

North-Western Italy

Governance of Transport Infrastructures

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Institutional structure and transport system

North-Western Italy and its institutional structure

North-Western Italy is the area comprising the Regions of Valle d'Aosta, Piedmont, Liguria and Lombardy. The area includes a sizeable portion of the Po Valley, crossed by the river Po (Italy's longest river), and includes highly industrialized regions with an active tourist sector. It is classified as a supra-regional entity in the EU's system of territorial units for statistics (NUTS, level 1) and is regarded as a geographical division by the Italian National Institute for Statistics (ISTAT), although there is no corresponding sub-national authority for this area.

North-Western Italy occupies a total surface of 57,946 km² and comprises 24 provinces and 3.064 municipalities, with a total population of 15,630,959. In regard to productive sector, there are 1,374,610 active enterprises (27% of the country's total), employing 6,816,894 workers (30% of the country's total), producing 32% of the country's Gross Domestic Product (GDP) and generating an added value of 426 billion € (32% of the country's total), with exports worth 132 billion € (40% of the country's total), imports worth 63 billion € (47% of the country's total) and a per capita income of 19,446 €.

These figures are representative of the undeniable strength and capacity of development revealed in recent years by this part of the country. The North-West is currently one of the greatest productive polarizations in Italy and Europe.

In recent years it is playing a leading role on the national stage due to its dynamic capacity, after this area (the so-called industrial triangle of Milan-Turin-Genoa) led the country's development from the post-war (World War II) until the end of the seventies.

Today, it constitutes a crucial nerve-centre in the great processes of territorial reorganisation currently affecting mainland Europe and the Mediterranean. As a result, it is subject to growing mobility of people, goods and resources.

As mentioned previously, this area can be regarded as a macro-region from an economic, functional and systemic perspective, but does not benefit by administrative recognition.

Therefore, the governing of the North-West territorial dynamics lies with institutions at state level (i.e. the national government), regional level (in this case there are four regions involved), provincial level (twenty-four provinces) and finally at the level of municipalities (over 3,000 municipalities).

The administrative model established in Italy over the last two decades has been modelled on multiple levels of government with autonomous regional and local authorities at its base. As from 1990 (through Law 142/90 and the Bassanini Law, 59/97), Italy was involved in policies that brought about a shift in the focus of political and administrative power. These policies, that can be classified as decentralisation, introduced a new phase in the relationships between the centre and the periphery, which underwent a major change from hierarchically ordered levels of government to a plurality of autonomous public authorities (Perulli, 2000).

Thus began a phase of transition towards a decentralised, federalist system of government, characterised by a marked autonomy of local authorities in terms of decision-making and programming.

This decentralisation entails a transfer of functions, resources and duties to the system of autonomous local authorities, bringing about a major reform of government and consequently of the ways in which the decision-making process took place.

The structure of resulting administrative system is grounded on the principle of subsidiarity, which states that the most suitable public authority to exercise the majority of administrative functions is the one which is territorially and functionally closest to citizens.

Municipalities and Provinces, therefore, became responsible for socio-economic and territorial development, as they are closest and most sensitive to the issues affecting local system.

Institutional competences in terms of infrastructure and transport

In terms of infrastructures and transport, Legislative Decree 112/98 concerning the assignment of administrative functions and duties of the State to the Regions and local authorities, in implementation of Law 59 of 1997, requires the State to exercise functions that include multi-year planning for roads as well as the planning, execution and management of the national network of motorways and roads, including country's major traffic routes and the roads that connect the State's main roadway network to those of neighbouring countries.

For this purpose, the Integrated National Transport System (Sistema Nazionale Integrato dei Trasporti, SNIT) was established, resulting from the integration of national interest infrastructures and services at persons and goods disposal, financed by the State. The sum of these infrastructures and services constitutes the foundation of the Italian transport system, in a dynamic, process-driven perspective.

The SNIT road network is made up of highways and roads which remain responsibility of the State (following devolution to the Regions and local authorities of functions relating to transport, pursuant to Legislative Decree 112/98), in addition to the system of airports, freight terminals and the main road/rail interchange centres.

The SNIT rail network comprises sections that ensure domestic long-distance services, along with the respective connections within major metropolitan and urban centres, as well as connections with transport nodes of both national and international significance. This includes the TEN-T (Trans European Transport Network), the "strong network" of Ferrovie dello Stato (on which most of the overall transport of passengers and goods takes place), the FS national routes (on which traffic is mainly medium to long-distance connections), the FS support lines (providing connections between the main routes), the non FS lines (which enable goods and passenger itineraries at a national level, or significantly reduce travel times in comparison to the FS lines) and alternative goods itineraries as identified by Ferrovie dello Stato.

The role of this system is to identify the basic issues in transport system and major national and international infrastructures to which the State should dedicate planning and financial resources, leaving to the Regions the task of creating and managing on the appropriate scale the network of services and infrastructures. Furthermore, the

redefinition of the various levels of government duties and responsibilities also provides local governments with a frame of reference for their own decisions.

With the aim of providing greater substance to the process of “Administrative Federalism through an unchanged Constitution”, initiated by the Bassanini Law and continued with Legislative Decree 112/98, legislator intervened, changing the text of Constitution. Following the reform of Title V of Constitution (by means of Constitutional Law 3/2001), new competences in terms of concurrent legislation were attributed to the Regions, on the subject of ports, civil airports and the major transport and shipping networks.

These recent normative modifications caused certain difficulties in the interpretation of the actual distribution of competences, partially resolved by recourse to the concepts of national interest, indivisibility and unity of entire legislative system and subsidiarity, from the perspective of safeguarding territorial unity as well as the efficient functioning of the whole transport network. According to this perspective, with regard to public works, the Regions would hold a residual amount of power, complemented by that of the State. This one infact retain competences regarding regulation and execution of the project of its responsibility, such as, for example, the major infrastructures of national interest (Unioncamere, 2008).

This complex approach arising from the increasingly intricate mesh of state and regional competences, in terms of infrastructures and transport, requires great flexibility and adaptability. Therefore, it appears imperative to reinforce channels of institutional coordination, employing the principle of agreements (in its various forms) and the principle of collaboration, in effort to guarantee coherent and unitary construction of European transport system (Montebello, 2004).

The infrastructure and transport system of the North-West

The strategic position of the North-West within European and national communication networks, and its economic importance as a basis for intermediate and final demand has fostered, over the course of time, the development of an extensive system of infrastructures.

As noted previously, an efficient infrastructure system constitutes a decisive factor of the competitiveness of an area with ambitions to compete on a global level and should therefore be regarded as a kind of “essential requirement”.

The following is a brief description of the main transport infrastructures in the North-West. The examined area possesses a significant motorway network. Motorway sections run from the three metropolitan areas, connecting them to each other and to urban centres of bordering regional and supra-regional territories. As a result, the current motorway network, in addition to supporting the metropolitan areas, extends along major east-west and north-south routes.

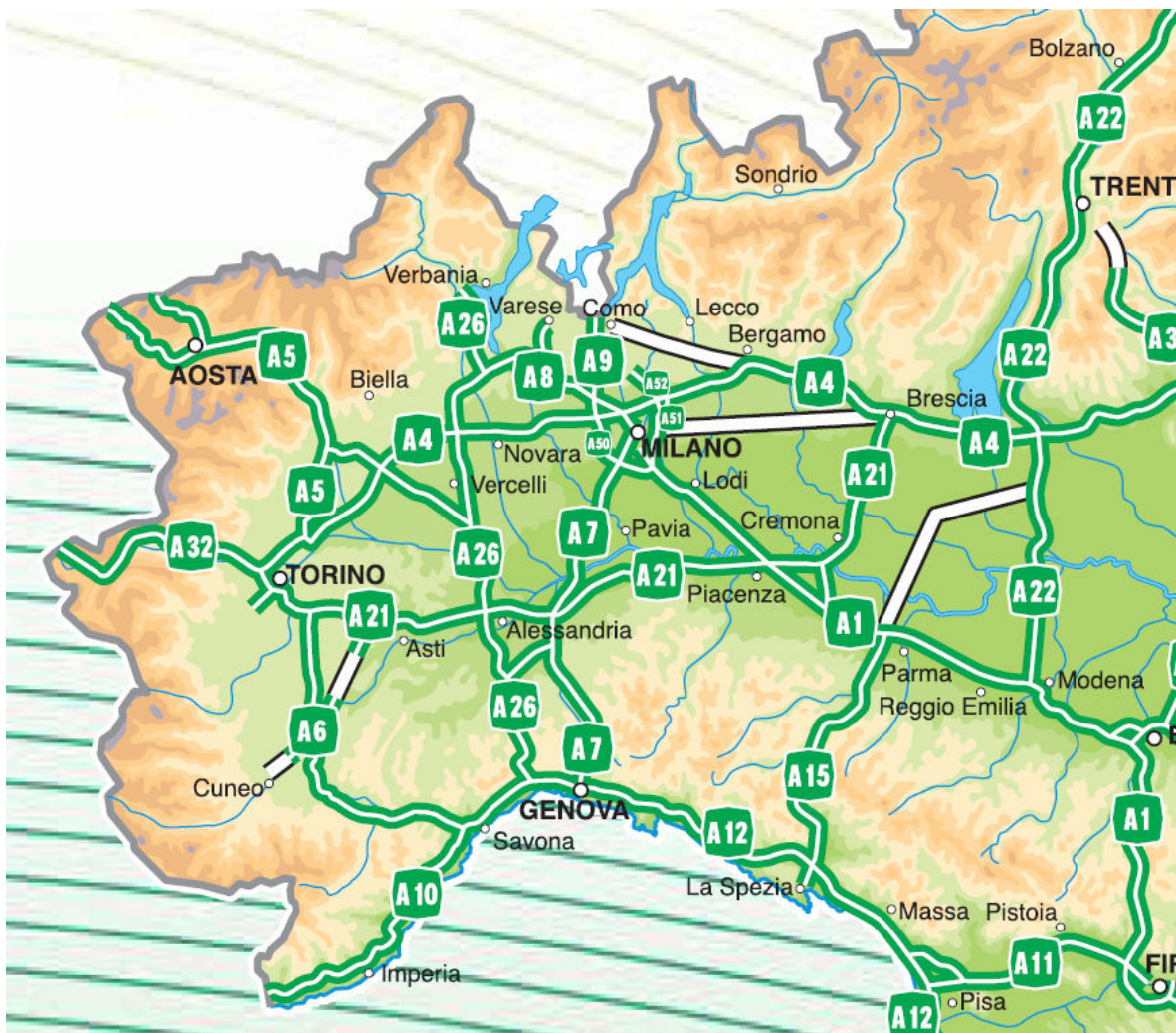
On the east-west axis the main artery is the A4 motorway which joins Trieste to Turin (via Venice and Milan) and continues to Frejus (A32 motorway), flanked by the A21 motorway connecting Turin to Brescia (via Piacenza) and the section connecting the arch of Liguria (motorway A10 towards Ventimiglia and motorway A12 towards Livorno).

