STATUS QUO ANALYSIS

BOLOGNA,

EMILIA-ROMAGNA REGION

FINAL VERSION 2.0

Bologna (IT), 2013

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EMILIA-ROMAGNA REGION

DEPARTMENT OF INFRASTRUCTURE NETWORKS, LOGISTICS AND MOBILITY SYSTEMS

STATUS QUO ANALYSIS

ON THE EMILIA-ROMAGNA AIRPORT SYSTEM FOCUSING ON BOLOGNA AIRPORT

FINAL VERSION 2.0

BOLOGNA, November 2013

Partnership Agreement between Lead Partner and Partners of “airLED: Local economic development in airport catchment areas” - project No 4CE485P4. **CENTRAL EUROPE PROJECT**

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- Statistic Department - Emilia Romagna Region
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- ENAC
- Assaeroporti

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A SPATIAL PLANNING AND ARCHITECTURE

I. PREMISES

The Italian airport system presents particular and highly articulated characteristics. In general, the **lack of a national frame of reference on a national scale** has meant that each airport has planned and made buildings and infrastructures, also thanks to public funding, not supported by adequate studies into the relative development potential and without coordination with other airports or mobility systems.

In 2012 ENAC (National Civil Aviation Authority) laid down a proposal for the **first National Italian Airport Plan**, also in order to constitute a fundamental element for economic development.

The Plan is based on important strategies, the most important of which are:

• classification of the airports, depending on their role, integrated with the European network structure TEN-T, which includes 33 national airports;

• integrated planning with the territory, also to foster the development of synergies with the public and private actors that operate in the vicinity of the airports;

• long-term environmental sustainability of the airports in agreement with the related national and European policies;

• accessibility from the territory and effective interconnections with the other modes of transport.

The Plan thus implements some important decisions also in regard to the hierarchical scale, identifying, in line with the TEN-T network:

• **the main airports**, which satisfy the demand for air transport with a large traffic catchment area. Those airports are characterized by an elevated degree of connectivity with the international destinations at the European level and develop connections at continental level; the same airports are included in the European TEN-T network.

• **the basic service airports**, with reduced extension of the catchment areas. Those airports perform a complementary service as feeders to the network, with some point-to-point connections at European level; they also constitute a capacity reserve in the overall set-up of the network.

For the Emilia-Romagna Region that Plan identifies Bologna airport as a strategic airport and the airports of Forlì, Parma and Rimini as service airports, according to the definitions given above.

Figure I.1. Italian airport system according to the ENAC plan (2012)

Source: ENAC

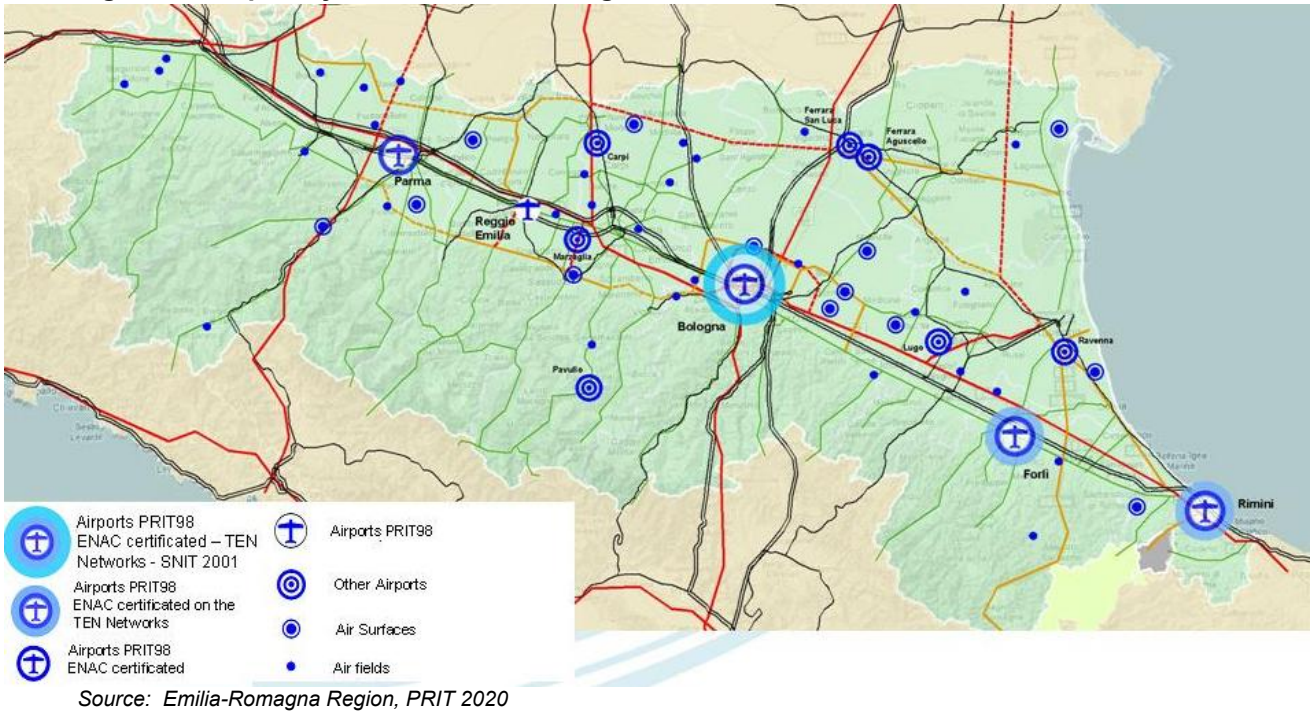
During the discussions concerning the National Plan, the Emilia-Romagna Region remarked that, granted Bologna's strategic role at the national level, greater attention should be addressed to the other two areas whose characteristics and importance go beyond the regional boundaries: Romagna, as is known an articulated territory in which the touristic vocation is fundamental, making it one of the most important in this sector at the European level, and served by the airports of Rimini and Forlì; and centre-western Emilia with the

airport of Parma, a very large area, densely populated, linked to important economic poles and with an important presence of principal infrastructures, roads in particular. For both of these areas, the availability of the air modality by now represents a mandatory requirement.

With reference to regional planning, the PRIT (Integrated Regional Transport Plan) defines a **coordinated regional airport system,** inserted in the trans-European and Mediterranean network, which on the one hand leaves scope to the development of the single airports, and on the other fosters, in a relatively specialised perspective, the **creation of synergies between airports** also as a function of their own territorial role, besides broadening the supply and the opportunities for the territory.

In this context **Bologna airport represents the strategic portal for the accessibility of the Emilia-Romagna economic system.** It fills a key role at regional level for its intermodality and access to the European and international networks, in view of its barycentric position, the size of the catchment area, the typology of the road and railway infrastructures present on the territory and, of course, the number of connections that makes it the fourth in Italy in terms of global connectivity. At present, along with Venice, it is the only Italian airport connected to the High Speed railway network.

Figure I.2. Airport system in Emilia-Romagna



Source: Emilia-Romagna Region, PRIT 2020

The airports of Forlì and Rimini instead have their own catchment area in an articulated albeit more limited territory, in which a very strong tourist vocation prevails. The extreme

proximity of the two airports has led to the passing of the Regional Law 4/2011 “Extraordinary measures in support for the regional airport system,” whose aims are to valorise the vocations of the various territories and to ease and foster the private investments within the airport companies.

Verdi Airport of Parma is located at the centre of a theoretically very large and populous catchment area but in practice it is squeezed between the important airports of Milan and Bologna, and so can perform a complementary role within the system.

In this context, Bologna airport can perform a dynamic role for the whole regional economy, constituting an access portal to which the policies of territorial valorization and mobility must refer, so that the different infrastructures, not just airport ones, can indeed **guarantee accessibility in a coordinated and integrated manner.**

The main objective of this document will thus be to analyse the role of Bologna airport and its position within the regional system, while the **“Annex**” will provide some analyses of the airport infrastructures of Rimini, Forlì and Parma.

The International airport “Guglielmo Marconi” (code IATA: BLQ) is situated in the north-western quadrant of the Municipality of Bologna, about 5 km from the city centre, falling partly within the southern territory of the municipality of Calderara di Reno.

The airport was founded in the 1920s for military purposes until 1962, when the management company called “Aeroporto Civile di Bologna” was set up.

In 1973 the new terminal was inaugurated, almost totally demolished and rebuilt in 1997.

At present the airport is run by “SAB SpA” (Società Aeroporto Bologna”), which has the total management for 40 years, with effect from 28 December 2004.

From the shareholder point of view, SAB is mostly made up of Public Bodies, including the Chamber of Commerce of Bologna which holds the majority stake.

As mentioned before, considering the evolution of the air traffic, the growth dynamics and its activities, the local planning instrument has identified the airport as a strategic pole for accessibility to the city of Bologna and its metropolitan area, as well as for the economic system of the Emilia-Romagna region.

Airport development is an opportunity for economic and social growth and its enhancement in the metropolitan area of Bologna and the whole region, also in regard to its solid connections with the Romagna regional system.

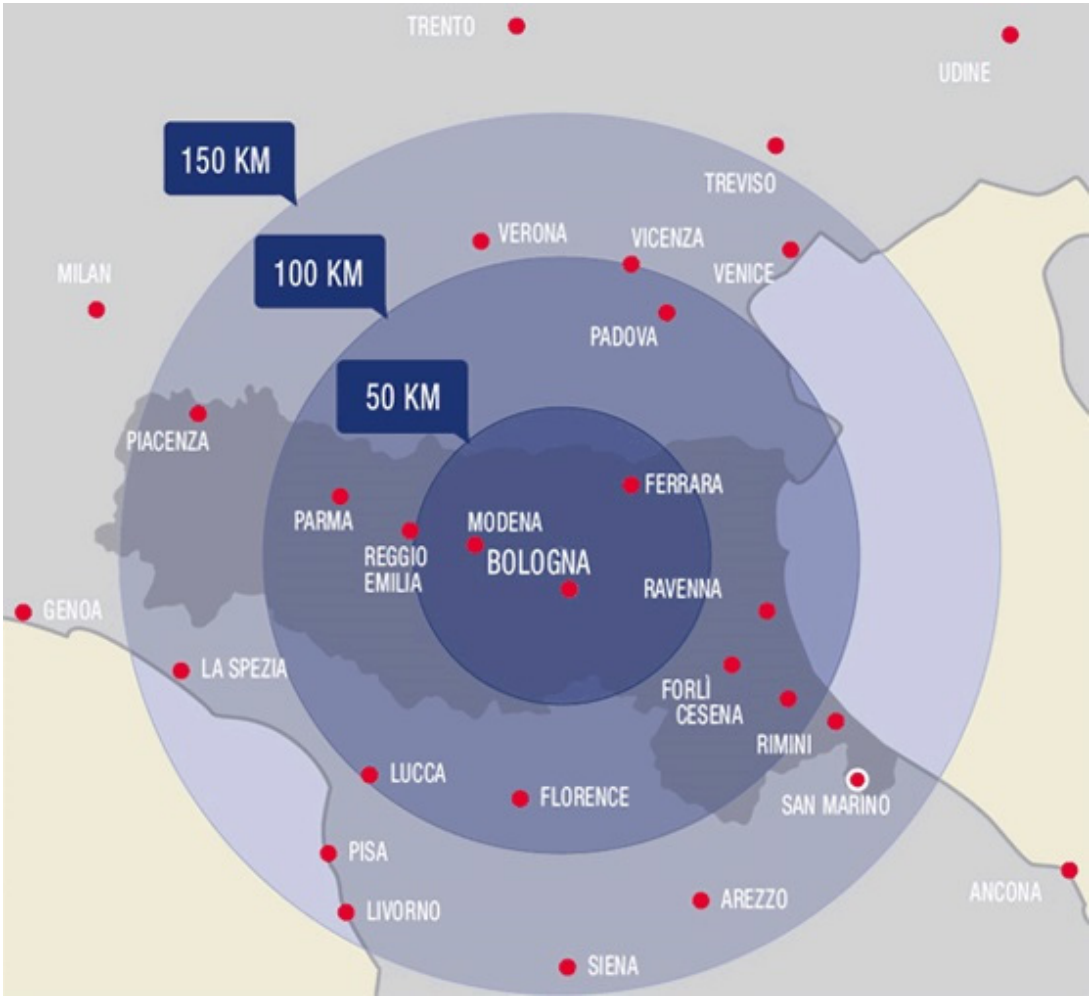
II. DELIMITATION OF THE AIRPORT IMPACT ZONE

2.1. Delimitation of the direct and indirect impact zones by means of the Cartesian distance

"Guglielmo Marconi" Bologna airport is substantially localized in the centre of the Emilia-Romagna region, along the main north-south road and railway axes of Italy.

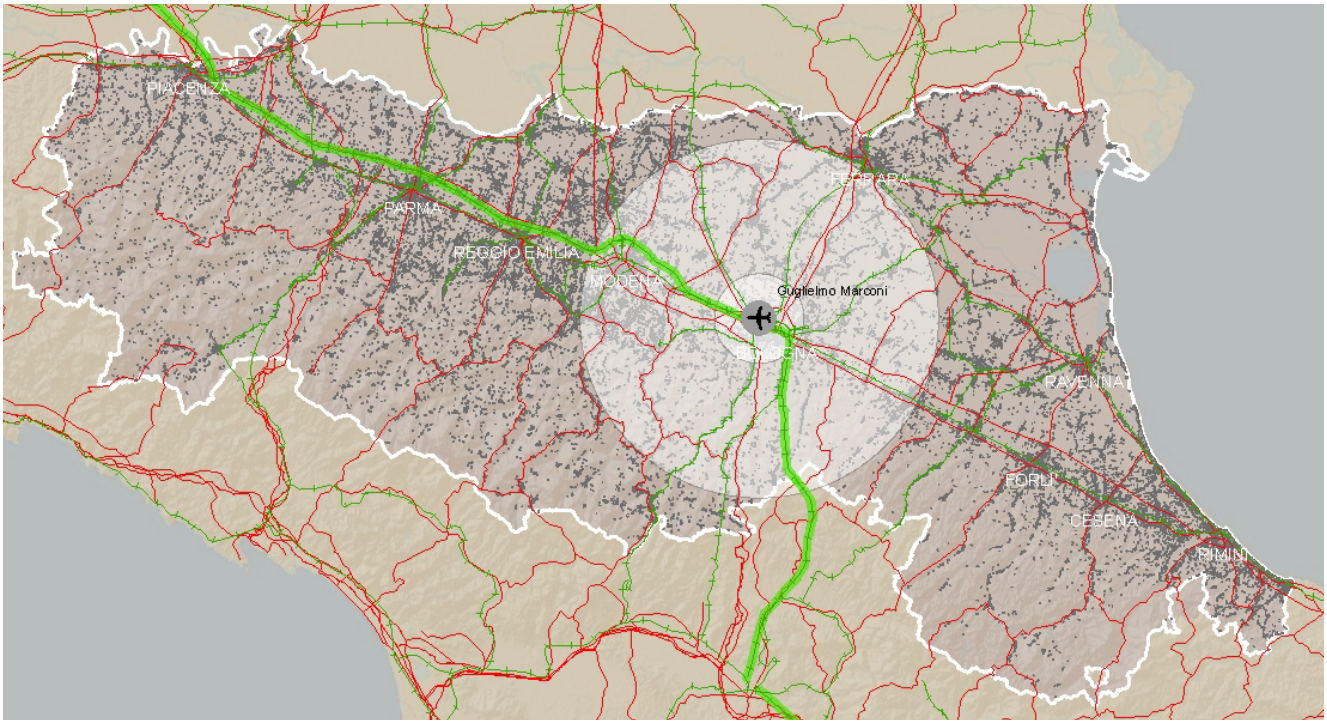
Indeed, from the node of Bologna (the most important in the centre-north of Italy) branch out the lines for Milan, Florence/Rome, Venice and Verona, connecting it to the north of Europe via the Brenner pass.

Figure II.1. Localization of the city of Bologna in respect to the north of Italy.



For an initial analysis 2 zones have been identified, delimited by two circles with a radius of 10 km (zone defined by the methodology as “direct impact”) and 40 km (zone defined as ”indirect impact”), respectively, with their centre at the airport of Bologna (see Figure II.2).

Figure II.2. Impact zone of G. Marconi airport of Bologna.

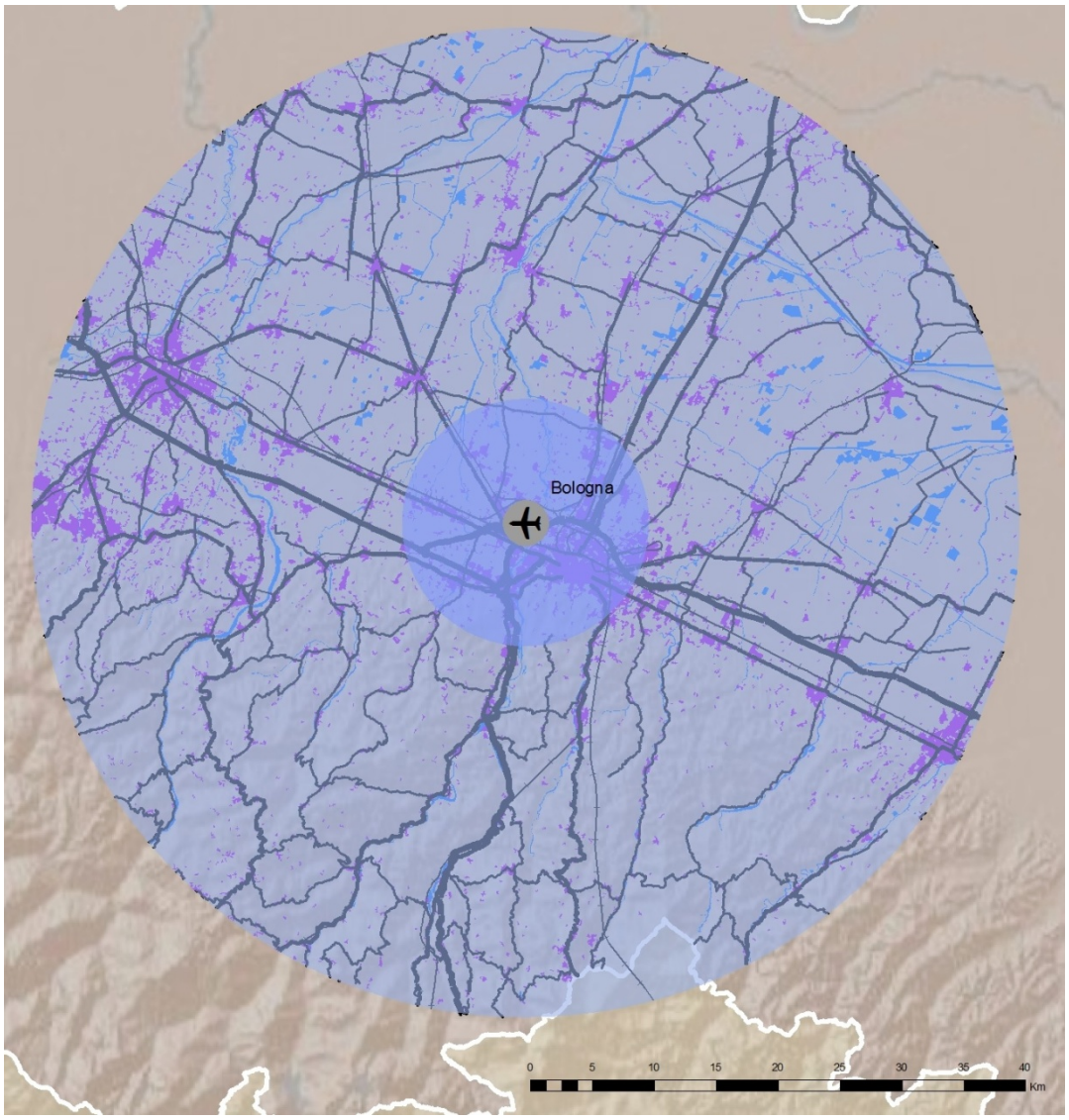


Source: Elaboration from cartography of the Cartographic Service Emilia Romagna region

The 10 km radius from the main terminal of the airport covers almost the whole municipal territory of Bologna and the first few municipalities on the outskirts (Casalecchio di Reno, Zola Predosa, Anzola Emilia, Calderara di Reno, Castel Maggiore) and some portions of the municipalities of Bazzano, Sala Bolognese, San Giorgio di Piano and Granarolo dell’Emilia.

The indirect impact zone instead covers the whole province of Bologna (all the municipalities of the plain and many of the hillside/mountain ones) and parts of the provinces of Modena and Ferrara (including their respective chief towns), involving over 84 municipalities of the central part of the Emilia-Romagna region.

Figure II.3. Impact zones at 10 and 40 Km from G. Marconi Airport of Bologna



- zone I (10 km)
- zone II (40 km)

Source: Elaboration from cartography of the Cartographic Service Emilia Romagna Region, 2008

2.2. Delimitation of the direct and indirect impact zones of airport via the access time.

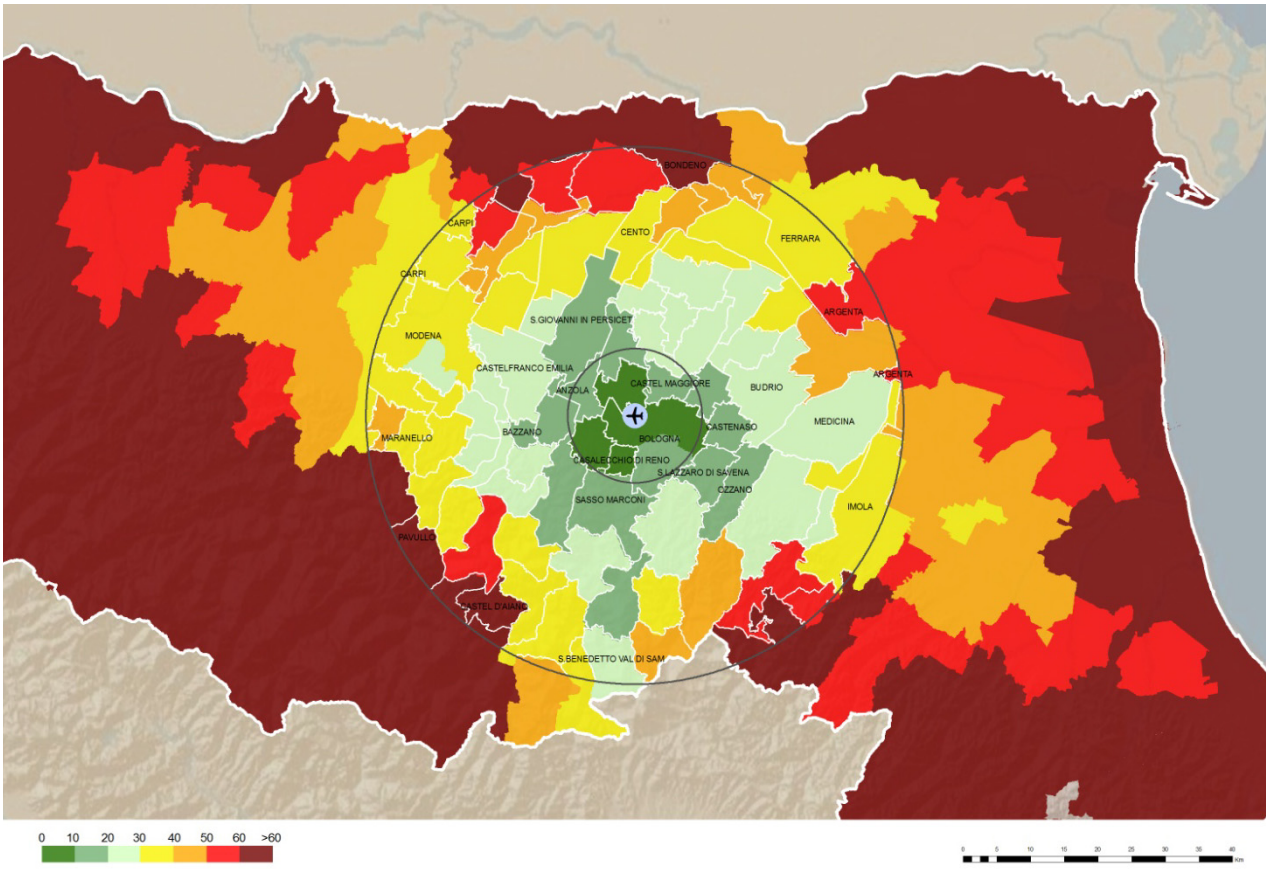
The delimitation of the impact zone described in this section is instead based on the evaluation of the time needed to reach the airport by means of the road system alone.

The Emilia-Romagna region has in the past few years implemented a private and public traffic model capable of describing the mobility dynamics at regional level and simulating

possible future scenarios. By means of this model, called SIMT (Traffic and Mobility Informative System), the accessibility of G. Marconi Bologna Airport was assessed both in regard to private mobility and public transport (this will be dealt with in Chapter VI).

In order to better represent the impact zones, the values of time needed to reach the airport (by means of the road system and in conditions of non-congestion, i.e. at off-peak times) have been subdivided into incremental intervals of 10 minutes, represented with gradual shades of colour (from dark green to dark red). From those intervals it is east to move, by aggregation, to the ”time-zones” defined in the Methodology: zone I (within 20 minutes for access time to the airport by means of the road system and zone II (within 60 minutes).

Figure II.4. Impact zone defined by the road access time (free-flowing network) to the airport

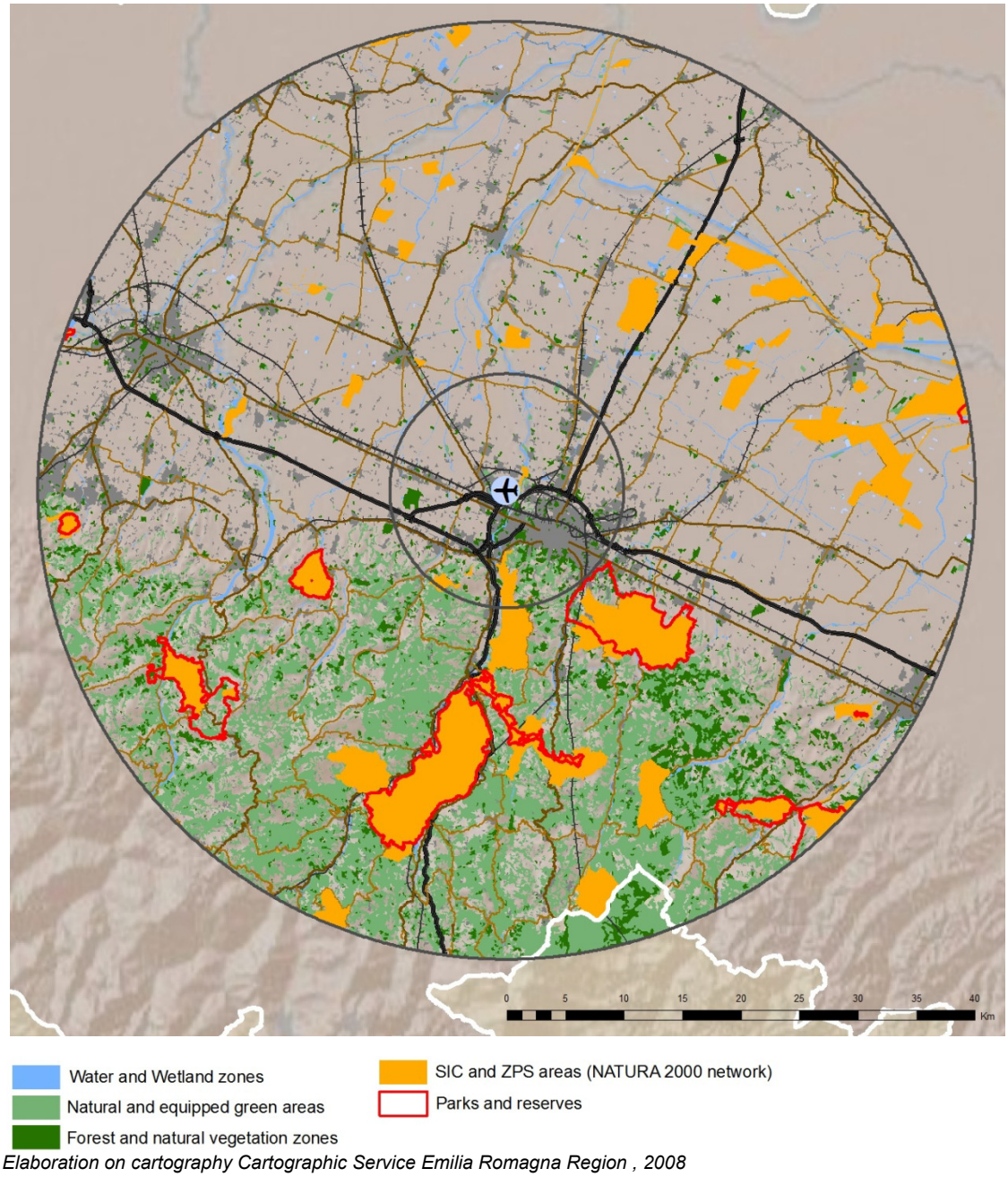


Source: Emilia-Romagna region, SIMT elaborations.

III. ENVIRONMENTAL CONDITIONS

The protection and safeguarding of the natural environment are important elements affecting the development of the areas around the airport.

Figure III.1. Indirect impact zones of Bologna airport – Protected areas within 40 km

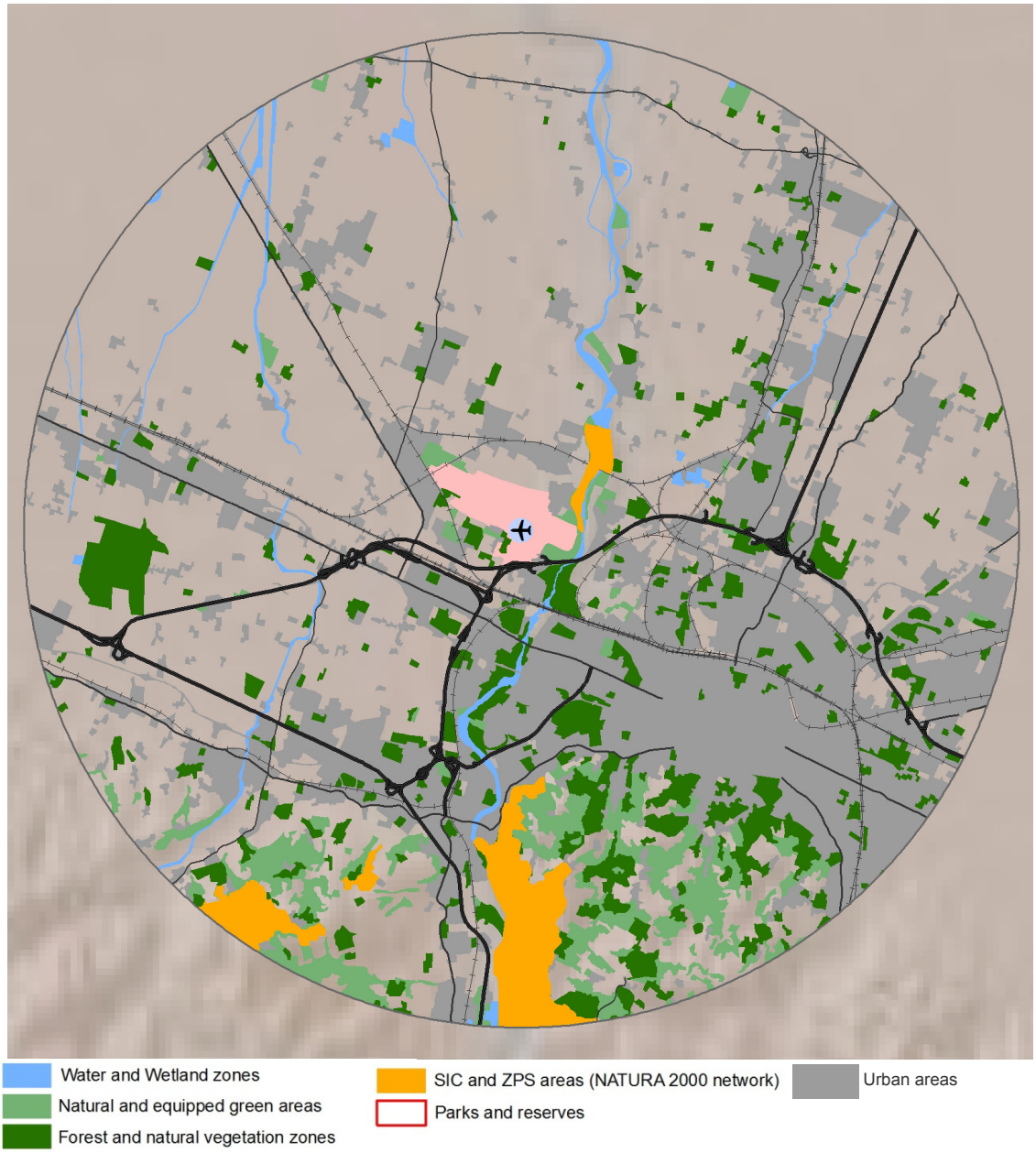


Source: Elaboration on cartography Cartographic Service Emilia Romagna Region , 2008

Figure III.1 shows the spatial distribution of the protected environmental areas (Natura 2000 network, parks and regional and national reserves, local natural areas) placed within the indirect impact zone (40 km), which represent around 13.7% of the total of the protected areas present in the region (almost 2.4% of the overall regional surface).

Most of these areas are situated in hillside and mountainous zones in the southern sector of the province of Bologna.

Figure III.2. Direct impact zone of Bologna airport – Protected areas within 10 km

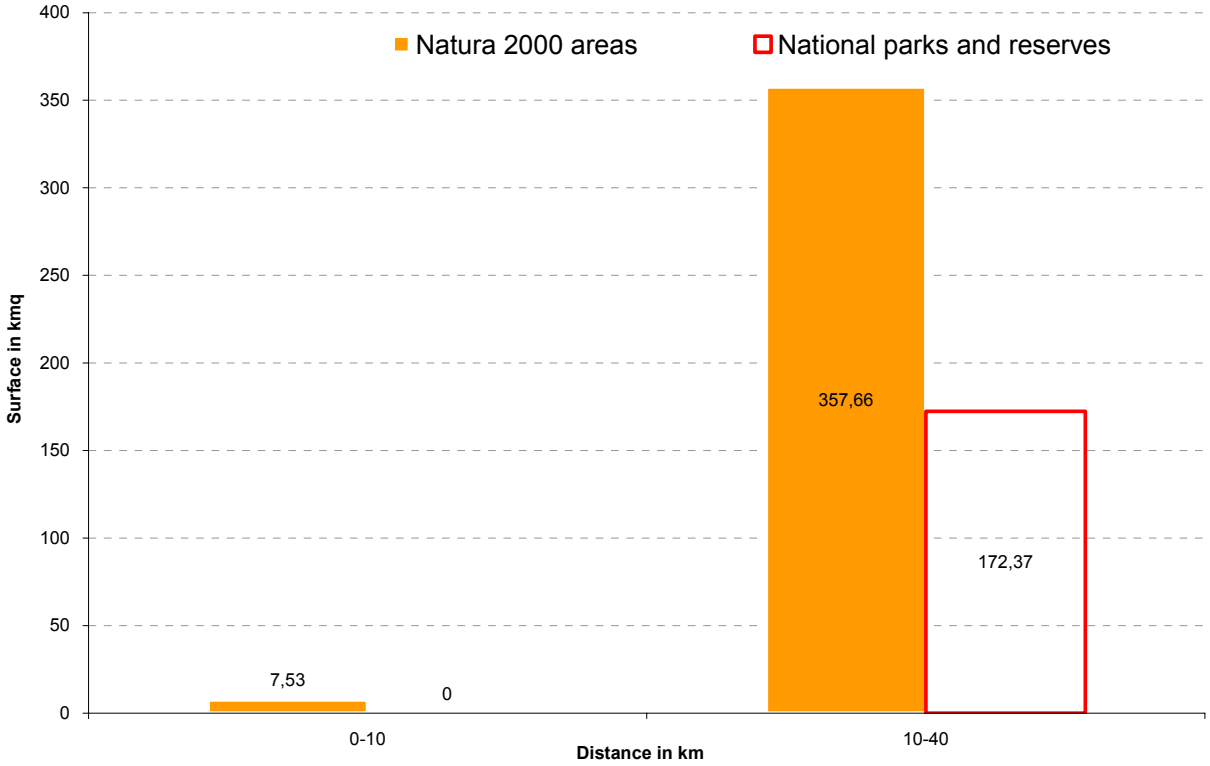


Source: Elaboration on cartography Cartographic Service Emilia Romagna Region , 2008

Inside the direct impact zone (10 km) there are 4 protected areas (orange-coloured zones in Figure III.2), nearly all of which situated in the low-lying hills of the province of Bologna. One of them instead lies on the north-eastern boundary of the airport area; this area called SIC/ZPS, around 69.15 hectares, termed "Alluvial basin of San Vitale and Lippo" covers the environmental and territorial protection zone of the River Reno. Beyond the northern boundary of the airport there is an active quarry.

The histogram of Figure III.3 shows the extension in km^2 of the areas SIC/ZPS (Natura 2000 network, regional and national parks and reserves), particularly significant beyond the direct impact zone (10 km).

Figure III.3. Impact zone of Bologna airport – Protected areas (Natura 2000 network, Parks and Reserves)



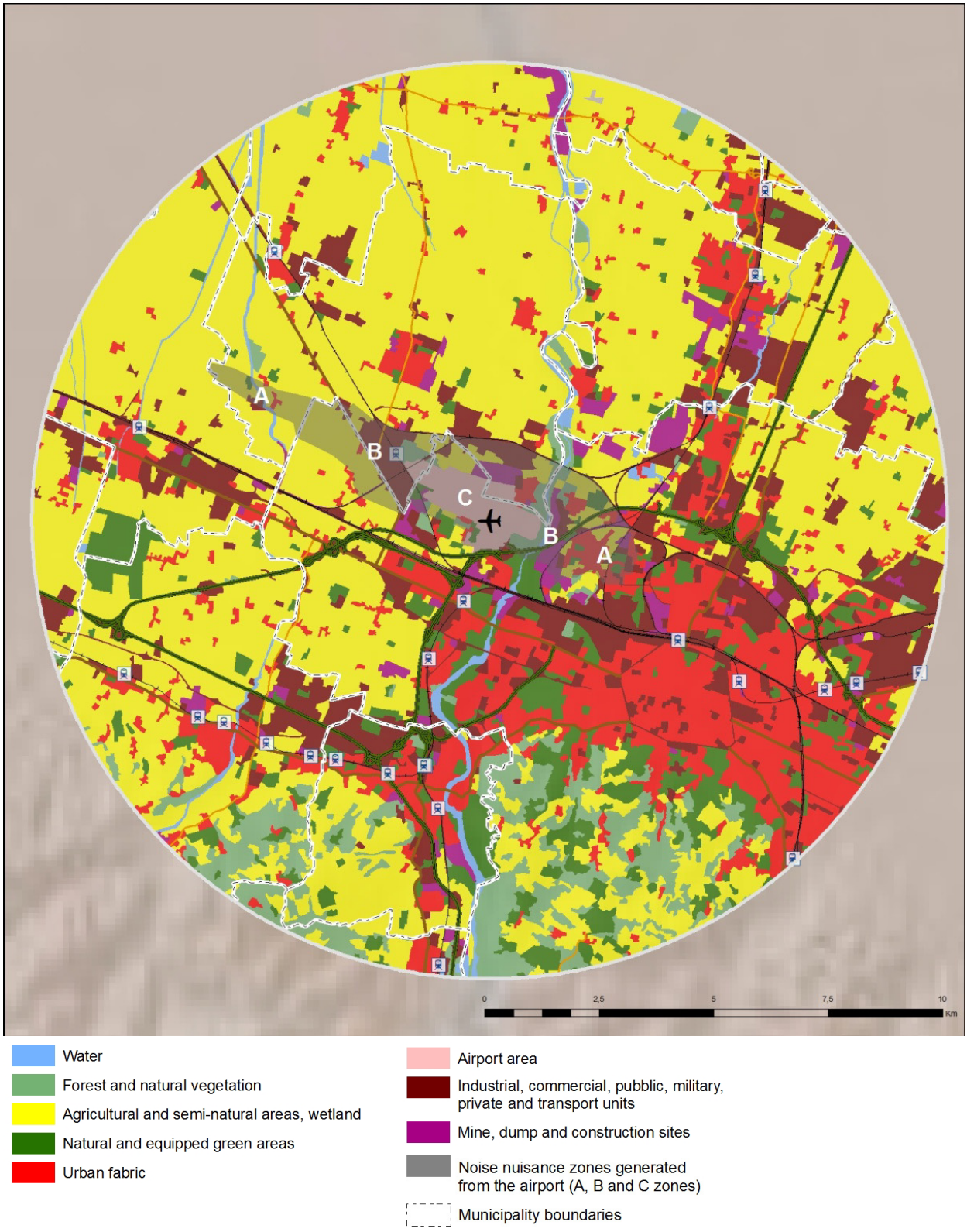
Source: Elaboration from cartography Cartographic Service Emilia Romagna Region, 2008

Table III.A. Impact zones – Protected areas (Natura 2000 network, Parks and Reserves)

	Natura 2000 areas (SIC/ZPS)			National and regional Parks and Reserves		
	Distance in Km					
	0-1	0-10	10-40	0-1	0-10	10-40
Kmq	**0**	**7,5**	**357,7**	**0**	**0**	**172,4**
% tot RER	**0,0%**	**2,4%**	**7,6%**	**0,0%**	**0,0%**	**3,7%**

Source: Elaboration on cartography Cartographic Service Emilia Romagna Region , 2008

Figure III.4. Use of the territory and limitations on the areas with acoustic pollution issues of Bologna airport



Source: Elaboration on cartography Cartographic Service Emilia Romagna Region , 2008

The noise produced by the landing and take-off operations of the airplanes is calculated in accordance with the method established by Italian law (decree law 31/10/97), using as an indicator the LVA index (Airport Noise Level Assessment).

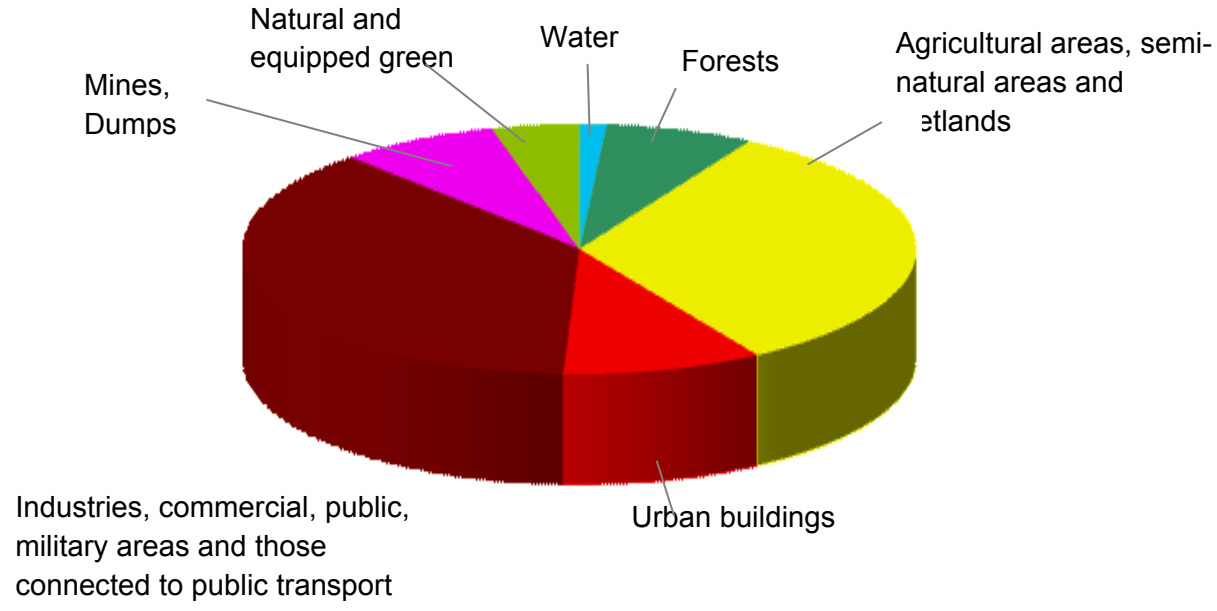
Figure III.4 shows the restriction area for noise protection (isophonic LVA), which covers an area of around 1,500 hectares (grey shaded area). That area is subdivided into 3 zones A, B, C representing 3 scales of acoustic pollution produced by the take-off and landing operations areas.

