EU Strategy for the Adriatic and Ionian Region
EUSAIR

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European Regional Development Fund - Instrument for Pre-Accession II Fund
EUSAIR FACILITY POINT

EUSAIR Transport MasterPlan

Volume 6

Air transport

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This Volume is part of the *Transport Masterplan of the Adriatic-Ionian Region*, elaborated by the *EUSAIR Facility Point* with the technical assistance of *PTSCLAS*, *TPS Pro* and *Systematica*, with the collaboration of *Tplan Consulting*, under the supervision of *Prof. Pierluigi Coppola* (Politecnico di Milano). Credits for reviewing and editing goes to *Dr. Francesco de Fabiis* (Politecnico di Milano).

The Masterplan includes the following volumes:

Volume 1 – Executive Summary

Volume 2 – Maritime Transport

Volume 3 – Inland Waterway Transport

Volume 4 – Road Transport

Volume 5 – Rail Transport and related Intermodality

Volume 6 – Air Transport

Volume 7 – Accessibility to urban nodes and tourist attractions

Introduction and methodology

In an era defined by global connectivity and sustainable development, the air transport system plays a pivotal role in fostering economic growth, tourism, and environmental sustainability. This report delves into the current characteristics of the air transport system within the EUSAIR (European Union Strategy for the Adriatic and Ionian Region) macro-region, shedding light on the unique challenges and opportunities faced by the countries encompassing this dynamic area.

The following report provides a detailed study of the current air infrastructure in the Adriatic-Ionian Region.

It starts by identifying the major airports in the region for both passenger and cargo, followed by the detail study of airports infrastructure, the air traffic for both passenger and freight, and the integration of air transport with the primary intermodal logistics platforms. Implementation of the SESAR system, availability, and diffusion of alternative ecological fuels.

The first part of the study is divided by country, providing information regarding each selected airport, followed by infrastructure and connection and air transport traffic. This chapter sets the stage by examining the present state of the air transport system within the EUSAIR macro-region. It explores vital aspects such as airport infrastructures, connectivity, and traffic, focusing on each member country's distinctive landscape.

The second part includes Cross-cutting Themes, this section delves into overarching themes that transcend national borders within the EUSAIR macro-region, including the implementation of the SESAR system, the availability and diffusion of alternative ecological fuels, sustainable aviation fuels, carbon reduction policies, and the integration of air transport with the main intermodal logistics platforms.

The report continues with the identification of the main key issues. Understanding the challenges faced by the region, this section pinpoints key issues such as passenger rail connections in the airports, rail freight connections, interconnections between airports and ports, and other critical factors that impact air transport.

It concludes by identification of key issues for each country for air transport. This subsection, delves into specific challenges unique to each member country in the EUSAIR macro-region, providing insights into the diverse dynamics that shape their air transport systems.

The methodology for selecting airports in the Adriatic-Ionian region is structured into two distinct rounds, addressing the primary and secondary airports, for both passenger and cargo traffic. These two rounds aim to ensure comprehensive representation of key airports within the region.

Round 1: Selection of Primary Airports

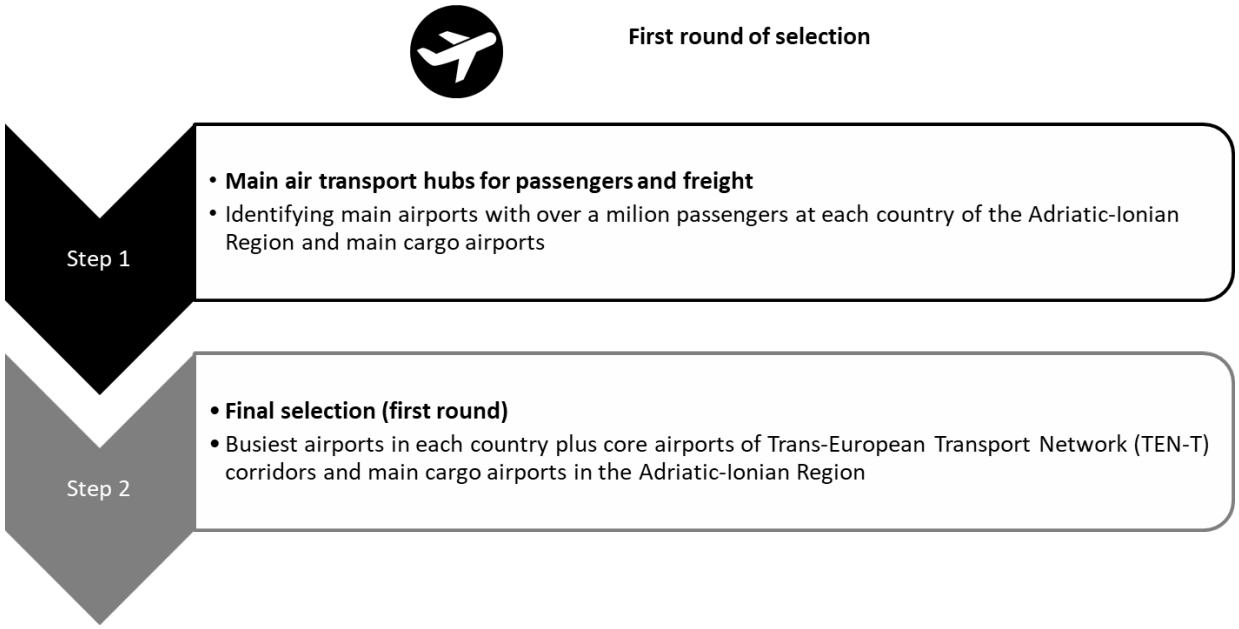
The first step involves identifying the main airports in each Adriatic-Ionian macro-region country followed by the airports with an annual passenger count exceeding one million and major cargo airports that play significant role in handling highest cargo traffic in the macro-region. Thirty airports where identified with the mentioned characteristics in the EUSAIR macro-region.

The final selection among the identified main airports includes the busiest airport in each country, this ensures representation from each nation. Additionally the core airports of Trans-European Transport Network (TEN-T) corridors and the main cargo airports in the Adriatic-Ionian Region are included in the final

selection to ensure a balanced representation. Twenty one airports are chosen in this round as primary airports for further studies.

The diagram below summarizes the methodology for selecting primary airports.

Figure 1 Primary airport selection methodology



The following table and map show the primary airports selected for the detailed study.

Table 1 List of selected primary airports

Country	Selected Airports (first round)
Albania	Tirana International Airport Nënë Tereza
Bosnia and Herzegovina	Sarajevo International Airport
Croatia	Zagreb Franjo Tuđman Airport Rijeka International Airport Split Airport
Greece	Athens International Airport Thessaloniki Airport
Italy	Milan Malpensa Airport Orio al Serio International Airport Venice Marco Polo Airport Catania–Fontanarossa Airport Bologna Guglielmo Marconi Airport Falcone Borsellino Airport Milan Linate Airport Bari Karol Wojtyła Airport Brindisi-Papola Casale Airport (Aeroporto del Salento)
Montenegro	Podgorica International Airport Tivat Airport

North Macedonia	Skopje International Airport
Serbia	Belgrade Nikola Tesla Airport
Slovenia	Ljubljana Jože Pučnik Airport

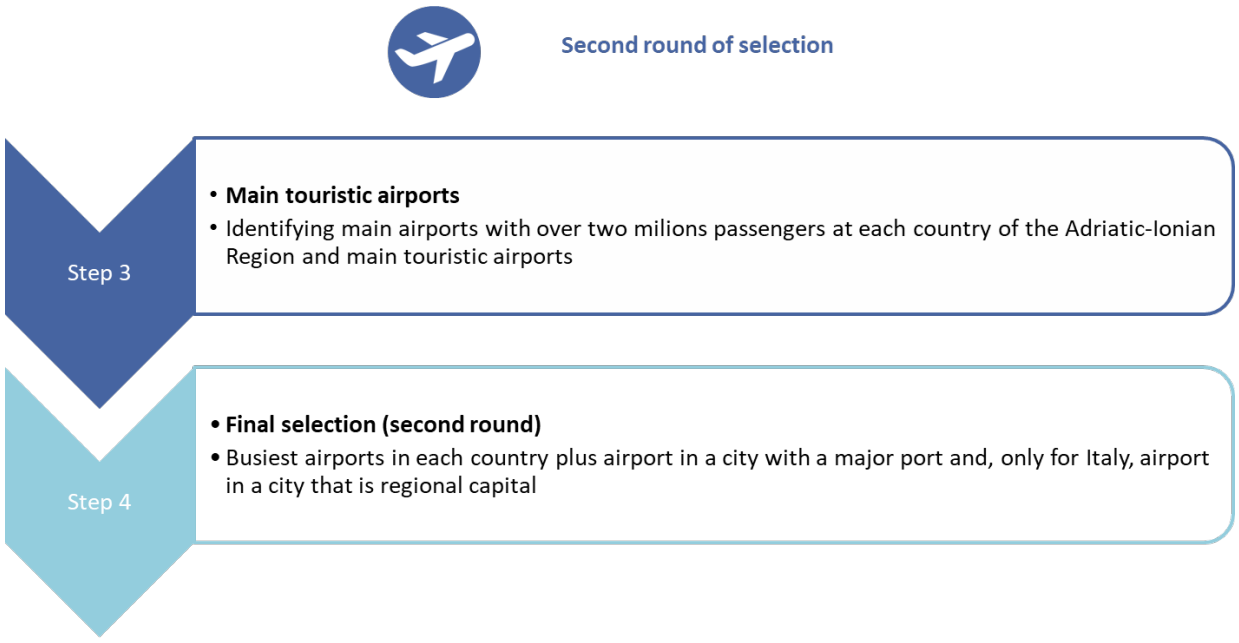
Round 2: Selection of Secondary Airports

The first step involves identifying the main touristic airports in each Adriatic-Ionian macro-region country followed by airports with an annual passenger count exceeding two million in the recent years and airports located within major port cities. Additionally in case of Italy, airports located in the regional capital cities are included in the selection.

Based on the established criteria, a subset of secondary airports is chosen to complement the primary airports selected in Round 1. These secondary airports contribute to the region's tourism and economic development. Twelve airports are selected as secondary airports for further analysis.

The diagram below summarizes the methodology for selecting the secondary airports in the macro-region.

Figure 2 Second round of selection methodology



The following table shows the additional airports selected for the detailed study.

Table 2 List of selected secondary airports

Country	Selected Airports (first round)
Croatia	Dubrovnik Airport
Greece	Heraklion Airport Rhodes Airport Corfu Airport Kos Airport Santorini Airport
Italy	Verona Airport

	Treviso Airport Trieste Airport Lamezia Terme Airport Pescara Airport Ancora Airport

This multi-round approach allows for the inclusion of airports with diverse functions and significance within the region. It ensures a well-rounded representation of airports, thereby facilitating a thorough analysis of the air transport system and its various components. These selected airports serve as the foundation for further research and analysis in subsequent phases of this study.

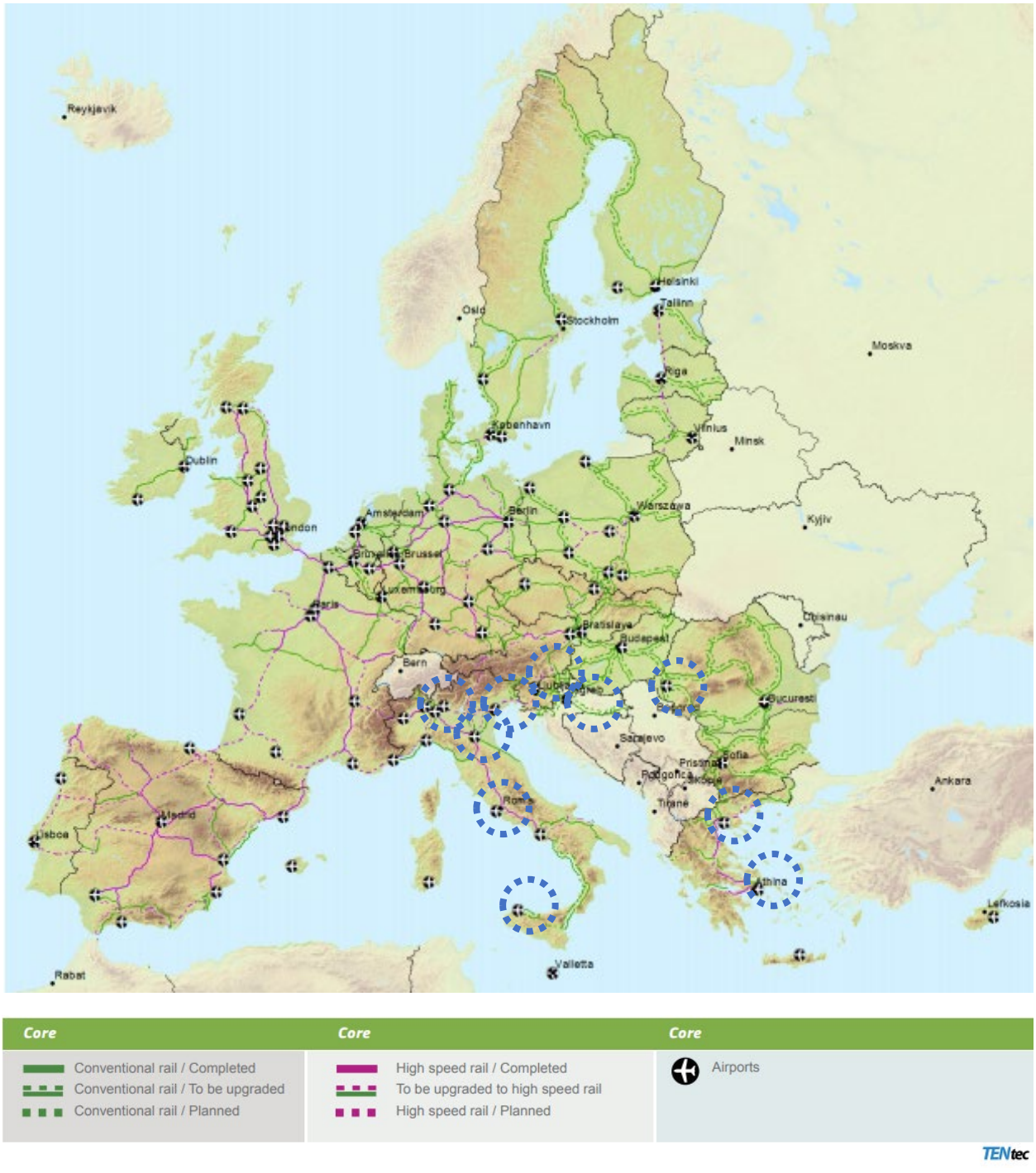
The following map shows all the selected airports as primary and secondary airports for

Figure 3 Selected airports

As mentioned in the methodology, the core airports of the TEN-T network are selected as primary airports; the following maps[1] shows the mentioned airports.

[1] Core Network: Railways (passengers) and airports in EU Member States

Figure 4 TENT network and core airports



The following table shows all the airports identified in the first step of the primary airport selection for the study with indications of their location and their traffic in 2019 for both passenger and cargo, followed by indicating EU and regional corridors passing through their region.

Table 3 Airports identifies in the first step of primary airport selection

	Location	Annual Passenger Traffic (2019)	Airport Cargo Traffic in Tonne (2019)	Pan-European corridors	Trans-European Transport Network (TEN-T)	Adriatic–Ionian Motorway corridor
Albania						
Tirana International Airport Nënë Tereza	Tirana	3,338,147	2,372			Adriatic–Ionian Motorway
Bosnia and Herzegovina						
Sarajevo International Airport	Sarajevo	1,143,680	13,671			
Croatia						
Zagreb Franjo Tuđman Airport	Zagreb	3,435,531	12,881	Corridors 5 & 10	Mediterranean Corridor / Rhine–Danube Corridor	
Rijeka International Airport	Rijeka	200,841	1,026	Corridor 5	Mediterranean Corridor	Adriatic–Ionian Motorway
Split Airport	Split	3,301,930	273			Adriatic–Ionian Motorway
Greece						
Athens International Airport	Athens	25,574,030	103,615		Orient/East–Med Corridor	
Heraklion International Airport	Heraklion	7,933,558	NA			
Thessaloniki Airport	Thessaloniki	6,897,057	NA	Corridor 4 & 10		
Rhodes International Airport	Rhode	5,542,567	NA			
Ioannis Kapodistrias (Capodistrias) International Airport	Corfu	3,275,897	NA			
Chania International Airport "Daskalogiannis"	Chania	2,983,542	NA			
Kos International Airport	Kos	2,676,644	NA			
Santorini (Thira) International Airport	Santorini	2,300,408	NA			
Zakynthos International Airport	Zakynthos	1,810,427	NA			
Mykonos Airport	Mykonos	1,520,145	NA			
Italy						
Milan Malpensa Airport	Milan	28,846,299	558,481		Mediterranean Corridor / Rhine–Alpine Corridor	
Orio al Serio International Airport	Bergamo	13,857,257	93,764			
Venice Marco Polo Airport	Venice	11,561,594	49,425	Corridor 5	Baltic–Adriatic Corridor / Mediterranean Corridor	
Catania–Fontanarossa Airport	Catania	10,223,113	5,772			
Bologna Guglielmo Marconi Airport	Bologna	9,405,920	33,754		Baltic–Adriatic Corridor / Scandinavian–Mediterranean Corridor	
Falcone Borsellino Airport	Palermo	7,018,087	NA		Scandinavian–Mediterranean Corridor	
Milan Linate Airport	Milan	6,570,984	7,586		Mediterranean Corridor / Rhine–Alpine Corridor	
Bari Karol Wojtyła Airport	Bari	5,545,588	19,323		Scandinavian–Mediterranean Corridor	
Verona Villafranca Airport	Verona	3,638,088	NA		Scandinavian–Mediterranean Corridor / Mediterranean Corridor	

Brindisi Airport	Brindisi	2,697,749	11			
Montenegro						
Podgorica International Airport	Podgorica	1,297,365	882			Adriatic–Ionian Motorway
Tivat Airport	Tivat	1,367,282	7,049			
North Macedonia						
Skopje International Airport	Skopje	2,360,400	3,407	Corridor 8 & 10		
Serbia						
Belgrade Nikola Tesla Airport	Belgrade	6,159,000	25,543	Corridors 7 & 10	Rhine–Danube Corridor	
Slovenia						
Ljubljana Jože Pučnik Airport	Ljubljana	1,721,355	24,874	Corridor 5 & 10	Mediterranean Corridor	

1 Current characteristics of the air transport system in the EUSAIR macro-region

This chapter provides a comprehensive overview of the current state of air transport within each country of the EUSAIR macro-region. It delves into the vital aspects of airports, encompassing their infrastructures, connectivity, and traffic patterns. Through detailed analysis and examination, it aims to uncover the key elements that shape the air transport landscape in this dynamic and strategically significant region.

1.1 Airports: infrastructures, connections, and traffic

1.1.1 Albania

According to the selection criteria above, the only airport chosen for Albania is the Tirana International Airport "Nënë Tereza." Following a brief introduction of the airport according to the available primary information on the official website[2].

1.1.1.1 Tirana International Airport

About 17 kilometers from the country's capital, Tirana, Tirana International Airport "Nënë Tereza" (IATA: TIA, ICAO: LATI) is Albania's most important air transport hub. It connects this south-eastern European country with Europe's major business centers and, among its many contributions, is supporting tourism development along Albania's nearly 450-kilometer-long Mediterranean coastline. Since 23 April 2005, the airport has been privately managed. Within the framework of a BOOT (Build, Own, Operate, and Transfer) concession, a new operating company became responsible for running the airport, with all the rights of an owner, and for undertaking construction and development. At the end of the concession period, in 2027, the airport will be transferred back to the Albanian state.

Operating airlines in the Tirana International Airport are the following:

Aegean Airlines

- Air Albania
- Air Cairo
- Air France
- Air Montenegro
- Air Serbia
- airBaltic
- Albawings
- Austrian Airlines
- British Airways
- Buzz
- Corendon Airlines
- easyJet

[2] https://www.tirana-airport.com/media/15831582891599Company_Broshure_ENG.pdf and https://www.tirana-airport.com/media/611a2e38ea365.pdf

- Enter Air
- Eurowings
- flydubai
- flynas
- Freebird Airlines
- Gulf Air
- Iberia
- Israir Airlines
- ITA Airways
- Jazeera Airways
- LOT Polish Airlines
- Lufthansa
- Norwegian Air Shuttle
- Pegasus Airlines
- Ryanair
- Smartwings
- SunExpress
- Swiss International Air Lines
- Transavia
- TUI fly Belgium
- Wizz Air

The new passenger terminal started operations on 22 March 2007, while on 9 September 2009, Tirana International Airport marked the opening of a new expanded Airport, setting new standards of comfort, and service for passengers. Since 2005, more than EUR 70 million have been invested in the reconstruction and expansion of the airport.

Tirana International Airport (TIA) has begun one of the essential projects called "Airfield 2020," which rehabilitates runways and taxiways that enable aircraft movement in the airside.

The "Airfield 2020" project will be implemented in several phases. The Taxiways W and B, part of the project's first phase, are in the stage of reconstruction with a length of about 1.5 km, in compliance with the requirements and standards of aircraft expected to operate in TIA next year.

The 45m width of the taxiways is designed within national and international standards and regulations for Category E aircraft that have Speed 166 knots or more and will also be equipped with new drainage and lighting systems. Along with all the airfield restructuring, it is also being operated with flights to new destinations.

Since 2006, TIA has implemented an Environmental and Quality Management System oriented to ISO standards 14001, 50001, and 9001.

Tirana International Airport has designed a Quality Policy to fulfill top international facilities, safety, security, and comfort standards. In doing so, it shows its attentiveness to the satisfaction of passengers, airlines, and other Airport users.

In January 2013, Tirana International Airport (TIA) became carbon accredited at the Mapping level. Airport Carbon Accreditation is a certification for the carbon management of airports. The program evaluates the efforts of airports to manage and reduce their carbon emissions, with four levels of award, namely Mapping, Reduction, Optimization, and Neutrality. Energy efficiency, energy saving, and reduction of carbon emissions already play a significant role in TIA's development and business strategy. The provision of resources and information, and the involvement of management and employees, all required to achieve these objectives, is another crucial aspect of TIA's Energy Policy.[3]

In 2020, TIA served 1,310,614 passengers. The airport also recorded 15,150 air traffic movements (ATMs) and handled 1,798 tons of cargo. Compared with the previous year, the effects of lockdown and travel restrictions have reduced passenger numbers by 60.7 percent, ATMs decreased by 46.4 percent, and cargo decreased by 24 percent. In 2019, about 30 scheduled airlines (including scheduled charters) operated into and out of TIA, directly connecting the Albanian capital city with 50 destinations. TIA committed to offering its passengers, airlines, and business customers the best service and continued the operation, taking all precautionary measures for the health and well-being of all airport users.

In December 2020, Kastrati Group Sha acquired the shares of Tirana International Airport from Chinese shareholders "Real Fortress Limited," marking an excellent development for the airport and country and a new vision for air transport. A complete package of investments totaling approximately € 100 million will be the focus of the new management to expand the airport's accommodation capacity to 6 million passengers per year, runway extension, complete improvement of airport infrastructure, and significant improvement of service quality.

Tirana International Airport Cargo Department is the leader in Albania for cargo handling, sales, shipping, and logistics. Following the opening of the new Cargo Terminal in April 2007. It offers international standards and solutions to all carriers operating in Tirana. TIA Cargo Export is currently the only accredited International Air Transport Association (IATA) member in the country. New facilities – refrigeration room, cold room – enable the handling and processing of all kinds of perishable cargo, while the well-coordinated and spacious warehouse intends to meets all storage needs, irrespective of volume or weight. TIA Cargo Handling can accommodate special loads and dangerous goods on-site structures and staff.

The following paragraphs show the main facts and figures regarding Infrastructures, Connections, and Passengers.

1.1.1.2 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airport, including the location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct connection to the EUSAIR main cities and link to the city center by mode of transport.

Table 4 Infrastructures and connections in selected airports in Albania

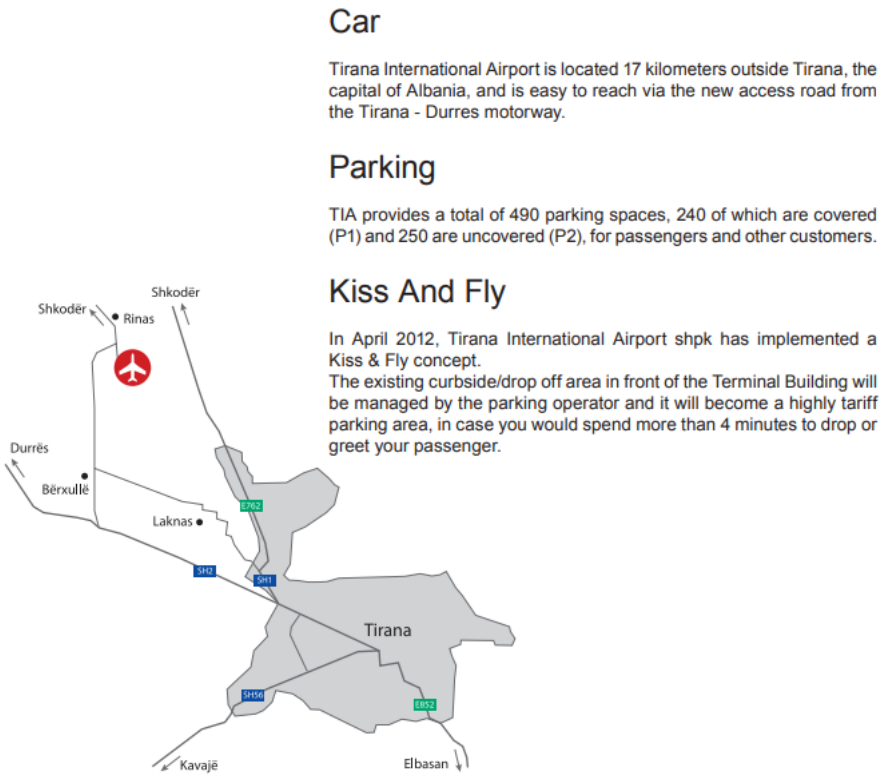
	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City

[3] tirana-airport.com

Tirana International Airport Nënë Tereza	Tirana	1 Terminal for passengers - 1 runway	Athens, Bari, Pescara (starts in May), Perugia (from June to October), Ancona, Rimini (from June to October), Bologna, Milan–Malpensa, Bergamo, Verona, Venice (ends in October), Treviso (starts in June), Belgrade, Ljubljana	Bus, Taxi

Figure 5 Operating airlines and routes map of Tirana International Airport

Figure 6 Accessibility to Tirana Airport from nearby cities



1.1.1.3 Traffic

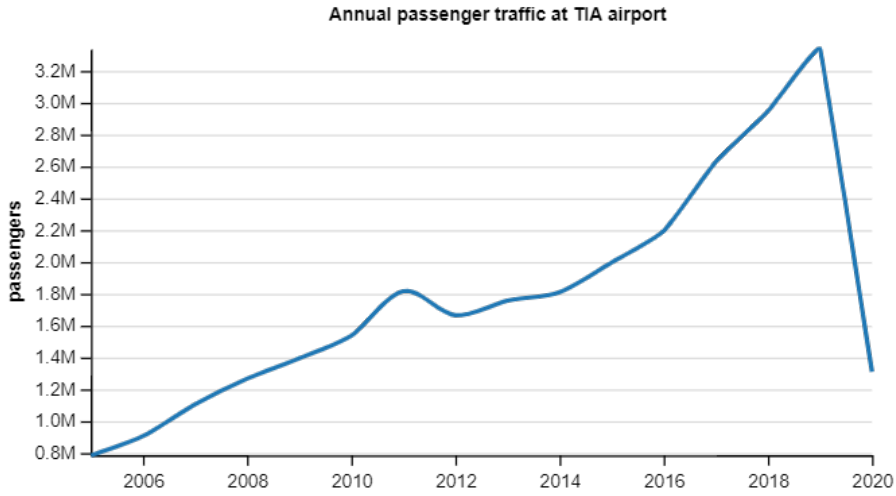
The following table indicates the air traffic for passengers and freight in the selected airport of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

Table 5 Traffic in selected airports in Albania[4]

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Tirana International Airport Nënë Tereza	Tirana	3,338,147	2,372 t

[4] https://web.archive.org/web/20200810120604/https://www.tirana-airport.com/media/15795173093894Traffic_Report_2019.pdf

Figure 7 Annual passenger traffic in Tirana International Airport



1.1.2 Bosnia and Herzegovina

According to the selection criteria above, the Sarajevo International Airport is the only airport chosen for Bosnia and Herzegovina. Following a brief introduction of the airport according to the available primary information on related websites5.

1.1.2.1 Sarajevo International Airport

Sarajevo International Airport (Bosnian: Međunarodni aerodrom Sarajevo/Међународни аеродром Сарајево); (IATA: SJJ, ICAO: LQSA), also known as Butmir Airport, is the leading international airport in Bosnia and Herzegovina, serving Sarajevo, capital of Bosnia and Herzegovina. It is located 3.3 NM (6.1 km; 3.8 mi) southwest of the Sarajevo railway station and some 6.5 NM (12.0 km; 7.5 mi) west of downtown Sarajevo in the Ilidža municipality, a suburb of Butmir. In 2019, 1,143,680 passengers traveled through the airport, compared to 323,499 in 2001.

Sarajevo Airport opened on June 2, 1969 for domestic traffic. In 1970, Frankfurt became the first international destination served. After the stop for regular flights due to the Bosnian war in the early 1990s, the airport re-opened to civilian air traffic on August 16, 1996 and has since been renovated and slowly restored. In May 2015, work started on expanding Sarajevo International Airport to the following actual size.

Sarajevo International Airport offers a range of facilities and services to accommodate passengers efficiently. With a maximum annual passenger capacity of 1,000,000. For check-in procedures, the airport boasts 15 traditional check-in counters, supplemented by two self-check-in counters, streamlining the passenger processing experience. Travelers have access to five gates, including three equipped with air bridges for boarding convenience.

In terms of amenities, the airport features a Duty-Free Shop, providing passengers with the opportunity to shop for a variety of products. Additionally, there are three restaurants and bars, ensuring that travellers can find refreshments and meals while waiting for their flights. A point kiosk is available, offering essential travel items. The presence of a Post Office further facilitates communication and mailing needs for passengers.

Access to cash is made easy with five ATM machines. In terms of airline options, Sarajevo International Airport serves as a hub for ten different airlines, offering diverse travel choices. Travelers seeking rental cars have the convenience of selecting from nine car rental providers, enhancing transportation options for their journey.

The Cargo Services Sector, operating as an organizational unit within P.C. "SARAJEVO" International Airport Ltd. Sarajevo, offers a comprehensive range of services to meet various cargo and logistical needs. These services encompass the handling of goods and mail, including special shipments such as dangerous goods (DG), valuable cargo (VAL), and perishable items (PER), among others. The sector also manages documentary processes and provides sales of air waybills.

In terms of storage, the Cargo Services Sector accommodates imported goods, with the exception of specific categories such as animals (AVI), human remains (HUM), radioactive materials (RRY, RRW),

[5] https://www.sarajevo-airport.ba/Page/Op%C4%87e-informacije - https://en.wikipedia.org/wiki/Sarajevo_International_Airport

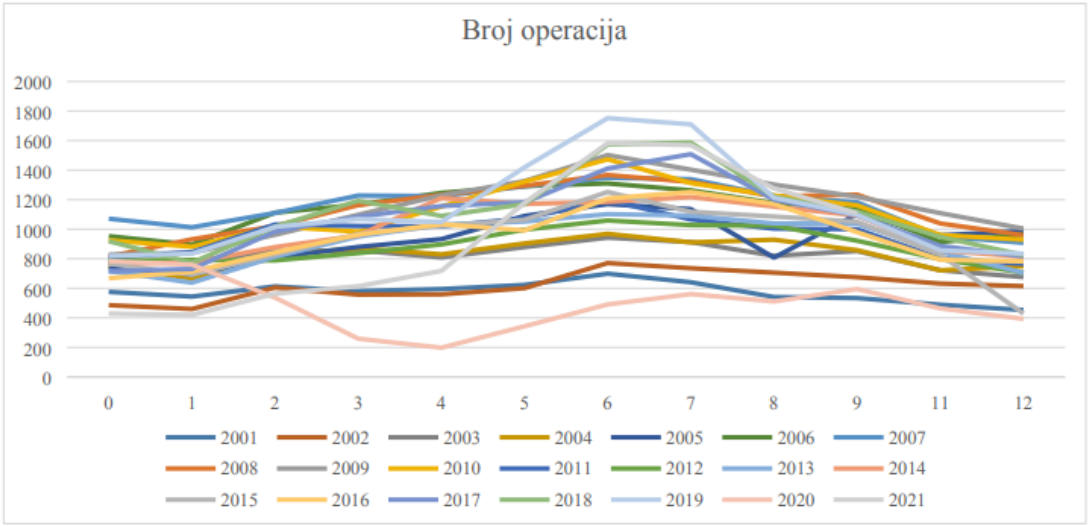
valuable/money shipments (VAL), and veterinary medicines. Storage of ammunition is subject to approval by the Border Police Unit and Customs Office at Sarajevo Airport. Furthermore, the sector offers the convenience of door-to-door delivery services using airport vehicles.

The main partners are airlines (Turkish Airlines, Lufthansa, Adria Airways, Croatia Airlines, Air Serbia, Austrian Airlines, and Pegasus Airlines), forwarding agents, sales agents, courier services, diplomatic missions, and similar.

The following table and graph report the official statistics data for the last twenty years related to the number of operations (broj operacija) and the number of passengers (broj putnika) [6].

Figure 8 Number of operations in Sarajevo Airport

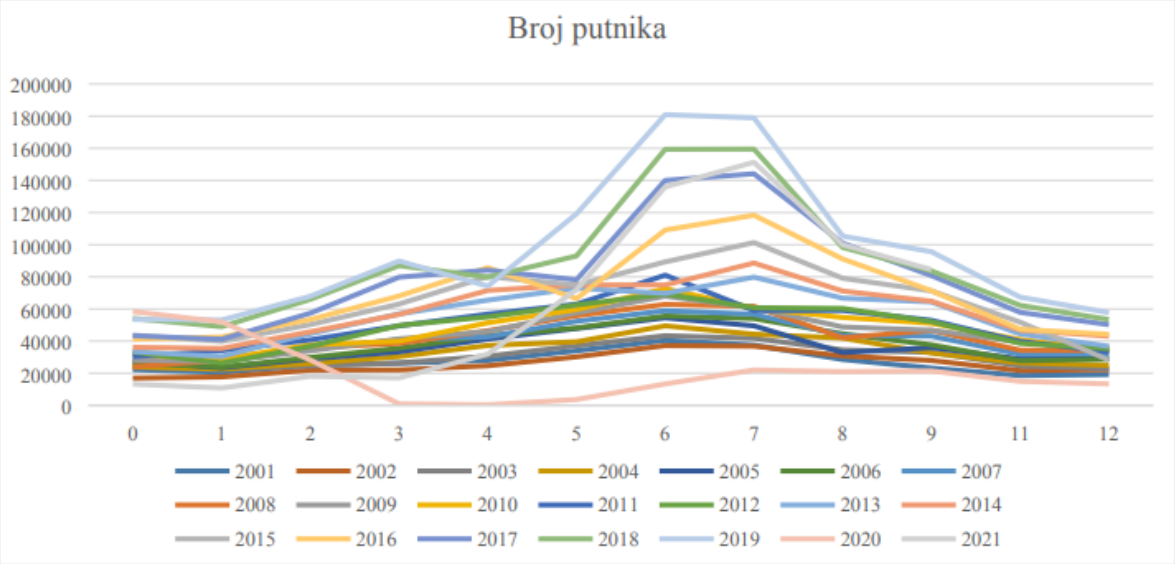
Broj operacija													
Godina	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**	**Ukupno**
2001	576	544	613	581	595	623	699	641	541	534	489	453	**6889**
2002	486	460	605	557	559	601	771	736	706	675	632	615	**7403**
2003	773	785	850	856	809	879	943	913	820	852	722	676	**9878**
2004	751	665	823	871	830	904	969	911	929	858	722	749	**9982**
2005	740	695	808	880	933	1090	1170	1136	808	1102	959	988	**11309**
2006	953	896	1112	1166	1246	1292	1310	1263	1177	1141	914	963	**13433**
2007	1071	1013	1110	1228	1224	1290	1348	1339	1225	1182	953	908	**13891**
2008	815	932	1021	1163	1232	1294	1367	1320	1222	1234	1039	960	**13599**
2009	828	841	962	1098	1229	1326	1502	1403	1302	1220	1109	1004	**13824**
2010	925	881	1020	983	1153	1321	1473	1312	1228	1161	961	929	**13347**
2011	806	845	1032	1022	1020	1074	1196	1066	1004	1000	803	765	**11633**
2012	786	792	789	838	897	997	1059	1028	1024	922	798	705	**10635**
2013	717	638	814	950	1031	1052	1102	1092	1039	1038	849	704	**11026**
2014	763	774	879	958	1211	1171	1185	1218	1153	1092	856	814	**12074**
2015	767	692	829	968	1023	1064	1252	1118	1086	1051	828	429	**11107**
2016	668	713	843	963	1034	992	1208	1252	1171	980	793	782	**11399**
2017	716	731	985	1084	1157	1182	1411	1508	1200	1095	887	817	**12773**
2018	919	774	1017	1192	1090	1170	1573	1586	1220	1118	948	825	**13432**
2019	819	835	1016	1069	1049	1419	1752	1710	1213	1097	857	835	**13671**
2020	784	760	537	259	198	343	491	561	511	595	464	393	**5896**
2021	429	420	564	614	718	1178	1582	1569	1276	1108			**9458**



[6] https://www.sarajevo-airport.ba/Page/Statistika - Statistics archive

Figure 9 Passenger traffic in Sarajevo Airport

Broj putnika													
Godina	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**	**Ukupno**
2001	22209	20582	24942	26245	28019	34000	40452	37511	28555	23236	18540	19208	**323499**
2002	16982	17706	21936	22056	24646	30199	37205	36848	30796	27962	21643	22147	**310126**
2003	23464	22371	24619	26428	30614	37077	43365	41723	34552	32972	24617	22710	**364512**
2004	24077	22532	26116	30372	37270	39583	49493	44307	41896	32596	26467	24898	**399607**
2005	27496	23396	28924	33268	41294	47853	54476	49524	32814	35950	28922	29305	**433222**
2006	26454	23792	29822	35618	43352	48168	55636	54052	44539	37653	27802	28738	**455626**
2007	32116	27689	34843	40892	42554	52349	58924	56756	43504	43129	31801	32199	**496756**
2008	24083	27898	35819	38543	46451	55785	62874	61627	42078	46672	34353	34213	**510396**
2009	28117	27266	33909	41390	45921	57588	67930	60746	48802	46773	39494	35979	**533915**
2010	31746	28850	37657	39907	51398	59636	72615	60475	54753	51137	40912	34180	**563266**
2011	30484	34148	40803	49489	56812	62994	81042	59042	59074	52957	39785	33348	**599978**
2012	33247	26278	36765	49709	55107	62491	69346	60787	60323	52115	38612	35278	**580058**
2013	33437	30399	44631	56918	65495	72949	69699	79796	66721	64387	44446	36760	**665638**
2014	36114	35435	45789	56611	71513	74976	74948	88591	71168	64844	46833	43079	**709901**
2015	43700	39908	50273	63064	80143	74855	89319	101307	79120	71255	51793	28167	**772904**
2016	41208	42567	53438	68085	85738	66429	109141	118344	91123	71360	47352	44181	**838966**
2017	43377	41122	57381	79796	84137	78170	140025	144166	100923	80767	57887	50218	**957969**
2018	54147	48986	65991	86995	79808	92997	159380	159506	98277	83660	62253	53417	**1045417**
2019	53485	53130	67893	89843	74178	119205	180929	178943	105370	95628	67358	57718	**1143680**
2020	58397	51969	28249	929	367	3629	13345	22014	21011	21416	14949	13367	**249642**
2021	13239	10836	18115	17106	31925	71985	136018	151309	99950	84462			**634945**



1.1.2.2 Infrastructures and connections

The following table shows information regarding the infrastructure of the selected airports, including their location, annual passenger and freight, number of terminals and runways, direct flight connections to the EUSAIR main cities, and type of connection to the city center by mode of transport.

Table 6 Infrastructures and connections in selected airports in Bosnia and Herzegovina

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Sarajevo International Airport	Sarajevo	1 Terminal for passengers - 1 runway	Belgrade, Zagreb, Ljubljana, Athens	Trolleybus, Bus, Taxi

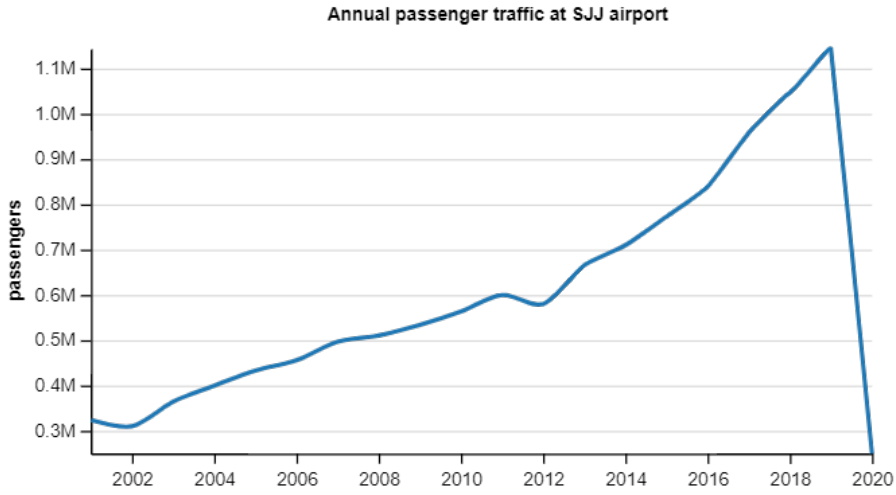
1.1.2.3 Traffic

The following table indicates the air traffic for passengers and freight in the selected airport of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

Table 7 Traffic in selected airports in Bosnia and Herzegovina

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Sarajevo International Airport	Sarajevo	1,143,680	13,671 t

Figure 10 Annual passenger traffic in Sarajevo International Airport



1.1.3 Croatia

According to the selection criteria mentioned above, the airport chosen for Croatia are the following four: Zagreb Franjo Tuđman Airport, Rijeka International Airport, Split Airport, and Dubrovnik Airport. The subsequent chapter briefly introduces each airport according to the available primary information on related websites.

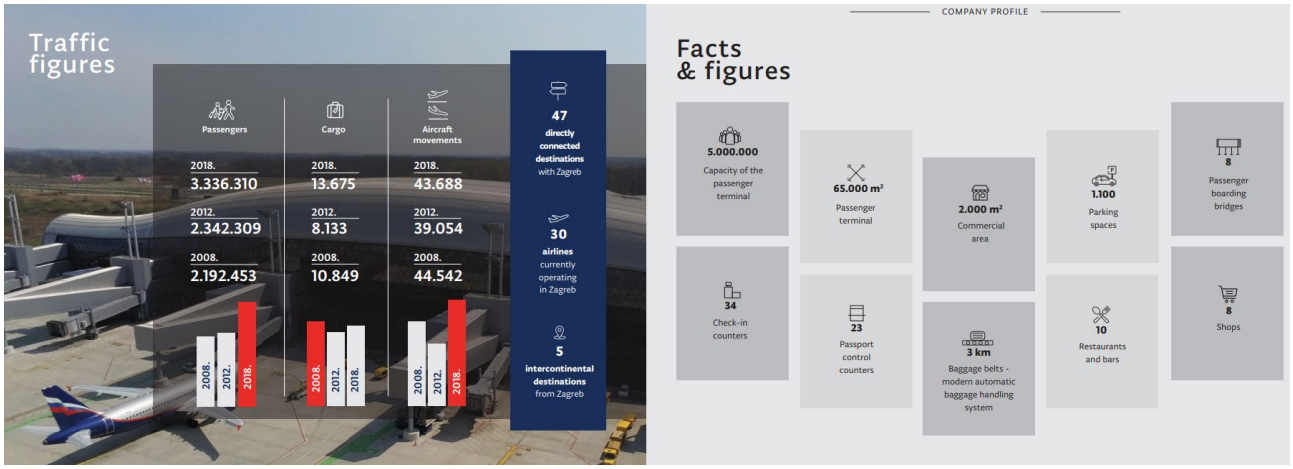
1.1.3.1 Zagreb Franjo Tuđman Airport

International Zagreb Airport[7] (IATA: ZAG, ICAO: LDZA) is the leading international airport of Croatia and the base of the Croatian Air Force. Located 10 km south of Zagreb, in 2019 served roughly 3.5 million passengers with more than 45000 flights and almost 13000 tons of cargo movements. It is the hub for the Croatian flag carrier Airlines.

To facilitate a substantive upgrade of the airport facilities, the Croatian Government initiated a new passenger terminal facility development project, for which a tender procedure based on Public Private Partnership was implemented in February 2011. The 30-year concession for the operation and maintenance of the current facilities and the construction of the New Passenger Terminal was granted in 2012 to Međunarodna Zračna Luna Zagreb JSC ("MZLZ Jsc"), a Croatian company whose main partners are Aéroports de Paris Management S.A., Bouygues Batiment International S.A., Marguerite, IFC, TAV and Viadukt d.d. The handover of the airport between the previous operator, Zračna Luna Zagreb (ZLZ), and the new Concessionaire, MZLZ, occurred on 05 December 2013. The new passenger terminal was inaugurated and opened in March 2017.

It has been eight years since International Zagreb Airport became accredited to Airport Council International's (ACI) Airport Carbon Accreditation (ACA), initially at Level 2 in 2013. International Zagreb Airport intends to submit an application for Level 3 Optimisation in June 2021. This progression demonstrates remarkable progress. Committed to net zero carbon emission by 2050 is the next step in environmental protection.

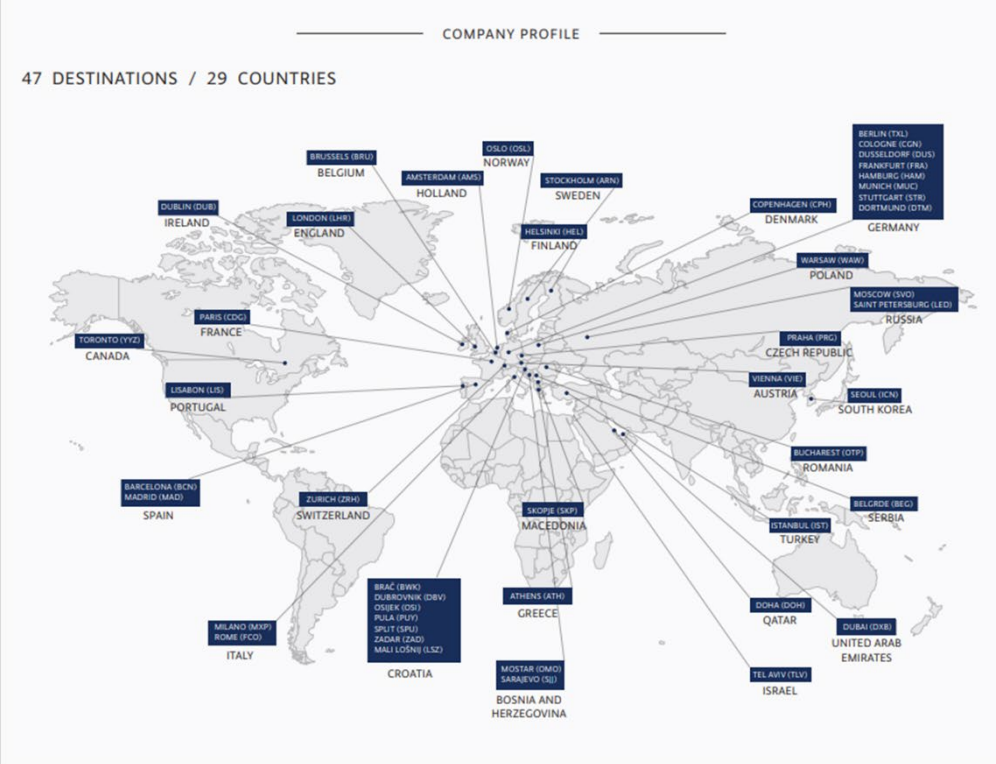
Figure 11 Traffic figures in Zagreb Franjo Tuđman Airport



[7] https://www.zagreb-airport.hr/en/business/corporate/environment/129 - https://www.zagreb-airport.hr/UserDocsImages/dokumenti/mzlz-cp-mail1.pdf

Figure 12 Airlines and routes map of Zagreb Franjo Tuđman Airport

1962 – Zagreb airport opens at Pleso a 2,500 m long runway, a1,000 m2 terminal and a 5,000 m2 apron.
1966 – Zagreb Airport gets a modern 5,000 m2 passenger terminal
1974 – The runway was extended to its current 3,252 m and the terminal expanded to 12,000 m2.
2004 – The airport installed a CAT-IIIb instrument landing system (ILS).
2008 – A VIP Terminal was added with extra amenities, restaurants and bars. The terminal was expanded to 15,500 m2.
2010 – A 3rd Floor Viewing platform and a bar were added in the Terminal.
2013 – The Terminal was expanded to 22,500 m2 to an increased capacity of 3.5 million passengers.
2017 - 21st March 2017 – official opening of the New Passenger Terminal.
28th March 2017 – New Passenger Terminal started with operations.