The main route on the north-south axis is the A26 motorway (Voltri-Gravellona Toce) connecting Genoa to the Sempione pass. In addition to this one, the motorways A5 and A6 connect Turin to the Monte Bianco tunnel and Ligurian riviera (Savona) respectively, the A7 motorway connects Genoa and Milan, the A1 motorway connects Milan to Bologna and Florence, and A8 and A9 motorways provide a connection from the capital of Lombardy to Varese and Lago Maggiore (and consequently the A26 motorway), as well as to Como and Swiss border at Chiasso respectively.

Finally, and also worthy of note, there are the A15 motorway connecting Parma (located along A1) to La Spezia (located along A12), the A4/A26 link near Vercelli and the A4/A5 link near Ivrea, as well as the A4/Malpensa dual carriageway (close to Boffalora Ticino) and Milan and Turin peripheral systems. (figure 1)

figure 1

THE MOTORWAY SYSTEM IN THE NORTH-WEST

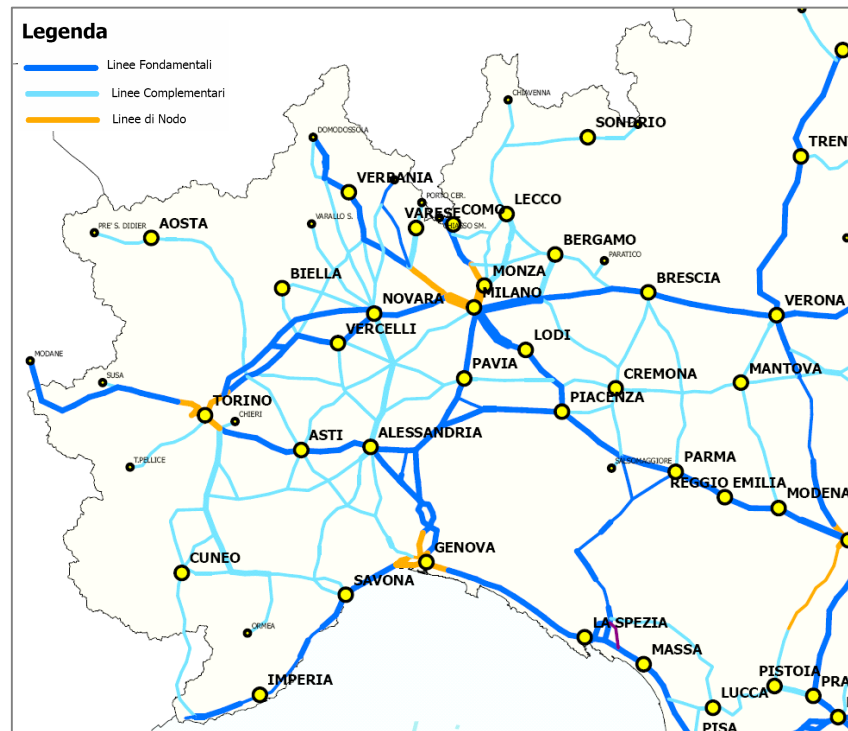


Source: Associazione Italiana Società Concessionarie Autostrade e Trafori, 2008

With regard to the railway system, it is easy to observe how the main lines are anchored to metropolitan areas but comprise a number of additional nodes (medium-sized cities) which also play an important role. (figure 2)

figure 2

THE RAILWAY SYSTEM IN THE NORTH-WEST



Source: RFI, 2008

Table 1 includes the railway lines of North-Western area belonging to basic network, according to Rete Ferroviaria Italiana (RFI).

table 1

THE RAILWAY LINES IN THE NORTH-WEST BELONGING TO BASIC RFI NETWORK

Railway line	Line features
Turin-Modane	Electrified double-track line
Turin-Alessandria-Piacenza	Electrified double-track line
Turin-Milan-Verona	Electrified double-track line
Ventimiglia-Genoa	Electrified double-track line (except for the S. Lorenzo- Finale Ligure section)
Genoa-Livorno	Electrified double-track line
Alessandria-Genoa	Electrified double-track line
Genoa-Voghera-Milan	Electrified double-track line
Gallarate-Luino	Electrified single-track line
Milan-Domodossola	Electrified double-track line
Milan-Como-Chiasso	Electrified double-track line
Milan-Piacenza-Bologna	Electrified double-track line

Source: RFI, 2008

In addition to these lines there are other lines, classified as complementary, all together forming the rail connections network of North-Western Italy.

Recent years have seen the development of so-called HS/HC (High Speed/High Capacity) lines created for high-speed passenger transport. The Italian HS/HC

system (still under construction) will be developed along the most heavily travelled and saturated railway axes of the country: Turin-Milan-Naples, Milan-Verona-Venice and the connection towards Genoa.

The lines currently active in the North-West are Turin-Novara (since February 2006), Milan-Treviglio (since July 2007) and Milan-Bologna (since December 2008); the urban nodes of Milan and Turin are at an advanced stage of construction.

Also worthy of mention is the importance of the infrastructure nodes represented by the area's three commercial ports (Genoa, La Spezia and Savona), the main area's passes (Ventimiglia, Frejus, Monte Bianco, Sempione and Gottardo), the hub airport of Malpensa, and the area's other main airports (Milan-Linate, Turin-Caselle, Bergamo-Orio al Serio and Genoa).

In conclusion, we can say that within the context examined there are a number of territorial differentials which contribute to the creation of some routes characterized by a greater accessibility. These routes radiate outwards from Milan to the north, west, south and east. The first route around which numerous local commuter systems¹ are assembled leads from the centre of the Po Valley towards border with Switzerland; the second crosses the Novara area connecting with Turin urban centre and reaching border with France; the third extends along the Via Aemilia; finally, the fourth is less continuous, extending towards eastern border (Conto Nazionale Infrastrutture e Trasporti [*National Infrastructure and Transport Report*], 2005).

The infrastructure system of the North-West transformation projects

The North-West is characterised by a transport infrastructure system which is superior to national average (with the exception of the railway system), although it presently suffers for an infrastructural deficit in relation to the most highly developed regions of Europe, which recent Governments have sought to address by means of *ad hoc* programmes.

As a result, a number of interventions to expand existing network or create new stretches of railways and roads necessary to meet the requirements of the polycentric North-Western region are currently in planning stage, in order to foster mobility in the three metropolitan centres and fully exploit the opportunities of development arising from the area's privileged position within Europe.

In the context of the Po Valley, the North-West is identified by the European Spatial Development Perspective (ESDP) as the southern area of the European Pentagon (the heart of Europe). The importance of the North-West is also grounded in its considerable assets in terms of both infrastructures and services, such as networks of airports (of which Malpensa is the main node), ports, alpine passes and other logistical nodes of european level.

The ESDP aims to develop the international transport network by improving existing infrastructures in order to create multi-modal transport axes that will allow implementation of links between countries.