Table III.B. Share of respective groups of land use in the restricted use area (A-B-C noise nuisance zones of Bologna Airport)

Distribution of the use of the territory of the areas subject to limitations (Zones of acoustic pollution A-B-C)		
Denomination of the areas defined by the codes of the urban atlas	**Surfaces in hectares**	**Percentage**
A - Water	19.48	1.3%
B, T - Forest	106.41	7.1%
C, S, Z – Agricultural, semi-natural and wetlands	491.98	32.8%
E –Urban buildings	144.18	9.6%
F, I, R - Industries, commercial, public, military zones, elements related to transport	560.12	37.3%
Q – Mines, dumps	115.82	7.7%
V – Natural and equipped green belts	62.88	4.2%

Source: Elaborations on the Use of the Territory Emilia – Romagna 2008.

Figure III.5. Distribution of the use of the territory of the areas subject to limitations (Zones of acoustic pollution A-B-C)



The monitoring was done in 2012, in 3 typical weeks identified by the Regional Agency for Environmental Protection (ARPA) of Bologna, which periodically checks and records the data relating to acoustic pollution by means of the noise monitoring system installed at the airport area.

Table III.B and Figure III.5 show the use of the ground, subdivided into homogeneous groups, falling within the 3 zones (A, B and C): most of it (over 560 hectares) is destined to public/private infrastructures and to commercial and industrial areas, which overall cover more than 37% of the total; there thus follow the agricultural, rural, semi-natural areas and wetlands (32.8%, equal to around 492 hectares) and the urban settlements (9.6%, equal to around 144 hectares). The airport area of Bologna, naturally fully included, covers around 291 hectares, 263 of which for civil uses and 28 for military use.

Hence, the development of the airport area appears to be compromised by the urban density present in its immediate vicinity and is influenced by the natural and artificial barriers.

Finally, as regards the population, the inhabitants that live inside the areas A-B-C are estimated at around 12,200 people in 2011, little more than the value in 2001, with an increase of less than 1% over the period.

Table III.B. Inhabitants in restricted use area (A-B-C noise nuisance zones of the Bologna Airport)

Residents on the territory of the areas subject to limitations (Zones of acoustic pollution A-B-C)				
Zone	Number of residents (estimated values)		Percentage of distribution within 40 Km	
	2001	2011	2001	2011
Areas with limitations (A, B, C)	12,100	12,200	0.9%	0.8%

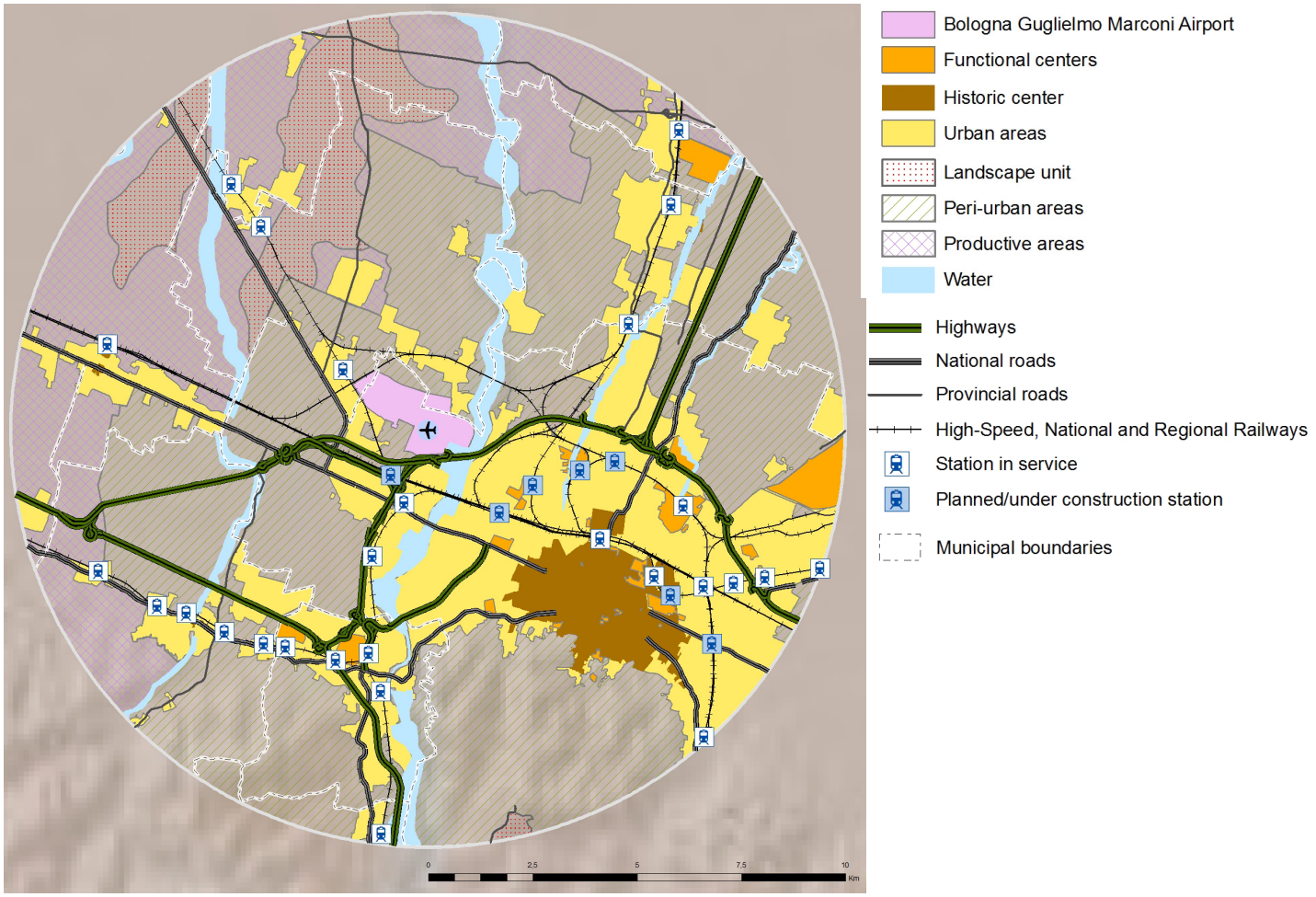
Source: Elaborations on data of the Emilia- Romagna Region 2008.

IV. ARCHITECTURE

This chapter describes the growth forecasts for Bologna airport and the areas in its immediate surroundings, with reference to the estimates of the current instruments of local and provincial planning and the further agreements that the local authorities have underwritten, not only by the local authorities, but also by the Emilia Romagna Region and SAB, the airport management company.

In the currently effective Provincial Territorial Coordination Plan (PTCP) of Bologna, the G. Marconi airport is identified as a Functional Pole to be consolidated, enlarged and improved.

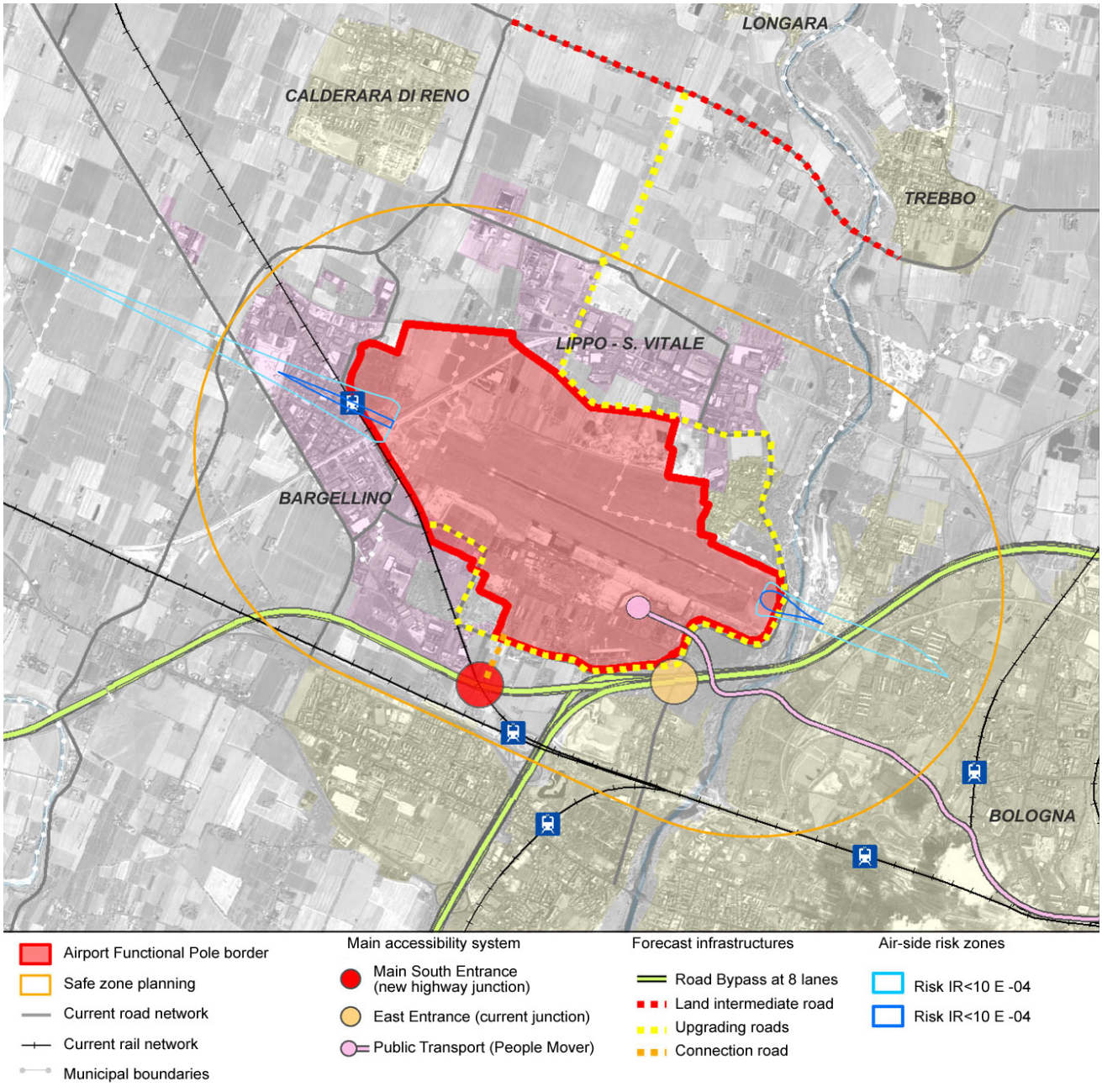
Figure IV.1. Extract of the Provincial Territorial Coordination Plan of Bologna (PTCP): Settlements and transports networks.



Source: Elaborations on the data of the Province of Bologna (PTCP).

In 2008 a specific Territorial Agreement was signed by Emilia-Romagna Region, the Province of Bologna, the Municipalities of Bologna and Calderara di Reno and the airport management company SAB: it lays down the planning policies for the development of the airport and defines the territorial and urban layout and that of the surrounding infrastructures (in agreement with the PTCP of Bologna), to ensure the concomitant alignment of the urban settlements in the vicinity of the airport (see Figure IV.2).

Figure IV.2. Territorial Agreement on the Functional Airport Pole

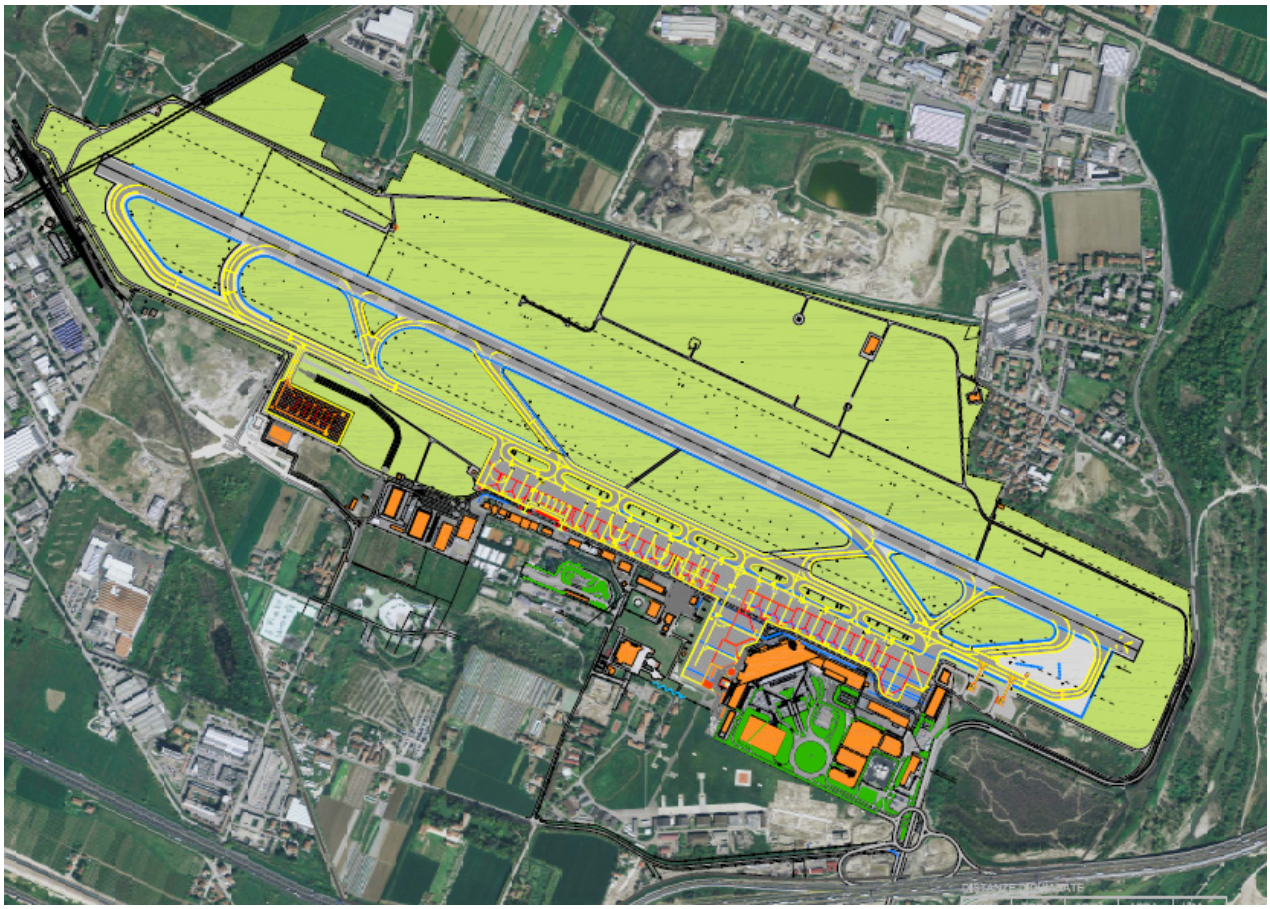


Source: Territorial agreement (2008)

SAB has also drafted the new Master Plan 2009-2023, which envisages a series of infrastructural interventions for the development and the upgrading of the airport facilities, with an estimated increase in capacity up to 10 million passengers/year, to deal with the expected growth in demand. As will be better seen in the specific chapters, the increase in the traffic volumes has indeed been very sustained in the past few years, thus leaving limited capacity margins. The main actions will concern the requalification of the current terminal and the realization of a new one, the reconfiguration and rationalisation of the aircraft bays and the identification of the new cargo area. By the end of the interventions envisaged by the Master Plan, the airport area will reach a surface of around 310,000 m^2.

Figure IV.3 shows the current configuration of the airport buildings, in which the current terminal and related passenger services are situated in the south-eastern side of the whole area (orange-coloured perpendicular areas).

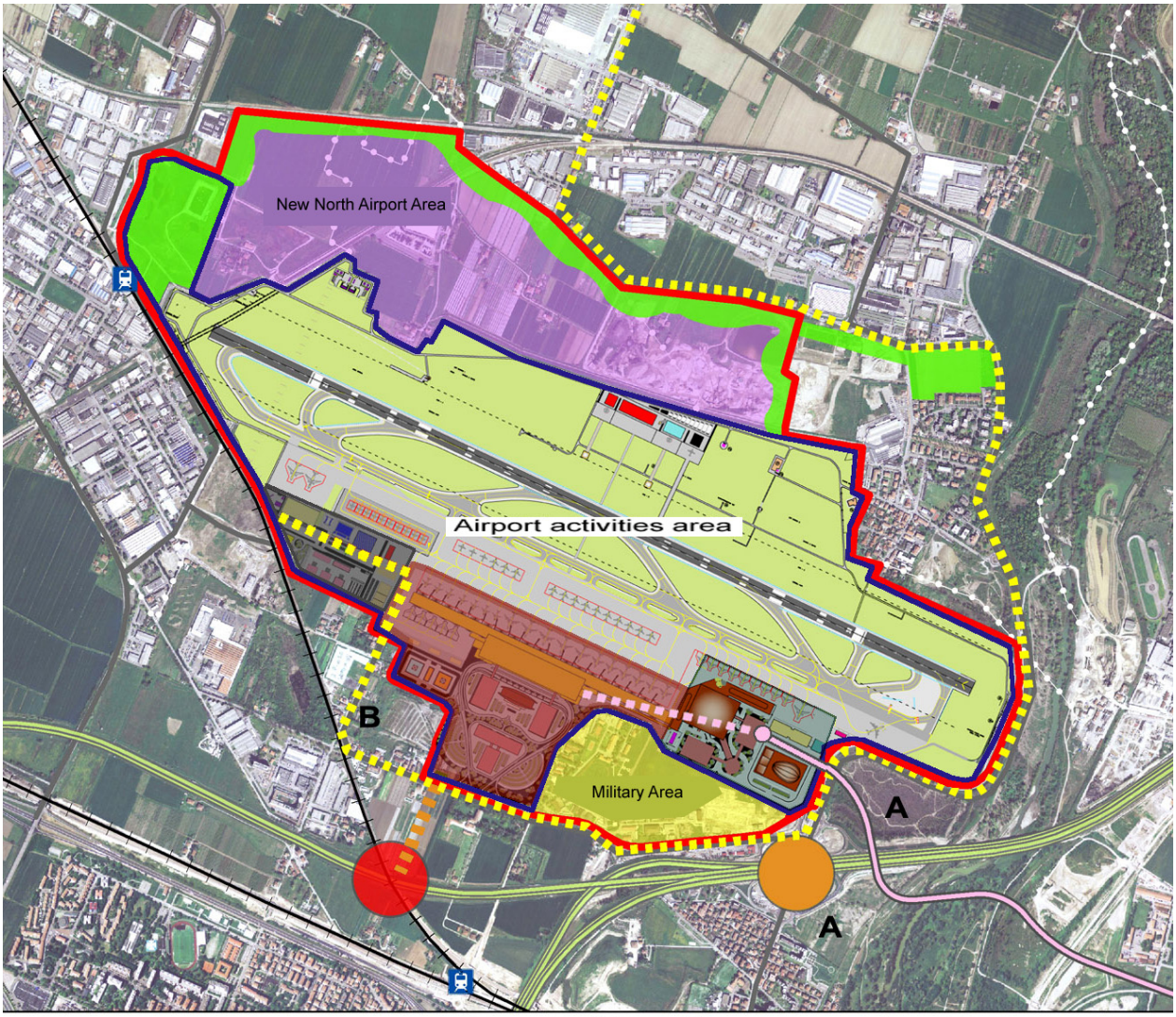
Figure IV.3. Current state of the airport settlement



Source: SAB

Figure IV.4 instead represents the subdivision of the functional areas and the activities scheduled in the Master Plan 2023 and related to the Functional Pole of the Airport as identified in the previously mentioned territorial Agreement.

Figure IV.4. Functional Pole - Airport



Source: SAB

The strategy on which the implementation programme of the Masterplan up to 2023 is based arises from the need to modernize, enhance and develop the current airport system, minimizing the investment costs and the impact on the territory.

In particular, by means of the scheduled interventions, the Masterplan will:

- allow the harmonious development of the airport infrastructures, so that the growing demand can be adequately satisfied in economically and technically sustainable terms, in full respect for the demands for safeguards in the airport surroundings;

- minimize the enlargement of the current airport land base, also with a view to reducing the environmental impact generated by the structural enlargements themselves;

- allow the full integration between the different transport systems, in regard to the users' mobility;

- plan the interventions so that the enhancement of the structure results to be flexible and well correlated with the development timescales of the demand.

The project for the enhancement of the airport infrastructure is articulated in three phases of main intervention:

- *Phase I 2009-2013*

Requalification of the existing airport hub, enlargement of the bays, new fuel depot and de-icing bay and building;

- *Phase II 2014-2018*

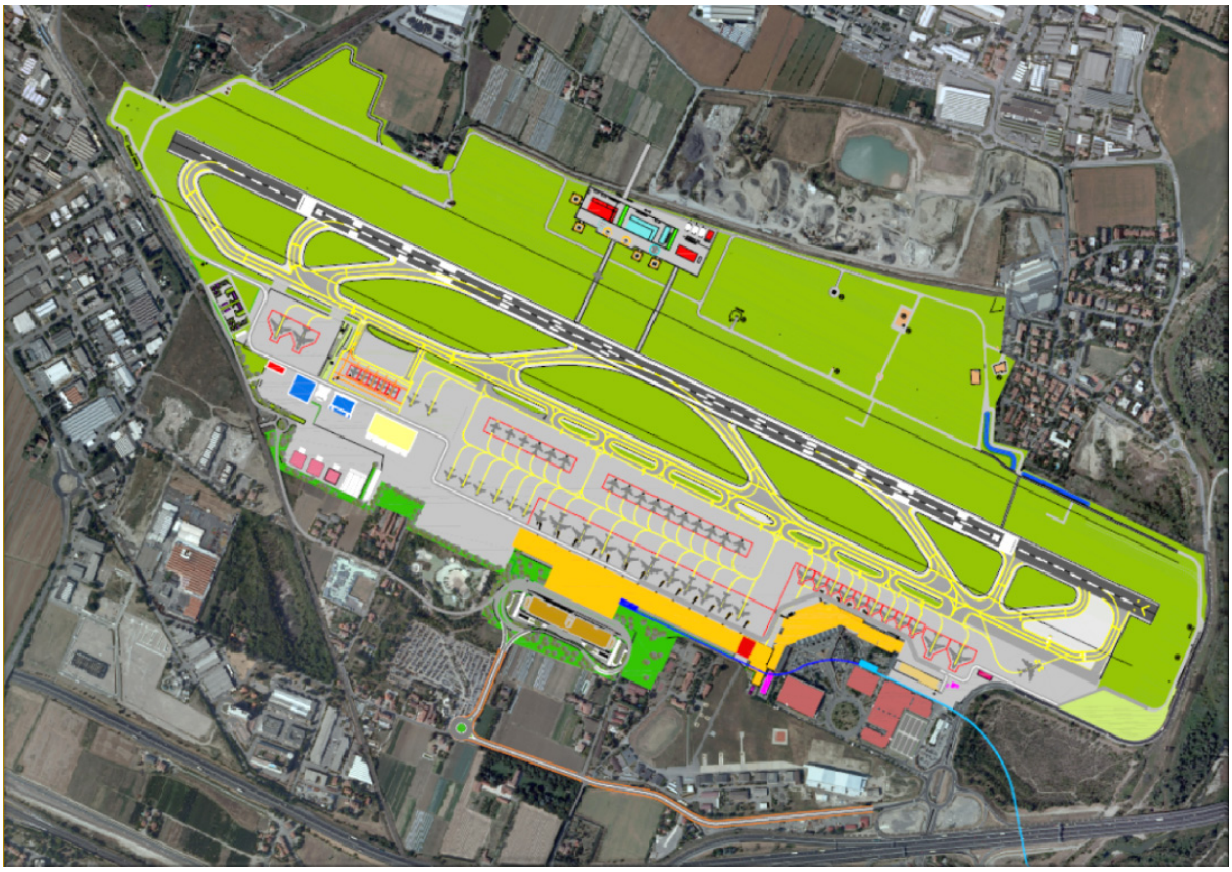
New amenities for fire-fighters' and police buildings, enlargement of the terminal wharf, new cargo pole (bays, terminals, warehouses);

- *Phase III 2019-2023*

Enhancement of the main airport road (Via dell'Aeroporto), new passenger terminal and new multi-storey car park.

Figure IV.5 shows the final configuration of the airport area with the new Airside system, the new Air Terminal and the repositioning and reconfiguration of the activities and the outlying areas.

Figure IV.5. Expected final configuration of the airport area by 2023



Source: SAB, Master Plan of Bologna Airport

At present enlargement and requalification works of the current passenger terminal are in progress, also scheduled in the industrial development plan for 2012, and whose completion is expected by late-2013; the total investment of the ongoing requalification interventions amounts to around 200 million Euros.

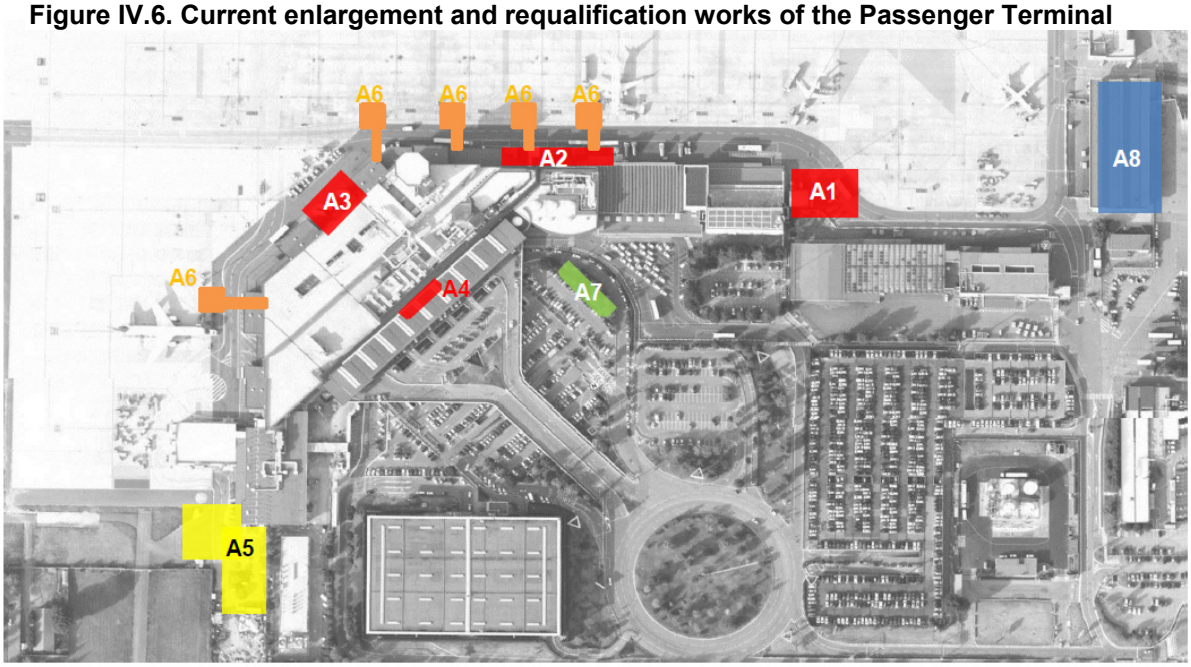
Table IV.A. Investment on the airport area of Bologna (2009-2011)

Investments (in thousands of Euros)	2009	2010	2011	% 2010-2011
Investments made	7,519	12,717	15,033	18,20%
Investments implemented	4,696	4,179	21,151	405,40%

Source: SAB

Figure IV.6 shows the final air-side configuration of the current passenger terminal by the end of above-mentioned requalification and restyling works, of which are highlighted the 5 new embarkation piers for the direct access to the aircraft (finger).

Figure IV.6. Current enlargement and requalification works of the Passenger Terminal



A1 SALA ARRIVI	A3 SALA IMBARCHI	A5 EDIFICIO E IMPIANTO BHS	A7 PASSERELLA VERSO STAZIONE PEOPLE MOVER
A2 NUOVO PROSPETTO AIR SIDE	A4 MAIN ENTRANCE	A6 PONTILI DI IMBARCO	A8 NUOVO TERMINAL EST

Source:SAB

Figure IV.7. Airside rendering Air-side of the enlargement and requalification of the Passenger Terminal

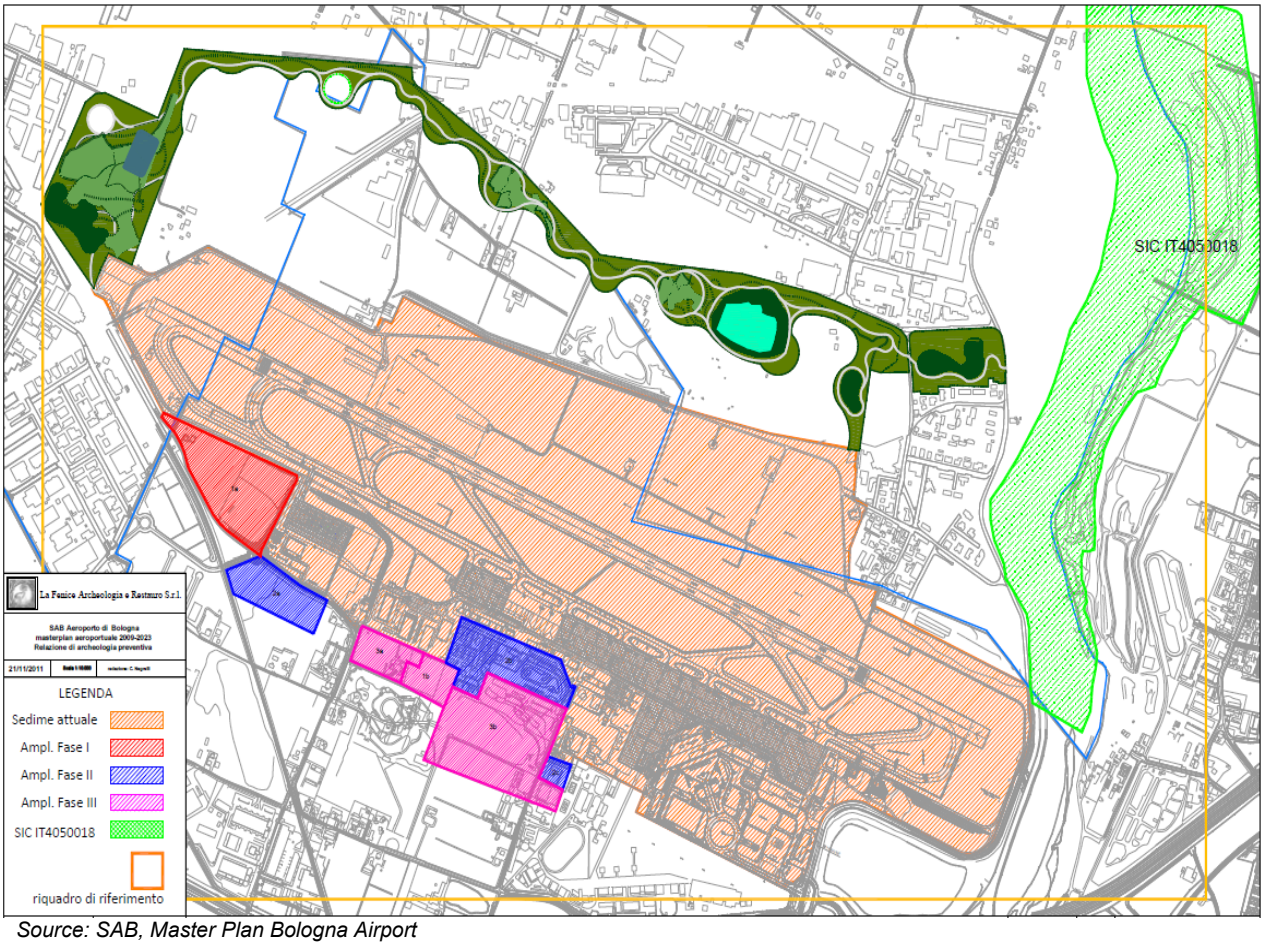
Source: SAB

Instead as regards the scheduled interventions, from the point of view of road accessibility, a new motorway junction (A14) is scheduled: from there, by means of a new link road, it will be possible to directly reach the new terminal (new main southern access), which will be placed in a barycentric way in respect to the aircraft take-off and landing runway.

Road accessibility to the airport hub will be also improved thanks to the enhancement of the existing road network, with a new scheduled intermediate road across the plain.

Lastly, an expansion area is scheduled, as well as the environmental mitigation beyond the northern side of the current airport land area (see Figure IV.8).

Figure IV.8. Final configuration of the Airport by 2023.



Source: SAB, Master Plan Bologna Airport

The main intervention scheduled is the realization of the new passenger terminal (see Figure IV.9), which will be the subject of a design competition and for which the Masterplan has identified a location that allows for the attainment of the maximum benefit in both

operative and environmental terms; indeed, the positioning of the new structure in a barycentric position in respect to the air-side movement will allow for the optimization of the airport's operativity in the phases of passenger embarkation/disembarkation, as well as the minimization of the aircraft taxiing operations.

Figure IV.9. Preliminary hypothesis for the new airport terminal by 2023.

Source: SAB

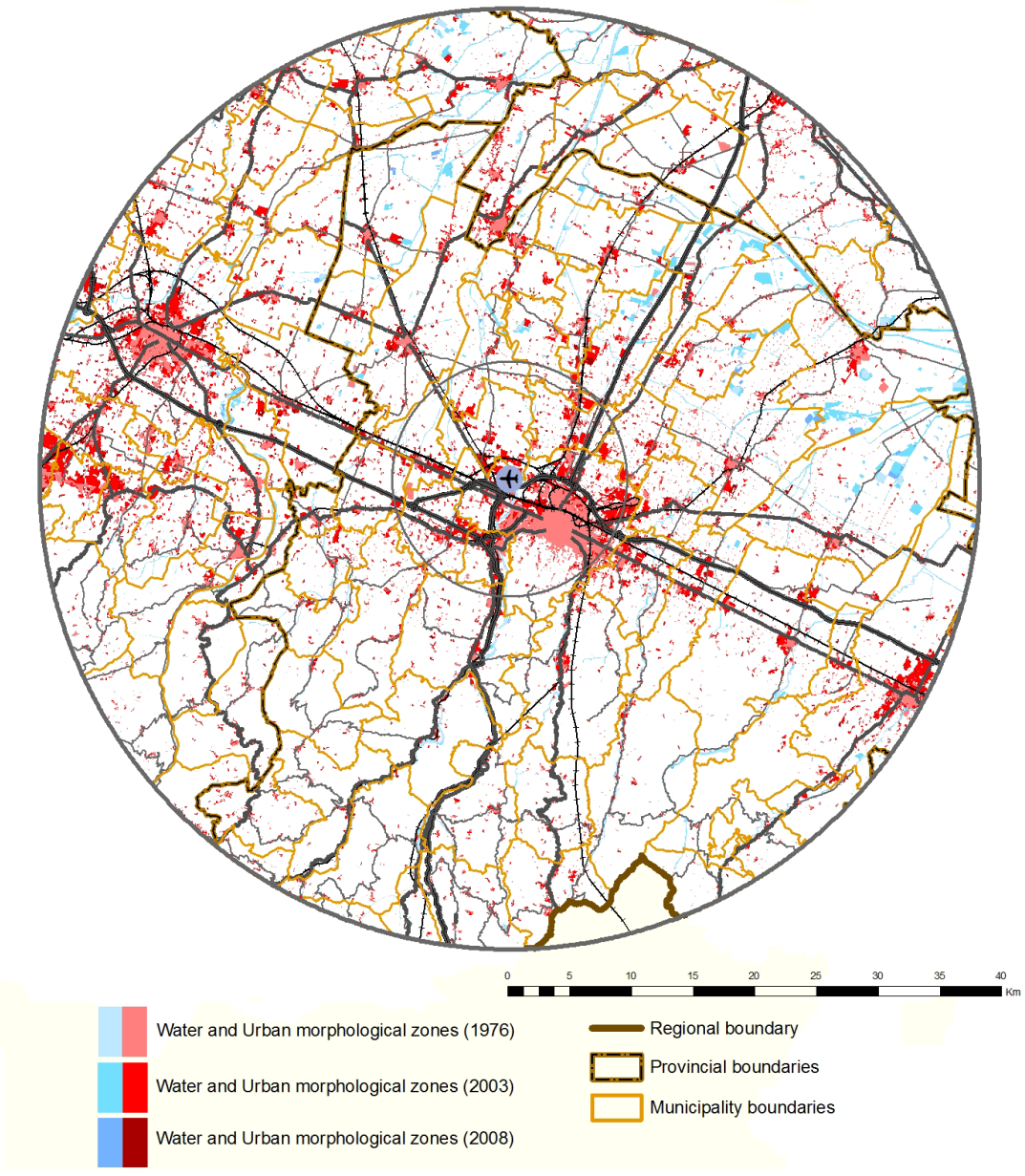
Moreover, the design definition of the airport and the choice of the related typology takes account not only of the passenger needs and, in general, the airport users as a whole, but also of the configuration of the system of flight infrastructures (runway, taxiing routes, bays, etc.).

In relation to those areas where today there are elements of ornamental or common natural vegetation, there will be a broad ecological belt to the north of the current land area, which will guarantee not only the total replanting of the vegetation that may have been removed, but will increase the naturalistic and landscape positioning of the airport infrastructure in the surrounding territory.

V. SPATIAL DEVELOPMENT

The spatial analysis referring to Bologna airport takes into account the relationship between the airport area and its hinterland, inside the two circles with a radius of 10 and 40 km centred in the airport.

Figure V.1. Relationship between Bologna airport and the city: evolution of the urban morphology

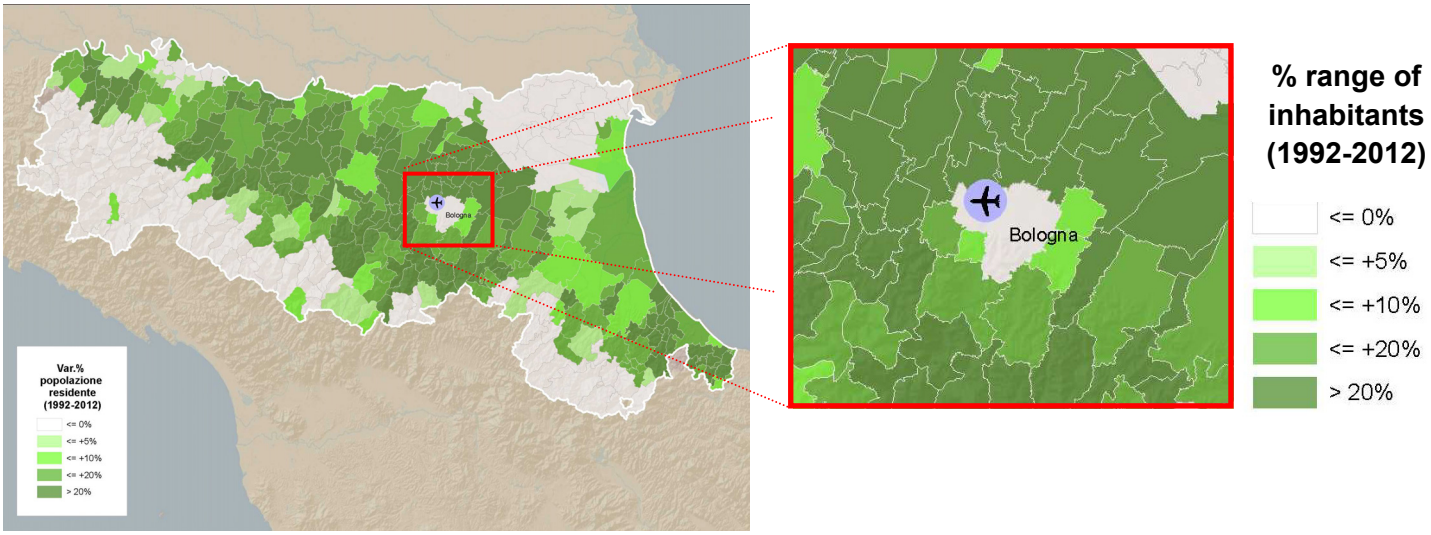


Source: Elaboration of data of the Emilia-Romagna Region (use of the land 1976, 2003 and 2008)

Figure V.1 shows the evolution of the urban morphology in 3 sample years (1976, 2003 and 2008) inside the indirect impact zone (40 km). As can be noted, G. Marconi Bologna airport is localized at the limit of the urban area of Bologna (385,000 residents in 2013, representing the seventh city in Italy in terms of population) which, almost without interruption, continues beyond the municipal boundaries towards the urban areas of the neighbouring municipalities.

Figure V.1 indeed shows how the urbanized areas have developed in a particular way in the outlying areas of the chief town and along the main axes of the road network: in the past twenty years the neighbouring municipalities have experienced strong population growth (to the order of 20%) indeed to the detriment of Bologna, which in the same period instead lost 5% of its inhabitants (Fig. V.2), only inverting that trend in the past few years.

Figure V.2. Variation in the resident population in Emilia-Romagna by Municipality (1992-2012)

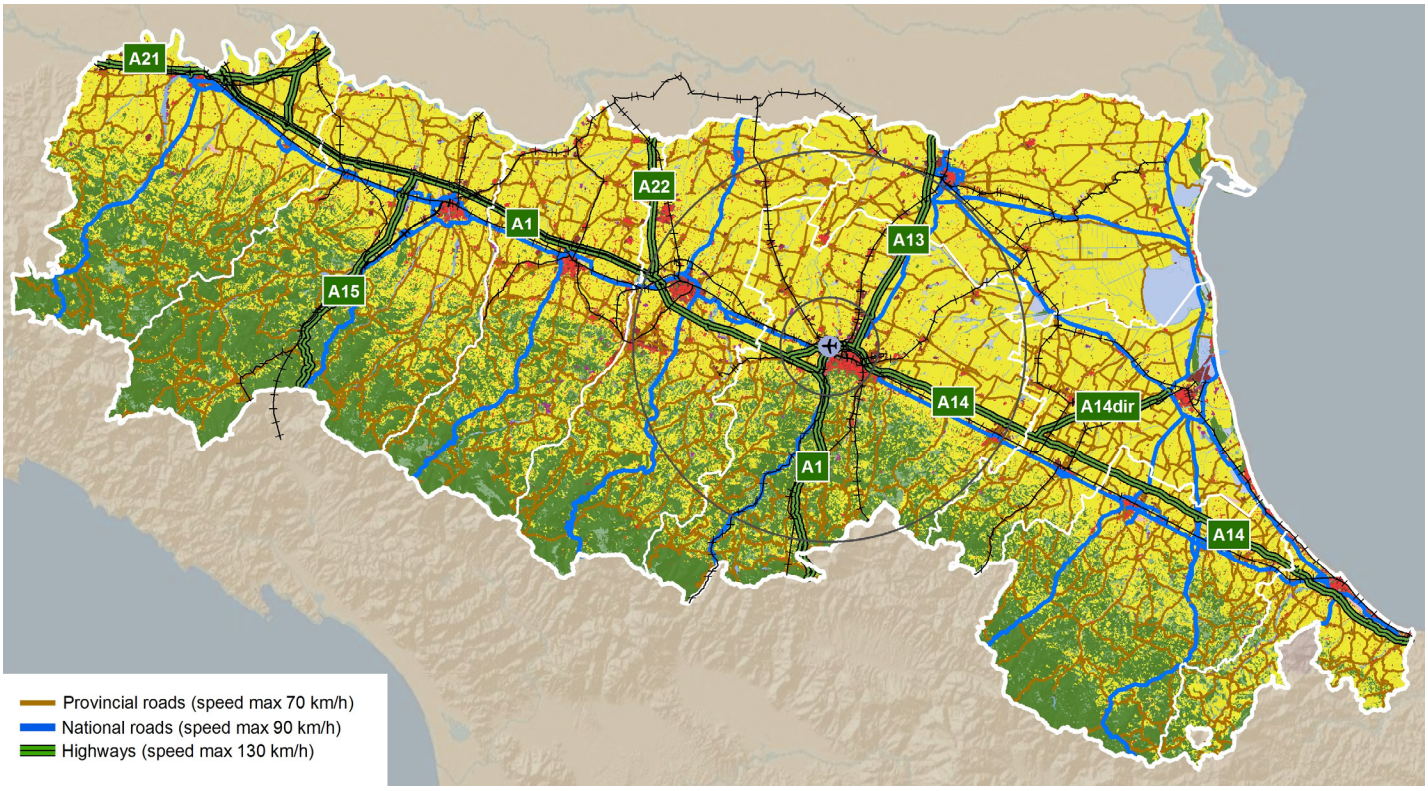


Source: Elaboration on data of the Emilia-Romagna Region - Statistical and Geographic Information Service

The following Figures illustrate the road and railway networks in the metropolitan area: considering the former, the airport is in an optimum position, close to the Bologna bypass which allows for a rapid and direct connection both with the various areas of the city and with the motorway and the main roads at the national and provincial level.