1.1.3.2 Rijeka International Airport

Rijeka Airport[8] (Croatian: Zračna luka Rijeka, Italian: Aeroporto di Fiume; IATA: RJK, ICAO: LDRI) is the international airport serving Rijeka, Croatia. It is located near Omišalj on the island of Krk, 17 km from the Rijeka railway station. Most of the traffic to and from the airport occurs during the summer months when it is used by several European low-cost airlines flying tourists to the northern parts of the Croatian coast.

Rijeka airport has a single terminal building which dates back to its original opening in 1970. Over the decades, minor upgrades have been made. The terminal has seven gates, one domestic and six international. None of the gates have jet bridges, and boarding is done by people walking from the terminal directly to the aircraft. The arrivals hall features a single baggage belt. On the upper floor, there is a small duty-free in the international area, mainly featuring locally produced merchandise and a café bar. Another bar with a limited snack selection is in the entrance hall. Domestic departures have no facilities after security checks. Several car rental agencies maintain their offices during the summer season. The airport has a single 2500 m long and 45 m wide runway. There are no taxiways, so the airplane must turn at the runway end and taxi back to the terminal.[9]

On November 28, 2019, Rijeka Airport Management held a press conference to mark a noteworthy achievement – surpassing 200,000 passengers. Additionally, after three years of challenging negotiations, the airport's management successfully signed a Collective Agreement with the Union of Istria, Kvarner, and Dalmatia. This substantial growth in passenger numbers was made possible through the collaborative

[8] https://en.wikipedia.org/wiki/Rijeka_Airport - http://rijeka-airport.hr/en/technical-data
[9] https://en.wikipedia.org/wiki/Rijeka_Airport

efforts, commitment, and financial support of Rijeka Airport's management, in partnership with Primorje-Gorski Kotar County, the Ministry for Sea, Transport and Infrastructure, the Croatian National Tourist Board, and the Kvarner County Tourism Office. These entities worked together to facilitate the introduction of new routes in 2019, contributing to the airport's success.[10]

The general objectives of the Rijeka Airport for the forthcoming period are:

- Increase in aircraft, passengers, and cargo traffic
- Quality of service
- Development of infrastructure
- Safety and security of air traffic
- Employee education
- Environmental protection

The specific objectives of the Rijeka Airport operations in the forthcoming period are:

- Transformation of Rijeka Airport into the airport is available to all air transport users H24 throughout the year, with constant connection with other types of transport and a network of airports worldwide.
- Rijeka Airport is connected to the international air traffic system, respecting all restrictions given the specific global border crossing.
- Rijeka Airport is connected to the domestic air traffic system through a PSO model with a volume of at least 700 flights a year.
- They ensure the continuous maintenance and development of infrastructure, equipment, and knowledge to ensure a rigorous minimum quality of functioning in front of the Croatian Civil Aviation Agency and the European Aviation Safety Agency.
- Rijeka Airport's operation ensures continuous traffic growth (increasing the number of air carriers, destinations, and rotations) and sustainable airport development while respecting the environmental impact.
- Rationalizing the company's operations through personnel reorganization and retraining, additional education, and training for work in multiple jobs of the same business complexity.

The Rijeka International Airport was part of the Airport Security and Air Taxi Network in the Adriatic project (ADRIAIR), funded by the European Union between 2007-2013. This project was driven by two leading ideas: the first was the possibility of setting up a new flexible and on-demand air connection in the Adriatic macro-region based on air taxis; the second was the improvement of the security standards of the airports involved. Both these leading ideas were melted in the same project to contribute to facilitating, improving, and intensifying air transportation in the Adriatic macro-region

1.1.3.3 Split Airport

Split Airport[11] (Croatian: Zračna luka Split; IATA: SPU, ICAO: LDSP) was opened for traffic on 25 November 1966. Situated in the center of the Middle Dalmatian region, it meets coastal and islands air traffic requirements from Makarska to Sibenik and from the isles of Brac, Hvar, and Korcula to other islands. Traffic connection of Dalmatia with different domestic and foreign destinations is of great importance not only for domestic and business passengers but also for nearing our tourist capacities to Europe and the

[10] http://rijeka-airport.hr/

[11] http://www.split-airport.hr/index.php?option=com_content&view=article&id=160&Itemid=115&lang=en

world. Due to the need for increased traffic, the apron area of 200 x 112 m, with six aircraft stands, was enlarged to 300 x 112 m, with four additional stands, already in 1967.

The planned number of 150 000 passengers per year was exceeded as early as 1968. The increase of interest of tourists, tourist arrangement sales, and thereupon the growth of Split Airport traffic continued over the following years, to culminate in the year 1987, with a total of 1 151 580 passengers and 7 873 aircraft.

After the year 1988, a decrease in traffic was caused by a political crisis instigated by former SFRY republics' aspirations for independence. In September 1991, Split Airport was closed to all traffic due to the war.

The reopening occurred at the beginning of April 1992. Civil passenger and aircraft traffic was minimal, but military aircraft, passenger, and cargo traffic constantly increased. Thousands of humanitarian aid, military equipment, and soldiers participating in peace missions were transported. From the year 1992 to the year 1995, a total of 37423 aircraft landed and took off to and from Split Airport.

In the following years, military aircraft traffic decreased, not accompanied by any significant increase in civil aircraft traffic. The number of aircraft declined, and passenger traffic stagnated at about 500 000 passengers annually.

The Republic of Croatia renovates hotels and accompanying infrastructure, safety status is unquestionable, and Croatian tourism is slowly returning to the European market, directly connected with increased air traffic. Split Airport records the growth of the number of passengers starting from the year 2000, arriving at the millionth passenger in the year 2006, exceeds 1 200 000 passengers in the year 2008, and the growth continues.

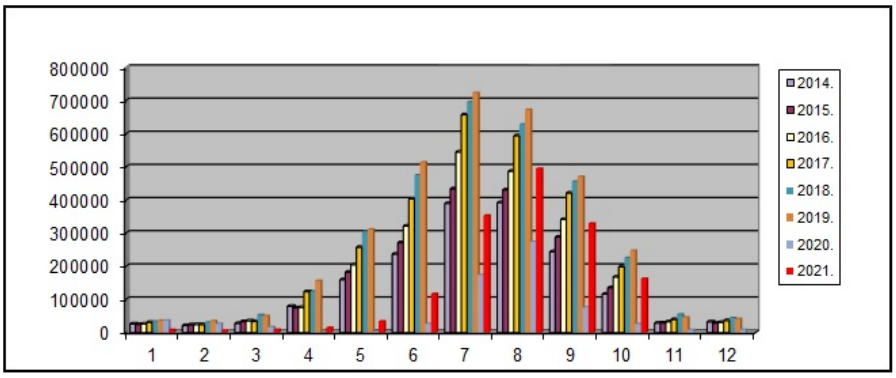
In 2004, the passenger terminal was enlarged, and in 2009, works on the enlargement of the apron were started.

Table 8 Passenger traffic in Split Airport

Total Passenger Numbers 2014 - 2021

	jan	feb	march	april	may	june	july	aug	sep	oct	nov	dec	total
2014	26044	21530	27580	79284	159485	236923	389368	392077	243761	116013	28485	32107	1752657
2015	24561	23335	33091	74950	182627	271006	433927	430777	288038	135163	29273	28652	1955400
2016	25958	23830	35131	75525	204595	321545	544263	486581	341405	167632	32829	30693	2289987
2017	30423	23932	33828	123230	257445	403586	657056	593709	421122	198150	39552	36143	2818176
2018	33699	30631	53165	124352	304135	474646	695509	628024	455595	225383	54856	44072	3124067
2019	36360	34825	50037	156381	310809	513706	723048	672262	470102	247172	45871	41357	3301930
2020	36741	26294	16466	6	2777	26150	173617	273842	75881	25796	8131	8665	674366
2021	7753	6125	8477	14783	33695	116596	352857	494241	328886	162475			1525888

Figure 13 Passenger traffic in Split Airport



1.1.3.4 Dubrovnik Airport

The history of Dubrovnik Airport[12] (Croatian: Zračna luka Dubrovnik; IATA: DBV, ICAO: LDDU) extends through four periods starting in 1936, when the airport in Grude, Konavli, was opened. After the Second World War, the airport was rebuilt in a new location in Cilipi, which has remained until today. The airport, known as 'Aerodrom Dubrovnik,' was open for charter aircraft flights on 15 May 1962 and regular air traffic on 15 July 1962. The core business of the company 'Dubrovnik Airport Ltd.,' seated in Cilipi, includes airport activities such as services relating to domestic and international air transport of passengers and goods. Dubrovnik Airport is a 4E category airport with a Runway length of 3300 m and a width of 45 m. The critical (the largest) aircraft type is Boeing 747-400. The total fenced area of the airport is 193 hectares, with the passenger terminal total area of 24,138 square meters. Other traffic, manipulative, and parking areas cover 511,250 square meters, and the green areas cover about 1,410,000 square meters. Today, Dubrovnik Airport is equipped with the ILS and VOR/DME systems which enable taking off and landing under the most complex weather conditions, day and night. The lighting project and installation of the RWY 30 navigation equipment have enabled the performance of all taking off and landing operations by night from the direction with a considerably weaker crosswind, which resulted in the minimization of the number of canceled flights canceled because of wind.

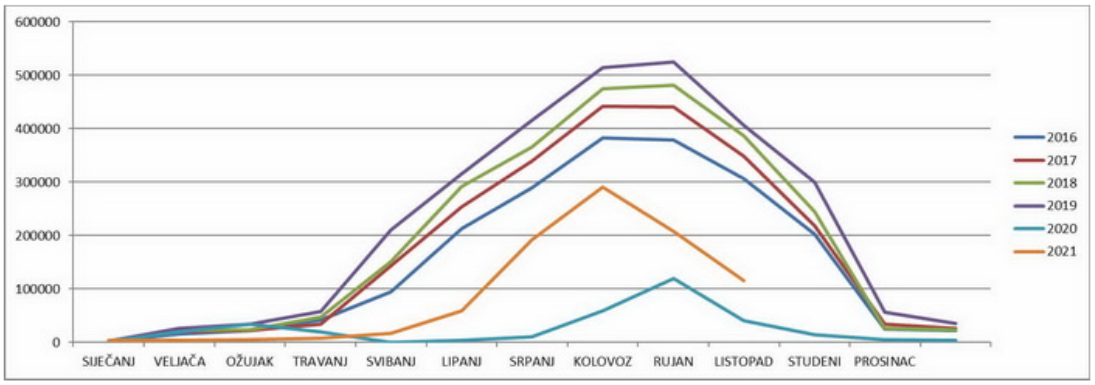
Dubrovnik Airport is the second busiest airport in Croatia. The annual traffic was recorded in 1987 when Dubrovnik airport registered 1,46 million passengers and 2,490 tons of cargo. In August 2010, the airport recorded 261,159 passengers, the record monthly traffic in the airport's history. In 2010 Dubrovnik Airport registered its record post-war annual traffic of 1,270,062 passengers and 406 tons of cargo and mail. Since that, traffic has constantly increased during the years.

[12] https://www.airport-dubrovnik.hr/storage/upload/articles/environment_protection_strategic_plan_en_16115.pdf

Figure 14 Passenger traffic at Dubrovnik Airport

Dubrovnik Airport - Number of passengers

Year	2016	2017	2018	2019	2020	2021
January	15.666	19.329	22.280	26.323	19.338	3.729
February	22.615	22.813	24.074	33.765	33.588	3.548
March	41.664	33.834	47.684	57.880	19.511	5.069
April	94.632	143.920	151.661	210.803	0	8.094
May	213.321	253.928	291.453	315.037	3.997	17.105
June	288.809	338.729	365.348	415.876	10.592	59.566
July	383.032	442.122	474.643	514.723	59.133	191.714
August	378.473	440.789	481.863	524.615	119.838	291.207
September	305.900	348.749	386.365	405.924	40.952	207.558
October	202.703	218.088	244.187	299.532	14.347	115.261
November	24.284	34.090	26.615	56.924	4.526	
December	22.144	26.674	23.239	34.825	4.325	
In total	1.993,243	2.323,065	2.539,412	2.896,227	330,147	902.851



The airport is also accredited as part of the monitoring and controlling CO2 emissions into the environment under the auspices ACI – Airport Carbon Accreditation program for level 1 - Mapping to introduce system management of CO2 emissions since 2010.

Dubrovnik Airport is actively participating in lower international projects funded by EU funds, which include the modernization of infrastructure, measures for environmental protection, and optimization of business processes while raising the quality of service provided in the airport. The main European projects are the following.

- PROJECT ZLD DEVELOPMENT[13]
  Dubrovnik Airport is situated in Dubrovnik-Neretva County in Croatia. Dubrovnik-Neretva County is geopolitically isolated from Croatia and the European Union due to its narrow land area and the border with Bosnia and Herzegovina. Dubrovnik Airport, therefore, plays a crucial role in securing the accessibility of the county to tourists, especially when because more than 65% of tourists arrive by air transport. In the current state, Dubrovnik Airport cannot manage the predicted increase in traffic since its capacity is already used to its maximum. Additional overload of different subsystems would affect airport functionality. Due to those mentioned above, the "Dubrovnik Airport Development" project is recognized as one of the key investment projects in the Republic of Croatia. Furthermore, the project follows the Transport Development Strategy of the Republic of Croatia 2014 – 2020 and the Transport Operational Programme 2007 - 2013. The realization of the project follows proclaimed objectives of the Dubrovnik-Neretva County Traffic Isolation Declaration, Europe 2020 strategy, and EU White Paper.
  The general project objectives encompass several key aims: enhancing traffic connections with Croatia and the EU, preparing for Schengen rules, facilitating seamless mobility for people and goods, improving regional quality of life, reducing unemployment, promoting regional development and investment, and aligning the Terminal Building with international air traffic standards. The project includes a range of activities such as reconstructing runways, taxiways, and aprons, adapting the Terminal Building, enhancing waste management and nature protection measures, establishing a sewage system, and relocating aircraft refueling facilities, along with constructing administrative and other necessary infrastructure.
- PROJECT LAIRA. LAirA[14]
  Landside Airports Accessibility (LAirA)is a new Interreg Central Europe project that started in May 2017. Dubrovnik Airport Ltd. is participating in this project and will cooperate with City of Dubrovnik Development Agency (DURA) in developing the local activities linked to the Dubrovnik Functional urban areas (FUA), in particular, the FUA report on airports employees' mobility needs & behaviors, the application of the ITS tools at the node, building the strategy for Dubrovnik Airport long term low carbon mobility integration into the FUA as implementation strategy of the FUA Energy Efficiency in Public Transport Programme consistently with the National Strategy for Traffic Development. Dubrovnik Airport will be responsible for the Road public transport & DRT action plan in LAirA airport FUAs and for Publications Activity. LAirA addresses the challenge of the multimodal, innovative, and low-carbon mobility integration of airports and airport landside access in the mobility systems of Central Europe. The project aims to reduce energy use and the environmental impacts of transport activities in airports and hinterlands. LAirA is planning to achieve its objective by changing the mobility behaviors of airport passengers and employees and by building novel strategies for public entities in low-carbon mobility planning. LAirA integrates seven key thematic areas: electric mobility, air-rail links, walking & cycling, shared mobility, intelligent transport systems, wayfinding, and road public transport. LAirA is financially supported by the European Union's Interreg Central Europe program, an EU cohesion policy program that

[13] https://www.airport-dubrovnik.hr/en/business/project-zld-development-s72
[14] https://www.airport-dubrovnik.hr/en/business/project-laira-s73

encourages cooperation beyond borders. LAirA is a 30-month project with a total budget of €2.23 million.

- PROJECT INTER-PASS[15].
  Intermodal Passengers Connectivity between Ports and Airports (INTER-PASS) is a project approved under the INTERREG V-B Adriatic-Ionian Transnational Cooperation Programme 2014-2020. The European Regional Development Fund funds the program under the European Territorial Cooperation objective, which supports regional cooperation between countries of the Adriatic-Ionian Region during the programming period 2014-2020. The managing body of the Cooperation Program is the Emilia-Romagna Region, based in Bologna, Italy. The national body in the Republic of Croatia coordinating the joint program implementation with other participating countries is the Ministry of Regional Development and European Union funds. The Agency for Regional Development of the Republic of Croatia has been appointed as the control body in the Republic of Croatia within the European Territorial Cooperation Programme. The project will be implemented by eight project partners and one associated partner from Italy. The project started in January 2018 and is expected to be finished in December 2019. The total budget approved for the project amounts to 1.498.568 EUR, 85% of which is co-financed through the ERDF fund (European Regional Development Fund). Many maritime cities in the Adriatic-Ionian Region have to deal with many passengers during the peak season, during which cruise tourism is an essential factor in regional and local development. However, most of these "homeports" for cruisers & ferries are suffering from a lack of integration within various modes of transport, especially with regional airports. The overall objective of the INTER-PASS project is to enhance the intermodal connections between ports and airports in the Adriatic–Ionian Region to improve the processing of passengers, mainly cruise tourists and travelers reaching tourist destinations located on Adriatic and Ionian costs during the peak season.
- PROJECT ADRIGREEN[16].
  Green and intermodal solutions for Adriatic ports and airports - ADRIGREEN is a project approved under the INTERREG V-A Italy Croatia CBC Programme 2014-2020. The European Regional Development Fund funds the program under the European Territorial Cooperation objective during the programming period 2014-2020. The managing body of the Cooperation Program is the Veneto Region, Italy. The national body of the Republic of Croatia coordinating the implementation of the joint program with other participating countries is the Ministry of Regional Development and European Union funds. The project commenced in January 2019 and is expected to end by January 2021. The total budget approved for the project amounts to 2.104.217,00 EUR, 85% of which is co-financed through the ERDF fund (European Regional Development Fund). Ten project partners will implement the project.
- PROJECT DANOVA[17].
  DANOVA – Innovative transportation services for blind and partially sighted passengers in Danube Region**.** It is a transnational cooperation project co-funded by the Interreg Danube Transnational Programme, one of the programs of the European Territorial Cooperation

[15] https://www.airport-dubrovnik.hr/en/business/project-inter-pass-s74
[16] https://www.airport-dubrovnik.hr/en/business/project-adrigreen-s75
[17] https://www.airport-dubrovnik.hr/en/business/project-danova-s89

objective funded by the European Union. The DANOVA project aims to improve the accessibility of airports, ports, trains, and bus stations to blind and partially sighted people by developing new services and competencies to allow them full access to all transportation information and services. The 30 months project (01 July 2020 – 31 December 2022) and a total budget of 2.192.546,66 Euro bring together partners from 9 countries motivated to work together to make transportation facilities more accessible.

1.1.3.5 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airports, including their location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct link to the EUSAIR main cities and connection to the city center by mode of transport.

Table 9 Infrastructures and connections in selected airports in Croatia

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Zagreb Franjo Tuđman Airport	Zagreb	1 Terminal for passengers - 1 runway	Pula, Zadar, Split, Brač (ends in October), Dubrovnik, Athens (from May to October), Skopje, Sarajevo, Belgrade	Bus, Taxi
Rijeka International Airport	Rijeka	1 Terminal for passengers - 1 runway	Osijek (ends in June), Split (ends in June)	Bus, Taxi
Split Airport	Split	1 Terminal for passengers - 1 runway	Dubrovnik (ends in October), Athens (from May to October), Palermo (from June to October), Bari (from June to October), Milan–Malpensa (from June to September), Venice (from May to October), Pula (ends in June), Rijeka (ends in June), Zagreb, Osijek (ends in October),	Bus, Taxi, Ferry, or taxi boat
Dubrovnik Airport	Dubrovnik	2 Terminals for passengers - 1 runway	Mikonos (from May to September), Athens (ends in October), Bari (from June to September), Palermo (from June to September), Milan Malpensa (from June to September), Venice (from May to September), Pula, Split (ends in October), Zagreb, Osijek, Belgrade	Bus, Taxi

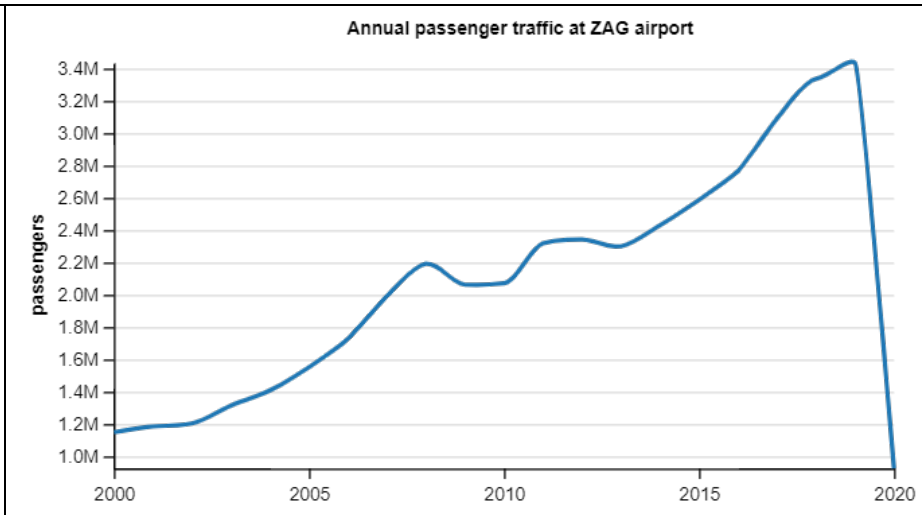
1.1.3.6 Traffic

The following table indicates the air traffic for passengers and freight in the selected airports of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

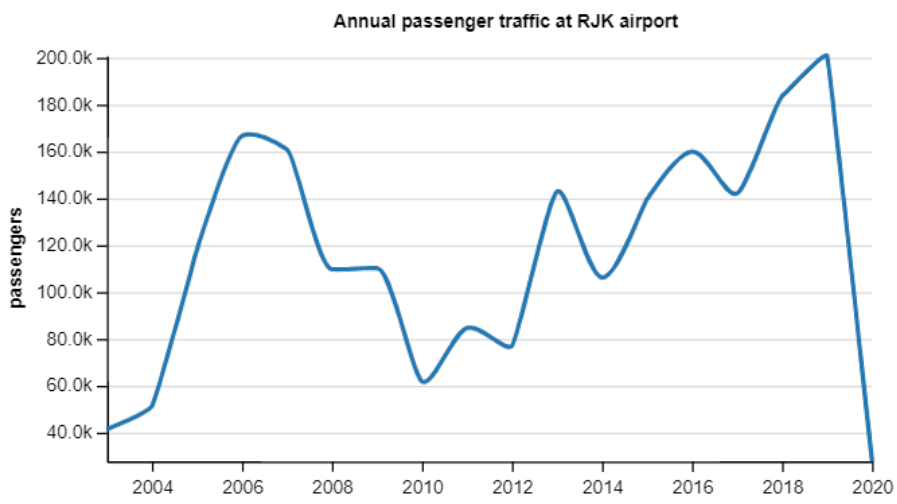
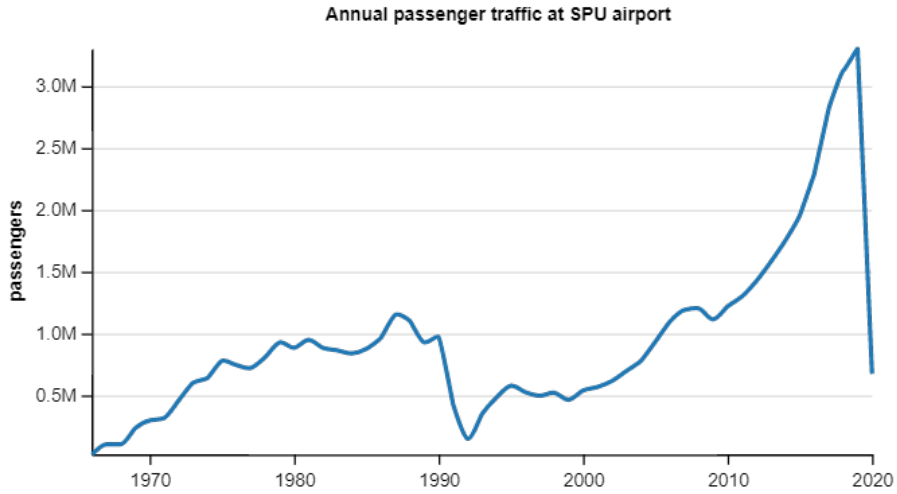
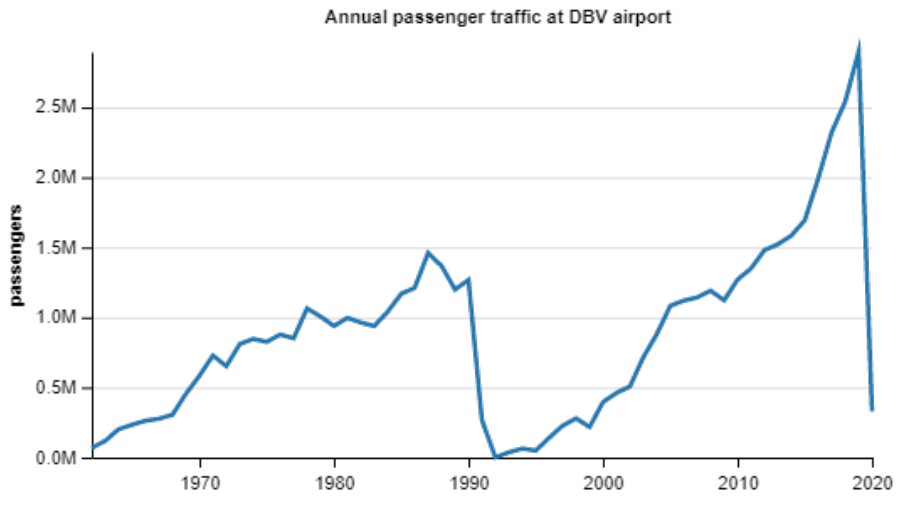
Table 10 Traffic in selected airports in Croatia

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Zagreb Franjo Tuđman Airport[18]	Zagreb	3,435,531	12,881
Rijeka International Airport[19]	Rijeka	200,841	1,025 t
Split Airport[20]	Split	3,301,930	273 t
Dubrovnik Airport[21]	Dubrovnik	2,896,227	127 t

Table 11 Annual passenger traffic in selected airports of Croatia

Zagreb Franjo Tuđman Airport	

[18] https://en.wikipedia.org/wiki/Dubrovnik_Airport
[19] https://en.wikipedia.org/wiki/Rijeka_Airport
[20] https://en.wikipedia.org/wiki/Split_Airport
[21] https://en.wikipedia.org/wiki/Dubrovnik_Airport

Rijeka International Airport	
Split Airport	
Dubrovnik Airport	

1.1.4 Greece

According to the selection criteria mentioned above, the airports chosen for Greece are the following seven: Athens International Airport Eleftherios Venizelos, Thessaloniki Airport "Makedonia," Heraklion International Airport "Nikos Kazantzakis," Rhodes International Airport "Diagoras," Corfu International Airport "Ioannis Kapodistrias," Kos International Airport and Santorini (Thira) International Airport.

Following a brief introduction of each airport according to the main available information on related websites.

1.1.4.1 Athens International Airport Eleftherios Venizelos

Athens Airport [22]"Eleftherios Venizelos" (IATA: ATH, ICAO: LGAV), also known as Athens Airport and commonly initialized as AIA, is the largest and busiest international airport in Greece and serves its capital, the city of Athens, and Attica region. It began operation on 28 March 2001 (in time for the 2004 Summer Olympics). It replaced the old Ellinikon International Airport. Athens Airport is located between Koropi, Markopoulo, Spata, and Loutsa, 30 km east of Athens.

ATH Airport is a hub for Aegean Airlines, Olympic Air, Ryanair, Volotea, and Sky Express. Athens Airport "Eleftherios Venizelos" handled 25,574,030 passengers in 2019. During 2020, Athens Airport registered 8,078,383 passengers—a significant decrease due to coronavirus. Athens International is currently a member of Group 1 of Airports Council International (over 25 million passengers). As of 2020, it is the 19th-busiest airport in Europe and the busiest and largest in the Balkans.[23]

[22] https://www.airport-athens.com/
https://athens-international-airport.com/
https://en.wikipedia.org/wiki/Athens_International_Airport
[23] https://en.wikipedia.org/wiki/Athens_International_Airport

Figure 15 Athens International Airport passenger traffic development in 2020[24]

ATHENS INTERNATIONAL AIRPORT
PASSENGER TRAFFIC DEVELOPMENT 2020

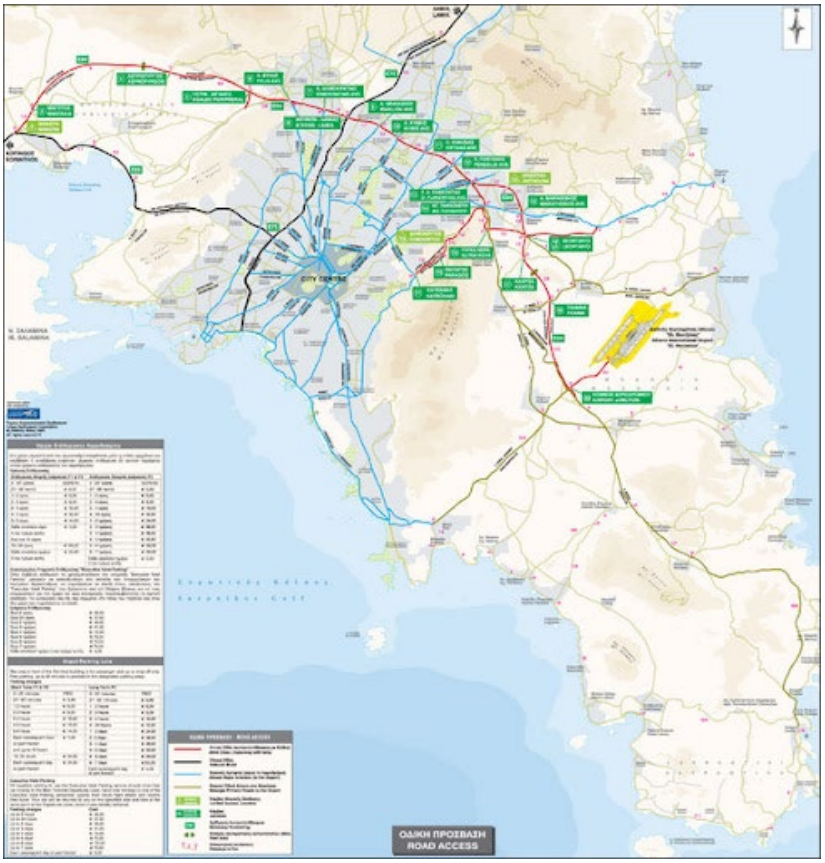
PASSENGER TRAFFIC	Domestic			International			Total		
	2020	2019	%2020/ 2019	2020	2019	%2020/ 2019	2020	2019	%2020/ 2019
January	433,964	449,834	**-3.5%**	1,038,772	943,051	**10.2%**	1,472,736	1,392,885	**5.7%**
February	423,501	443,228	**-4.5%**	941,130	884,560	**6.4%**	1,364,631	1,327,788	**2.8%**
March	207,955	516,796	**-59.8%**	431,826	1,135,798	**-62.0%**	639,781	1,652,594	**-61.3%**
April	11,917	573,227	**-97.9%**	11,411	1,413,529	**-99.2%**	23,328	1,986,756	**-98.8%**
May	58,293	700,752	**-91.7%**	25,728	1,584,454	**-98.4%**	84,021	2,285,206	**-96.3%**
June	195,826	795,188	**-75.4%**	119,823	1,817,906	**-93.4%**	315,649	2,613,094	**-87.9%**
July	400,368	915,648	**-56.3%**	493,254	2,065,533	**-76.1%**	893,622	2,981,181	**-70.0%**
August	485,156	915,133	**-47.0%**	718,365	2,124,732	**-66.2%**	1,203,521	3,039,865	**-60.4%**
September	340,993	810,796	**-57.9%**	521,123	1,878,605	**-72.3%**	862,116	2,689,401	**-67.9%**
October	266,245	669,131	**-60.2%**	453,691	1,632,425	**-72.2%**	719,936	2,301,556	**-68.7%**
November	99,465	496,989	**-80.0%**	163,711	1,169,664	**-86.0%**	263,176	1,666,653	**-84.2%**
Year-to-date	**2,923,683**	**7,286,722**	**-59.9%**	**4,918,834**	**16,650,257**	**-70.5%**	**7,842,517**	**23,936,979**	**-67.2%**

AIA SA operates the airport, and ownership is divided between the Hellenic Republic (Greek State) and Private Sector in a 55%-45% stake following a PPP scheme for the airport company. Private investors include the Copelouzos Group (5%) and PSP Investments of Canada (40%) after purchasing Hochtief's shares.

Its major features include two parallel runways being 4 km (2.5 mi) and 3.8 km (2.4 mi) long, respectively. The airport has received approval from the European Aviation Safety Agency and the Federal Aviation Administration for take-offs and landings of the biggest passenger jet worldwide, the A380.

[24] https://news.gtp.gr/2020/12/11/aia-fraport-greece-airports-passenger-traffic-hits-low-november/

Figure 16 Athens International Airport Eleftherios Venizelos accessibility[25]



Athens International Airport has the "Main Terminal" and the "Satellite" Terminal. The two terminals are connected through an underground link.

The Main Terminal is spread through 3 levels. One hosts the dining area, and the other serves the arrivals and departures. What's more, the Main Terminal has two Halls. Hall A handles flights from Non-Schengen and Non-European countries, while Hall B accommodates domestic services and flights from Schengen Area countries. On the other hand, the Satellite Terminal has two levels, one for the arrivals and one for the departures. Satellite Terminal can handle 6 million passengers per year.

Several modes of transport connect the airport to the city center, including bus, train, metro, and car rental.

The airport is accessible by the Attiki Odos toll highway from the center and northern Athens, Varis-Koropiou Avenue from the western part, Laurio Ave. from the South, and Spata-Loutsa Avenue from the East. Several parking options are available on-site at the airport in three parking lots. Located at the arrivals level, opposite the airport terminal, the airport offers short-term parking for up to five hours, with 1,357 parking spaces available in lots P1 and P2. Long-term parking is across the airport's main access road (Attiki Odos), with 5,802 parking spaces in lot P3.[26]

[25] http://www.mappery.com/Athens-Airport-Access-Map
[26] https://en.wikipedia.org/wiki/Athens_International_Airport

Athens Airport enjoys convenient transportation links to the city center through four bus lines (x93, x95, x96, and x97), all operated by OSY. These bus routes extend their service to important locations like the KTEL Terminal, Liosion bus terminal, and Piraeus, ensuring round-the-clock availability, seven days a week, with buses departing every 30-60 minutes. For regional destinations, KTEL Express offers bus services connecting the airport to Rafina, Markopoulo, Lavrio, Kalyvia, and Keratea.

Adjacent to the airport terminal, a railway station is easily accessible via an elevated walkway. This station serves Athens Metro line 3 and the suburban railway service Proastiakos, facilitating seamless train connections to and from the airport.[27]

1.1.4.2 Thessaloniki Airport Makedonia

Thessaloniki Airport[28] (IATA: SKG, ICAO: LGTS), officially Thessaloniki Airport "Makedonia" is located at Mikra, 16.5 km southeast of central Thessaloniki (Aristotelous Square), and is easily accessible from the A25 Motorway (Thessaloniki - N. Moudania National Road). The drive to and from the city center takes about 25 - 30 minutes.

The airport is the third-largest airport in the country after Athens International Airport and Heraklion International Airport. It opened in 1930 and was the second-busiest airport in Greece regarding flights served and the third-busiest in terms of passengers served in 2016, with over 6 million passengers. It is the main airport of Northern Greece, and apart from the city of Thessaloniki, it also serves the popular tourist destination of Chalkidiki and the surrounding towns of Central Macedonia. The Athens–Thessaloniki route is the tenth busiest in the EU, with 1.8 million passengers. A second terminal is currently under construction as part of a billion-euro investment by Fraport Greece, which operates the airport to cope with the increasing passenger demand.

The operational aspects of the airport were privatized in 2015. Fraport AG/Copelouzos Group joint venture and the state privatization fund agreed to privatize the airport operations and 13 other Greek airports in December 2015. Fraport Greece will operate the airport for 40 years, starting 11 April 2017. It pledged to invest €400 million ($451.88 million) in the various airports, including refurbishing the existing terminal at Thessaloniki and constructing a second terminal. Construction on the new terminal began on 19 September 2018 and finished in February 2021, three months ahead of schedule. Due to its investment, Fraport expects passenger traffic to increase by 48% by 2026.

The airport has two runways (10/28 and 16/34) and two taxiways. There are 22 stands for narrow-body aircraft and 20 for light aircraft.

The airport's terminal consists of three floors. The ground floor serves arrivals only and is divided into two sections: international/extra-Schengen arrivals and domestic/intra-Schengen arrivals. The second floor serves departures and also includes a shopping center. On this floor, there are 16 check-in counters, waiting areas, bars, stores, and various airlines' offices—the third-floor houses two restaurants and several

[27] https://www.aia.gr/en/traveler
[28] http://www.thessalonikiairport.com/
https://en.wikipedia.org/wiki/Thessaloniki_Airport
https://www.skg-airport.gr/en/category-detailed/ctg_id-36/nd_id-294

bars with views of the runways. There are two passenger lounges. An additional terminal was opened in 2021.

The airport is directly connected with the city's major road arteries in the southeast, the EO16 and the A25, which connects Thessaloniki with Chalkidiki via the EO67. The Thessaloniki Inner Ring Road provides access to the A1/E75 and A2/E90 motorways. Two thousand two hundred eighty-five parking places are available at the front of the terminal building. A car rental service is available at the terminal building. In addition, taxi services are available outside the airport terminal building 24 hours a day.[29]

There are plans to connect the airport with the Thessaloniki Metro network, which is set to open in 2023 after delays. Attiko Metro, the company overseeing the project, has published a map of proposed extensions, including an overground extension of Line 2 towards the airport. However, this extension is not an immediate concern for the company since the terminus of Line 2, Mikra, will be connected with the airport by a 10-minute shuttle bus. Detailed planning of the metro extension toward the airport was initiated in March 2019.

In the meantime, the airport is served on a 24-hour basis by bus 01X/01N of the Thessaloniki Urban Transport Organization (OASTH), which provides bus services between the Thessaloniki Bus Station (KTEL) and Makedonia Airport arrivals/departures.[30]

Figure 17 Thessaloniki Airport Makedonia routes map [31]

[29] https://www.skg-airport.gr/en/flights--more/airport-information
[30] https://www.skg-airport.gr/en/category-detailed/ctg_id-37/nd_id-425
[31] https://www.anna.aero/2017/01/17/thessaloniki-airport-traffic-up-8-1-2016/

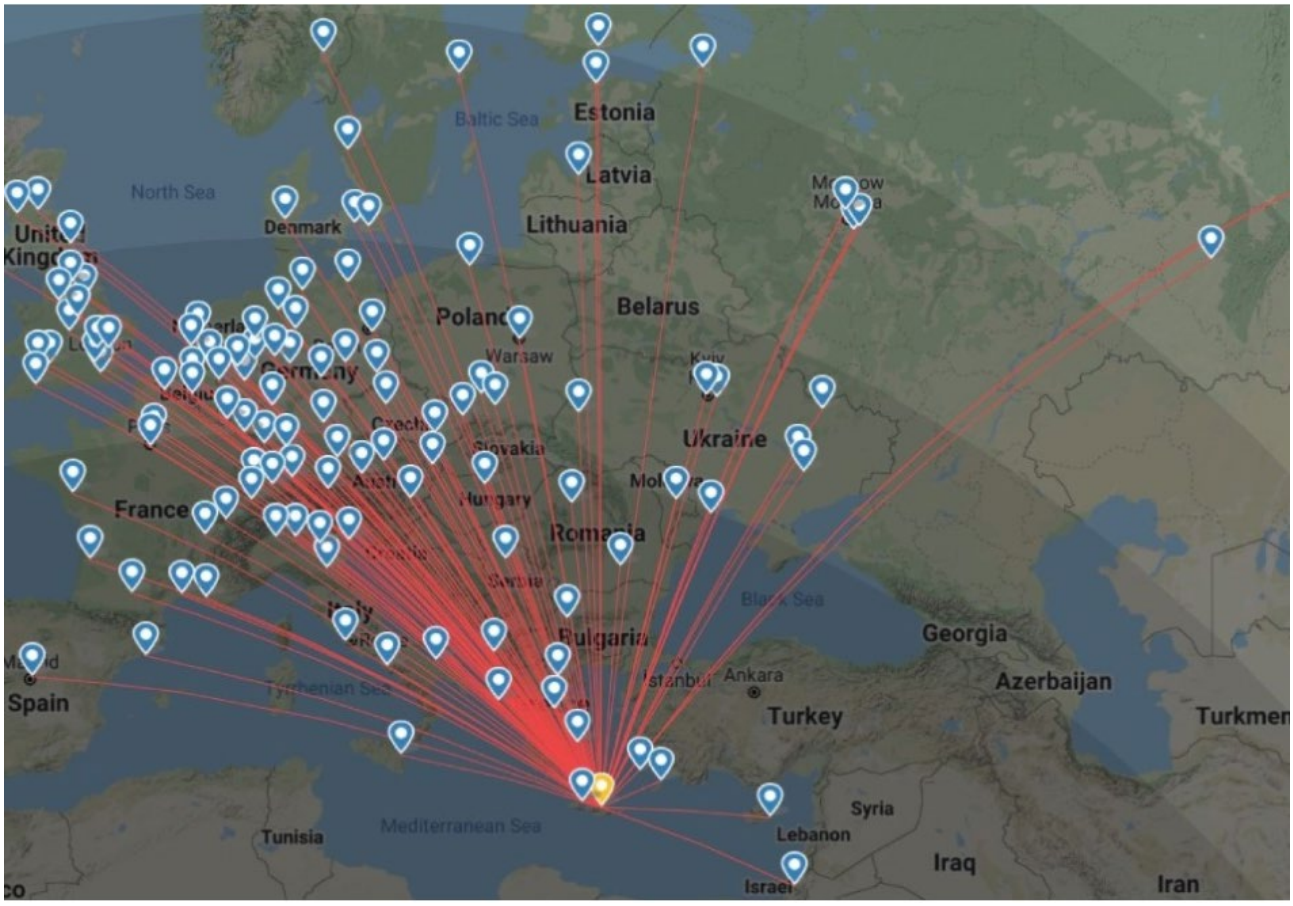
1.1.4.3 Heraklion International Airport Nikos Kazantzakis

Heraklion International Airport [32]"Nikos Kazantzakis" (IATA: HER, ICAO: LGIR) is the primary airport on the island of Crete, Greece, and the country's second busiest airport after Athens International Airport. It is located about 5 km east of the main city center of Heraklion, near the municipality of Nea Alikarnassos. It is a shared civil/military facility. The management and operation entity of the State Airport is the Civil Aviation Service.

A new airport for Heraklion, located 39 km southeast of the city at Kasteli, is under construction and due to open by 2025. Once completed, the new Kasteli International Airport will replace the current Heraklion International Airport as the hub for central Crete.

On average, Heraklion International Airport, "Nikos Kazantzakis," has 26 departure flights daily.

Figure 18 Heraklion International Airport routes map



In October 2017, airport expansion projects began. The projects, which in their entirety were financed entirely by the Duty-Free Shops SA (€ 10,000,000), after an agreement with the Ministry of Infrastructure

[32] https://www.heraklion-airport.info/
https://en.wikipedia.org/wiki/Heraklion_International_Airport
https://www.trip.com/flights/airport-her/n-kazantzakis-airport/
https://www.heraklion-airport.gr/en/history/

and Transport and the CAA, at no cost to the Greek state. Work began in early October 2017 and was completed on 30 March 2018. The project includes:

- the redesign of the layout of the ground and the first floors of the airport
- the expansion of the terminal by 2,900 square meters, an extension of 17 meters to the airside
- the renovation of a further 8,000 square meters within the existing terminal
- the increase in the number of gates for the arrival and departure of passengers
- integration of the arrival hall
- the modification of a luggage belt so that passengers are not required to queues for their receipt
- improve the operation of electronic ticketing
- upgrading the video ad system
- the modernization of air conditioning in the arrivals hall (budget 700.000 euros)

The airport is connected with the city center of Heraklion via Ikarou Avenue. The journey by car takes about 10 minutes. Several city bus lines that serve the entire municipality of Heraklion begin from the airport. The bus stop is within walking distance from the terminal building.[33]

1.1.4.4 Rhodes International Airport Diagoras

Rhodes International Airport[34] "Diagoras" or Diagoras International Airport (IATA: RHO, ICAO: LGRP) is located on the West side of the island of Rhodes in Greece. The facility is located just north of the village Paradise, about 14 km southwest of the capital city, Rodos. Rhodes International Airport was the fourth busiest airport in Greece as of 2019, with 5,542,567 passengers utilizing the airport.

The aircraft parking floor covers a total area of 110,600 square meters with the possibility of parking 13 aircraft, while the terminal building has an area of 20.753 square meters with a capacity of 1700 passengers, with the expansions and improvements continuing.

Over the years, improvements have been made to Rhodes Airport Diagoras, with expansions to facilities, new taxiways, and replacement airport buildings being built to accommodate the large number of tourists arriving on the island daily. An upgraded passenger terminal was opened in 2005 to provide a more modern experience for passengers. As it stands right now, the airport covers an area of over 60,000 square meters, making it one of the largest airports in Greece.

The airport's single runway direction is 065/245 degrees (designated as 06/24), having a length of 3,305 meters and a width of 60 meters. Two taxiways and four taxi links connect the runway with the apron. The apron with the new pushback configuration can simultaneously accommodate up to 20 ICAO reference category C or smaller airplanes. Three parking positions have MARS (Multiple Apron Ramp System) capabilities and can accommodate larger category D and E (such as B757-300, B787-900, B777-300, B747-400, A340-500, and A350) aircraft. A small general aviation apron has three dedicated positions for small propellers or jet aircraft.

Rhodes Airport terminal is two separate buildings with a joined corridor in the middle. Departures are served on the ground (check-ins, baggage checks) and first floor (passenger screening, gates, shops), while

[33] https://www.heraklion-airport.gr/en/access-to-airport/
[34] https://www.rhodes-airport.info/
https://en.wikipedia.org/wiki/Rhodes_International_Airport

arrivals are served only on the ground floor's southern corner, where passport control, customs, and customs baggage reclaim operate. The airport does not have air bridges, so boarding and disembarking require buses. Both terminals are and will be under renovation from Fraport for the next couple of years as a series of chronic problems need to be addressed. Toilets and air conditioning systems were first fixed, while more complicated works, including new check-in facilities, will be implemented. These facilities will eliminate double checks for baggage, and the interior remodeling will proceed gradually during low-traffic winter months.