¹ Local Working Systems (*Sistemi Locali del Lavoro, SLL*) are clusters of adjoining municipalities, geographically and statistically similar, characterised by a relatively high density of work-related travel on the part of the reference population. They form an appropriate instrument of analysis oriented to examination of the country's socio-economic structure from a territorial perspective, insofar as they represent areas of the daily life of the population living and working there.

The strategic importance of the North-West on the European stage is recognised in the definition of the Trans-European Transport Network (TEN-T), for that realization 30 priority improvement projects have been defined.

This list of projects includes the route crossing the Po Valley (corridor V, Lisbon-Kiev) and the rail network connecting Genoa to Rotterdam (corridor XXIV) and its natural extension southwards along the “Motorways of the Sea”. (figure 3)

figure 3

THE EUROPEAN CORRIDORS IN THE NORTH-WESTERN ITALY



Source: prepared by the author using a Ministry of Infrastructures and Transports map, 2004

At the national level, the so-called Legge Obiettivo [goal law] (Law 443 of 21 December 2001) establishes procedures and financing methods for the construction of major strategic infrastructures of primary national interest, creating the conditions to accelerate the execution of these as a result of the streamlining of the procedures required to approve projects.

This law prescribes the drafting of a Programme of Strategic Infrastructures, in agreement with the Regions.

The First Programme of Strategic Infrastructures – approved by Deliberation 121 of 21 December 2001 of the Interministerial Committee for Economic Planning (CIPE) – contains 228 infrastructure projects, sub-divided by region of competence and by type of infrastructure (road and motorway systems, railway systems, airport hubs, shipping hubs, freight terminals, metropolitan networks and other interventions).

In following years, the national Government monitored the Programme’s progress and prepared regular financial reports to verify its compatibility with public finances and establish, in agreement with the Regions, priorities based on the updated programme strategies.

The most recent document published is the Programme of Strategic Infrastructures (updated to august 2008), included as Appendix to the Economic and Financial Planning Document (DPEF) 2009-2013.

This new programme underline the need of infrastructures and the urgency of solving problems connected with an efficient and effective transport offer which can increase the development of Italy.

The programme, in order to overcome actual problems, considers the strategic importance of interventions in the pipeline which need continuity of cash flow, of interventions concerning junctions between Italy and euro-mediterranean system (alpine passes, ports and airports) and of interventions aimed at reshaping territorial asset at regional and national level.

The programme, starting from all the projects included in the Legge Obiettivo, defines the overall framework of planned and in the pipeline infrastructures for the 2009-2013 period, resulting in the list shown in [tables 2a-2b](#) (for the North-West).

Table 2a

THE LIST OF PRIORITY AND IN THE PIPELINE INFRASTRUCTURES IN THE NORTH-WEST

Interventions	Cost (Million of €)	Progress of works (%)
Infrastructures completed at least at 60% (end of 2007)		
Extension of Milan Underground M1	264.40	100.00
Road Access to Fiera Milano – Construction of a road system for the new Rho-Però trade fair complex	336.56	82.52
Novara Freight Terminal (Western Terminal)	104.96	62.88
Infrastructures completed at least at 20% (end of 2007)		
Brescia Underground, Prealpino - S.Eufemia section improvements and related interventions - 1st functional lot	655.82	39.87
Major Stations - Renovation of stations	236.83	24.40
Infrastructures contracted out and in the pipeline at the end of 2007		
South Brescia By-pass: Motorway connection from the Ospitaletto toll-booth (A4), Poncarale and Montichiari airport	293.87	-
Interventions	Cost (Million of €)	Project level*
Projects with full financing to start within 2013		
Genoa road tunnel	421.00	-
Genoa: modifications to Voltri port accessibility	35.00	PP approved
Savona: variant of SS1 Aurelia bis torrente Letimbro - tollgate section	137.54	-
La Spezia: variant of SS1 Aurelia bis 4th lot between San Benedetto and Beverino	208.01	-
Motorway connection from the A4 motorway to Valtrompia	923.05	DP approved
Rail access to Malpensa airport: expansion of the Gallarate - Rho section	302.00	DP approved
<i>Pedemontana Lombarda</i> motorway	4,200.00	PP approved
Bergamo – Lecco: road connection Calusco d'Adda – Terno d'Isola	58.00	PP approved
HS/HC: Treviglio - Brescia section	2,000.00	PD in investigation
Milan Underground M2 – Extension Cologno Nord – Vimercate	533.00	PP approved
Milan Underground M2 – S. Donato – Paullo section	798.00	PP approved
Milan Underground M4 – Sforza policlinico – Linate section	910.00	PP approved
Saronno – Seregno railway line: improvement and variant of Galliate section	78.85	DP approved
HS/HC Brescia - Verona	2,738.00	PP approved

*: shows the progress of project level (PP = preliminary project ; DP = definitive project) in relation to CIPE's ratification

Source: Infrastructure Appendix to the DPEF 2009-2013

Table 2b

THE LIST OF PLANNED INFRASTRUCTURES IN THE NORTH-WEST

Interventions	Region	Cost (Million of €)	Project level*
Projects submitted to the CIPE (updated at april 2008)			
Alpine passes			
Corridor 5 - international connection Turin - Lyon	Piedmont	5,365.00	PP approved
Multi-modal Padan Corridor			
European Corridor V: Bergamo-Seregno section (Eastern Milan railway by-pass)	Lombardy	1,000.00	PP approved
Doubling of the Milano-Mortara railway: Cascina Bruciata – Parona section	Lombardy	391.90	PP approved
Renovation of the Saronno – Seregno railway line (Ferrovie Nord Milano Esercizio)	Lombardy	75.51	DP approved – call for tenders
Rail access to Malpensa airport: new connection Arcisate - Stabio section (national border)	Lombardy	223.00	DP approved
Nord Turin railway by-pass: enhancing Bussoleno-Torino section and Bussoleno freight by-pass	Piedmont	2,375.00	PP approved
Motorway A4 Torino Milano Novara - Milano section from KM 91to KM 127	Piedmont and Lombardy	265.32	DP approved
Road Access Valtellina S.S 38 - Fuentes-Tartano	Lombardy	450.30	DP approved
SS 11 Padana Superiore: Magenta - West Milan by-pass - Abbiategrosso variant of the SS 494 section	Lombardy	281.09	PP approved
Cuneo ring road to the SS 22 of the section “da Cuneo all'autostrada A6”	Piedmont	118.49	PP approved
Bergamo - Lecco: Cisano Bergamasco variant of the SS 639	Lombardy	25.82	PP approved
Brescia - Bergamo - Milano (BreBeMi) connection with SP19	Lombardy	1,685.12	PP approved
East outer Milan by-pass	Lombardy	1,578.00	PP approved
Renovation of the SS 415 Paultese - Peschiera Borromeo to Spino d'Adda (except for the bridge)	Lombardia	162.80	DP approved – call for tenders
Renovation of the SS 415 Paultese - Peschiera Borromeo to Spino d'Adda: Adda bridge	Lombardia	5.13	PP approved
Multi-modal Corridor Tyrrhene-Brennero			
Motorway connection CISA Fontevivo (PR) – Brennero Motorway Nogarole Rocca (VR) (the so called TiBre)	Lombardy, Veneto, Emilia-	1,809.65	DP approved
Multi-modal Corridor Tyrrhene North Europe			
Doubling of the Voltri - Brignole railway	Liguria	622.00	DP approved
Genoa - Ventimiglia: doubling of the track on the Andora - Finale Ligure Marina section	Liguria	1,540.10	PP approved
Milan - Genoa HS/HC section: terzo valico di Giovi	Piedmont and Liguria	5,060.00	DP approved
SS 28 Colle di Nava: tunnel passArmo-Cantarana and connection to SS 28	Liguria	194.04	PP approved
SS 1 Aurelia bis – Variant of Imperia	Liguria	207.87	PP approved
Urban Systems			
Interchange junction AC/SFR/MM/road public-private transport	Lombardy	18.80	PP approved
Tram-road Milan (Parco Nord) - Desio - Seregno	Lombardy	214.12	PP approved

Monza Underground – Extension of Underground M1: Monza - Bettola (1st lot)	Lombardy	205.94	DP approved
Monza Underground – New line M5 P.ta Garibaldi - Monza Bettola: Garibaldi – Bignami section	Lombardy	557.83	DP approved
Milan Underground M5 2nd lot: Garibaldi-S.Siro section	Lombardy	657.05	PP approved
Turin Undergoround section 4 Lingotto - Bengasi	Piedmont	193.55	PP approved
Portual Hubs			
Savona: variant of SS 1 Aurelia bis between Savona/Letimbro torrent and Albisola Superiore	Liguria	239.41	DP approved
Access to La Spezia port : variant of the SS Aurelia (3rd lot) between Filettino and motorway connection	Liguria	239.35	DP approved
Freight Terminals			
New lock of Cremona	Lombardy	61.25	PP approved
Airport Hubs			
New Underground line M4 Lorenteggio-Linate – 1st functional section	Lombardy	788.70	PP approved

*: shows the progress of project level (PP = preliminary project ; DP = definitive project) in relation to CIPE's ratification

Source: Infrastructure Appendix to the DPEF 2009-2013

The framework is completed by the observations about Infrastructural Appendix to the Economic and Financial Planning Document (DPEF) 2009-2013 expressed by the individual Regions. For North-Western Regions, the total number of projects scheduled is 66 (of which 11 are in Piedmont, 2 in Liguria and 53 in Lombardy).