The same can be said also in respect to the railway network, given the proximity to the main city station, a fundamental railway junction both for local lines and for the regional and national ones (high speed and long distance): Bologna Central station is indeed the fifth largest in Italy for passenger traffic, with 59 million passengers per year and 700 trains a day.

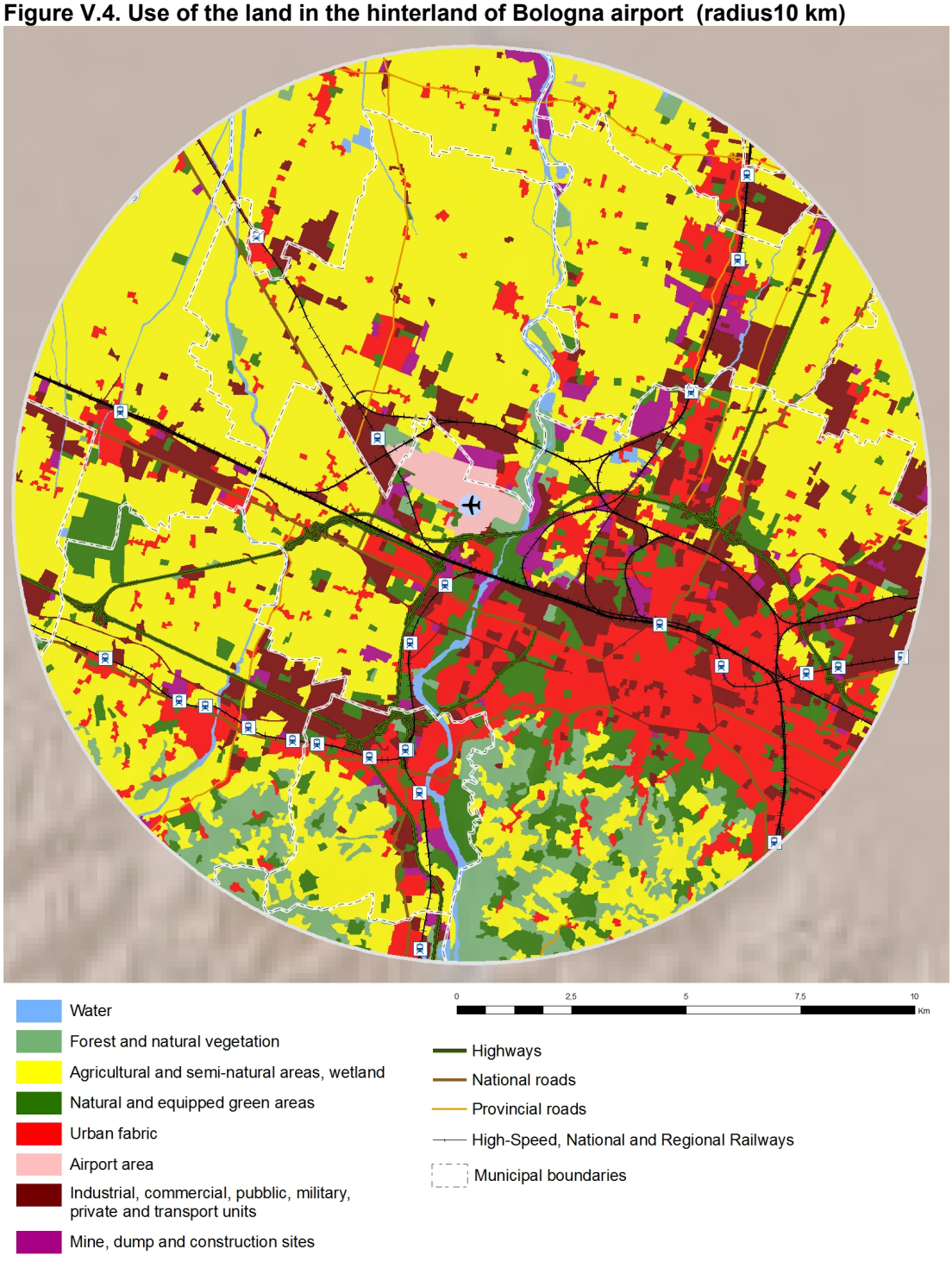
Figure V.3. Relationship between Bologna airport and the other transport infrastructures



Source: Elaboration on data of the Emilia-Romagna Region (use of the land 2008)

As regards the use of the land, given the extreme proximity of the urban area, 30% of the territory falling within the circle of a radius of 10 km results to be already built-up, subdivided into equal parts between residential settlements and other types (productive, commercial, services or destined to infrastructures), and as has been said, substantially located along the main branches of the road network. However, there is no lack of areas not as yet urbanized, in particular woodland (6%) and agricultural: the latter, by virtue of the fact that Bologna is located inside the largest Italian plain, amount to over 50% of the total.

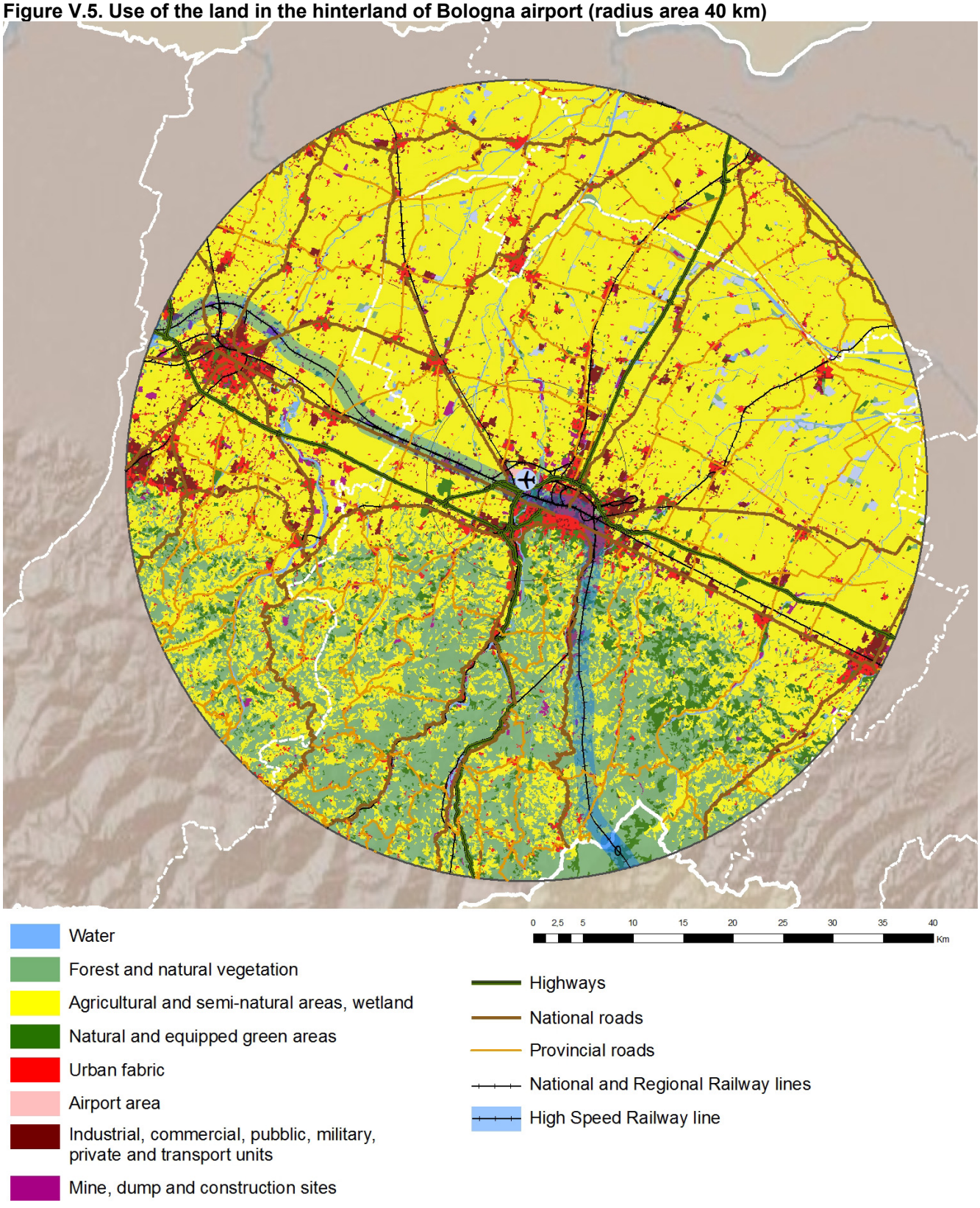
Figure V.4. Use of the land in the hinterland of Bologna airport (radius10 km)



Source: elaboration on data of the Emilia-Romagna Region (land use 2008)

A similar analysis can be made also by enlarging the radius of the territory to be examined to 40 km: the anthropised areas go so far as to involve the urban areas of Modena, Imola and part of Ferrara, but the percentage of the agricultural area increases in a much greater way, reaching almost two-thirds of the total.

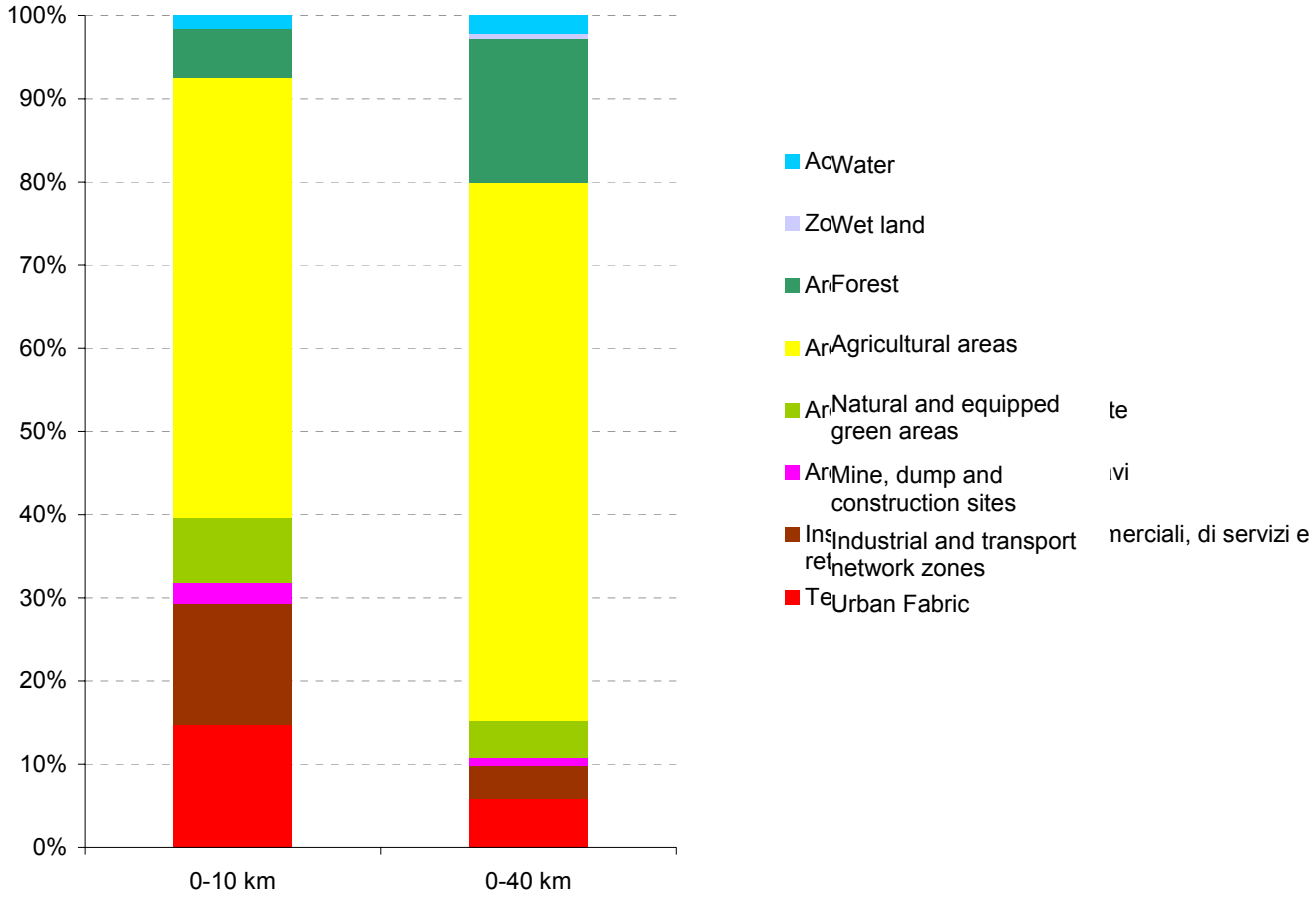
Figure V.5. Use of the land in the hinterland of Bologna airport (radius area 40 km)



Source: elaboration on data of the Emilia-Romagna Region (land use 2008)

A great increase also for the woodland areas, which reach 17%: this is due to the fact that the southern area, as can be seen in Figures V.4 and above all V.5, is mostly occupied by hillside and mountainous areas, in some cases protected.

Figure V.6. Comparison with the use of the land in the hinterland of Bologna airport (area in a radius of 10 and 40 km)



Source: elaboration on data of the Emilia-Romagna Region (land use 2008)

Following the methodology proposed by the project, we thus move on to the analysis of the national panorama of the sector of air transport and the role of Bologna airport.

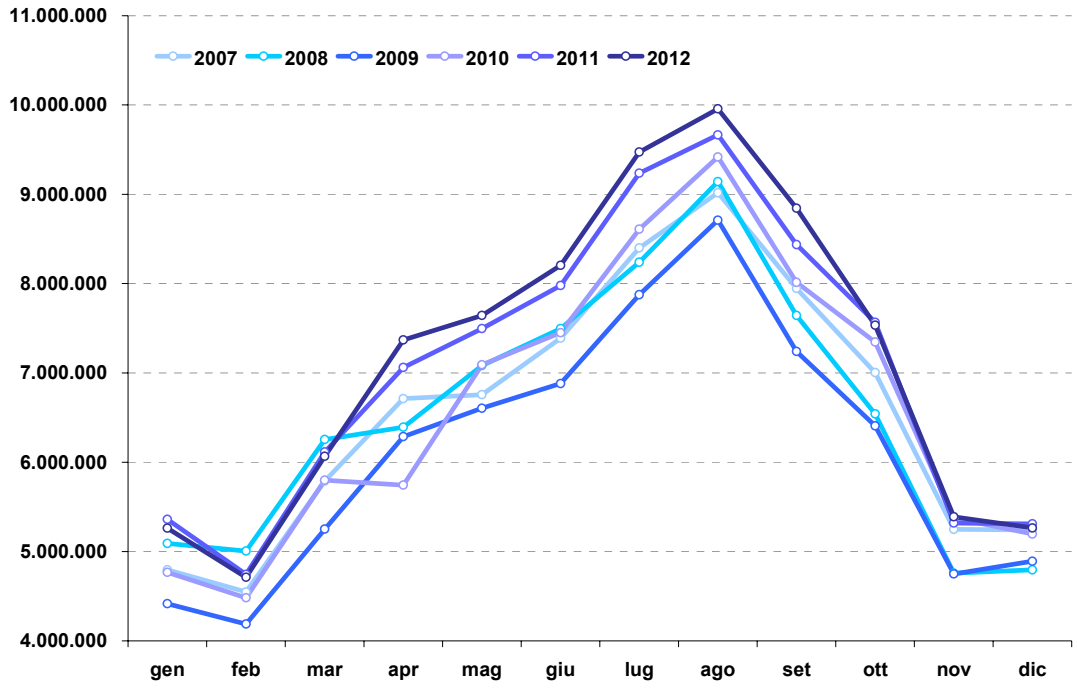
As for several other fields of the Italian economy, 2012 was a difficult year for air transport too, with traffic dropping as compared with the previous year both in the passenger sector and in the cargo one.

The passengers transiting in the national airports were indeed 146 million, about two million passengers fewer than 2011 (-1.3%). This is the third drop in the past five years, during which two traffic records were also recorded, nonetheless, (2010 and 2011): an oscillating trend that is hardly usual for a sector that is generally expanding (see Figure V.12), and that in any case led to an overall increase, in that period (2007-2012), of almost 11 million passengers (+7.9%).

A first explanation for the drop recorded in 2012 may be found by examining the components of national and international traffic, from which a very different trend emerges: in fact, on the one hand, in the course of the year the international traffic has stayed at the record levels of 2011, actually with a slight increase in the summer months, for +1.7% overall by the end of the year; on the other, the national traffic has always been lower to the 2011 figure, with a final balance equal to -5.2% and a growing fall in the second half of the year, so much as to record in the last three months values even slower than those of 2007. The drop in the overall traffic is this due exclusively to the contraction in domestic demand.

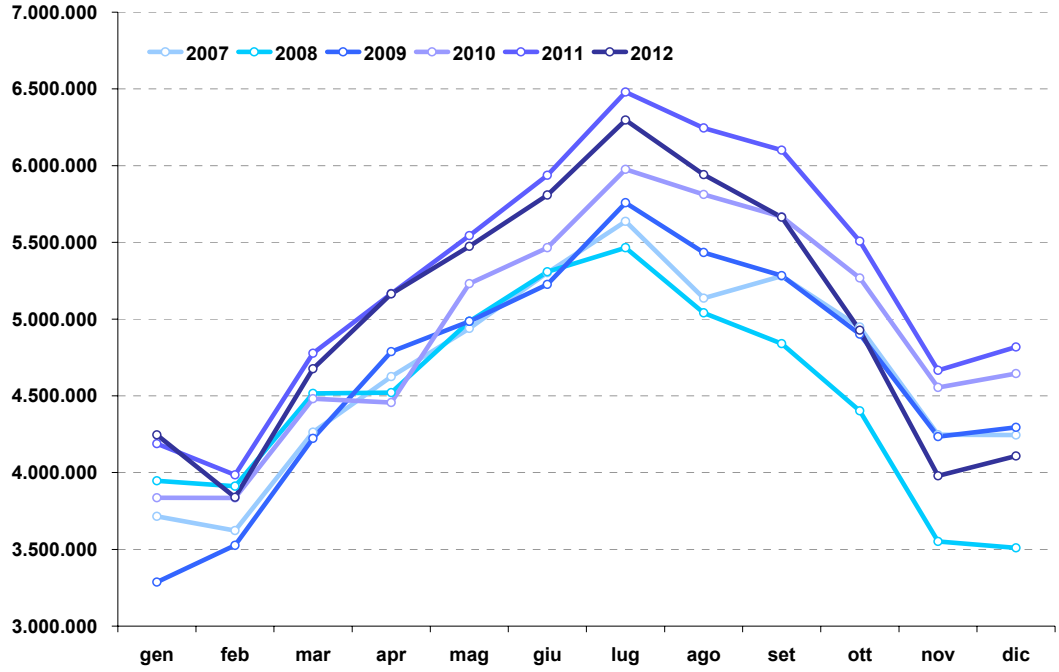
As a consequence, almost two Italian airports out of three recorded dropping passenger traffic in 2012: among the few with the opposite trend we should mention Bergamo (+5.5%), Brindisi (+2.2%), Bari (+1.5%), Milan Linate (+1.3%) as well as Bologna (+1.1%).

Figure. V.7. International passenger traffic in the Italian airports (2007-2012)



Source: elaboration on Assaeroporti data

Figure. V.8. National passenger traffic in the Italian airports (2007-2012)



Source: elaboration from Assaeroporti data

Table. V.A. Top ten Italian airports for passenger traffic (2012)

AIRPORTS	Number of passengers				Passenger per 1.000 inhabitants			
	national traffic	international traffic			national traffic	International traffic		
		total	regular	irregular		total	regular	irregular
Rome FCO	11,815,467	24,927,008	24,323,802	603,206	2,957	6,239	6,088	151
Milan MXP	3,549,557	14,779,648	13,783,464	996,184	1,169	4,869	4,541	328
Milan LIN	5,331,031	3,844,588	3,838,541	6,047	1,756	1,267	1,265	2
Bergamo	2,714,146	6,087,246	5,665,861	421,385	2,497	5,601	5,213	388
Venice	1,800,953	6,309,567	6,172,848	136,719	2,128	7,456	7,294	162
Catania	4,786,522	1,360,597	1,012,167	348,430	4,440	1,262	939	323
Bologna	**1,709,929**	**4,169,698**	**3,825,170**	**344,528**	**1,752**	**4,272**	**3,919**	**353**
Naples	2,944,038	2,813,841	2,392,156	421,685	964	922	783	138
Palermo	3,709,665	875,534	683,057	192,477	2,986	705	550	155
Rome CIA	1,019,587	3,471,112	3,453,180	17,932	255	869	864	4
ITALY	60,377,775	85,623,008	80,116,209	5,506,799				

Source: ENAC

G. Marconi Bologna airport is the main airport in Emilia-Romagna and the seventh at the national (Table V.A), with almost 6 million passengers transported (+1.2% as compared with 2011). The largest flows, apart from Italy, are recorded in the connections with Spain (860,000 passengers), Germany (613,000), France (531,000), the United Kingdom (450,000), Belgium (190,000) and the Netherlands (166,000). The flows towards the African countries are also substantial (355,000 passengers altogether), in particular for tourism in the Mediterranean area.

The "tourism" motivation has concerned 47% of the passengers who transited through Marconi, instead that of business 25%.

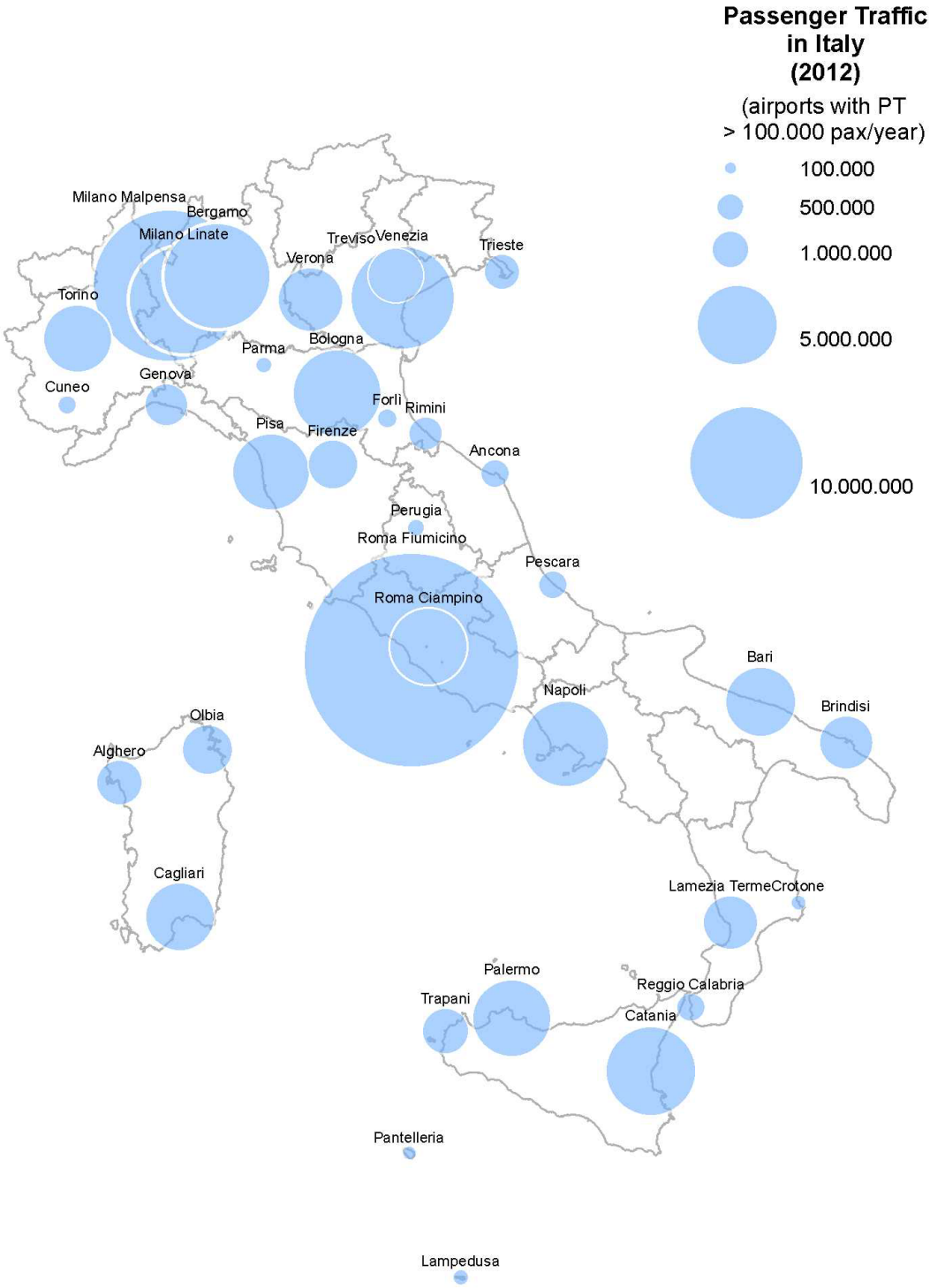
Also for cargo traffic 2012 was a negative year: the tonnage of freight in the Italian airports was indeed 844,300 altogether, with a drop of 3.4%. In Bologna 30,600 tonnes were transported by air, with a 6% decrease: Bologna is nonetheless the fourth largest airport in this sector, even if very far from the first three, where the traffic is substantially concentrated (Table V.B and Fig. V.11).

Table V.B. Top ten Italian airports for cargo traffic (2012, data in tonnes)

AIRPORTS	Total		Freight arrivals form airports			Freight departures form airports		
	domestic	foreign	domestic		foreign	domestic		foreign
			total	of which mail		total	of which mail	
Milan Malpensa	2,412	411,906	1,535	NDA	179,216	877	NDA	232,690
Rome Fiumicino	9,802	133,443	4,402	NDA	53,218	5,400	NDA	80,225
Bergamo	13,040	103,691	6,442	NDA	46,901	6,598	NDA	56,790
Bologna	**7,693**	**22,889**	**3,400**	**NDA**	**9,608**	**4,293**	**NDA**	**13,281**
Brescia	15,099	14,694	6,868	NDA	12,474	8,231	NDA	2,220
Venice	2,229	26,565	983	NDA	10,032	1,246	NDA	16,533
Milan Linate	2,794	17,013	852	NDA	8,027	1,942	NDA	8,986
Rome Ciampino	80	16,863	34	NDA	9,650	46	NDA	7,213
Catania	7,600	272	4,568	NDA	135	3,032	NDA	137
Ancona	6,417	448	3,660	NDA	96	2,757	NDA	352
ITALY	88,300	756,030	43,735	NDA	332,568	44,565	NDA	423,462

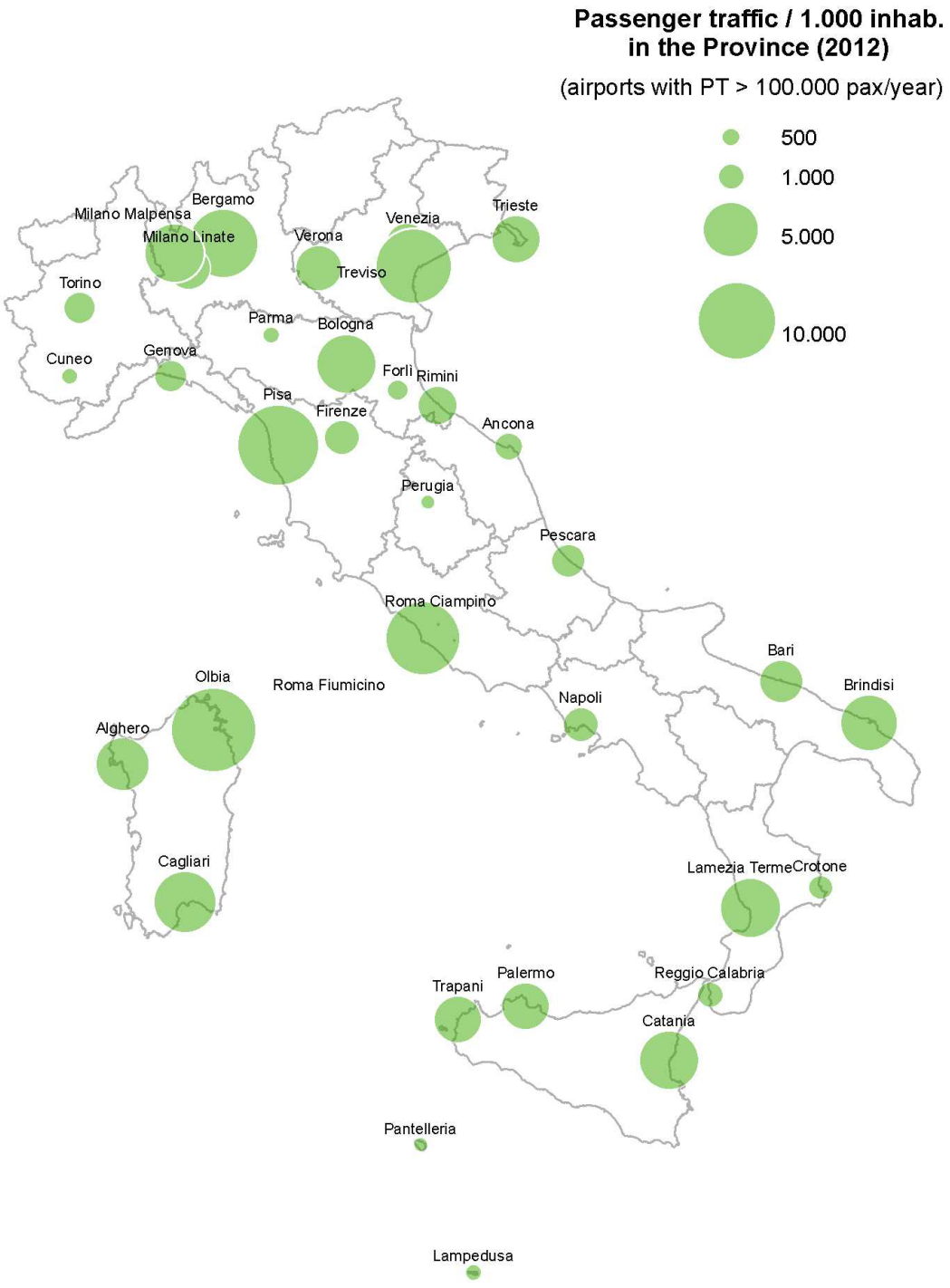
Source: ENAC

Figure V.9. Passenger transport in Italian airports (2012)



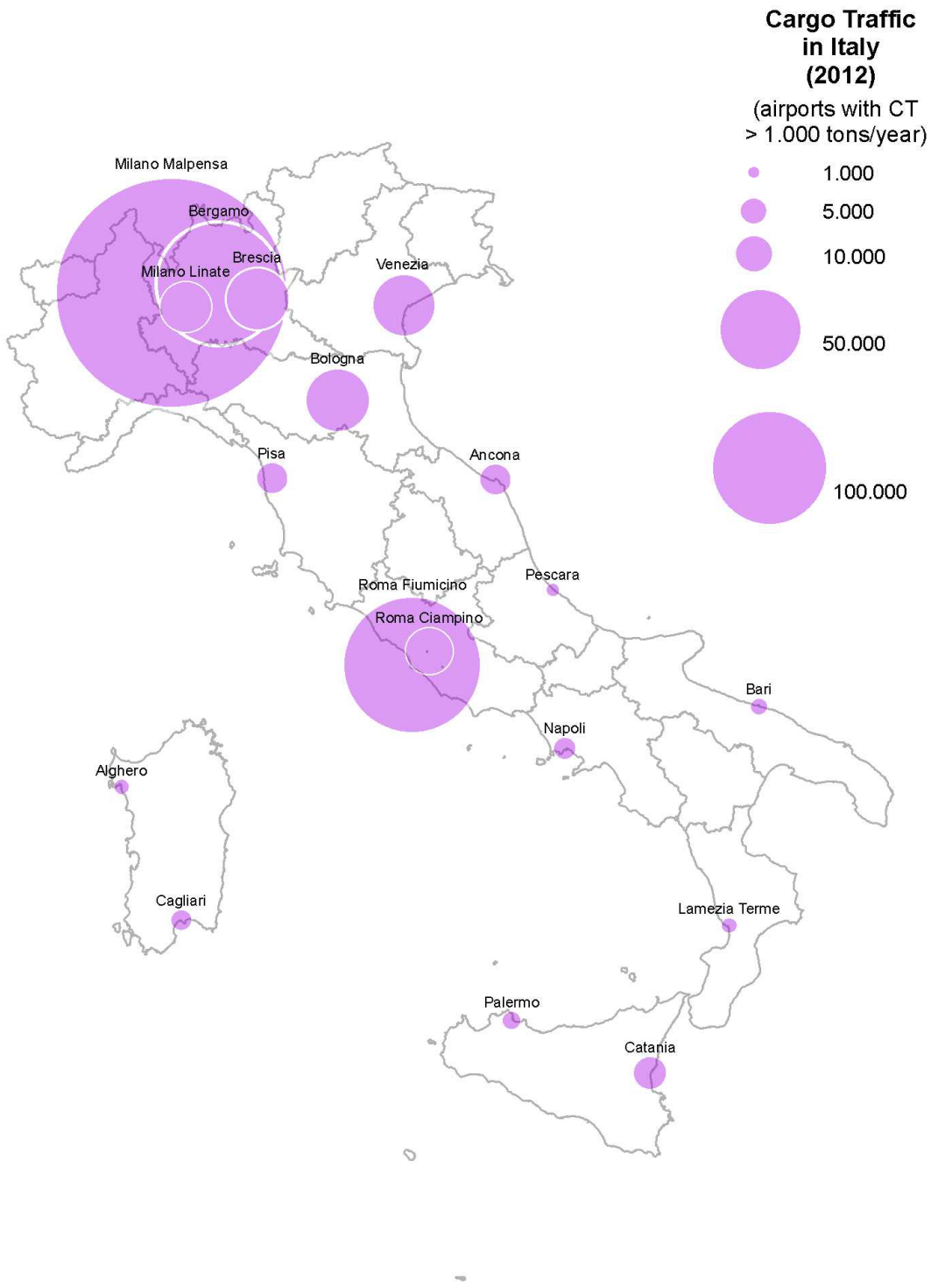
Source: elaboration from ENAC data

Figure V.10. Passengers / 1,000 inhabitants in the Province (2012)



Source: elaboration from ENAC data

Figure. V.11. Cargo traffic in the Italian airports (2012)



Source: Elaboration from ENAC data

The part that follows extends the analysis period up to 2004: as can be seen, all the main airports result to be substantially rising

Table V.C. Top ten Italian airports for passenger traffic (2004-2012)

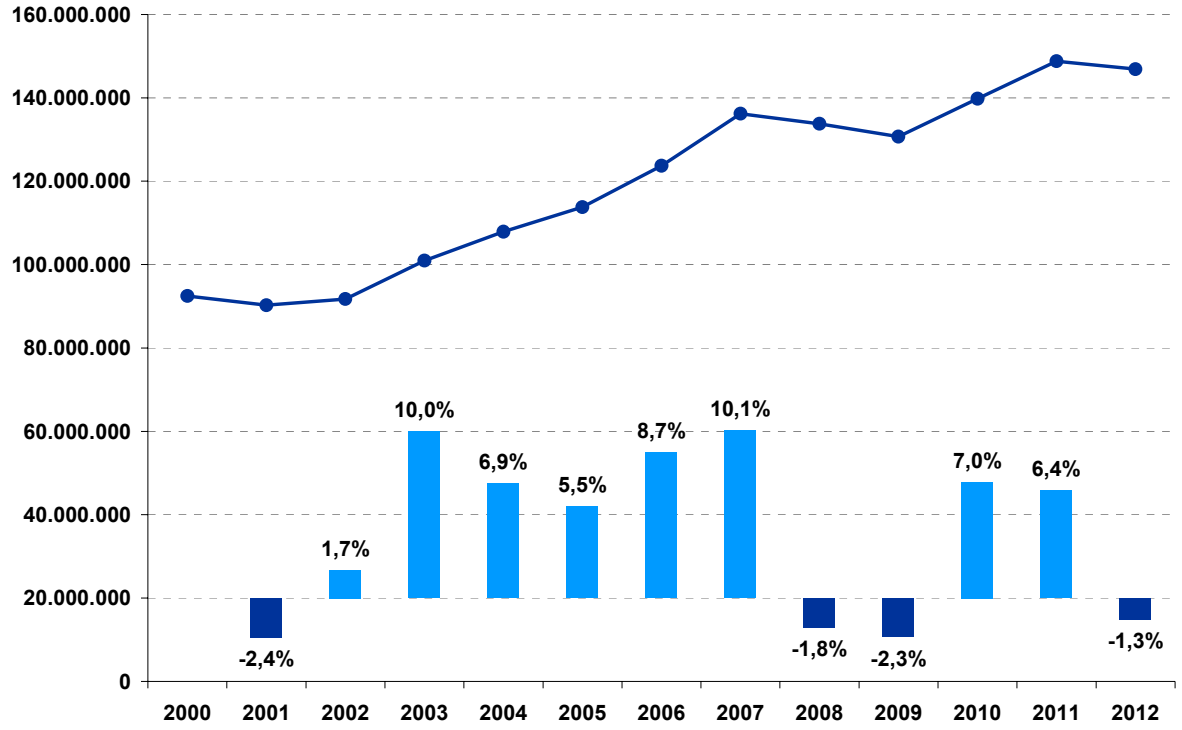
AIRPORTS	Passenger traffic								
	2004	2005	2006	2007	2008	2009	2010	2011	2012
Rome FCO	27,608,482	28,208,161	29,726,051	32,479,653	34,815,230	33,415,945	35,956,295	37,406,099	36,742,475
Milan MXP	18,421,598	19,499,158	21,621,236	23,717,177	19,014,186	17,349,602	18,714,187	19,087,098	18,329,205
Milan LIN	8,944,991	9,085,999	9,693,156	9,924,558	9,264,561	8,293,839	8,295,436	9,061,749	9,175,619
Bergamo	3,312,550	4,291,239	5,226,340	5,720,481	6,462,591	7,144,203	7,661,061	8,338,656	8,801,392
Venice	5,838,008	5,780,783	6,296,345	7,032,499	6,848,244	6,655,612	6,801,941	8,507,691	8,110,520
Catania	5,075,433	5,169,927	5,370,411	6,046,263	6,020,606	5,905,074	6,301,832	6,774,782	6,147,119
Bologna	**2,867,315**	**3,624,072**	**3,928,887**	**4,253,198**	**4,124,298**	**4,765,232**	**5,432,248**	**5,815,971**	**5,879,627**
Naples	4,608,083	4,573,158	5,056,643	5,720,260	5,594,043	5,279,388	5,535,984	5,725,033	5,757,879
Palermo	3,758,285	3,809,637	4,246,555	4,486,364	4,424,867	4,352,778	4,341,696	4,944,311	4,585,199
Rome CIA	2,540,854	4,222,263	4,933,487	5,388,749	4,778,059	4,757,136	4,563,852	4,776,919	4,490,699
ITALIA	106,989,798	112,931,916	122,889,091	135,308,151	132,952,402	129,859,539	138,909,695	147,946,210	146,000,783

Source: ENAC

Air transport in Italy was indeed a sector increasing significantly in the 2000s: the exceptions were only recorded in 2001 and in 2008-2009 as a result of the effect of the general crisis (Figure V.12). The rise in passengers thus restarted in 2010 and continued in 2011. Indeed, starting from 2012 to the present-day, once again economic reasons, tied however to the particular Italian situation, are signifying a major fall in the national component, as has been seen not offset by the international one, whose increase instead proceeds in a continuous way.

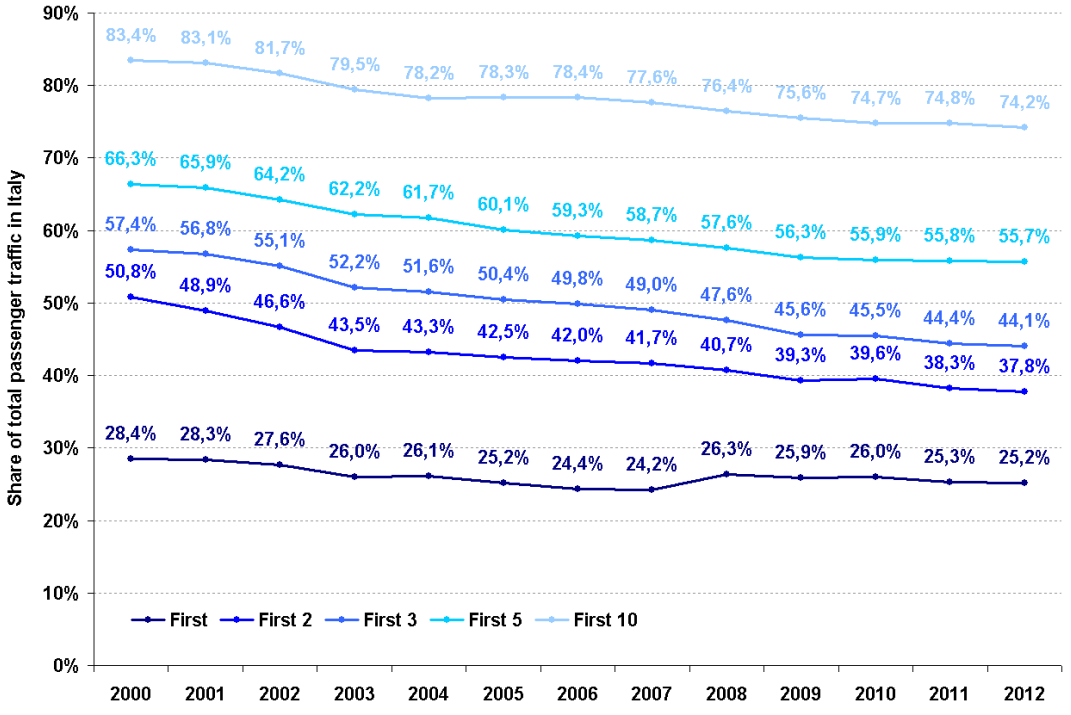
In the context just described of general sector growth (in the period 2000-2012 the passengers in the Italian market indeed went from 92 to 146 million), it is interesting to see (Fig. V.13) how the concentration of the flows in the main airports is progressively and constantly declining to the advantage of the other airports, this means that the smaller airports have been able to earn market share as compared with the bigger ones, and above all to attract most of the new demand that has been generated.

Figure V.12. Total passengers/year transported in the Italian airports and percentage change as compared with the previous year



Source: Elaboration on Assaeroporti data

Figure V.13. Trend in quota of passenger traffic/year in the main Italian airports out of the national total



Source: elaboration from Assaeroporti data

That phenomenon is naturally due to several factors, starting from the appearance to the success, in the past few years, of low-cost carriers, capable of making accessible transport provision to vast types of users (indeed using, mostly, point-to-point connections on secondary airports, some of which have in time become comparable to the 'historical' ones, at least in terms of flows: above all in Italy the case of Bergamo), up until the process of European integration, which has led to both the liberalization of the air transport market and the relaxing of the constraints to the mobility of European citizens, now free to move inside their own new and larger boundaries.

Cargo traffic has instead presented a more swinging trend, both between the main airports and at the overall national level, in particular, in the difficult two-year period 2008-2009.