In December 2015, a joint venture between Fraport AG and Copelouzos Group bought and privatized the airport with thirteen other regional airports. The contract they signed with the state privatization fund gives them the right to operate Rhodes International Airport and the other thirteen airports for 40 years.

On 22 March 2017, the Fraport-Greece presented its master plan for the 14 regional airports, including the International Airport of Rhodes. The following summarizes the enhancement changes that started in November 2017 and will be implemented for Rhodes International Airport under Fraport Greece's investment plan: Immediate actions that were implemented at the airports as soon as Fraport Greece took over operations and before the launch of the 2017 Summer season included:

- General clean-up
- Improving lighting and marking of airside areas.
- Upgrading sanitary facilities
- Enhancing services and offering new free Internet connection (WiFi)
- Implementing works to improve fire safety in all the areas of the airports
- Remodeling the current terminal
- Reorganizing the airport apron area
- New fire station
- 13 percent increase in the number of check-in counters (from 40 to 45)
- 13 percent increase in the number of departure gates (from 16 to 18)
- 71 percent in the number of security-check lanes (from 7 to 12)
- 25 percent increase in the number of baggage reclaim belts (from 4 to 5)

Public buses run daily between Rhodes Diagoras Airport and Rhodes City downtown. Taxis are available outside the airport. A trip to Rhodes city center takes approximately 20 to 30 minutes.

Figure 19 Rhodes International Airport Diagoras location map[35]

The following table provides approximate distances from Rhodes International Airport to other main cities and areas on the island of Rhodes and travel time by car.

Figure 20 Distances from Rhodes International Airport

Lindos	About 50 min	(51.8 km)
Faliraki	About 20 min	(17.4 km)
Rhodes Town	About 22 min	(20.9 km)
Ixia (Ialyssos)	About 16 min	(13.3 km)
Kiotari	About 1 hr 3 min	(62.2 km)
Kolymbia	About 28 min	(27.1 km)
Pefkos	About 1 hr	(56.0 km)

[35] https://www.vjv.com/europe-tours/greece/island-of-rhodes/

1.1.4.5 Corfu International Airport Ioannis Kapodistrias

Corfu International Airport[36] (CFU) Ioannis Kapodistrias (IATA: CFU, ICAO: LGKR) is about 3 kilometers south of Corfu Town, half a mile north of Pontikonisi. The airport has handled 3,275,897 passengers in 2019.

The covered areas of the airport intended for the service of passengers have an area of 16,000 sq.m. The mezzanine floor on which the offices of Fraport Greece and the airlines are housed has an area of 1,200 sq.m. The passenger station has shops, offices of car rental companies and travel agencies, restaurants, cafes, and ATMs, while complimentary wireless internet (WiFi) is available. In the basement of the airport are the electromechanical installations, the refrigeration machines, and storage spaces of 10,000 sq.m.

The runway (17-35) has a length of 2375 m and a width of 45 m.

In addition, it has: A fire station, Airport fire safety class: 7 (VII), Aircraft parking spaces: 10 and General Aviation aircraft parking spaces: 28

In December 2015, the privatization of Corfu Airport and 13 other regional airports was finalized by signing the Fraport AG/Copelouzos Group's syndication agreement with the Hellenic Republic Asset Development Fund (HRADF). Under the agreement, the consortium will operate the 14 airports (including those of Athens, Mykonos, and more) for 40 years starting 11 April 2017.

On 22 March 2017, Fraport Greece presented its master plan for the 14 regional airports, including Corfu International Airport. Immediate actions implemented as soon as Fraport-Greece took over operations included a general clean-up of the airport, improving lighting and sanitary facilities and the markings of airside areas, offering free WiFi, and ensuring fire safety standards are met throughout the airport and surrounding property.

The works that will be carried out in the framework of the investment program of Fraport Greece until 2021 are the following:

- New Terminal
- Expansion of the terminal by 10,294 square meters and renovation of the existing terminal
- Installation of "HBS inline screening" system for luggage control
- Renovation and upgrade of the fire station
- Reorganization of the aircraft parking area
- Renovation of the roadway in the aircraft landing-take-off areas
- 27% increase in Check-in stations (from 22 to 28)
- 33% increase in the total number of portals (from 9 to 12)
- 33% increase in airport security and control points (from 6 to 8)

The route to the airport from the Corfu city center (and vice versa) goes through Dimokratia Avenue and the roads of Dessyla, Vlahernon, and Georgakis and lasts 10 minutes.

[36] https://www.corfu-airport.com/
https://www.cfu-airport.gr/en
https://en.wikipedia.org/wiki/Corfu_International_Airport

Figure 21 Corfu Ioannis Kapodistrias International Airport location map[37]

The airport is connected by regular city bus services of line 15 with Corfu's city center and harbor. The services to all destinations of the island start from there. Taxis to and from the Corfu airport are available 24 hours a day (24/7). It takes to get from the airport to the city of Corfu is 10 minutes. [38]

[37] http://www.wordtravels.com/assets/map/Greece/
[38] https://www.corfu-airport.com/

The parking is right next to the Corfu airport station building. Built-in 7.000 square meters, with a capacity of 271 spaces, it offers secure short and long-term parking. It is fenced and watched by security cameras 24 hours a day.[39]

A 2021 study found that Corfu International Airport was one of the top 20 most vulnerable airports to climate change-caused sea level rise.[40]

[39] https://www.corfu-airport.com/corfu-airport-parking/
[40] https://www.airport-suppliers.com/airport/corfu-international-airport/

1.1.4.6 Kos International Airport

Kos Airport (IATA: KGS, ICAO: LGKO) [41], also referred to as Hippocrates, is located on the Greek island of Kos, close to the village of Antimahia. It is 22km southwest of Kos town. According to its annual traffic, it is currently the 7th busiest airport in Greece.

Kos Airport was an entirely civilian airport operated by the Hellenic aviation authority. On March 22, 2017, the ownership of the airport was transferred to Fraport Greece (a joint venture of Fraport AG Frankfurt Airport Services Worldwide and partner Copelouzos Group) under a 40-year concession operation contract. It is an international entry point for the rapidly developing tourist destination island.

Kos Airport often receives and offers regular flights to Athens and Rhodes. As a result of Kos Airport's development as a preferred destination, the airport handles many chartered flights. Standard service is offered by Olympic Airlines and Aegean Airlines. The airport handled 2,676,644 million passengers as an international entry point in 2019. [42]

Kos Airport's single terminal covers some 5900 square meters.

The Kos Airport has a 2390-meter-long runway. The runway is not equipped with an ILS instrument landing system from either approach direction (14/32) and is therefore approached according to visual flight rules or via a radio beacon (VOR / DME). In addition, unlike almost all other Greek airports, Kos Airport does not have a taxiway parallel to the runway. For take-off, the aircraft roll to the end of the runway, then turn 180 ° on a turning hammer provided for this purpose and take off from there. Most of runway 32 is used, as the wind predominantly blows west to north.

Kos has had an International Airport since 1964. The high tourist traffic, beginning in April and lasting until the end of October, led to expansions on the runway and at the airport facilities. The airport was operated and supervised by the Civil Aviation Authority until it was privatized, along with 13 other Greek regional airports, in 2015.

On March 22, 2017, Fraport-Greece presented the plans for all airports, including Kos Airport. The immediate works that will be carried out at the airport with the assumption of their operation by Fraport Greece and before the beginning of the summer season of 2017 include:

- General cleaning
- Improving lighting and signaling inside (terminals) and outside airports (aircraft parking runways)
- Upgrading and enhancing sanitary facilities
- Improvement of services, including free internet connection (WiFi)
- Work to improve fire safety in all areas of airports

The works that will start in October 2017 and will be carried out within the investment program of Fraport Greece until 2021 are the following:

- New Terminal

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[41] https://www.kosairportguide.com/
https://kosinternationalairport.com/#/searchcars
https://en.wikipedia.org/wiki/Kos_International_Airport
[42] https://www.kosairportguide.com/

- New fire station
- Renovation/expansion of the wastewater treatment plant
- 201% increase of the airport's total area to 24,000 sq.m.
- 75% increase in Check-in stations (from 16 to 28)
- 125% increase in airport security and control points (from 4 to 9)

The airport is connected to Kos via the provincial road Kos – Kefalos. The journey by car lasts about 30 minutes. It has a parking lot located next to the terminal entrance. It has around 220 parking spaces with long or short-term options and parking spaces for people with reduced mobility.[43]

There are mainly public buses servicing Kos Airport and Kos Town, with a stop in Mastichari. The bus stop is located right outside the terminal building, 50 m, at Kos Hippocrates Airport, and buses leave for Kos Town and Mastichari every hour during the summer and less often during other seasons, Sundays, and bank holidays. During the summer season, there are also buses going to and from Kefalos and Kardamena, although less frequently than the buses to Kos Town.

[43] https://kosinternationalairport.com/kos-airport-parking/

Figure 22 Kos International Airport location map[44]

1.1.4.7 Santorini Thira International Airport

The Santorini (Thira) International Airport[45] (IATA: JTR, ICAO: LGSR), is located on the East side of the Greek island, close to Kamari village. It is the largest in the south Aegean Sea and is a fighter base. The airport serves as both a military and a civil airport. With its redesigned apron, as of 2021, the airport can serve up to nine civilian airliners at the same time.

[44] http://www.wordtravels.com/assets/map/Greece/Kos_map.jpg
[45] https://www.santoriniairport.com/
https://www.jtr-airport.gr/en
https://www.jtr-airport.gr/en/flight-list
https://en.wikipedia.org/wiki/Santorini_(Thira)_International_Airport

The airport is located about 6 km southeast of the center of the city of Thira. The main asphalt runway (17/35) is 7208 feet (2197 m) long. The parallel taxiway was built and marked to runway specification but is now marked and lighted as a taxiway. The airfield can accommodate medium-sized jets like the Boeing 757, Boeing 737, and Airbus 320 series and smaller aircraft such as the Avro RJ, Fokker 70, and ATR 72.

In December 2015, the privatization of Santorini (Thira) International Airport and 13 other regional airports of Greece was finalized by signing the agreement between the Fraport AG/Copelouzos Group joint venture and the state privatization fund. According to the agreement, the joint venture will operate the 14 airports (including Santorini (Thira) International Airport) for 40 years as of April 11, 2017.

On March 22, 2017, Fraport Greece presented its master plan for the 14 regional airports, including the Santorini International Airport.

The following summarizes the enhancement changes that will be implemented for Santorini International Airport under Fraport Greece's investment plan by 2020:

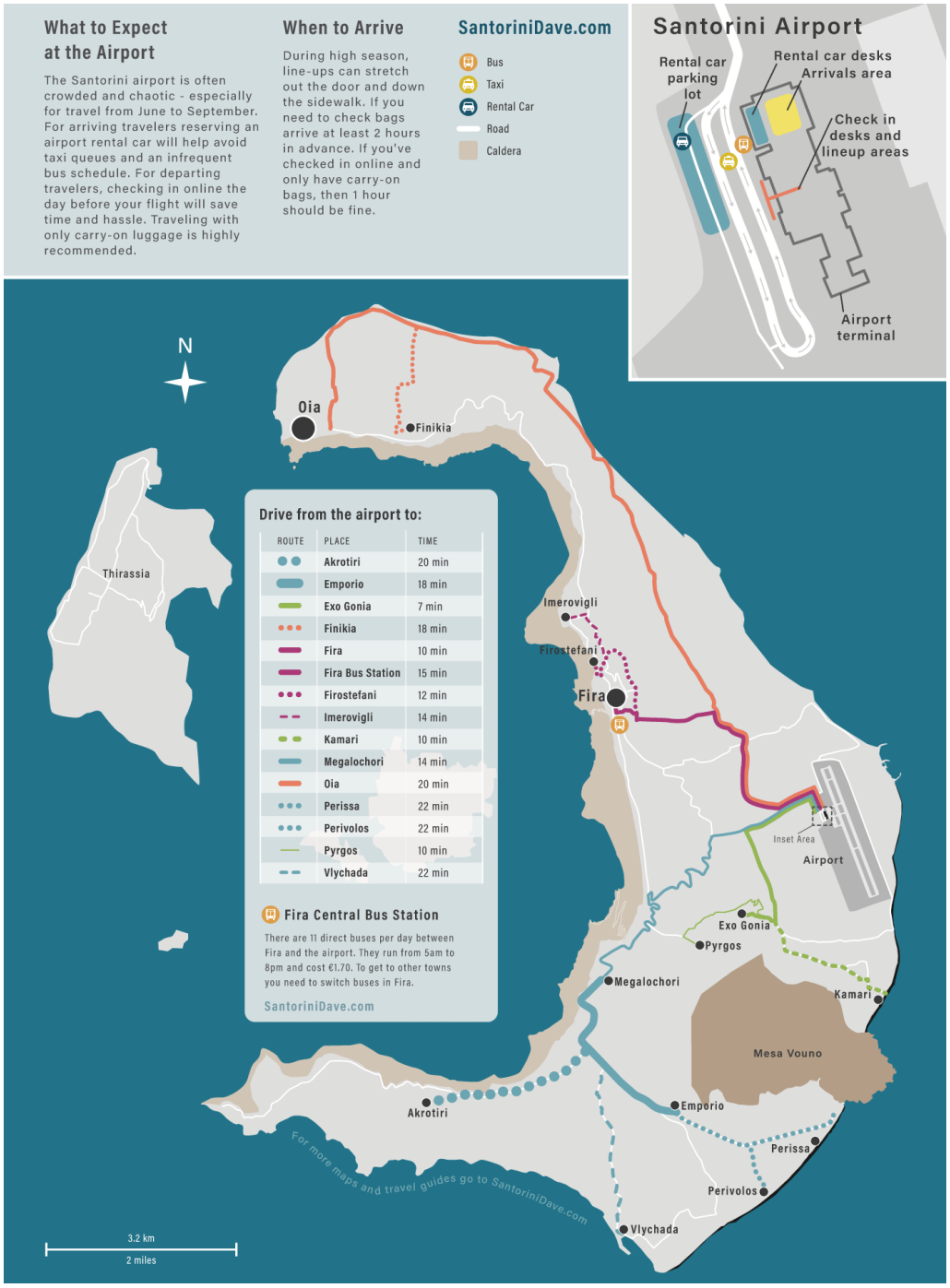
- Expanding and remodeling the current terminal
- 236% increase in total terminal space at 15,640 square meters by replacing part of the current terminal and constructing a new terminal
- 113% increase in the number of check-in counters (from 8 to 17)
- Doubling the number of security-check lanes (from 1 to 2)
- 20% increase in the number of departure gates (from 5 to 6)
- 250% increase in the number of security-check lanes (from 2 to 7)
- Improving lighting, marking of airside areas
- Upgrading sanitary facilities
- Enhancing services and offering a new free Internet connection (WiFi)
- Implementing works to improve fire safety in all the areas of the airports
- New fire station
- Reorganizing the airport apron area

The airport can be reached from most national airports of Greece via Athens and Thessaloniki. Also, numerous charter flights from different European Cities fly directly to the island during summer.

Santorini International Airport hosts many charter flights from all over Europe. From the UK, Thomson Fly offers charter flights at desirable prices from the airports of Manchester and Gatwick. Departing from Germany, several airlines like Condor and Air Berlin offer cheap direct flights and charter flights to Santorini from several airports in Germany like Frankfurt, Berlin, Munich, Düsseldorf, and similar. There are flights from Scandinavian countries such as Sweden, Norway, Finland, and Denmark. Direct flights to Thira with RyanAir, Olympic Air, Astra Airlines, Aegean Airlines, SAS, and other smaller airlines also exist. Furthermore, direct flights are available from Rhodes and Kos islands.

It is well connected by road to the rest of the island, and taxis, public buses, and car rentals are available on arrival. The airport’s location is very accessible. In particular, it is located in the east-central part of the island, near Monolithos Beach, 6 km from Fira, the island's capital. Also, it is about 17 km from both the northernmost end of the island and the village of Oia, and the southernmost end, the Akrotiri area. It will take about 15 minutes to reach Fira using the shuttle bus service.

Figure 23 Santorini International Airport location map[46]



The public bus in Santorini Airport is the only mode of public transportation. There is no underground or train. The transfers are performed by KTEL company with full-size coaches. No buses are traveling across the island, going from one side of the island to the other. Every bus goes to the central bus station at Fira (the capital of Thira). Any changeovers for the next bus destination must only be made from the central

[46] https://santorinidave.com/santorini-airport

station. The journey from the airport to Fira is about 25 minutes. Therefore, besides Fira, there is no direct bus from Santorini Airport to Oia, Imerovigli, Firostefani, Akrotiri, Kamari, Pyrgos, Emporio, Perissa, Perivolos, Megalochorim Finikia or Vothonas. Also, there are no direct buses between Santorini Airport and Athinios ferry port.

The following section shows the main facts and figures regarding the airports' Infrastructures, Connections, and Passengers in Greece.

1.1.4.8 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airports, including their location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct connection to the EUSAIR main cities and connection to the city center by mode of transport.

Table 12 Infrastructures and connections in selected airports in Greece

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Athens International Airport *Eleftherios Venizelos*	Athens	The airport currently has two terminals, the main terminal, and the satellite terminal, accessible by an underground link from the main terminal. 2 runways	Corfu, Ioannina, Kastoria, Kozani, Thessaloniki, Kavala, Alexandroupolis, Limnos, Skyros, Skiathos, Mytilene (Lesbos), Chios, Samos, Ikria Island, Leros, Kalymnos, Rhodes, Kos, Astypalaia Island, Santorini, Milos, Kythira, Kalamata, Zakynthos Island, Kefalonia, Catania (starts in June), Palermo (from November to March), Bari (from May to October), Bologna (begins in May), Bergamo, Milan-Malpensa, Verona (from May to October), Venice (starts in May), Zagreb, Split (from May to October), Dubrovnik (from May to October), Tirana, Skopje, Belgrade	Metro, Suburban Rail, Bus, Taxi
Thessaloniki Airport "Makedonia"	Thessaloniki	1 Terminal for passengers - 2 runways	Athens, Kalamata, Zakynthos Island (from June to October), Corfu, Limnos, Mytilene (Lesbos), Chios, Samos, Rhodes, Kos, Mikonos, Paros, Santorini, Heraklion, Chania, Kythira, Skyros, Bologna, Bergamo, Venice, Treviso, Belgrade	Bus, taxi. There are plans to connect the airport with the Thessaloniki Metro network, which is set to open in 2023 after delays. Attiko Metro, the company overseeing the project, has published a map of proposed extensions, including an overground extension of

				Line 2 towards the airport. However, this extension is not an immediate concern for the company since the terminus of Line 2, Mikra, will be connected with the airport by a 10-minute shuttle bus. Detailed planning of the metro extension toward the airport was initiated in March 2019.
Heraklion International Airport "Nikos Kazantzakis"	Heraklion (Crete)	1 Terminal for passengers - 2 runways *A new airport for Heraklion, located 39 km southeast of the city at Kasteli, is under construction and due to open by 2025. Once completed, the new Kasteli International Airport will replace the current Heraklion International Airport as the hub for central Crete.*	Palermo (from June to October), Bologna (starts in March), Milan Malpensa (ends in November), Milan Bergamo (begins in March), Verona (from May to October), Venice (from May to October), Bari (from May to October), Tirana (from May to October), Belgrade (from June to September), Thessaloniki, Athens, Mykonos (from May to October), Rhodes	Bus, Taxi
Rhodes International Airport "Diagoras"	Rhodes	2 Terminals for passengers - 1 runway	Karpathos, Heraklion (Crete), Kos, Samos, Athens, Thessaloniki, Tirana (from June to September), Belgrade (from June to September), Palermo (from June to October), Bari (from May to October), Milan Malpensa (from June to September), Treviso (from June to September)	Bus, Taxi

Corfu International Airport "Ioannis Kapodistrias"	Corfu	1 Terminal for passengers - 1 runway	Preveza, Athens, Thessaloniki, Palermo (from June to October), Bari (from June to October), Milan Malpensa (from March to September), Treviso (from June to September), Venice (from June to October)	Bus, Taxi
Kos International Airport	Kos	1 Terminal for passengers - 1 runway	Rhodes, Kalymnos, Athens, Thessaloniki, Bari (from April to October), Bologna (from April to October), Milan Malpensa (from June to September), Milan Bergamo (starts in March), Treviso (from April to October), Venice (from June to October)	Bus, Taxi
Santorini (Thira) International Airport	Santorini	1 Terminal for passengers - 1 runway	Mykonos (from May to October), Athens, Thessaloniki (from April to October), Palermo (from March), Bari (begins in March), Bologna (begins in March), Milan Malpensa (starts in March), Milan Bergamo (from March), Verona (from May to October), Treviso (from March), Venice (from April to October)	Bus, Taxi

1.1.4.9 Traffic

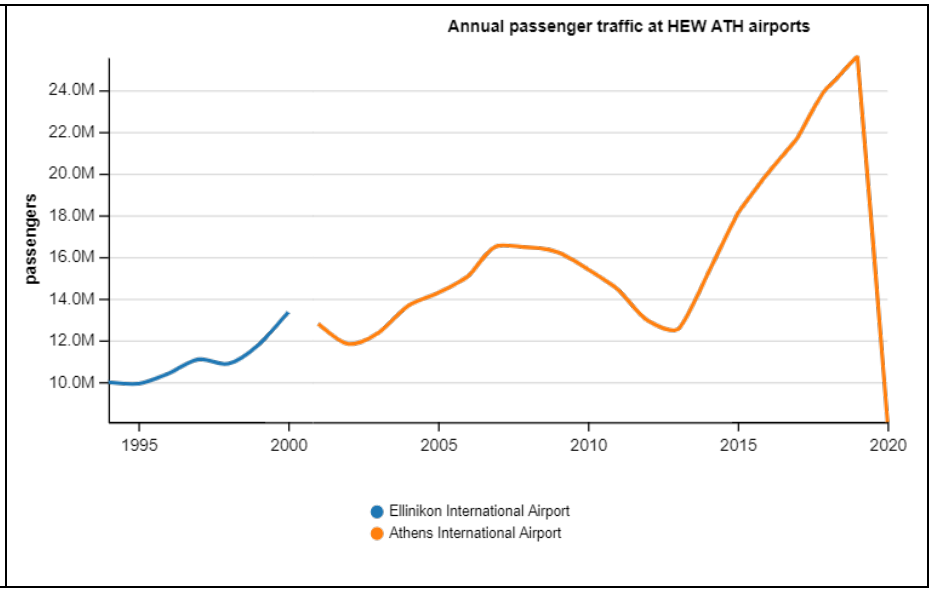
The following table indicates the air traffic for passengers and freight in the selected airports of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

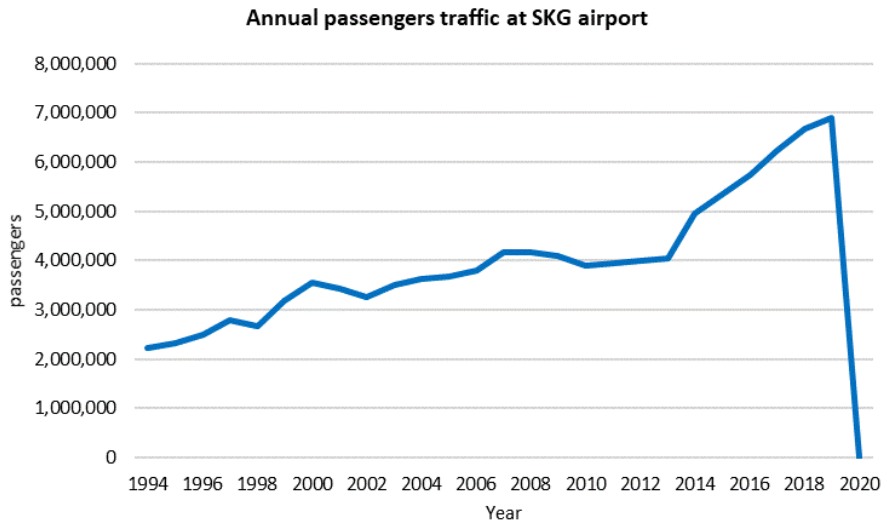
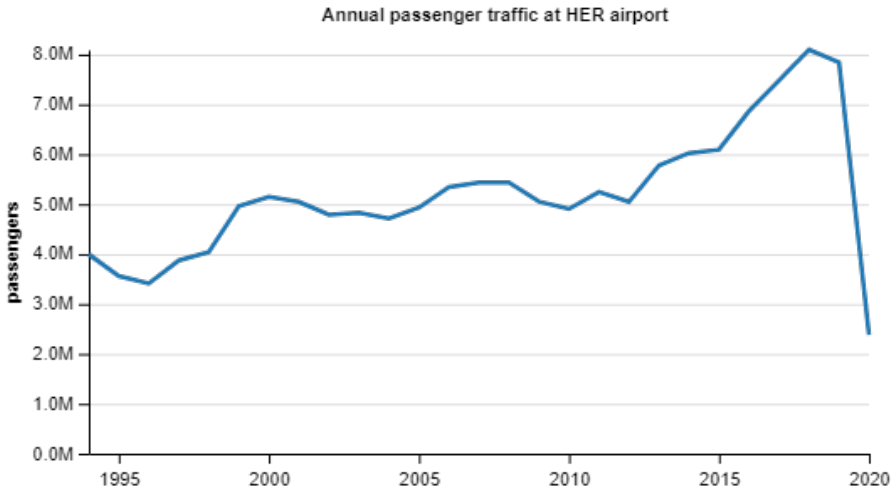
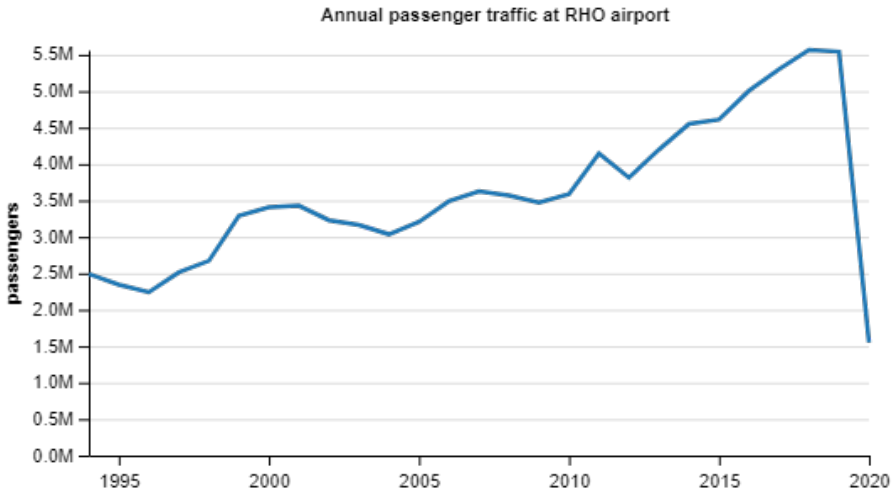
Table 13 Traffic in selected airports in Greece

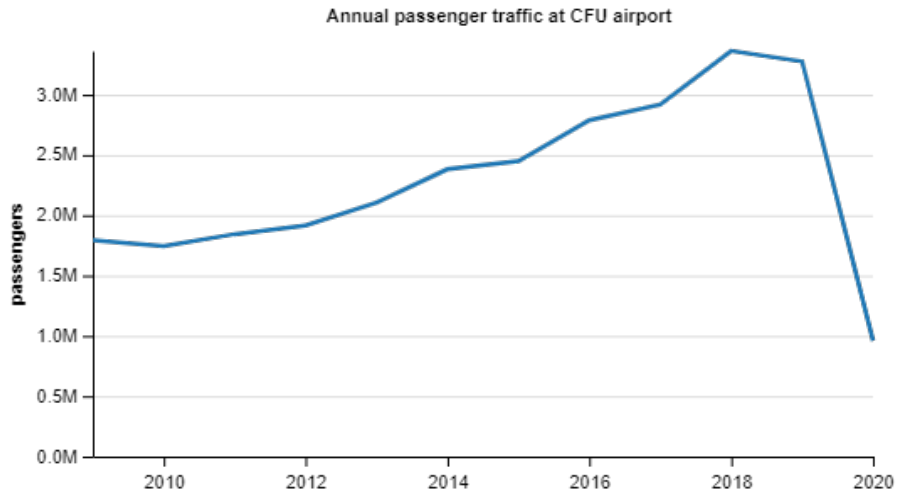
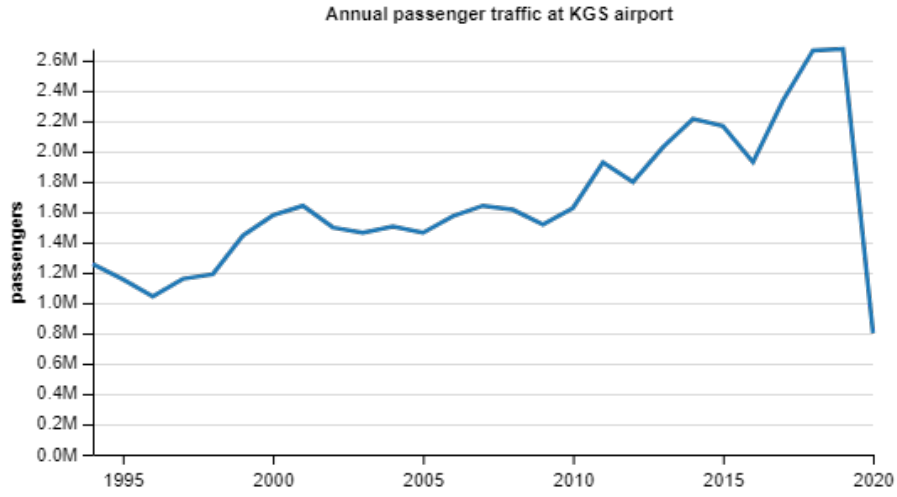
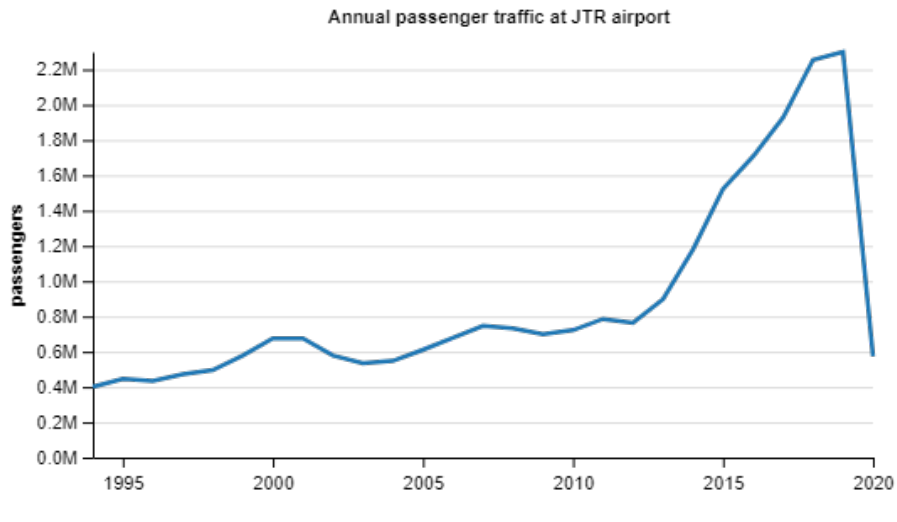
	Location	**Annual Passengers (2019)**	**Annual Cargo (2019)**
Athens International Airport	Athens	25,574,030	103,615 t
Thessaloniki Airport	Thessaloniki	6,897,057	NA
Heraklion Airport	Heraklion (Crete)	7,933,558	The commercial operation will take place in 2025, and there will be 19 boarding gates, 8 of which will be of combined use for Schengen and Non-Schengen flights.

Rhodes Airport	Rhodes	5,542,567	NA
Corfu International Airport "Ioannis Kapodistrias"	Corfu	3,275,897	NA
Kos International Airport	Kos	2,676,644	NA
Santorini (Thira) International Airport	Santorini	2,300,408	NA

Table 14 Annual passenger traffic for selected airports of Greece

Athens International Airport	

Thessaloniki Airport	
Heraklion Airport	
Rhodes Airport	

Corfu International Airport "Ioannis Kapodistrias"	
Kos International Airport	
Santorini (Thira) International Airport	

1.1.5 Italy

According to the selection criteria mentioned above, the airports chosen for Italy are the following fifteen: Milan Malpensa Airport, Bergamo Orio al Serio International Airport, Venice Marco Polo Airport, Catania–Fontanarossa Airport, Bologna Guglielmo Marconi Airport, Palermo Falcone Borsellino Airport, Milan Linate Airport, Bari Karol Wojtyła Airport, Brindisi-Papola Casale Airport (Aeroporto del Salento), Verona Villafranca Airport, Treviso Airport, Lamezia Terme International Airport, Trieste Airport, Abruzzo Airport and Marche Airport.
Following a brief introduction of each airport according to the available primary information on related websites.

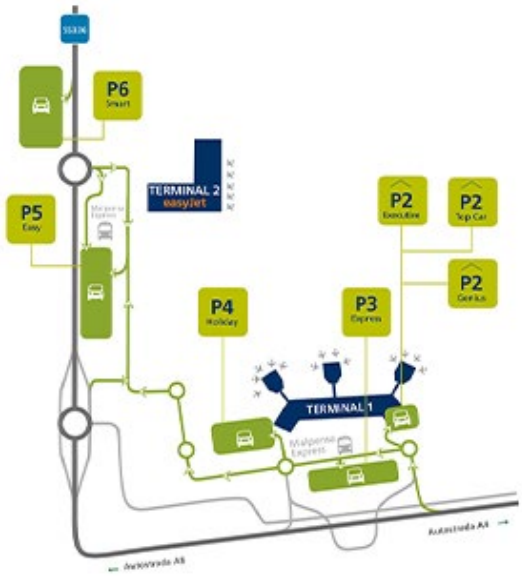
1.1.5.1 Milan Malpensa Airport

Malpensa airport[47] (IATA: MXP, ICAO: LIMC) is in a strategic position in the financial and productive heart of Europe.

It serves around 17 million inhabitants in Lombardy, Piedmont, and Liguria, as well as those living in the Swiss Canton of Ticino. The airport is 49 kilometers (30 mi) northwest of central Milan, next to the Ticino River (dividing Lombardy and Piedmont). The airport has two terminals (Terminal 1 and Terminal 2), two runways, and a dedicated cargo terminal.

Malpensa was the 20th busiest airport in Europe in 2019 in terms of passengers, handling more than 28 million passengers. It is the second busiest airport in Italy after Rome Leonardo da Vinci Fiumicino Airport in terms of total passengers, freight, and cargo.

Figure 24 Malpensa Airport map[48]



[47] https://www.milanairports.com/en
https://www.airportmalpensa.com/
http://www.malpensa-airport.info/
https://en.wikipedia.org/wiki/Milan_Malpensa_Airport
[48] https://www.parkwing.it/milano-malpensa.shtml

It is one of the most important airports in Europe, offering 2,900 direct flights each week and numerous intercontinental and long-haul destinations. It is also the leading Italian airport in terms of freight transport. In recognition of its high-quality services and infrastructure, it received the Best European Airport 2015 award, along with other essential certifications and awards:

- Air cargo award of Excellence 2014
- D-4001 certification for accessibility
- ISO 14001 certification for environmental management
- ISO 50001 certification for energy efficiency
- TÜV IT 005 MS certification for service for passengers with reduced mobility

In 2000, a project named Malpensa was entrusted with the responsibility of enlarging and upgrading the airport. To facilitate its expansion, the airport received funding from the European Union as part of the Trans European Transport Network Programme. The project was done because while the area was rich in industry, trade, and commerce, it lacked adequate infrastructure. Milan airport was favored because of its strategic location, enabling it to connect all the air traffic from the Mediterranean and consequently connect the most prominent European markets.

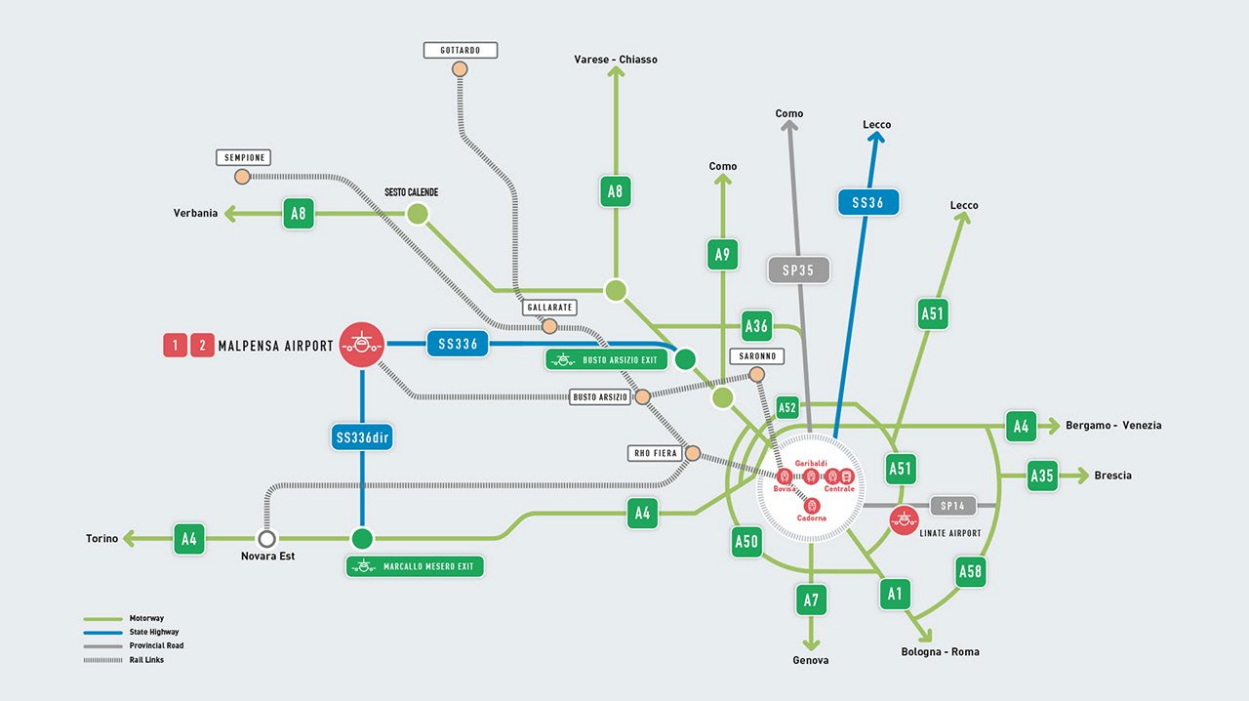
Malpensa Airport is easily accessible by different modes of transport, including car, taxi, bus, train, and car sharing. The following are the details of accessibility by each mode.

Milan Malpensa airport is easily reachable by car using the A8 / A9 motorway from Milan or located to the North and East of the airport, the A4 motorway from the West or the South.

Those using the A8 are advised to travel the motorway to the BUSTO ARSIZIO – MALPENSA exit and proceed on State Highway SS336 in the GALLARATE – MALPENSA to the exits Malpensa Terminal 2 or Aeroporto Malpensa Terminal 1.

Those using the A4 should travel the motorway to the MARCALLO MESERO exit, proceed in the MARCALLO – MESERO – MALPENSA direction, and then take the SS336DIR in the MALPENSA- A8 – MILAN – VARESE direction. Once entering SS336, proceed until the exit of Malpensa Terminal 1.

Figure 25 Malpensa Airport accessibility by road



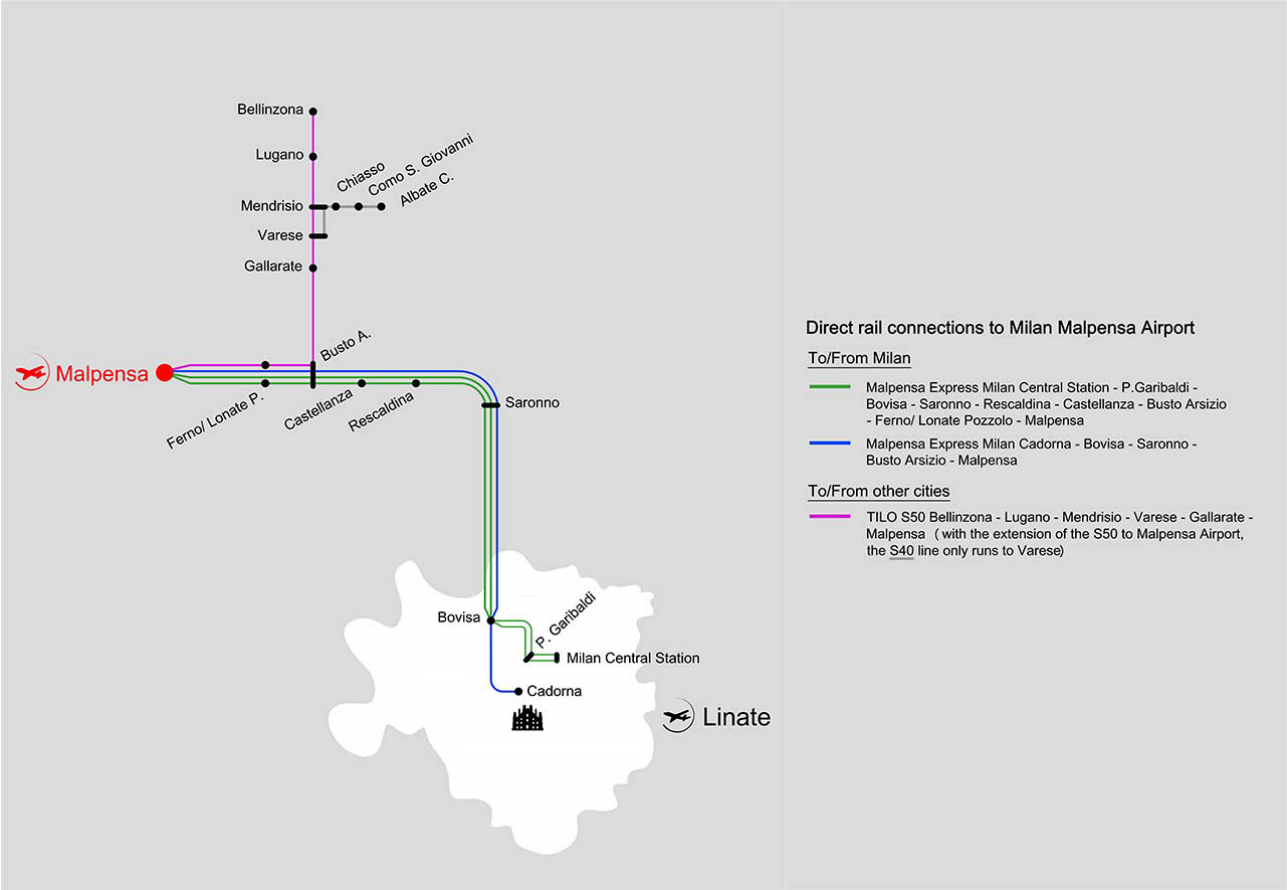
For the municipalities located to the northeast, it is also possible to reach the airport via the new Pedemontana Lombarda A36 Motorway, then take the SS336 towards MALPENSA - A8 - MILAN - VARESE. Once on the SS336, continue to the Malpensa Terminal 1 exit.

Milan Malpensa Airport can be easily reached from the center of Milan with the Malpensa Express train from Milan Cadorna, Milan Central, and Milano Porta Garibaldi stations. Malpensa Express train stops at Malpensa Terminal 1 and Malpensa Terminal 2. The Malpensa express airport service connects the center of Milan to Malpensa Airport and vice versa, with trains seven days a week.

Milan Malpensa can be easily reached by bus from Milan Central Station, Fiera Milano City, Rho Fiera Milano, Milan Linate Airport, and Orio al Serio Airport. Bus connections between Milan Central Station and Malpensa Airport are available every 20-30 minutes and are operated by four bus lines: Terravision, Malpensa Bus Express (Autostradale), Caronte, and Malpensa Shuttle (Air Pullman).

E-VAI is the first region-wide eco-friendly car-sharing scheme. It is also available at Milan Malpensa Terminal 1 with four vehicle places and two columns with four top-up payment stations. E-Vai is the first regional electric car-sharing service, fully integrated with Lombardy's railway services. E-Vai is a cheap and sustainable way of moving freely around Lombardy between airports, railway stations, and cities.

Figure 26 Railway connections to Milan Malpensa Airport



1.1.5.2 Orio al Serio International Airport

The Orio al Serio International Airport (IATA: BGY, ICAO: LIME) is branded as Milan Bergamo Airport[49] is located 5km from the city of Bergamo in the municipal territory of Orio al Serio. Bergamo Airport, also known as the II Caravaggio International Airport, was named after the great painter Michelangelo Merisi, Caravaggio. It's the third busiest airport in Italy, with more than 13 million passengers a year, and one of three servicing the cities of Bergamo, about 3.7 Km away to the southeast, and Milan, 45 Km away to the northeast.

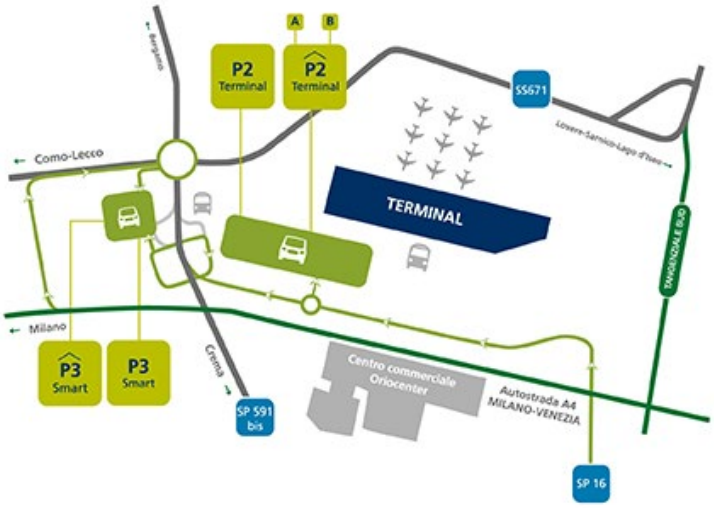
The following are the details of the airport infrastructure:

- Classification: civil and private airport (fully leased)
- Height A.S.L.: 238 metres
- Opening hours: 24 hours
- Distance from Bergamo:3.7 Km

[49] https://www.milanbergamoairport.it/en/
https://www.bergamo-airport.com/
https://www.airport-bergamo.com/
https://en.wikipedia.org/wiki/Orio_al_Serio_International_Airport

- Distance from Milan: 45 Km
- Airport grounds area: 350 hectares
- ICAO Classification: 4E. Aerodrome with a reference code 4E can accommodate aircraft with a "Reference Field Length" of 1800m and above and a wingspan up to 65m.[50]
- Instrument landing system (ILS) : cat. IIIB; luminous visual aids cat. III; airport enabled for cat. IIIB operations. A category III B approach is a precision approach and landing with no decision height or a decision height lower than 50ft (15m) and a runway visual range less than 700ft (200m), but not less than 250ft (75m).[51]
- Traffic type: intercontinental; international; national; general aviation
- Runways: runway 10/28; m 2,874 x 45 (main runway); runway 12/30; m 778 x 18 (tourist runway)
- Runway capacity: 26 hourly movements with 16 touchdowns per hour
- Aircraft parking: 33 independent spaces of various sizes according to the normal traffic mix
- Passenger capacity: over 10 million per annum
- Aerial surfaces: 67,200 square meters terminal; 14,900 square meters warehouses
- Check-in area: 35 desks
- Group meeting points: 8
- Boarding gates: 26
- Mobile piers: 2

Figure 27 Orio al Serio International Airport map[52]



Ground handling services are the most crucial part of an airport, and the Airport Global Service and SACBO handle the services of the Milan Bergamo Airport. SACBO also provides security for the airport, which is the other most crucial aspect since many passengers use the Bergamo Airport Orio al Serio for transportation in

[50] https://www.airsight.de/projects/item/higher-code-letter-aircraft-operations-at-aerodromes/#:~:text=For%20instance%2C%20an%20Aerodrome%20with,a%20wingspan%20up%20to%2065m.
[51] https://www.smartcockpit.com/docs/Getting_To_Grips_With_CATII_and_CATIII.pdf
[52] https://www.parkwing.it/bergamo-orio-al-serio.shtml

day-to-day life. The Polizia di Frontiera, the border police of Italy, supervises the security provided by SACBO for the airport.