The scheduled projects was tabuled in interventions included in CIPE's deliberations, interventions included in General Framework Agreements² and in new interventions which will be object of future Integrative acts of Agreements itself.

The synthesis and selection carried out by the Government shows how the overall layout of priority infrastructures conforms to a strategic scenario, in accordance with the territorial outlook identified and based on the importance of European transport corridors.

The priority plan defined by the Ministry aims to achieve an increase in roads and motorways along both the east-west and north-south routes.

The examination of projects reveals a focus of attention on attempts to decongest traffic in the metropolitan areas (Turin and above all Genoa and Milan) on the one hand, and, on the other, attempts to improve the road system providing access to the great urban centres and traffic conditions along the area's main transport arteries.

As regards the railway system, it is possible to underline important interventions for completion of the Po Valley HS/HC line, the construction of the Milan and Turin freight line, the expansion of the Genoa-Sempione axis (including the building of the Terzo Valico), the metropolitan railway nodes and the Novara junction (located on the intersection of Corridors V and XXIV).

Furthermore, and from an international perspective, there are improvements to connections with France and Switzerland through the development of alpine passes and the increased accessibility (by road and rail) to Malpensa airport, which currently faces a serious deficit of connection infrastructures.

² For more specific indications on General Framework Agreements (Intese Generali Quadro) see the paragraph "Decision-making capacity and instruments available to institutional agencies".

Finally, it is important to underline the interventions aimed at enhancing the accessibility of ligurian ports, strategic logistics nodes located on the multimodal axis Tyrrhene-North Europe.

Spending and investments in infrastructures and transport in the North-West

Table 3 shows that consolidated public capital expenditure in this sector in Italy tripled between 1990 and 2006, increasing from 8,552.9 to 25,784.8 million Euros, at an average yearly rate of 12.6%.

The observation of this series of data reveals a slight drop between 1990 and 1995 followed by a significant increase in 2000, then an important drop in the following year and afterwards continuous growth up to 2006.

The distribution of public spending in this sector by operator category shows that over the years, the “Other Bodies” (including Territorial Public Authorities, Companies and other Public Bodies) have generally sustained growing levels of expenditure in relation to the total, with a corresponding reduction in the contribution of the State, also in line with the process of administrative decentralisation, which began in the nineties and has become more firmly established since the start of new millennium.

The proportion of expenditure by the State has indeed fallen dramatically over recent years, from 65% in 1990 and 2000 to 3.4% in 2006.

A breakdown of the funds by transport modality reveals that the largest portion of expenditure is absorbed by roads and fixtures sectors, with 55.4% and 34.8% of the total respectively in 2006; unattributable expenses and maritime shipping expenses trailed far behind in third and fourth place, with 5.4% and 3.3%, while the contribution of the air transport sector was under 1%, and the estimate for inland shipping was almost negligible (CNIT, 2006).

table 3

CONSOLIDATED PUBLIC CAPITAL SPENDING IN ITALY IN TRANSPORT SECTOR, IN EUROS

	1990	1995	2000	2001	2002	2003	2004	2005	2006
State (*)	5,630.5	5,406.1	11,645.9	1,966.6	2,139.6	2,089.2	1,808.0	2,121.5	870.5
Other bodies (**)	2,922.4	2,188.5	6,024.4	10,871.4	13,556.4	16,129.5	19,584.0	20,338.0	24,914.3
Total public spending	8,552.9	7,594.6	17,670.2	12,838.1	15,695.9	18,218.7	21,392.0	22,459.5	25,784.8

Millions of current Euros (*) Up to 2000 also includes Companies (**) Territorial public authorities and others (including Companies from 2001)

Source: Conto Nazionale Infrastrutture e Trasporti [National Infrastructure and Transport Account] 2006 and 2004.

Shifting the focus to capital expenditure sustained by the North-Western regional administrations in the transport and infrastructure sector (in particular regarding road system³ and other modes of transport⁴) in the period 1996-2006, it becomes

³ Road system: includes all expenditure for creation, operation, use and maintenance of roads and motorways; installation, operation, maintenance and improvement of public lighting; administration of activities and services regarding operation, use, construction and maintenance of systems and infrastructures for road

apparent that expenditure followed an irregular pattern from 1996 to 2000, settling into a growing trend in the following years, interrupted only by a slowdown in 2005.

table 4

CAPITAL EXPENDITURE ON ROAD SYSTEM AND OTHER MODES OF TRANSPORT IN THE NORTH-WEST REGIONS

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Piemonte	1.001,63	718,15	830,36	868,34	914,48	1.084,55	1.090,99	1.511,05	1.419,54	1.273,51	1.531,04
Valle d'Aosta	99,04	68,46	69,01	81,62	80,71	65,80	86,03	108,76	93,50	158,75	135,34
Liguria	564,98	729,06	662,74	714,48	615,44	697,70	661,24	660,15	761,89	662,01	605,09
Lombardia	1.383,33	1.368,25	1.556,04	1.839,14	1.517,19	1.564,78	1.659,48	2.010,21	2.078,13	1.963,24	2.096,73
Nord-Ovest	3.048,98	2.883,93	3.118,15	3.503,58	3.127,82	3.412,83	3.497,75	4.290,17	4.353,05	4.057,50	4.368,20

Millions of current Euros

Source: Ministry for Economic Development - Department of Development Policy, Territorial Public Accounts

Examining the internal distribution in the North-West, we note that Piedmont and Lombardy are main investors (83% in 2006), but also that Liguria's share, which in 1997 was 25.28% of the North-West, progressively fell over the following years, becoming just 13.85% in 2006. On the other hand, Piedmont's share rose from 24.90% in 1997 to 35.05% in 2006, as a consequence of the recent investments made to improve the railway and road systems.

Figure 4 shows the comparison between the evolution of capital expenditure in the North-West described above and that of GDP in the period 2000-2006⁵.

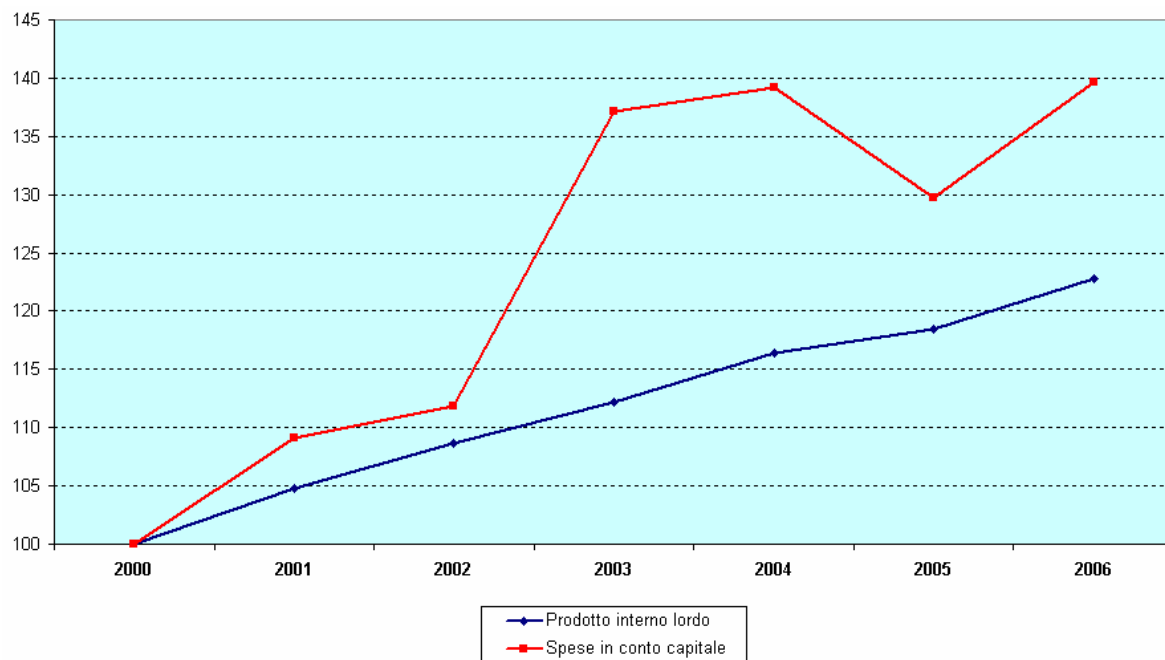
transport (bridges, tunnels, parking areas and paid parking areas, bus terminals, etc.); monitoring and regulation of road use (driving licences, vehicle security inspections, legislation regarding dimensions and load for road transport of passengers and goods, etc.), granting of licences, approval of toll rates.