Table V.D. Top ten Italian airports for cargo transport (2004-2012)

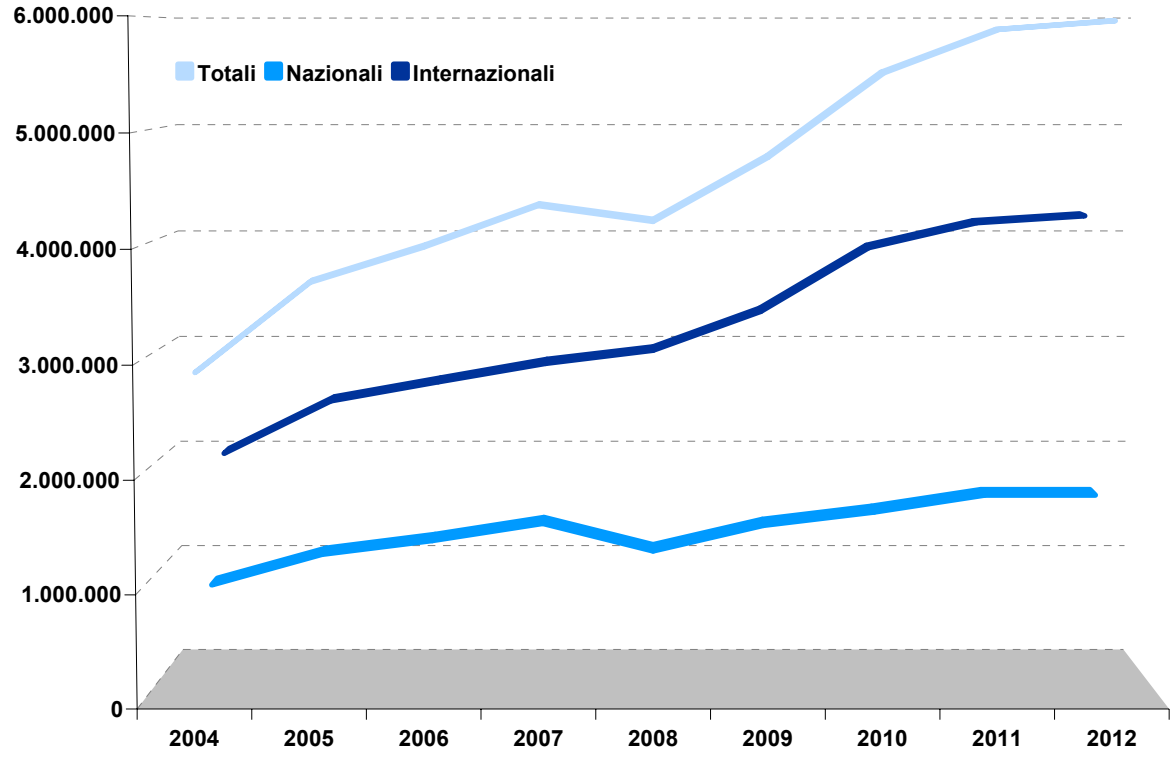
AIRPORTS	Freight loaded and unloaded (tonnes)								
	2004	2005	2006	2007	2008	2009	2010	2011	2012
Milan MXP	361,237	384,753	419,130	486,670	415,952	344,045	432,673	450,448	414,318
Rome FCO	174,658	170,798	164,385	154,444	153,026	138,775	164,546	151,833	143,245
Bergamo	129,652	135,105	139,518	133,941	122,213	99,573	106,050	112,250	116,730
Bologna	12,176	16,100	20,944	18,691	26,467	27,274	28,147	32,563	30,583
Brescia	850	20,253	23,397	46,981	36,770	22,010	20,969	15,684	29,793
Venice	11,965	12,341	14,135	12,997	22,660	22,555	25,377	27,936	28,794
Milan LIN	25,634	25,345	27,469	23,494	20,007	17,028	19,063	19,592	19,807
Rome CIA	21,669	23,054	23,769	22,996	19,644	16,978	18,003	18,843	16,943
Catania	9,497	9,553	8,585	8,800	8,777	7,737	9,286	8,965	7,871
Ancona	5,805	4,870	5,010	6,040	6,430	5,590	6,276	6,996	6,865
ITALY	820,167	868,553	915,906	980,448	883,808	735,029	865,843	873,844	844,330

Source: ENAC

In the past few years Bologna airport has experienced virtually constant growth, rising from tenth to seventh place at the national level in terms of passenger numbers.

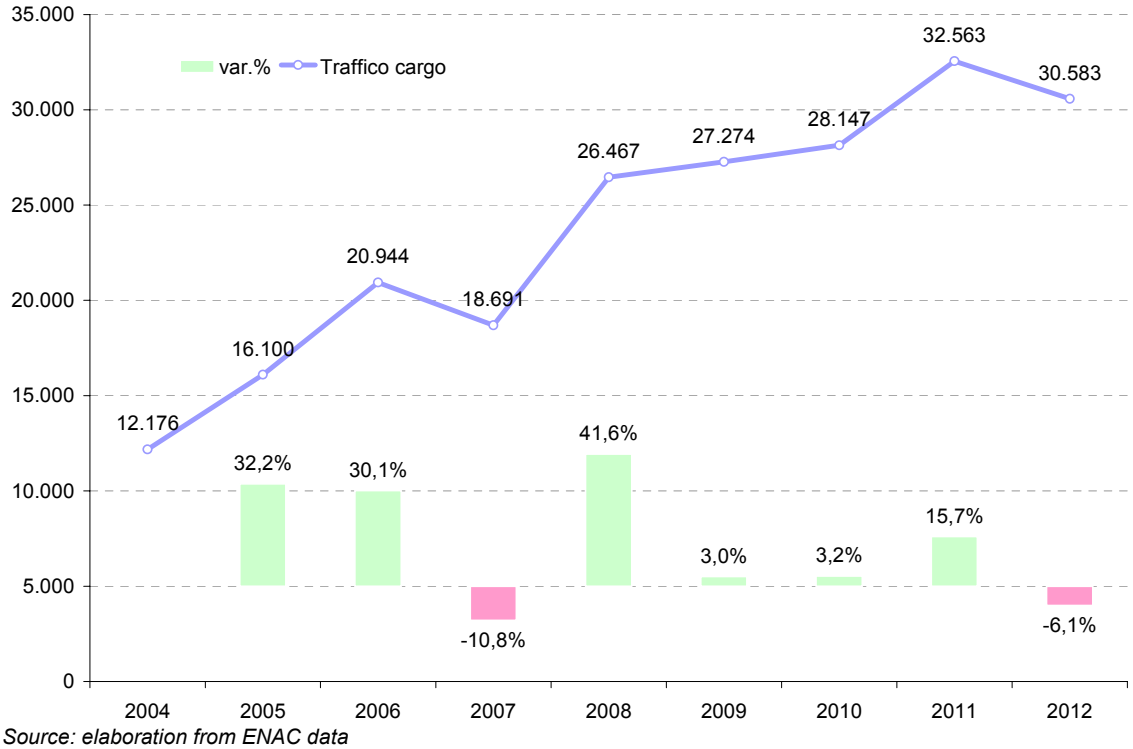
The main component is always represented by that of the international connections, which in the period under examination has earned 2.1 million passengers as against 0.8 national ones. Even the cargo transport has recorded a considerable growth, in spite of the slow-down in the past year.

Figure V.14. Passenger traffic in Bologna airport (2004-2012)



Source: ***elaboration from*** *Assaeroporti data*

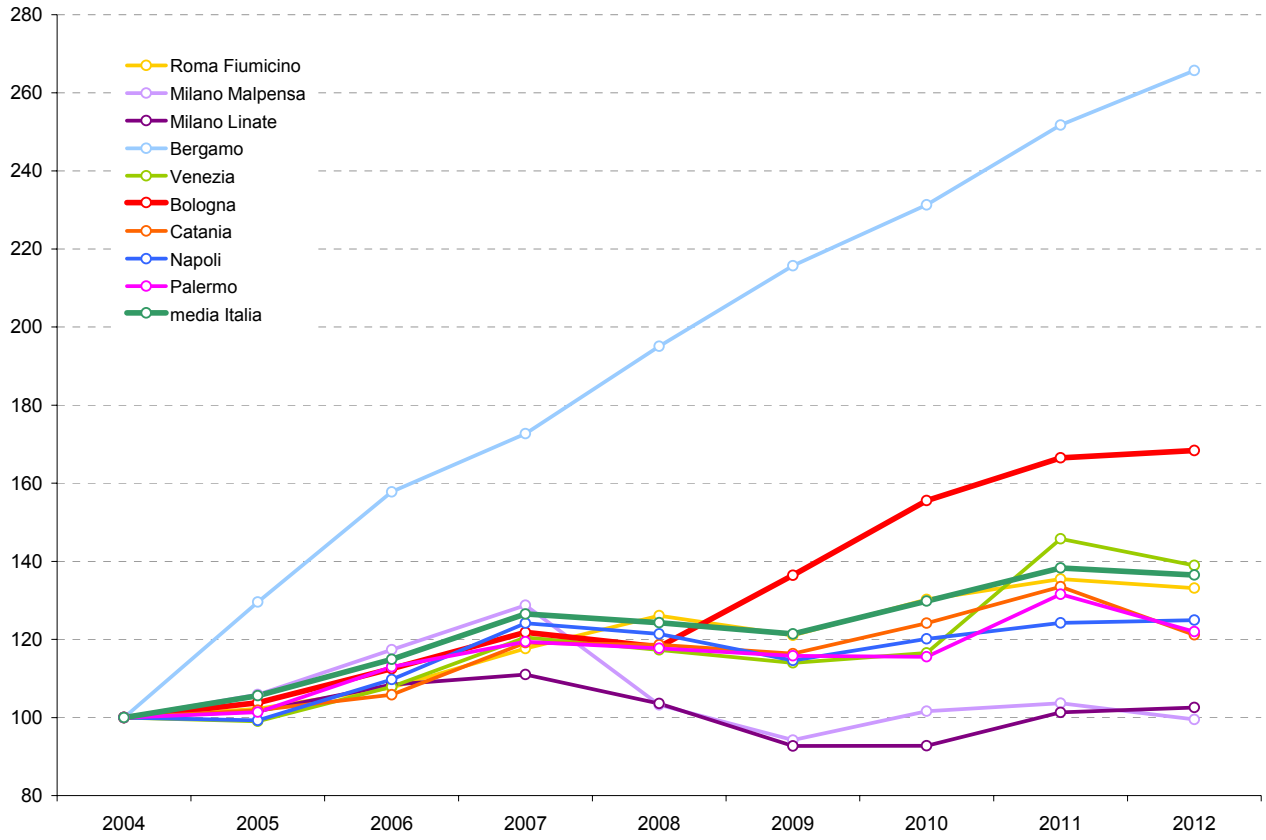
Figure V.15. Cargo traffic at Bologna airport (2004-2012)



Source: elaboration from ENAC data

We can indeed observe that, given the value of the traffic as 100 in 2004[1], in the period considered Bologna airport has obtained superior results to the national average and is actually placed among the main Italian airports, amongst those with the highest growth both in the passenger sector (Figure V.16) and that of cargo (Figure V.17).

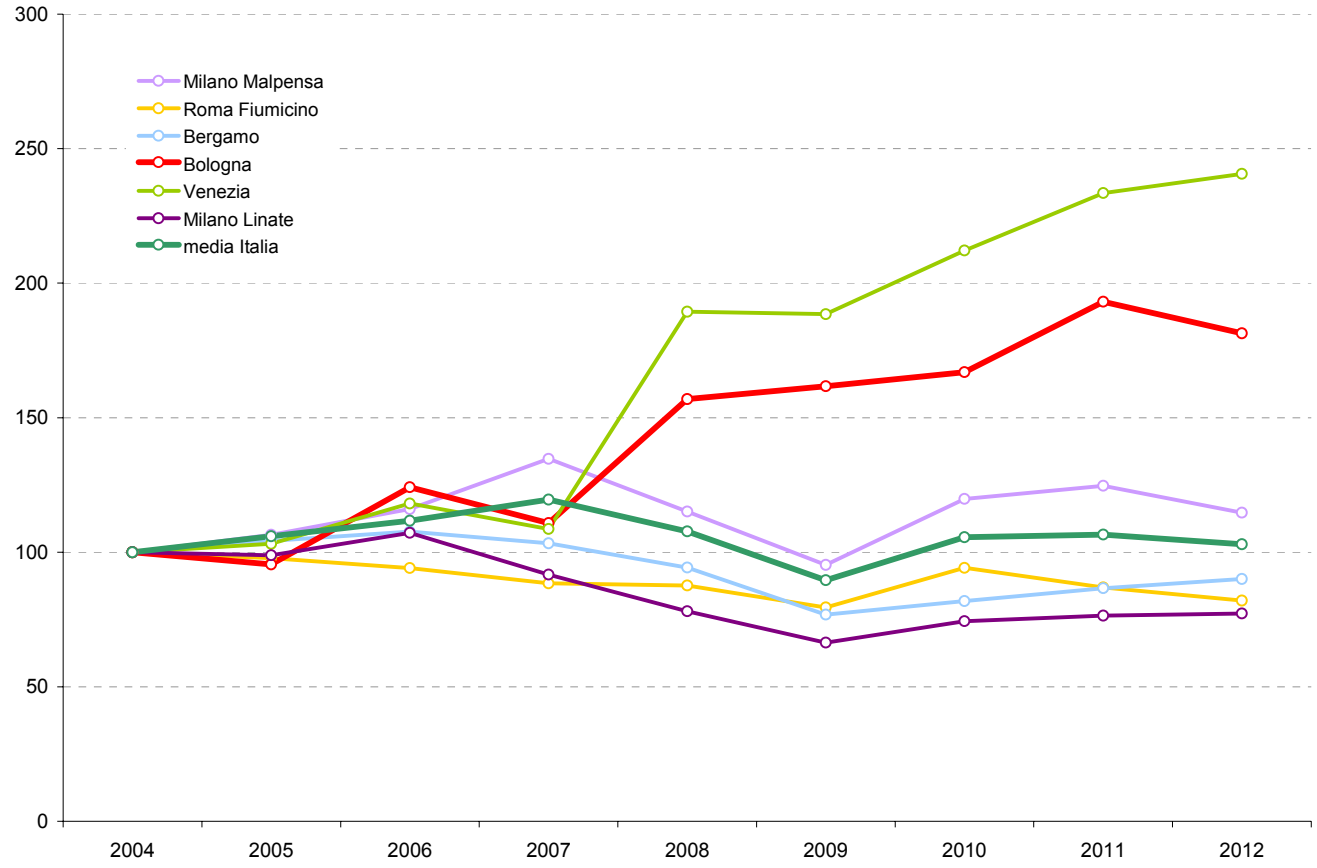
Figure V.16. Top ten Italian airports for passenger traffic (2004-2012, 2004=100)



Source: elaboration from ENAC data

[1] For Bologna airport the traffic values for 2004 have been appropriately corrected to take account of the temporary closure of the runway due to extension work.

Figure V.17. Top ten Italian airports for cargo traffic (2004-2012, 2004=100)

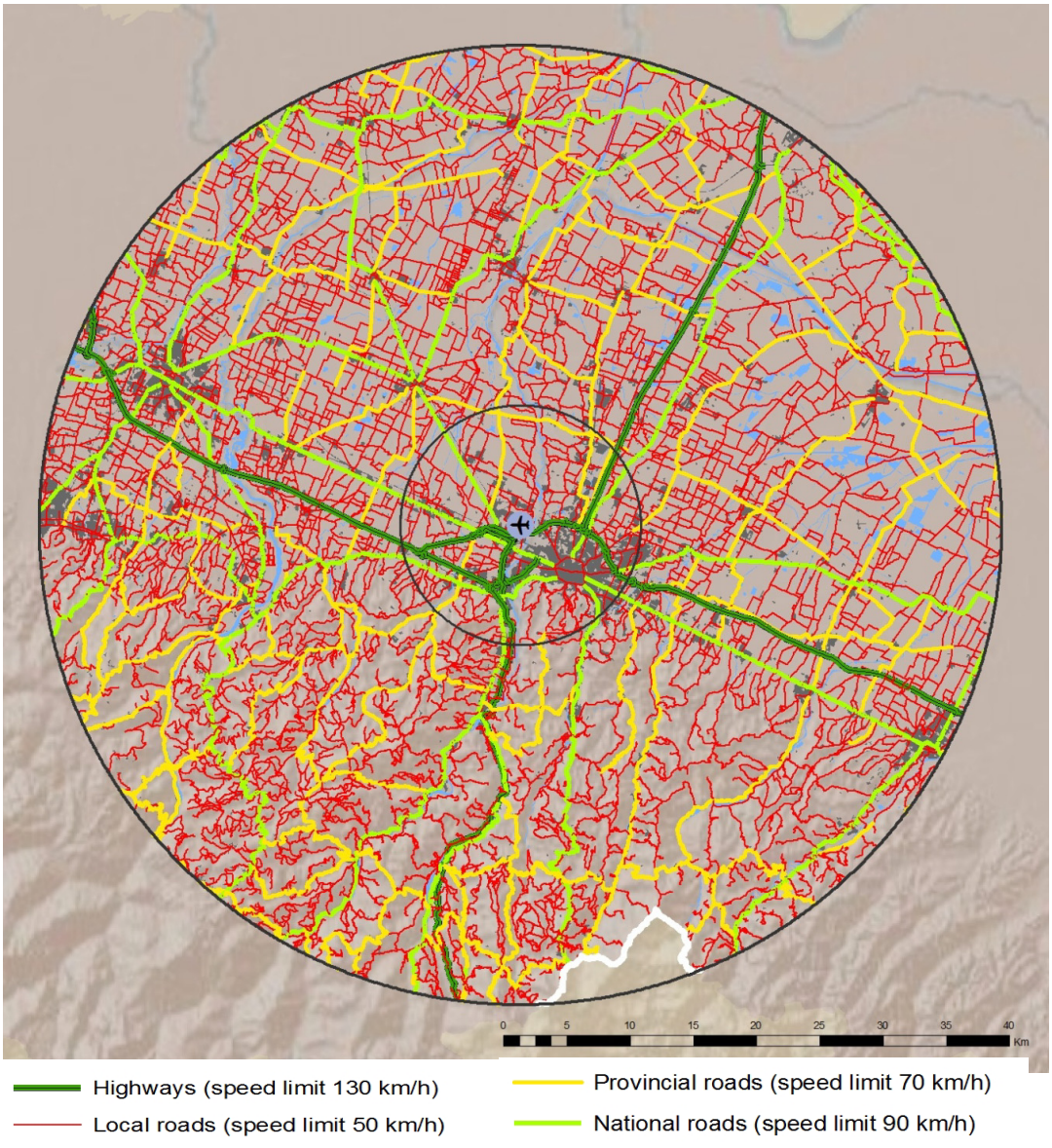


Source: elaboration from ENAC data

VI. AIRPORT ACCESSIBILITY

Direct accessibility to the airport is today only by road. As can be seen in Figure VI.1, the airport zone is brushed by the motorways A1, A14 and A13: these motorways, among the most important and congested in Italy, connected the north (and cities like Milan, Turin, Padua and Venice) with the centre and the south of the country.

Figure VI.1. Road network within 40 Km from the airport



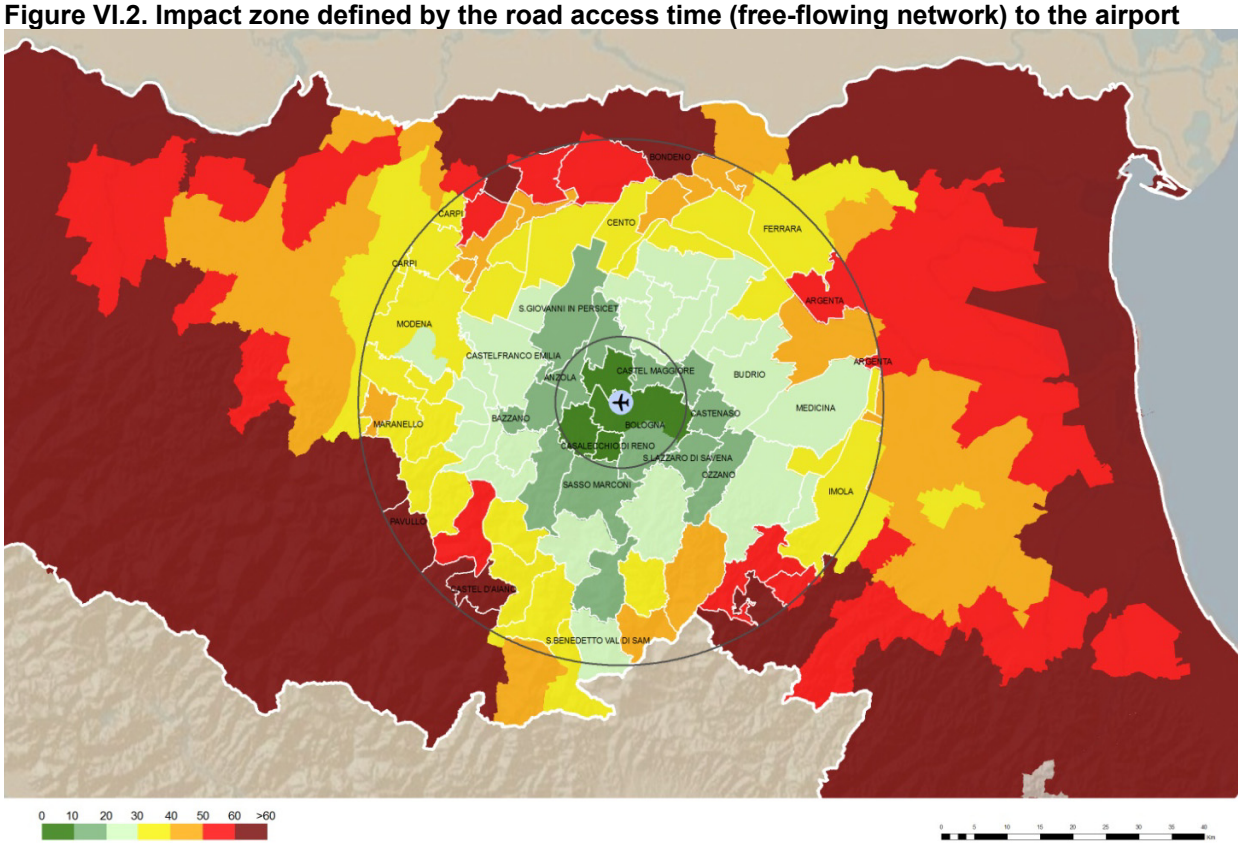
Source: Regione Emilia - Romagna.

The connection with the airport at present does not occur with a dedicated tollgate but via the bypass (toll-free) of Bologna: that connection has been enhanced in the past ten years by means of several infrastructural intervention and could be further reviewed with the possible enhancement on a large scale of the whole motorway network of Bologna, currently in the planning phase.

To evaluate the accessibility of G. Marconi Bologna airport at the regional level, we refer to the traffic model implemented in these years by the Emilia-Romagna Region and called SIMT (Informational System Mobility and Traffic): in order to have a better representation of accessibility, it has been decided to subdivide the values of time necessary to reach the airport (by means of the road system and in situations of non-congestion, that is to say not in the rush hours), in incremental intervals of 10 minutes, and to represent with a gradual colouring (from dark green to dark red), the increase of that access time.

From such intervals it is easy to then move, by aggregation, to the ”time-zones” defined in the methodology: zone I (within 20 minutes by access time to the airport by means of the road system) and II (within 60 minutes).

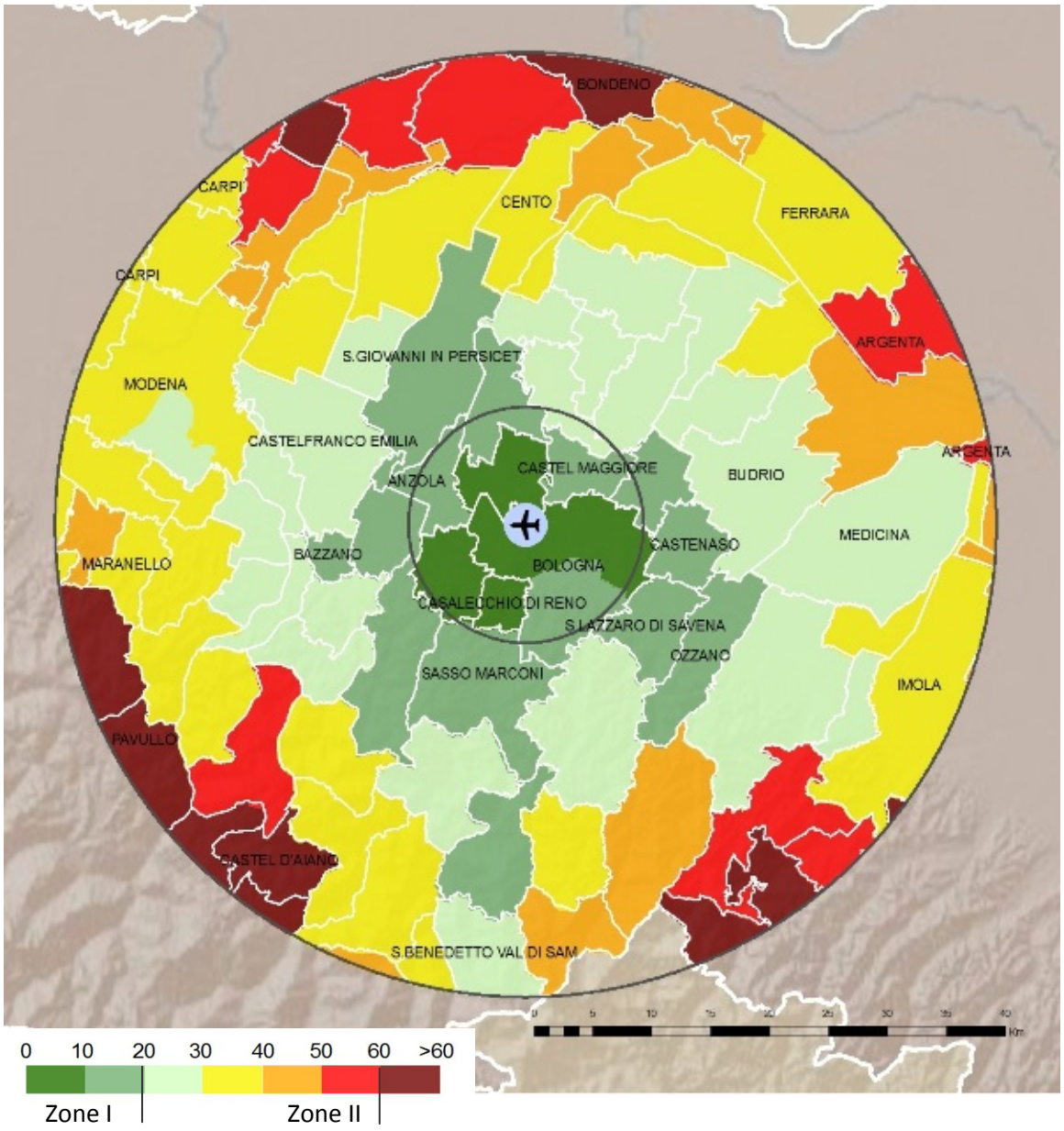
Figure VI.2. Impact zone defined by the road access time (free-flowing network) to the airport



Source: Emilia-Romagna Region, SIMT elaborations.

From Figure VI.2 it thus emerges that zone I covers 18 municipalities and sees around 650,000 inhabited affected (data 2010); also considering zone II (in any case within 40 km radius inside the regional boundary) we reach 86 municipalities and around 1,800,000 inhabitants involved. They become 138 municipalities and around 3,000,000 inhabitants considering just regional boundaries. (without delimitation of 40 km radius).

Figure VI.3. Focus network inside the 40 km impact zone of road accessibility to Bologna airport with free-flowing

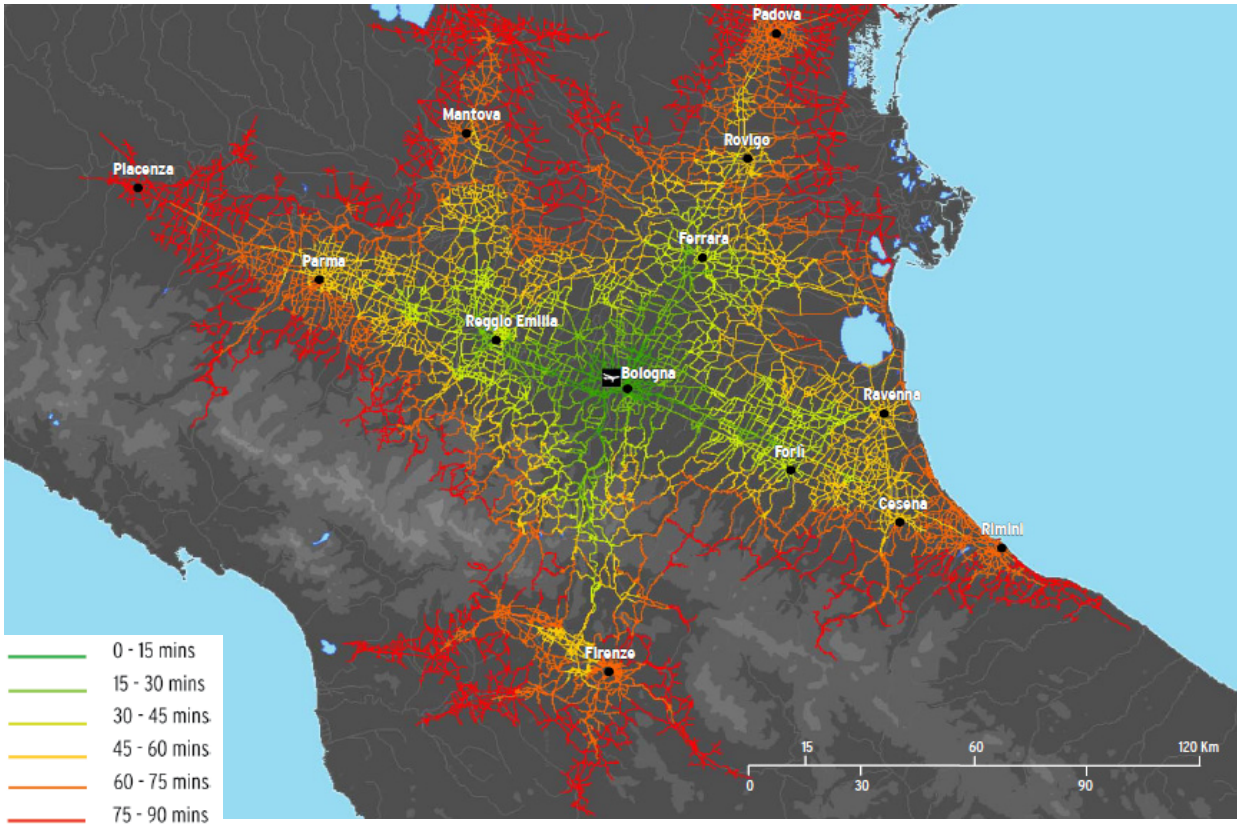


Source: Emilia-Romagna region, SIMT elaborations.

The particular centrality of Bologna in respect to the coasts and the substantial presence of roads with a high level of service generated a lengthening of the isochrones along the four main radial roads; towards north-west and south west in particular by means of motorway A1, towards north-east via the A13 and towards the south-east via the A14.

In order to visualize this aspect on a large scale, extending the analysis beyond the regional boundaries, reported here is the result of the study on the accessibility of Bologna airport present in the Atlas of Italian Airports (2010), drafted by One Works, KPMG and Nomisma.

Figure VI.4. Road accessibility of Bologna airport in respect to the centre-north of Italy



Fonte: One Works, KPMG, Nomisma – Atlas of Italian airports (2010).

As regard public transport, Figure VI.5 shows the railways network (regional and national) and the network of suburban buses (winter timetable 2010-2011), managed by the four companies currently operating:

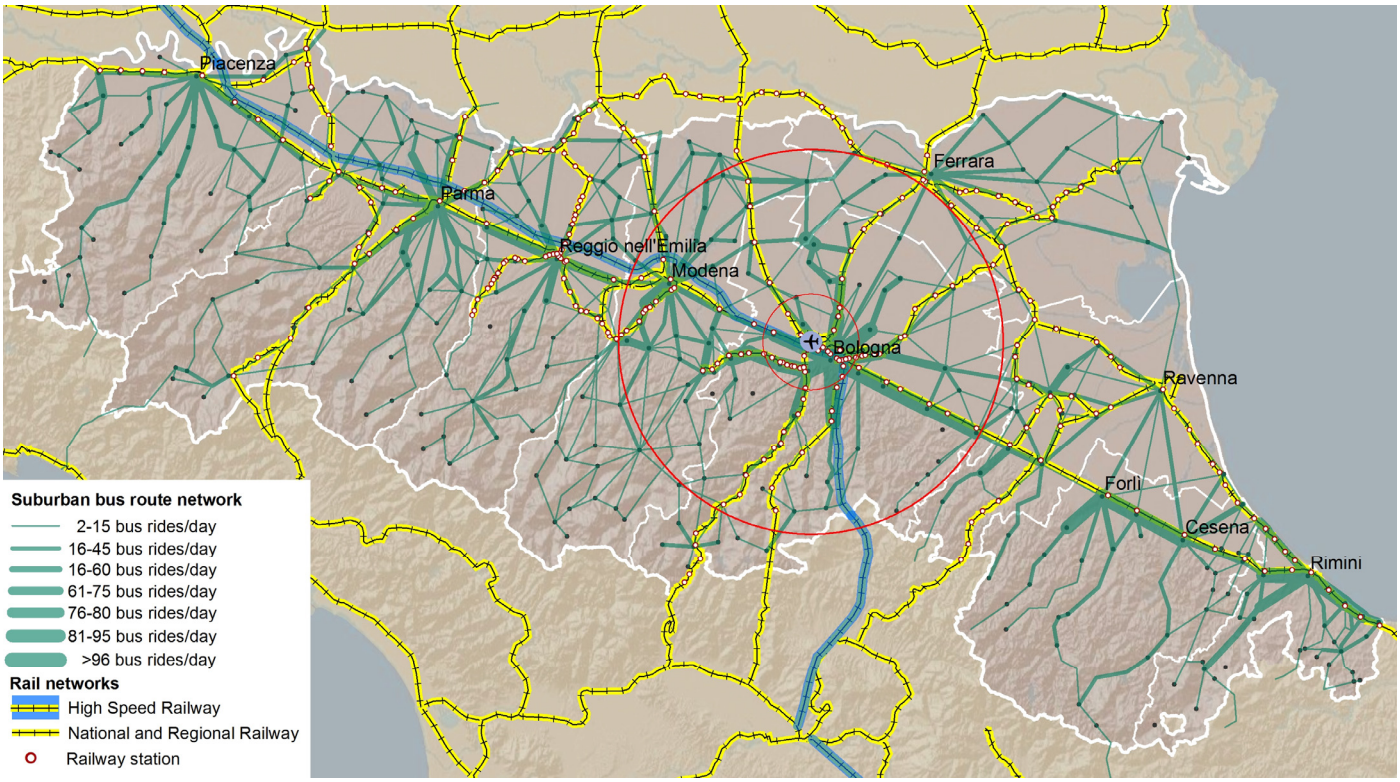
Tper in the catchment areas of Bologna and Ferrara

Start Romagna in the catchment areas of Forlì-Cesena, Ravenna and Rimini

SETA in the catchment area of Modena, Reggio Emilia and Piacenza

TEP in the catchment area of Parma.

Figure VI.5. Network of suburban buses routes in Emilia-Romagna

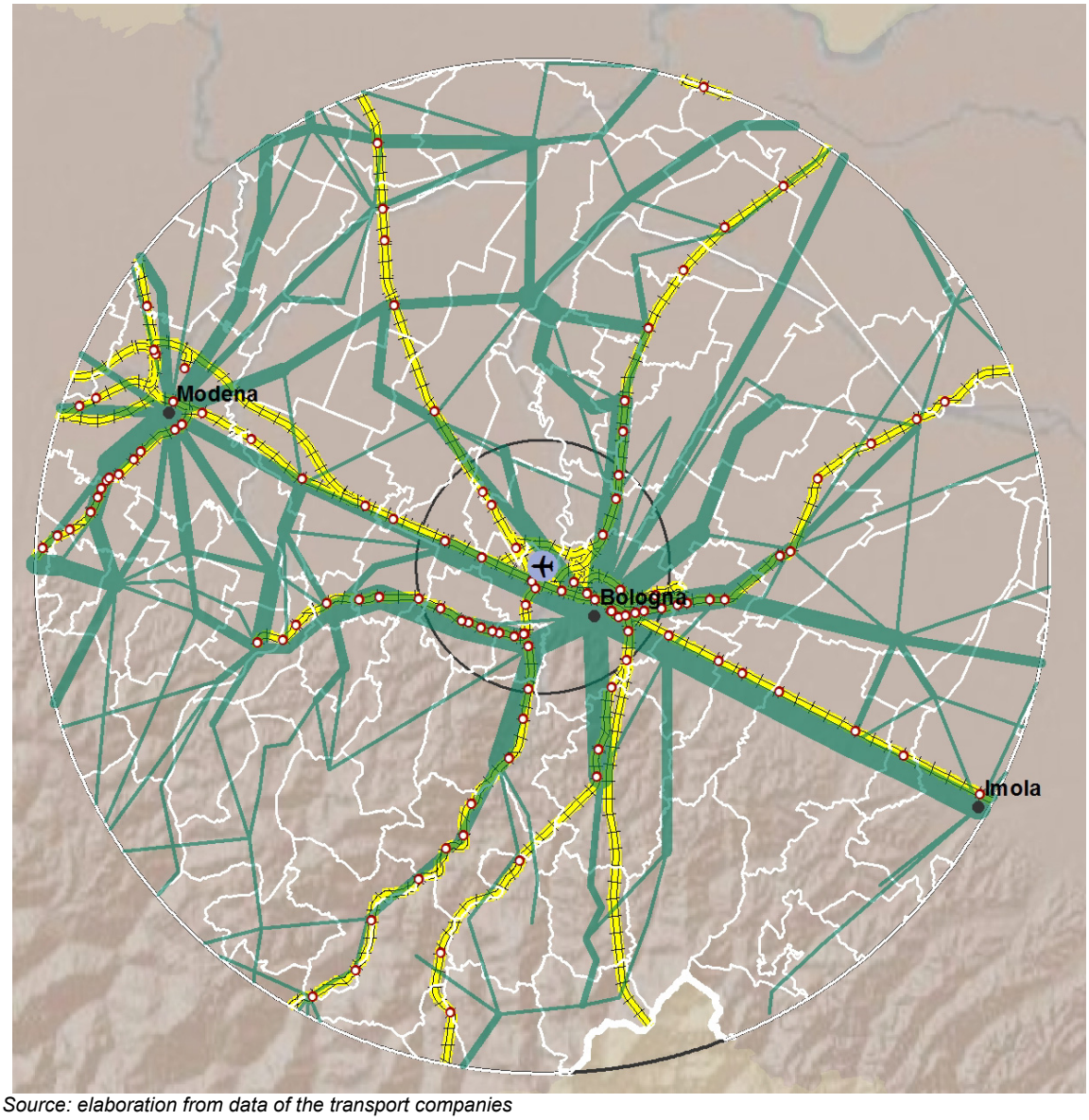


Source: elaboration of data of the transport companies

Instead Figure VI.6 shows the suburban routes of the buses falling within a 40 km radius, as well as all the stops and railways stations of the lines connected to Bologna Central hub.

In particular, as regards the suburban bus lines (in green on the map), the thickness is proportional to the number of trips made in both direction during a typical winter's day (2010-2011): as can be seen, the fundamental junction in the network examined is of course Bologna, while the bus lines on the one hand reinforce and on the other complete the coverage of the territory realized by the railway lines.

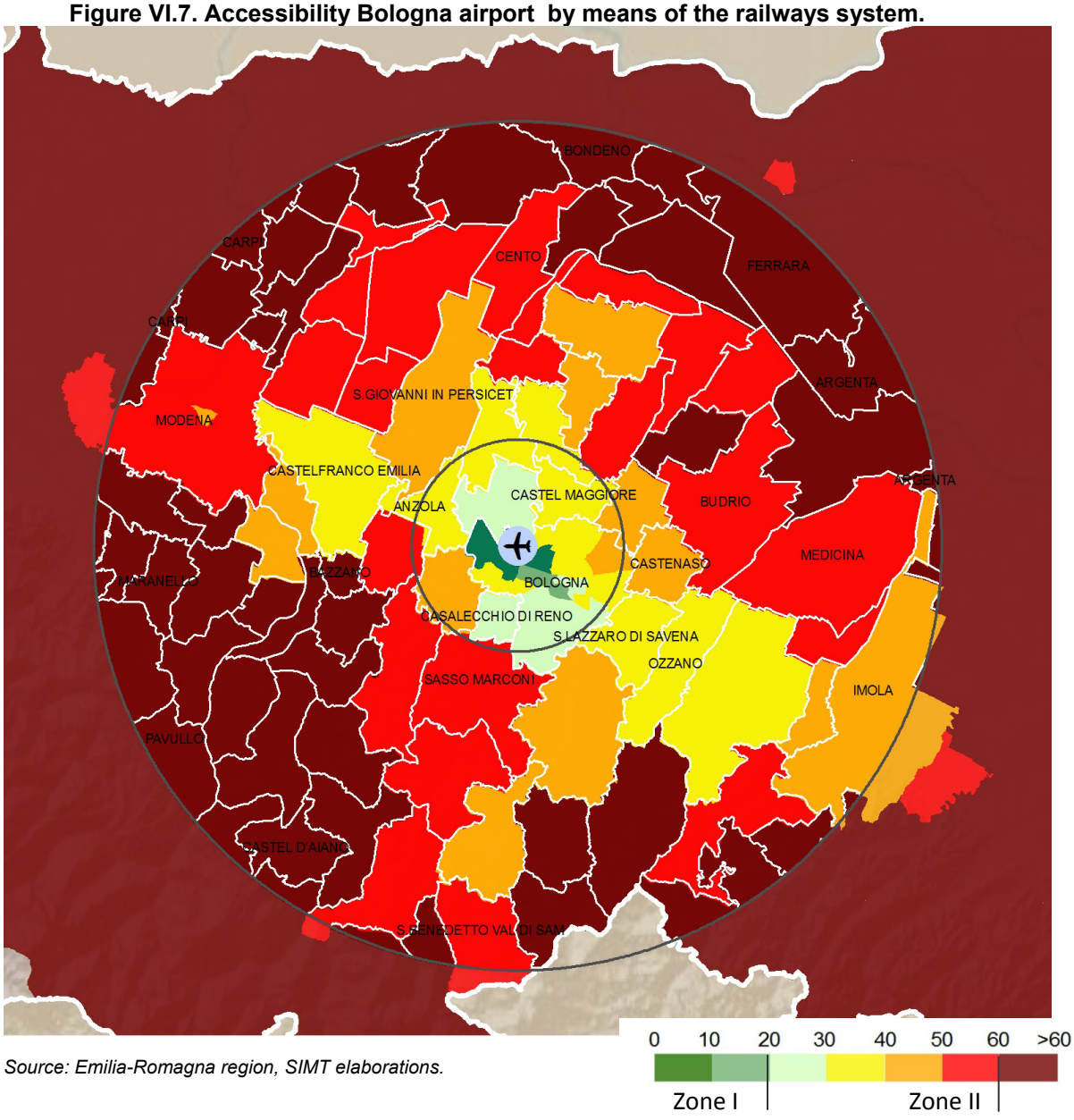
Figure VI.6. Public transport on track and road within 40 km of Bologna airport



Source: elaboration from data of the transport companies

Even the evaluation of accessibility by means of public transport (Figure VI.7), was performed thanks to the SIMT model: to determine the time needed to reach the airport by means of the railway system from each zone of origin, the use of the regional railways service was considered (Regional and High Speed) with destination Bologna Central and interchange with dedicated bus shuttle for the airport, while the special direct services on the road from/to the other cities were excluded.

Figure VI.7. Accessibility Bologna airport by means of the railways system.



Source: Emilia-Romagna region, SIMT elaborations.