The airport is in Lombardy, one of Italy's busiest and biggest industrial zones.

Figure 28 Orio al Serio International Airport routes map[53]

There are several transport modes in use to and from Bergamo Airport. There is a shuttle service, taxis, buses, and car hire.

The bus operates every 20 minutes, from 05:18 a.m. to 11:55 p.m. It goes to the Bergamo city center. Taxis are available outside the arrivals hall. Several car hire companies, including Avis, Autoeuropa, Europcar, and others, are within the arrivals hall. The bus companies ferrying people to Milan from this airport are Autostradale and Locatelli Air Pullman.

While a railway station is currently being built at Bergamo airport by 2024, the current nearest railway station is Bergamo railway station, 5.6 km away. There is no official shuttle between the airport and the railway station. A bus service operated by ATB connects to the airport, which is about 10 minutes from the train station.

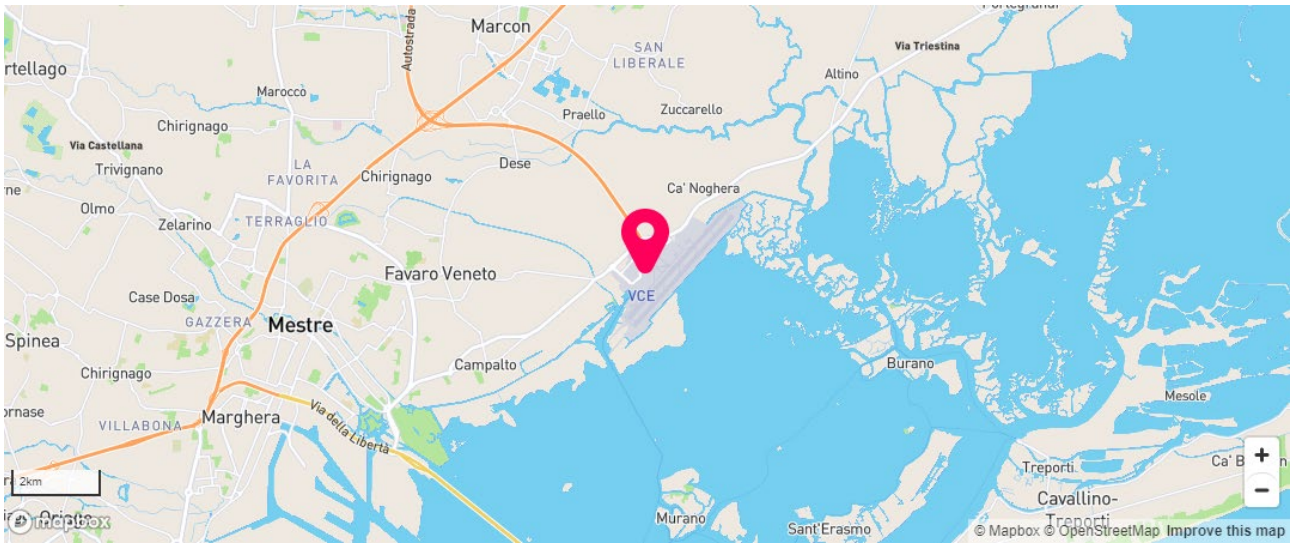
[53] https://corporatetravelcommunity.com/analysis/airport-insight-milan-bergamo---orio-al-serio-airport-583281

1.1.5.3 Venice Marco Polo Airport

Venice Marco Polo Airport[54] (IATA: VCE, ICAO: LIPZ) is located 8km north of Venice, Italy, in Tessera. It is among the-busiest airports in Italy and is managed by SAVE SpA, a company partially owned by local authorities. SAVE SpA also manages Venice Treviso Airport, which is used mainly by LCCs. Marco Polo is the larger international airport serving Venice, with the smaller Treviso catering largely to LCCs.

More than 1,300 weekly connections exist to the leading national, European, and intercontinental destinations.

Figure 29 Venice Marco Polo Airport location map[55]



The airport terminal has three floors: the ground floor for arrivals and the second floor for departures. The departure area has 70 check-in desks and two lounges airside for customers. There are two departure lounges. The terminal's third floor has offices for the operating company and airlines. The departure gate area is separated for Schengen and non-Schengen flights.

In 2017, the extension of the landside arrivals/departures area was completed (including restaurants and shops) to which the new Moving Walkway is connected, the mobile walkway that connects the multi-story car park and the dock for the numerous passengers who choose to reach the airport by water taxi or Vaporetto.

On 1 July 2019, in just three months and for 80 million euros, the total refurbishment of the 4R / 22L runway, the main one of the airport, was completed. During the entire duration of the works, the airport's operations were never interrupted or decreased as the secondary runway 4L / 22R, previously lengthened by 600 meters at the end of 2018, was used.

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[54] https://www.venice-airport.com/
https://www.introducingvenice.com/venice-marco-polo-airport
https://centreforaviation.com/data/profiles/airports/venice-marco-polo-airport-vce
https://en.wikipedia.org/wiki/Venice_Marco_Polo_Airport

[55] https://www.introducingvenice.com/venice-marco-polo-airport

The airport is 13 km from Venice, 8 km from Mestre, 28 km from Treviso, and 47 km from Padua. Venice is connected to the Bergamo-Orio al Serio airport by the A4 motorway, reachable in about two hours by car or by some extra-urban public transport lines. There are numerous car parks in the airport area, including a multi-story one with 6,200 parking spaces. Other nearby places are Murano (5.4 km), Torcello (6.1 km), Burano (6.3 km), Cannaregio (6.5 km), and Ca' Pesaro (7.1 km).

A couple of bus companies in Venice Airport connect to Venice city center or other destinations on the mainland: ACTV and AVTO. ATVO's buses run from Venice Marco Polo Airport to Piazzale Roma in just 20 minutes since the bus only has two stops. The blue buses run approximately every 30 minutes. Bus no.5 connects Venice's Marco Polo Airport and the city center (Piazzale Roma). The bus stops several times before the last stop so that the journey can take 30 to 45 minutes.

Venice Airport doesn't have a railway station. The closest stations are Mestre Railway Station that is 11.5 Km away and Santa Lucia Railway Station 14.2 Km from the airport.

At Venice Airport, there is a water boat transportation service by Alilaguna boats, which links Marco Polo Airport with some Venetian Islands (Burano, Murano, and Lido).

1.1.5.4 Catania–Fontanarossa Airport

Catania–Fontanarossa Airport[56] (IATA: CTA, ICAO: LICC) also known as Vincenzo Bellini Airport, is an international airport 2.3 NM southwest of Catania, the second largest city on the Italian island of Sicily.

Vincenzo Bellini Airport was Sicily's busiest and Italy's fourth busiest in 2020. Catania–Fontanarossa Airport handled 10,223,113 passengers in 2019. During 2020, numbers decreased due to the coronavirus crisis: 3,654,457 passengers checked in at the airport.

Major airlines such as Alitalia, Lufthansa, and KLM offer services here and connect numerous European destinations such as Rome, Munich, Amsterdam, and Berlin, while low-cost airlines such as easyJet and Ryanair offer flights to leisure destinations. With nearly two million passengers in 2016, the Catania/Fontanarossa - Rome/Fiumicino route is Italy's busiest air and Europe's fourth busiest.

Catania Airport includes two terminals for a total area of 48,260 square meters. To cope with the growing passenger demand, two additional terminals were opened in 2018, Terminals B and C. Terminal C is used exclusively by easyJet.

Terminal A, inaugurated in May 2007, is spread over two floors, covering an area of 44,460 square meters. On the ground floor are the Arrivals, while the first floor is dedicated to Departures.

In the terminal, there are 55 check-in and drop-off desks dedicated to all airlines present at the airport, 12 passenger control gates, six boarding loading bridges, and eight baggage reclaim belts.

[56] https://www.airport-catania.com/
https://www.aeroporto.catania.it/
https://en.wikipedia.org/wiki/Catania%E2%80%93Fontanarossa_Airport

The airport is close to the A19 motorway, which links Catania with Palermo and central Sicily, while the European route E45 runs to Syracuse in the south.

A shuttle bus service provides transport into Catania city center and the Central Train Station, while scheduled bus services to other parts of the island are also available direct from the airport.

Figure 30 Catania–Fontanarossa Airport map[57]

A new train station, Catania-Aeroporto Fontanarossa, is served by regional train lines such as the Messina-Syracuse railway, the Catania-Palermo railway, and the Catania-Caltagirone railway. Catania-Aeroporto

[57] https://www.cataniablog.it/mappa-interna-aeroporto-di-catania.html

Fontanarossa rail station is part of Catania's suburban railway line. The station is situated between Bicocca and Catania-Acquicella stations. A typical journey to and from Catania Central Station will take less than 10 minutes and approximately one hour to and from Syracuse or Taormina train stations.

1.1.5.5 Bologna Guglielmo Marconi Airport

Bologna Guglielmo Marconi Airport[58] (IATA: BLQ, ICAO: LIPE) is it an international airport serving the city of Bologna in Italy? It is approximately 6 km northwest of the city center in the Emilia-Romagna region of Italy.

The site of Bologna Airport covers an area of 2,450,000 square meters and boasts a newly extended 2,800-meter-long runway, which was opened in July 2004. The new track has increased the number of long-distance flights offered, including intercontinental destinations as far as approximately 9000 Km.

Bologna Airport handled 9,405,920 passengers in 2019. During 2020, due to the coronavirus crisis, Bologna Airport only registered 2,506,258 passengers.

The top 10 busiest routes from Bologna Airport are Catania, Barcelona, Frankfurt, Paris, Rome, London Heathrow, Palermo, Madrid, Amsterdam, and London-Stansted.

Bologna Airport has one passenger terminal. There is one terminal that underwent an expansion during 2011–2013. It now covers a total surface of 36,100 square meters, of which 5,500 square meters are shopping areas. A new baggage handling system was installed, and there are now 24 departure gates.

The new development plan (2019-2023) was approved in 2019. In January 2020, the new de-icing stand of 29,000 m² was inaugurated; in January 2021, the works for constructing a new cargo area consisting of a DHL logistics hub of 15,000 square meters and an additional floor were completed of the P-Express car park.

The parking surface is 111,500 square meters and has a capacity of 5,100 parking spaces.

Monorail (People Mover) connects Bologna Airport to Bologna central train station. The station is located on the first floor of the terminal building. The airport is about 5 kilometers (3 mi) from Bologna Centrale railway station. From 2020, the Marconi Express monorail connects the airport to Bologna Centrale railway station with a travel time of approximately 7.5 minutes.

[58] https://www.airport-bologna.com/
https://www.bologna-airport.it/en
https://en.wikipedia.org/wiki/Bologna_Guglielmo_Marconi_Airport

Figure 31 Bologna Guglielmo Marconi Airport people mover map[59]

Before the start of the Marconi Express, the connection with the Bologna Central Station and the city center was guaranteed by the Aerobus-BLQ service, a shuttle bus with special rates managed by TPER. Daily bus services also connect the airport to numerous cities, including Ferrara, Florence, Modena, Rimini, Riccione, the Republic of San Marino, Pesaro and Urbino, and Reggio Emilia.

Figure 32 Bologna Guglielmo Marconi Airport People mover[60]

[59] https://www.marconiexpress.it/en/information/the-project/
[60] https://www.marconiexpress.it/en/information/the-project/

Taxis ranks are located at the Arrivals area of Bologna Airport (Main Terminal). A taxi ride from Bologna Airport to Bologna city center should take 30 minutes, but it always depends on the traffic and the exact destination.

1.1.5.6 Falcone Borsellino Airport

Palermo Airport[61] (IATA: PMO, ICAO: LICJ) also known as Falcone-Borsellino, the airport is 35 km from Palermo, the capital city of the Italian island of Sicily. Falcone Borsellino Airport is still one of the busiest southern airports in Italy, with many national and international flights.

The airport structure is organized above one terminal, a total width of 450 acres, with two runways. The terminal has four levels, a subterranean floor, a ground floor, a first floor, and a second floor, with arrivals and departures on both upper levels. Airline Companies are increasing, and low-cost airlines are now connecting Sicily to the rest of Europe. The most important low-cost airline is Meridiana, which has its hub there. Other airlines flying to Palermo airport are Ryanair, Air Berlin, Air Italy, Blu-express, easyJet, Jetairfly, Norwegian Air Shuttle, Lloyd, and others. Today Palermo airport is one of the busiest in Italy, with 7,018,087 passengers in 2019.

Falcone Borsellino is the second busiest airport in Sicily after Catania–Fontanarossa Airport.

Short-term parking at Palermo Airport has 770 parking spaces facing the main terminal.

Palermo airport has a train station that you can use to either depart from or arrive at. Punta Raisi will bring you right to the city of Palermo via the Trinacria Express. The station is located underneath the terminal and is designed as an underground railway. On the train, it takes about an hour to get from the airport to Palermo city's center.

Figure 33 Palermo metropolitan railways map[62]

[61] https://www.palermo-airport.com/
https://www.aeroportodipalermo.it/en/
https://www.airport-palermo.com/

[62] https://metropalermo.xoom.it/metropalermo/homeenglish.html

Busses depart from the Palermo city center and the airport every half hour. Rental services are located in the arrival hall and are provided by Europcar, Avis, Hertz, and Autoeuropa.

1.1.5.7 Milan Linate Airport

Linate airport[63] Milan's city airport (IATA: LIN, ICAO: LIML) is just 8 km from the city center. Conveniently located near the city Centre, it is well-served by public transport and easy to reach by car. With its 47 destinations and 18 airlines.

An essential reference point for those traveling in Italy or Europe thanks to its wide range of short and medium-haul domestic and international flights. An airport destined to grow further and become even more accessible.

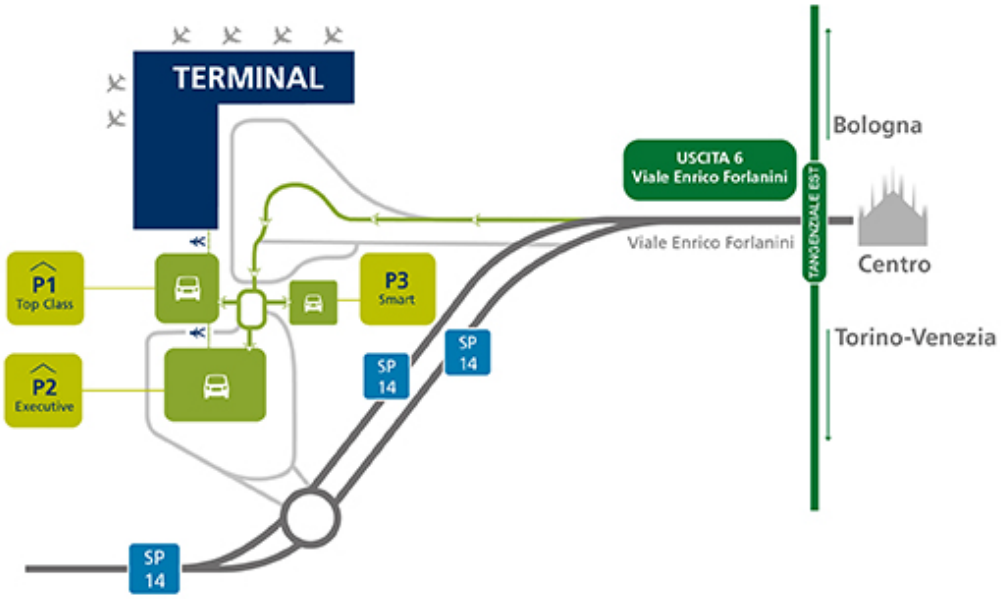
Milan Linate is the third international airport in the Italian city of Milan. Milan Linate Airport handled 9,233,475 passengers in 2018.

From July 27 to October 27, 2019, Linate Airport underwent a temporary closure to carry out essential runway resurfacing and terminal enhancement projects. The latter endeavor is anticipated to continue even after the airport's reopening, with an expected completion date in 2021. During this closure period, the majority of flights were redirected to Malpensa Airport, affecting approximately 2.5 million passengers.

Linate Airport boasts a passenger terminal building comprising three levels. The ground floor is dedicated to check-in services, separate baggage reclaim areas, service counters, and an additional departure gate section for bus boarding. The first floor houses the primary departure zone, featuring a variety of shops, restaurants, and service amenities. Meanwhile, the second floor serves as office space. The terminal structure incorporates five aircraft stands, all equipped with jet bridges for passenger convenience. Multiple parking positions are available on the apron, accessible from various bus-boarding gates.[64]

[63] https://www.milanairports.com/en/our-airports/malpensa-linate-airports
[64] https://en.wikipedia.org/wiki/Linate_Airport

Figure 34 Milan Linate Airport map[65]



The Milan metro line 4 will connect the airport (station Linate Aeroporto) to the city center starting in 2022, with a travel time of about 15 minutes.

ATM Urban Bus Line 73 directly connects Milan Linate Airport, Milan Forlanini Station, and Duomo (Milan city center).

There isn't a direct train connection between Linate Airport and downtown Milan.

The taxi arrives at Milan city center within 40 minutes according to traffic. Taxi ranks are located on the ground level, at gate 5.

1.1.5.8 Bari Karol Wojtyła Airport

Bari Karol Wojtyla International Airport[66] (IATA: BRI, ICAO: LIBD) is the main international airport serving Bari in the Southeast region of Italy (Puglia).

Bari Airport is a hub for Ryanair and Wizz Air. BRI Airport is about 8 km northwest of Bari city center. Bari International Airport handled 5,545,588 passengers in 2019. Bari Airport registered 1,703,130 passengers in 2020. A significant decrease due to the coronavirus crisis.

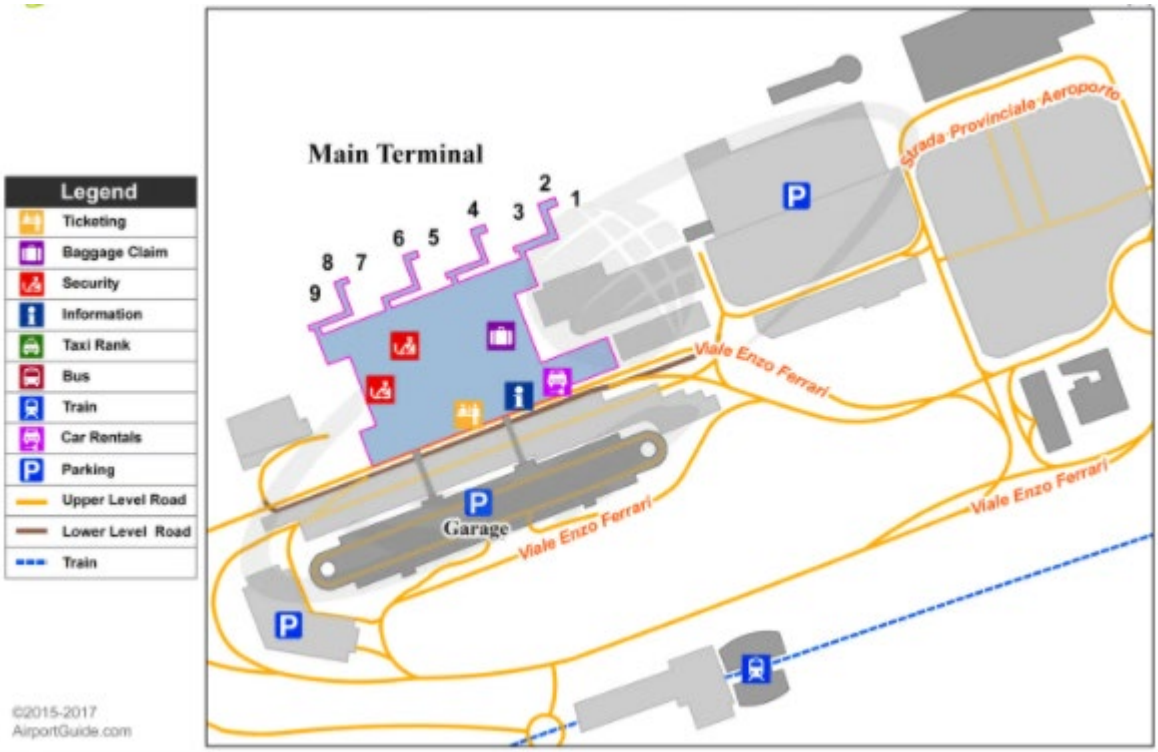
The terminal dedicated to Karol Wojtyła has a passenger terminal spread over approximately 29,000 square meters across five levels.

[65] https://www.parkwing.it/milano-linate.shtml
[66] https://www.airport-bari.com/
http://www.bari-airport.com/
https://en.wikipedia.org/wiki/Bari_Karol_Wojty%C5%82a_Airport

There are 5,400 square meters reserved for commercial activities, while four of the eighteen aircraft stands are served by boarding sleeves for passengers' direct embarkation and disembarkation. The incoming and outgoing flows are separated and placed on different floors.

The size of the terminal is for 3 600 000 passengers per year, with an hourly peak of 1 400 passengers per hour and an aircraft movement of 32 000 per year. The 28 932 square meters are divided between the basement (3 530 square meters), ground floor (arrivals and baggage claim, 9 296 square meters), mezzanine (arrivals/transits, 1 130 square meters), first floor (departures, 9 660 square meters) and floor second (offices and exhibition hall, 5 216 square meters).

Figure 35 Bari International Airport map[67]



At the end of 2018, the airport was adapted to the infrastructural part of the runway. Its total length can be fully exploited in both directions of orientation (the orientation of runway 07 was limited to 2,400 meters due to the presence of trees and unevenness in the ground). In January 2019, following significant works that lasted about 16 months, the airport runway became available in all its physical length (3000 meters) from both direction 07 and direction 25. The descent path from direction 07 has been lengthened by 500 meters with the elimination of physical obstacles consisting of olive trees (removed and replanted both within the airport area and outside) and an artifact that has been demolished.

Two rainwater collection tanks have been set up. A new ILS system was installed that allows landings every 2.6 min / h24, and a new ALS system with LED lights was also installed.

[67] https://airportguide.com/airport/info/BRI#maps

The airport can be reached by the ring road of Bari and from the A14 motorway.

The multi-level car park, inaugurated in 2005, a few months after the new terminal, is connected by two pedestrian bridges on the departures level of the terminal. It is a rectangular building with two floors above ground, for a total area of 20 520 square meters. There are 749 spaces to be added to the 2,300-level parking spaces.

The Bari metropolitan railway service connects the airport with the Bari Centrale railway station in the city center. The railway connection with the airport was co-financed with over 27 million euros from the ERDF fund of the European Union (POR 2007-2013). The service, carried out by the Ferrotramviaria company, is structured through the two lines FR2 and FM2 of the Ferrovie del Nord Barese.

1.1.5.9 Brindisi-Papola Casale Airport (Aeroporto del Salento)

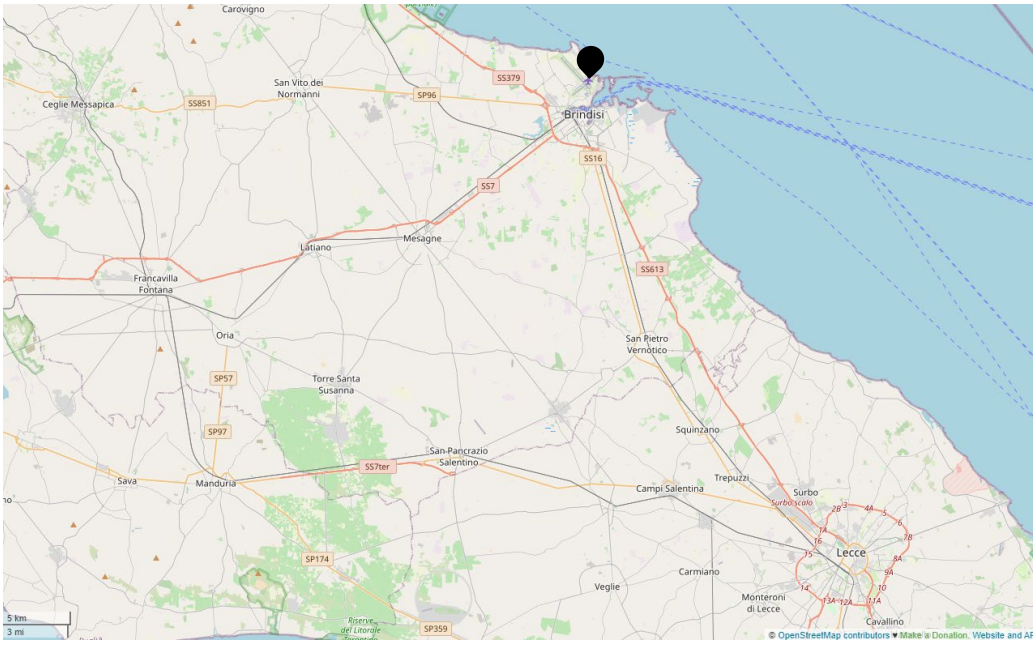
Brindisi Airport[68] , also known as Papola Casale Airport or Aeroporto del Salento (IATA: BDS; ICAO: LIBR), is located in Southern Italy. It is the main international airport serving Brindisi in southern Italy, 5 km from downtown Brindisi. This is a part of the Aeroporti di Puglia. The other three airports belonging to Aeroporti di Puglia are Foggia, Taranto, and Bari.

As of 2008, it officially changed its legal status into a civilian airport, maintaining the operational military facilities attached to it.

Brindisi Airport serves flights to Italy, UK, Switzerland, and Germany. Brindisi Airport handled 2,697,749 passengers in 2019. During 2020, Brindisi Airport only registered 1,016,571 passengers due to the coronavirus crisis.

[68] https://www.brindisiairport.net/
https://www.brindisi-airport.com/
https://www.italianairportguide.com/bds/brindisi-car-hire.htm#/searchcars

Figure 36 Brindisi Airport road access



The 2018 enlargement project of the airport included the following:

- The boarding areas of the airport have been enlarged to approximately 1500 square meters
- The gates went from eight to thirteen.
- The security check area has been relocated to the airport's first floor.
- The new automated system for passenger access has been activated (optical reader of boarding passes and automatic doors) and consists of five gates, one of which is reserved for the «Fast Track» lane.
- Outside, on the landside front, two canopies have been built in correspondence with the entrance and exit doors of the airport.
- Expansion of the aircraft parking area, whose capacity has increased from eight to ten stands.
- The category of junction "B" connecting runway RWY 05/23 and the aircraft parking area was then raised (from "C" to "E"), suitable for handling high-capacity aircraft (Boeing 747, Airbus A330)
- parking of ramp vehicles
- new light towers
- restoration of the existing aircraft apron

The SS16/SS379 is the road leading from the airport to the city of Brindisi, while the SS613 will take you to Lecce, about a 40-minute drive. Lecce is approximately 45 km from Brindisi Airport. Both cities can be reached by bus and shuttle service.

Around 30 parking spaces are available in short-stay parking, denoted as P1. Vehicles can be parked there for only a few hours as it is the nearest to the terminal building. P2 parking is for medium to long-term parking periods with a capacity of 462 spaces. P3, which is long-stay parking, has 143 parking spaces.

Brindisi Airport offers a shuttle bus to the city center of Brindisi. Operated by the local public transportation company, STP Brindisi, this service typically provides a 20-30 minute journey, though travel times may vary due to traffic conditions. The bus stops near the Brindisi train station in the city center.

There is a regional bus operated by the local bus company, Salento in Bus from Brindisi Airport to Lecce. The journey usually spans approximately 1 to 1.5 hours, with travel time variations influenced by the chosen route and any intermediate stops along the way. Buses commence their journey from the airport's bus terminal and conclude at Lecce's primary bus station, referred to as "Lecce Terminal."

1.1.5.10 Verona Villafranca Airport

Verona Villafranca Airport[69], also known as Valerio Catullo Airport or Villafranca Airport (IATA: VRN, ICAO: LIPX), is located 10 km southwest of Verona, Italy. The airport is next to the junction of the A4 Milan-Venice and A22 Modena-Brenner motorways. It serves more than 4 million in the provinces of Verona, Brescia, Mantua (Mantova), and Trentino-Alto Adige/Südtirol.

Ownership is currently shared between provincial governments from Veneto (Villafranca di Verona and Sommacampagna), Lombardy (Province of Brescia), Trentino (second main shareholder), and Alto Adige/Südtirol.

Verona Villafranca Airport handled 3,638,088 passengers in 2019, being the 15th busiest airport in Italy in terms of passenger traffic.

The airport has two terminals, departures and arrivals. The departures hall hosts check-in facilities on the eastern side. The lounge is located on the first floor's eastern wing. The main bus stand is located directly outside the arrivals hall.

[69] https://www.airport-verona.com/
https://www.aeroportoverona.it/en/
https://skybrary.aero/airports/lipx
https://www.airports-worldwide.com/italy/villafranca_italy.php
https://en.wikipedia.org/wiki/Verona_Villafranca_Airport

Figure 37 Verona Villafranca Airport map[70]

Changes have been made to the road access system to Verona airport, aimed at improving and more effectively organizing vehicle flow for the benefit of travelers and those accompanying them. The entrance and exit lanes have been increased from two to three per direction: there are now two for car access and a third permitting access for vehicles of over 1.90 m in height, reserved for emergency vehicles, buses, vans, taxis, trucks, and lorries, government vehicles, and NCC. Access is now regulated through columns with bars fitted to enter online booking codes.

The aim of the new system, in line with the one in operation in many Italian and international airports, is to discourage drivers from leaving their cars in no-parking areas and to avoid travelers being dropped off or picked up in vehicle transit areas. A further objective is to rid the airport area of shuttle services or taxis operating without a license.

The Verona Airport can be reached by car from the A4 and A22 motorways.

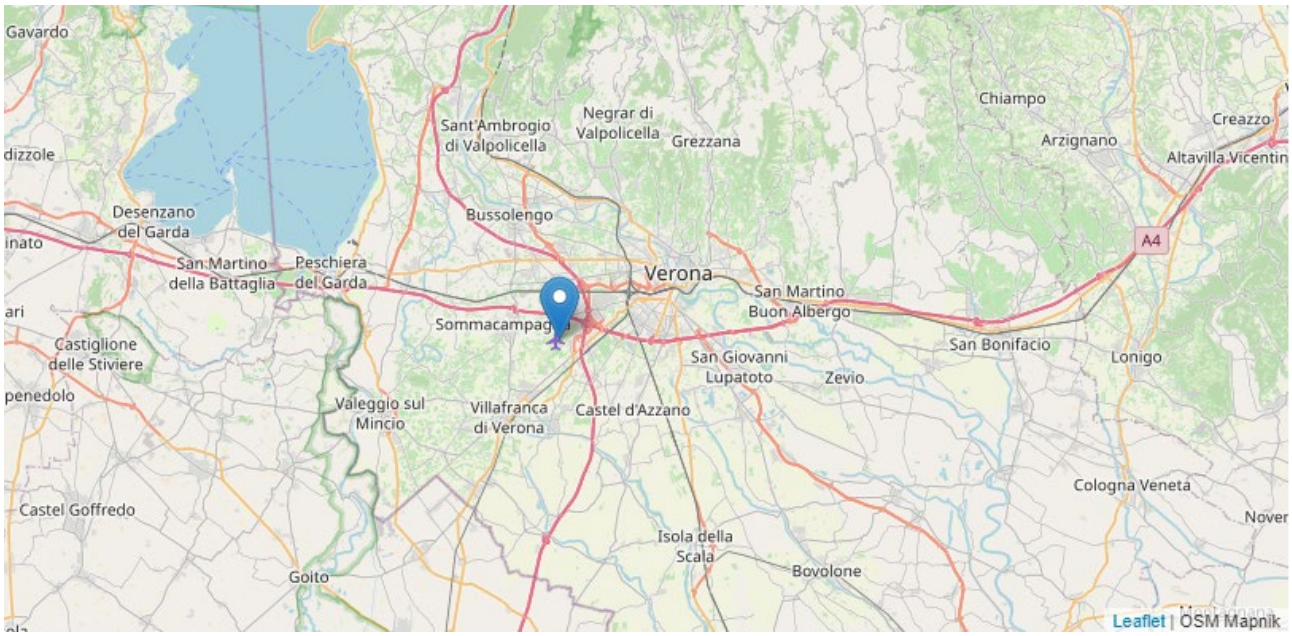
Verona Airport is connected to the Verona train station via a Shuttle/Aerobus service that runs every 20 minutes (journey time 15 minutes).

A shuttle bus service, Aerobus (199), operated by ATV, connects Verona-Villafranca Airport directly with Verona Porta Nuova station. During the summer months (June to September), ATV (Verona) buses 164, 183, and 184 additionally provide hourly connections between Verona-Villafranca Airport en route to communes along Lake Garda/Lago di Garda.

[70] https://www.aeroportoverona.it/en/parking/parking-map.html

The taxi rank can be found at the exit of the Arrivals Terminal.[71]

Figure 38 Verona Villafranca Airport Road access[72]



1.1.5.11 Treviso-Sant'Angelo Antonio Canova Airport

Treviso-Sant'Angelo Antonio Canova Airport[73], Italian: Aeroporto di Treviso A. Canova, sometimes Venice-Treviso Airport (IATA: TSF - ICAO: LIPH), is an international airport located 1.6 NM (3.0 km; 1.8 mi) west-southwest of Treviso and approximately 31 km from Venice, Italy. It is used mainly by low-cost airlines.

The runway direction is 07/25, with an asphalt surface 2,420 m (7,940 ft) long and 45 m (150 ft) wide. The new terminal was opened in 2007.

Following the COVID-19 pandemic, the airport remained closed to traffic from March 2020 to May 31, 2021. From June 1 of the same year, it returned to operation. The air traffic that was carried out from the Treviso airport was operated by that of Venice-Marco Polo.

In December 2020, Ryanair announced it would open a new base at the airport consisting of 18 new routes and several existing ones.

[71] https://www.aeroportoverona.it/en/transport/train.html
[72] https://skybrary.aero/airports/lipx
[73] https://www.trevisoairport.it/en/
https://it.wikipedia.org/wiki/Aeroporto_di_Treviso-Sant%27Angelo

In 2011 the runway was rebuilt entirely (with consequent closure of six months with traffic diverted to the Marco Polo in Venice), reusing and treating the waste material of the old structure, and the 2nd category ILS system was installed today. Operational (the first runway in Italy with a central line with LED lights).

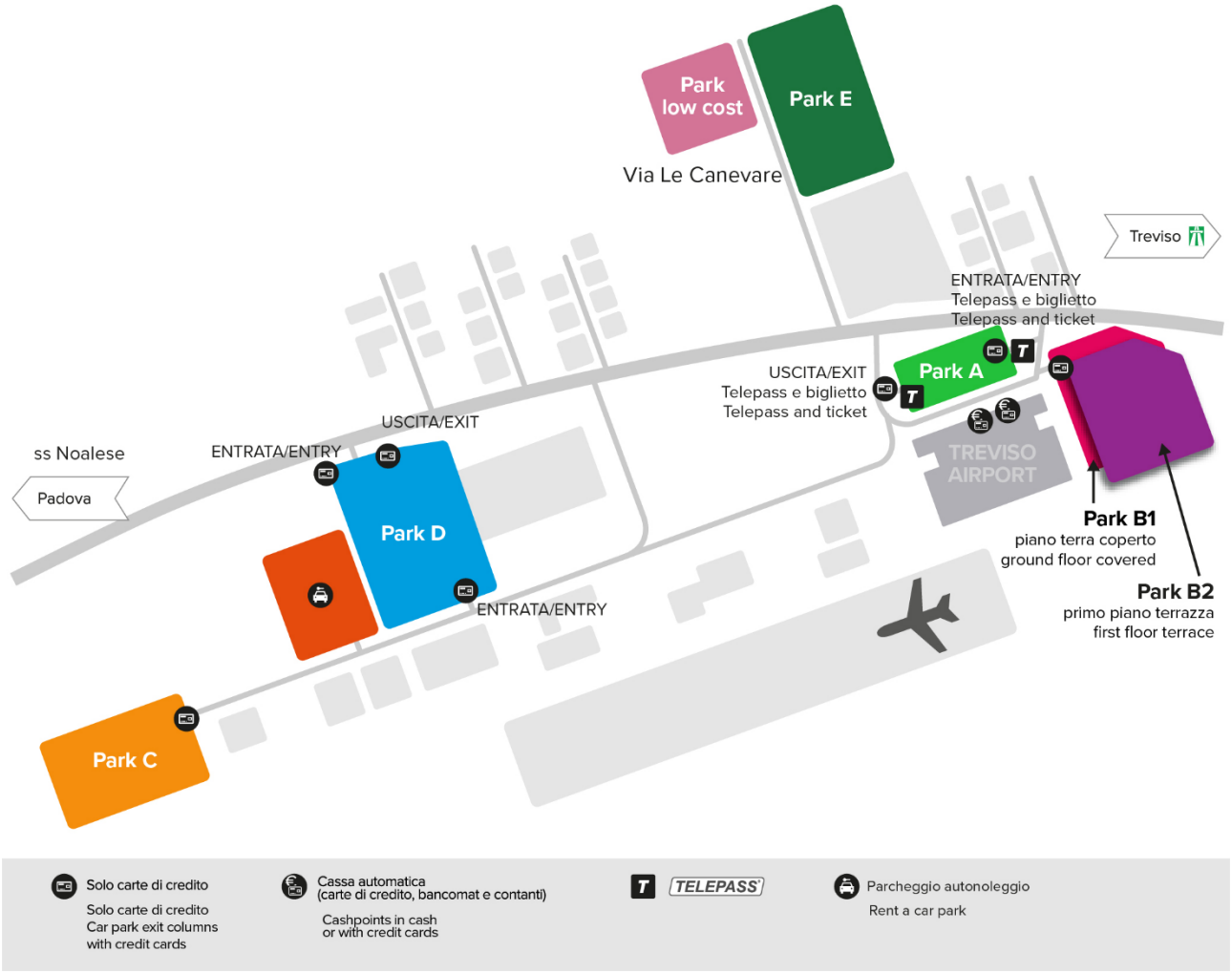
The aircraft landing at this airport is mainly Boeing 737 and Airbus A320 and A321, as well as some aircraft for charter flights.

The dimensions remained unchanged (2 459 × 45 m), but the rainwater drainage conducted in purifiers has been redone, eliminating the possibility of pollution of the river Sile that flows alongside the runway.

It is located at3 km from the city center on the SR 515 "Noalese" state road (towards Padua), in an area adjacent to the Treviso ring road SS 53, which connects it in a few minutes to the main motorway networks; it is approximately—25 km from Venice and 37 Km from Padua.

The airport has four parking areas. Three are long-term car parks with a total of 564 places. In front of the terminal building are additional 50 parking spaces for short-term parking.

Figure 39 Treviso-Sant'Angelo airport map[74]



A public bus service, operated by Mobilità di Marca, connects the airport with the railway station (the Treviso Centrale railway station) in the center of Treviso. Another bus service, coupled with flights for Wizzair and Ryanair, operated by BARZI BUS SERVICE, reaches Venice in 40 minutes by highway. Further coach connections are available from the airport or the city center of Treviso. Daily coach service operated by DRD to Ljubljana (Slovenia) via Venice Marco Polo Airport (Venice) and Friuli Venezia Giulia Airport (Trieste). A public bus and vice versa service from Treviso to Padua, route 101, is operated by Mobilità di Marca.

A bus and taxi service connects Treviso Canova Airport to the Mestre railway stations.

[74] https://parcheggi.trevisoairport.it/en/treviso-airport-carpark/map/

1.1.5.12 Lamezia Terme International Airport

Lamezia Terme International Airport[75], also known as Sant'Eufemia Airport (IATA: SUF, ICAO: LICA), is the main international airport serving Lamezia Terme in Calabria, Italy. It is the principal airport of Calabria. A military helicopter unit, the 2° Reggimento dell'Aria "Sirio," is also based near the airport.

SUF Airport is located in the Sant Eufemia district, 12 km from Lamezia Terme city center. The busiest routes from Lamezia Terme Airport are mostly domestic: Milan-Malpensa, Roma-Fiumicino, Bergamo, Bolognia, Milan-Linate, Treviso, Pisa, and Turin.

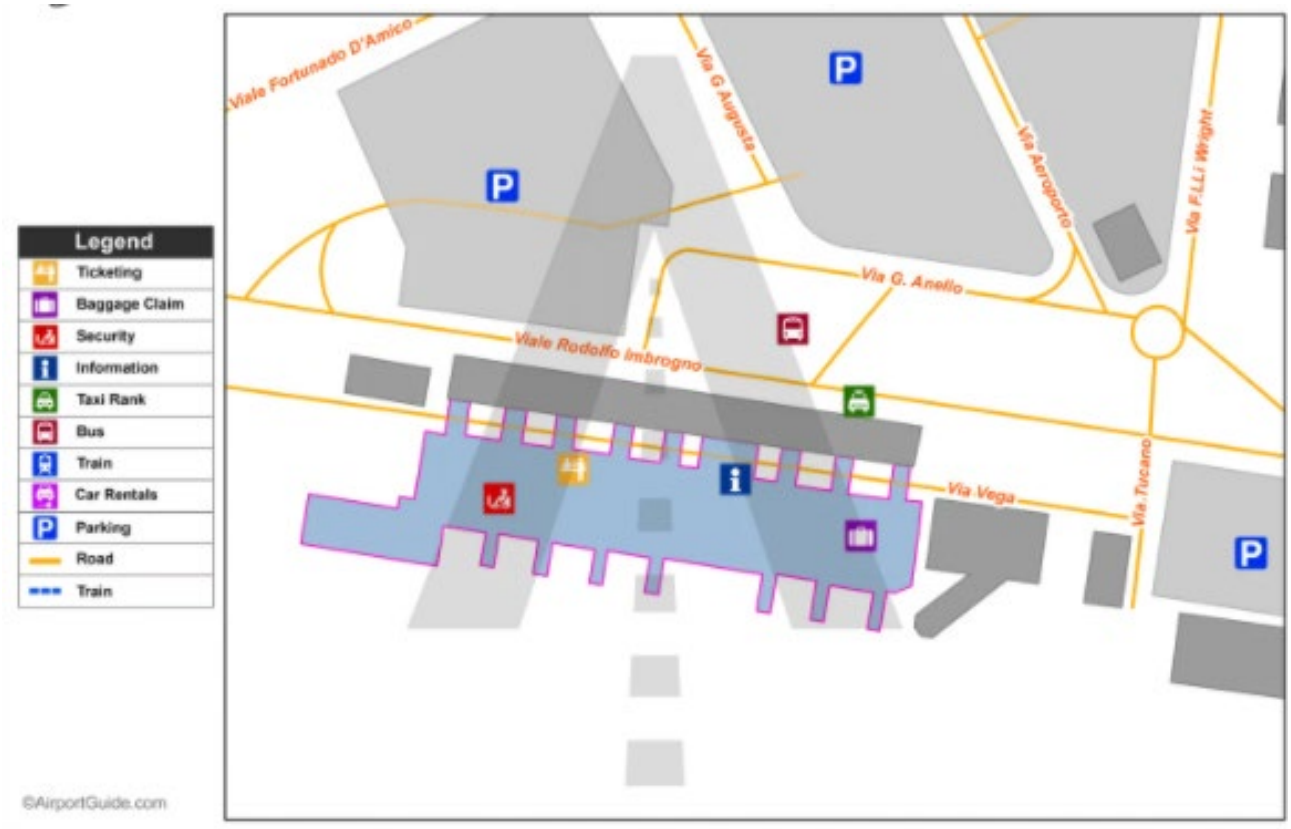
Lamezia Terme International Airport offers domestic and international destinations to air passengers. Major airlines operating out of this airport are Ryanair, Monarch, Air Italy, Alitalia, Easyjet, Air France Air Berlin, Germanwings, KLM, and Helvetic Airways.

There's just one modern, well-equipped terminal building serving arrivals and departures.

Lamezia Terme airport has a single runway with two ends (10-28), 3017 m long and 45 m wide. The runway was fully operational in the new configuration on July 21, 2016 (AIRAC A6 / 16). Runway 28 is equipped with ILS / DME Cat. I and is mainly used for take-offs (and landings in case of high traffic or bad weather, being the only precision instrument runway in the airport), while runway ten is used for landings (and take-offs when the wind does not allow take-off to runway 28).

[75] https://www.lamezia-terme-airport.com/
https://lameziaairport.com/
https://en.wikipedia.org/wiki/Lamezia_Terme_International_Airport

Figure 40 Lamezia Terme International Airport map[76]



The airport has a freight terminal, always active and managed by SACAL as a freight handler, capable of handling various goods. Furthermore, it has a large warehouse for temporary customs custody, with double airside and landside accesses that facilitate goods' inbound and outbound operations subject to quick custody procedures.

Lamezia Terme International Airport (SUF) handled 2,756,211 passengers in 2018.

There is no train station serving the airport. However, a bus or taxi can take you to the nearest train station in just a few moments, as the train station is only 2 km from Lamezia Terme International Airport. An electric shuttle service operates every 20 minutes between the airport and the train station at St. Eufemia.

Trains from Lamezia Terme International Airport's nearest train station at St. Eufemia are part of an extensive rail network crisscrossing Calabria and the rest of Italy. Italian and European rail travel is fast, modern, and very comfortable. Eurostar, Trenitalia, and Eurail are part of this vast rail network, and air passengers alighting at Lamezia Terme International Airport can look forward to onward travel by rail to Rome, Florence, Naples, and Milan as well as Sicily and destinations further afield in Switzerland, France, Belgium or Germany.

[76] https://airportguide.com/airport/info/SUF#maps

For example, Lamezia Terme International Airport buses are operated by local companies like Bus Romano, Bus Fersav, and Bus Ferrovie della Calabria. The shuttle services run between the airport and various stops within the city and the train station and further afield to cities like Crotone, Cosenza, or Catanzaro.

A taxi trip from SUF Airport to Lamezia Terme city center takes about 15 minutes. Taxi ranks are properly located outside, facing Lamezia Terme Airport Terminal.

1.1.5.13 Trieste – Friuli Venezia Giulia Airport

Trieste Airport[77] (IATA: TRS, ICAO: LIPQ) is an international airport located 0.3 NM (0.56 km; 0.35 mi) west of Ronchi dei Legionari (Province of Gorizia), near Trieste in Venezia Giulia, north-eastern Italy. The airport has a catchment area of approximately 5 million people, stretching beyond the Friuli-Venezia Giulia region into neighboring Slovenia, Austria, and Croatia.

The airport is owned and operated by Aeroporto Friuli Venezia Giulia S.p.A., a jointly owned company controlled by F2i and the Friuli-Venezia Giulia government.

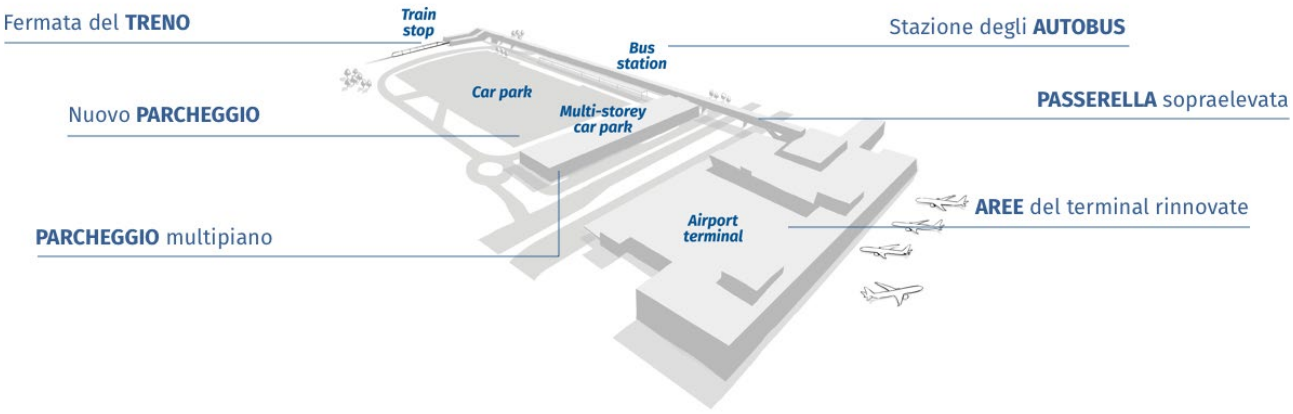
The airport is connected to the national railway and highway networks thanks to the Intermodal Transit Hub completed in March 2018, serving as an air-road-rail interchange.