⁴ Other modes of transport: includes all expenditure for the creation, operation, use and maintenance of infrastructures for transport by rail, sea, air, lakes and rivers, including ports, airports, stations, freight terminals; monitoring and regulation of the use (registrations, inspections, safety regulations, condition of vehicles, investigation of incidents), granting of licences, approval of rates for the transport service. Includes expenditure connected to the financing and management of public transport lines, including roads, as well as subsidies and railway structures under concession.

⁵ The ISTAT calculation procedures of the territorial economic accounts were changed in 2005; as a result, the historical data sets referring to years prior to 2000 are no longer comparable to the new one (2000-2006) published in 2008.

figure 4

EVOLUTION OF THE GDP AND CAPITAL EXPENDITURE ON ROAD SYSTEM AND OTHER MODES OF TRANSPORT IN THE NORTH-WEST REGIONS (BASE INDEX 2000 = 100)



Gross inner product - expenses in capital accounts

Source: prepared by the author using data of the Ministry for Economic Development - Department of Development Policy, Territorial Public Accounts and National Institute for Statistics (ISTAT) - Regional Economic Accounts.

Equating 100 the 2000 capital expenditure on transport and GDP, it can be observed that the growth of the former follows the trend of the latter between 2000 and 2002, but also that the two lines diverged significantly after 2002: whereas the GDP continued its constant growth (slowing only in 2005), expenditure rose sharply in 2003, slowed down in 2004, dropped in 2005 and rose again in 2006.

The increase in expenditure on road system and other modes of transport in Piedmont and Lombardy in recent years is attributable to the planning and execution of a number of projects for roads, logistics and public transport sectors.

A final examination of the capital expenditure of the North-West concerns the destination of funds based on type of infrastructure. (table 5 and figure 5)

table 5

CAPITAL EXPENDITURE OF THE NORTH-WEST REGIONS BY DESTINATION OF FUNDS – 2006

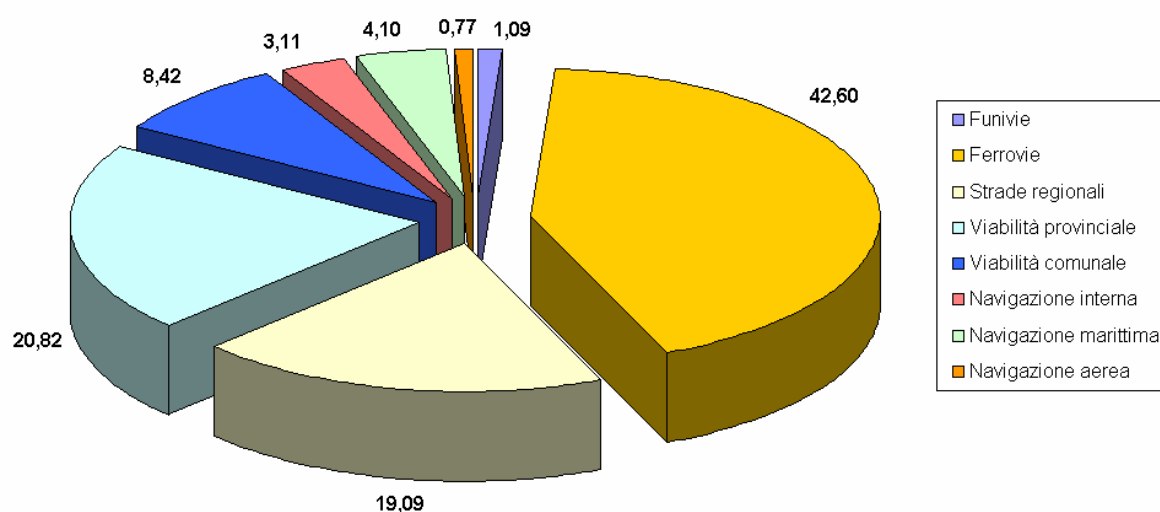
	Cableways	Railways	Regional roads	Provincial roads	Municipal roads	Inland shipping	Maritime shipping	Air transport	Total
Piedmont	3,281	114,293	24,816	14,734	23,277	361	98	0	180,860
Valle d'Aosta	710	899	11,092	47	669	0	1,592	0	15,009
Liguria	0	0	0	489	489	0	13,278	2,810	17,066
Lombardy	0	40,444	33,849	60,816	6,331	10,997	0	0	152,437
North-West	3,991	155,636	69,757	76,086	30,766	11,358	14,968	2,810	365,372
Italy	76,665	296,640	266,634	149,426	508,269	29,087	54,363	23,350	1,404

Thousands of Euros

Source: prepared by the author using data from the Conto Nazionale Infrastrutture e Trasporti [National Infrastructure and Transport Report], 2006

figure 5

DISTRIBUTION OF CAPITAL EXPENDITURE IN THE NORTH-WEST BY DESTINATION OF FUNDS – 2006



Legend: Transport by cable//Railways/Regional roads/Provincial roads/Local roads/ Inner navigation/Sea navigation/Airplane navigation

Source: prepared by the author using data of the Conto Nazionale Infrastrutture e Trasporti [National Infrastructure and Transport Account], 2006

The available data (2006), reveal a disproportionate amount of expenditure on railways (particularly in Piedmont) and regional and provincial road system (particularly in Lombardy, because of the high number of provincial roads in this region), whereas expenditure for municipal road system is more limited (relevant only in Piedmont). We observe that almost all of the expenditure on inland shipping is concentrated in Lombardy (where the highest proportion of navigable rivers are located) whereas expenditure on maritime shipping is, as might be expected, concentrated in Liguria and constitute the majority of regional resources spent in 2006 on transport.

Governance of the transport infrastructure system

Decision-making capacity and instruments available to institutional agencies

As noted in first chapter, the division of competences regarding infrastructures between the various administrative levels was recently redefined as part of the process of administrative decentralisation.

The partial abatement of sovereignty of the State has occurred on supra-national level (in favour of the normative and programmatic role of the European Union) but also on internal level, with the new concurrent competences assigned to the Regions following the reform of Title V of Constitution.

The problematic redistribution of competences between the State and the Regions implies a need (also considering certain recent judgements by the Constitutional Court) to find forms of institutional coordination and collaboration in order to ensure a coherent and unitary construction of the Italian and European transport system.

Recent events concerning Lombardy Regional Law 15/2008, on “Infrastructures of both state and regional interest”, disputed by the Government because some articles exceeded regional competence, reaffirm the need of an effort towards negotiation by parties involved, in an issue (regarding strategic projects of primary national interest) that was largely under the State’s legislative competence.

The reference instrument for this purpose is the Programme of Strategic Infrastructures prescribed in the Legge Obiettivo. The programme is prepared by the Ministry of Infrastructures and Transport in collaboration with the competent Ministers and the Presidents of the Regions involved, and included, following the CIPE approval, in the DPEF (Economic and Financial Planning Document). In the programme are defined, through the General Framework Agreements between Government and individual Regions, also infrastructures for that regional interest is concurrent with primary national interest. These agreements are monitored every six months and updated every year through the Infrastructural Appendix to the DPEF. In order to finance and execute the infrastructures listed in the programme is very important the following ratification of projects in the context of the CIPE.

Another important instrument is the General Transport and Logistics Plan (*Piano Generale dei Trasporti e della Logistica*, PGTL), approved in 2001, in which the State identifies goals, obligations and strategies regarding entire national territory in order to enable the physical and functional unity of the Italian transport system and legitimates its actions of coordination and direction, aimed at ensuring the correct methodological execution of regional planning activities.

It should be noted that the Legge Obiettivo prescribes that the strategic projects identified become an “automatic variation” of the PGTL, which is weakened and in part deprived of its most innovative and strategic content.

Since Legislative Decrees 422/97 and 112/98 and the modification of Articles 117 and 118 of Constitution completed the transfer from the State to the Regions of powers regarding transport and road system which are not of national importance,

the Regions have all the competences required to plan transport within their own territory and schedule interventions (PGTL, 2001).

At the regional level, scheduled infrastructural interventions are included in the regional documents of programmation⁶, which establish the cost of works and respective funding, while the Regional Transport Plan (*Piano Regionale dei Trasporti*) in accordance with the indications of the PGTL provides a more detailed description and positioning within an overall framework executed through the regional investment plan (*piano regionale di investimenti*).

Scheduling and planning activities regarding transport also involve the provincial level, with the drafting of Provincial Road System Plans (*Piani Provinciali di Viabilità*) (in accordance with regional transport plan), with the purpose of managing road and traffic-related problems within the province by means of coordinated and synergic actions, following a perspective of integrated and sustainable development of overall transport system. In conjunction with this plan, a three-year programme of projects to be executed is also drafted.

At the municipal level, there is the option to draft an Urban Mobility Plan (*Piano Urbano della Mobilità*), a voluntary instrument (unlike the Urban Traffic Plan, which is compulsory) available to municipalities to define appropriate territorial and transport-related projects both on urban and metropolitan scale.