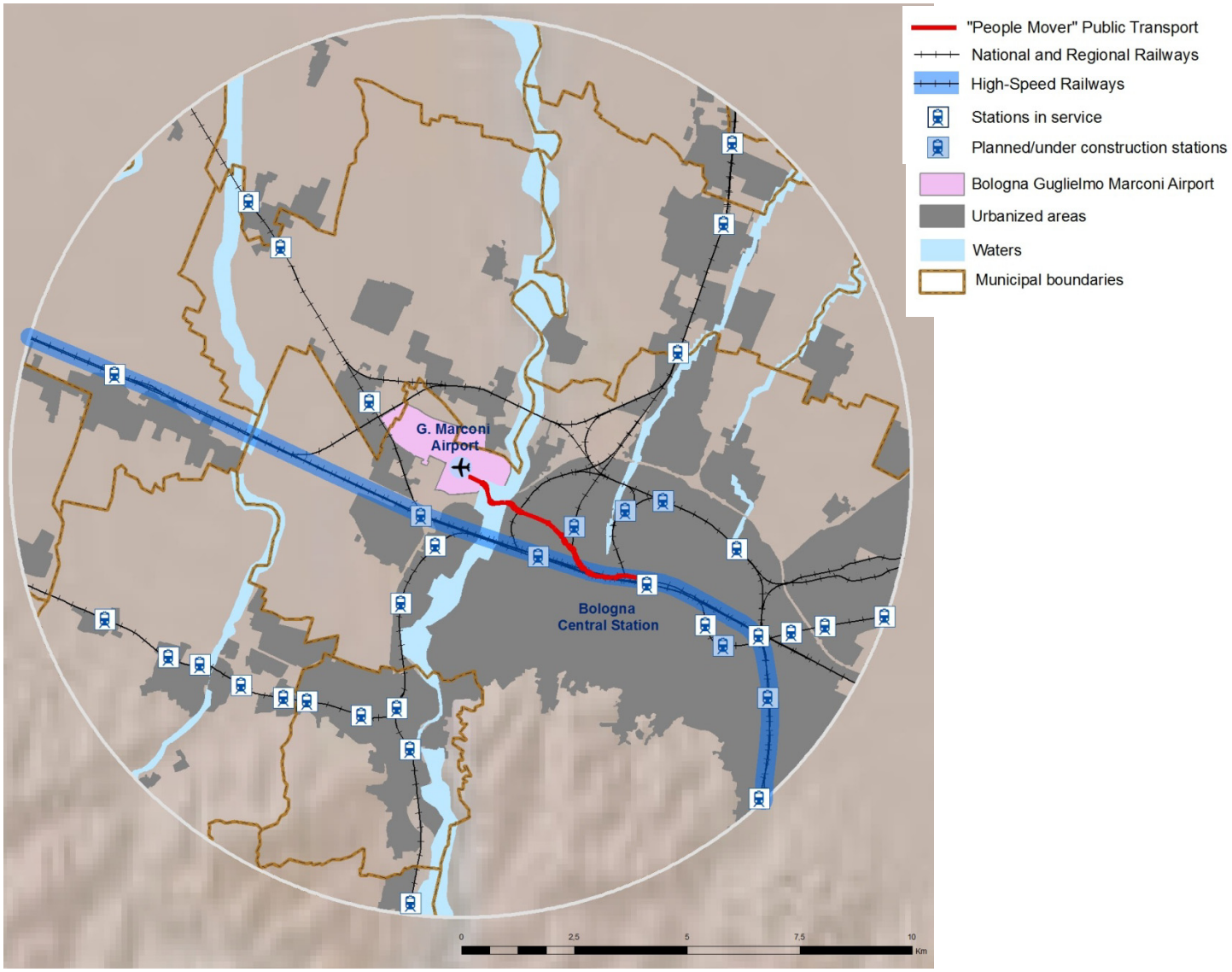
Zone I, which substantially overlaps with the urban area of Bologna, has around 250,000 residents, while with zone II we reach 46 municipal territories and 1,190,000 inhabitants involved. With a improved connection Bologna Central Station-Airport, within 60 min, it would cover about 1.500.000 inhabitants.

As in the case of the road system, territories and residents outside the regional boundaries are not counted: in the case of public transport, then, the High Speed railways service is not considered, which would have significantly increased the user catchment

figures, in that the railways junction of Bologna by now can be reached in a short time even from a considerable distance, such as in the case of Florence (about 35 minutes).

Figure VI.8 highlights the railway network, the stations present within a radius of 10 km and, with the red line, the route of the People Mover project, a work with which there is the intention to connect rapidly and directly the airport to the main Bologna station, a fundamental railways junction at the national level and the fifth in Italy in terms of number of passengers with 59 million passengers/year.

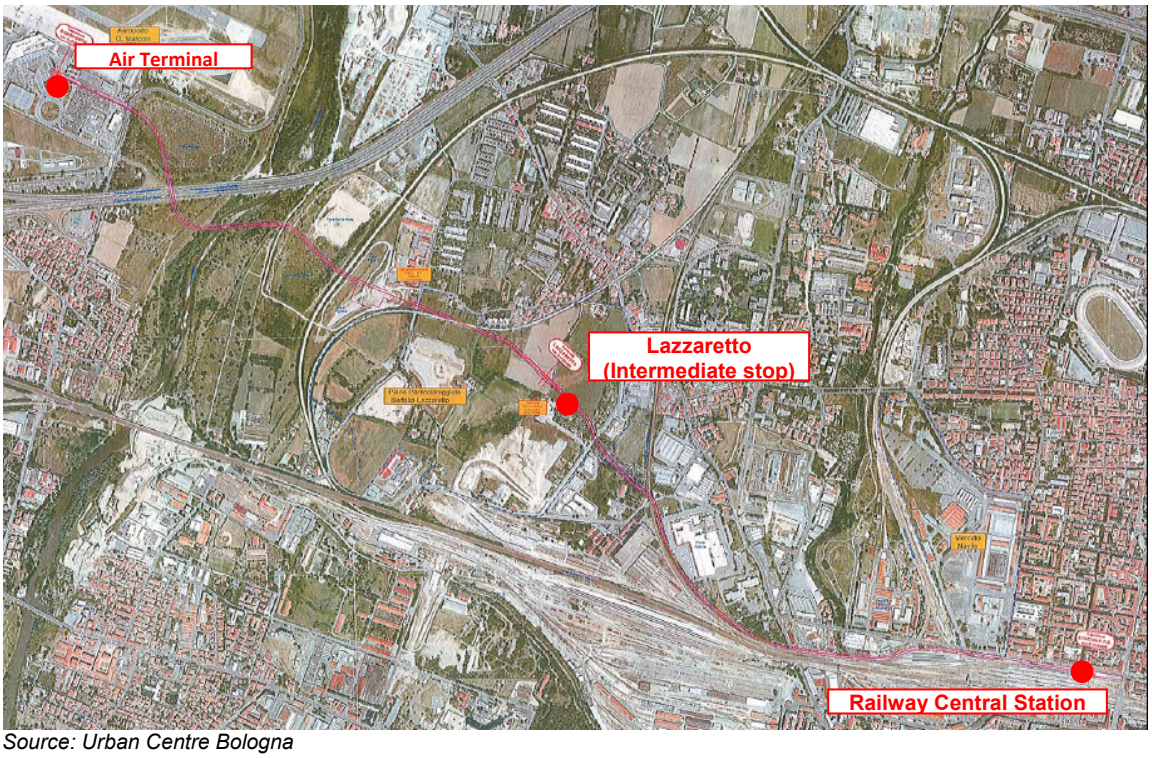
Figure VI.8. System of railways connections to Bologna airport (within 40 km)



Source: elaboration from data of the PTCP of the Province of Bologna.

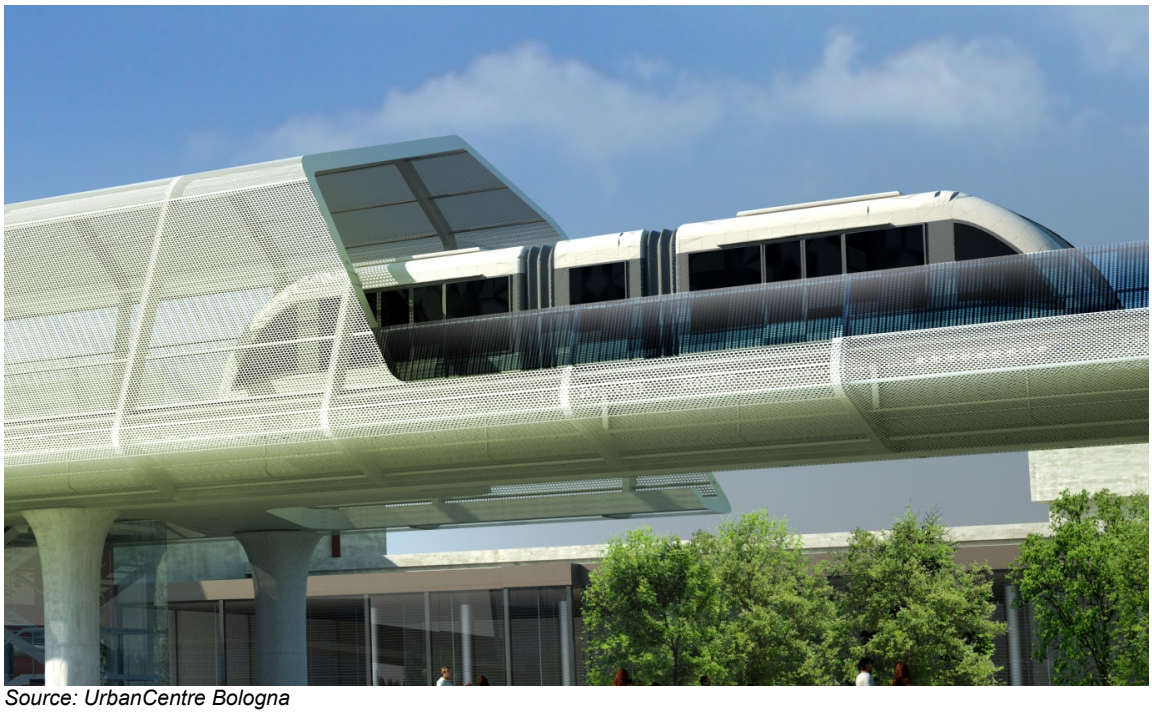
By virtue of the short distance existing between Bologna central station and the airport (just 5 kilometres), the travel time of that automatic shuttle is expected to be less than 8 minutes, with just one intermediate stop, where the two vehicles in service will switch and in correspondence with a new university area (see Figure VI.9). The scheduled work will allow for the transportation of 700-900 thousand passengers per year. Figure VI.10 shows a rendering of the terminus at the airport.

Figure VI.9. Planned route for the People Mover



Source: Urban Centre Bologna

Figure VI.10. Typology of infrastructure and the People Mover shuttle vehicle



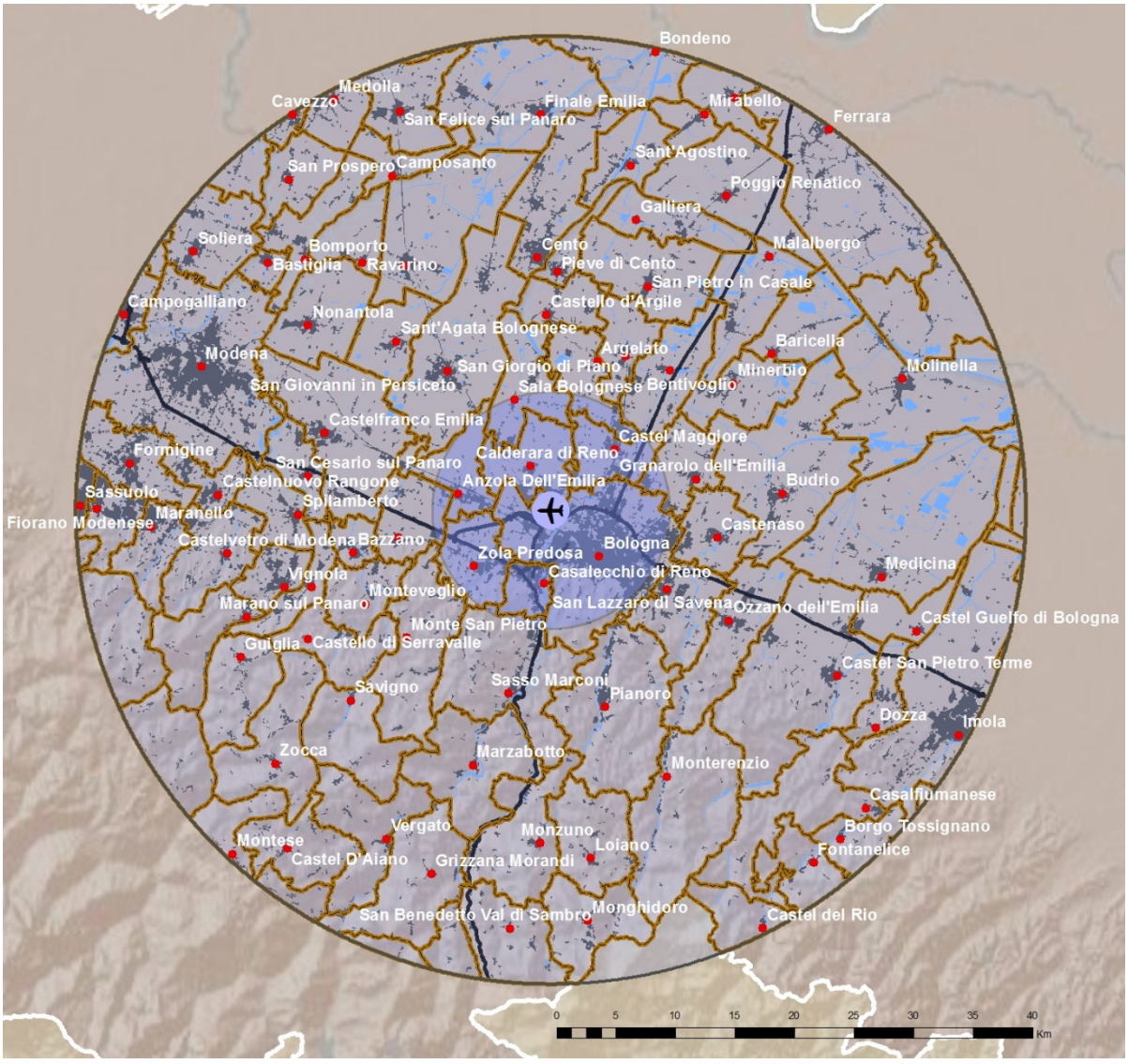
Source: UrbanCentre Bologna

Lastly, it is worthwhile highlighting that, within the metropolitan area of Bologna, some stations of the Metropolitan Railway Service are already been made and opened; these will contribute to providing a frequent and capillary service to the territory of the Bolognese hinterland and at the same time reduce the travel time towards Bologna Central station.

VII. AIRPORT POTENTIAL

In this paragraph we analyse the demographic scope of the territory surround Bologna airport.

Figure VII.1. Demographic potential analysis of the airport – on distance from the airport



● Municipal Town

Source: Demographic data processing Emilia-Romagna Region.

The analysis method is based on the identification of the number of residents inside the maximum radius of 40 km from the airport and the time necessary to reach the airport by means of the road system, distinguishing it by regular 10-minutes intervals up to a maximum of 60: the whole of the two factor thus generated the number of inhabitants capable of reaching the airport within a pre-set time.

Figure VII.1 shows the territorial subdivision of the municipalities falling within a radius of 40 km from the centre of the airport, with the administrative boundaries and the municipal chief towns highlighted.

The municipalities falling within the 40 km radius from the airport are 81 but, for the purposes of a greater accuracy of calculation, it is worthwhile considering also those portions of territory of other municipalities that nonetheless fall within the considered zone. To do this we have used census statistics, which are the units of infra-municipal dimensions taken as minimum for the official statistical survey in Italy: from the data available relating to the censuses of the populations made in 2001 and in 2011 we have thus been able to obtain the number of residents inside the zones under investigation.

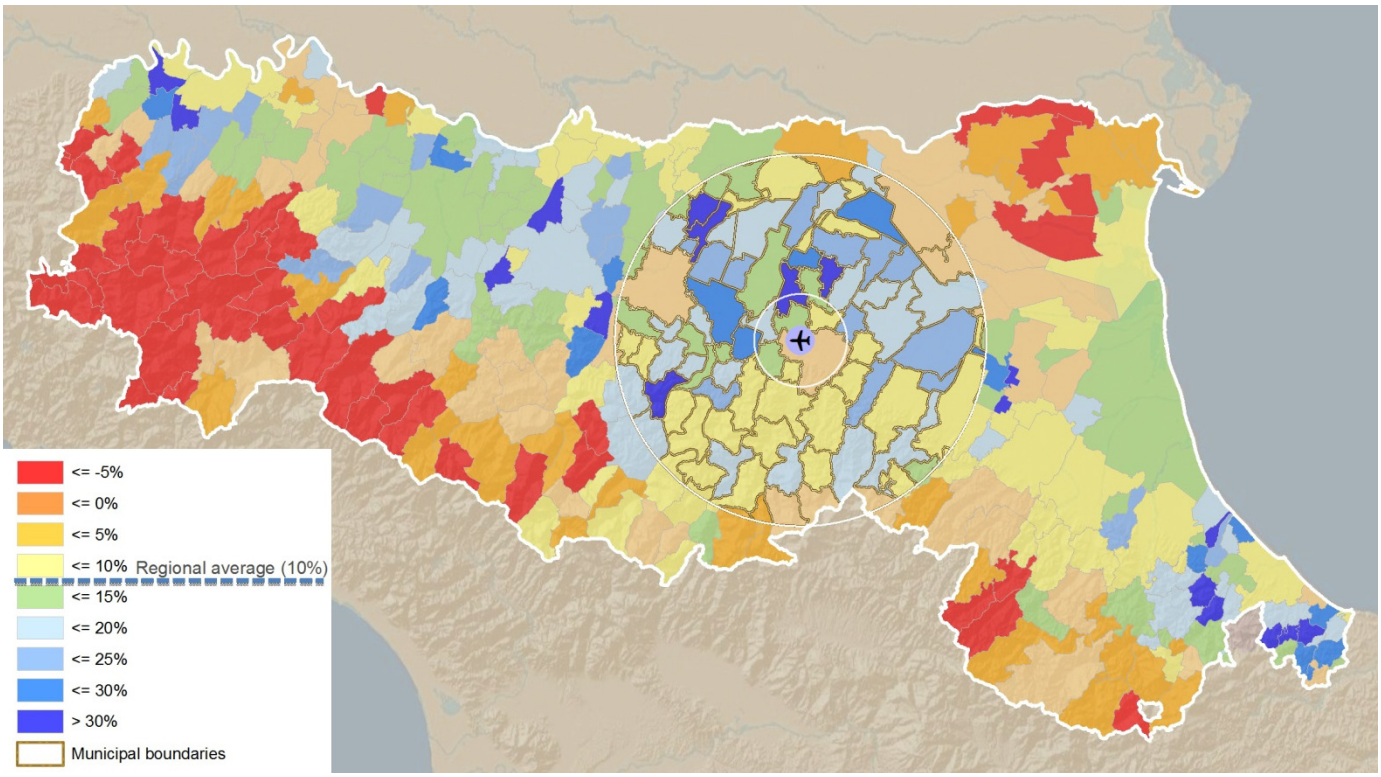
From such an elaboration it has emerged that in 2011 there were around 480,000 residents within 10 km of Bologna airport, and over 1,500,000 within 40 km (see Table VII.A), values that increased in the last decade by 4.3% and 7.1% respectively, and thus to a lesser extent as compared with the regional average (10.5%): in the decade considered we have indeed seen, at the regional level (Figure VII.2), both a drop in the population in the southern mountainous areas and a concomitant increase in the central and northern ones of the plains, and a substantial stability of some large cities like Bologna and Modena as opposed to a major increase in the outlying municipalities.

Table VII.A Demographic analysis (2001-2011)

Zone	Number of inhabitants (estimated values)		Percentage share		% 2001-2011
	2001	2011	2001	2011	
Area within 10 km around the airport	460.000	480.000	33%	32%	4,3%
Area within 40 km around the airport	1.400.000	1.500.000	100%	100%	7,1%

Source: Statistical Data processing, Emilia-Romagna Region

Figure VII.2. Demographic analysis on airport catchment area – percentage change 2011-2001



Source: Statistical Data processing, Emilia-Romagna Region

Figure VII.3 shows the distribution of the **population resident in zone II** (40 km) which can reach the airport within a given time by means of the road system. This analysis is of some interest for comparison with the railway system. In fact, the ring of 40 km includes all reachable municipalities by rail within the limit of 60 minutes.

From the analysis it appears that almost 200,000 inhabitants manage to reach the airport within 10 minutes, a value that increases very rapidly up to around 890,000 within 30 minutes drive and to almost 1,650,000 within 40 minutes. The only areas characterized by longer travel time are those placed in hills or mountains zone inside the ring of indirect impact zone.

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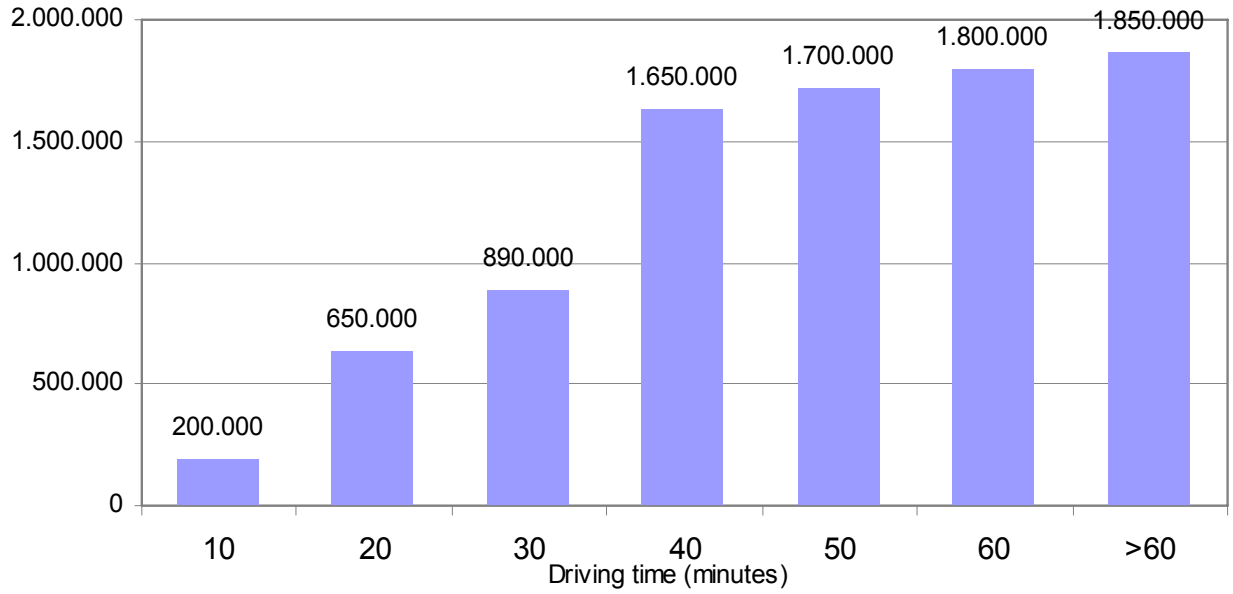
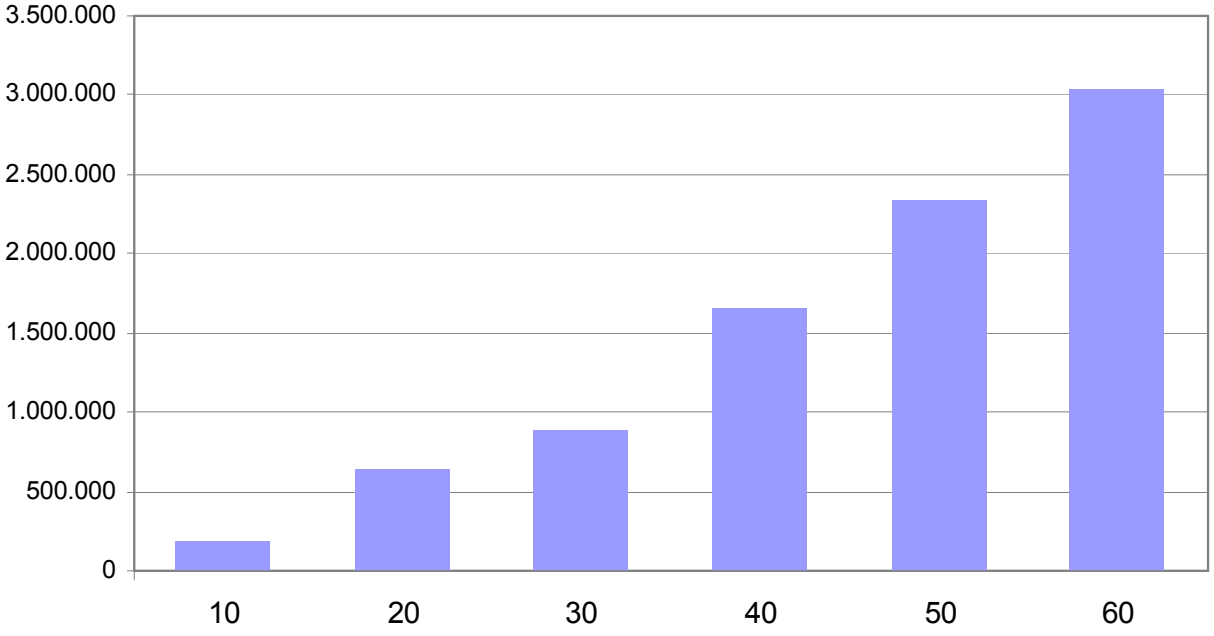
Figure VII.3. Inhabitant distribution from Bologna Airport, according to reach to the airport by driving time (resident population at 1-1-2012) inside the 40 km radius



Source: Statistical Data processing, Emilia-Romagna Region

Figure VII.4 shows the inhabitant distribution in relation with the driving time to airport via road system, without considering any spatial restriction (ring 40 km).

Figure VII.4. Inhabitant distribution from Bologna Airport, according to reach to the airport by driving time (resident population at 1-1-2012) without the 40 km radius



Source: Statistical Data processing, Emilia-Romagna Region

Indeed, It can be seen that up to 40 minutes of driving time the inhabitants appear to be involved within that ring, while over 40 population almost constantly increases about 700,000 every 10 minutes of driving time, now covering a population of over 3,000,000 inhabitants up to 60 minutes from the airport.

That increase in surface and population is also fostered by the geomorphological conformation of the territory. Bologna is located in the Po Valley, the largest in Italy and one of the largest in Europe (46,000 km2), which makes the settlements frequent and densely populated and the connections easy: indeed, over one fourth of the Italian population live in the Po Valley (Northern Italy), with a residential density that is twice that of the national average.

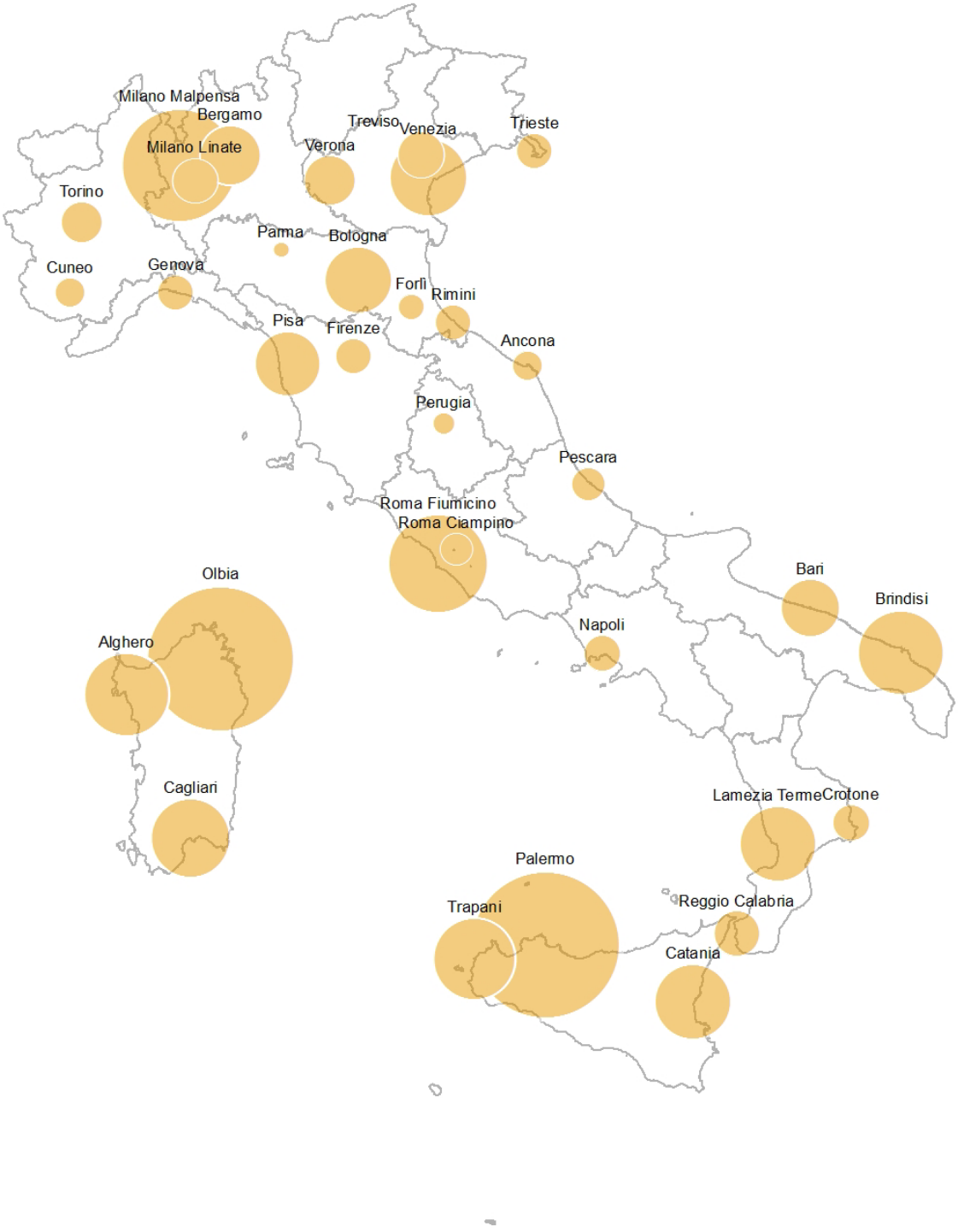
It is also the economically most important and most advanced part of Italy, as confirmed by the various indicators relating to industries, services, employment, exports, contribution to GDP and average income.

Finally, it is worth remembering that the presence of an endowment of road and railway infrastructures of primary importance, at the regional and at the national level, represents a distinctive characteristics and a very important competitive advantage for Bologna airport, in that it significantly **enlarges the area covered by the isochrones even outside the regional boundaries** (see Figures VI.2 and VI.4): from Bologna it is by now possible to reach Milan in just over 1h, Florence in 40', Venice in 1h 30', and practically all the regional territory within 1h 30'.

To try to assess the relationship that has an airport with its own catchment area, it has been processed a comparison between domestic airports, having more than 150 thousand passengers/year. It has been then compared the number of passengers for each airport (2010 data) with inhabitants into the catchment area within 60 minutes, both road and rail (see Figures VII.5 and VII.6).

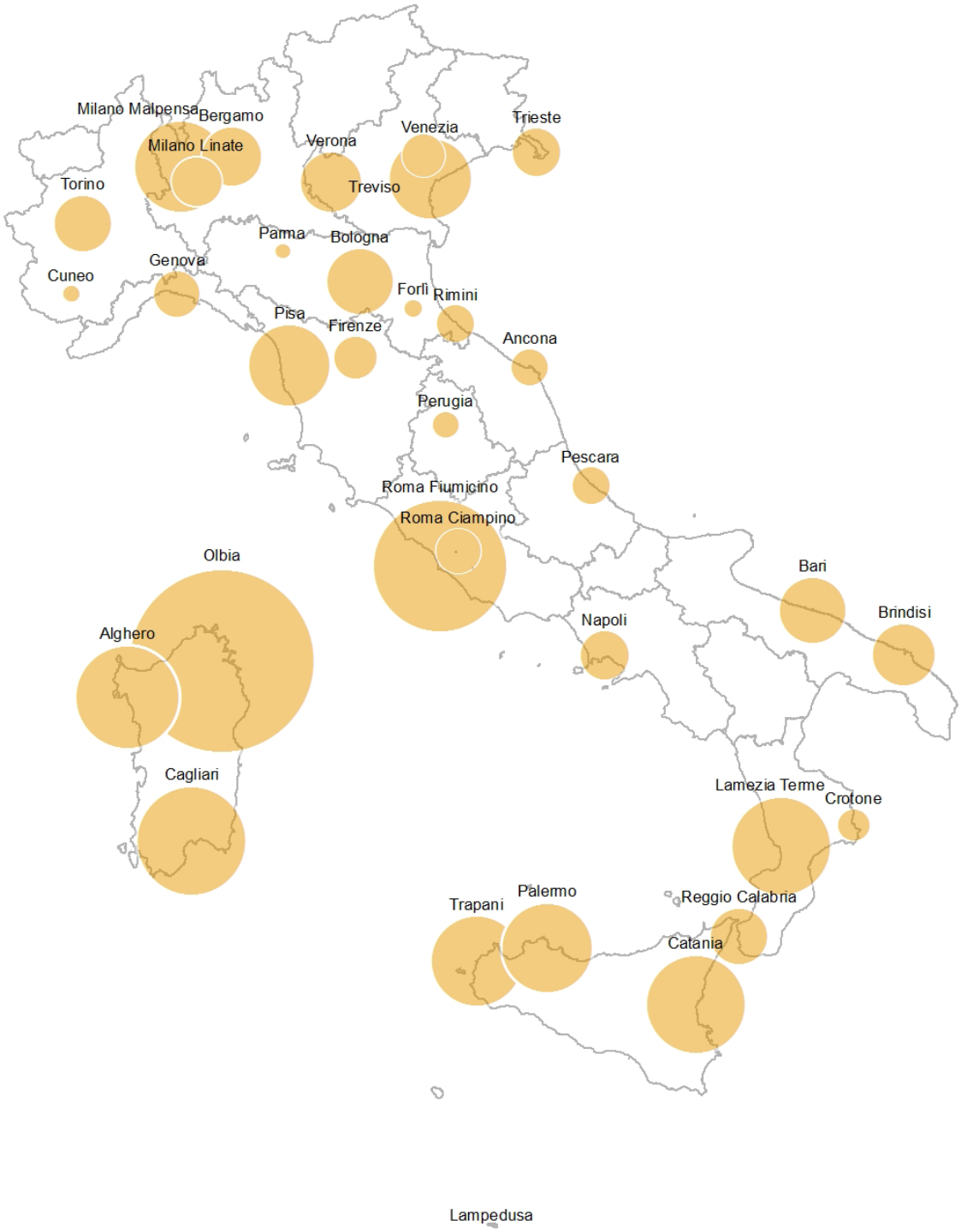
These values obviously depend on several factors (airport services offered, accessibility timing, inhabitants distribution, flights frequencies, etc.), which cannot be shown by just one Figure.

Figure VII.5 Passengers per 1000 inhabitants within the catchment area (without regional boundaries) and 60 minutes by driving time (road system). Comparison between domestic airports with traffic > 150.000 pax/year (2012)



Source: ENAC and One Works-KPMG-Nomisma Survey data processing

Figure VII.6 Passengers per 1000 inhabitants within the catchment area (without regional boundaries) and 60 minutes by rail service time (rail system). Comparison between domestic airports with traffic > 150.000 pax/year (2012)



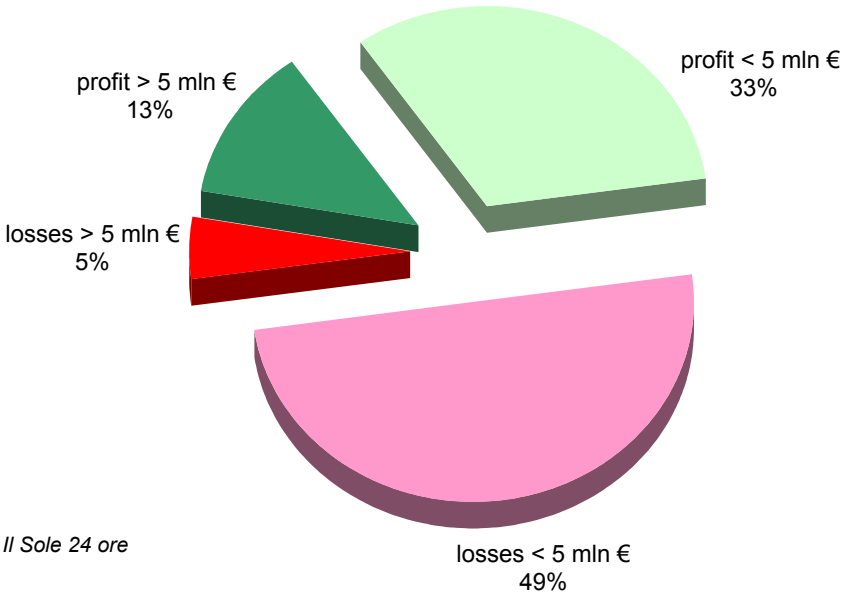
Source: ENAC and One Works-KPMG-Nomisma Survey data processing

B ECONOMIC IMPACT OF AIRPORTS

VIII. ECONOMIC ANALYSIS

The economic results of the Italian airport management companies are, generally speaking, rather non-homogeneous, with around half that has ended with losses and the other half that has reported profits (data from the business year 2011, the most recent available).

Figure VIII.1. Business results of the airport management companies (2011)



Source: Il Sole 24 ore

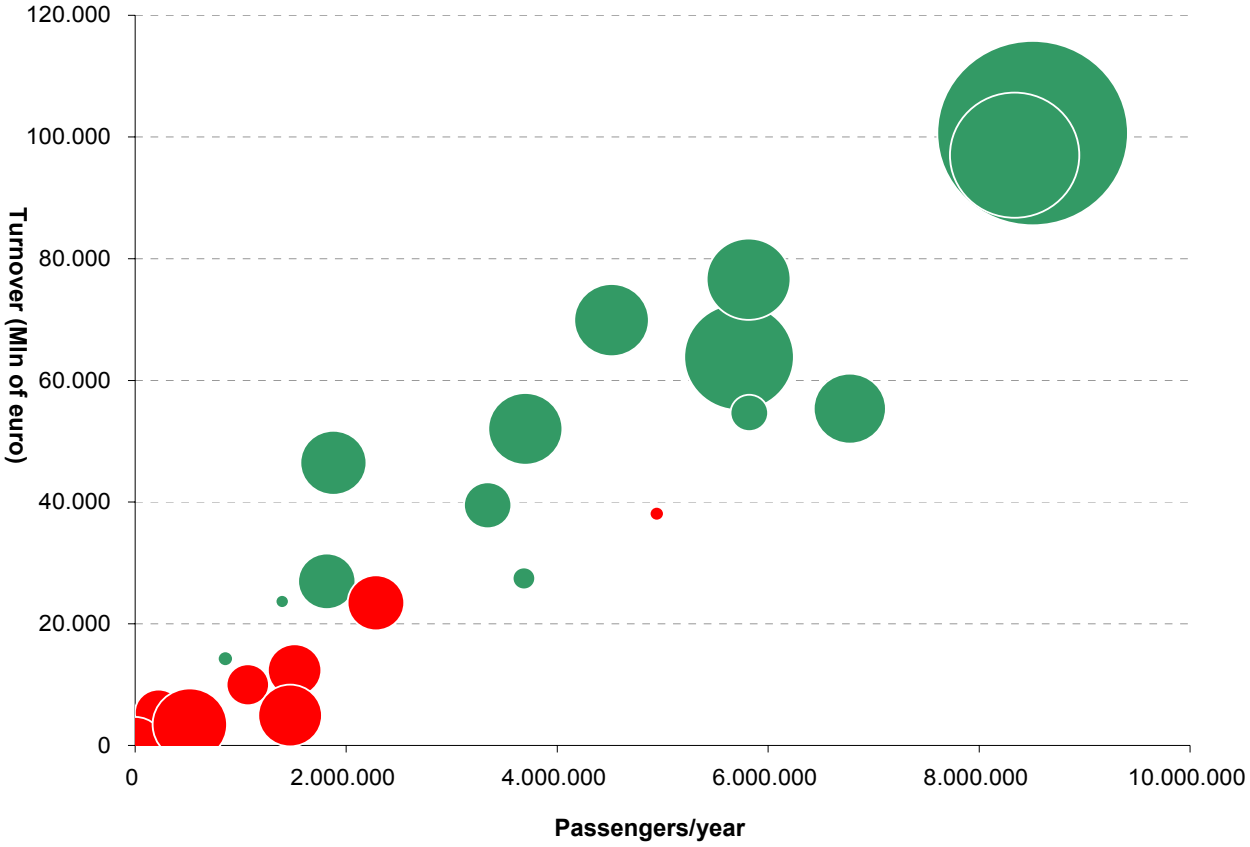
If on the one hand there are also some small realities capable of making profits, on the other the turnover of the companies (and thus their capacity to make profits) seems to be correlated to the number of passengers transported, through related items such as airport taxes, commercial activities and retail, the system of car parks and so on, so that the volume of passenger traffic represents increasingly a decisive factor in determining the management profitability.

Figure VIII.2 highlights that relationship, comparing turnover and passenger traffic of the Italian airport management companies[2]: the dimension of the bubble represents the size of the business result, the colour indicates whether it is a profit (green) or a loss (red).

[2] The data relating to AdR and SEA, which would confirm the trend expressed by the graph, have not been shown to make it more legible; the two companies indeed invoiced between 500 and 600 million

Again allowing for the business result to depend on numerous factors and that every reality can present substantial specificities, we can however observe that the turnover seems to be directly proportional to the traffic volume, and that the companies with traffic above two million passengers/year result to be substantially profitable.

Figure VIII.2. Passenger traffic and invoicing (2011)



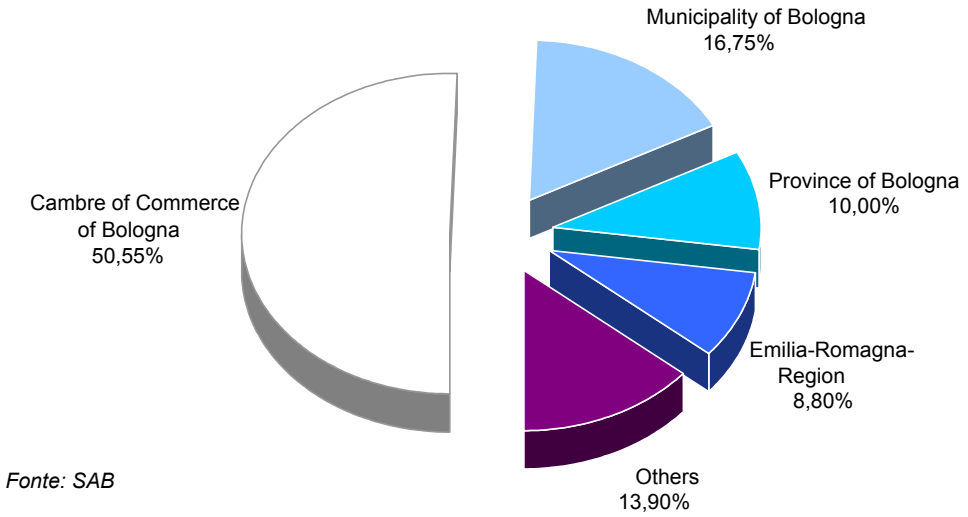
Source: elaboration from data of Il Sole 24 ore

The management company of G. Marconi Bologna Airport is SAB SpA: among its tasks are the administration of the airport infrastructure (with activities of planning, development, management and maintenance of the terminals, the runway and the other airport areas and structures) the sublicensing of areas and facilities, the coordination of the airport operators and the operative one of the whole airport. Majority stakeholder of SAB is the Chamber of Commerce of Bologna, which owns over 50% of the stake. The other main

Euros each in 2011 (for over 40 million Euros profits) with 42 and 28 million passengers/year, respectively.

partners are local bodies and institutions: the Municipality (16.75%) and the Province of Bologna (10%), Emilia-Romagna Region (8.8%). The remainder is held by private actors.

Figure VIII.3. Stakeholder breakdown of AB SpA



Fonte: SAB

As can be seen from Table VIII.A, two-thirds of the income of the companies are made up by aeronautic revenue, in the past year the results have risen thanks to the growth in passenger traffic and the increase in the tariffs following the implementation of the new Economic Regulation Agreement, signed by SAB and the National Civil Aviation Authority.