The Trieste Airport, Intermodal Hub project is one of the key objectives the Friuli Venezia Giulia Region set out in its regional strategic transportation plan. While this facility – mainly funded by the region and by the EU – will improve airport accessibility, it aims to integrate all the different transport modes of the regional transportation system, allowing an easy and smooth air-rail-road modal interchange.

This project, set out by Aeroporto FVG SpA, is based on a simple design based upon a mid-air pedestrian walkway connecting the airport terminal to the new car parks, the bus station, and the new railway station on the Trieste - Venice line.

[77] https://triesteairport.it/en/airport/
https://en.wikipedia.org/wiki/Trieste_%E2%80%93_Friuli_Venezia_Giulia_Airport

Figure 41 Trieste Airport intermodal hub[78]



Since March 2018, 19th Trieste Airport has entirely changed by integrating the new railway station on the national railway line, connected to the air terminal by a mid-air pedestrian walkway. The major projects undertaken have completed the intermodal hub of Friuli Venezia Giulia with a new bus station, a multi-story car park, and a new car park, besides the air terminal areas renovation.

The Intermodal hub project is one of the key objectives the Friuli Venezia Giulia Region set out in its regional strategic transportation plan. It was inaugurated on March 19, 2018. It will improve airport accessibility; it aims, above all, at integrating all the different transport modes of the regional transportation system, allowing an easy and smooth air-rail-road modal interchange.

Trieste Airport is easily and quickly accessible through a dedicated 1.5 kilometer dual- carriageway link to the A4 Trieste-Venice motorway (REDIPUGLIA-MONFALCONE OVEST exit), assuring immediate access to the national and European motorway system.

A bus terminal with 16 platforms, a multi-story car park with 500 lots, and a grade-level car park with 1000 lots provide rapid access to and from the A4 Trieste-Turin highway for public and private motor vehicles. This highway also offers connections to Slovenia's A1 Motorway in the southern direction with two crossings at Fernetti and Rabuiese, linking the airport with the highway networks in Croatia, Hungary, and the Balkans. The A4 branches off to Autostrada A23 at the interchange near Palmanova, relating to Austria's Süd Autobahn (A2) via Udine and Tarvisio.

Trieste Airport offers public transport services to all the main destinations of the region: Trieste, Udine, Gorizia, Monfalcone, Grado, and Cervignano Del Friuli. Trieste Airport is connected by daily long-haul coach services linking Rijeka, Naples, Nice, Ljubljana, and Zagreb.

[78] https://triesteairport.it/en/airport/polo-intermodale/

1.1.5.14 Abruzzo International Airport Pasquale Liberi

Abruzzo International Airport "Pasquale Liberi"[79] (IATA: PSR, ICAO: LIBP) is it an international airport serving Pescara, Italy? It is located approximately 4 km from the center of Pescara, about 180 km from Rome, a 2-hour drive by car on a motorway across the Appennine mountains. The airport is located on the state road 5 Via Tiburtina Valeria and is well connected to important roads (Autostrada A25, Autostrada A14, SS714 Tangenziale di Pescara) and railway connections (Rome–Sulmona–Pescara railway, Adriatic railway).

Being the only international airport in the Abruzzo region, it plays a fundamental role in the transportation and aerial connection of the area and for that of neighboring regions, catching people from Molise, Marche, and the Gargano area. The airport has seen a steady increase in transit passengers, mainly due to a growth in low-cost airlines and flights. The terminal built in 1996 was extended in 2011 and was recently restructured in 2018.

A series of development works have been carried out between 2008 and 2018 at the airport. Those completed in July 2019 include the following:

- Building of a new arrival hall (completed in September 2018);
- Construction of a new departures hall with new gates, bar, and toilettes (completed in November 2018);
- Redesign and expansion of the duty-free area (bar, shops, rent a car) to 7.800 square meters (from the current 6.300 square meters) and placed in the arrival hall (completed in July 2019);
- Retrofitting and regulation works (completed in late 2008);
- Expansion of the apron 2 (completed in January 2009);
- Expansion of the airport to the west (completed in 2011);
- Building of offices and accommodation for the Flight Police Department (completed in May 2014);
- Resurfacing of the runway (completed in March 2017);
- Modernization and redesign of the parking areas (completed in November 2017);
- Building of a Business room (completed in November 2018);
- Renovation of the toilets of departures and domestic arrivals areas;
- The union of domestic and international arrivals halls;
- Modernization of the baggage belts;
- New trim and fittings in the redeveloped areas
- Expansion of the airport security and video surveillance systems;

The master plan for the development and modernization of the airport includes further upgrading works of both the airside and landside areas for an overall cost of 33 Euro million. The works include:

Landside area

- Construction of a plant for the treatment of water;
- The installation of a photovoltaic system on the roof;
- Replacement of the computer infrastructure;

[79] https://www.abruzzoairport.com/home
https://en.wikipedia.org/wiki/Abruzzo_Airport

- Renovation of the air conditioning system.

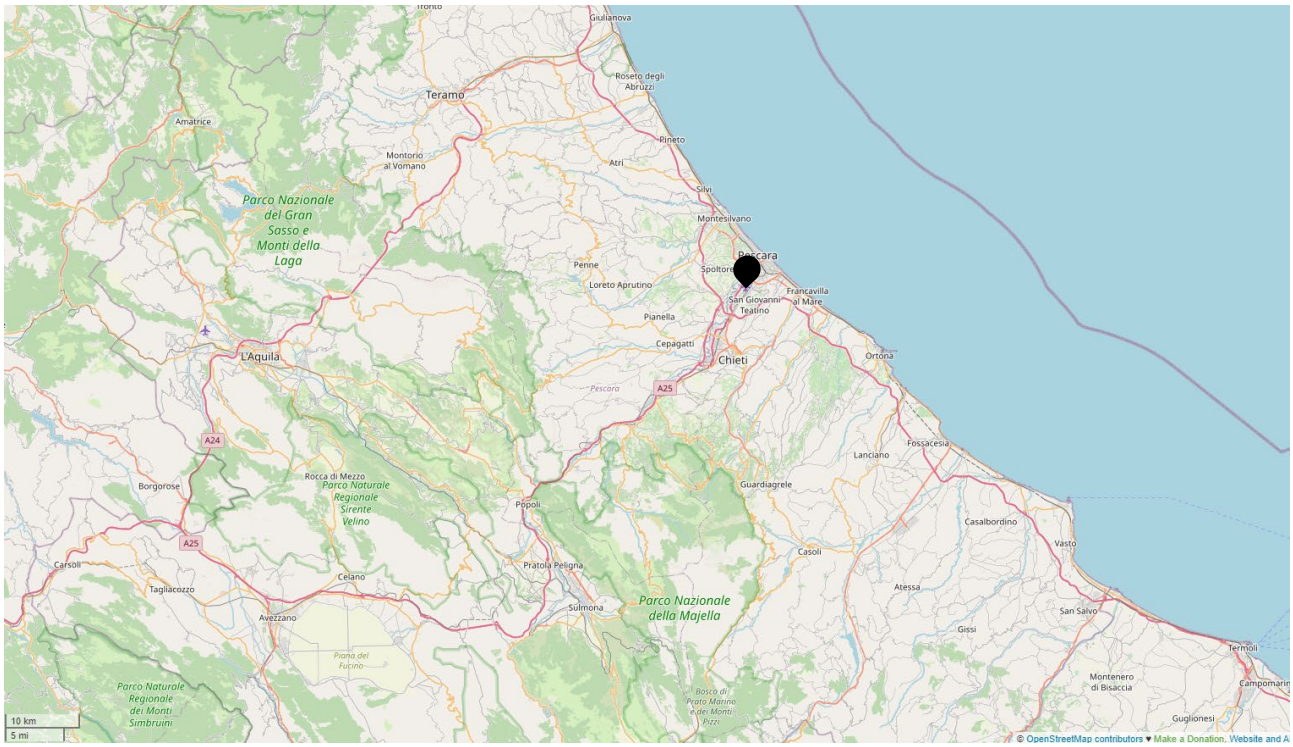
Airside area

- Removal of ex-military structures previously sold to privates to increase the number of parking spaces for aircraft;
- Construction of two new hangars and a cargo area;
- Construction of new helipads for the law enforcement helicopters and a new small square for the Coast Guard;
- Lengthening of the runway and construction of a new multi-story garage for cars;
- Rail link.

The airport is accessable via the A14 Adriatica motorway via the Pescara Ovest-Chieti junction and the A25 Strada dei Parchi motorway via the Chieti-Pescara junction.

Located along the SS5 Tiburtina Valeria, the airport is also quickly reachable from the nearby SS16 Adriatica and its city variant, the SS714 Tangenziale di Pescara.

Figure 42 Abruzzo International Airport road access



Abruzzo Airport is equipped with sizeable uncovered parking, 500 places, open 24 hours a day, with automatic cash machines inside and outside the terminal.

The airport is connected to the center of Pescara with the TUA (regional public transportation company) bus lines 8 and 38, with which it is possible to reach Piazza della Repubblica, the Bus Terminal serving

domestic and international destinations. Bus lines 8 and 38 also pass near the central railway station in Pescara railway station.

The airport is connected to the Chieti with the TUA Chieti-Pescara line, with which it is possible to reach the university campus "G. D'Annunzio" in Chieti Scalo.

In addition, the airport will soon be served by the new trolley line currently under construction, which will connect Pescara and its points of reference, such as Pescara railway station and other neighboring towns such as Montesilvano and Francavilla al Mare.

1.1.5.15 Marche Airport

Marche Airport[80] (IATA: AOI, ICAO: LIPY), formerly Ancona Falconara Airport, serves Ancona and the Marche region of central Italy. The airport is approximately 12 km (6 NM) west of Ancona, in Falconara Marittima. It was also known as Raffaello Sanzio Airport, named after Raffaello Sanzio (1483–1520), the Italian painter and architect.

The Marche Airport, which is strategically located in the center of Italy, can be easily reached from the railway station and port of Ancona, the railway and freight terminal of Falconara, and the new Interporto (freight terminal), and is directly connected to the motorways leading to Rome, Milan, and Bari. The airport is a reference point for central Italy's mid-Adriatic and Apennine areas.

In June 2004, the Marche Airport was enlarged and renovated, making it a modern structure capable of promoting the tourist and industrial development of the Marche region and its neighboring regions in Europe and the rest of the world.

The airport has one runway designated 04/22 with an asphalt surface measuring 2,962 by 45 meters and a 52 780 square meters apron with 14 remote aircraft stands.

The terminal comprises two passenger terminals (arrivals and departures), each of 6 300 square meters, and a freight terminal with a storage area of 1 800 square meters. These terminals have nine check-in desks and six gates. The airport is barrier-free to ensure accessibility for PRM passengers.

There are two terminals dedicated to DHL and UPS operators. Customers can send their parcels from the delivery points in the respective terminals at the airport.

Considering the potential of the Marche region – one of Italy's most industrialized areas and boasting an excellent geographical position – Aerdorica International Airport S.p.a. considers the parallel development of both passenger and cargo traffic as strategic.

Indeed, Aerdorica International Airport S.p.a. has a cargo infrastructure dedicated exclusively to the air cargo sector that is equipped with state-of-the-art warehousing and shipping assistance systems compliant with the safety standards established by the industry's regulations; said infrastructure is at the service of the Marche and Italian industrial fabric.

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[80] https://www.ancona-airport.com/en/
https://www.anconaairport.com/
https://en.wikipedia.org/wiki/Marche_Airport

Ancona Airport is located in a central geographical position and is adequately connected to the port of Ancona and the Jesi Interporto, making it the ideal airport for developing the cargo sector.

An 870 m² photovoltaic system inside the airport generates about 25% of the electricity necessary to operate the control tower.

In 2020 the Ancona Airport recorded 150,678 passengers. The leading airlines serving the airport are Albawings, Lufthansa, Volotea, Ryanair, Tayaranjet, WizzAir, Vueling, DHL, and UPS.

Ancona International Airport is an essential generator of employment in the Marche region, with over 200 employees, including Civil Aviation, Airport Management, Airlines, transport services, car dealers, security, police, and commercial staff.

Figure 43 Marche Airport route map[81]

The Marche Airport is strategically located in central Italy, just 18 km from the center of the regional capital and, more precisely, in the municipality of Falconara Marittima.

The airport is found on Strada Statale 76 della Val d'Esino in the directions of both Jesi and Falconara Marittima. People traveling on the Autostrada A14 must exit at "Ancona Nord" and join Strada Statale 76 della Val dino. For those coming from the west, the airport is located near Exit 21 of SS 76; for those coming

[81] https://www.ancona-airport.com/en/passengers/flights/destinations/

from the Adriatic A14 motorway, exit at Ancona Nord (at the motorway exit, follow the signs for the airport and take State Road 76 up to Exit 21).

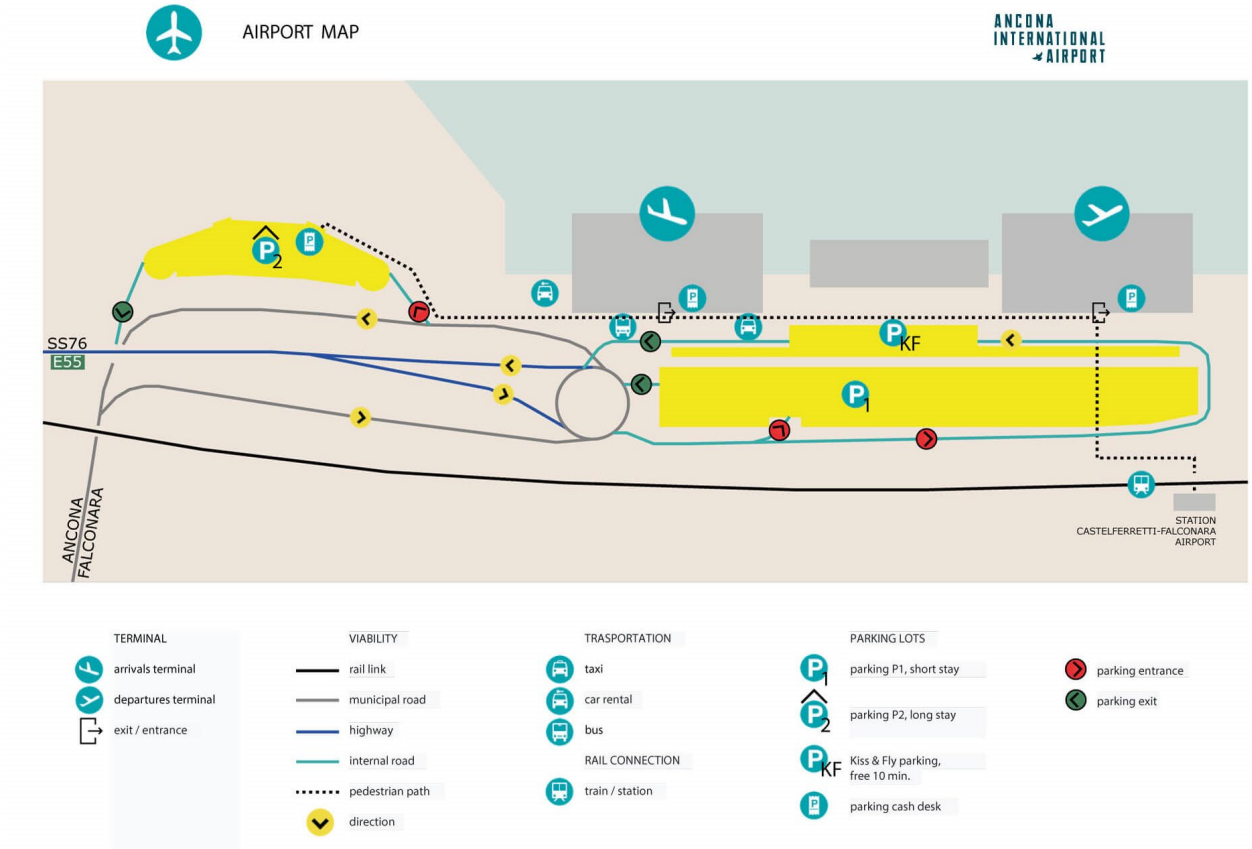
In front of the Departures Terminal at Ancona Airport, there is the Premium P1 car park for short stays (290 bays); a few meters from the Arrivals Terminal, there is the Multi-storey P2 car park for extended stays (250 bays). Those accompanying travelers can use the "Kiss & Fly" area in front of the airport, free of charge, for a maximum of 10 minutes.

The airport is connected to Ancona and Falconara Marittima via Piazza Cavour, piazza Kennedy, Ancona railway station, Ancona Torrette railway station, and Falconara Marittima railway station, usually in coincidence with the operating flights.

A small railway station, Castelferretti-Falconara Aeroporto, is situated just outside the airport. Regional trains for Ancona, Jesi, Fabriano, Foligno, Orte, and Rome depart from there.

The Raffaello Aerobus is a shuttle bus service from/to Ancona (Piazza Cavour, Railway Station, and Torrette), and the Falconara M.ma Station is available from 7 am to 10:30 pm.

Figure 44 Marche Airport map[82]



[82] https://www.ancona-airport.com/en/passengers/parks/

1.1.5.16 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airports, including their location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct connection to the EUSAIR main cities and connection to the city center by mode of transport.

Table 15 Infrastructures and connections in selected airports in Italy

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Milan Malpensa Airport	Milan	The airport has two terminals (Terminal 1 and Terminal 2), two runways, and a dedicated cargo terminal.	Trapani (from May to October), Palermo, Comiso (starts in May), Catania, Lamezia Terme, Brindisi, Bari, Verona, Zadar (from June to September), Split (from June to September), Podgorica (starts in May), Pristina (ends in April), Skopje (starts in June), Ohrid (begins in June), Tirana, Corfu (from June to October), Skiathos (from June to September), Athens, Mykonos (from May to October), Kos (from May to October), Rhodes (from May to October), Karpathos (from June to October), Heraklion (from May to October), Chania (from July to September), Kalamata (from May to October), Zakynthos Island (from June to October), Kefalonia (from June to September), Preveza/Lefkada (from June to September), Belgrade, Lampedusa (from May to October)	Train, Bus, Taxi. The Malpensa – Varese – Mendrisio (CH) – Lugano (CH) line is under construction, directly connecting Malpensa Airport/Aeroporto and the southeastern part of Switzerland. There are plans to connect Gallarate Station and Milan's Centrale Station (FS), a terminus station with no through tracks, to allow more convenient access to high-speed international lines.
Orio al Serio International Airport	Bergamo	2 Terminals for passengers - 2 runways	Trapani (starts in May), Palermo, Catania, Lamezia Terme, Crotone (starts in May), Brindisi, Bari, Pescara, Banja Luka (from July to October), Nis (starts in May), Thessaloniki (begins in May), Skiathos (from June to September), Tirana, Corfu (from June to October), Kefalonia (from June to October), Zakynthos Island (from June to October), Kalamata (from June to October), Mikonos (from June to September), Kos (from June to September), Rhodes (from June to October), Karpathos (from June to September), Heraklion (from June to October), Chania (from May to October), Lampedusa (from May to October), Pantelleria (from May to October)	Bus, Taxi, Planned Rail

Venice Marco Polo Airport	Venice	1 Terminal for passengers - 2 runways	Pescara (starts in May), Bari, Brindisi, Lamezia Terme (ends in May), Catania, Palermo, Trapani (from May), Belgrade, Split (from May to October), Dubrovnik (from May to October), Tirana (ends in October), Skopjie (from June), Thessaloniki (from May), Skiathos (from June to October), Samos (from June to October), Kos (from May to October), Karpathos (from June to October), Heraklion (from May to October), Santorini (from May to October), Mykonos (from May to October), Athens (from May), Kalamata, Kefalonia (from June to October), Zakynthos Island (from June to October), Preveza/Lefkada (from May to October), Corfu (from June to October), Lampedusa (from May to October), Pantelleria (from May to October)	Bus, Taxi, Boat, Planned Rail
Catania–Fontanarossa Airport	Catania	2 Terminals for passengers - 1 runway	Palermo, Brindisi, Bari, Pescara (starts in May), Perugia (starts in May), Ancona, Rimini (starts in September), Bologna, Venice, Verona, Bergamo, Milan-Linate, Milan-Malpensa, Trieste, Tirana (starts in June), Athens (starts in June), Rhodes (from June to October), Lampedusa, Pantelleria (starts in May)	Bus, Taxi, Rail
Bologna Guglielmo Marconi Airport	Bologna	1 Terminal for passengers - 1 runway	Rome-Fiumicino, Bari, Brindisi, Crotone (starts in May), Lamezia Terme, Catania, Palermo, Trapani, Podgorica (starts in May), Tirana, Thessaloniki (starts in May), Skiathos (from June to September), Athens (starts in May), Mykonos (from May to October), Kos (from June to October), Rhodes (from June to October), Karpathos (from June to September), Heraklion (from May to October), Santorini (from June to September), Zakynthos Island (from June to October), Kefalonia (from June to September), Corfu (from June to October), Pantelleria (from June to October), Lampedusa (from June to October), Cagliari, Olbia (starts in May), Alghero	Bus, Taxi. The airport is about 5 kilometers (3 mi) from Bologna Centrale railway station. From 2020 the Marconi Express monorail connects the airport to Bologna Centrale railway station with a travel time of approximately 7.5 minutes.

Falcone Borsellino Airport	Palermo	1 Terminal for passengers - 2 runways	Trapani (ends in April), Pantelleria, Lampedusa, Catania (from June to September), Brindisi (from May to October), Bari, Pescara (from May to October), Perugia (starts in May), Ancona (starts in May), Rimini (from July to October), Milan–Malpensa, Milan–Linate, Bergamo, Verona, Bologna, Treviso, Venice, Trieste, Zakynthos Island (from June to October), Athens (from November to March), Rhodes (from July to October), Santorini (from June to October), Heraklion (from July to October), Split (from June to October)	The railway connecting the airport to Palermo Centrale railway station, Bus, Taxi
Milan Linate Airport	Milan	1 Terminal for passengers - 2 runways	Bari, Brindisi, Trapani (from June to September), Catania, Palermo, Pescara, Reggio Calabria, Lamezia Terme, Comiso (ends in May), Lampedusa (from June to October), Pantelleria (from June to October), Rhodes (from June to September)	Bus, Taxi, Planned Metro (under construction), Planned Rail
Bari Karol Wojtyła Airport	Bari	1 Terminal for passengers – 1 runway	Catania, Comiso (from Nov to Mar), Palermo, Milan Malpensa, Milan Linate, Bergamo, Parma, Bologna, Verona, Treviso (ends in March), Venice Marco Polo, Trieste (ends in March), Zadar (ends in October), Split (from June to August), Dubrovnik (from June to August), Tirana (ends in March), Corfu (from June to August), Skiathos (from May to August), Athens (from April to August), Zakynthos Island (ends in October), Kefalonia (from June to August), Mykonos (from June to August), Santorini (ends in October), Kos (ends in October), Rhodes (from May to August), Heraklion (Crete) (from May to August), Chania (Crete) (ends in October)	Bus, Taxi, Rail
Brindisi-Papola Casale Airport (Aeroporto del Salento)	Brindisi	1 Terminal for passengers – 2 runways *In 1994 the airport was chosen as the primary global logistics base by the United Nations to support its peacekeeping and*	Rhodes (ends in October), Lamezia Terme (ends in October), Palermo (ends in October), Trapani (ends in October), Milan Malpensa, Milan Linate, Bergamo, Verona (ends in March), Bologna, Venice Marco Polo	Bus, Taxi, Planned Rail

		peace enforcement operations around the world		
Verona Villafranca Airport	Verona	2 Terminals for passengers - 1 runway	Milan Malpensa (starts in December), Bari, Brindisi, Lamezia Terme, Catania, Palermo, Zakynthos Island (from June to October), Heraklion (Crete) (from May to October), Santorini (from May to October), Mykonos (from May to October), Athens (from April to October), Skiathos (from May to October), Preveza (from June to October), Tirana (ends in March),	Bus, Taxi, and Shuttle bus service to Railway Station
Treviso Airport	Treviso	1 Terminal for passengers – 1 runway	Trapani (ends in March), Lamezia Terme, Brindisi (starts in March), Corfu (from June to September), Chania (Crete) (from June to September), Santorini (starts in March), Kos (starts in March), Rhodes (from June to September), Thessaloniki, Tirana (ends in March), Skopjie (ends in March), Sarajevo (from December to March)	Bus, Taxi
Lamezia Terme International Airport	Lamezia Terme	1 Terminal for passengers – 1 runway	Catania, Bologna Forlì (ends in March), Bologna, Milan Linate, Milan Malpensa, Milan Bergamo, Parma, Verona, Treviso, Venice (starts in March)	Bus, Taxi
Trieste Airport	Trieste	1 Terminal for passengers – 1 runway	Bari, Catania, Palermo, Trapani (ends in November)	Bus, Taxi, Rail (the Trieste Airport railway station links the passenger terminal directly to the Venice–Trieste railway thanks to a 425-meter long raised walkway).
Abruzzo Airport	Pescara	1 Terminal for passengers – 1 runway	Catania (ends in January), Palermo (starts in December), Trapani (ends in November), Milan Linate, Milan Bergamo, Tirana (ends in March)	Bus, Taxi, Regional Buses (Bus & Fly). In addition, the airport will soon be served by the new trolley line currently under construction, which will connect Pescara and its points of reference, such as

				Pescara railway station and other neighboring towns such as Montesilvano and Francavilla al Mare.
Marche Airport	Ancona	1 Terminal for passengers – 1 runway	Tirana (ends in March), Catania, Palermo, and Trapani (ends in November)	Bus, Taxi, Rail (a small railway station, Castelferretti-Falconara Aeroporto, is situated just outside the airport. Regional trains bound to Ancona, Jesi, Fabriano, Foligno, Orte, and Rome depart from there).

1.1.5.17 Traffic

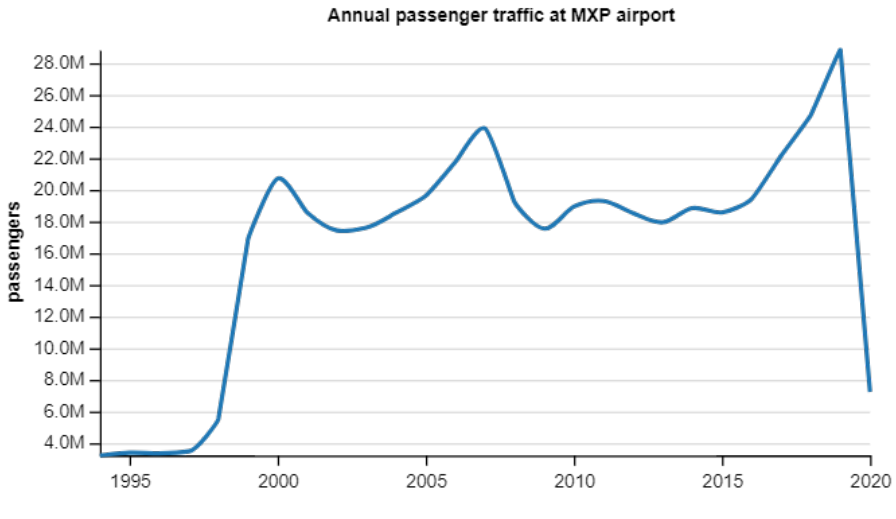
The following table indicates the air traffic for passengers and freight in the selected airports of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

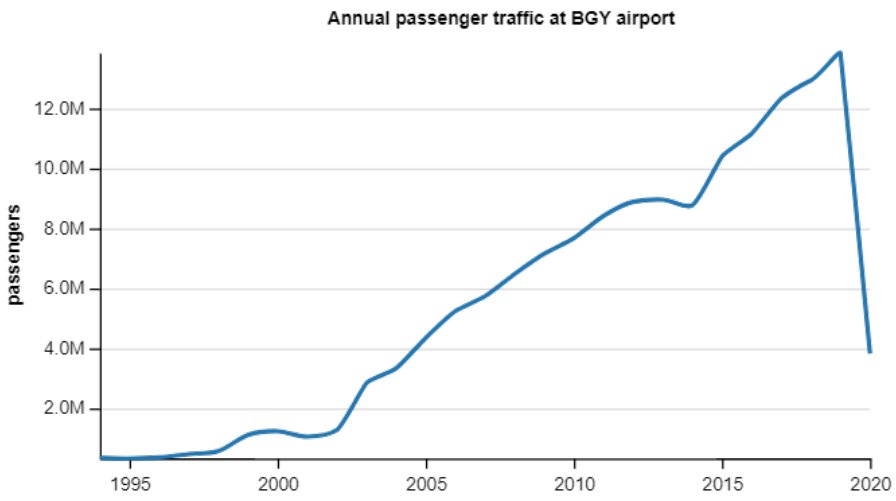
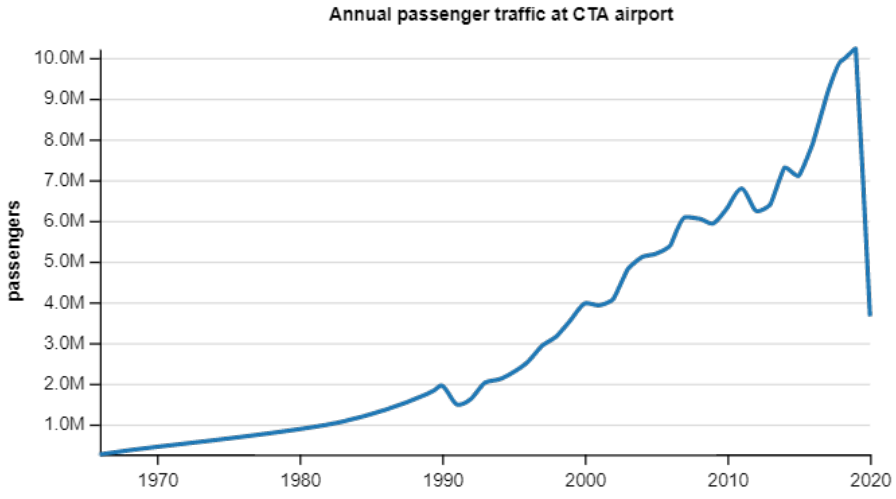
Table 16 Traffic in selected airports in Italy

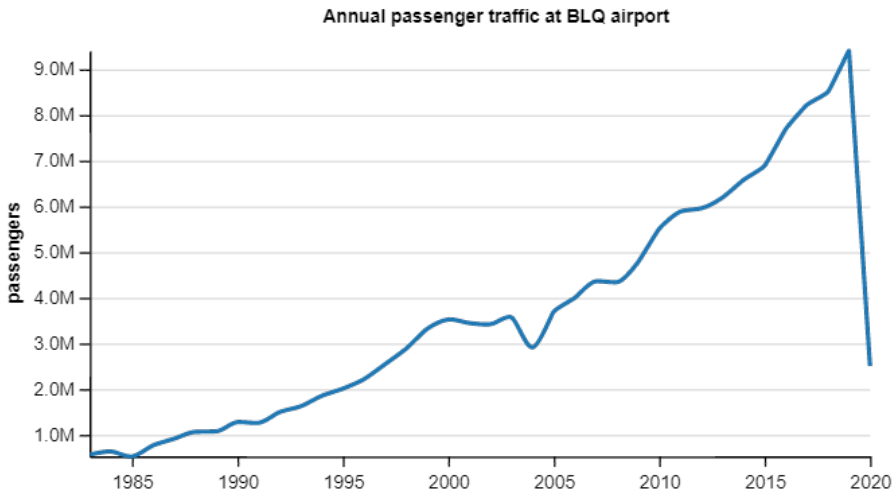
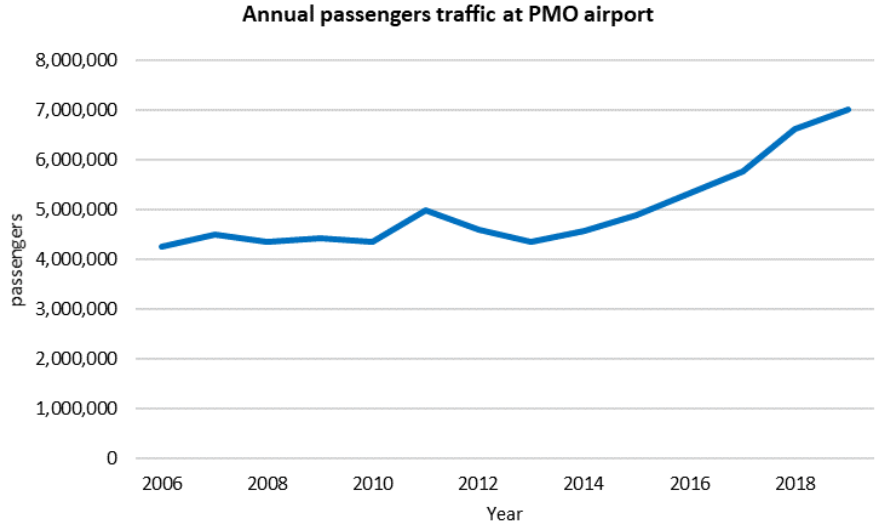
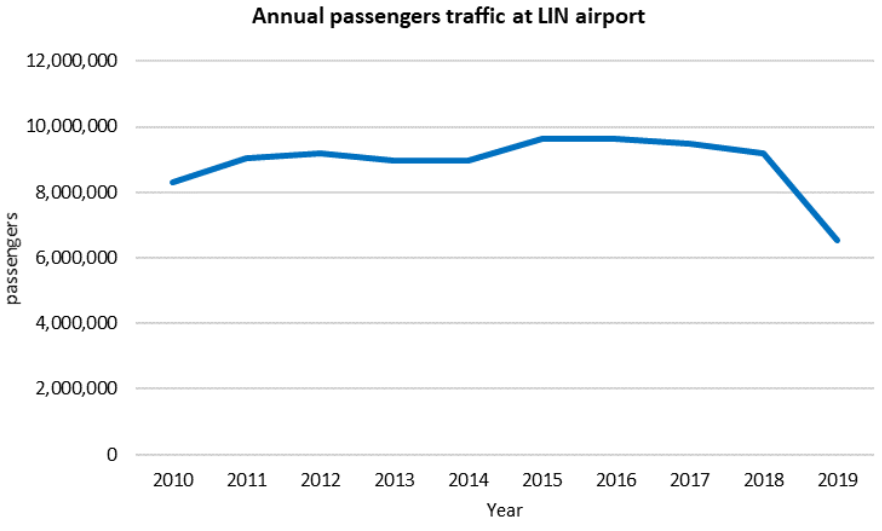
	Location	Annual Passengers (2019)	Annual Cargo (2019)
Milan Malpensa Airport	Milan	28,846,299	558,481 t
Orio al Serio International Airport	Bergamo	13,857,257	118,964 t
Venice Marco Polo Airport	Venice	11,561,594	63,970 t
Catania–Fontanarossa Airport	Catania	10,223,113	5,749 t
Bologna Guglielmo Marconi Airport	Bologna	9,405,920	48,832 t
Falcone Borsellino Airport	Palermo	7,018,087	1,166 t
Milan Linate Airport	Milan	6,570,984	7,586 t

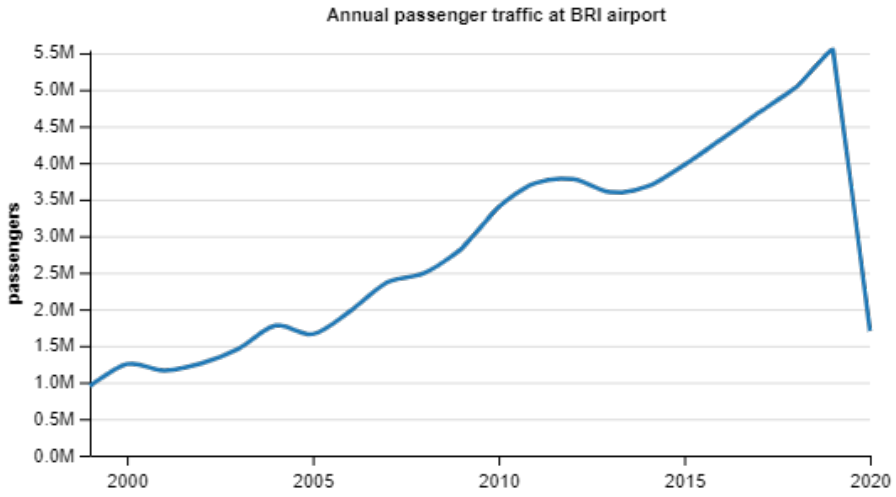
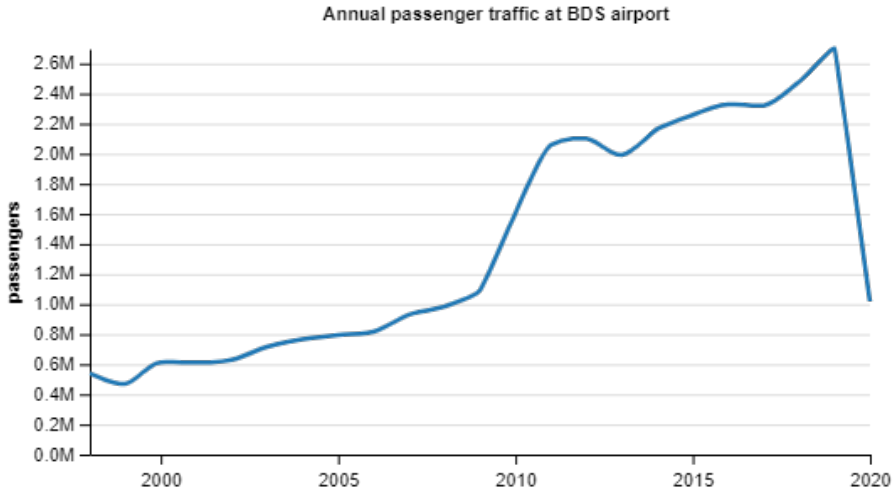
(Milan Linate Airport was closed from July 27 to October 25, 20109. Milan Malpensa Airport managed operational activities)			
Bari Karol Wojtyła Airport	Bari	5,545,588	2,273 t
Brindisi-Papola Casale Airport (Aeroporto del Salento)	Brindisi	2,697,749	11 t
Verona Villafranca Airport	Verona	3 638 088	1,155 t
Treviso Airport	Treviso	3,254,731	-
Lamezia Terme International Airport	Lamezia Terme	2,978,110	1,240 t
Trieste Airport	Trieste	783,179	277 t
Abruzzo Airport	Pescara	703,386	276 t
Marche Airport	Ancona	489,835	7,021 t

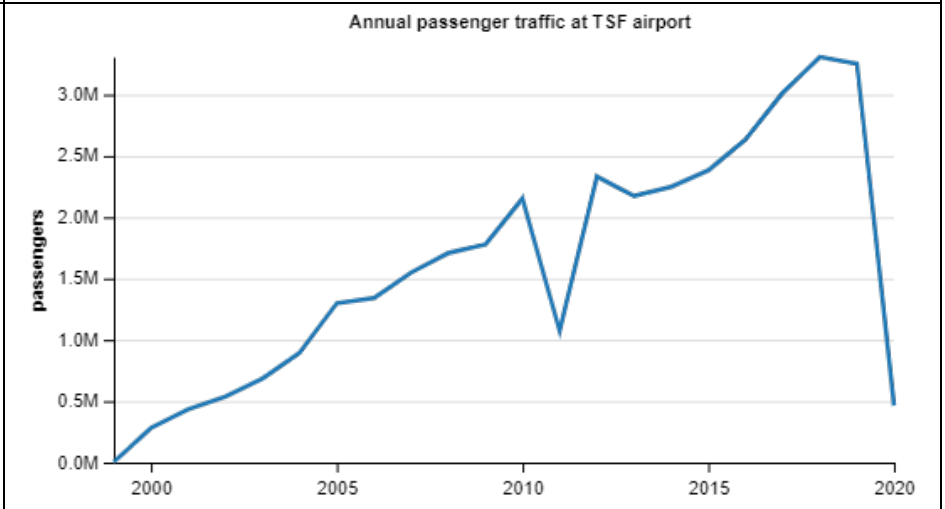
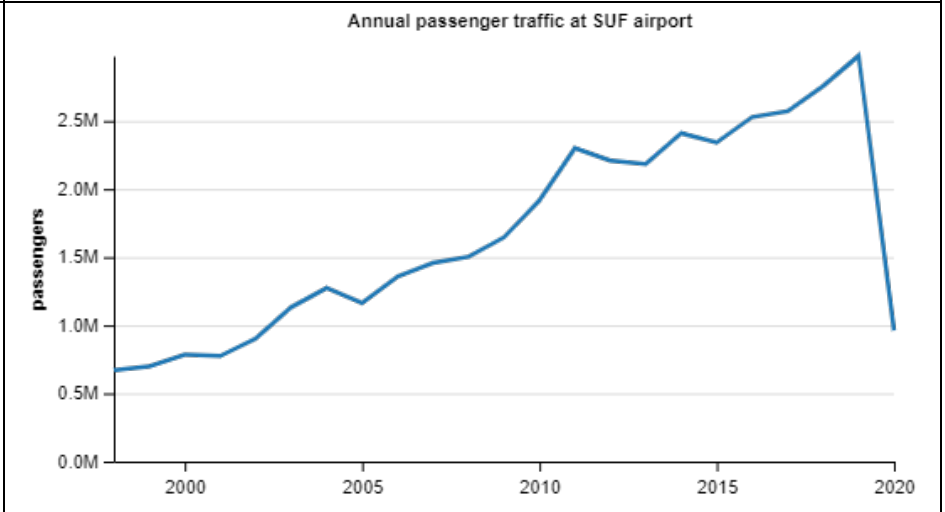
Table 17 Annual passenger traffic in selected airports of Italy

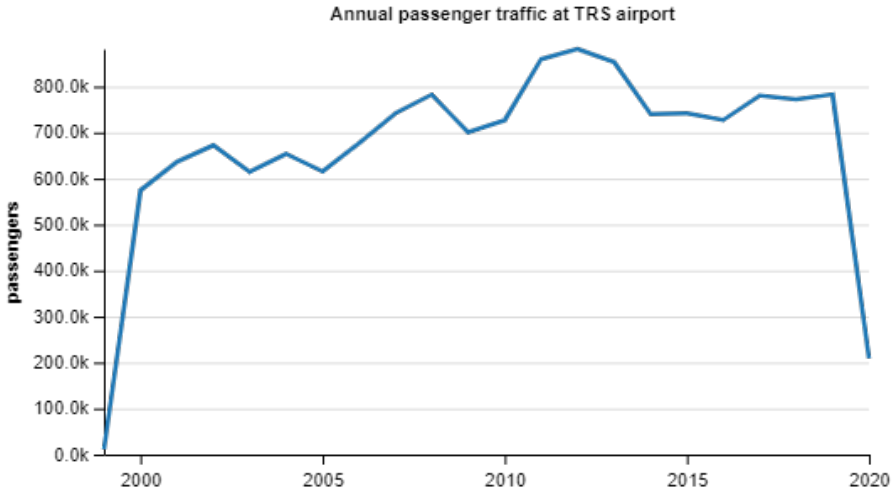
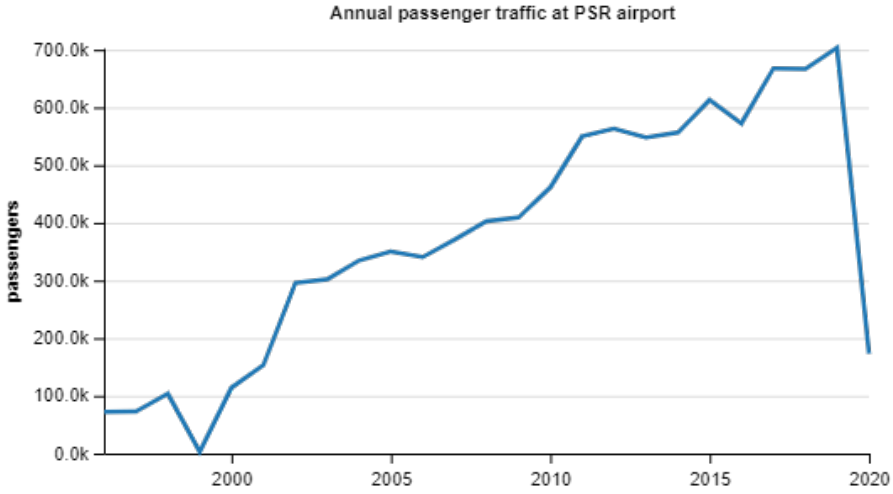
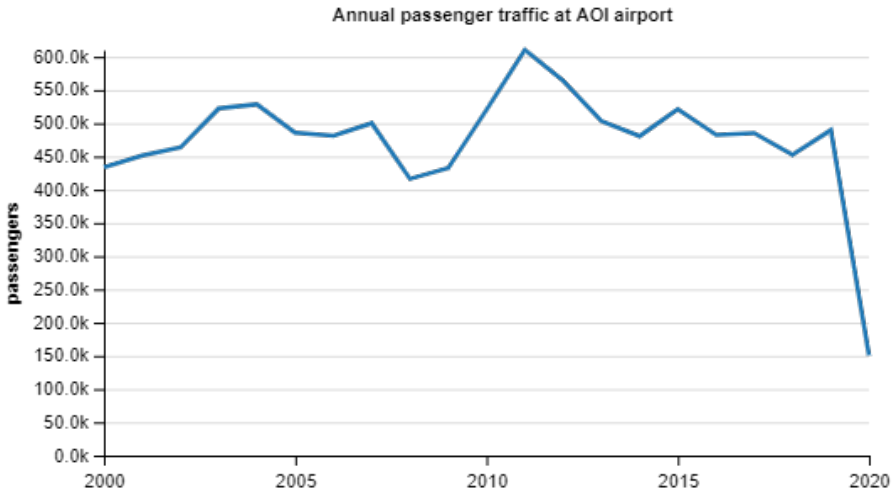
Milan Malpensa Airport	

Orio al Serio International Airport	
Venice Marco Polo Airport	
Catania–Fontanarossa Airport	

Bologna Guglielmo Marconi Airport	
Falcone Borsellino Airport	
Milan Linate Airport	

Bari Karol Wojtyła Airport	
Brindisi-Papola Casale Airport (Aeroporto del Salento)	

Verona Villafranca Airport	
Treviso Airport	
Lamezia Terme International Airport	

Trieste Airport	
Abruzzo Airport	
Marche Airport	

1.1.6 Montenegro

According to the selection criteria mentioned above, the two main airports chosen for Montenegro are the Podgorica International Airport and the Tivat Airport. The Following part briefly introduces the airport according to the available primary information on related websites.

1.1.6.1 Podgorica International Airport

Podgorica International Airport (IATA: TGD, ICAO: LYPG) is serving the Montenegrin capital of Podgorica and the surrounding region. It is one of two international airports in Montenegro, the other being Tivat Airport. The airport is situated 11 km south of central Podgorica, in the Zeta Plain.

The history of civil aviation in Podgorica began on May 26, 1928, when an Aeroput Potez 29/2 landed on a grass runway at a small airfield near the city's current train station. The plane was on an experimental Belgrade-Skopje-Podgorica-Mostar-Sarajevo-Belgrade line, organized to determine the viability of linking Belgrade with southern Yugoslavia by air. The airport was moved to its present location south of the city in 1961.