The multiplication of institutional authorities with competence of programming and planning infrastructures and transport has given rise to the need of forms of coordination and cooperation among agencies involved. This is made possible by certain procedural and cooperative instruments which enable regulation of relationships between the State and the Regions, and among local authorities, with regard to infrastructures.

The Institutional programme agreement (*intesa istituzionale di programma*) is the instrument used to reach agreement between the national Government and the Council of each Region on goals to be achieved and sectors in which joint action by the above authorities is essential. It is the ordinary channel for the relationship between national Government and each Region to achieve development in accordance with the principle of administrative decentralisation.

The aim of this instrument is to enable collaboration with a view to the drafting of a Multi-year Plan of Interventions of common interest, functionally connected, to be carried out within the territory of each Region in accordance with the state and regional programming.

The framework programme agreement (*accordo di programma quadro*) is the instrument whereby the Institutional programme agreement is implemented in the sectors of intervention defined by the latter. It is an agreement with local authorities and other public and private actors promoted by the central and regional Public Administration, in implementation of an Institutional Agreement for the definition of an executive intervention programme. These two instruments were used (from 2000) by the Piedmont, Liguria and Lombardy Regions to identify infrastructure priorities and carry out interventions on the road and motorway system and on the railway system.

⁶ The framework of North-western Regions programming instruments is not unitary. The regional DPEF is the instrument used in Liguria and Piedmont for economic planning. Valle d'Aosta Region use the Economic-financial Regional Plan (Prefin) which is similar to the Regional Development Programme (PRS) that is the instrument adopted in Lombardy.

Public administration has at its disposal another operative instrument, the programme agreement (*accordo di programma*), which can be used when the execution of complex interventions, intervention programmes, public works or projects of public interest, including private initiative, requires integrated and coordinated action by the Municipalities, Provinces or metropolitan Cities and Regions, State administration and other public authorities. (table 6)

table 6

INSTRUMENTS AVAILABLE TO INSTITUTIONAL AGENCIES

Administrative level	Territorial planning instrument	Sector-specific (transport) planning instrument	Procedural and operative instrument
State	-	▪ General Transport and Logistics Plan	<ul style="list-style-type: none"> ▪ General Framework Agreement ▪ Institutional Programme Agreement ▪ Framework Programme Agreement ▪ Programme Agreement
Region	▪ Regional Territorial Plan	▪ Regional Transport Plan	<ul style="list-style-type: none"> ▪ General Framework Agreement ▪ Institutional Programme Agreement ▪ Framework Programme Agreement ▪ Programme Agreement
Province	▪ Provincial Territorial Plan for Coordination	▪ Provincial Road System Plan	▪ Programme Agreement
Municipality	▪ Municipal Regulatory Plan	<ul style="list-style-type: none"> ▪ Urban Mobility Plan ▪ Urban Traffic Plan 	▪ Programme Agreement

Source: prepared by the author

The need of a mechanism of vertical and horizontal cooperation

As highlighted above, recent years have seen an increase in the number of institutional authorities with competence of programming and planning infrastructures and transport.

In addition to the Region, which has become a “central” agency, legislating and taking charge of drafting and regular updating of numerous documents, other subjects empowered to intervene with their own proposals and plans are the local authorities (Provinces, Municipalities, supra-municipal authorities), public economic authorities (such as the ANAS) and service companies (Ferrovie dello Stato, maritime shipping and air transport companies, local public transport companies). The result is a situation of “polycentric decision-making”.

In front of this multitude of subjects it has become necessary to regulate interaction among them through cooperation and collaboration in the relationships between the State and the Regions and between the Regions and local authorities, which can be achieved by means of shared decisions regarding programming and planning, although this is not always easy due to the rigidity of certain public administrations.

The relationship between institutional agencies should be regarded in terms of “administrative polycentrism” rather than “decentralisation” and in this context governance takes on a coordinating role, through negotiation, agreement or interaction (Formez, 2003).

According to this perspective, the concept of governance coincides with the operative concept of coordination between subjects (public and private) and the various forms of organisation of political and decision-making power.

The governance of infrastructures refers to the regulating system of a detailed decision-making process, such as the process leading to the creation of an infrastructure and its subsequent management.

Such a system should ensure a balance between forces and interests and at the same time the capacity for speedy adaptation of responses to emerging collective problems. In the current system of infrastructures governance these capacities are limited due to high number and opacity of the potential areas of conflicting interests to which public and private actors are exposed, in particular those that play the role of proponents (Bartolomeo, 2006).

In the context of the North-West, this pattern of government is beginning to be applied at level of relationships between public administrations, on the same or different levels, while there is a lesser involvement on the part of civil society.

Recourse to these new forms of joint decision-making depends greatly on the capacity of individuals operating within institutions, on their political desires and on the emergence of common issues, favouring dialogue, interaction and cooperation.

This is the direction pursued by certain recent initiatives promoted by the Regions of the North-West. In September 2006, Piedmont and Lombardy formed an alliance with regard to a number of important issues, one of which was the issue of infrastructures. The joint effort of two regions arose from the need to accelerate the modernisation of the A4 between Turin and Milan, to carry out road and rail projects for Corridor 5, to create the HS/HC within the terms set by the EU, to connect the two *pedemontana* motorways to build a “third motorway” connecting east and west, to find a solution to the environmental and accessibility problems of Malpensa airport, to develop collaboration between Malpensa and Caselle, to coordinate the development of intermodal nodes and to expand Liguria’s port logistics areas.

In February 2008, the regional Councils of Piedmont and Liguria signed several agreements⁷ that mark an important step forward in terms of integration and sharing of transport and infrastructures.

The agreements are concerned with the reorganisation and management of the Alessandria intermodal port, the use of the revenue from VAT on imports and exports in ports and freight terminals to expand infrastructure network and improve connections between the Ligurian port system and inland Piedmont, with storage terminals to boost rail and combined transport (these amounts would enable financing the completion of the *Terzo Valico* within a few years) and the commitment to support the joint candidacy of Turin and Genoa as headquarters of the National Transport Authority⁸ and the development of a common logistics strategy involving ports, freight terminals and platforms.

Besides is important to underline the recent promotion of the Foundation of the North-West Provinces, of which are members almost all provincial administrations of Lombardy, Liguria and Piedmont.

⁷ Article 117 (paragraph 8) of the current Constitution provides for the establishment of inter-regional agreements which become valid simply through the approval of the respective Regional Councils.

⁸ The reform process of the National Authorities provides for the establishment of an Authority for services and use of transport infrastructures, responsible for economic regulation of tariffs, prices, quality standards, conditions of access to infrastructures and free competition extended to the air transport, motorway, railway and maritime sectors.

The need to anchor to territory many of the great infrastructure and development projects of the North-West has fostered mobilisation in the provinces, an essential intermediate level that aims to connect development projects to territories and to develop and safeguard social and environmental features that are particular to specific areas.

For these reasons the North-Western provinces decided to play an active part in the construction of a local experiences network, in order to create a common ground between citizens and expectations in which public agencies can adopt a role as the regulator and incubator of development strategies.

The infrastructure system and transport policy shortcomings perception

As a consequence of the ever-increasing demand for mobility, the North-West today faces an infrastructure deficit (in terms of both road and rail) in relation to the most important regions of Europe.

Although northern Italy (and the North-West in particular) is better-equipped with infrastructures than the remainder of the country, citizens, enterprises and associations express dissatisfaction with delays encountered in projects that are indispensable to the competitive relaunching of the North-Western Italy on a European scale and to the improvement of the road system in the three metropolitan areas.

The system of infrastructure's financing presently suffers from shortcomings because of (public) budget restrictions, a barrier which is not easy to overcome.

Italy, more than other European countries, have to solve the problems in the transport infrastructures financing under the most difficult conditions, fully aware that, on the one hand, it cannot make use of the required public finances (constrained by the Maastricht restrictions), and, on the other, that it must equip itself as a major European player, through the modernisation and "sustainable" completion of its transport infrastructure (Milotti and Patumi, 2008).

At stake is Italy's integration into the rest of the European Union across the Alps, the competitiveness of the Po Valley in terms of west-east traffic towards the new Europe and the central role of the North-West in relations between the Mediterranean and North-Western Europe.

Moreover, it is essential that the reinforcement of top level infrastructure systems (nodal and linear), and their modernisation in terms of organisation and management, is strengthened by equally efficient subordinate systems, able to provide the necessary support to the transport infrastructure connecting and projecting the country on the international level, but also to provide more widespread accessibility to urban areas, with the consequent diffusion of development (Logistics Plan, 2006).

The problem of infrastructure's financing can be solved by supporting the traditional model (yearly assignment of funds from public budgets) with financial circuits based on numerous forms of public-private partnerships (PPP) able to pass the cost of the infrastructure and related services entirely, or mainly, to the end-users (Milotti e Patumi, 2008).