Table VIII.A. Summary of the profit and loss account reclassified (2011-2012, data in thousands of Euros)

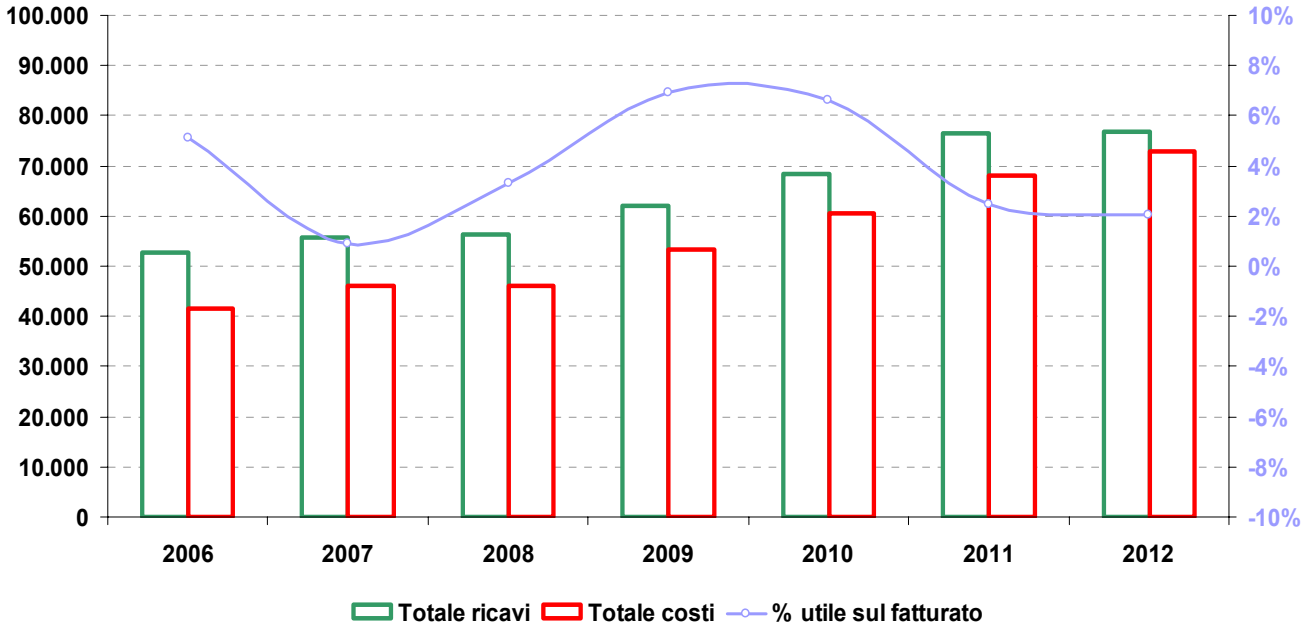
Item	2012	2011	Var %
Aeronautic incomes	50,688	49,452	+2%
Non-aeronautic/commercial yields	23,581	24,604	-4%
Other incomes	2,519	2,540	-1%
Total incomes	76,787	76,596	0%
External running costs	42,184	38,418	+10%
Value added	34,604	38,178	-9%
Labour costs	20,133	19,859	+1%
Gross operating margin (EBITDA)	14,471	18,318	-21%
Total structural costs	10,715	9,695	+11%
Characteristics operating result (EBIT)	3,756	8,623	-56%
Result pre-tax	3.509	4.247	-17%
Business profit	1.572	1.872	-16%

Source: SAB

The remaining part is substantially made up by non-aeronautic revenues, whose drop in 2012 almost wiped out the positive results of the other component: that slow-down was especially due to the fall in revenues from parking, the retail sublicenses and the commercial spaces, items on which the work for requalification of the terminal have had an impact (these involved restrictions and negative impacts above all on advertising and commercial spaces) and above all to the effects of the enduring economic crisis, in particular in Italy, which has led to significant changes in purchasing and the approach to services by the customers: in the parking area, for instance, there has been a drop both in numbers and in the average duration of the parking, showing how the private customers and the companies tend to optimize their trips and staff transfers; for similar reasons at the national level the new car registrations have collapsed, while the sale of bicycles and the use of public transport has seen a rise of previously unseen proportions.

The sum of these two components has thus determined revenues substantially in line with 2011, with a slight improvement (see Fig. VIII.4)

Figure VIII.4. Trend in costs, revenues and business profit of SAB (2006-2012)



Source: elaboration from SAB data

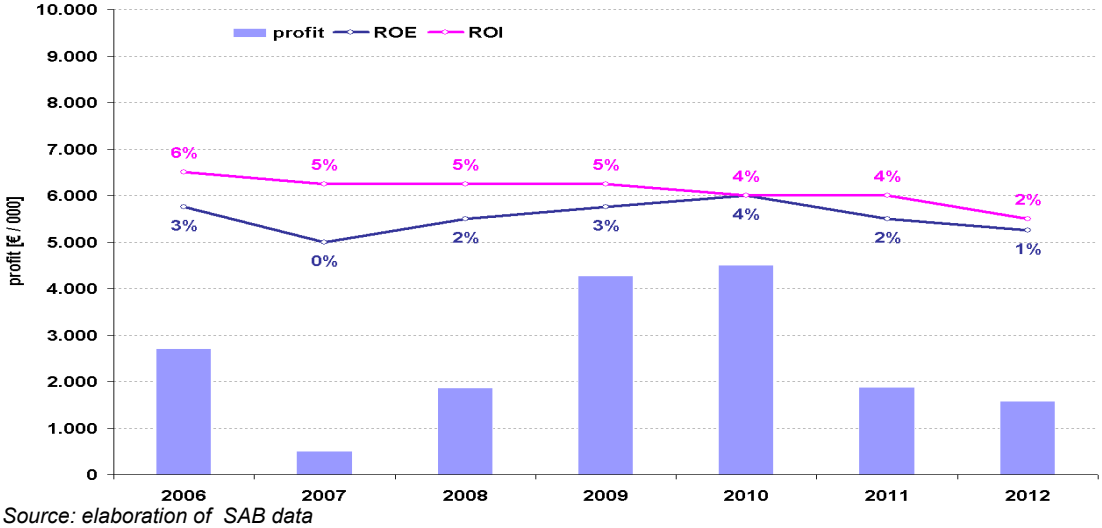
The most important item of the costs is instead represented by the external running costs, among which there are for instance the raw materials and consumables, the maintenance costs, third-party services, rentals and utilities. Their increase which occurred in 2012 is above all due to the higher costs linked to exceptional events (the winter, and in

particular February, saw record values of snowfall: the negative impact was assessed at 1.4 million Euros) and the development of airport traffic, correlated with the higher volume of traffic and the development of the existing low-cost base.

The increase in costs superior to that of the revenues has of course had an effect on profits. The business result has, however, remained positive, equal to 2% of the turnover. As observed previously (Fig. VIII.1), a result that is anything but obvious in the Italian scenario.

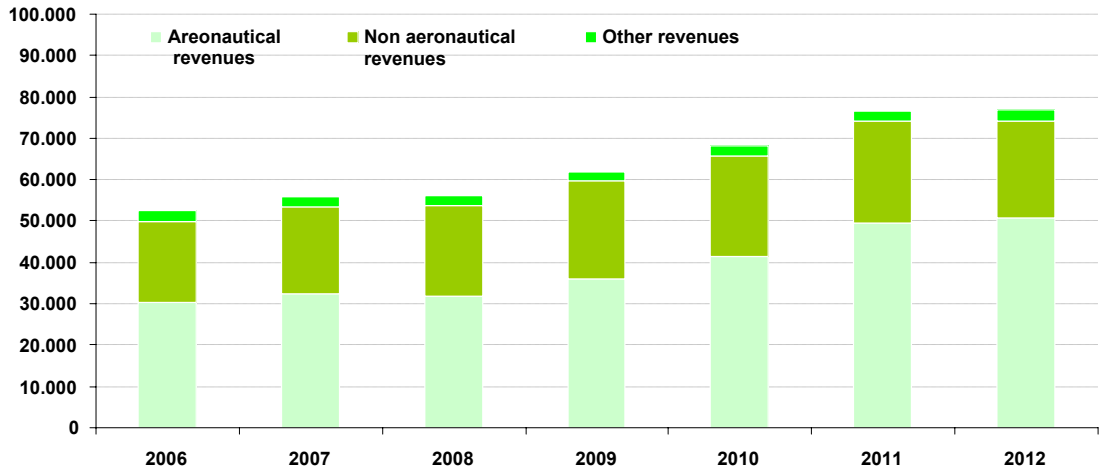
Actually, from this point of view, it is a confirmation: indeed, for several years the company has ended its business year with a business profit (Fig. VIII.5), in spite of the sector's growing competitiveness.

Figure VIII.5. Business result and yield indicators (2006-2012)



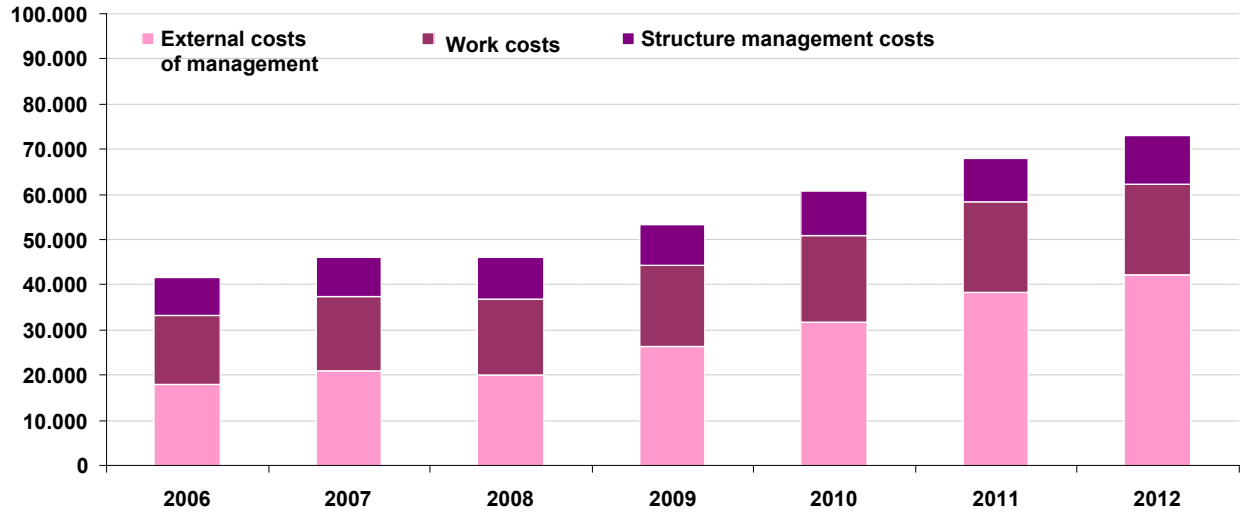
Source: elaboration of SAB data

Figure VIII.6. Macro items of revenues (2006-2012)



Source: elaboration from SAB data

Figure VIII.7. Cost macro-items (2006-2012)



Source: elaboration from SAB data

In the airport spaces there are also numerous commercial activities and passengers services, with their own results and balance sheets, which integrate the strictly airport activities and provision and contribute to determine the direct impact, so that they will be mentioned again in Chapter X.

Table VIII.2. Commercial and service activities present in the airport (2012)

Area	Activity	Number
Retail	Cafes and restaurants	11
	Newsagents, tobacconists, personal care products	6
	Clothing and accessories, gastronomy	13
	Duty-Free	2
Car Rental	Car hire	10
Banking services	Bank and bureau de change	2
Tourism	Tourist Information and Welcoming	2
Meeting room	Marconi Business Lounge	1

Source: SAB

IX. AIRPORT INFRASTRUCTURE ANALYSIS

Table IX.A reports the data relating to the airport infrastructure and the passenger and goods traffic in the period 2011-2012.

Table IX.A. Technical data of Bologna Airport operations and infrastructure 2011-2012

General data		2011	2012
Number of operations per year (ATM)		69,153	67,529
Number of operations per hour			24
Number of cancelled operation by reason per year and month			
Number of gates			20
Number of check-in desks			57
Number of luggage conveyor belts			10
Number of airport employees		346	352
Number of runways		1	1
Runway(s) length		2,800	2,800
Total airport area in sq. meters		2,450,000	2,450,000
Terminal area in sq. meters			34,770
Aircraft parking area inc. open/under roof in sq. meters		155,500	155,500
Passengers capacity in number of passengers per hour per year			
Passenger traffic including transit per year			
Years and months (general aviation included)		5,885,884	5,958,648
LCC/FSC/charter	Low Cost Carrier	2,423,547	2.675.024
	Full Service Carrier	3,061,733	2.841.097
	charter	390,933	435.131
Airlines		68	62
Destination (airport and country)	airports	108	104
	countries (directly)	34	34
	countries (indirectly)	196	
Cargo			
Total in tonnes per year		43,788	40,645
Area of cargo terminal in sq. meters per year			
Revenues and costs of airport operator business activity by type			
Air in mln EUR per year		49,452	
Non-Air in mln EUR per year		24,604	

Source: SAB, Annual report 2012

G. Marconi airport today occupies an overall land area equal to around 240 hectares also following the enlargement on the western side, as a result of the work for the extension of the runway, carried out in 2004.

The transition to intercontinental airport has been closely correlated to such works, following which the runway today has an overall length of 2,800 metres and a length of 45 metres (plus two lateral shoulders of 7.5 metres each, for a paved surface of around 171,000 m^2), and allows to host flights with a radius up to 5,000 nautical miles.

The connection between the runway and the aircraft parking bays comes about by means of a taxiing path, parallel to the runway, and a system of paved connections. The overall paved surface (including the runway, the taxiing path and the connections) is equal to 350,000 m^2.

From the current capacity values of the runway, equal to 24 movements hour, an operative capacity of around 32 movements/hour can be achieved with the implementation of the actions scheduled in the current Master Plan.

The passenger terminal, made up of a single building block, is situated to the south of the runway. The building is articulated on three levels: the ground floor of over 19,400 m^2, the first floor with a surface of around 13,500 m^2 and lastly the second floor with an overall surface of around 10,770 m^2.

The passenger airport system is articulated on two distinct levels dedicated, respectively, to arrival and departures, both for national and international flights.

As described in Chapter VI, work for restyling and the enlargement of the current passenger terminal is in progress; these will end at the end of 2013. The main aims of the intervention are:

- Increase in spaces and improvement of the access and the check-in of the terminal;
- Increase and rationalization of the spaces dedicated to the commercial activities (landside and airside);
- Upgrading and improvement of the technological systems in order to continue to improve passenger services.

Table IX.B. Technical data of works ongoing at Bologna Airport

Working area	Current situation	Future situation
Total surface	35.000 sq^2	36.000 sq^2
Commercial area	3.700 sq^2	5.500 sq^2
Boarding gate	20	24
Check security gate	7	10
Toilette	120	145

Source: SAB, Annual report 2012

At present, G. Marconi Airport is ranked seventh among the Italian airports by passenger volume. Its vocation is strongly international: two flights out of three are directed outside the Italian territory, in particular towards the European Union countries (almost 50 destinations), but also towards North Africa, non-EU Europe and the Middle East.

The destinations reached in 2012 were 104 in 34 countries: the movements linked to commercial traffic were 63,300, mostly national airline flights (93%) made by 62 airline companies altogether: Bologna thus confirms its fourth place in Italy for world connections (source ICCSAI).

As can be seen in Figures IX.1-2 the most served destination are the main European capitals, where the main national airlines fly to, while the tourist destinations are above all served by the low cost and charter airlines.

Figure IX.1 Scheduled flight destinations in Europe, North Africa and Middle East from Bologna Airport

Source: SAB, Annual report 2012

Figure IX.2 Intercontinental Flight destinations from Bologna Airport

Source: SAB, Annual report 2012

X. DIRECT IMPACT OF AIRPORTS

In 2012 the people employed by SAB were on average 352 full-time equivalents, rising by 1.9% as compared with 2011; of these, 95% is employed with open-ended contracts. In an unfavourable economic situation, the results achieved by SAB have thus allowed for the maintenance of employment levels that have risen slightly.

Female employment is equal to 43.2 % of the total. Women are present to an important extent at all the organizational level: among the employees, amongst whom they are numerically the largest part, among the junior managers (in particular, two Post Holders out of four) and among the Executives, in important posts (Corporate Affairs, Administration, Finance and ICT, Business Cargo Management) besides the Company Board.

Table X.A. Numbers of workers by gender (full-time equivalent) at Bologna Airport

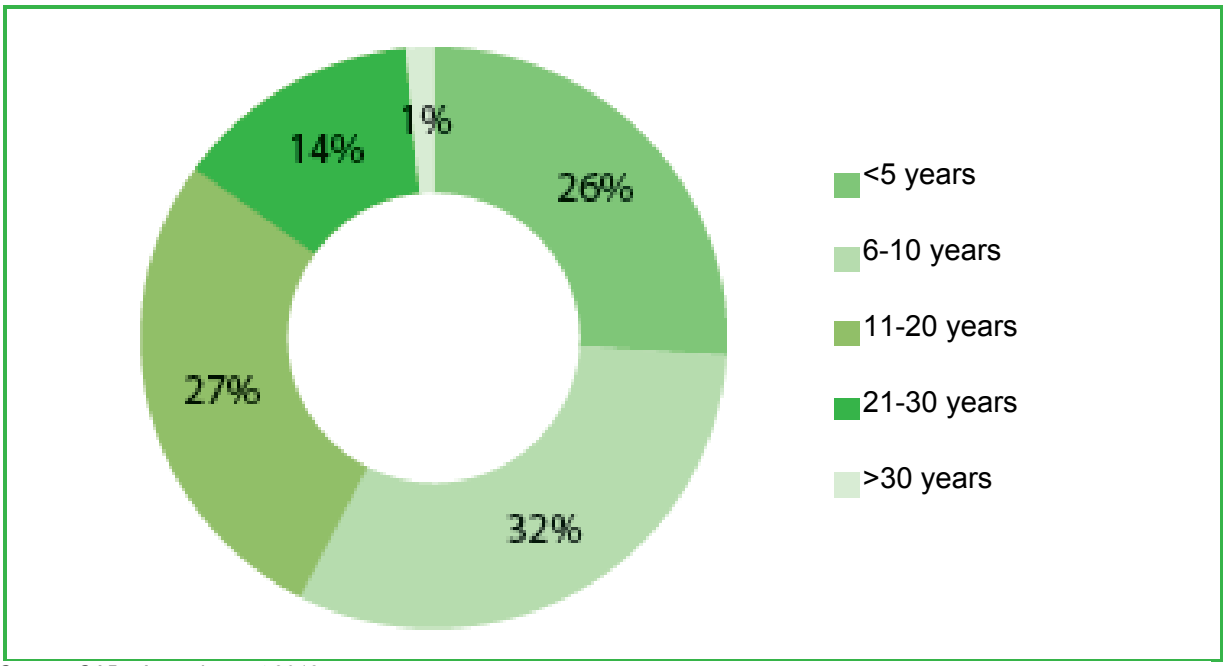
	2012	2011	2010	% share 2012/2011
Women	152	152	145	0.20%
Men	200	194	189	3.10%
Total	352	346	334	1.90%

Source: SAB, Annual report 2012

From the standpoint of age, the average age at the company is around 42 years.

Instead moving on to consider the company seniority, Figure X.1 shows the subdivision of the SAB workers by the number of years of presence in the company: the result is a certain overall equilibrium in the distribution by bands, so that a majority of employees present for less than 10 years (57.5%) is flanked by a strong minority of workers with more than 10 years' activity (42.5%).

Figure X.1. Employee subdivision by seniority (2012)

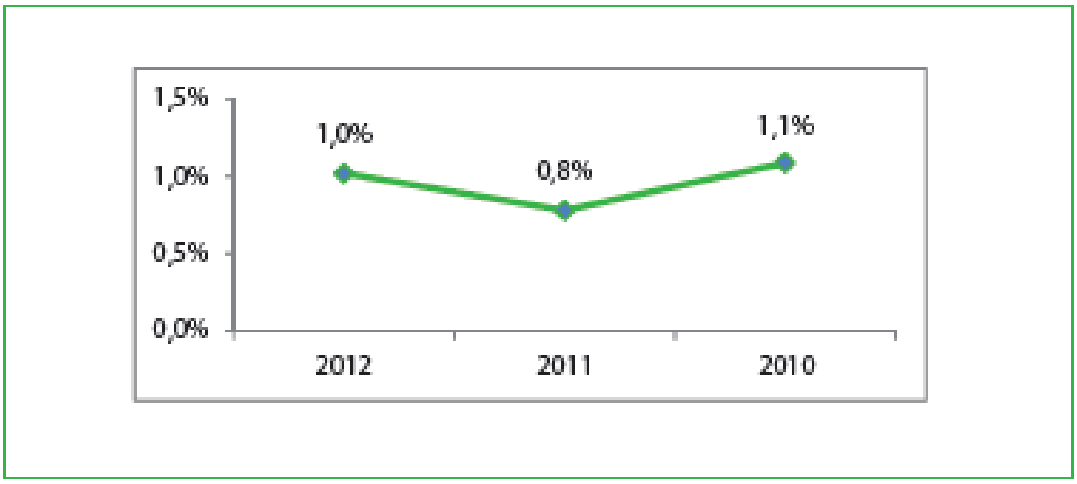


Source: SAB, Annual report 2012

The average turnover of the employees of the airport management company in 2012 was equal to 1.0% and results to be slightly higher than 2011. Figure X.2 shows the trend in the period 2010-2012, which remained substantially unchanged in percentage terms.

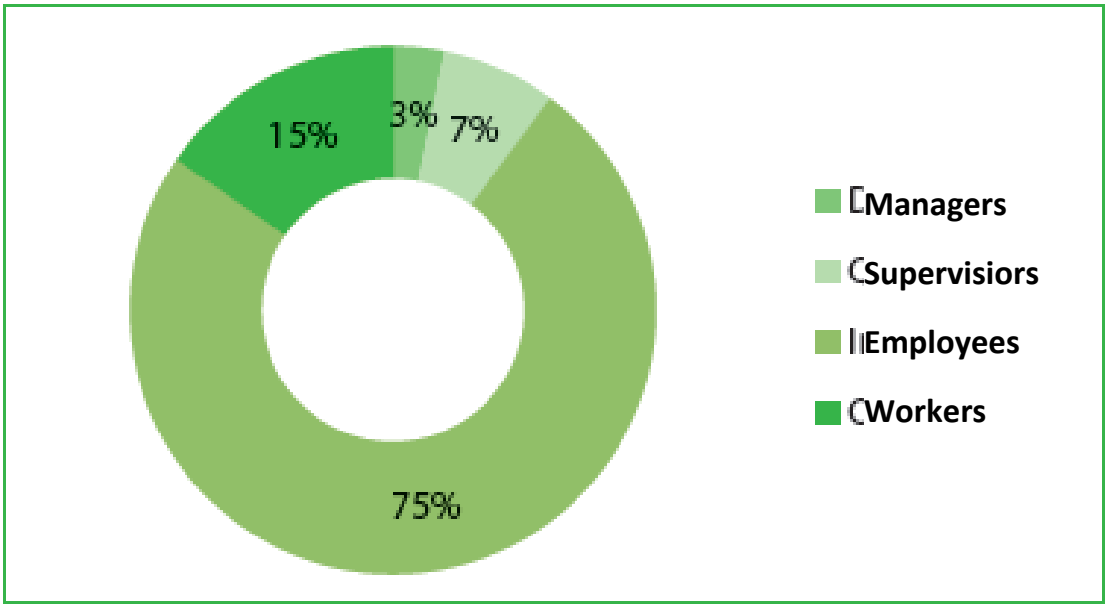
Instead Figure X.3 shows the subdivision of the working positions, from which it emerges that the employees represent 75% of the total as compared with just 3% of the Executive Managers.

Figure X.2. Turnover average trend 2010-2012 of the Bologna Airport employed



Source: SAB, Annual report 2012

Figure X.3. Employee subdivision by position

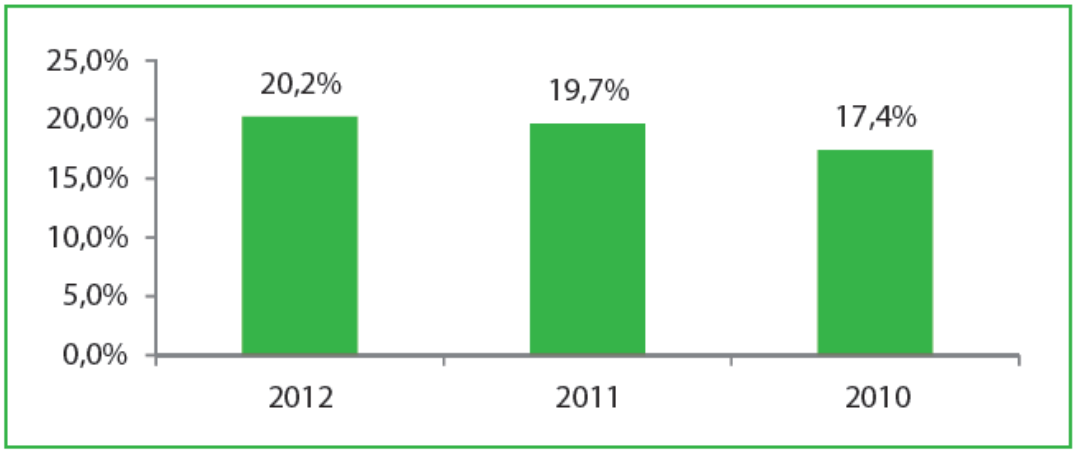


Source: SAB, Annual report 2012

The wage policies are defined on the grounds of investigations performed by means of a specialised company that compared the earnings levels of SAB with those of other companies that operate in the Italian market, comparable with SAB in terms of characteristics, markets of reference and professional fields. This is accompanied by a continuous monitoring of internal fairness, to avoid the occurrence of situations of imbalance and potential discrimination.

Lastly, from Figure X.4 we can see how the part-time or multi-period staff employed by SAB in 2012 results to be around 20.2% in 2012, a slow increase over the past few years.

Figure X.4. Part-time employees percentage 2012



Source: SAB, Annual report 2012

From the point of view of the direct economic impact that Bologna airport generates on the surrounding territory, Table X.B summarizes the employment estimate, subdivided by operators, in the activities relating to the airport, as well as the value of the production generated by them.

The category of the airlines as a whole generates the largest quota of production value (around 120.6 million €) and 348 workers. In spite of a number of operators that is lower in respect to the other fields, it is the sector of area handling that has the highest number of workers, with 663 workers, generating a production value of around 39.6 million Euros. Lastly, the airport management company, with 329 workers, generates around 54.6 million Euros of production.

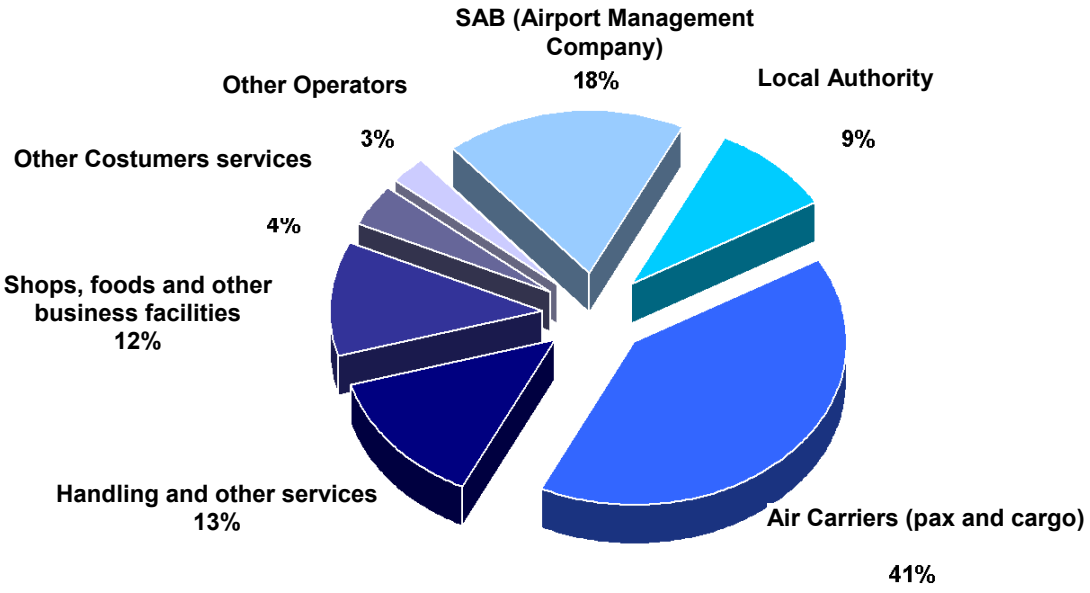
Table X.B. Direct impact of Bologna Airport (2010)

Operators	No. of Operators	Workers	Production value (millions of €)
Managing actor (SAB)	1	329	54.6
Public bodies	14	416	28
Airline carriers (passengers and goods)	46	348	120.6
Handling, movement and other services	15	663	39.6
Shops, catering, car hire and other commercial activities	33	240	34.7
Other passenger services	12	121	12.1
Other operators	20	131	8.2
TOTAL	**141**	**2,248**	**297.7**

Source: SAB

Lastly, Figure X.5 represents the total value of production tied to the airport activities and subdivided into categories, from which it clearly appears that most of that value is generated, after the airline carriers, by the airport management (about 18% of the total), by the handling and movement activities, by the commercial activities for passengers (shops, catering, car hire and so on) and by the public bodies.

Figure X.5. Production value (2010)



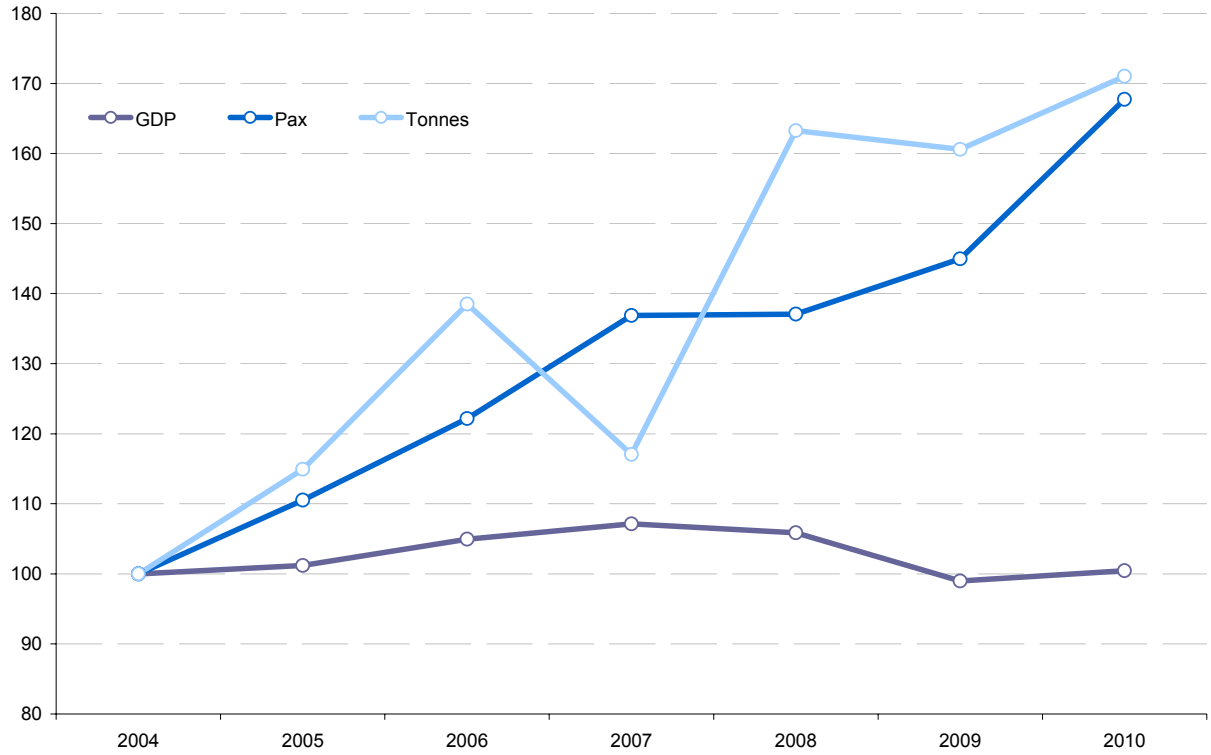
Source: SAB

XI. INDIRECT IMPACT OF AIRPORTS

Figure XI.1 shows the trends in passenger and goods traffic in the regional airports in the period 2004-2010 (given the value in 2004 as 100), compared with that of the Gross Domestic Product of the territory in the same period.

It seems immediately clear that, at least at the regional level, the substantial increase in the period considered both in terms of passengers and goods was not correlated to the GDP trend, which in the same period has instead shown a far flatter curve, with contained growth in the first period and a slight drop from 2007 to 2009, after which it rose again in 2010.

Figure XI.1 Gross Domestic Product/Air passengers/Freight tones trend 2004-2010



Source: ISTAT (National Statistics Agency), Assaeroporti

As regards Bologna airport more directly, in 2010 SAB performed a study to evaluate the impacts (direct, indirect and induced) due to the presence of the airport in the territory:

that study was performed according to a methodological approach shared at the European level, already introduced in 2000 and in 2004 by ACI Europe and York Consulting.

By direct impact we mean the effects of an economic kind generated by the activities directly related to air transport, and so substantially located in a stable and continuous manner in the airport; instead the indirect impact concerns the activities present outside the airport but connected to it in that they support the direct activities or have with then the same users, such as the welcoming activities, catering and so on; the induced impact is generated by the multiplier effect of the direct and indirect impacts, in that it is connected to the activities linked to the greater consumption induced by the spending of the actors involved in the direct and indirect impacts; lastly, the catalytic impact, not examined in the SAB study, refers to the greater attractiveness of the territory due to the presence of an airport and the consequent greater likelihood of the arrival of new economic activities.

The results of the study are reported in Table XI.A: overall, over 5,000 workers are tied to Bologna airport with 564.3 million Euros of value produced, and 1.1% of the workers and 1.7% of the Gross Domestic Product of the province of Bologna can be traced back to it.

Table XI.A Employees and Value of production by direct, indirect and induced impact of Bologna Airport (data 2009)

	Employees	Value of production
Direct Impact	2,248	297,7 mnl €
Indirect Impact	1,008	99,1 mnl €
Induced Impact	1,746	167,5 mnl €
Total Impact	**5,002**	**564,3 mln €**

Source: SAB

Table XI.B Employees and Value of production by direct, indirect and induced impact of Bologna Airport (data 2009) on Province of Bologna.

Province of Bologna	Employees	GDP
Direct + Indirect + Induced Impact	1.1%	1.7%

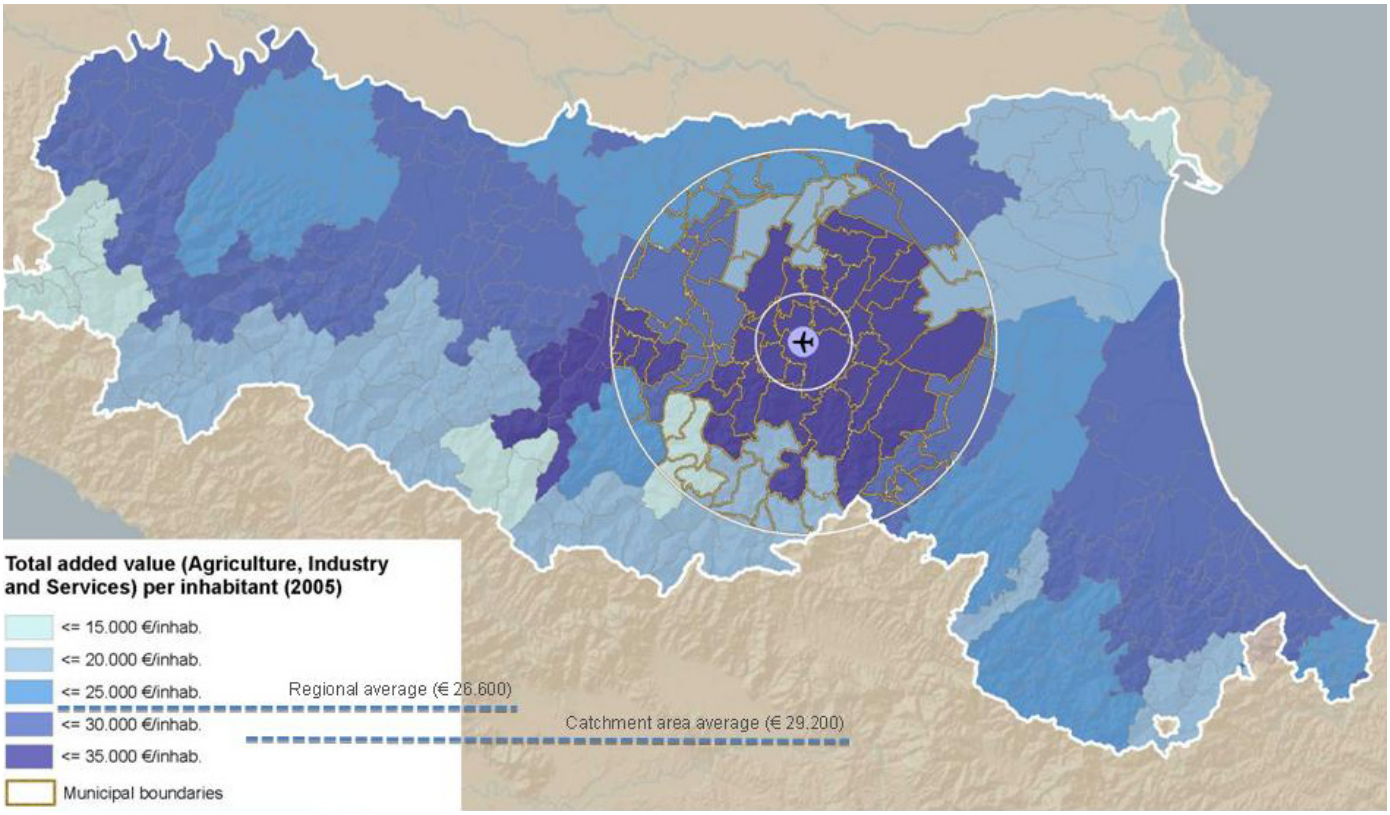
Source: SAB

XII. CATCHMENT AREA SOCIO-ECONOMIC PROFILE

Figure XII.1 shows the aggregate value added per capita resulting from Agriculture, Industry and Services (referring to the year 2005) in the Emilia-Romagna region: the mean regional value is equal to about 26,600 €/inhabitant, superior then to the national average (about 21,800 €/inhabitant) and one of the highest in Italy.

Since, as can be seen, the areas with the highest value added per capita are almost wholly included within a radius of 40 km, the average relating to the indirect impact zone of G. Marconi Airport results to be even higher (29,200 €/inhabitant): fundamental productive and industrial areas fall within that area such as the Modena ceramic district and that of the Bologna motor engineering companies.

Figure XII.1. Total added value (agriculture, industry and services) per inhabitant (2005)



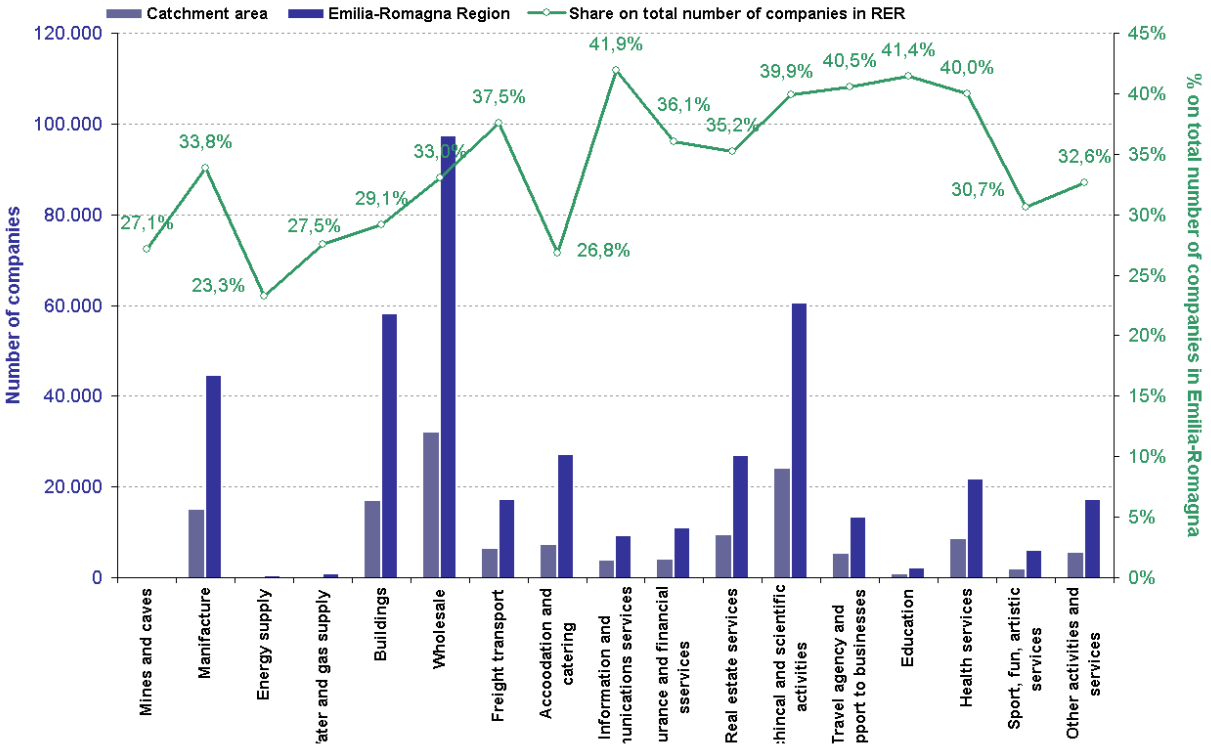
Source: elaboration from ISTAT data

The histogram of Figure XII.2 compares the number of activities present (in 2007) within the catchment area with the regional total, having aggregated them according to the NACE code (Statistical classification of economic activities in the European Community).

From the graph it appears that the highest number, as an absolute value, of activities present in the catchment area is that of wholesale trade, followed by technical and scientific services, which represent around 33% and 40% respectively of the total of the respective categories present in the region.

If instead we analyse the percentage of the activities of a certain sector present in the catchment area as compared with the total over the whole regional territory, it emerges that almost 42% of all the activities linked to the information and communication services present in the region are located in the indirect impact zone of the airport, followed by those of the education sector (about 41.4% of the total of the whole region).

Figure XII.2. Number of companies by NACE sections in the catchment area (2007)



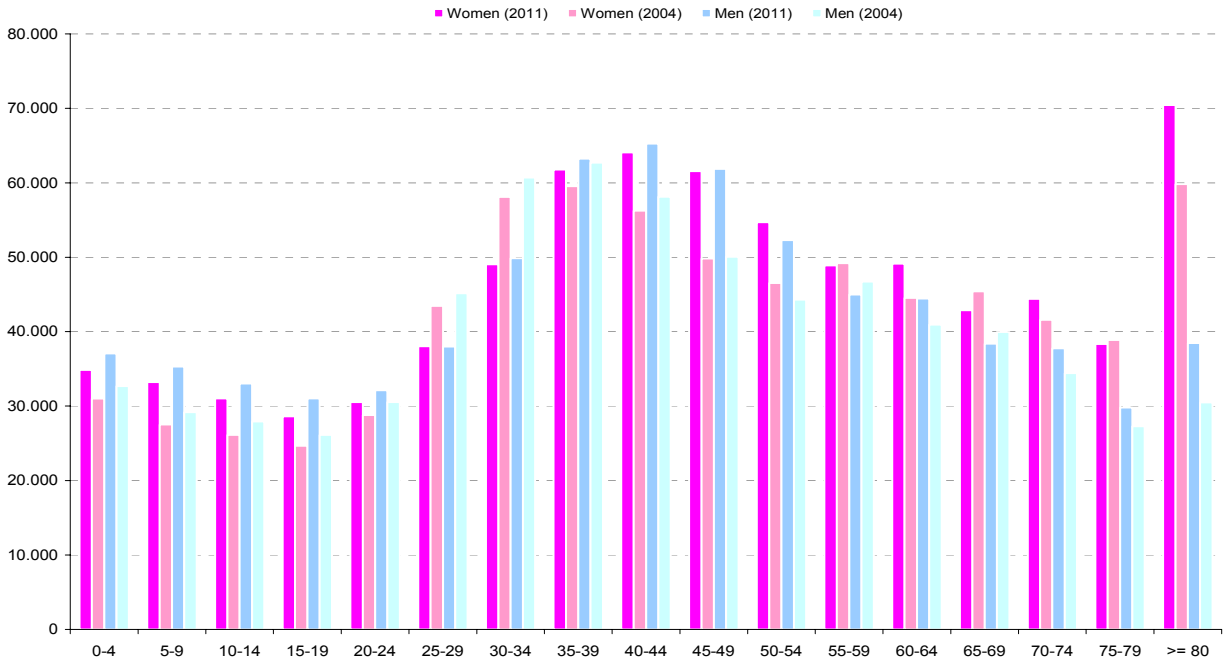
Source: Emilia-Romagna Region

As regards the analysis of the resident population, in addition to what has already been seen in the previous chapters, Figure XII.3 compares the data of the years 2004 and 2011, distinguishing them by age and gender: if on the one hand it appears clear that the general

process of ageing of the population is observable also at the national and at the European level (all the age bands over 60 years are rising strongly), a trend we shall not linger on, on the other all the bands under the age of 24 are also rising.