On April 23, 2003, the airport ownership was transferred from JAT Airways to Airports of Montenegro, a public company owned by the Government of Montenegro. Along with the formation and growth of Montenegro Airlines, this contributed to increased services from the airport. The decades-long practice of the airport being primarily a feeder airport for Belgrade was dropped in favor of a more diverse network of scheduled passenger flights.[83]

As air traffic in Montenegro multiplied in the 2000s, the old passenger terminal, a small cobblestone building, was retired after the new terminal was built, except for servicing small-volume charter flights. The new passenger terminal, comprising 5,500 square meters (59,000 sq ft), opened on May 14, 2006. It has eight departure and two arrival gates and can handle up to 1 million passengers annually. The terminal does not feature jetways, as the airport's passengers are low to necessitate them.

The main (new) terminal building is a modern aluminum and glass structure featuring contemporary architectural solutions such as indirect lighting. Although the airport is considered low-risk, security screening has visibly increased since the construction of the new terminal. Security measures and standard monitoring for European airports are applied in the terminal.

The old terminal building was completely renovated and reopened on September 15, 2009, and is now intended for VIP use and general aviation.

Podgorica Airport is a public international airport but shares the main runway with Podgorica's military airbase.

Podgorica Airport can be reached via the Podgorica - Bar road (E65/E80) with a short detour. A segment of this road, running from Podgorica to the airport, has been upgraded to meet expressway standards. The journey from the city center to the airport typically takes less than 15 minutes by car.

[83] https://en.wikipedia.org/wiki/Podgorica_Airport

Public transportation options to and from the airport include the L-20 bus line connecting to the city center, charter bus services to various Montenegrin cities, as well as taxi services.

Additionally, there is an Airport train station situated 1.2 kilometers away from the passenger terminal, part of the Belgrade–Bar railway. However, it is infrequently used as a city link due to its inconvenient location and inconsistent train schedule.

Through the utilization of the Sozina tunnel, the airport is situated approximately 40 kilometers from Bar, which serves as Montenegro's primary port. Consequently, the airport is progressively focusing on meeting the requirements of cities located along the southern coast of Montenegro.[84]

1.1.6.2 Tivat Airport

Tivat Airport [85](Montenegrin: Аеродром Тиват, romanized: *Aerodrom Tivat*) (IATA: TIV, ICAO: LYTV) is an international airport serving the Montenegrin coastal town of Tivat and the surrounding region. The airport is situated 3 km (1.9 mi) south of the center of Tivat, with the runway aligned with the *Tivat Field* (Montenegrin: Тиватско поље, romanized: *Tivatsko polje*).

It is the busier of two international airports in Montenegro, the other being Podgorica Airport. The 1,367,282 passenger traffic at the airport follows the highly seasonal nature of the tourism industry in coastal Montenegro, with 80% of the total volume of passengers being handled during the peak season (May–September).

On April 23, 2003, the airport ownership was transferred from Jat Airways to the "Airports of Montenegro," a public company owned by the government of Montenegro. Since then, the airport was once again modernized and refurbished, with a reconstructed passenger terminal opening on June 3, 2006. In October 2007, South Korea made a government donation valued at $1 million for new airport equipment ranging from cargo loaders to flight information display systems. Further reforms came in 2008 when several old types of passenger aircraft, such as the Ilyushin Il-86, were permanently banned from flying to Tivat and redirected to Podgorica Airport due to noise abatement.

However, as passenger traffic in the mid-2010s approaches the one-million mark and strong growth continues, the passenger terminal is a bottleneck in peak summer months. Thus, a new passenger terminal is planned at Tivat Airport shortly, along with further expansion of airport facilities.

In December 2018, PM Duško Marković opened the newly built Terminal 2 at Tivat Airport – the first investment since 2006 when the existing airport building was built. Marković used this opportunity to point out that he sees the cooperation between the government and the Management of Airports as an example to be followed by others in Montenegro.

The following paragraphs show the main facts and figures regarding Infrastructures, Connections, and Passengers.

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[84] https://en.wikipedia.org/wiki/Podgorica_Airport

[85] https://montenegroairports.com/en/tivat-airport/business-information/airport-services - https://en.wikipedia.org/wiki/Tivat_Airport

1.1.6.3 *Infrastructures and connections*

The following table shows the information regarding the infrastructure of the selected airports, including their location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct connection to the EUSAIR main cities and connection to the city center by mode of transport.

Table 18 Infrastructures and connections in selected airports in in Montenegro

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Podgorica International Airport	Podgorica	1 Terminal for passengers - 1 runway	Belgrade (ends in December), Bologna (starts in May), Milan–Malpensa (starts in May), Rome-Fiumicino (starts in June),	Bus, Taxi, The Airport train station on the Belgrade–Bar railway is located 1.2 kilometers from the passenger terminal but seldom used as a link to the city due to the inconvenient location and train schedule.
Tivat Airport	Tivat	1 Terminal for passengers - 1 runway	Belgrade, Niš, Ohrid	Taxi

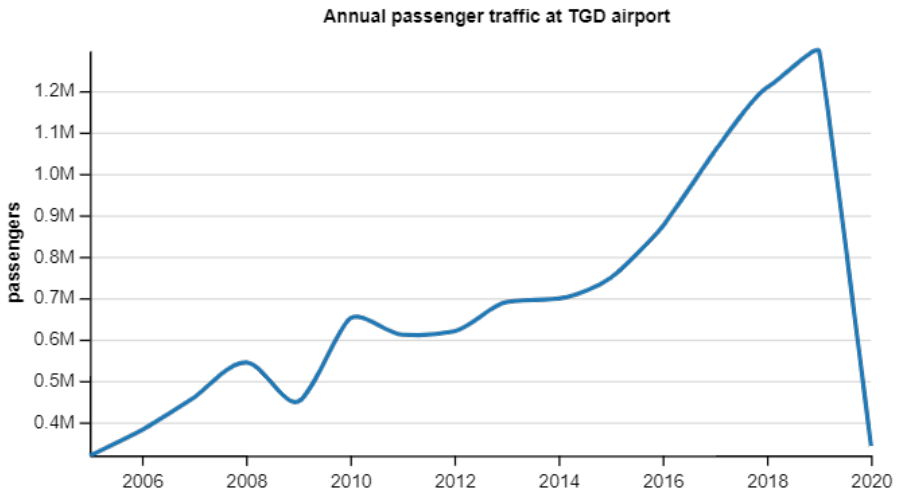
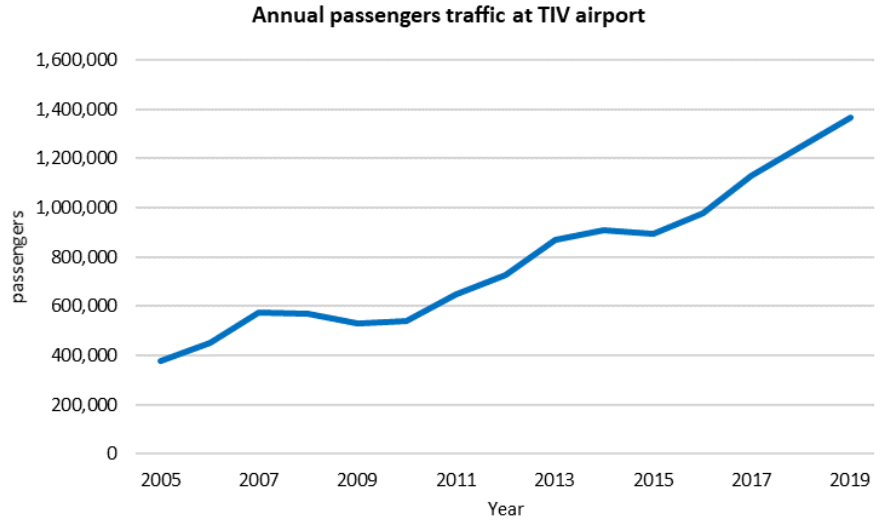
1.1.6.4 *Traffic*

The following table indicates the air traffic for passengers and freight in the selected airports of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

Table 19 Traffic in selected airports in Montenegro

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Podgorica International Airport	Podgorica	1,297,365	882 t
Tivat Airport	Tivat	1,367,282	7,049 t

Table 20 Annual passenger traffic in selected airports of Montenegro

Podgorica International Airport	
Tivat Airport	

1.1.7 North Macedonia

According to the selection criteria above, the only airport chosen for North Macedonia is the Skopje International Airport. Following a brief introduction of the airport according to the available primary information on related websites[86].

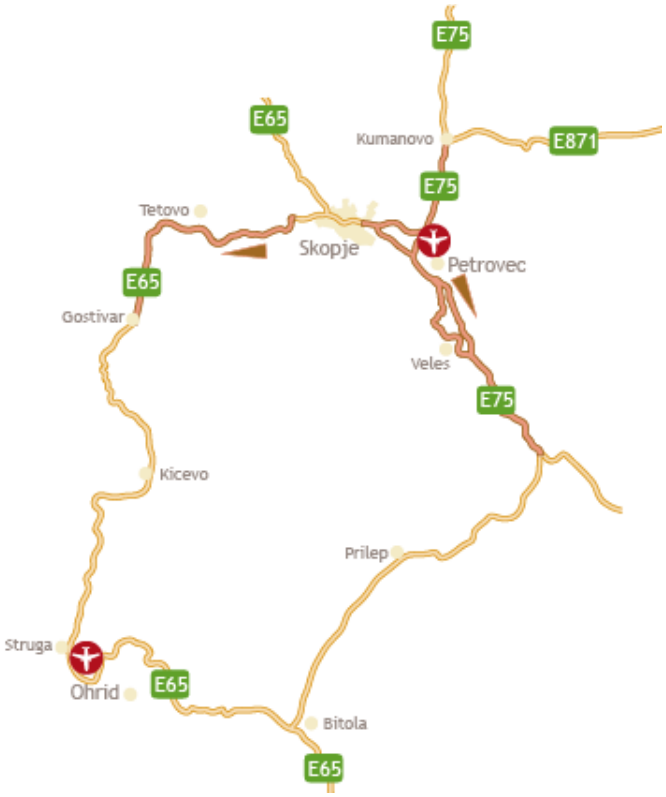
1.1.7.1 Skopje International Airport

Skopje International Airport (Macedonian: Меѓународен аеродром Скопје, romanized: Megjunaroden aerodrom Skopje, Albanian: Aeroporti Ndërkombëtar i Shkupit, IATA SKP, ICAO: LWSK), also known as Skopje Airport (Macedonian: Аеродром Скопје, romanized: Aerodrom Skopje) and previously known as Petrovec Airport (Macedonian: Аеродром Петровец, romanized: Aerodrom Petrovec) and Skopje Alexander the Great Airport (Macedonian: Аеродром "Александар Велики" Скопје, romanized: Aerodrom "Aleksandar Veliki" Skopje), is the larger and busier of the two international airports in North Macedonia, with the other being the St. Paul the Apostle Airport in Ohrid which is located 170 km (110 mi) southwest from the national capital Skopje.

In 2008, the Macedonian Government signed a contract with the Turkish company Tepe Akfen Ventures (TAV) for a twenty-year-long concession during which this company would manage Macedonia's two existing airports - the Skopje Alexander the Great Airport and the St. Paul the Apostle Airport in Ohrid. In September 2011, the new terminal building, extension of the runway, new administrative building, cargo building, and access road with parking facilities were opened. TAV holds the right to operate Skopje Airport until March 2030.

[86] http://www.tavhavalimanlari.com.tr/en-EN/airport-operations/north-macedonia/pages/skopje-international-airport - https://en.wikipedia.org/wiki/Skopje_International_Airport - http://skp.airports.com.mk/

Figure 45 Skopje International Airport accessibility



TAV Macedonia is participating in ACI's ASQ Survey, a world-renowned and globally established global benchmarking program measuring passengers' satisfaction while traveling through an airport.

The number of passengers has increased since 1990, from 312,492 passengers in that year to 2,158,258 passengers in 2018, but this was not a steady increase. In 2000 the airport handled 1,005,852 passengers, but in 2001 the number of passengers dropped to 499,789. The decrease in passengers was partly influenced by several airlines replacing services to Skopje with services to nearby. In 2014 Skopje airport handled 1,208,359 passengers, surpassing one million for the first time since 2000.

1.1.7.2 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airport, including its location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct connection to the EUSAIR main cities and connection to the city center by mode of transport.

Table 21 Infrastructures and connections in selected airports in North Macedonia

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Skopje International Airport	Skopje	1 Terminal for passengers -1 runway	Athens, Belgrade (ends in December), Zagreb, Milan–Malpensa (starts in June), Rome–Ciampino (starts in June), Venice (starts in June), Treviso (starts in June)	Bus, Taxi

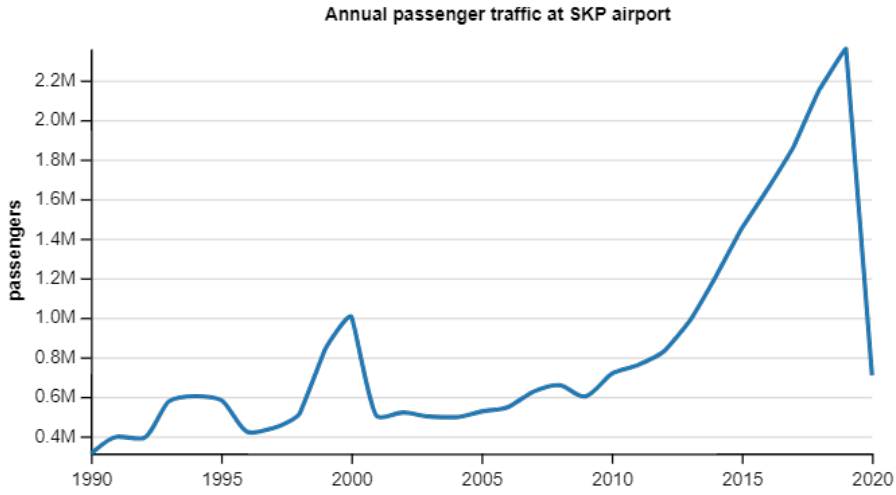
1.1.7.3 Traffic

The following table indicates the air traffic for passengers and freight in the selected airport of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

Table 22 Traffic in selected airports in North Macedonia

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Skopje International Airport	Skopje	2,360,400	3,407 t

Figure 46 Annual passenger traffic in Skopje Airport



1.1.8 Serbia

According to the selection criteria above, the only airport chosen for Serbia is the Belgrade Nikola Tesla International Airport. The following part provides a brief introduction of the airport according to the available primary information on related websites[87].

1.1.8.1 Belgrade Nikola Tesla Airport

Belgrade Nikola Tesla Airport (Serbian: Аеродром Никола Тесла Београд / Aerodrom Nikola Tesla Beograd) or Belgrade Airport (Serbian: Аеродром Београд / Aerodrom Beograd) (IATA: BEG, ICAO: LYBE) is an international airport serving Belgrade, Serbia.

The Belgrade Airport is situated between the highway E-70 (European route) and the semi-urban and urban settlements of Surcin and Novi Beograd to the south and southwest, respectively, and Radiofar to the northeast and approximately 19 km from the Belgrade city center. Several residential settlements are nearby, the closest being the eastern part of Surcin, which is located adjacent to the southeast end of the runway (approximately 380 m to the nearest residential housing). Another adjacent settlement is the Belgrade suburb of Radiofar, located between the airport and the highway E-70, around 320 m to the north side of the runway. Other nearby settlements are the Belgrade suburbs of Ledine and Bezanijska Kosa to the southeast and east, respectively, and Dobanovci to the northwest. The area of the airport is approximately 400 ha. The site is mainly surrounded by agricultural land comprised of large fields planted with seasonal crops. There are no industrial facilities in the proximity of the airport.

[87] https://beg.aero/sites/belgrade/files/pdf/belgrade_airport_-_nts_esia_final_eng.pdf - https://beg.aero/eng/construction/the_project

Figure 47 Macro location of the Belgrade Airport

Figure 1 Macro-location of the Belgrade Airport
(Source: Google Earth)

VINCI Airports SAS, the concessionaire of the Belgrade airport, is undertaking reconstruction and modernization of the airport (hereafter referred to as “the Project”). The government of the Republic of Serbia signed a 25-year concession agreement with VINCI Airports SAS on March 22, 2018, for the financing, development through construction and reconstruction, maintenance and management of the airport infrastructure.

At the beginning of 2020, the company BELGRADE AIRPORT started works on the modernization and expansion of Nikola Tesla Belgrade Airport following the adopted planning acts. Based on the Master Plan for Nikola Tesla Airport, approved in 2019, a Detailed Regulation Plan for the area of Nikola Tesla Airport was prepared and adopted in 2020, enabling further development of the wider airport area.

Thanks to its extensive worldwide airport management expertise, the parent company VINCI Airports will boost growth and create additional value for the passengers and partners of the leading Serbian airport during the concession project. Modernization works have been ongoing without significant disruptions, even during an emergency, following all the recommendations and health and safety measures prescribed by relevant authorities. Together with the construction partner, VINCI Terna Construction JV, and their subcontractors, BELGRADE AIRPORT has developed a specific plan to mitigate the impacts of the pandemic on the dynamic of works and projected deadlines.

The new phase of works on Airport modernization, which commenced in 2021, includes the works on construction of significant infrastructure projects, of which major ones are a reconstruction of the terminal, modernization of access roads, aprons expansion, as well as the projects dedicated to sustainable

development and business operations. These works are being performed simultaneously with those commenced in 2019.

The project's main aim is to increase capacity (air traffic and passenger). The project commenced in December 2018 and is expected to be completed by Q1 2024. The project includes reconstruction or expansion of existing structures and facilities as well as new construction, which in general comprises of:

- An integrated terminal operations concept with increased capacity (extension and reorganization of the terminal, extension of the piers) and improvement of an overall setting within the terminal,
- Airside1 works with additional aircraft stands, a newly inserted runway, new taxiways, and rehabilitation of the existing runway,
- Increased car parking capacity, and
- Construction of new utilities and facilities such as a new wastewater treatment plant, heating plant, and photovoltaic plant.

Belgrade Nikola Tesla Airport joined the Airport Carbon Accreditation Program (ACA) of the Airport Council International (ACI). In November 2020, it obtained a Level 1 certificate, thus receiving acknowledgment for our airport's efforts to reduce carbon dioxide emissions.

1.1.8.2 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airport, including its location number of passenger and freight terminals and runways, followed by information regarding the connections both the direct link to the EUSAIR main cities and connection to the city center by mode of transport.

Table 23 Infrastructures and connections in selected airports in Serbia

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Belgrade Nikola Tesla Airport	Belgrade	2 Terminals for passengers - 1 runway	Athens, Heraklion (from June to September), Thessaloniki (starts in May), Skopje (ends in December), Tirana, Podgorica (ends in December), Tivat (ends in December), Dubrovnik (from May to October), Sarajevo (ends in December), Split (from May to October), Banja Luka (ends in December), Ljubljana (ends in December), Zagreb (ends in December), Venice (from November to December), Milan–Malpensa (starts in May), Rome–Fiumicino (ends in December)	Bus, Taxi, Planned Rail

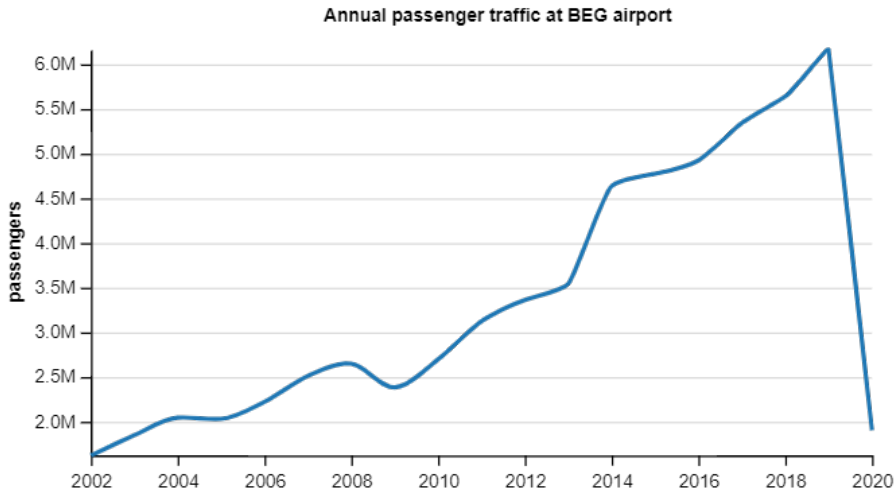
1.1.8.3 Traffic

The following table indicates the air traffic for passengers and freight in the selected airports of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

Table 24 Traffic in selected airports in Serbia

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Belgrade Nikola Tesla Airport	Belgrade	6,159,000	25,543 t

Figure 48 Annual passenger traffic at Belgrade Airport



1.1.9 Slovenia

According to the selection criteria above, the only airport chosen for Slovenia is the Ljubljana Jože Pučnik International Airport. The following provides a brief introduction of the airport according to the available primary information on related websites[88].

1.1.9.1 Ljubljana Jože Pučnik Airport

Ljubljana Jože Pučnik Airport (Slovene: *Letališče Jožeta Pučnika Ljubljana*) (IATA: LJU, ICAO: LJLJ), also known by its previous name Brnik *Airport* (Slovene: *Letališče Brnik*), is the international airport serving Ljubljana and the largest airport in Slovenia. It is located near Brnik, 24 km (15 mi) northwest of Ljubljana and 9.5 km (5.9 mi) east of Kranj, at the foothills of Kamnik – Savinja Alps.

Due to growing air traffic and Slovenia's EU entry, which requires the separation of traffic into Schengen and non-Schengen, Aerodrom Ljubljana Airport Authorities have prepared a redevelopment plan for the passenger terminal. The expansion was to be carried out in two phases. Works on the first phase began in early July 2007 to accommodate Slovenia's entry into the Schengen Area in December 2007.

The terminal building (T1) was extended with a new upper level which added 4,000 square meters (43,000 sq ft) to the departure lounge, and four jetways have also been installed for easier passenger access to and from the terminal. In 2013, the second phase of terminal expansion, which included a new terminal T2, was scrapped by the minority stakeholders.

In 2014, the Slovenian government initiated a privatization process of the airport. The bid was won by Fraport, which, in turn, acquired a 75.5% stake in the airport. The remaining shares were acquired in the following months resulting in Fraport taking 100% ownership of the airport.

In April 2017, the airport operator Fraport Slovenia announced a plan to expand the existing passenger terminal. A modular solution was proposed, which can be carried out in phases that are effectively and continuously adapted to traffic development needs.

The new terminal for passengers at Ljubljana Jože Pučnik Airport opened its doors to passengers on July 1, 2021. Thanks to the modern infrastructure spread over 10,000 square meters, Fraport Slovenija will offer users higher quality, a greater variety of services, and a better working environment to rank Ljubljana Airport amongst Europe's modern airports.

In 2017 Fraport Slovenija also published a revised Master Plan for 2010–2040. It includes a plan to construct a new 6,000 square meters (65,000 sq ft) cargo terminal to the east of the airport complex, expansion of passenger and aircraft maintenance aprons, and a relocation of the general aviation apron to the west. To the north, a business and logistics center named Airport City is planned. It will include various business and logistic facilities and a new hotel; there are multiple subsidies and incentives for the potential investor. In January 2018, a new road from Kranj to Mengeš that will enable the Airport City's development was opened.

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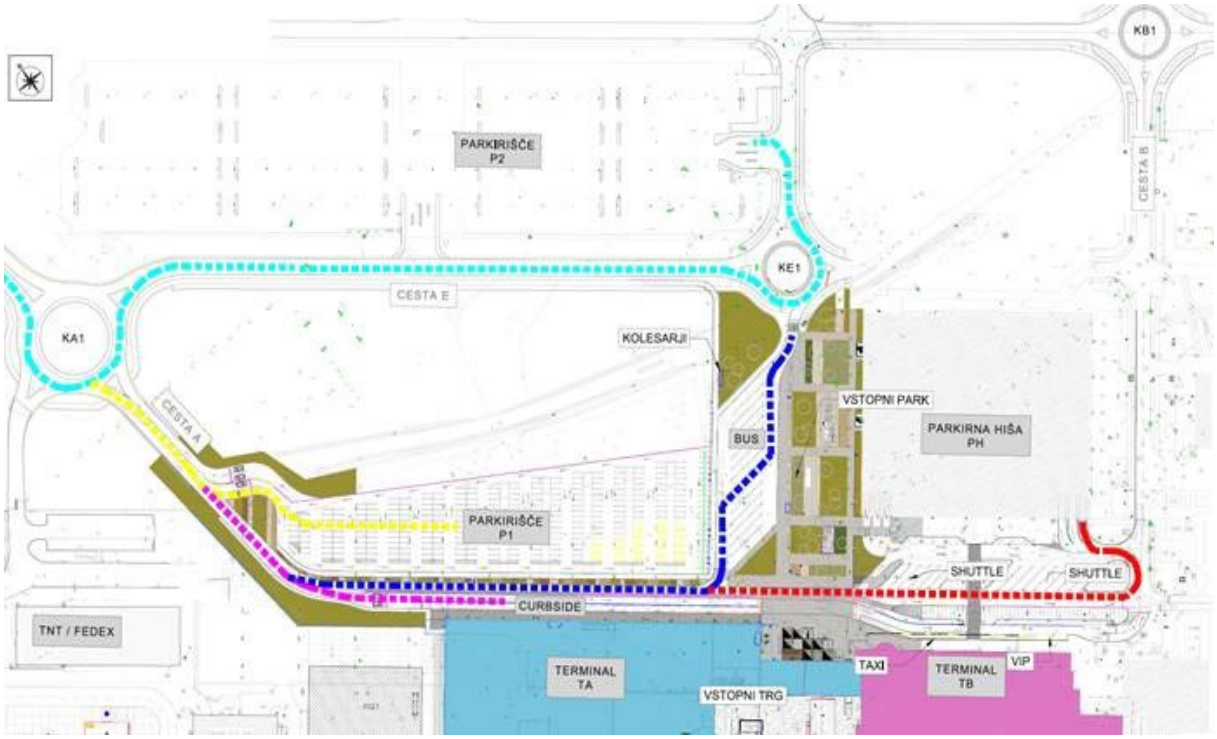
[88] https://www.lju-airport.si/en/info/news - https://www.lju-airport.si/en/info/news/new-resolution-on-the-development-of-transport-infrastructure-in-the-vicinity-of-the-ljubljana-airport - https://en.wikipedia.org/wiki/Ljubljana_Jo%C5%BEe_Pu%C4%8Dnik_Airport

Figure 49 Ljubljana Jože Pučnik International Airport accessibility and parking



Through its numerous commercial activities, Ljubljana Airport significantly influences the economic development of the Gorenjska and Central Slovenia regions. The airport is Slovenia's leading air traffic hub and also the destination and source of traffic flows in the broader region, which significantly affects the transport infrastructure and, consequently also, urban planning in the local municipalities.

The transport links from the airport towards Ljubljana and Kranj have been practically unchanged since the airport was opened in 1963. Except for the Gorenjska motorway, built in 1985, and the rerouting of a section of the state road that runs past the airport in 2018, there have been no investments or improvements to the existing infrastructure, which is an obstacle to the development of both the airport and the local municipalities.

Since the introduction of vignettes in 2008, traffic on the Gorenjska motorway has increased significantly due to the rerouting of local traffic and the overall increase in the traffic level. Industrial zones have sprung up near motorway junctions, while the layout, design, and number of motorway junctions have remained the same.

No systemic severe solutions have been proposed, as all the proposals have focused on individual, unrelated projects. Realizing that the issue has not been sufficiently addressed, Fraport Slovenija has decided to take a more proactive approach and has drawn up concrete proposals for changes to the transport network near the airport.

These changes include the construction of a new motorway junction and the modification of the existing junctions, new roads, and the construction of a high-capacity rail line in Pan-European Corridor X in the

direct vicinity of the airport, with a shared rail station for Kranj, Šenčur and the airport, which would enable the development of a new multimodal logistics center directly adjacent to the Gorenjska motorway.

Two open-air parking areas, a parking house and drop-off zone for short term parking are available in the immediate vicinity of the terminals, allowing passengers of Ljubljana Airport to park their vehicles safely.[89]

The bus station is located in the immediate vicinity of the Passenger Terminal A. Buses run directly to Ljubljana, Kranj and Bled in Slovenia.

Several companies offer shuttle service to the city center. Shuttle counters are located at Arrivals (Terminal) and station for shuttles is located in front of Terminal B of the airports. [90]

Several car rental companies are available at the airport terminal. A taxi station is also located in front of Terminal B. [91]

1.1.9.2 Infrastructures and connections

The following table shows the information regarding the infrastructure of the selected airport, including its location number of passenger and freight terminals and runways, followed by information regarding the connection ns both the direct link to the EUSAIR main cities and connection to the city center by mode of transport.

Table 25 Infrastructures and connections in selected airports in Slovenia

	Location	Infrastructures	Direct Connections (EUSAIR Region)	Connection to the City
Ljubljana Jože Pučnik Airport	Ljubljana	2 Terminals for passengers - 1 runway	Corfu, Karpathos, Preveza/Lefkada, Rhodes, Belgrade (ends in December), Dubrovnik, Heraklion, Kefalonia, Kos, Preveza/Lefkada, Samos, Santorini, Zakynthos	Bus, Taxi, Shuttle Service, Planned Rail

1.1.9.3 Traffic

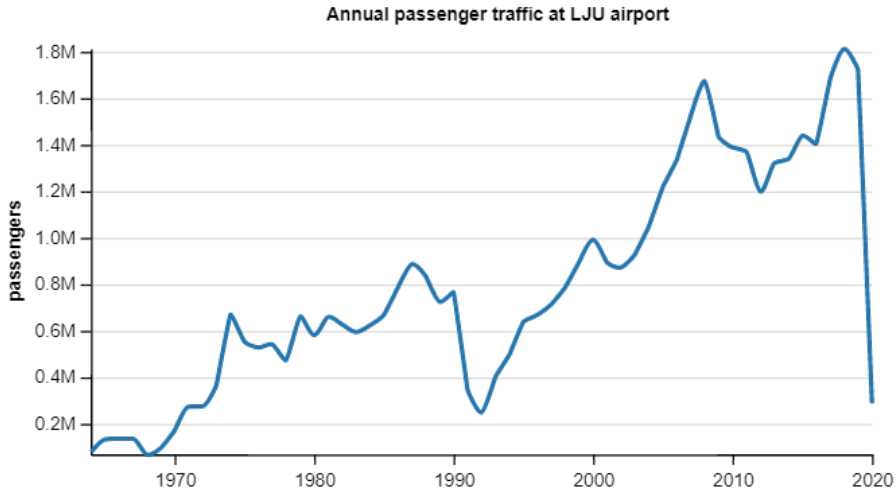
The following table indicates the air traffic for both passengers and freight in the selected airport of the country, followed by an annual passenger traffic graph. The data source is multiple, from the official website of each airport to free online encyclopedias/databases.

Table 26 Traffic in selected airports in Slovenia

	Location	Annual Passengers (2019)	Annual Cargo (2019)
Ljubljana Jože Pučnik Airport (LJU)	Ljubljana	1,721,355[92]	24,874 t[93]

[89] https://www.lju-airport.si/en/ljubljana-airport-parking/
[90] https://www.lju-airport.si/en/transport/shuttle-services/
[91] https://www.lju-airport.si/en/transport/taxi/
[92] https://en.wikipedia.org/wiki/Ljubljana_Airport
[93] https://en.wikipedia.org/wiki/Ljubljana_Airport

Figure 50 Annual passengers at Ljubljana Airport



1.2 Cross-cutting themes

1.2.1 Implementation of the SESAR system, availability and diffusion of alternative ecological fuels

The European sky is now fragmented, managed, and controlled by more than 60 control centers that still follow the borders of the nation-states. This fragmentation is the cause of possible delays, unnecessarily longer routes, fuel waste, and increased CO2 production.

To solve these problems, the European Commission began working on a program to offer Europe a modern, secure management system that addressed the sector's needs almost twenty years ago. The Single European Sky project was launched in 1999, born to improve the performance of air traffic management (ATM) activities and air navigation services (ANS), thanks to a better and renewed integration of European airspace.

The expected benefits of the initiative are enormous: around 2030-2035, it will be able to meet the traffic forecasts that are expected to double (source Eurocontrol), halve the costs of ATM, improve safety, and reduce the impact of air transport on the environment by 10 % compared to 2004 data.

The Single European Sky aims to organize air traffic better to make it more efficient, competitive, safe, and less dangerous for the environment; SESAR (research project for the management of air traffic of the Single European Sky, "Single European Sky Air traffic management Research") is the enabler of this ambitious objective since it has the task of accelerating the reform of air navigation services and identifying innovative technological elements that allow the implementation of a new air traffic management system.

SESAR aims to achieve the following results:

- Develop systems for reducing air traffic management costs, fuel consumption, CO2 emissions, and flight time;
- Increasing operational efficiency for airspace users by reducing delays and expanding the scope of air capacity, given that many European airports will face possible congestion problems at the current rate of air traffic growth.

The measures cover the civil and military sectors and concern regulation, the economy, security, the environment, technology, and institutions.

The SESAR project is composed of three phases:

- In the Definition phase spanning from 2004 to 2008, the focus was on delivering an ATM master plan that outlined the content, development, and deployment strategies for the next generation of ATM systems. Eurocontrol led this phase, with co-funding from the European Commission through the Trans-European Transport Networks program. Execution involved a broad consortium representing all air transport stakeholders.
- Moving into the Development phase, which took place from 2008 to 2013, the primary goal was to create the necessary technological systems and components as outlined in the earlier definition phase. This phase, with a budget of 2.1 billion euros, was overseen by the SESAR Joint Undertaking.
- The subsequent Deployment phase, spanning from 2014 to 2020, marked a significant effort to produce and implement the new air traffic management infrastructure on a large scale. This

infrastructure consisted of fully harmonized and interoperable components designed to ensure the high-performance operation of air transport activities across Europe.[94]

Today SESAR unites the whole aviation community through its 19 members. Several members are made up of consortia - and together with their affiliates and sub-contractors - represent a total of 100 organizations actively participating in and demonstrating the impact of the SESAR program on ATM R&D activities in Europe.

The two Founding Members coming from the SESAR Joint Undertaking founding Regulation are the European Union and Eurocontrol, as defined in Article 1 of the Statutes of the SESAR JU. For SESAR 2020, 19 SESAR JU members were selected as a result of a membership accession process launched in 2014, these are:

1. Airbus SAS
2. AT-One Consortium (Consortium comprising: Deutsches Zentrum fur Luft-und Raumfahrt e. V. (German Aerospace Centre, DLR) and Stichting Nationaal Luchten Ruimtevaartlaboratorium (Netherlands Aerospace Centre, NLR))
3. B4 Consortium (Consortium comprising: Polish Air Navigation Services Agency: (PANSA), Air Navigation Services of the Czech Republic (ANS CR), Letové prevádzkové služby Slovenskej republiky Štátny podnik (LPS SR s.p.) – State owned ANSP of Slovakia and The State Enterprise "Oro navigacija " (ON) – Lithuania)
4. COOPANS Consortium (Consortium comprising: Naviair, Irish Aviation Authority (IAA), Croatia Control - Croatian Air Navigation Services Limited, Austro Control - Österreichische Gesellschaft für Zivilluftfahrt mit beschränkter Haftung and Luftfartsverket (LFV))
5. Dassault Aviation SA
6. DFS Deutsche Flugsicherung GmbH
7. Direction des Services de la Navigation Aérienne – DSNA
8. ENAV S.p.A.
9. Entidad Publica Empresarial ENAIRE
10. Finmeccanica S.p.A.
11. Frequentis SESAR Partners (Consortium comprising: Frequentis AG; Hungarocontrol Zrt and ATOS Belgium SA/NV)
12. Honeywell Aerospace SAS
13. INDRA Sistemas S.A.
14. NATS (En Route) Plc
15. North European ATM Industry Group - NATMIG Consortium (Consortium comprising: Stiftelsen SINTEF, Saab AB and Airtel ATN Ltd.)
16. SESAR European Airports Consortium – SEAC (Consortium comprising: Heathrow Airport Ltd, Aeroports de Paris S.A, Fluchafen Munchen GmbH, Flughafen Zurich AG, Schiphol Nederland B.V, Swedavia AB and Avinor AS)
17. Skyguide, Swiss civil and military Air Navigation Services Ltd
18. Thales Air Systems SAS

[94] https://en.wikipedia.org/wiki/Single_European_Sky_ATM_Research

19. Thales Avionics SAS[95]

For SESAR to reach its full potential, it needs the expertise of all stakeholders and the assurance that the technologies developed will meet their needs. That is why the SESAR Joint Undertaking continually strives to include more experts or stakeholders in the program and its committees. This makes the SESAR Joint Undertaking a truly international public-private partnership.

The SESAR 3 JU partnership brings together the EU, Eurocontrol, and more than 50 organisations covering the entire aviation value chain, from airports, airspace users of all categories, air navigation service providers, drone operators and service providers, the manufacturing industry and scientific community.

The partnership also works closely with the regulatory and standardisation bodies, notably EASA and Eurocae, as well as key stakeholders, such professional staff organisations, the space and military communities and global partners.[96]

Figure 51 SESAR 3 JU Members

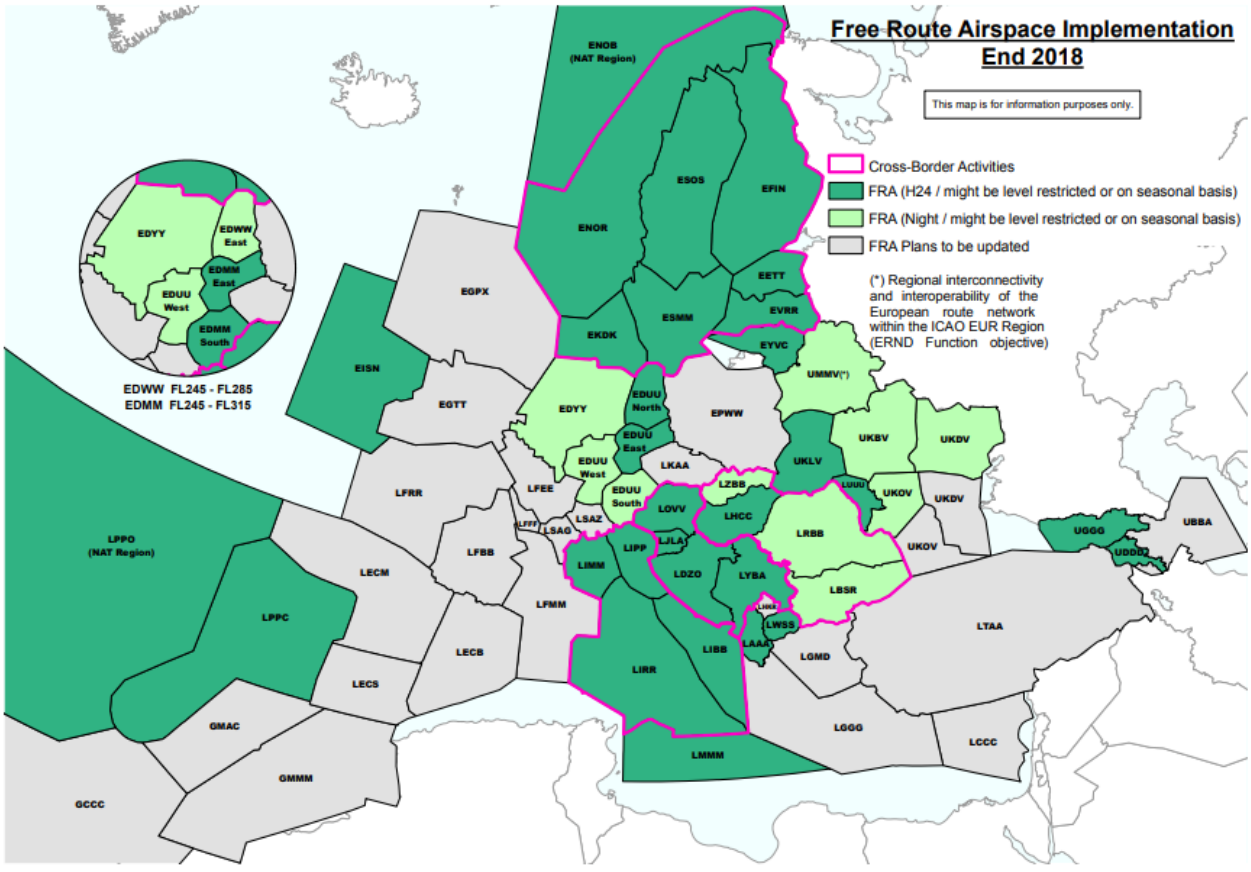
According to the European "Aviation Environmental Report 2019"[97], the 2018 European ATM Master Plan ambition is to continue reducing the additional gate-to-gate flight time and additional gate-to-gate CO2 emissions to reach 3.2% and 2.3% respectively by 2035. This level is to be achieved by implementing various operational initiatives:

[95] https://www.sesarju.eu/newsroom/all-news/sesar-2020-membership-reflects-growing-europe-wide-commitment-atm-modernisation
[96] https://sesarju.eu/discover-sesar/partnering-smarter-aviation
[97] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

- Free Route Airspace;
- Continuous Climb Operations / Continuous Descent Operations;
- Implementation of Airport Collaborative Decision Making.

Free Route Airspace is defined as that airspace within which users may freely plan a route between any defined entry and exit point, subject to airspace availability. The following Figure[98] provides an overview of Free Route Airspace (FRA) and direct routing implementation in Europe as of the end of 2018. It fosters the performance of shorter routes and more efficient use of the European airspace. The proportion of flight time flown in Free Route Airspace during 2017 was 20% compared to 8.5% in 2014. Since 2016, it should also be noted that cross-border accessible route activities have been implemented in Estonia, Latvia, Italy, Malta, Slovenia, and Croatia. The Network Manager estimates 2.6 million tonnes of CO2 savings from the implementation of FRA since 2014

Figure 52 Free route airspace (24 hours or at night) implementation (Source: Network Manager)



In 2015, a Task Force of European ATM Stakeholders agreed on harmonized definitions, metrics, and parameters to measure **Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO)** in

[98] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

Europe. These included the definition of a 'noise CCO/CDO' and a 'fuel CCO/CDO.' The fuel CCO/CDO measures the vertical flight efficiency, in terms of fuel and CO2, for the entire climb and descent profile, respectively. The noise CCO/CDO measures the sheer flight profile efficiency to 10,500 ft for CCO and from 7,500 ft for CDO, the phases of flight where the immediate impact is considered noise.

Continuous Climb and Descent Operations (CCOs and CDOs) are aircraft operating techniques enabled by airspace design, instrument procedure design and facilitated by air traffic control (ATC). CCO and CDO allow aircraft to follow a flexible, optimum flight path that delivers major environmental and economic benefits - reduced fuel burn, gaseous emissions, noise and fuel costs - without any adverse effect on safety.

CCO and CDO operations allow arriving or departing aircraft to descend or climb continuously, to the greatest extent possible. Aircraft applying CCO employ optimum climb engine thrust and climb speeds until reaching their cruising levels. With CDO, aircraft employ minimum engine thrust, ideally from top of descent and in a low drag configuration, prior to the final approach fix. Employment of these techniques reduces intermediate level-offs and results in time being spent at more fuel-efficient higher cruising levels, hence significantly reducing fuel burn and lowering emissions and fuel costs (see ICAO Doc 9993 and ICAO Doc 9931).[99]

In 2018, EUROCONTROL conducted an ECAC-wide CCO and CDO analysis using 2017 traffic data, in order to estimate the potential network benefits of optimising the CCO and CDO in terms of fuel savings, emissions reduction and fuel costs.

For CCO, the study concluded that 94% of flights in ECAC currently fly CCO to FL (Flight Level) 100 while 74% fly a full CCO to Top of Climb (ToC).

For those flights currently flying non-CCO profiles, the average time in level flight to the ToC was 168 seconds with per-flight savings estimated at 15kg fuel/48kg CO2/7EUR. Across the network, this would result in a potential average per-departure saving of 4.3kg fuel/13.7kg CO2/~2€

For CDO, the study concluded that 41% of flights fly CDO from FL75 (the top of the noise CDO) while only 24% fly a CDO from Top of Descent (ToD – the top of the fuel CDO).

For those flights currently flying non-CDO profiles, the average time in level flight from the ToD was 217 seconds, with per-flight savings estimated at 46kg fuel/145kg CO2/20EUR. Across the network, this would result in a potential average per-arrival saving of 35kg fuel/110kg CO2/15€.

The ECAC-wide study identified two main conclusions:

- The results indicate that in Europe the potential savings from optimising CCO and CDO are up to 340,000 tonnes fuel/year, (1.1M tonnes CO2/150M EUR) *
- The potential fuel saving benefits from CDO are in the region of x10 those from CCO.

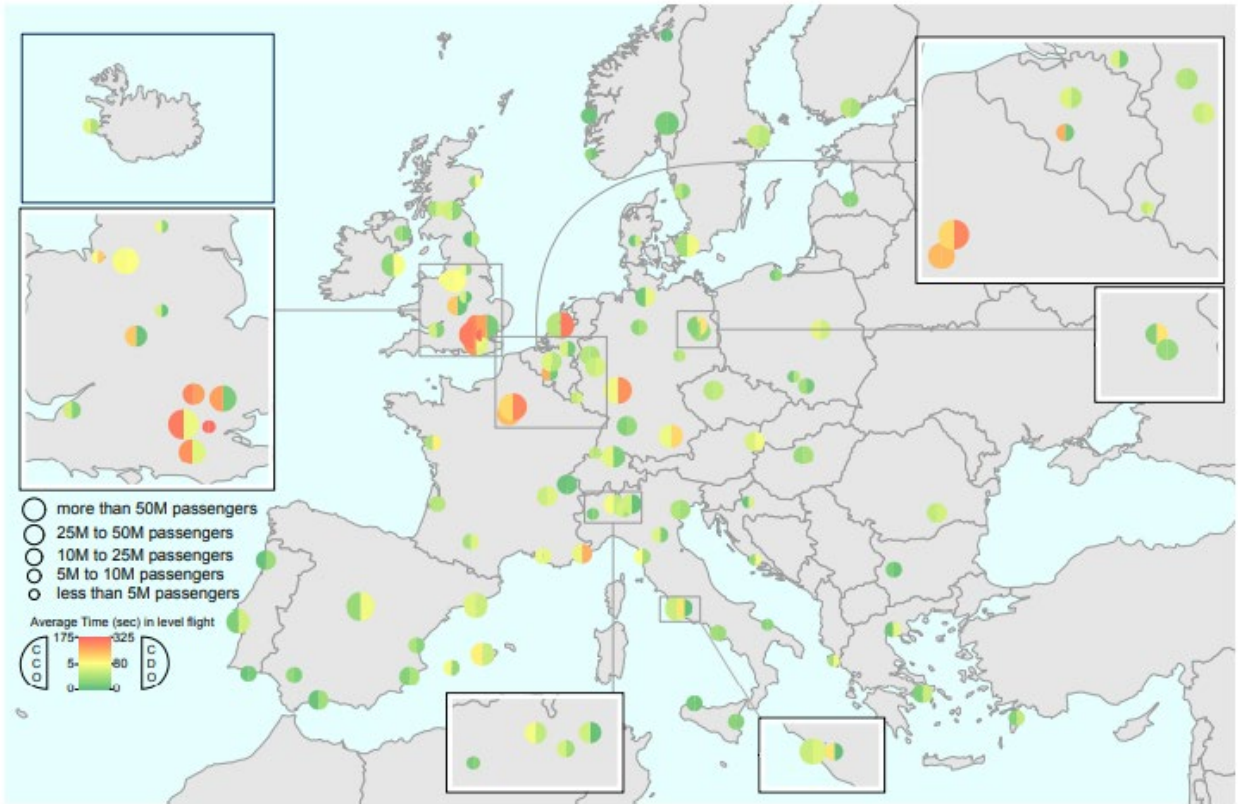
(*) It should be noted that the achievement of 100% CCO and CDO across the European network may not be possible for a number of reasons, such as safety (i.e. the need to keep aircraft separated by a certain distance or time), weather, capacity or ATCO workload, all of which may be considered as

[99] https://www.eurocontrol.int/concept/continuous-climb-and-descent-operations

interdependencies, while small inefficiencies in the system are required to operate a flexible and operationally efficient network.[100]

The following Figures[101] use a sliding scale to indicate the average amount of time flown in level flight for both the noise and the fuel CCO/CDO at selected European airports in 2017. The noise and fuel CCO/CDOs scales are different, based on minimum, average, and maximum values, illustrating the relative performance between the airports. Note that the average amount of level flight flown on departure (noise CCO) is relatively low at 5 seconds compared to 67 seconds for arrivals (CDO).