Another shortcoming of current policy regarding infrastructures is consensus management, which in this country remains a thorny issue, requiring the development of specific activities and initiatives directed towards promoting and reinforcing the social acceptability of infrastructure projects.

Opposition to the infrastructure choices made in Val di Susa for the construction of the Turin-Lyon section of the HS/HC section is a representative example of this.

Also in regard to HS/HC lines, it is important to note that in recent years, have been voiced some dissenting opinions about the correspondence of these lines to the real traffic needs of certain sections.

An investigation carried out in 1999 by a commission comprising officials nominated partly by the Ministry and partly by TAV⁹, demonstrated the need to think in terms of network and not of individual lines and identified requirements for expansion based on concrete evidence of saturation of lines and nodes. According to this perspective (and considering the lack of funding), it was not necessary to proceed immediately with the construction of the entire Turin-Milan-Venice line, but it was absolutely essential to expand the metropolitan nodes of Turin and Milan as well as the lines leading to them, because these centres are used for both short-stop and long-stop traffic, as well as the transport of goods. It should not be forgotten that the critical points of the North-Western transport system are concentrated in the metropolitan areas.

Finally, it should be added that a policy concerned with railway alone is insufficient and that what is required is a global policy for the transport system, a policy of discouragement and levying of road traffic, a policy to transfer traffic from road to railway. Only by coherently combining such measures the HS/HC lines can play a real strategic role (Vittadini, 2005).

The bargaining power of the North-West in interactions with central Administration

To consider the North-West as a single unit means acknowledging the territorial significance of the area and adopting a “multi-level” governance of the processes of development and territorial transformation, widening the horizons of policies to a more appropriate geographic scale: the macro-region of North-Western Italy.

In a wide-ranging scenario, the North-West system has access to numerous resources (concentration of manufacturing and third sector enterprises, high volume of exports, capacity of innovation, knowledge, University’s impetus for opportunities to link research and innovation, credit system, local cooperation networks, willingness for interaction between actors and institutions), all of that contribute to the creation of wealth within this macro-area.

The significant contribution of the North-West to the country’s GDP (32% of Italy’s GDP) justifies the greater demand for investments in infrastructures supporting the European corridors, but also the regional road system and urban mobility (in particularly metropolitan) necessary to increase the area’s competitiveness.

⁹ TAV SpA is a company belonging to the FS SpA group responsible for planning and construction of HS/HC railway lines in Italy.

In fact, the priority infrastructures list drawn up by the North-Western regions includes over 60 interventions.

The demand for the creation of new infrastructures in the North-West became more insistent when the European perspective of a polycentric territorial configuration highlighted the need of all centres within a particular area to be effectively and functionally connected to each other and to those present in other areas, but also when the two European infrastructure corridors began to take shape (the Lisbon-Kiev Corridor V and the Genoa-Rotterdam Corridor XXIV), that must support this macro-area and connect it to the most advanced and dynamic regions of Europe.

The combined importance of the North-West in Italian economy and European transport network reinforces its bargaining power in interactions with the State, in a period of growing awareness of the economic and territorial relevance of the area, with the four regions putting forward their requests in a unitary and coordinated institutional process.

This status enables the North-West regions to sit at table with Government officials with sufficient bargaining power to uphold their requests, independently of political affiliation. The results of this process can be seen, for example, in the definition of priority infrastructures put in the Infrastructure Appendix to the DPEF 2009-2013, which includes significant recognition by the State of the strategic importance of the interventions listed by the North-Western regions.

This occurs, for example, in the State-Regions Conference, the primary venue for political negotiation between the central Administration and the regional authorities and for discussions about decisions of regional interest, where understandings and agreements are reached with a view to establishing a common will.

Also in relation to interactions between the central Administration and the Regions, it should be noted that Expo 2015 has the potential to provide an opportunity to increase the area's bargaining power and complete those infrastructures – already programmed and in many cases planned – which are both necessary and urgent for the transportation of goods and people mobilised for this event.

In the first place, particular attention will have to be paid to infrastructures serving the Milan metropolitan area, while it will also be necessary that local and regional institutions do their best to promote the execution of infrastructure projects in Lombardy (the *pedemontana lombarda* motorway, the BreBeMi), in the Lombardy/Piedmont areas (road and rail access to Malpensa and renovation of the Turin-Milan motorway) and Liguria (Genoa port as the sea port of Expo 2015, improvements to connections between the two locations, favouring the HS/HC railway between Genoa and Milan).

The prevailing approach to the definition of infrastructure policies

In terms of infrastructure, Italy lags behind the major European countries and in particular in the case of transport system.

In this context, the growing pressure felt in recent years at the national level to close this gap is easily explained (Milotti e Patumi, 2008).

As mentioned above, recent choices regarding infrastructures in our country have been based on the interest in promoting corridor policies from a national and European perspective. However there is a clear need to focus on integrating these corridor infrastructures with local areas and on mobility at a regional and local level.

A study by Vittadini (2005) shows that the EU regards these corridors as important routes, to which the member states are invited to contribute with coordinated and coherent improvements, based on the assumption that such improvements mainly serve the interests of each of the territories crossed by the European corridors. As a result the corridor is, in real terms, formed by the coordination of a number of interventions benefiting each centre or territory it passes through: enabling the co-existence, with maximum efficiency, of short, medium and long distance transport.

In the North-West (and in northern Italy in general), demand for mobility (of both passengers and goods) is mainly for short-stop and medium-stop travel: large volumes of traffic are a fundamentally metropolitan and regional issue.

This is due to the fact that since the seventies, steady outward expansion of the main metropolitan areas has given rise to major urban systems on a regional scale, forming the “diffuse city of the Po Valley”. This also generates an intense, even if relatively dispersed, demand for short and medium range mobility (Lenzi, 2006).

The phenomenon of urban dispersion affecting the North-Western Italy caused a tendential increase of the average distance travelled, resulting in increased traffic (in particular road traffic). This tendency has been accompanied by a steady drop in rail traffic. This imbalance has been influenced by specific decisions in recent years to focus infrastructure development exclusively on road transport.

As stated by Lenzi (2006), over the course of the last two decades the standard railway network of the North-West has undergone very few changes: interventions of infrastructural expansion have almost exclusively targeted the four-fold increase of access to urban centres (such as Milan-Melegnano or Turin-Trofarello) and limited line extensions (such as the rail connection to Malpensa and the western section of the Milan railway link).

The most recent sectorial policies on national and regional scale is aimed at creating new infrastructures (road and rail) feeding into the great European corridors.

However, as the current standard of transport available is inadequate to serve the demand for mobility in the North-West, there is not only a requirement for more efficient transport services, relevant to the demands of the “diffuse city” but also new infrastructures, in particular of medium size (railways and undergrounds as well as roads and motorways) in accordance with a scenario of environmental sustainability, connecting to the European routes (De Bernardi, 2007).

The importance of non-institutional actors in policy-making and decision-taking with regard to the infrastructure system

The North-West territory is becoming increasingly urbanised (due to the “diffuse city” model cited above) and this has led to an exponential increase in need of mobility and in traffic produced as a result.

The high level of development in this area, the scarcity of land and the transport infrastructure deficit (giving rise to a high number of proposals within a short period of time) characterise the scenario of the North-West infrastructure policy. In addition to this, there is the difficulty faced by politicians, both local and national, in reaching consensus with regard to certain projects (Bartolomeo, 2006).

The urgency of infrastructure's creation has certainly not favoured the participation of non-institutional subjects in the decision-making processes for the definition of strategic and priority projects.

It should also be mentioned that Italy is affected by a culture lacking in transparency of decision taking and in inclusion of actors.

However, at the present time local communities are proving increasingly able and informed and, therefore, better equipped in terms of cognitive and political resources. Consequently the risk is the one of increasing levels of conflict (such as those observed in the decisions regarding the layout of the Turin-Lyon HS/HC rail line in Val di Susa) unless significant innovations are introduced in the design and governance of the decision-making process (Bartolomeo, 2006).

This would involve new forms of coordination in which participation is open and dynamic, and exchanges are both intensive and continuous.

The participation of local communities provides an opportunity of cooperation and dialogue with non-institutional groups and authorities, closing the gap between decision-making centres and those affected by transport policy (or between centres of political and/or technocratic power and citizens/companies), which often prevents institutional agencies from making decisions in line with the specific requirements and values of a particular community (PGTL, 2001).

This need of participation arises from the recognition of the general principle according to which the public interest should be served with the least possible sacrifice in terms of the other interests involved. This principle requires that the other interests are known, taken into consideration and assessed in a suitable and complete manner, without fear that this process will have the effect of thwarting decisions (PGTL, 2001).

The confidence of the affected communities becomes a vital element in the process of creating infrastructures in a territory. Unfortunately Italy is suffering a ten-year gap, particularly with regard to its problems of institutional structure and effective governance of the decision-making process.

In recent years, efforts have been made in the North-West to close this gap by seeking to institutionalise certain processes of participation.