The latter phenomenon is also confirmed at the regional level and is attributable in particular to immigration. Indeed, in general fertility in Emilia-Romagna has grown significantly in the 2000s: the Total Fecundity Rate (TFR), that is the average number of children per woman, has risen from 1.1 in 1999 to 1.50 in 2009, thanks substantially to the greater propensity of foreign women to have children and the concomitant increase in the foreign female population during that decade.

Figure XII.3. Age of inhabitants by sex in 5 years cohorts (2011-2004) in the catchment area



Source: elaboration from ISTAT data

The growth in fecundity recorded during the past decade has, however, slowed down because in the last two years surveyed the TFR went down to 1.49 in 2010 and 1.46 in 2011. That phenomenon, also due to the economic crisis, has translated into a new demographic dynamic: not only a marked slow-down in foreign immigration in Emilia-Romagna (from the over 50,000 arrivals per year before the crisis, to 32,245 in 2012), but also a rapid fall in the fecundity of foreign women resident in the region. Indeed, for the

latter, the TFR went down from 2.61 in 2005 to 2.46 in 2008 and in 2009, down to 2.17 in 2011.

On the other hand, the fecundity of Italian women has progressively risen in the past two decades, after having reached the lowest levels in the early 1990s, with the TFR lower than 1. From 1.10 in 2000, for the Italian women resident in our region, the TFR rose to 1.20 in 2005, and to 1.26 in 2008. In the crisis years, fertility has settled at the following rates: 1.25 in 2009, 1.27 in 2010 and 1.25 in 2011.

Moving on to examine the tourist sector, since the available data are aggregated at the provincial or sub-provincial level, it has been possible to estimate the values of the number of tourists and receptive structures by elaborating the data relating to the parts of the provinces of Bologna and Modena falling within the catchment area.

Tables XII.A-B therefore list the number of arrivals and stays in 2011 in the territory considered, disaggregating it by area of origin and category of welcoming facility. We should bear in mind that by arrivals we mean the number of clients hosted in the facilities in the period studied, while by stays we mean the total number of nights spent therein.

Table XII.A. Number of tourists accommodated in Bologna and Modena Provinces (about ring 40 km) by country of origin (2011)

ORIGIN	ARRIVALS				
Zones	**** and *****	***	* and **	Other tourist buildings	Total
Italy	651,800	508,100	98,700	113,200	1,371,800
Europe	300,900	182,300	22,000	52,100	557,300
North America	30,500	16,500	2,100	3,600	52,800
South America	13,400	9,000	1,200	2,300	26,000
Asia	39,800	23,900	1,000	1,900	66,500
Middle-East	5,800	2,700	200	500	9,200
Africa	6,300	4,500	1,700	1,100	13,600
Oceania	5,200	3,800	600	1,400	11,000
Other non-EU countries	6,300	3,800	300	600	11,000
Total	1,060,900	754,600	127,900	176,900	2,119,200

Source: elaboration from data of the Statistical Service of the Emilia-Romagna Region

Table XII.B. Number of tourists accommodated in Bologna and Modena Provinces (within a radius of 40 km) broken down by country of origin - (2011)

ORIGIN	STAYS				
Zones	**** and *****	***	* and **	Other touristic buildings	Total
Italy	1,275,200	1,114,300	278,100	463,600	3,131,300
Europe	628,700	379,000	51,400	151,100	1,210,100
North America	70,300	40,400	4,700	10,800	126,200
South America	33,300	19,100	2,300	12,800	67,500
Asia	81,600	38,600	2,400	8,500	131,100
Middle-East	20,400	6,900	800	4,100	32,100
Africa	19,600	10,900	5,500	11,600	47,600
Oceania	13,400	7,700	1,200	3,100	25,500
Other non-EU countries	14,700	12,100	600	2,200	29,600
Total	2,157,200	1,629,000	347,000	667,800	4,801,000

Source: elaboration on data of the Statistical Service of the Emilia-Romagna Region

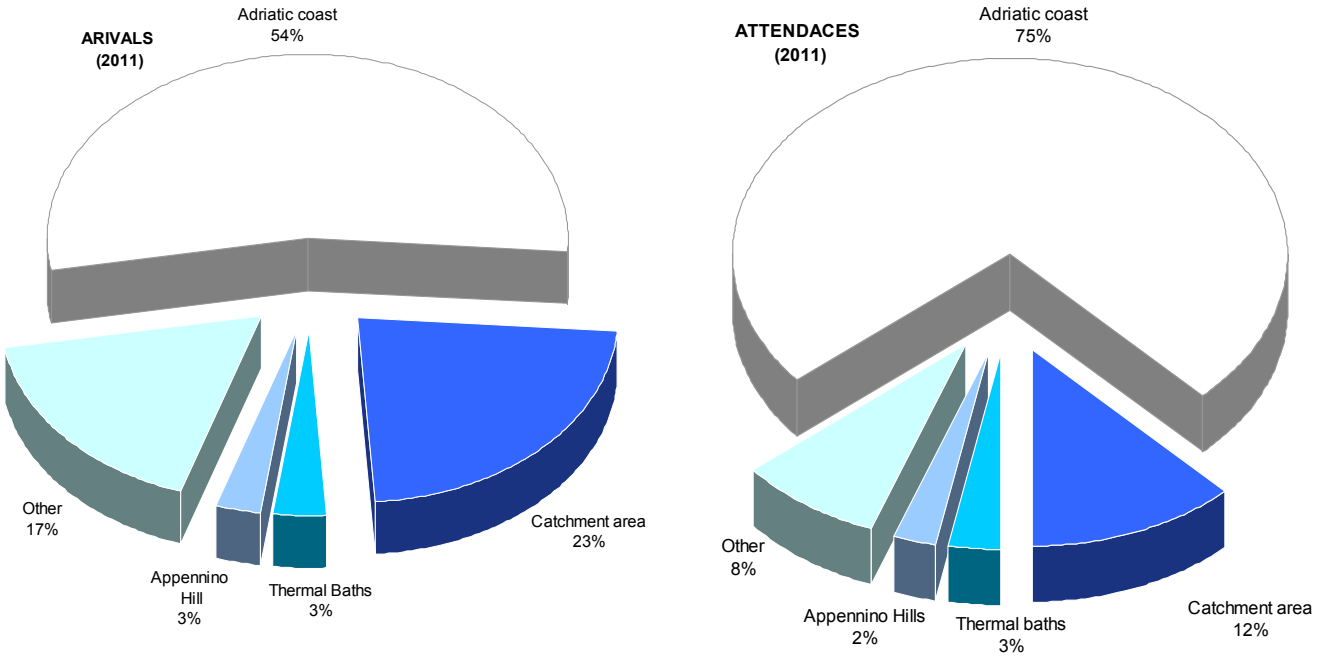
In 2011 (ISTAT figures), Emilia-Romagna resulted to be the most popular destination for the Italians to make trips and take holidays and one of the main ones for foreign visitors: in Emilia-Romagna there were indeed over 9.2 million arrivals and 38.6 million stays, equal respectively, to 9% and 10% of the yearly total recorded in Italy.

The circa 2.1 million arrivals in the catchment area thus represent 23% of the total arrivals in the region and 2% of the total in Italy: half of them, i.e. over one million, used higher category facilities (4 or 5 stars).

Instead, as regards the stays, with 4.8 million people registered in 2011, the percentage out of the regional total falls to 12%. This is due to the different average stay of the tourists, also linked to the reasons for the stay, which results to be much longer in the facilities of the Adriatic coastline: the Adriatic Riviera indeed totals almost three quarters of the total stays in the region, concentrating them particularly in the summer period , while in the area of Bologna and Modena an important component is represented by the shorter business trips, for trade fairs or congresses, as is moreover confirmed by the type of facility

used. Also for the stays around half of them are registered in four or five-star facilities (Table XII.B).

Figure XII.4. Stays and arrivals in Emilia-Romagna (2011)



Both for the arrivals and for the stays, the main quota, equal to almost two thirds of the total, is represented by Italian tourists (around 1.4 million arrivals for 3.1 million presences), but very significant is also the figure relating to the European tourists, equal to over 25% in both the categories.

That situation is also confirmed in the make-up of the supply, which sees almost 15,000 beds available (out of 40,000 available overall in the area) provided by the 4-star hotels and over.

Table XII.B. Buildings, rooms and beds in the catchment area (2011)

	5 stars luxury and 5 stars	4 stars	3 stars	2 stars	1 stars	Touristic residences	Room registered	Camping sites and holiday parks	Agro-tourism accommodation	Other accommodation	Total
Buildings	1	80	170	70	40	10	250	10	140	620	1.390
Rooms	1	140	440	230	90	35	420	50	370	1.220	3.000
Beds	230	14.400	10.800	2.000	1.100	1.000	2.600	1.400	1.800	4.000	40.000

Source: data processing Emilia-Romagna Region

C LOGISTICS AND TRANSPORT

XIII. LOGISTIC AND TRANSPORT ANALYSIS

The regional airport system is made up of the four airports of Bologna, Forlì, Parma and Rimini, to which are added the infrastructures tied to the smaller airports: the supply of airport infrastructures in Emilia-Romagna thus results to be among the highest at the national level, with almost one airport every million inhabitants.

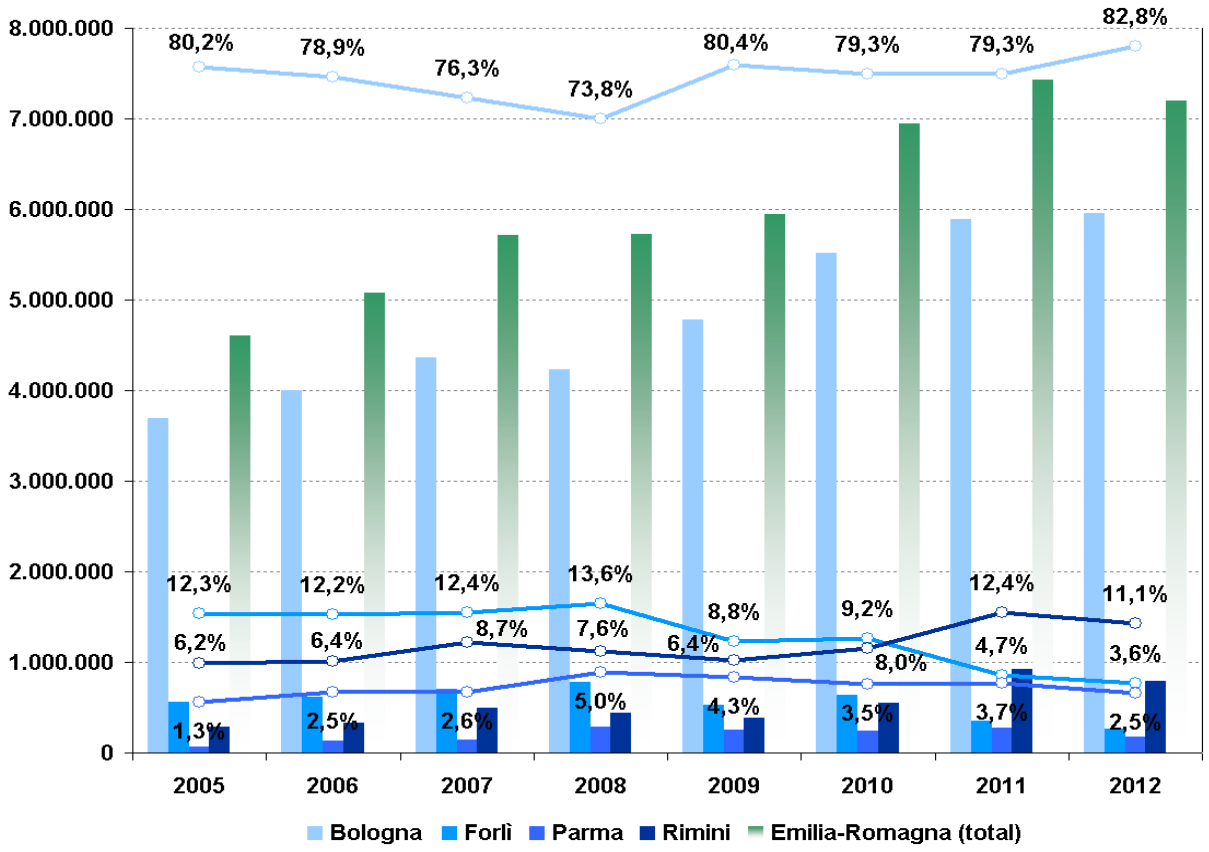
The regional airports are also inserted within a dense network of road and railways connections, in a pivotal territory for the east-west flows and above north-south (see Figure XIII.1): for an analysis of these aspects with more details, see the previous chapters and the annex.

Figure XIII.1. Regional airport system

Source: Cartographic data processing Emilia-Romagna Region

Figure XIII.2 shows the trend for passenger traffic in the four airports mentioned, in the period 2005-2012: as is plain to see, Bologna has always represented a point of reference for the whole regional territory, with about four-fifths of the overall passenger traffic (82.8% in 2012).

Figure XIII.2. Passenger traffic in Emilia-Romagna airports (2005-2012)



Source: ENAC (Civil Aviation National Authority)

The destinations that could be reached from Bologna in 2012 were 104 in 34 countries: the movements linked to commercial traffic were 63,300, mostly scheduled flights (93%) made by a total of 62 operating airline companies: Bologna thus confirms its fourth place in Italy for world connections (source ICCSAI).

Table XIII.A. Flight and destination settings by Bologna Airport 2010-2012

	2012	2011	2010	% share 2012/2011
Directly connected destinations (airports)	104	108	91	-3.70%
Directly connected Countries (in addition to Italy)	34	34	32	0.00%
Connected destinations (airports) with scheduled flights	81	72	77	12.50%
Destinations reached by most airlines	16	12	16	33.30%

Source: SAB, Annual report 2012

Table XIII.B. Flight and destination settings by Bologna Airport 2010-2012

	2012	2011	2010	% share 2012/2011
Airlines	62	68	51	-8.80%
Scheduled flights	93.37%	93.35%	89.97%	0.00%
which traditional flights (FSCs)	*48.39%*	*52.11%*	*53.24%*	*-3.70%*
which low cost flights (LFAs)	*44.98%*	*41.24%*	*36.73%*	*-3.70%*
Destinations reached by most airlines	6.14%	5.86%	10.03%	0.30%
Destinations reached by most airlines	0.49%	0.78%	dna	dna

Source: SAB, Annual report 2012

The most connected airports in 2012 were the large European capitals and the main Italian cities of the centre-north. The top destination was Paris Charles De Gaulle, serviced by the companies Air France and EasyJet (while Ryanair operates on Beauvais), while London-Gatwick dropped to fourth place as a result of the enhancement of the London-Heathrow connection at the end of summer 2012.

Even Istanbul has become one of the main destinations thanks to daily connection by Turkish Airlines and the introduction on the same route of Pegasus that has activated its own flights to the airport from the Asian part of Istanbul (Sabiha Gokcen) starting from August 2012. It is worth pointing out that in 2012 some important international carriers have started up (Aeroflot) or increased their own presence (besides the previously cited Turkish Airlines, Lufthansa has introduced new routes for Berlin and Düsseldorf and Ryanair has based the fifth machine at the Bologna airport).

Instead, Alitalia and Meridianafly are declining, this being the emblematic sign of suffering of national air traffic. Alitalia has decided to rationalize the use of the fleet and operate drastic cuts in the airports where is does not have an operative base, amongst which Bologna, so that five national destinations (Alghero, Bari, Naples, Lamezia, Palermo) have been cancelled while only the flights for Rome and Catania have been kept: for Bologna airport it has thus amounted to an important loss that has determined a drop in Alitalia passenger traffic of 17.4% as compared with 2011.

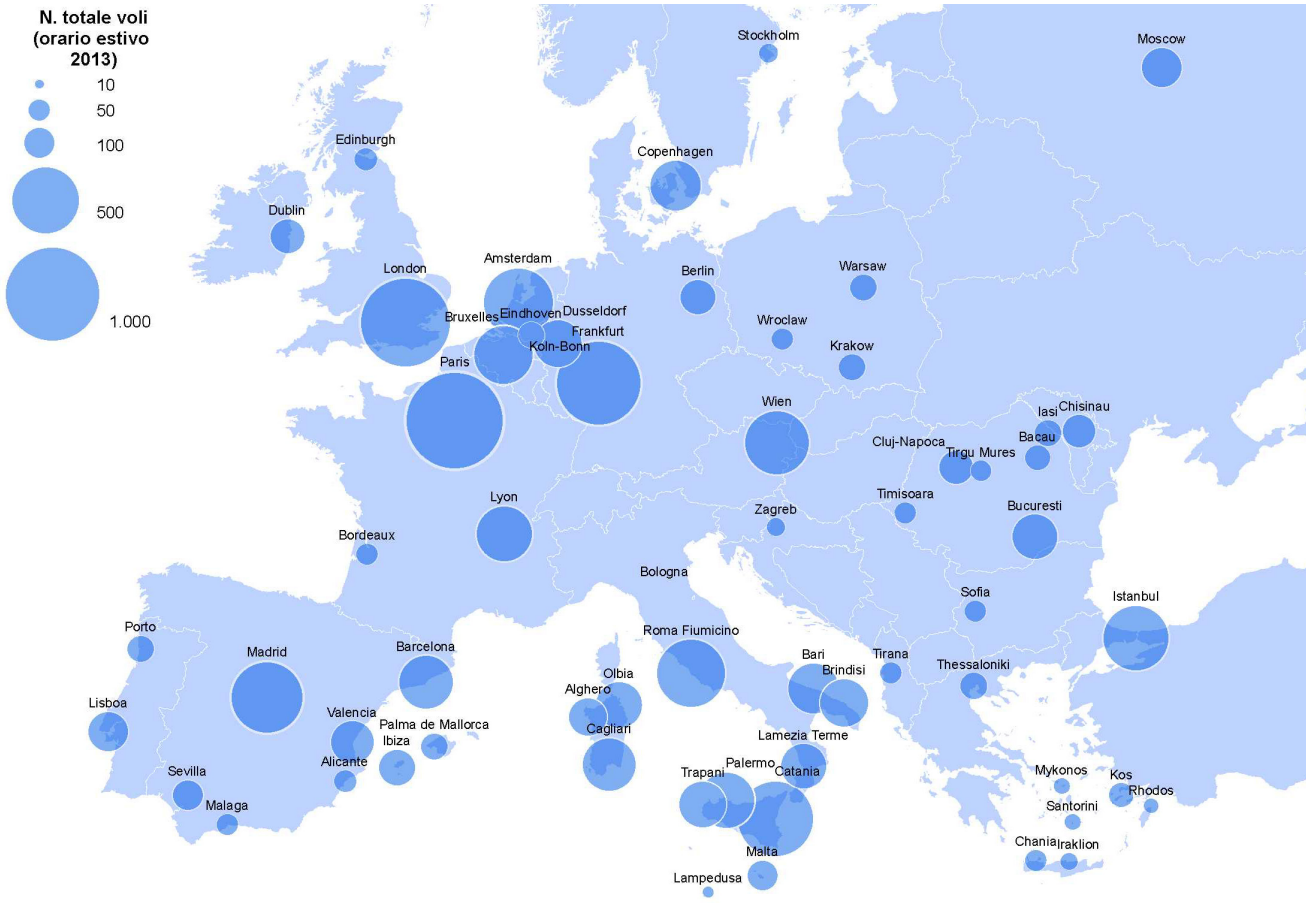
An important drop in traffic (-22.2% as compared with 2011) was also recorded for the group Meridianafly (also including Air Italy) owing to the cancellation of the route Bologna-

Palermo, the suspension of the connection with Alghero for a few months and the closure for over a month of Catania airport that caused the transfer of flights to Sigonella and thus the halving of the operations.

Figure XIII.3 and in Table XIII.C instead represents the connections relating to the summer schedule 2013 (May-October), currently applicable: the mean number of weekly flights results to be 567.

The main destinations are still those of the centre-south of Italy and the main European capitals: besides the typically touristic destination, whose connection are naturally reinforced in that period, there are also strong relations with the areas most tied to the economic and entrepreneurial world: that aspect will be better evidenced later, in regard to the passenger profile.

Figure XIII.3 Connections in Europe (summer schedule 2013)



Source: elaboration from SAB data

Table XIII. C Main destinations by number of flights (summer schedule 2013)

Pos.	Destination	Total flights
1	Paris	1.057
2	London	884
3	Frankfurt	782
4	Munich	662
5	Catania	650
6	Madrid	576
7	Amsterdam	531
8	Rome Fiumicino	518
9	Istanbul	468
10	Vienna	452
11	Casablanca	440
12	Brussels	380
13	Palermo	354

Pos.	Destination	Total flights
14	Lyons	346
15	Barcelona	326
16	Cagliari	322
17	Bari	281
18	Copenhagen	277
19	Brindisi	258
20	Düsseldorf	248
21	Trapani	240
22	Olbia	234
23	Lamezia Terme	228
24	Bucharest	225
25	Valencia	202

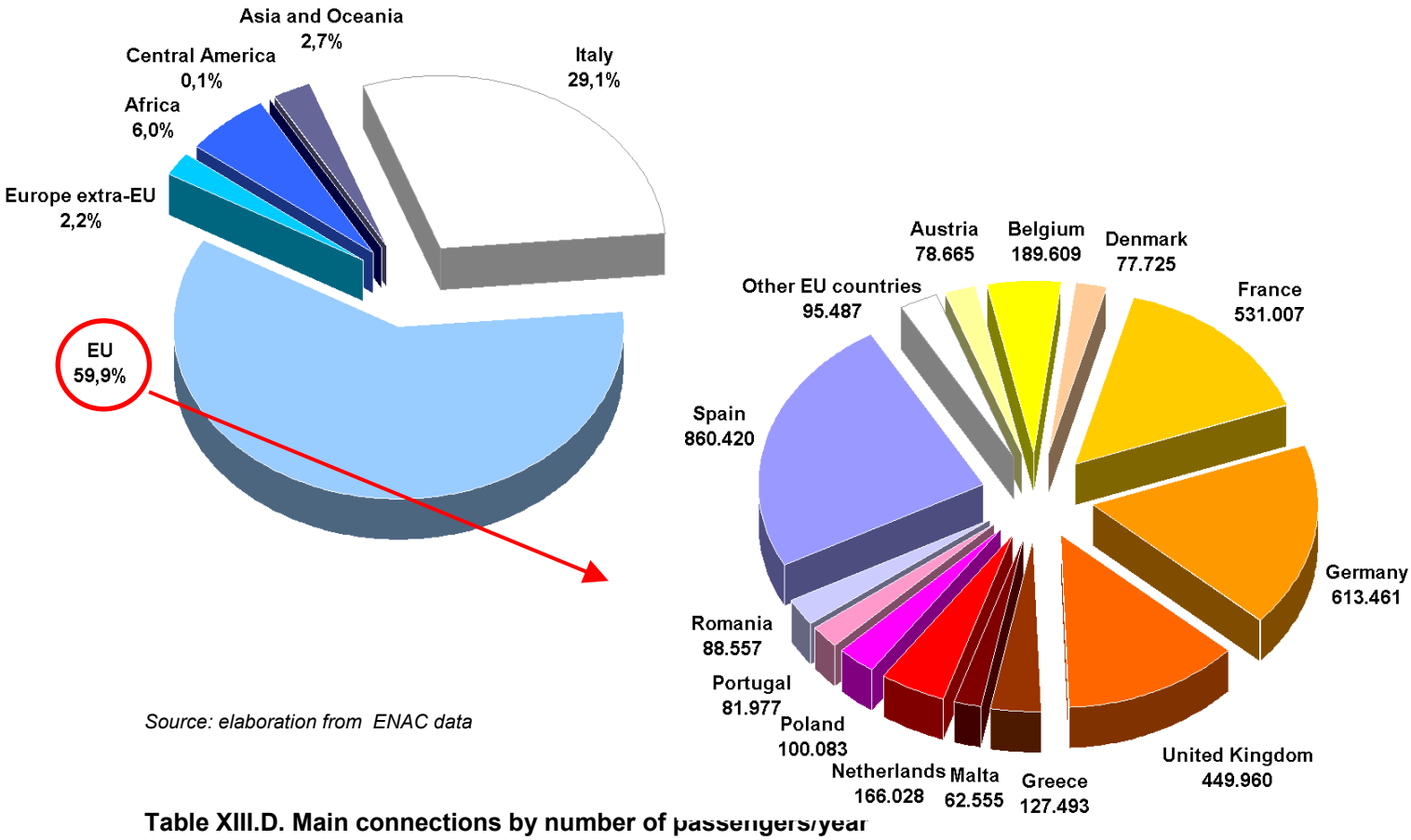
As regards demand, 65% of the passengers live in Italy and 35% aboard, while 50% of the total result to be outgoing passengers.

For the incoming passengers, the most represented countries are Spain, Germany and France. Bologna is still the favourite destination: about 38% of the incoming passenger stops in the city; over 20% remains in the province and 28.4% move around in the region. Spain, France and Germany are the most popular destinations also for the outgoing traffic.

Overall, about 30% of the passengers use national connections, while almost 60% move from/to another European Union country (Figure XII.4): the countries with the largest flows are Spain (860,000 passengers in 2012), Germany (613,000), France (531,000) and Great Britain (450,000), but important results have also been recorded for Belgium (190,000) and the Netherlands (166,000), and substantial flows also towards African destinations (355,000 passengers altogether), in particular for tourism in the Mediterranean area. Lastly, non-negligible flows are also recorded towards Greece (127,000), Poland (100,000), Romania (89,000), Portugal (82,000), Austria (79,000) and Denmark (78,000).

The same can be said of the single destinations (Table XIII.D): demand thus seems to be articulated and formed by travellers with different needs who nonetheless manage to find an adequate answer in the supply illustrated previously.

Figure XIII.4. Bologna Airport passenger traffic in 2012 split by geographical zone of the link



Source: elaboration from ENAC data

Table XIII.D. Main connections by number of passengers/year

No.	Airport	Passengers	No.	Airport	Passengers
1	Paris Charles De Gaulle	323.678	17	Valencia	124.670
2	Catania	279.875	18	Brussels Charleroi	120.291
3	Palermo	278.615	19	Trapani	110.485
4	London Gatwick	268.304	20	London Stansted	110.321
5	Madrid Barajas	262.806	21	Gerona Costa Brava	107.460
6	Frankfurt	245.424	22	Sharm El Sheikh	81.294
7	Rome Fiumicino	232.683	23	Vienna	78.665
8	Munich	185.884	24	Copenhagen	77.725
9	Lamezia Terme	185.509	25	Tirana	71.486
10	Bari	171.548	26	Ibiza	70.047

11	Amsterdam	165.916	27	London Heathrow	69.949
12	Casablanca Mohamed V	153.869	28	Brussels National	68.935
13	Brindisi	146.274	29	Colonia-Bonn	63.934
14	Paisi Beauvais	141.742	30	Marsa Alam	62.802
15	Cagliari	138.896	31	Malta	62.555
16	Istanbul Atatürk	126.562	32	Lisbon	61.268

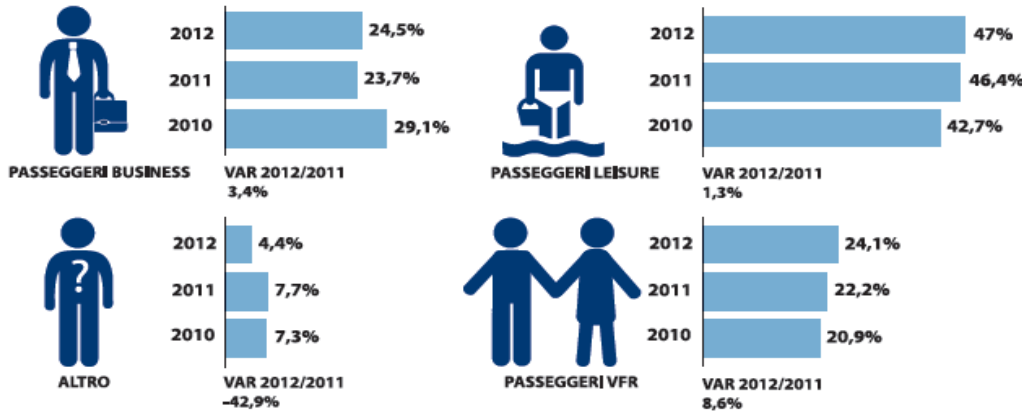
Source: elaboration from ENAC data

One of the particular aspects linked to Bologna airport is indeed the diversification of the passenger profile, which historically represents a competitive advantage, along with its geographical centrality.

The latter characteristic amplified by the national level infrastructure networks present, make Bologna a fundamental junction for road and rail connections. For this reason it is well connected to important tourist poles, to densely populated and the most economically developed areas of the country, so the composition of the passenger flows is this very heterogeneous: the leisure component is naturally still the main one, but around a quarter of the passengers are represented by the business clientele, enhanced by the presence on the territory of numerous industrial districts of international importance, and a further quarter of the component VFR (Visiting Friends & Relatives), who travel for personal, family or health reasons, a typology of passengers for whom Bologna represents an important pole of aggregation.

The passenger profile has indeed remained substantially coherent in the past three-year period, with a strong youth component (under 24) and a further growth in passengers aged between 25 and 54 years, who represent 68.3% of the overall users, confirming the growth trend of the Leisure and VFR components.

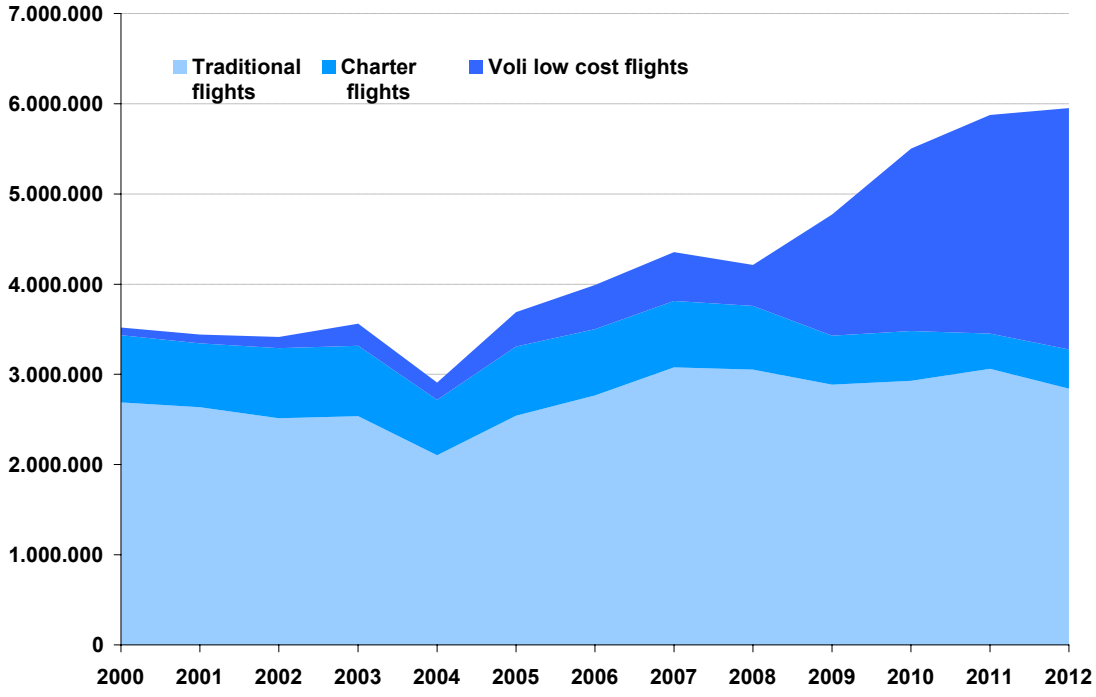
Figure XIII.5 Passenger profile at Bologna Airport (2010-2012)



Source: SAB

Also by virtue of such characteristics, the strong increase in low-cost passengers has not come about to the detriment of the traditional companies, as can indeed be observed from Figure XIII.6,as that passenger quota, also in view of the currently enduring crisis period, has stayed in these years at practically constant levels.

Figure XIII.6. Passenger sharing (2000-2012) by type of air carrier.



Source: elaboration from SAB data
** The 2004 data are affected by the closure of the airport for two months owing to the work for extending the runway*

In 2012 there was a drop in the cruise sector, a segment activated in 2011 thanks to a series of charter connections with Spain addressed to passengers departing from and/or arriving on cruise ships from the port of Ravenna. The contraction in the cruiser traffic, partly catered for in the planning, is nonetheless affected also by the negative effects caused by the continuing economic crisis in Spain that has undermined the reference target.

The charter segment, in spite of a timid recovery (+4,3%), continues to suffer from the collapse in demand for trips towards Northern Africa (above all Egypt) and the Middle East. Important structural factors are added to this, amongst which the preference of airline companies to operate with national flights and a change in the way of travelling by the passengers, ever more autonomous in organising their own trips.

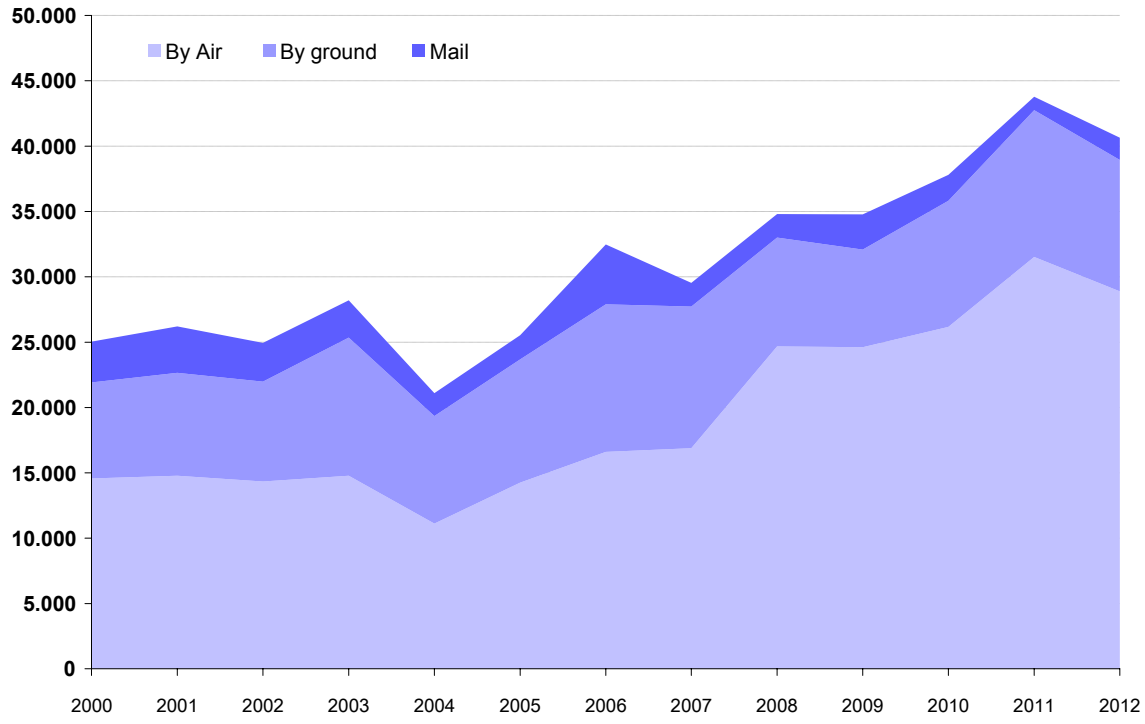
Table XIII.E. Passenger air traffic sharing on Bologna Airport 2010-2012 by type of air carrier

PASSENGER NUMBERS	2012	2011	2010	% share 2012/2011
Domestic Passengers	**1,730,132**	**1,725,742**	**1,568,469**	**0.30%**
Usual Airlines (FC	824,096	1,033,589	1,099,167	-20.30%
Low cost (LCC)	866,923	655,180	435,494	32.30%
Charter	18,910	14,703	16,205	28.60%
Transit	20,203	22,270	17,603	-9.30%
International Passengers	**4,220,867**	**4,150,275**	**3,934,637**	**1.70%**
Usual airlines	2,017,001	1,993,082	1,803,792	1.20%
Low cost	1,808,021	1,766,644	1,583,904	2.30%
Charter	315,018	305,320	493,686	3.20%
Transit	51,169	39,241	53,255	30.40%
Cruises	29,658	45,988	dna	-35.50%
General Aviation	7,396	9,671	8,563	-23.30%
TOTAL	**5,958,395**	**5,885,688**	**5,511,669**	**1.20%**

Source: Bologna Airport annual report 2012

In spite of the drop in the past year, in the period 2000-2012 there was a substantial enhancement of the cargo sector (by air + surface) which, considering also the mail service, was over 40,600 tonnes (Figure XIII.7).

Figure XIII.7. Cargo traffic of Bologna airport (2000-2012)



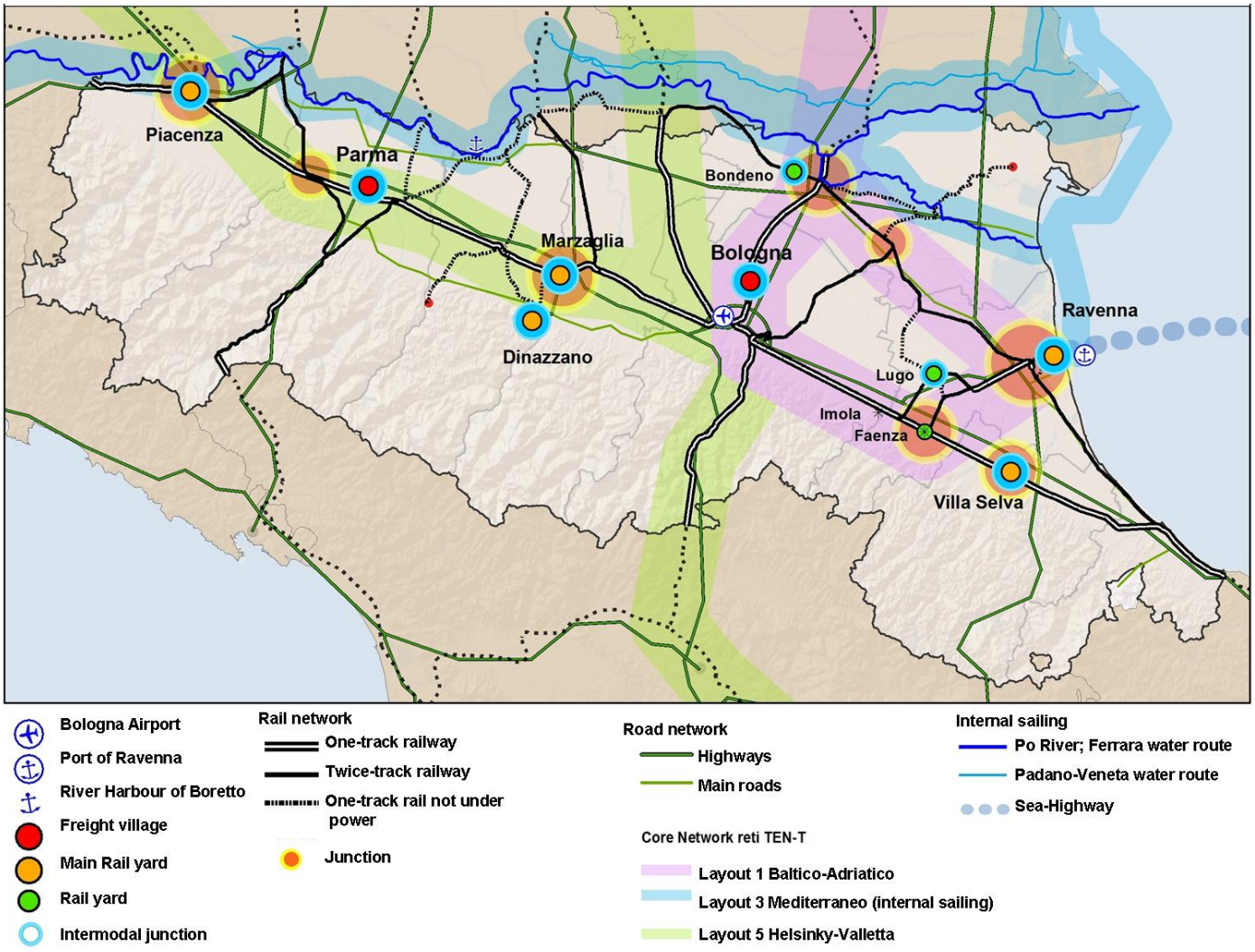
Source: elaboration from SAB data

Regarding the freight transport system, the Emilia Romagna Region has identified into its own transport plan (PRIT2020) the **Regional Logistics Platform**(see figure XIII.8)**,** which consists of an integrated logistics system interconnected with the infrastructure networks, in order to streamline the movement of goods, through the use of various modes of transport (by road, rail, sea-water and air).

On transport connection networks, They are placed the main interchange centres, the toll booths, the railway stations, the freight terminals, the airports (at different levels) and the Port of Ravenna.

In this background, the Bologna airport can carry out the role as main air logistics junction that connects the regional systems to the rest of Italy and Europe.