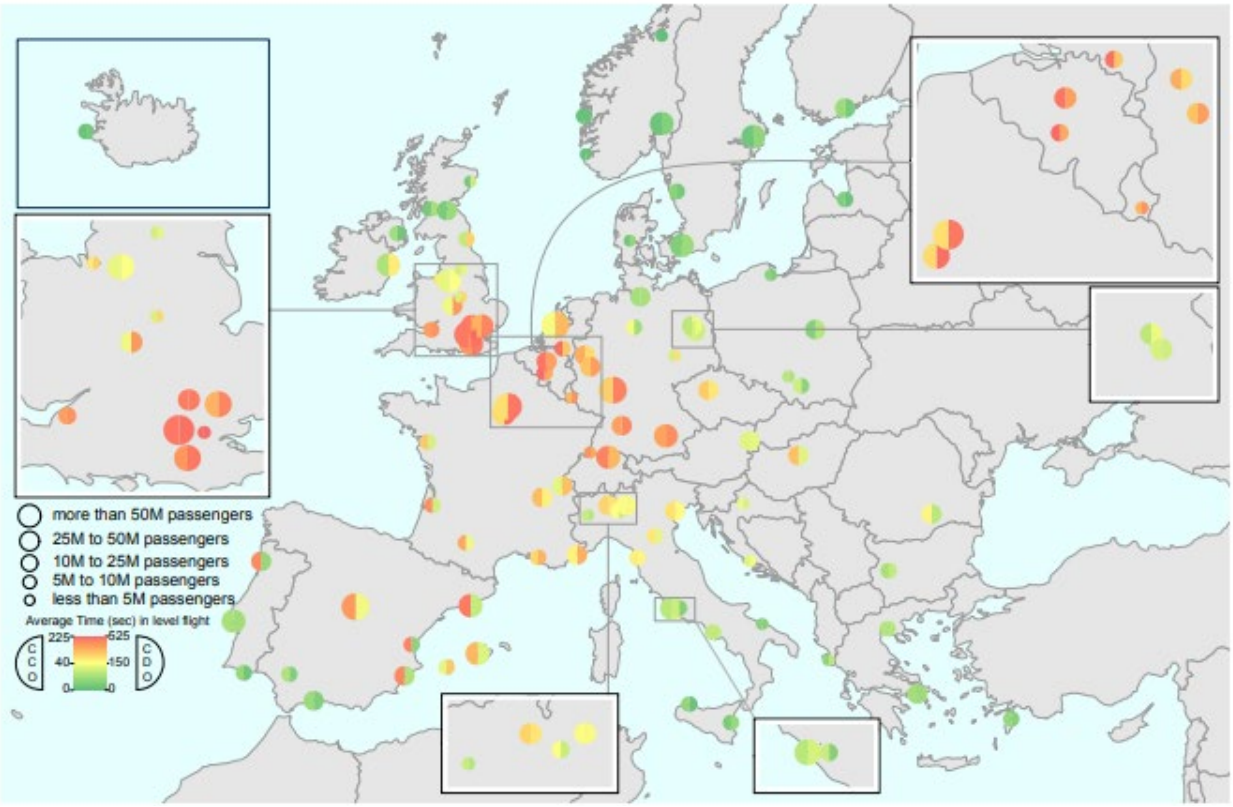
Figure 53 Noise CCO/CDO level flight in 2017



[100] https://www.eurocontrol.int/concept/continuous-climb-and-descent-operations

[101] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

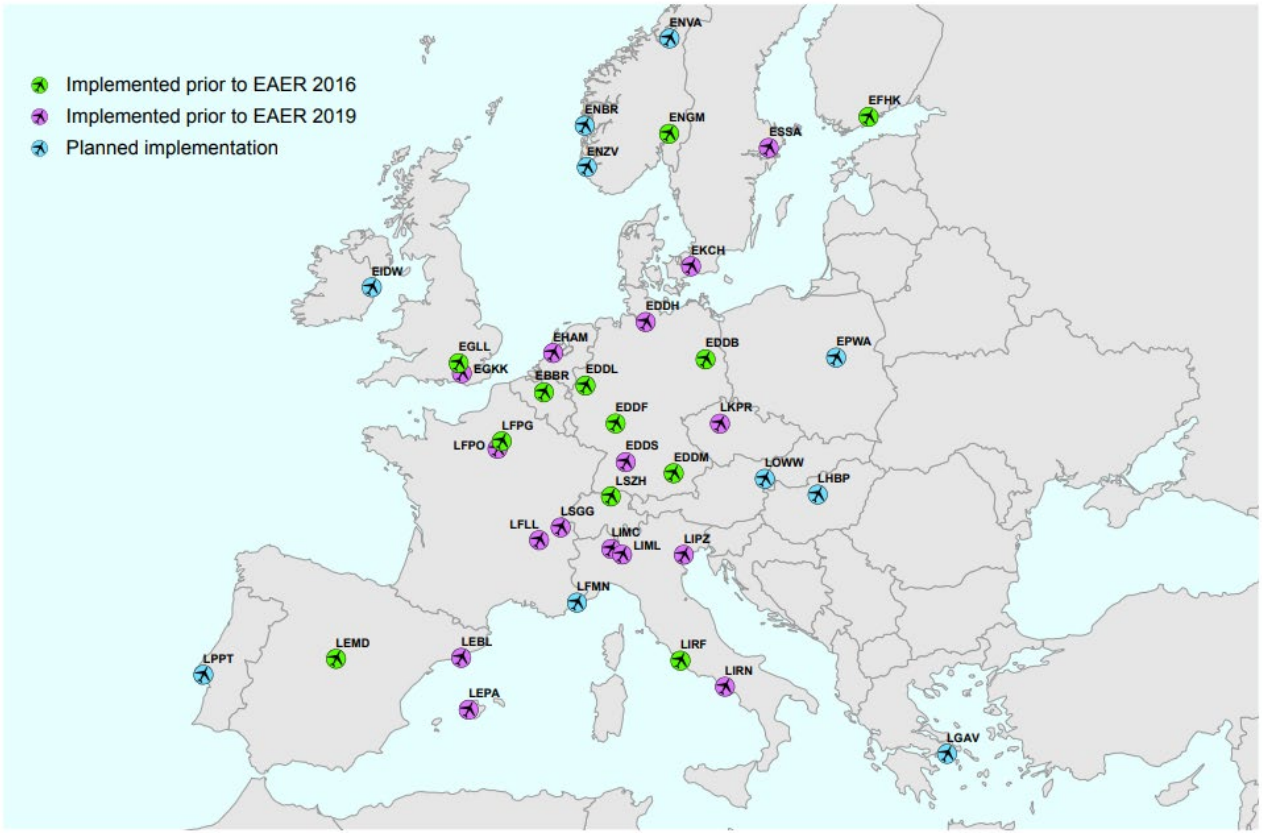
Figure 54 Fuel CCO/CDO level flight in 2017



Airport Collaborative Decision Making (A-CDM) aims to improve airport operations' overall efficiency, especially in aircraft turn-round and pre-departure sequencing processes. A further 16 airports (see the following Figure[102]) have implemented A-CDM since 2016, resulting in 40.9% of European departures operating from an A-CDM airport. The 2016 A-CDM impact assessment report [64] identified savings generated from 13 of the 17 A-CDM airports that have demonstrated tangible taxi-time performance improvements of 108,072 tonnes of CO2 emissions.

[102] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

Figure 55 Airport Collaborative Decision Making (A-CDM) in the SES area.



The following Table and image show the implementation of SESAR Solutions according to the "SESAR Solutions Catalogue 2019".[103] A fourth edition of the SESAR Solution Catalogue will be published in 2021, providing readers with an update on the solutions now ready and available for industrialization and ongoing work on candidate solutions. Recognizing the changing landscape of aviation and the challenges the aviation sector is facing, the latest edition will illuminate some solutions (delivered and candidate) identified as essential enablers for making ATM more scalable, sustainable, and resilient.

SESAR Solutions refer to new or improved operational procedures or technologies designed to meet the essential operational improvements outlined in the European ATM Master Plan. They are also developed following the International Civil Aviation Organization (ICAO) and the Global Air Navigation Plan (GANP) and apply to ATM environments worldwide.

[103] https://www.sesarju.eu/sites/default/files/documents/reports/SESAR_Solutions_Catalogue_2019_web.pdf

Table 27 SESAR in selected airpotrs

	Location of SESAR Solutions Testbeds	Airports deploying SESAR Solutions as part of the EU's Pilot Common Project (Synchronised deployment)	Sample of locations where local SESAR deployments are taking place
Albania			
Tirana International Airport Nënë Tereza	no	no	no
Bosnia and Herzegovina			
Sarajevo International Airport	no	no	no
Croatia			
Zagreb Franjo Tuđman Airport	no	no	no
Rijeka International Airport	no	no	no
Split Airport	yes	no	no
Greece			
Athens International Airport	no	no	no
Thessaloniki Airport	no	no	no
Heraklion International Airport "Nikos Kazantzakis"	no	no	no
Rhodes International Airport "Diagoras"	no	no	no
Corfu International Airport "Ioannis Kapodistrias"	no	no	no
Kos International Airport	no	no	no

	Location of SESAR Solutions Testbeds	Airports deploying SESAR Solutions as part of the EU's Pilot Common Project (Synchronised deployment)	Sample of locations where local SESAR deployments are taking place
Santorini (Thira) International Airport	no	no	no
Italy			
Milan Malpensa Airport	yes	yes	yes
Orio al Serio International Airport	no	no	yes
Venice Marco Polo Airport	no	no	no
Catania–Fontanarossa Airport	no	no	no
Bologna Guglielmo Marconi Airport	no	no	no
Falcone Borsellino Airport	no	no	no
Milan Linate Airport	yes	no	yes
Bari Karol Wojtyła Airport	no	no	no
Brindisi-Papola Casale Airport (Aeroporto del Salento)	no	no	yes
Verona Villafranca Airport			
Treviso Airport			
Lamezia Terme International Airport			
Trieste Airport			

	Location of SESAR Solutions Testbeds	Airports deploying SESAR Solutions as part of the EU's Pilot Common Project (Synchronised deployment)	Sample of locations where local SESAR deployments are taking place
Abruzzo Airport (Pescara)	yes		
Marche Airport (Ancona)			
Montenegro			
Podgorica International Airport	no	no	no
Tivat Airport	no	no	no
North Macedonia			
Skopje International Airport	no	no	yes
Serbia			
Belgrade Nikola Tesla Airport	no	no	no
Ljubljana Jože Pučnik Airport (LJU)	no	no	no

The solutions result from collaborative research and development between various aviation stakeholders, including air navigation service providers (ANSPs) regulators, airport operators, airspace users, the military, manufacturers (air and ground) staff organizations, and the scientific community. They follow a process established by the SESAR JU known as the release process, whereby solutions are tested or validated in real operational environments. Since 2016, SESAR JU members and partners have run over 200 validations across Europe at around 50 test beds (simulation platforms, onboard commercial flights, dedicated airport testbeds, and air traffic control centers). Exercises are not limited to a specific location but can be used to test multiple environments irrespective of where the physical validation is held.

Figure 56 Locations of SESAR solutions testbeds

Figure 57 Locations of local and synchronized deployment

In Annexes are reported the Local Single Sky Implementation (LSSIP)reports for all the Countries where selected airports are based. The documents by EUROCONTROL provide a comprehensive, consolidated, and harmonized picture, for the benefit of the ATM community at large, of how all European Civil Aviation Conference (ECAC) States, as well as States having a Comprehensive Agreement with EUROCONTROL, and

Stakeholders concerned, are progressing in planning and deploying all mature elements of the European ATM Master Plan and the various European aviation policies.

EUROCONTROL is cooperating with the SESAR Deployment Manager, the SESAR Joint Undertaking, the European Defense Agency, and NATO to optimize the reporting mechanism bringing all the processes into a single value chain.

In the following Annexes, it is possible to find in detail the progress per the SESAR project:

- Annex 1: Eurocontrol-lssip-2020-albania-level-1 published on 7 April 2021[104]
- Annex 2: Eurocontrol-lssip-2020-bosnia-herzegovina-level1 published on 7 April 2021[105]
- Annex 3: Eurocontrol-lssip-2020-Croatia-level1_0 published on 30 March 2021[106]
- Annex 4: Eurocontrol-lssip-2019-greece-level1 published on 26 March 2021[107]
- Annex 5: Eurocontrol-lssip-2019-italy-level1 published on 7 May 2020[108]
- Annex 6: Eurocontrol-lssip-2020-montenegro-level1 and Eurocontrol-lssip-2020-montenegro-level-2 published on 7 April 2021[109]
- Annex 7: Eurocontrol-lssip-2020-north-macedonia-level1_0 published on 30 March 2021[110]
- Annex 8: Eurocontrol-lssip-2020-serbia-level1 published on 26 March 2021[111]

1.2.2 Sustainable Aviation Fuels

Following a brief on Sustainable Aviation Fuels (SAF), the European "Aviation Environmental Report 2019."[112]

[104] https://www.eurocontrol.int/publication/albania-local-single-sky-implementation-lssip-document-2020
[105] https://www.eurocontrol.int/publication/bosnia-and-herzegovina-local-single-sky-implementation-lssip-document-2020
[106] https://www.eurocontrol.int/publication/croatia-local-single-sky-implementation-lssip-document-2020
[107] https://www.eurocontrol.int/publication/greece-local-single-sky-implementation-lssip-document-2020
[108] https://www.eurocontrol.int/publication/italy-local-single-sky-implementation-lssip-document-2019
[109] https://www.eurocontrol.int/publication/montenegro-local-single-sky-implementation-lssip-document-2020
[110] https://www.eurocontrol.int/publication/republic-north-macedonia-local-single-sky-implementation-lssip-document-2020
[111] https://www.eurocontrol.int/publication/serbia-local-single-sky-implementation-lssip-document-2020

[112] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

- The use of sustainable aviation fuel is currently minimal and is likely to remain limited in the short term.
- Sustainable aviation fuels have the potential to make an important contribution to mitigating the current and expected future environmental impacts of aviation.
- There is interest in 'electrofuels', which potentially constitute zero-emission alternative fuels. However, few demonstrator projects have been brought forward due to high production costs.
- Fuels must be certified in order to be used in commercial flights. Six bio-based aviation fuels production pathways have been certified, and several others are in the approval process.
- The EU has the potential to increase its bio-based aviation fuel production capacity, but the uptake by airlines remains limited due to various factors, including the cost relative to conventional aviation fuel and low priority in most national bioenergy policies.
- Regular flights using blends of bio-based aviation fuel are already being performed from several airports in the EU, albeit at very low percentages of the total fuel uplift.
- Recent policy developments and industry initiatives aim to have a positive impact on the uptake of sustainable aviation fuels in Europe.

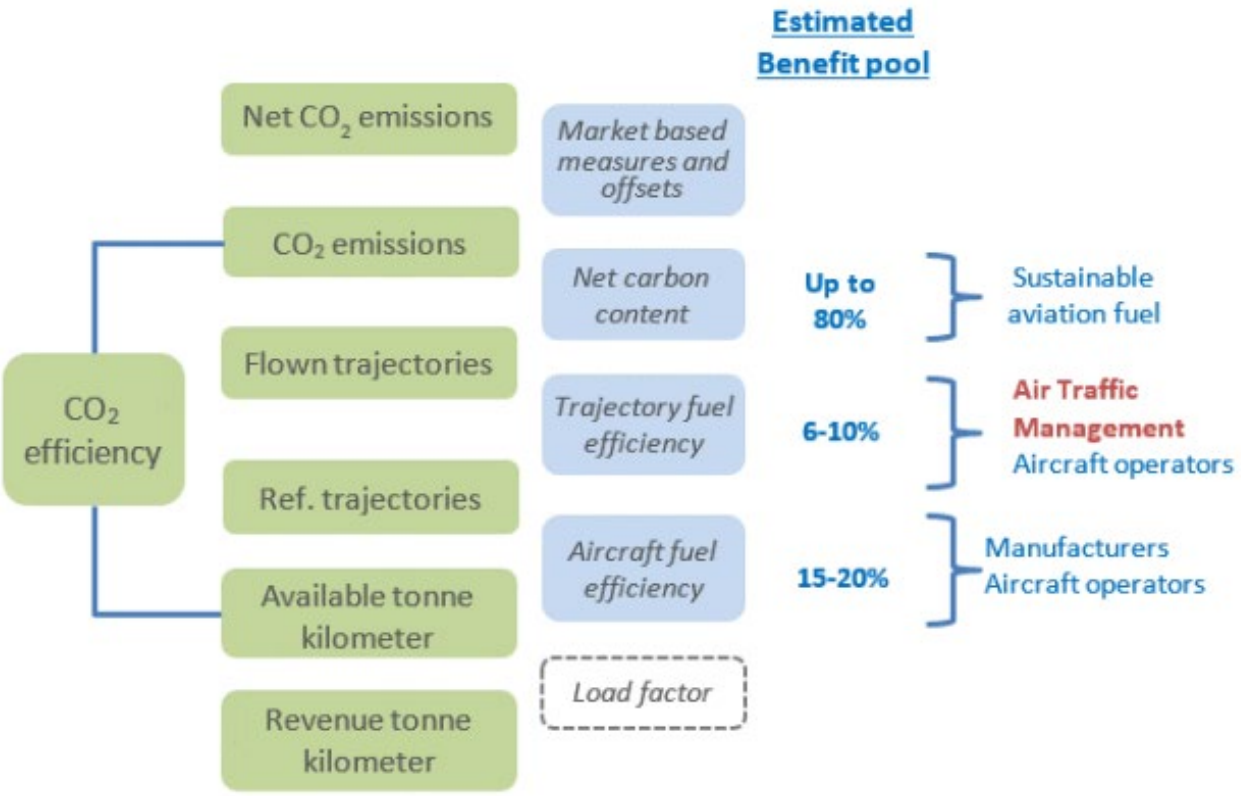
Along with future hybrid, electric, or hydrogen-powered aircraft, SAF represents one of the most promising solutions for aviation as the sector looks to transform itself toward a more sustainable future. SAF is estimated to generate 80% fewer carbon emissions than conventional kerosene (according to SAF producer NESTE Global - when measuring their full life cycle from production to combustion) and has the potential to reduce emissions considerably if uptake and production of SAF increase. However, there are several obstacles to overcome before this can become a reality, such as a strong business case and the emergence of a supportive policy framework. One way of kick-starting the SAF revolution, as EUROCONTROL think paper on taxing aviation argues[113], could be to ring-fence taxation to support aviation decarbonization measures, including SAF.

The chart below shows the CO2 efficiency due to SAF.[114]

[113] https://www.eurocontrol.int/publication/does-taxing-aviation-reduce-emissions

[114] https://www.eurocontrol.int/publication/environmental-assessment-european-atm-network-fuel-inefficiency-study

Figure 58 Aviation CO2 efficiency



Sustainable Aviation Fuel (SAF) is a "drop-in" fuel that meets all the same technical and safety requirements as fossil-based jet fuel. SAF contains the same hydrocarbons (and thus the same tailpipe emissions) as fossil-based kerosene, but the difference is that the hydrocarbons came from a more sustainable source. This results in a net reduction of emissions when comparing to fossil jet fuel on a life cycle basis.

Rather than removing carbon from the ground through the extraction of fossil fuels, the hydrocarbons are sourced from sustainable feedstocks like used or waste cooking oils, tallow (waste animal fats), waste biomass, and municipal solid waste (MSW), among others. Additional sustainability criteria are being considered, but today CORSIA requires feedstocks to meet two sustainability criteria in order to qualify as SAF:

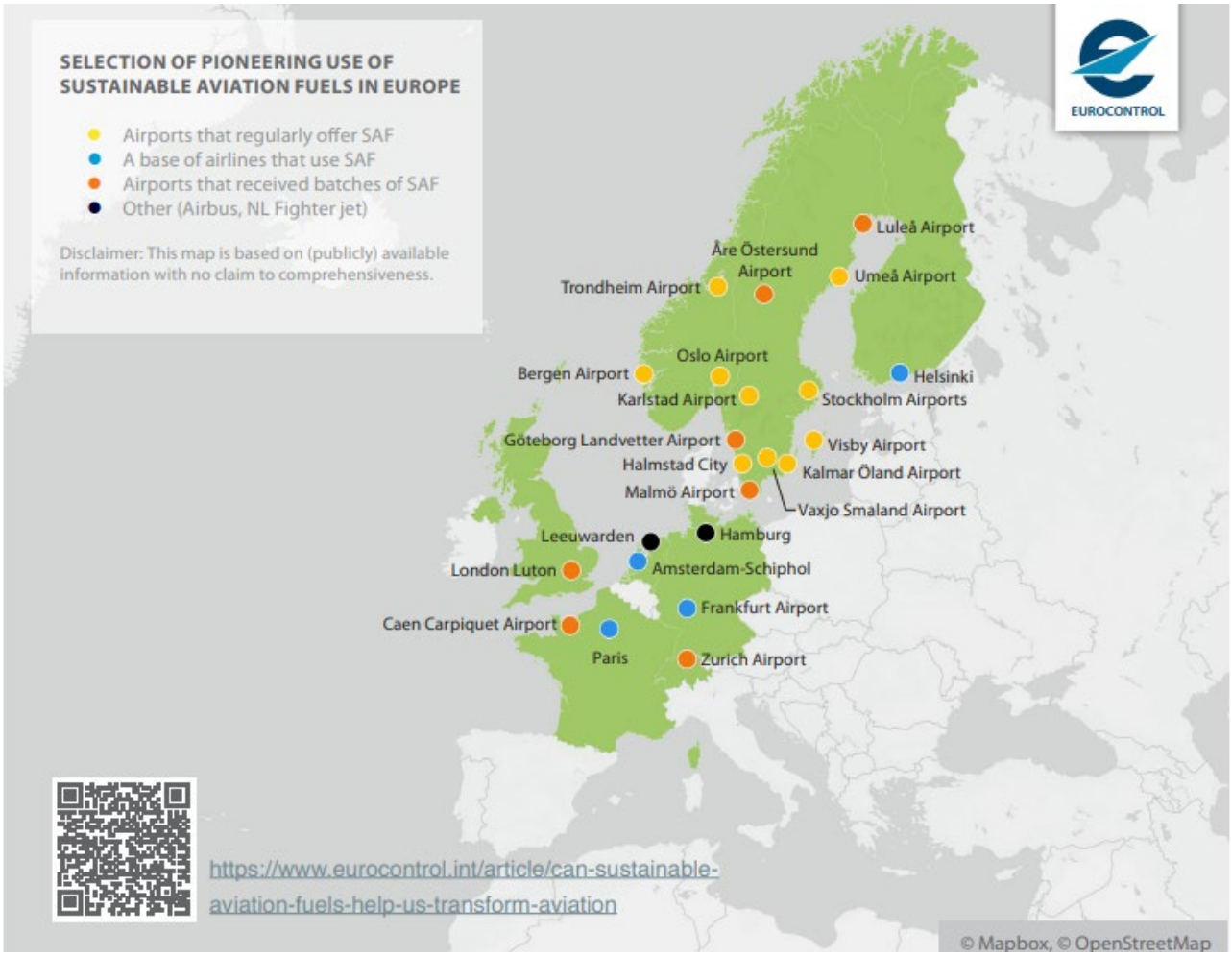
1. Achieve at least a 10% net greenhouse gas emissions reduction compared to the baseline life cycle emissions values.
2. Not be made from biomass sourced from land with a high carbon stock.

In addition, SAF cannot be made from edible feedstock sources that directly compete with food production or grown from land that could be used for food production. SAF is refined from these sustainable feedstocks and then certified under ASTM D7566 – a standard for the creation of synthetic fuels. From there, it is blended in approved ratios with fossil jet fuel and certified under ASTM D1655 – the same standard for conventional kerosene. At this point, it can be delivered as a drop-in product to existing fuel farms and airplane wings. SAF still has to be blended today due to the

lack of aromatics in the fuel which are often needed in aircraft engine fuel systems. However, engines, including ones for business aviation, are being developed today to burn 100% SAF.[115]

The following map published on 18 February 2021 in the EUROCONTROL Aviation Sustainability Briefing - Issue #1[116]shows that SAF is not used in the EUSAIR Region.

Figure 59 Pioneering SAF initiatives across Europe



In July 2021, the European Commission published a package of legislative proposals branded “Fit for 55”. One component of the package is the ReFuelEU proposal which aims to boost production and uptake of SAF. The proposal includes a blending mandate imposed on aviation fuel suppliers, with the obligation for the suppliers to ensure that all aviation fuel supplied to aircraft operators at European Union (EU) airports contains a minimum share of SAF, including a minimum share of synthetic fuel. The mandate is expected to start in 2025 with a minimum volume of SAF at 2%, increasing in five-year intervals to ultimately reach a minimum volume of 63% in 2050, of which 28% would consist of synthetic aviation fuels.

[115] https://www.4air.aero/whitepapers/sustainable-aviation-fuel-an-introduction
[116] https://www.eurocontrol.int/publication/eurocontrol-aviation-sustainability-briefing

All airlines departing from EU airports will be obliged to uplift jet fuel prior to departure. The amount of jet fuel uplifted must correspond to the volume of jet fuel necessary to operate the planned flight, regardless of the destination. The yearly quantity of aviation fuel uplifted by a given aircraft operator at a given EU airport shall be at least 90% of the yearly aviation fuel required. The legislative proposal also associates with reporting obligations of aircraft operators to the European Union Aviation Safety Agency. Procedure wise, ReFuelEU will follow the "EU Ordinary Legislative Procedure", whereby both the EU Parliament and the Council play an equal role in scrutinizing and amending the Commission's proposal to meet their respective views. Once the legislative bodies have agreed on their respective positions, they will need to find a compromise position before adopting the final legislation. The full process is expected to take between 8 and 18 months.[117]

There is pent-up demand for SAF but minimal supply at a price point that would attract buyers. Nevertheless, progress is being made. Some EU States are introducing targets for aviation biofuel use, with ambitions of up to a 30% share by 2030. United Airlines, KLM, and British Airways are investing in sustainable fuel production and are committed to purchasing SAF over the coming years, but this will only cover a small proportion of their flights. Potential alternative power sources are hydrogen fuel cells and electro fuels, in which water is electrolyzed to extract its hydrogen, which is then combined with CO2 captured from the atmosphere to produce a drop-in liquid hydrocarbon fuel. But both require significant new infrastructure and, as their production processes are energy intensive, this would need to come from renewable sources to make sense. These are potential sustainable fuel sources from the 2030s at the earliest. It will be challenging to reduce aviation emissions quickly with currently available technologies. But all of the research on SAF will take time to test through to successful certification, probably not before 2030. ***118***

The ICAO website also provides information about airport use of Sustainable Aviation Fuel. The following map provides details of the airports that receive ongoing deliveries (green drops) or batches (blue drops) of sustainable aviation fuels (SAF) ***119***

[117] https://www.iata.org/contentassets/d13875e9ed784f75bac90f000760e998/fact-sheet---us-and-eu-saf-policies.pdf
[118] https://www.eurocontrol.int/sites/default/files/2020-01/eurocontrol-think-paper-4-decarbonisation-en.pdf
[119] https://www.icao.int/environmental-protection/GFAAF/Pages/Airports.aspx - States and Stakeholders are invited to send additional information to: officeenv@icao.int

Figure 60 Airports receiving ongoing deliveries (green drops) or batches (blue drops) of sustainable aviation fuels (SAF)

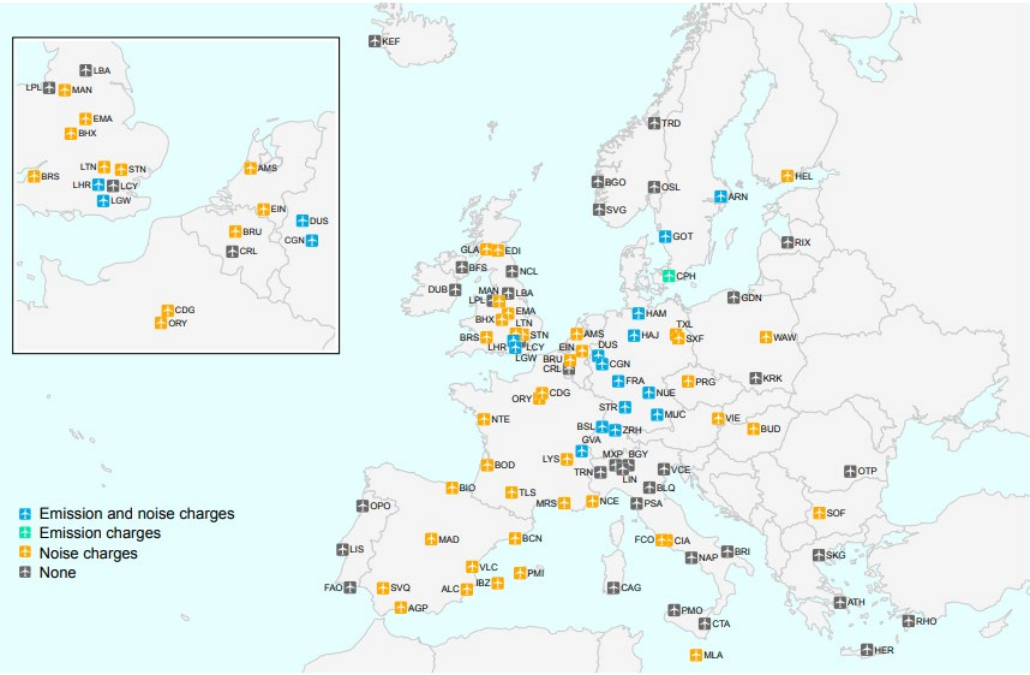
1.2.3 Carbon reduction policies

1.2.3.1 Environmental Charges[120]

Some airports levy environmental charges, either separate or integrated into other ones (e.g., landing charges), to incentivize airlines' use of quieter or lower-emission aircraft or fund local mitigation measures. Although there are significant differences in the structure of the environmental charging systems across Europe, the evaluation of the Airport Charges Directive concluded that it had provided a common framework for a transparent consultation on the charging setting process, remedies, non-discrimination, and the establishment of independent supervisory authorities.

[120] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

Figure 61 Environment-related charging schemes at 100 busiest EU28+EFTA airports in terms of flight movements



1.2.3.2 Airport Carbon Accreditation Programme

Lastly, the following image[121] reports the European Airports participating in the ACA (Airport Carbon Accreditation Programme).

[121] https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf

Figure 62 Airports participating in the ACA program.

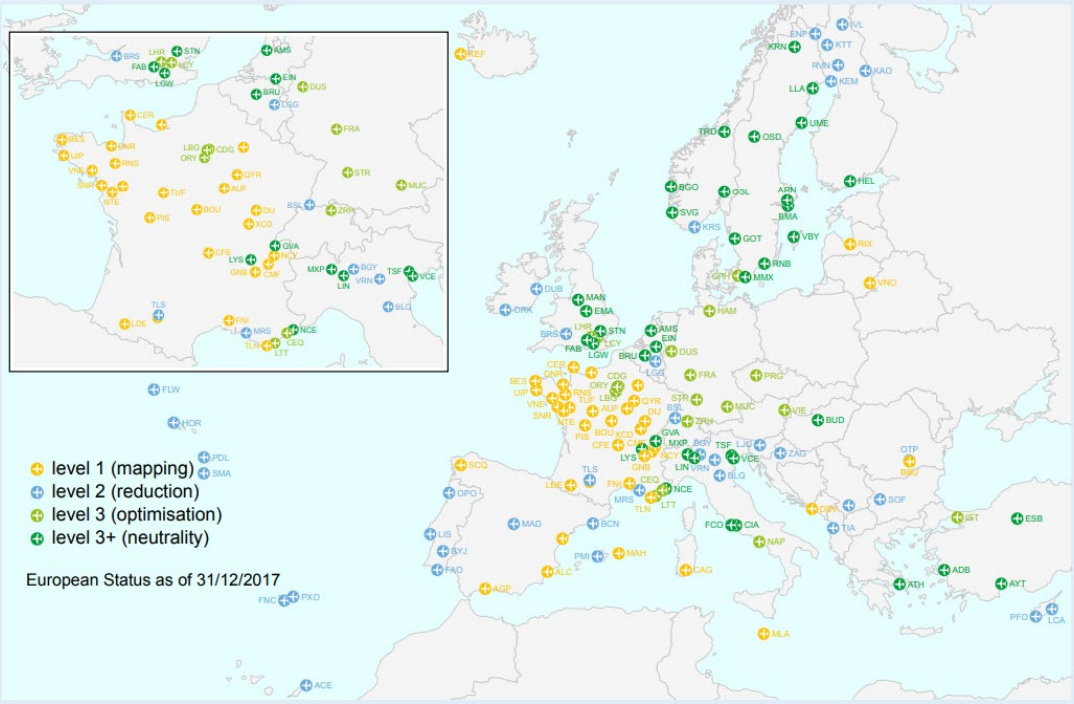
STAKEHOLDER ACTIONS

Airport Carbon Accreditation Programme

The Airport Carbon Accreditation programme [72] was launched by the Airports Council International Europe in 2009 and has now expanded to include 237 airports worldwide. It is a voluntary industry led initiative, that provides a common framework for carbon management with the primary objective to encourage and enable airports to implement best practices. It is run by an independent Programme Administrator who manages the application and approval process, and is overseen by an independent Advisory Board that reviews the progress and relevance of the programme. All data submitted by airport companies via Airport Carbon Accreditation are externally and independently verified.

The programme is structured around four levels of certification (Level 1: Mapping, Level 2: Reduction, Level 3: Optimisation and Level 3+: Neutrality) with increasing scope and obligations for carbon emissions management (Scope 1: Direct airport emissions, Scope 2: Indirect emissions under airport control from consumption of purchased electricity, heat or steam and Scope 3: emissions by others operating at the airport such as aircraft, surface access, staff travel). As of the latest 2017-2018 reporting period, there are **133 European airports**[17] participating in the programme.

Figure 5.5 European airports participating in the ACA programme



(Source: Airport Carbon Accreditation [72])

These airports correspond to **1.343 billion passengers (65% of passengers in Europe)** in 2017-2018, compared to 1.105 billion passengers (64% of passengers in Europe) in the 2014-2015 period. Total direct emissions which were under the full control of the airport were reported as 1.985 million tonnes of CO_2 in 2017-2018, down from 2.089 million tonnes

17 The figures presented on this page contain six non-EU28+EFTA airports (Istanbul Ataturk, Antalya, Ankara, Izmir, Pristina and Tirana) which are included in the European values provided in the Annual Reports.

1.2.4 Integration of air transport with the leading intermodal logistics platforms

The first step of the analysis was to evaluate, for each airport, the Cargo system information and the Cargo connections within the EUSAIR Region. Then, the intermodal connection between the leading logistic platforms, the Railway, and Ports, is investigated. The airport connection to the primary road network system is studied.

The following table shows all the available information about the major airports. Different colors are given to each table cell to simplify the evaluation of the level of integration of air transport with the leading logistic platforms. The colors are chosen according to the following rating system.

Railway connection in the airport	**Rail Freight Corridors (RFCs)**	**Main Port**
Existing	Existing	Port in the same city as the airport
Planned	-	Port in a radius of less than 100 km from the airport
No existing or planned	No existing	-

Table 28 Integration of air transport with logistics platforms

	Cargo air connection (cities and connections in the EUSAIR Region are highlighted)	**Railway connection**	**Rail Freight Corridors (RFCs)**	**Main Port**	**Port Cargo (tons)**	**Main Roads with direct connection to the airport**
Albania						
Tirana International Airport Nënë Tereza	*No available info*	At the moment, the airport is not connected to the railway. A planned rail link is mentioned in the SUMP of Tirana.	None	Port of Durazzo	4,072,541 (2019)	SH2, SH3, SH1
Bosnia and Herzegovina						
Sarajevo International Airport	DHL Aviation: **Ancona**, **Bergamo**, **Ljubljana**, Sofia, **Zagreb**	At the moment, the airport is not connected to the railway	None	-	-	A1/E73, M18, M19
Croatia						
Zagreb Franjo Tuđman Airport	DHL Aviation: **Athens** MNG Airlines: Istanbul-Atatürk, Paris–Charles de Gaulle Swiftair: **Belgrade**, **Milan**, Cologne/Bonn, Leipzig/Halle	At the moment, the airport is not connected to the railway	Mediterranean (RFC3), Alpine Western Balkan (RFC10)	-	-	E70, A3, A2, A6-A1
Rijeka International Airport	*No available info*	At the moment, the airport is not connected to the railway	Mediterranean (RFC3)	Port of Rijeka	12,600,000 (2017)	E61, A1
Split Airport	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Split	2,998,013 (2018)	A1
Dubrovnik	*No available info*	At the moment, the airport is not connected to the railway	None	Touristic Port of Gruz	-	D8
Greece						
Athens International Airport	*No available info*	Existing connection to the Suburban Railway	Orient/East-Med (RFC7)	Port of Piraeus	20,121,916 (2007)	A1, A8
Thessaloniki Airport	*No available info*	At the moment, the airport is not connected to the railway	Orient/East-Med (RFC7)	Port of Thessaloniki	18,127,224 (2010)	E75, A1, SH4
Heraklion International Airport "Nikos Kazantzakis"	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Heraklion	-	E75
Rhodes International Airport "Diagoras"	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Rhodes	-	Epar. Od. Ialisou-Katavias

	Cargo air connection (cities and connections in the EUSAIR Region are highlighted)	Railway connection	Rail Freight Corridors (RFCs)	Main Port	Port Cargo (tons)	Main Roads with direct connection to the airport
Corfu International Airport "Ioannis Kapodistrias"	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Corfu	-	EO Kerkiras Achiliou
Kos International Airport	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Kos	-	Epar-Od. Ko-Kefalou
Santorini (Thira) International Airport	*No available info*	At the moment, the airport is not connected to the railway	None	Athinios Ferry Port of Santorini	-	Epar.Od Mesarias-Archeas Tiras
Italy						
Milan Malpensa Airport	Aerologic: Hong Kong, Leipzig-Halle AirBridgeCarho: Amsterdam, Frankfurt, Maastricht/Aachen, Moscow-Sheremetyevo Alitalia Cargo: New York-JFK, Tokio-Narita Amazon Air: **Cagliari**, **Catania**, Leipzig-Halle Asiana Cargo: London-Stansed, Seoul-Incheon, Vienna Atlas Air: Amsterdam, San Juan Cargolux: Campinas-Viracopos, Chicago-O'Hare, London Stansted, Los Angeles, Luxembourg, Maastricht/Aachen, New York-JFK, Taipei-Taoyuan Cargolux Italia: Almaty, Baku, Curitiba-Afonso Pena, Dallas/Fort Worth, Dubai-International, Hong Kong, Luxembourg, Mexico City, New York-JFK, Novosibirsk, Osaka-Kansai, Vilnius Cathay Pacific: Delhi, Hong Kong, London Heathrow, Manchester, Mumbai DHL Aviation: **Ancona**, **Athens**, Bahrain, Barcelona, Brussels, Bucharest, Cincinnati, Cologne/Bonn, East Midlands, Leipzig/Halle, London-Heathrow, London-Luton, London-Stansted, Madrid, **Naples**, Paris-Charles de Gaulle, **Pisa**, Seoul-Incheon, **Thessaloniki**, Vitoria, **Zagreb** Egipt Air: Cairo Emirates	Existing connection to the railway	Rhine-Alpine (RFC1) Mediterranean (RFC6)	-	-	A4, A1-A14

	Cargo air connection (cities and connections in the EUSAIR Region are highlighted)	**Railway connection**	**Rail Freight Corridors (RFCs)**	**Main Port**	**Port Cargo (tons)**	**Main Roads with direct connection to the airport**
	SkyCargo: Dubai-Al Maktoum Ethiopian Airlines Cargo: Addis Ababa FedEx Express: **Ancona**, Dubai-International, Guangzhou, Memphis, Munich, Newark, Paris-Charles de Gaulle, **Pisa**, Shangai-Pudong, **Venice** Korean Air Cargo: Navoi, Seoul-Incheon, Tel Aviv, Vienna, Zaragoza Lufthansa Cargo: Cairo, Frankfurt Nippon Cargo Airlines: Amsterdam, Tokyo-Narita Qatar Airways Cargo: Chicago-O'Hare, Doha, London-Stansed, Tripoli-International Saudia Cargo: Brussels, Damman, Jeddah, Riyadh Silk Way Airlines: Baku Swiftair: East Midlands Turkish Cargo: Algiers, Istanbul-Ataturk UPS Airlines: Cologne/Bonn, **Naples**					
Orio al Serio International Airport	UPS Airlines: Cologne/Bonn	The planned railway connection between Bergamo and the Airport	None	-	-	A4, A35
Venice Marco Polo Airport	*No available info*	Planned railway link between the Airport and Mestre station (no high speed)	Baltic-Adriatic (RFC5) Mediterranean (RFC6)	Port of Venice	24,917,830	A19, A18
Catania–Fontanarossa Airport	*No available info*	The new railway station was activated in 2021. Planned burying part of the rail to allow the extension of the actual runway and the creation of the new project runway	None	Port of Catania	8,453,348	A19, A18
Bologna Guglielmo Marconi Airport	*No available info*	People mover connecting the airport with Bologna Centrale railway station	Baltic-Adriatic (RFC5) Scandinavian-Mediterranean (RFC3)	-	-	

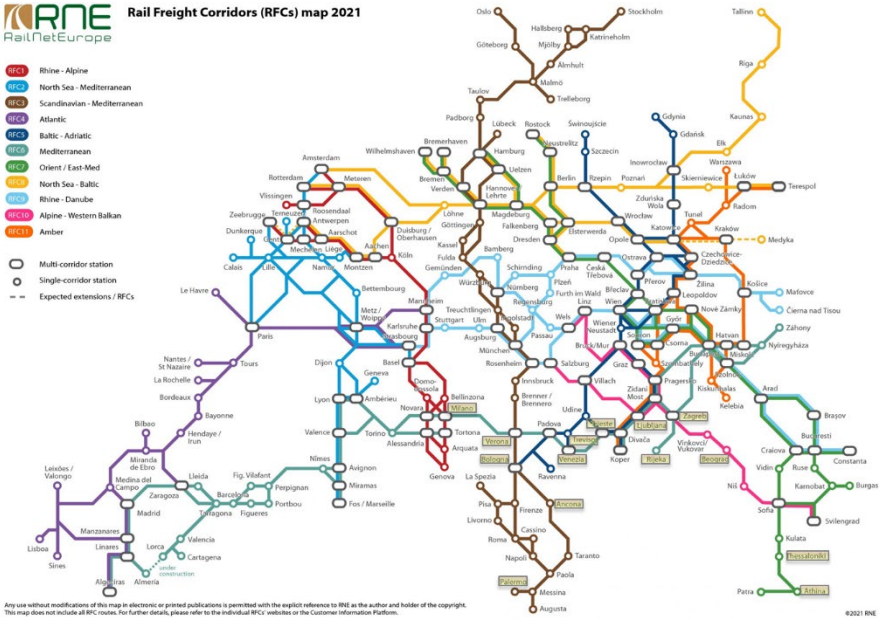
	Cargo air connection (cities and connections in the EUSAIR Region are highlighted)	**Railway connection**	**Rail Freight Corridors (RFCs)**	**Main Port**	**Port Cargo (tons)**	**Main Roads with direct connection to the airport**
Falcone Borsellino Airport	*No available info*	Existing connection to the railway	Scandinavian-Mediterranean (RFC3)	Port of Palermo	5,789,509	A19, A20, A29
Milan Linate Airport	*No available info*	A project is foreseen to connect the underground airport to the conventional/heavy rail line.	Rhine-Alpine (RFC1) Mediterranean (RFC6)	-	-	A4, A1-A14, A35
Bari Karol Wojtyła Airport	*No available info*	Existing connection to the railway	None	Port of Bari	6,099,845 (2109)	A14, SS16
Brindisi-Papola Casale Airport (Aeroporto del Salento)	*No available info*	Planned airport railway connection	None	Port of Brindisi Port of Taranto	Brindisi: 7,460,776 (2019) Taranto: 18,1 mln of tons (2019)	SP 581
Verona Villafranca Airport	*Air Cargo Verona (H. Agent Lufthansa Cargo - Alitalia - Air France - Air Italy - Siberian Airlines - Aeroflot)*	At the moment, the airport is not connected to the railway. There is a passenger shuttle service in partnership with Trenitalia.	Scandinavian-Mediterranean (RFC3) Mediterranean (RFC6)	-	-	A4 – A22 – SS62
Treviso Airport	*No available info*	At the moment, the airport is not connected to the railway	Baltic-Adriatic (RFC5)	Port of Venice	24,917,830	SR53 – SR515
Lamezia Terme International Airport	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Gioia Tauro Port of Vibo Valentia	Gioia Tauro 29.122.760 (2019) -	A3 – SS18 – SS106-SS280
Trieste Airport	*No available info*	Existing connection to the railway	Baltic-Adriatic (RFC5) Mediterranean (RFC6)	Port of Trieste	61.997.445 (2019)	A4 – SS14
Abruzzo Airport	*No available info*	Connection for passengers under construction	None	Port of Pescara Port of Ortona Port of San Benedetto del Tronto	- Ortona 1.037.662 (2019) -	A25 – A14 - SS174 – SR5
Marche Airport	The following cargo services are operated at the airport: DHL Aviation (destination Milan Malpensa – Sarajevo) FedEx Express (destination Rome Fiumicino)	Existing connection to the railway	Scandinavian-Mediterranean (RFC3)	Port of Ancona Port of Falconara Port of Pesaro	Ancona – Falconara 10.767.182 (2019)	A14-SS16

	Cargo air connection (cities and connections in the EUSAIR Region are highlighted)	**Railway connection**	**Rail Freight Corridors (RFCs)**	**Main Port**	**Port Cargo (tons)**	**Main Roads with direct connection to the airport**
	UPS Airlines (destination Bergamo, Cologne/Bonn)			Port of San Benedetto del Tronto	- -	
Montenegro						
Podgorica International Airport	*No available info*	At the moment, the airport is not connected to the railway	None	Port of Bar	805.219 (2012)	M3, M10, M2
Tivat Airport	*No available info*	At the moment, the airport is not connected to the railway	None	Bay of Kotor	-	M10, M2.4, E65
North Macedonia						
Skopje International Airport	*No available info*	At the moment, the airport is not connected to the railway	None	-	-	A1, A2, SH4
Serbia						
Belgrade Nikola Tesla Airport	Cargoair: Linz DHL Aviation: Budapest, Leipzig/Halle, Linz Jisheng Airlines: Changsha Swiftair: Cologne/Bonn, Sofia Turkish Cargo: Istanbul–Atatürk	At the moment, the airport is not connected to the railway. There is a planned rail link.	Alpine-Western Balkan (RFC10)	-	-	A3, M18, M19
Slovenia						
Ljubljana Jože Pučnik Airport (LJU)	DHL Aviation: **Bergamo**,Leipzig/Halle	At the moment, the airport is not connected to the railway. There is a planned rail link.	Amber (RFC11) Baltic-Adriatic (RFC5) Mediterranean (RFC3)	-	-	A1-A3, A2

The following maps show the primary connections between the selected airports and the area's central infrastructures/multi-modal hubs.