The Lombardy Region (by means of Regional Law 2/2003) established an innovative use of the programme agreements to bring about a closer involvement of interested private individuals and local communities. These instruments were used in the creation of the *pedemontana lombarda* motorway, the motorway link between Milan and Brescia (BreBeMi), the Milan outer eastern by-pass and the expansion of access roads to Valtellina.

The Liguria Region (by means of Regional Law 39/2007) instituted the Regional Programmes for Strategic Intervention (Programmi Regionali d'Intervento Strategico, PRIS), which adopt the necessary solutions to guarantee sustainability of choices

and resolve difficulties in the communities and territories involved, in the execution of strategic infrastructures of primary national interest identified by state legislation.

It seems appropriate, therefore, that processes of participation are expressly prescribed, promoted and regulated, allowing open and plural dialogue with regard to the alternatives (with reference both to strategic transport planning, and specific interventions on the ground) and thus guaranteeing legitimate and qualified decisions.

Dynamics arising from the processes of liberalisation and privatisation of transport

In order to assess the impact of the processes of liberalisation/privatisation on policy-making in the transport sector, it is useful to distinguish between air and rail transport.

Civil air transport is the economic sector in which European liberalisation has brought remarkable benefits to consumers. Situation has changed drastically over recent decades, due to the EU legislation in 1997 that gave the green light to the liberalisation process for intra-EU and domestic flights. This process is still incomplete, as intercontinental flights are still operated under oligopoly, though situation is set to change as the result of the agreement between the USA and the EU for partial liberalisation of intercontinental market (Giuricin, 2007).

Also as a result of this agreement, the air transport market is promising excellent development opportunities (over the next few years a yearly rate of growth is expected in excess of 5%).

Italian market situation is not so different from the rest of Europe, except for the presence of its previously dominant operator (Alitalia, national airline), near the smash in September 2008. In fact, the company, in the last decade, was unable to operate efficiently in an increasingly liberalised market, in which other companies (in particular the low cost airlines) are becoming significant players (Giuricin, 2008).

In January 2009 Alitalia's situation has been solved thanks to a long and complex privatisation procedure, started in December 2006 by the Ministry of the Treasury, which decided its strategic planning for too long.

A part of Alitalia (strategic assets in the black) has been acquired by the new Compagnia Aerea Italiana (CAI) which, through the integration with AirOne and the partnership with an international airline (the choice between Lufthansa and Air France-KLM has favoured the latter that has acquired 25% of new Alitalia capital), will try to relaunch the new national airline (which will keep the original name).

Concerning the effects of the Alitalia's privatisation in North-West territories, it is necessary to remember that since April 2008, in order to reduce its chronic weakness, the national company focused its activity on Rome-Fiumicino Airport, implementing dramatic cutbacks at Malpensa airport (where its traffic share was about 50% in 2007).

As a consequence of this significant reduction in the number of flights and destinations Malpensa has suffered a loss in its air accessibility and potential for growth¹⁰.

Since spring 2008 Malpensa airport has begun to divide its destiny from the Alitalia one, well-aware that the solution to the airport's problems lies in full exposure to the market and the low cost airlines, which would allow SEA (the company managing Malpensa airport) to find airlines that are willing to invest in the airport.

The recent (September 2008) agreement reached between Lufthansa and SEA to increase continental flights from Malpensa and to station six new regional aircraft is an important investment in this direction which underlines the intention of the German airline to bet on Malpensa as hub.

However, it should be pointed out that the effects of Alitalia crisis will remain at least for the short to medium term future and the airport is to be expected to face a number of difficulties (Baccelli, 2008).

The development of Malpensa airport needs a complete flights liberalization that will enable the access of big foreign airlines. This solution is not simple to realize because requires the state redefinition (the actual government seems to be inclined to do it) of international bilateral agreements with extra-EU countries, except for the USA which reached an agreement with the EU.

The observation of the recent evolution of passenger traffic in the main airports of the North-West (table 7) shows clear growth at Linate airport (+65%) caused by the prevalent focus on the domestic market (in light of the division of air routes with Malpensa) and in particular at Bergamo Orio al Serio (+362%), which benefited greatly from European liberalisation, establishing itself as base for low cost operators (in particular Ryanair, which is now the airport's main carrier).

table 7

PASSENGER TRAFFIC IN THE MAIN AIRPORTS OF THE NORTH-WEST

	2000	2001	2002	2003	2004	2005	2006	2007
Milano Malpensa	20,72	18,57	17,44	17,62	18,55	19,63	21,77	23,88
Milano Linate	6,03	7,14	7,81	8,76	8,95	9,09	9,70	9,93
Bergamo Orio al Serio	1,24	1,06	1,25	2,84	3,34	4,36	5,24	5,74
Torino Caselle	2,81	2,82	2,79	2,82	3,14	3,15	3,26	3,51
Genova	1,06	1,00	1,04	1,06	1,07	1,01	1,08	1,13

Source: Assaeroporti, 2008

Unlike air transport, the Italian rail transport sector has no true competitors, despite the liberalisation of goods transport imposed by the EU.

The EU began to take a specific interest in rail transport only at the beginning of this decade; indeed, the EU directives aimed at creating an integrated European railway network date back to 2001. The sector has suffered the effects of a profound crisis in goods and passengers transport over the last thirty years. Liberalisation appears to be the only way for the sector to recover its earlier market shares (Giuricin, 2007).

¹⁰ In the period from April to September 2008 Malpensa airport suffered a 24.7% drop in total passenger numbers (50.7% in domestic passengers) in relation to the same period of previous year.

However liberalisation will be slow to produce positive, visible effects in Italy, due to the existence of a dominant operator (Ferrovie dello Stato), in large part controlled directly by the government, which is a shareholder through its Ministries.

Although Italy has acknowledged the European directives and implemented laws to enable market competition, many administrative barriers remain to hinder free competition (Giuricin, 2007).

In addition, the high concentration of the sector, where the dominant operator controls the national railway system manager (RFI) and a considerable market share of transport, in both passengers and goods, does not favour competition with other operators.

It should nonetheless be pointed out that the area between western Lombardy and eastern Piedmont (with over 300 km of railways) is operated by FNM Group (Ferrovie Nord Milano), the most important non-state company in the Italian railway sector.

In recent years there has been a number of calls for tenders in the North-West to find operators for the regional railways, but the results so far have not been promising. In Liguria, the call for tenders announced in 2004 is to be repeated because of the exclusion of both of participants. In Lombardy, three calls for tenders were announced for three experimental lots, though only one of these was actually awarded, for the Milan metropolitan railway link, to a temporary consortium consisting of Trenitalia, FNM and Azienda Trasporti Milanese.

The environmental sustainability of infrastructure policies

There is presently widespread consent regarding the need to radically realign transport policy with a view to greater environmental compatibility.

The transport sector has only recently begun to experiment with forms of increased sustainability.

The context in which this sector operates has changed radically over the last few decades, not only in the North-West, but throughout Italy. Due to the steady advance of globalisation, the efficiency and reliability of the transport system have become even more important elements than before, in terms of territories competitiveness. Furthermore, increased congestion in urban areas, soaring oil prices and increased emissions are problems that demand policies aimed at solving reducing energy consumption and improving the environmental quality.

As the EU estimates predict by 2020 an increase of 50% in goods transportation by rail and an increase of 35% in passengers transportation, it is essential to operate to reduce the negative impact of mobility.

What steps can be taken and with regard to what variables?

Returning to the suggestions of the PGTL in 2001, three major variables requiring action can be identified:

- levels of mobility;
- means of transport and how they are used;
- infrastructures.

The continuous growth of the two components of demand for mobility (number and length of movements, both of them are grown significantly in the North-West), also influenced by a steady drop in the costs (in particular the relative costs) of transport, is today the main barrier to achieving environmental sustainability in the area. The fundamental issue, also identified by the PGTL, is to understand if such trends can be managed and to what extent containment of these trends would be bad for the production system and its competitiveness, as well as individual levels of wellbeing.

Regarding means of transport, significant technological advances have been made in recent years allowing a reduction in harmful emissions by individual vehicles. However questions regarding the ageing of vehicles in circulation, including local public transport, continue to remain unanswered.

It seems urgent, due to accumulated delays of recent decades, to adopt policies that encourage the use of sustainable means of transport, with recourse to intermodal road and rail options for goods transport.

Recent events regarding the creation of new infrastructures in the North-Western Italy, both extra-urban – such as the HS/HC railway lines, Malpensa 2000, the Lombardy and Piedmont *pedemontana* motorways – and urban, highlight the difficulties experienced by territories themselves in supporting a significant new consumption of space and environmental resources. The widespread social opposition to such projects put on relevance that the load-bearing capacity of certain areas has been exceeded, particularly in the view of public opinion and above all of the local communities affected.

The issue of a stronger focus on environmental sustainability, both at a national and regional level, appears solvable using the instrument of Strategic Environmental Assessment (*Valutazione Ambientale Strategica*, VAS), which introduces a new way of territorial planning formulation (as well as transport planning), guiding the actions of all actors involved in the area towards sustainability.

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