Figure XIII.8. Regional Logistic Platform (PRIT2020)



Source: Regione Emilia Romagna

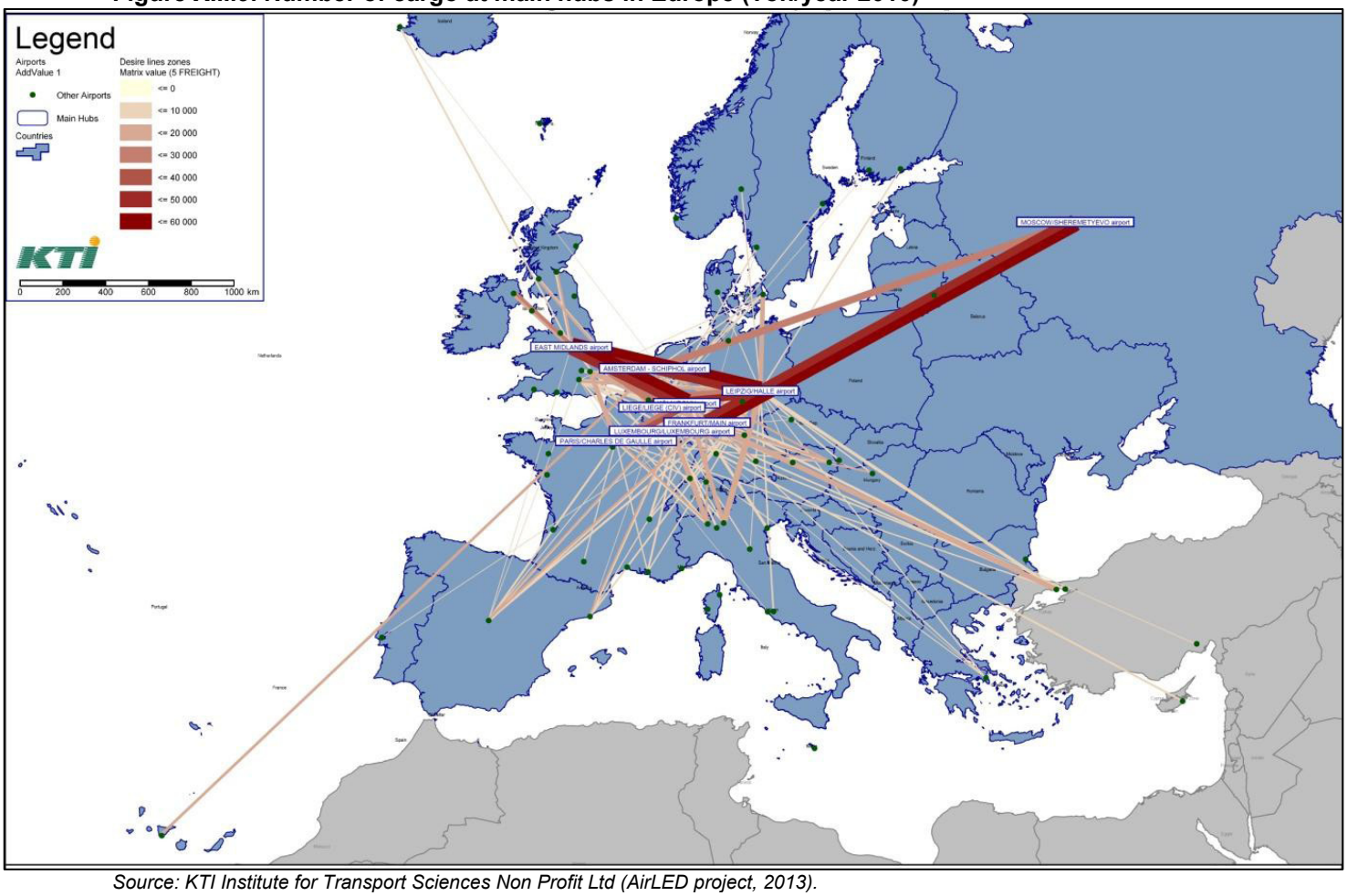
Emilia-Romagna region is third position in Italy in 2010 for value of exports (about 12,5% of Italian exports after Lombardia and Veneto), and it's also in third place for %-bearing for exports to GDP (after Friuli-Venezia Giulia and Veneto).

In 2010 Bologna has become the 4° airport for the volume of freight handled.

Indeed, 60% of freight processed into Bologna airport are handled by Courier (DHL, UPS and TNT) and the remainder from the major European legacy carriers (first on all

Lufthansa and British Airways), using the hold of passenger aircraft or by land transport link to their Hub.

Figure XIII.9. Number of cargo at main hubs in Europe (Ton/year 2010)



Source: KTI Institute for Transport Sciences Non Profit Ltd (AirLED project, 2013).

On European overview, the cargo traffic is quite different compared with passengers traffic. Indeed, within cargo network there are very few nodes, much fewer actors involved, specific logics in the market, much smaller volumes involved (compared to road or rail cargo traffic), much fewer connections, where Bologna Airport is part of this narrow network.

D SWOT ANALYSIS

XIV. THEMATIC PILLARS SWOT ANALYSIS

In this chapter we describe the SWOT Analysis of Bologna airport and the other regional airports of Forlì, Parma and Rimini.

- **Bologna Airport "Guglielmo Marconi"**

Strengths

Bologna's privileged geographical position makes the catchment area very extensive and it offers an ample catchment area of potential users, while its proximity with the city centre means the airport is within easy reach and is well connected.

The wealth of the territory from the industrial and touristic point of view and the choice not to concentrate all the activities on one single carrier allows for a balancing of the supply between traditional and low cost solutions.

The application of the Programme Contract, besides allowing for a simplification of the tariffs and economic advantages for SAB, given the achievement of the preset qualitative and environmental objectives, guarantees for the whole period in which it is applicable (until 2013 but with all the possibilities of an extension until 2014) a certain regulation of the airport activities in a scenario characterised by a marked normative uncertainty.

Weaknesses

The strongly downsized presence of the national carrier of reference Alitalia (from 7 to 2 destinations served from Bologna) owing to the economic difficulties that have created a void in the domestic market that will have to be bridged in order not to lose an important slice of the market.

Opportunities

The choice of being oriented towards the Russian and Turkish markets has triggered highly positive effects: so it is necessary to continue investing in the new emerging markets by means of connections that will allow for convenient connections with Asia and the Middle East.

Technological development represents a lever to be exploited to offer services that will improve the passenger experience in terms of greater autonomy in the check-in procedures and comfort while the passengers are at the airport.

Although it is a regional airport, G. Marconi Bologna airport is very mindful of international dynamics: the entrance in international bodies allows for benchmarking on a larger scale and to gather the best practices of the leading European airports on the subject of service quality and airport safety.

Threats

The main threats stem from the increased competition both in the aeronautical field (proximity to airports ad overlapping of the destinations) and in the commercial field for the non-aviation activities (competition in the parking and ticketing sectors).

The enduring nature of the economic crisis is also leading the population to change its own spending habits causing changes in lifestyles that cannot be ignored.

- **Forlì Airport "Luigi Ridolfi" (code IATA: FRL)**

STRENGTHS	WEAKNESSES
• Very large land area that still leaves ample margin for enlargement of the infrastructures • Strong competencies acquired in the handling of cargo (both traditional and special)	• Proximity to the airports of Bologna and Rimini. • Limited runway length, absence of taxiing connection
OPPORTUNITIES	**THREATS**
• Planned enhancement of the infrastructures • Aeronautic pole and flying school	• Growing competition in the sector of commercial air transport

- **Parma Airport "Giuseppe Verdi" (code IATA: PMF)**

STRENGTHS	WEAKNESSES
• Proximity to the city centre • Wealth of the catchment area • Presence in the corporate partnership of private subjects with a multinational vocation • Ample possibilities of development for the absence of particular physical or natural constraints upon development.	• Technical and infrastructural shortcomings in the land area • Limited supply (few carriers present) • Low visibility in the agency fabric of the same province of reference • Competition from the high-speed railway
OPPORTUNITIES	**THREATS**
• Geographical location at the junction of roads of national importance • Development of co-marketing actions • High number of potential partners (tour operators, shareholders, regional companies, Travel agencies, APT, etc.) • Partnership with the trade fair pole	• Competition from the neighbouring airports • Enhancement of the Milan Linate airport • Effects of the economic crisis on its spending capacity

- **Rimini Airport "Federico Fellini" (code IATA: RMI)**

STRENGTHS	WEAKNESSESS
• Quality of the infrastructural airport facilities, linked to the military origin of the land area • Preferential point of access for charter traffic directed to the Adriatic Riviera • Activities of diversification of the traffic towards eastern Europe	• Major seasonal nature of the traffic • Primary catchment area of limited size at present • Scarce visibility at present within the national network
OPPORTUNIIES	**THREATS**
• From the touristic point of view, the Adriatic Riviera represents one of the most important districts at the European level. • Partnership ties with the Republic of San Marino • Airport for the national airline company of San Marino (secondary of the catchment area expansion) • Partnership with the trade fair pole	• Competition from neighbouring airports • Effects of the economic crisis on the spending capacity

E ANNEX

REGIONAL AIRPORT SYSTEM

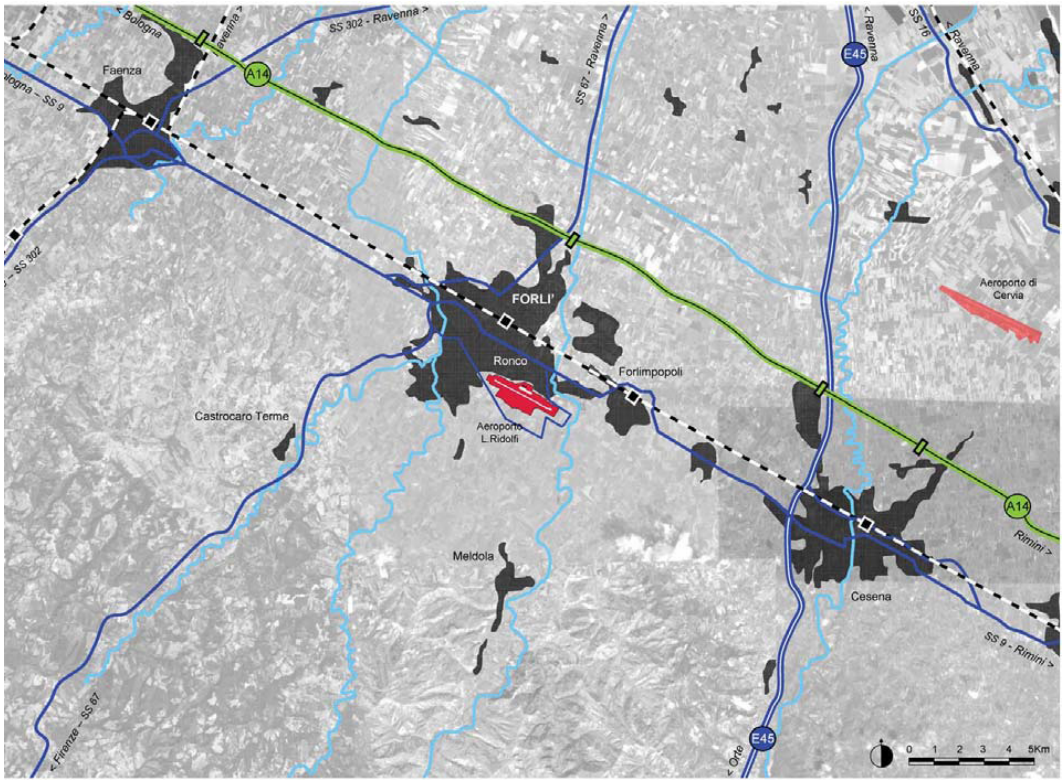
By way of integration of the present Status Quo Analysis, we report hereafter **some excerpts** from the "study into the Italian airport system, scenarios and development strategies" drafted in 2010 by **One Works, KPMG and Nomisma** commissioned by ENAC concerning the actual status of the remaining airports present in the regional territory, with particular reference to accessibility and infrastructural endowments.

- **Forlì "Luigi Ridolfi" Airport**

Position and role

The airport has had an autonomous growth tied to the commercial agreements with the low-cost carriers, so that more than 90% of the circulating traffic at Forlì airport (figures in 2008) is managed by the two low-cost companies Ryanair and Wind Jet. It is worth mentioning a substantial drop in the traffic in 2009, by around 30%, due mainly to the transfer of Ryanair from Forlì to Bologna.

Figure 1. Location of the Forlì Airport



Territorial framework

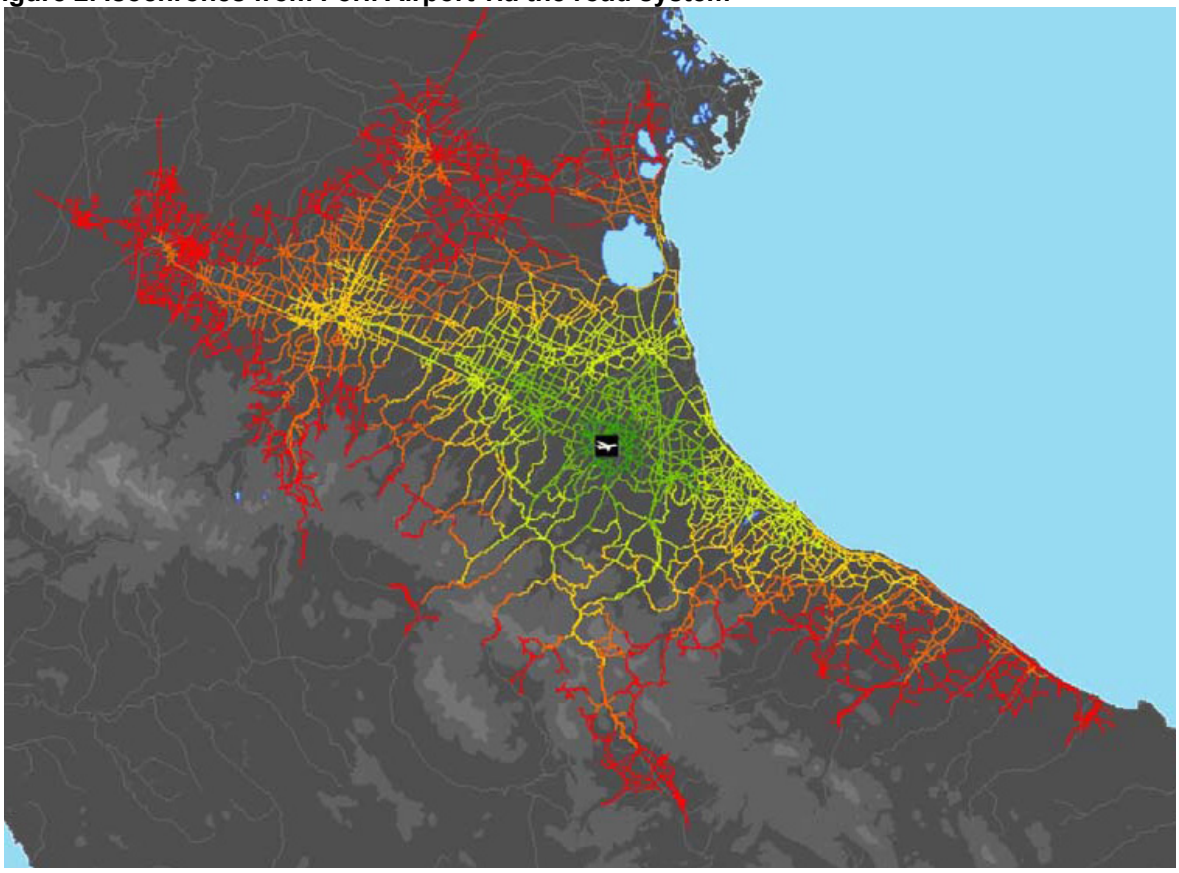
"Luigi Ridolfi" Airport of Forlì is located in the area to the south-east of the Romagna chief town, around 4 km from the city centre and 6 km in the south-east direction from the motorway tollgate of the A14 (Bologna - Ancona).

It is directly accessible from the urban road Via Emilia (Viale Roma) crossing the neighbourhood of Ronco. The airport land area is surrounded to the south by a large agricultural zone without buildings. In the northern and eastern zone the land area borders the outlying residential areas of I Forli.

Accessibility via road

The infrastructures capable of determining the expansion of the isochrones originating from Forlì airport are mainly the motorways A1 (Autostrada del Sole Milan-Naples), A13 (Bologna-Padua) and A14 (Adriatic Motorway Bologna-Taranto). They are capable of guaranteeing good accessibility above all from the north-west, connecting to Bologna in around one hour and Ravenna in just over half an hour.

Figure 2. Isochrones from Forlì Airport via the road system



The data relating to the municipalities affected by the isochrones show that around 360,000 inhabitants (equal to 10% of the total referring to the 90') reside inside the macro-belt 0-30', around 1,400,000 (equal to 39%) inside the macro-belt 30'-60' and around 1,900,000 (equal to around 51%) in the macro-belt 60'-90' (population data ISTAT 2008). The data relating to the workers (ISTAT 2001 data) shows that around 150,000 users (equal to 10%) are located in the first macro-belt, around 630,000 (equal to 41%) int eh second, and over 750,000 (equal to 49%) in the third.

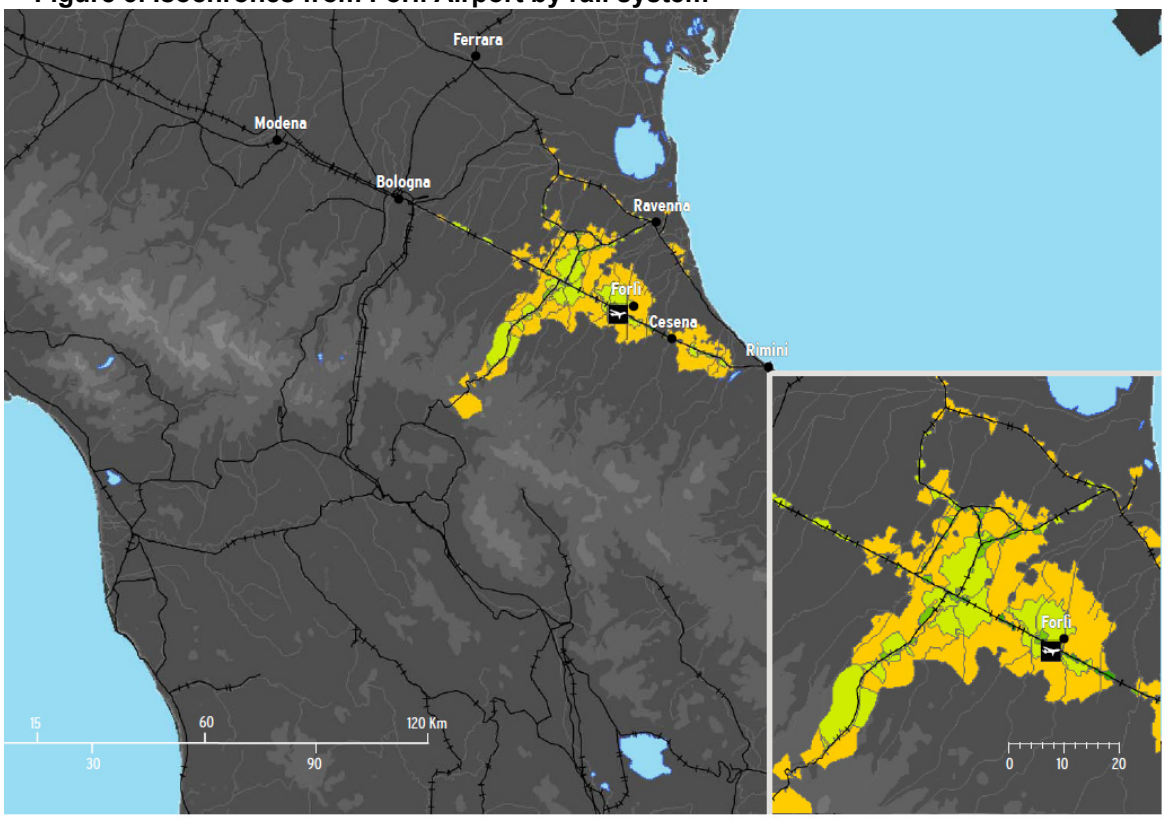
The territorial surfaces are distributed as follows:

- c.a. 1,300 km^2 (equal to around 8%) in the first macro-belt;
- c.a. 4,600 km^2 (equal to 28%) in the second macro-belt;
- c.a. 10,300 km^2 (equal to around 64%) in the third macro-belt.

Accessibility by rail

The railways station used is the city one, situated in the urban centre to the north of the Via Emilia. The ramified form of the isochrone goes back over the design present on the territory, reaching the municipalities of Imola, Ravenna and the territory of Rimini.

Figure 3. Isochrones from Forlì Airport by rail system



To the south of the line towards Florence it does not cover significant places and see the limit of 60 minutes reach the municipality of Borgo San Lorenzo. In the band of 30-45 minutes fall the municipalities of Faenza to the west, Lugo to the north and Cesena to the east.

In regard to the total of residents who have the chance to reach the railway station of reference in less than 60', 31% (equal to 430,000 people) is included in the macro-belt 0-30' and 69% (equal to almost one million inhabitants) is part of the macro-belt 30'-60' (ISTAT 2008 population data).

In the first macro-band there are also around 180,000 workers (equal to 29%) and in the second around 400,000 (equal to 71%) (ISTAT 2001 figures).

The territorial surface relating to the municipalities located inside the 2 macro-belts are:

- c.a. 1,400 km^2 (equal to 37%) in the first (0-30');
- c.a. 2,350 km^2 (equal to 63%) in the second (30'-60').

Current status of the airport and ongoing projects

In Forlì Airport major works of airport improvement were carried out in 2004 when Bologna airport was closed from May to June. In 2007 some work for the enlargement and upgrading of the functional spaces for the departures and the arrivals terminals were completed, to satisfy the needs stemming from a continuous rise in passenger traffic. The project for the move to a superior category of precision instruments for landing is ongoing.

Critical issues already formulated for future developments

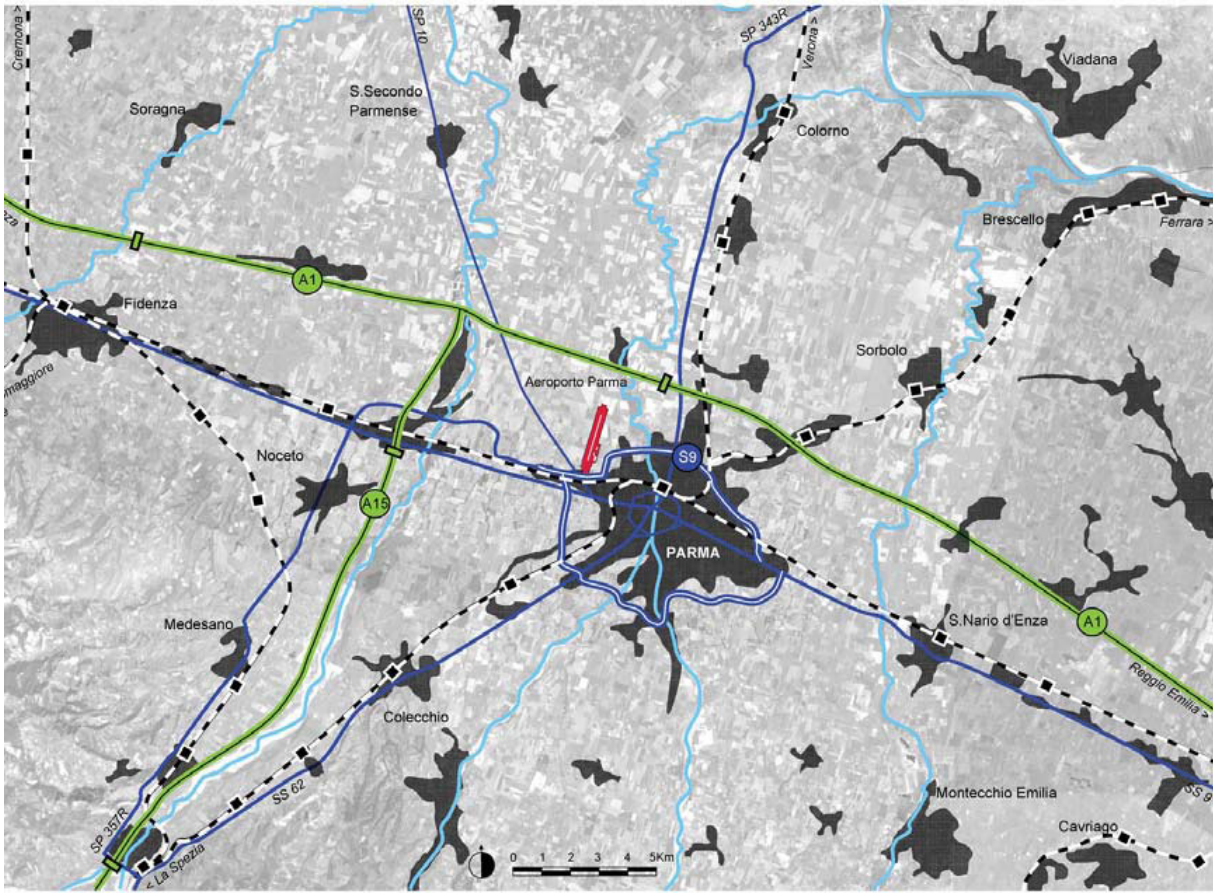
From the point of view of infrastructural endowments or the capacity for expansion, Forlì airport does not present important critical issues. The critical factor is instead the level of competition with the nearby airports of Bologna and Rimini. In the long-term management plan for the airport, during a study at the competent ENAC offices, the future needs of the airport were assessed and interventions were identified whose aim on the one hand if to increase the capacity of the airport system, in terms of aircraft, passengers and goods, and on the other eliminate the critical issues present in the current systems of flight infrastructures, road network access and car parking, as well as technological and network plants.

- **Parma "Giuseppe Verdi" Airport**

Position and role

Parma airport in the past few years has had difficulty developing owing to the scarce financial resources made available by the local stakeholder bodies. To support the growth path a procedure finalized to identifying a private partner willing to invest in a project for airport infrastructures was started and completed successfully in 2008. Parma airport present excellent development potential for its particular geographic location, at the intersection of roads having national importance, at the centre of a medium-sized city, potentially configured as a natural system of a metropolitan type. In that context, the airport can be an asset for the territory of reference that is made up of a catchment area of 1.2 million inhabitants in the immediate vicinity, not served by other airports.

Figure 4. Location of the Parma Airport



Territorial framework

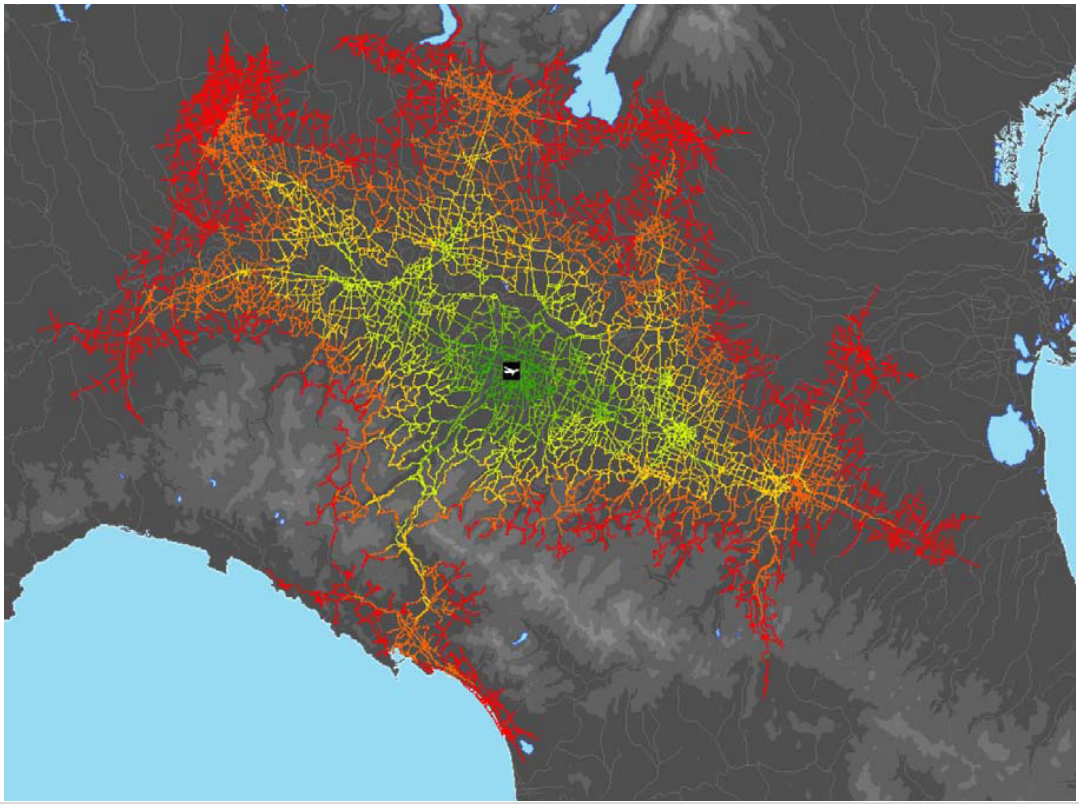
The airport is situated to the east of the residential centre of Parma, between the Autostrada del Sole and the northern bypass of the city (detour of the state road SS9 Via Emilia), from which you get direct access, by means of a dedicated junction. To the south of the airport runs the Bologna-Milan railway line.

It is worth mentioning the proximity to the Cisa A 15 motorway as well, which is just 9 kilometres away. It is 8 km from the centre of Parma. Within a range of just over 100 km you can reach the cities of Bologna, Piacenza, Milan, La Spezia, Modena, Mantua, Cremona and Reggio Emilia.

Accessibility via road

The substantial presence of key infrastructures. Like the A1 motorway (Autostrada del Sole Milan-Naples), A15 (Cisa Parma-La Spezia motorway), A21 (Autostrada dei Vini Turin-Piacenza-Brescia) and A22 (Autostrada del Brennero Brennero-Modena) means that the relative accessibility to Parma airport is well distributed across the whole territory, guaranteeing the connections with Bologna and Brescia in around 75' and with Milan in around 90'.

Figure 5. Isochrones from Parma Airport by road system



Over 650,000 inhabitants (equal to 6% of the total referred to the 90') can reach the airport in less than 30', while around 2,050,000 residents (equal to 20%) take between 30' and 60' and over 7,400,000 (equal to 74%) a time varying between 60' and 90' (ISTAT 2008 population data).

As regards the workforce, around 285,000 (equal to 7%) result to be included in the macro-band 0-30', around 870,000 (equal to 20%) in the macro-band 30'-60' and around 3,150,000 (equal to 73%) in the macro-band 60'-90' (ISTAT 2001 data).

The territorial surface referred to the municipalities affected by the 3 macro-bands result to be equal to around 2,200 km^2 (equivalent to 8%) for former, at around 7,600 km^2 (equal to 27%) for the second and around 18,300 km^2 (equal to 65%) for the third.

Accessibility by train

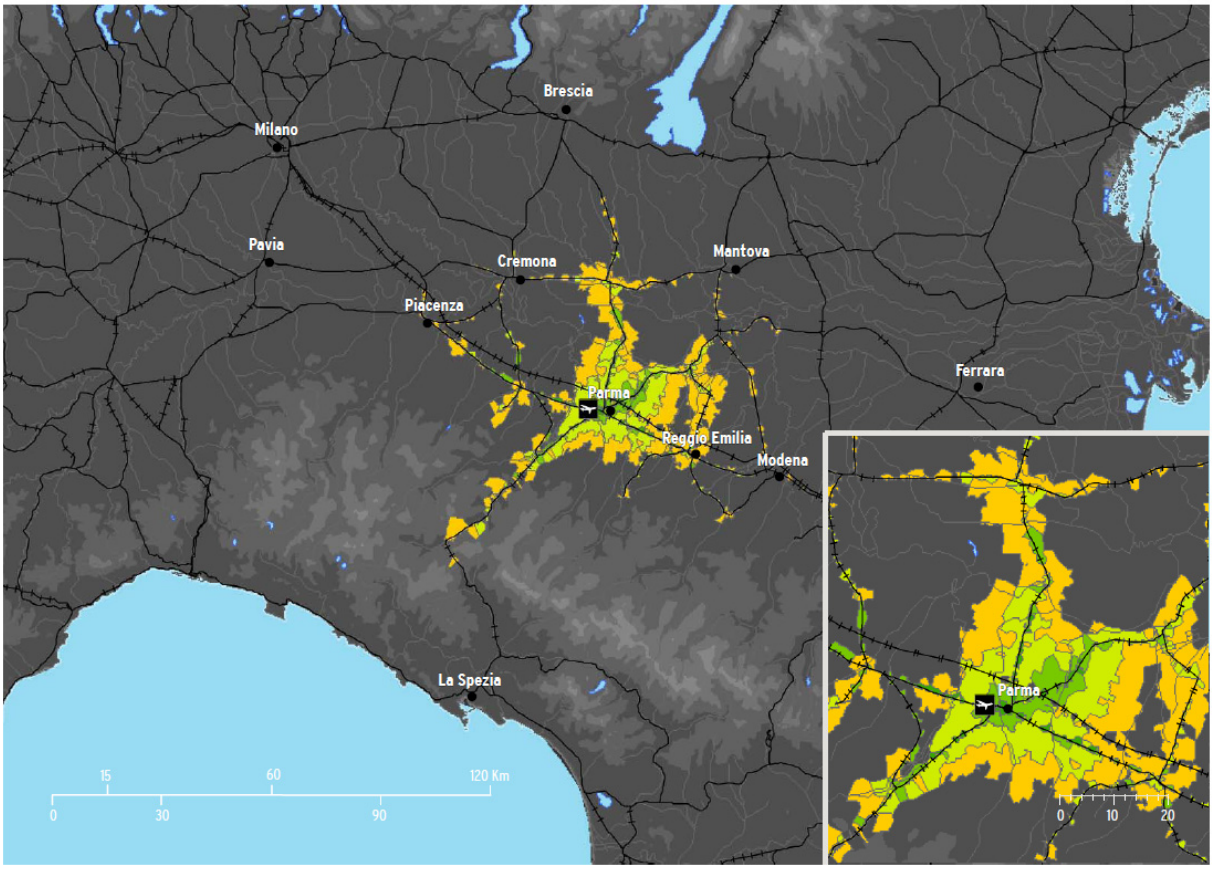
Parma airport, not far from the town centre, served by public service connecting with the city railway station.

The railway crosses the Po valley in every direction, connecting the cities of Piacenza and Bologna, along the Apennine backbone, and the cities of Brescia and La Spezia along the main road perpendicular to it. In 30' it is possible to reach the municipalities of Fornovo di Taro (south west), Reggio Emilia (south east), Guastalla (north east) and Fidenza (north west). The limit of the isochrones referring to the time brushes the municipalities of Borgo Val di Taro to the south west, Sassuolo to the south east, San Benedetto Po to the north east and Cremona/Piacenza to the north west.

The described railway network means that out of a total of around 1,300,000 inhabitants (ISTAT 2008 population data) who can reach the station of reference in less than one hour, around 540,000 (equal to 40%) are included in the first macro-band (0-30') and around 800,000 (equal to 60%) in the second (30'-60').

The presence of workers is rather similar: in the first macro-band (0-30') there are around 250,000 people (equal to 41%) and in the second (30'-60') around 350,000 (equal to 59%) (ISTAT 2001 data). The macro-band 0-30' covers a surface of around 1,500 km^2 (equal to 36%), while the macro-band 30'-60' stretches over around 2,600 km^2 (at 64%).

Figure 6. Isochrones from Parma Airport by rail system



Current state of the airport and ongoing projects

Parma airport has made infrastructural intervention both on the land side area and in the air side area addressed to the improvement of the infrastructure. In particular, from 2004 to 2008, the following works were carried out: interventions for the upgrading of the RESA of the headboard 20, upgrading of the RESA, Strip and shoulders of the airstrip 02/20 and the realization of a control system 100% for luggage in the hold. Ongoing are interventions addressed to improving the safety of the airside infrastructures and requalifying the current passenger terminal. The new control tower is being built.

Critical factors and indications already formulated for future developments

The future development of the airport will be determined by the Development Plan that will be drafted by the new private partner.

- **Rimini "Federico Fellini" Airport**

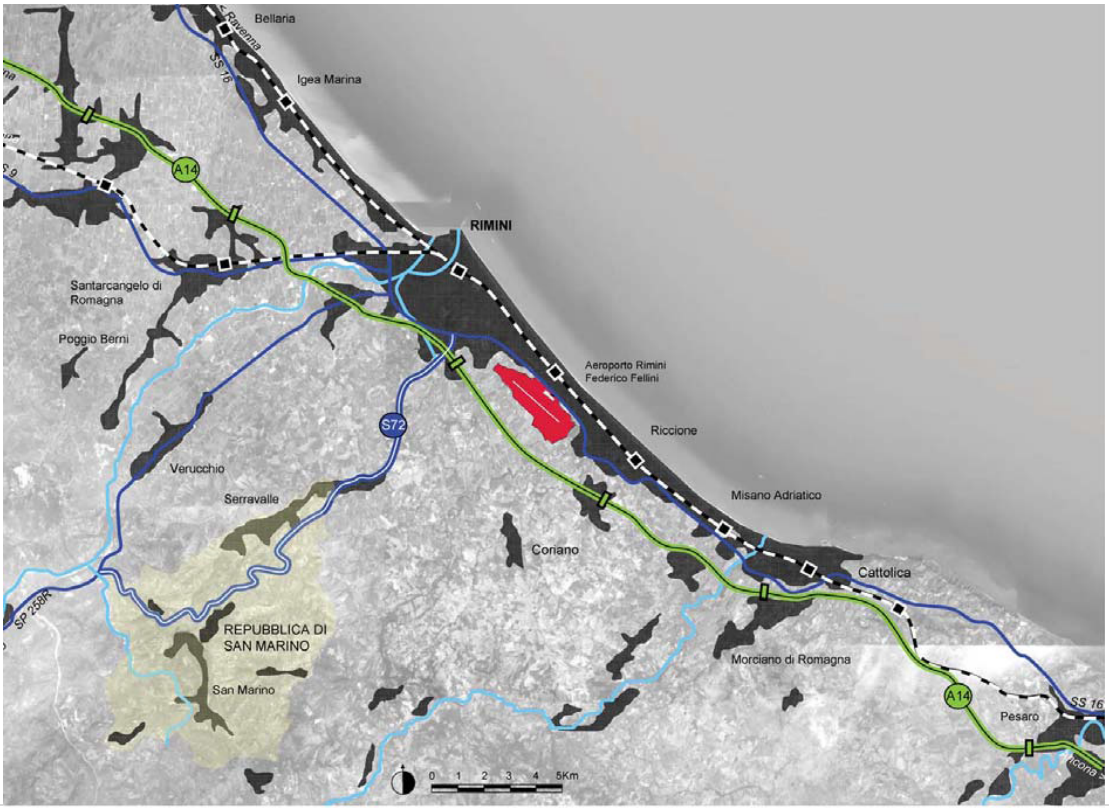
Positioning and role

The airport is ranked third in Emilia Romagna after Bologna and Forlì and is the one that is most of all characterised by the development of incoming charter and low-cost traffic, competing with the airport of Forlì. Rimini and its territory, which from the tourist point of view represent one of the most important holiday districts at European level, are in a strategic position in respect to the art and business locations of Emilia Romagna and the nearby regions of Marche, Tuscany and Umbria, a factor that can represent an opportunity for development for the airport as regards leisure traffic. The main runway, which is over 3 km in length, is the longest in Emilia Romagna and can thus aim at consolidating its role as airport of reference also for carriers that handle the large flows from Eastern Europe.

Territorial framework

The airport is situated to the south east of the city of Rimini, at around 8 km from the centre in the Miramare area, and is positioned adjacent to the state road SS 16. The airport is less than one kilometre from the Adriatic Sea, and nearby there is the theme park Fiabilandia and a large commercial and productive centre.

Figure 7. Location of the Rimini Airport

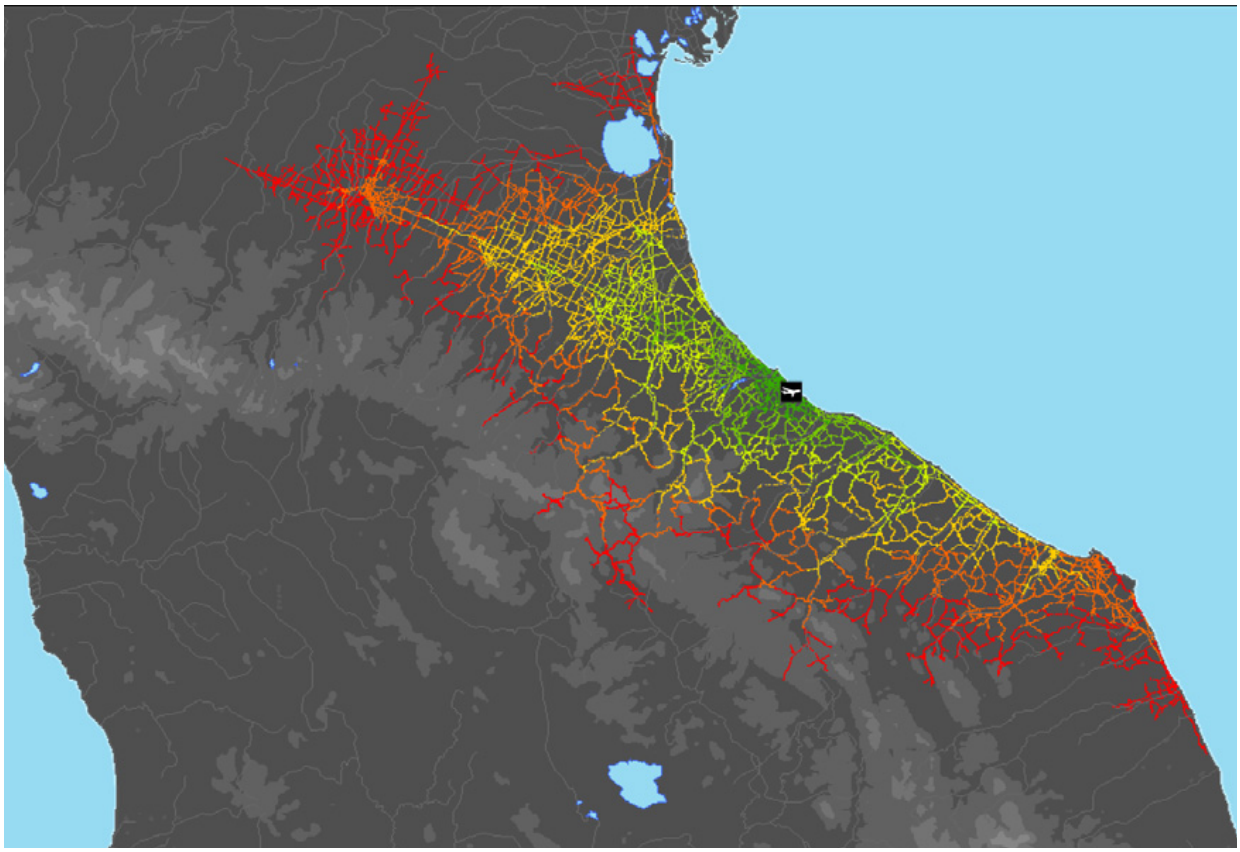


The international airport “Federico Fellini” can be reached from Bologna and Ancona via the motorway A14, exit at Rimini south or Riccione, from Ravenna via the state road SS 16 Adriatica, from Perugia by the highway E45, from Milan, Rome, and other locations via road, motorway, rail and air connections. .

Accessibility by road

The infrastructure of superior level capable of defining the expansion of the isochrones originating from Rimini airport of the motorway A14 (Autostrada Adriatica Bologna-Taranto) that runs along the Adriatic coast, guaranteeing the connection with Bologna in around 90’ and with Ancona in around 75’. Accessibility through the hinterland is possible by the presence of some state roads like the SS. 9 (Via Emilia) and the SS. 73bis (Bocca Trabaria).

Figure 5. Isochrones from Rimini Airport by road system



The road network described means that out of a total of around 3,200,000 inhabitants (population data from ISTAT 2008) that can reach the airport in under one and a half hours, around 550,000 (equal to 17%) are included in the first macro-band (0-30’), around 900,000

(equal to 28%) in the second (30'-60') and around 1,700,000 (equal to 55%) in the third (60'-90').

The workers relating to the 3 macro-bands are thus distributed (ISTAT 2001 data):

- c.a. 220,000 (equal to 17%) in the first;
- c.a. 330,000 (equal to 25%) in the second;
- c.a. 770,000 (equal to 58%) in the third.

The first macro-band covers a surface of around 1,000 km^2 (equal to 7%), the second of over 4,400 km^2 (equal to 33%), while the third of around 8,200 km^2 (equal to 60%).

Accessibility by train

The railway station Rimini Central represents the starting point for the isochrone accessibility on rail referred to the "Federico Fellini" Airport of Rimini. The rail infrastructure follows the pattern of the Adriatic coast and sees the divergence of the line to the north of the airport, connecting Rimini to Ravenna and Bologna.

By means of the railway service, it is possible to reach Pesaro in 30', to the south east, and Cervia/Cesena to the north-west. Instead it is possible to reach Senigallia towards the south east and Ravenna/Forlì towards the north west.

Almost 320,000 inhabitants (equal to 34% of the total referring to 60') can reach the station of reference in less than 30', while just under 650,000 residents (equal to 66%) get there by train in a time varying between 30' and 60' (ISTAT 2008 population data).

In regard to the workers, an analogous distribution is evidenced: around 120,000 people (32%) result to be included in the macro-band 0-30', the remaining 68% (around 250,000) in the macro-band 30'-60'.

The affected territory comprises almost 2,200 km^2, 18% of which results to be reachable within 30 minutes (375 km^2) and the remaining 82% (around 1,750 km^2) is reachable between 30 and 60 minutes.

In any case, present at around 1km from the airport is the railway station of Rimini-Miramare on the Bologna-Ancona line, where usually only regional trains stop on an occasional basis.

Figure 6. Isochrones from Rimini Airport by rail system