIT-2020 Scenario, making it possible to move forward progressively in the compatibility of the transport system with the principles of sustainable development:

- **2005-2008:** To complete the infrastructure system, to ensure territorial structuring and, at the same time, to fix the bases for the change. To implement the highest priority actions to ensure the coherence of the networks and optimise the functionality of actions and commitments under way. To begin the development of modal and technical alternatives which make de-coupling possible, and enhanced environmental performance by the sector, deploying the investments and planning activities which are necessary to the development of intermodal integration. To develop appropriate systems and procedures to manage, monitor and assess the Plan's objectives. To begin application of environmental integration measures in infrastructures. To move forward in an understanding of the external factors of transport and the internalisation alternatives, and to start up pilot experiments in demand management.

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- **2009-2012:** To consolidate trends in modal changes, furthering environmental improvement actions, and pursuing the development of the infrastructure networks to ensure that the system is meshed. To move forward in intermodal integration, developing the infrastructures and services, and putting down the bases to limit the elasticity of transport demand in relation to economic growth. To develop practical use of measures to manage demand and, depending on the results of the previous phase, to begin applying the internalisation instruments. To complete the trunks and corridors which guarantee provision of multimodal alternatives.
- **2013-2020:** To complete the process of integration of environmental and sustainable development objectives into the transport sector, to progress in the construction of an integrated transport system, and to implement infrastructure actions which are consistent with that model. To consolidate application of the management and internalisation tools needed to further the dynamics of mode change and to reduce external factors, begun in the previous phase. To move forward, coordinating with the spheres of political decision-making, in the de-coupling of economic growth and transport necessities. To finish planned infrastructure projects in line with the environmental compatibility priorities established in the processes for the updating and review of the Plan.