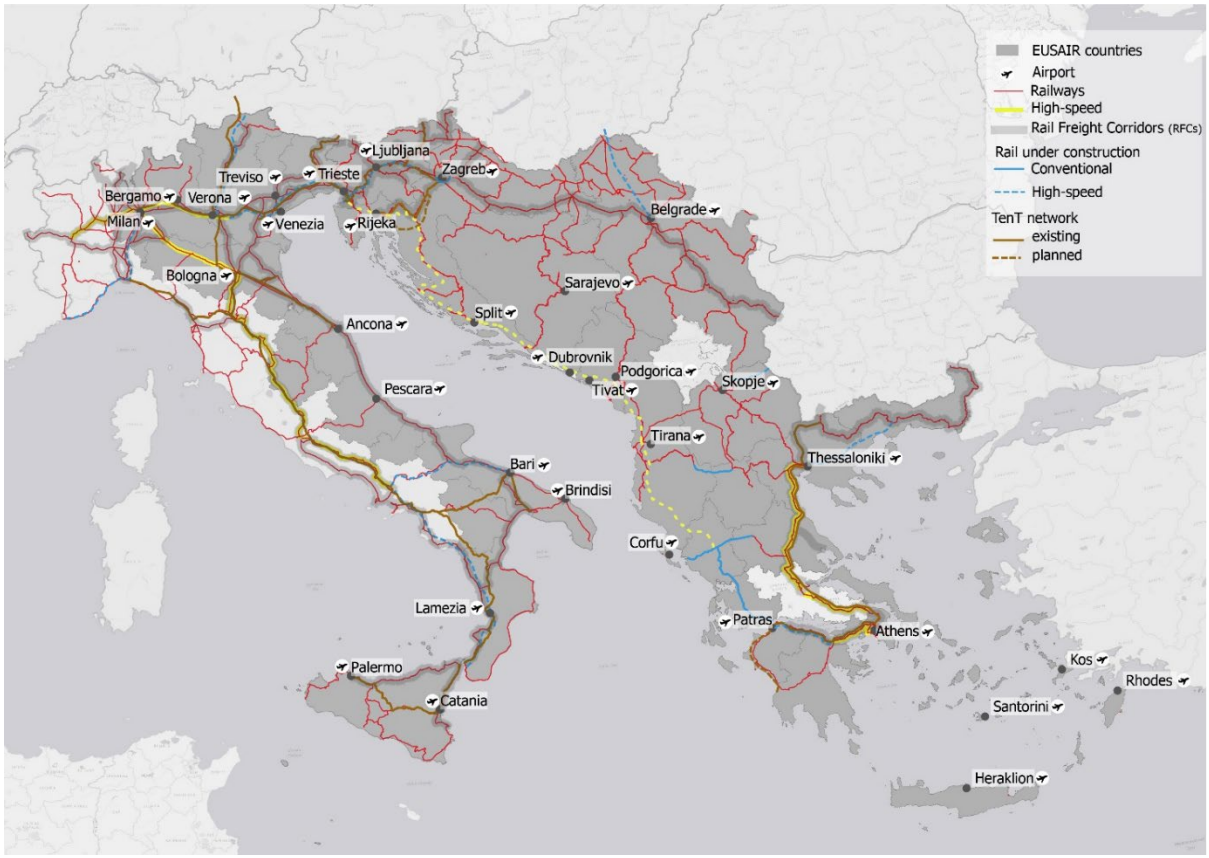
As reported in the upper table, the following map shows the Rail Freight Corridors and highlights the single or multi-corridor stations in the Adriatic Ionian Region.

Figure 63 Rail freight corridors



The following map shows the entire connection system in the region, focusing on rail and Ten-T European corridors.

Figure 64 The existing and under-construction railway infrastructure of the EUSAIR



Lastly, the following section deepen the state-of-the-art of the two main Airport Cargo Terminals in the EUSAIR Region: Milan Malpensa and Athens, and also highlight the new project for a new airport in Heraklion, Crete.

1.2.4.1 Milan Malpensa

The area's biggest and most important Cargo Terminal is the Milan Malpensa Cargo.

Milan Malpensa Cargo, in the heart of the most industrialized area of Italy, is located in a central position concerning the central and southern parts of Europe. Within a radius of 300 km are located in the Italian regions with the highest industrial density and import-export flows (Piedmont, Lombardy, Veneto, Emilia Romagna, and Tuscany) and primary production centers in Switzerland and France. Among the top 10 European freight-traffic airports, Malpensa is the most important point of reference for air cargo in southern Europe. An efficient network of road links in continuous development allows incoming and outgoing goods to easily reach the most important operating bases of the major shipping companies and the leading logistics operators in the country and the main neighboring states. (Switzerland, France, Austria, Germany, Spain, Slovenia, Croatia).

Milano Malpensa Cargo is the first Italian airport for goods transported, with a market share of around 55%, and the sixth cargo port in Europe. It can cope with 120 cargo flights weekly. Milano Malpensa Cargo covers an area of approximately 500,000 square meters, and it is strategically positioned: it is the most crucial point of reference for air cargo in the central south of Europe. Furthermore, it is located in the most industrialized area of Italy, with the most extensive import-export flows. Milano Malpensa Cargo is well

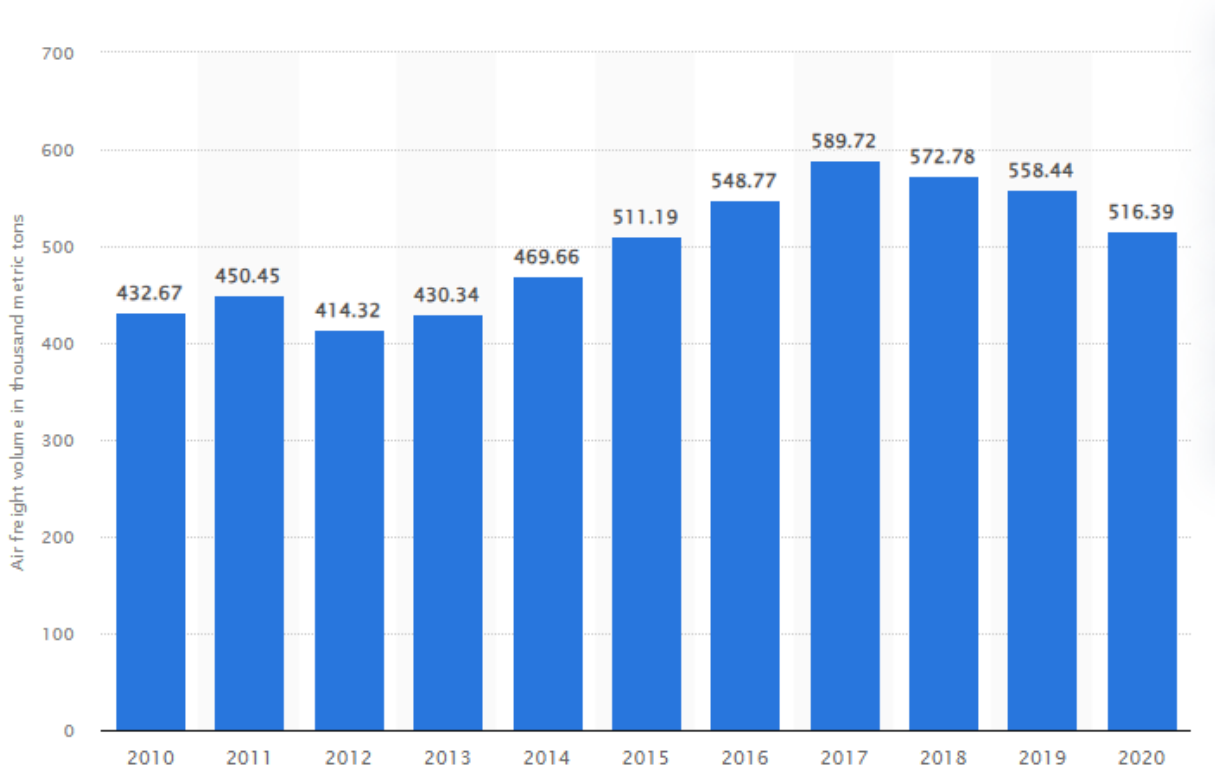
connected: a continuously developing road network easily connects the airport to the major shipping companies and logistics operators in Italy and neighboring states.

The main characteristics are (i) 2 parallel tracks, both 3,920 and 60 meters wide; (ii) an automatic and mechanized system for ULD storage; (iii) possibility of landing and take-off at full load for all types of aircraft (up to Antonov 224); (iv) 20 rest areas for all cargo aircraft, equipped with fuel and electricity supply; (v) operating 24/7; wide availability of slots for all cargo flights in all time slots; (vi) automatic and mechanized plant for ULD storage; (vii) temperature-controlled facilities for perishable goods and pharmaceutical products in each freight terminal.

The average rate of growth from 2011 to 2020 is +3%. Despite the market weaknesses recorded in the last part of 2019, Malpensa airport closed the year with a total traffic of goods equal to about 550 thousand tons, slightly down (-2.3%) compared to the previous year. 61% are transported by all-cargo aircraft, 29% travel in the holds of passenger aircraft, and about 10% are attributable to express couriers and to the traffic of e-commerce products.[122]

The following first graph shows the trend of cargo movements from 2010to 2020 in Malpensa Airport..

Figure 65 Volume of air freight handled at Milan Malpensa Airport in Italy from 2010 to 2020(in 1,000 metric tons)[123]



Smart City delle Merci (Goods) is a system for information exchanges between the supply chain. The Malpensa Smart City digital ecosystem of goods consists of a network of ICT-based services that allows all

[122] milanomalpensacargo.eu
[123] https://www.statista.com/statistics/670599/amount-of-air-freight-handled-at-milan-malpensa-airport-in-italy/

the players in the import-export chain to use, integrate, and share information of respective interest in the treatment cycle of air cargo arriving and departing at Malpensa airport.

1.2.4.2 Athens

The third Cargo Airport Terminal, located strategically, is the Athens Cargo[124], managed by the Athens International Airport (AIA) Cargo Development. The main characteristics are (i) 4 cargo terminals of 275,000 tonnes capacity; (ii) 3 independent third-party cargo handlers & 1 self-handler; (iii) minimum Service Delivery Standards; (iv) multi-modal links; (v) incentives for cargo flights.

Sea-air cargo. Athens International Airport is the first European airport to launch multi-modal flows through the combination of maritime, road, and air traffic. The project provides an attractive alternative to pure air transport and enables shippers to forward their cargo from the Eastern Mediterranean region via Piraeus seaport and Athens airport to final destinations in Northern Europe and North America. Having signed Cooperation Agreements with both Piraeus seaport operators, AIA and the local cargo community offer same-day connection in Athens and a total transit time of five days at competitive rates.

Road Feeder Services (RFS). To meet the requirements of various international lead carriers, the cargo community is currently designing a road feeder service connecting global markets via Athens Airport with Salonika and the Balkan States in one and two days, respectively. The Athens RFS project is expected to be launched in the following months.

1.2.4.3 Heraklion / Kastelli Airport in Crete

In 2018, the Ariadne Airport Group – a joint venture between the Greek firm "GEK Terna" and India's "GMR Airports Limited" (GAL) – was awarded the concession contract for the construction of the new Kastelli airport at Heraklion in Crete, and its operation for 35 years. [125]

The European Investment Bank (EIB) also loaned €180m to Greece for this project. The Group is bound to complete the project – expected to cost €517m – within 60 months. The Kastelli airport is set to become the second biggest airport in the country, with an annual capacity of more than 8m passengers.[126]. The airport could become a key hub for tourism and transportation and significantly benefit the area and its economy.

[124] https://www.aia.gr/company-and-business/aeronautical-activities/cargo/

[125] logistics-survey-2021

[126] Crete to Get New Airport: Works at Kastelli Begin, news.gtp.gr, 11 February 2020

1.3 Identification of the main key issues

According to the analyses of the main airports in the region and their connections to the railway, it is possible to make the following considerations based on identifying the main key issues.

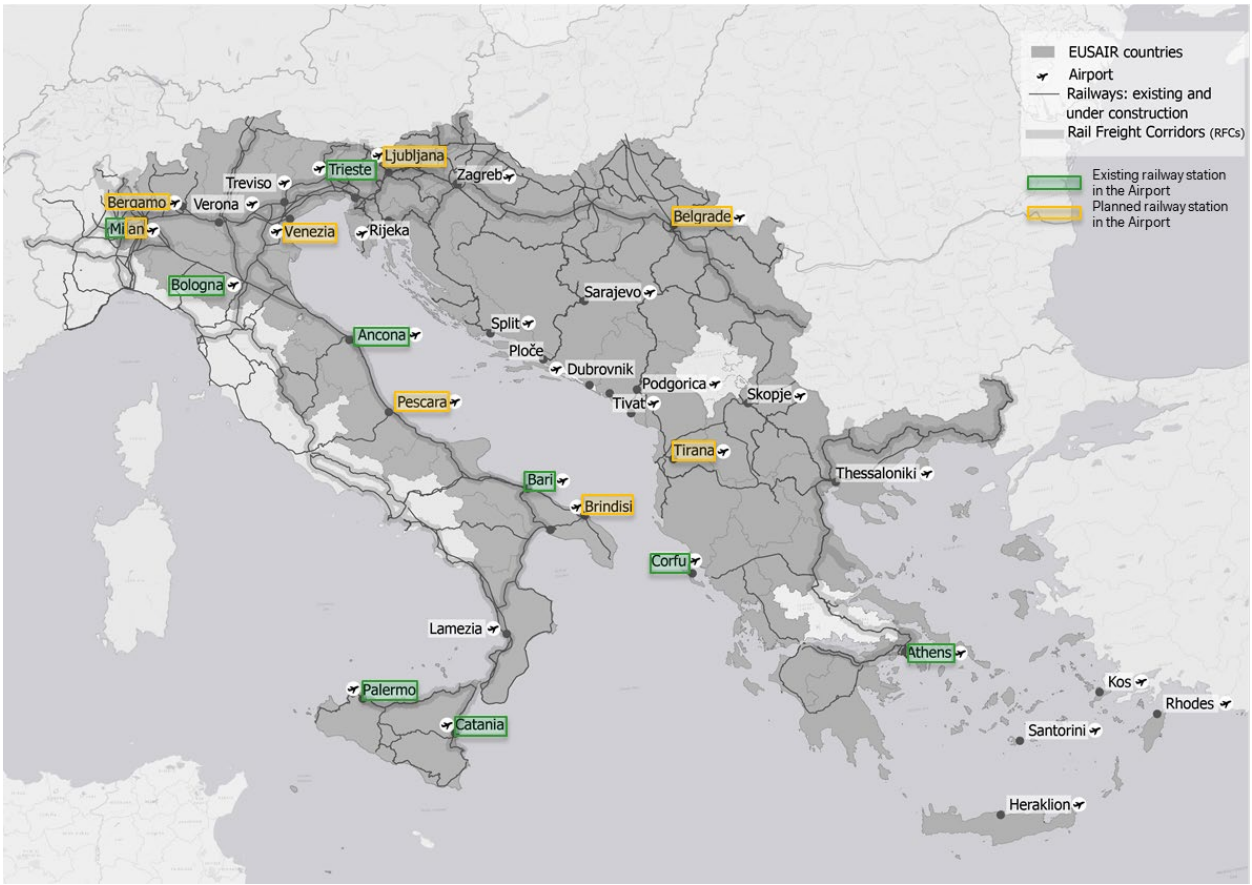
1.3.1 Passengers' rail connections in the airports

Regarding the pedestrian rail connection among the selected airports and cities, it is noticed that many airports in the region are not directly connected with the railway. Most airports offer buses or shuttle services to reach the central railway station but do not have an internal station.

Italy is the country where the existing connections are most available and planned ones are most developed. In northern Italy, there are projects for the main airports to cope with the Winter Olympic Games of 2026. These projects also involve a direct connection between the airport and the railway network to enhance the intermodality and the airport connections with the cities in the surroundings.

The following map only shows if the selected airport has an internal railway station, so it is directly connected with the national railway network without using an alternative transfer system (bus, shuttle, or taxi). Considerations about the railway connections in the cities are analyzed in Chapter 7, focusing on the primary urban nodes in the region.

Figure 66 Passenger railway connection with the selected airports of EUSAIR



1.3.2 Rail Freight Connections and interconnection with airports

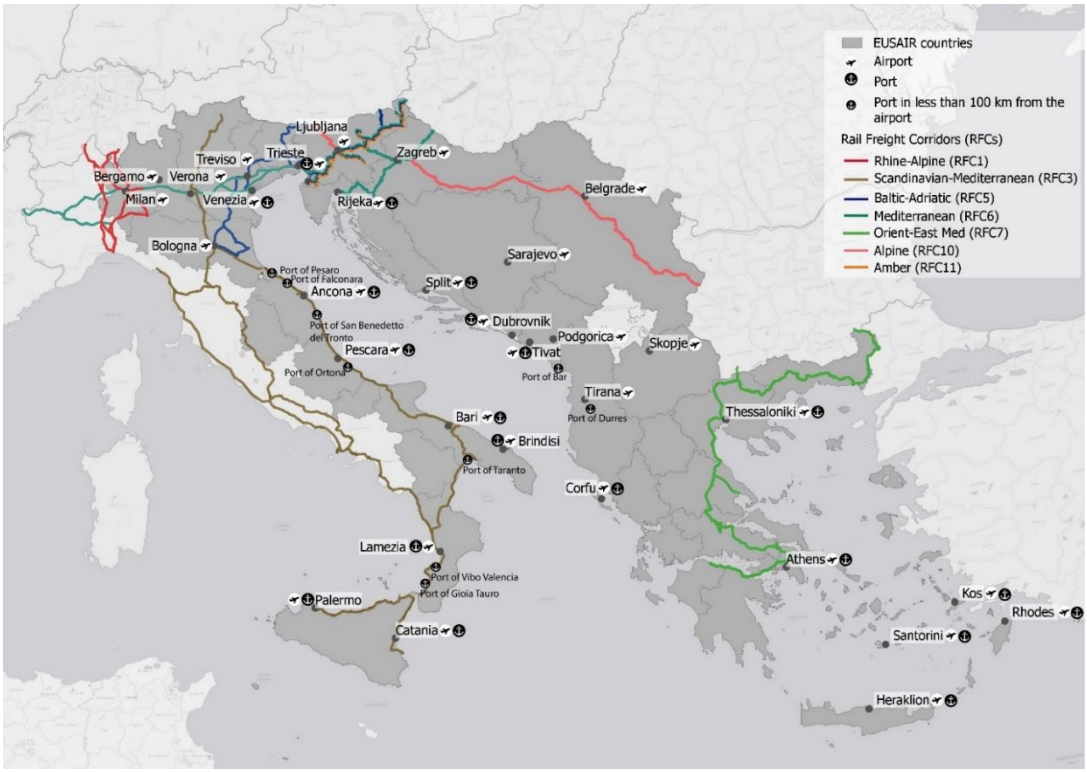
The Regulation concerning a European Rail Network for Competitive Freight (Regulation EU 913/2010EN) entered into force on 9 November 2010. The Regulation requests Member State to establish international market-oriented Rail Freight Corridors to meet three challenges:

- strengthening co-operation between Infrastructure Managers on key aspects such as allocation of path, deployment of interoperable systems and infrastructure development;
- striking the right balance between freight and passenger traffic along the Rail Freight Corridors, giving adequate capacity and priority for freight in line with market needs and ensuring that common punctuality targets for freight trains are met;
- promoting intermodality between rail and other transport modes by integrating terminals into the corridor management and development.[127]

So far, nine Rail Freight Corridors (RFCs) along European transport axes has been established.

Regarding the rail freight connection, Italy has more corridors and connected cities. In Greece, only the two main inland airports (Athens and Thessaloniki) are in an RFC, the Orient-East Med one (RFC7). As shown in the following map, the less connected area is the Adriatic coast of Croatia, Montenegro, and Albania. This area should be further investigated to enforce and enhance the freight connection in the entire Adriatic-Ionian Region.

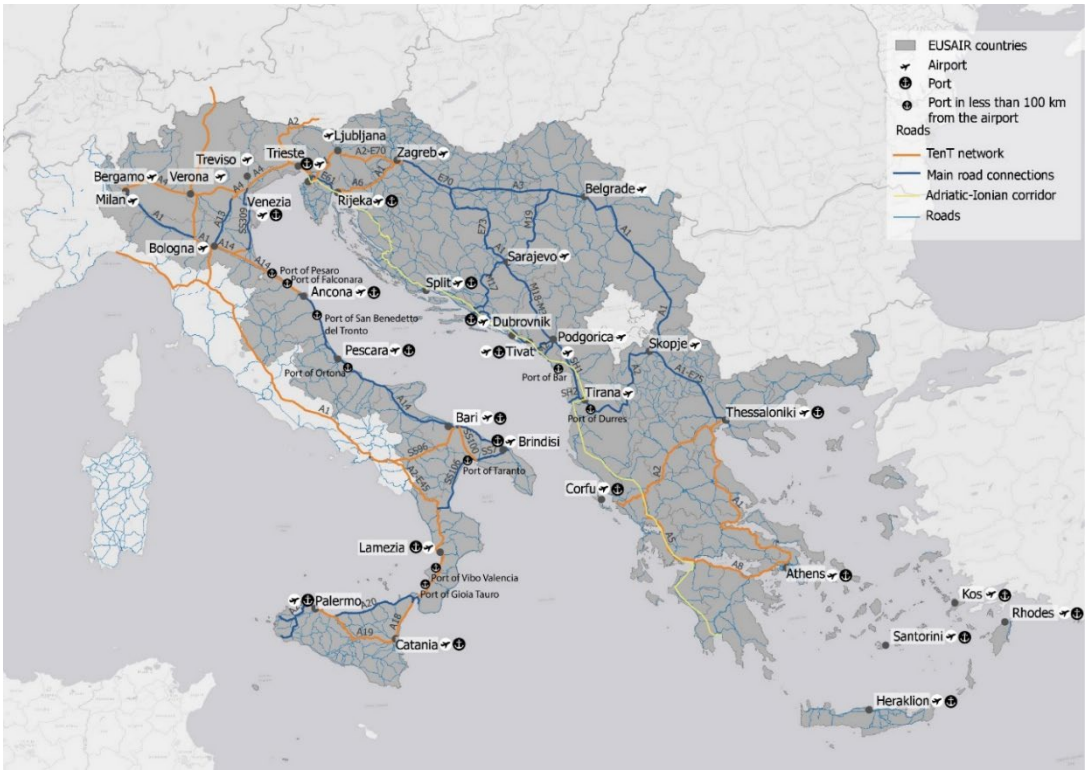
Figure 67 The freight railway corridors of the EUSAIR



[127] https://transport.ec.europa.eu/transport-modes/rail/infrastructure/european-rail-network-competitive-freight_en

A point of strength to use as a starting point for any strategies could be the presence of commercial ports to put in connection with the main Railway Freight Corridors also using the Adriatic-Ionian Corridor as highlighted in the following map that shows the entire road network system in the region.

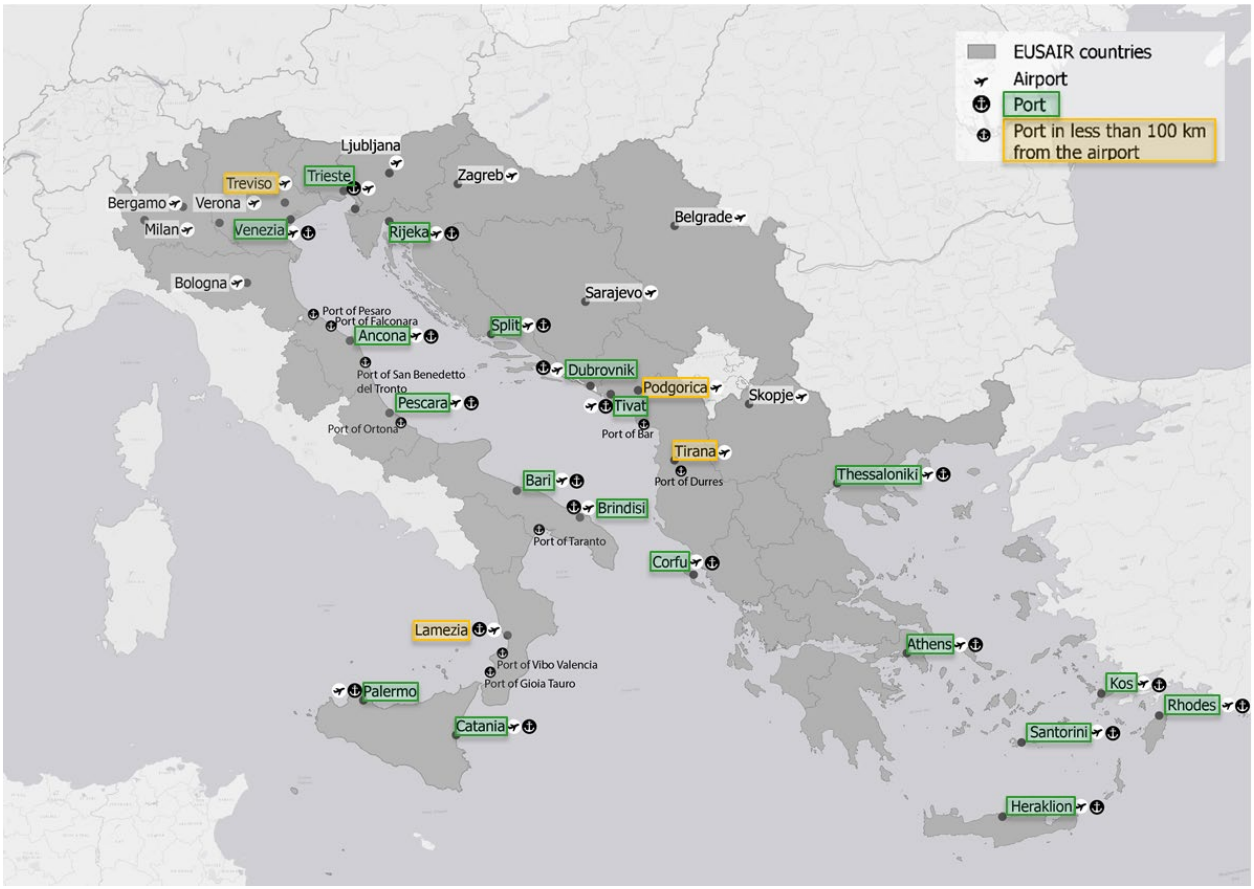
Figure 68 The main road infrastructure of the EUSAIR



1.3.3 Interconnection among airports and ports

The following map shows in green the cities having both an airport and port (both in the same city), and in orange, the cities having a main airport only without a port and a port in a radius of 100 km.

Figure 69 Port availability, location, and distance concerning the selected airports



The maritime and air transport connection in this region is very favorable, and the presence and availability of ports can be used to sustain and develop strategies to increase the interconnection with ports and air transport, for both passengers and freight.

1.4 Key issues for each country

The following table summarizes all the identified key issues on the county level and their scale of importance from very relevant to relevant and mainly improvements based on the studies done in this report.

While airports of the EUSAIR are in good condition in terms of infrastructure, most of them have been rehabilitated and improved recently. Investing in o implementation of SESAR systems is necessary, which is missing in most selected and studied airports. Almost none of the airports have installed the equipment for alternative ecological fuels.

The link to high-speed passenger railway is missing in most of the airports except some in Italy, such as Bologna airport with the monorail (people mover); it is noteworthy to mention that there is a passenger railway link already existing or planned in some of the studied airports, although the focus of this issue is high-speed railway connection.

The connection to the railway freight corridor is defined based on the availability of the corridors already passing through Italy, Greece (except the islands), Serbia, and Slovenia. At the same time, the less

connected area is the Adriatic coast of Croatia, Montenegro, Albania, and then Bosnia and North Macedonia.

All the mentioned issues will be considered and studied in the following chapters of this volume and, when relevant in other volumes, focused on other modes of transport, including railway and maritime transport, to define suitable strategies.

2 Planned projects in the macro-region

2.1 Strategic programs and investment plans

The report provides the base for drafting the air transport sector programmatic framework and provides details of planned projects and investment plans for each member state of the EUSAIR region. The following national transport plans, EU investment plans, and strategies are studied for each of the member countries based on their availability:

- Connecting Europe Facility (CEF) Transport projects funding by EU – which provides for Actions under the SESAR Development Programme
- Trans-European Transport Network (TEN-T)
- Development of indicative TEN-T extensions of the Comprehensive and Core Network in Western Balkans
- The National Transport Plan
- The National Recovery and Resilience Plans (NRRP)
- The National Air Transport Strategy

These strategic and planning documents are used to structure the presentation of the air transport-related projects per country in the following sections.

2.2 Connecting Europe Facility (CEF)

The Connecting Europe Facility (CEF)[128] is a key EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. It supports the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services. CEF investments fill the missing links in Europe's energy, transport and digital backbone.

The CEF benefits people across all Member States, as it makes travel easier and more sustainable, it enhances Europe’s energy security while enabling wider use of renewables, and it facilitates cross-border interaction between public administrations, businesses and citizens.

In addition to grants, the CEF offers financial support to projects through innovative financial instruments such as guarantees and project bonds. These instruments create significant leverage in their use of EU budget and act as a catalyst to attract further funding from the private sector and other public sector actors.

Since January 2014, Innovation and Networks Executive Agency (INEA) is the gateway to funding under the CEF. INEA implements most of the CEF programme budget, in total €28.7 billion out of €30.4 billion (€23.7 billion for Transport, €4.6 billion for Energy, and €0.5 billion for Telecom).

The CEF is divided into three sectors:

- CEF Transport
- CEF Energy

[128] https://ec.europa.eu/inea/en/connecting-europe-facility

- CEF Telecome

INEA ceased operations on 31 March 2021. The European Climate, Infrastructure and Environment Executive Agency (CINEA) was established on 1 April 2021 to take over its legacy portfolio as well as additional EU funding programmes.

2.2.1 The Connecting Europe Facility (CEF) for Transport

The Connecting Europe Facility (CEF)[129] for Transport aims at supporting investments in building new transport infrastructure in Europe or rehabilitating and upgrading the existing one.

CEF Transport focuses on cross-border projects and projects aiming at removing bottlenecks or bridging missing links in various sections of the Core Network and on the Comprehensive Network (link), as well as for horizontal priorities such as traffic management systems.

CEF Transport also supports innovation in the transport system in order to improve the use of infrastructure, reduce the environmental impact of transport, enhance energy efficiency and increase safety.

The total budget for CEF Transport is €24.05 billion for the period 2014-2020. INEA is responsible for implementing €23.7 of the CEF Transport budget in the forms of grants during the same period.

2.2.2 CEF Transport Projects

The CEF programme[130] contributes to the implementation of the Trans-European Transport Network (TEN-T) by financing key projects to upgrade infrastructure and remove existing bottlenecks whilst also promoting sustainable and innovative mobility solutions. These projects cover all EU Member States and all transport modes (road, rail, maritime, inland waterways, air), as well as support transport co-modality, logistics and innovation.

Nine transport corridors and specific horizontal priorities have been established to focus on pan-European integration and development.

TEN-T policy objectives foresee[131]:

- completion by 2030 of the Core Network, structured around nine multimodal Core Network Corridors.

completion by 2050 of the Comprehensive Network in order to facilitate accessibility to all European regions

2.2.3 eGAFOR Projects Under CEF for Air Transport

The following section provides the list and details of the projects that EUSAIR member countries are involved at for CEF transport projects.

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[129] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport
[130] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/cef-transport-projects
[131] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport

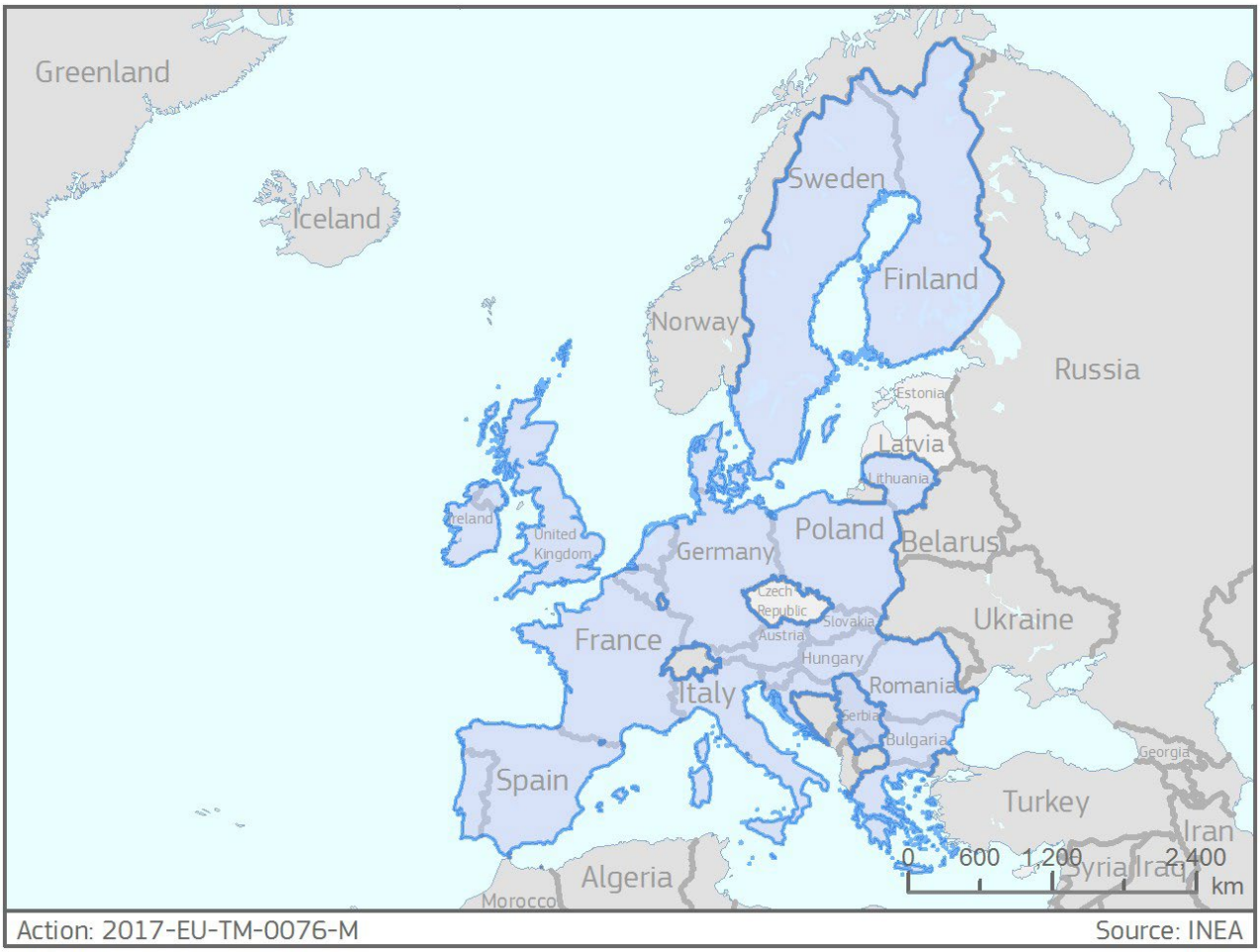
2.2.3.1 SESAR Deployment Programme Implementation

The Action contributes to the deployment of SESAR and is aimed at facilitating the coordinated and synchronised deployment of a cluster of 49 Implementation Projects (IPs) in 22 EU Member States and Serbia. These IPs are aligned with the Pilot Common Projects (PCP, Regulation 716/2014) and will enhance ATM performance.

This Action includes IPs of all six ATM Functionalities (AFs):

- AF1 Extended Arrival Management and Performance Based Navigation in high density Terminal Manoeuvring Areas
- AF2 Airport Integration and Throughput
- AF3 Flexible Airspace Management and Free Route
- AF4 Network Collaborative Management
- AF5 Initial System Wide Information Management
- AF6 Initial Trajectory Information Sharing

Figure 70 Countries Involved at SESAR Deployment Programme Implementation



Location of the Action: Austria, Belgium, Bulgaria, **Croatia**, Denmark, Finland, France, Germany, **Greece**, Hungary, Ireland, **Italy**, Lithuania, Netherlands, Poland, Portugal, Romania, **Serbia**, Slovakia, **Slovenia**, Spain, Sweden, United Kingdom

Implementation schedule: April 2018 to December 2023

Maximum EU contribution: €227,350,056Total eligible costs: €456,032,277

Percentage of EU support: 50%

Coordinator: SESAR Deployment Alliance Association Internationale Sans But Lucratif (AISBL) (Belgium)

https://www.sesardeploymentmanager.eu/

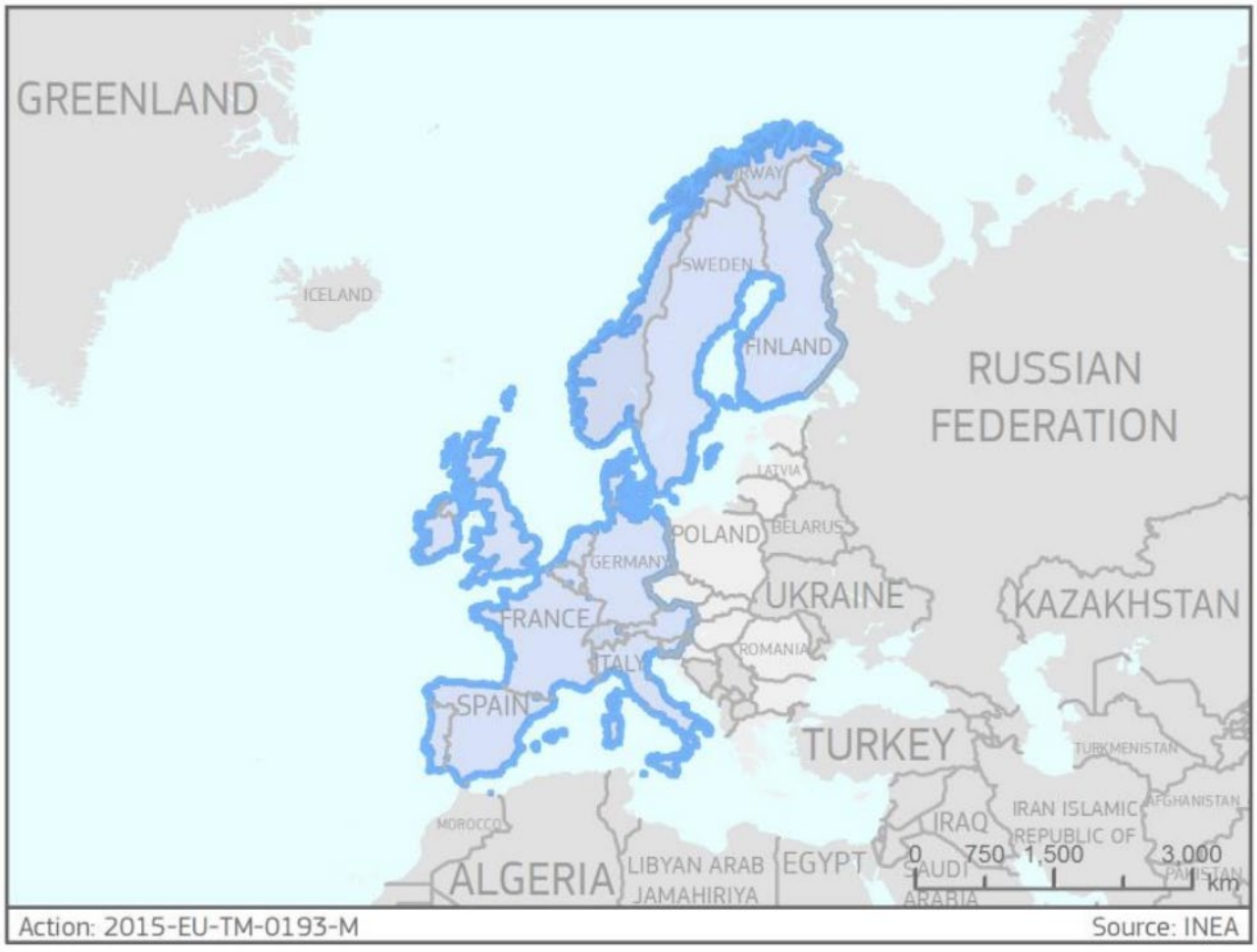
2.2.3.2 SESAR Deployment Programme implementation 2015 – Cluster 1

The Action[132] contributes to the deployment of SESAR and is aimed at facilitating the coordinated and synchronised deployment of a cluster of 51 Implementation Projects (IPs) in EU Member States. These IPs are aligned with the Pilot Common Projects (PCP), as defined in Regulation (EU) No 716/2014 and are expected to achieve enhancement in terms of ATM performance. This Action includes IPs in four of the six ATM Functionalities (AFs) described in the PCP:

- AF1 Extended Arrival Management (AMAN) and Performance Based Navigation (PBN) in high density Terminal Manoeuvring Areas (TMAs)
- AF2 Airport Integration and Throughput
- AF3 Flexible Airspace Management (ASM) and Free Route
- AF5 Initial System Wide Information Management (SWIM)

[132] https://ec.europa.eu/inea/sites/default/files/fiche_2015-eu-tm-0193-m_final.pdf

Figure 71 Countries Involved at SESAR Deployment Programme implementation 2015 – Cluster 1



Planning of implementation is in line with the deployment target dates indicated in Regulation (EU) No 716/2014.

Member States involved: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, **Italy**, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom

Implementation schedule Start date: February 2016 End date: December 2018

Budget: Estimated total cost of the action: €258,481,518 Maximum EU contribution: €105,545,416

Percentage of EU support: 40.83%

Project Coordinator: SESAR Deployment Manager www.sesardeploymentmanager.eu

2.2.3.3 SESAR Deployment Programme implementation 2015 – Cluster 2

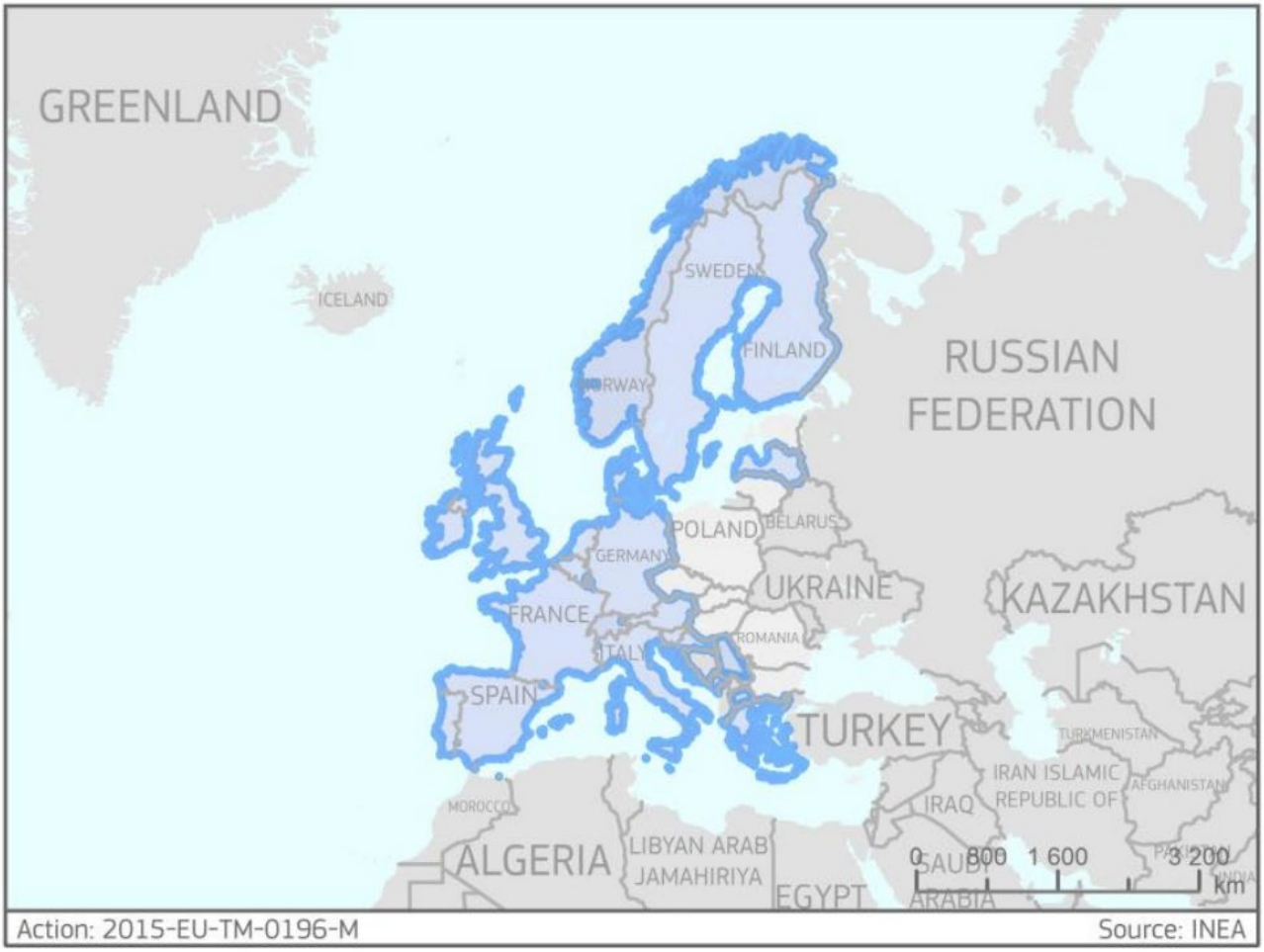
The Action[133] contributes to the deployment of SESAR and it is aimed at facilitating the coordinated and synchronised deployment of a cluster of 63 Implementation Projects (IPs) in EU Member States. These IPs

[133] https://ec.europa.eu/inea/sites/default/files/fiche_2015-eu-tm-0196-m_final.pdf

are aligned with the Pilot Common Projects (PCP), as defined in Regulation (EU) No 716/2014 and are expected to achieve enhancement in terms of ATM performance. This Action includes IPs in four of the six ATM Functionalities (AFs) described in the PCP; in particular:

- AF1 Extended Arrival Management (AMAN) and Performance Based Navigation (PBN) in high density Terminal Manoeuvring Areas (TMAs)
- AF2 Airport Integration and Throughput
- AF3 Flexible Airspace Management (ASM) and Free Route
- AF4 Network Collaborative Management
- AF5 Initial System Wide Information Management (SWIM)

Figure 72 Countries Involved at SESAR Deployment Programme implementation 2015 – Cluster 2



Planning of implementation is in line with the deployment target dates indicated in Regulation (EU) No 716/2014.

Member States involved: Austria, Belgium, Denmark, Finland, France, Germany, **Greece**, Ireland, **Italy**, Latvia, Netherlands, Portugal, **Slovenia**, Spain, Sweden, United Kingdom

Implementation schedule Start date: February 2016 End date: December 2020

Budget: Estimated total cost of the action: €854,946,393 Maximum EU contribution: €367,146,178 Percentage of EU support: 42.94%

Project Coordinator: SESAR Deployment Manager www.sesardeploymentmanager.eu

2.2.3.4 SESAR Deployment Programme implementation 2015 – Cluster 3

The Action[134] contributes to the deployment of SESAR and it is aimed at facilitating the coordinated and synchronised deployment of a cluster of 24 Implementation Projects (IPs) in EU Cohesion Member States. These IPs are aligned with the Pilot Common Projects (PCP), as defined in Regulation (EU) No 716/2014 and are expected to achieve enhancement in terms of ATM performance. This Action includes IPs in four of the six ATM Functionalities (AFs) described in the PCP; in particular:

- AF1 Extended Arrival Management (AMAN) and Performance Based Navigation (PBN) in high density Terminal Manoeuvring Areas (TMAs)
- AF3 Flexible Airspace Management (ASM) and Free Route
- AF4 Network Collaborative Management
- AF5 Initial System Wide Information Management (SWIM)

[134] https://ec.europa.eu/inea/sites/default/files/fiche_2015-eu-tm-0197-m_final.pdf

Figure 73 Countries involved at SESAR Deployment Programme

Planning of implementation is in line with the deployment target dates indicated in Regulation (EU) No 716/2014.

Member States involved: Bulgaria, **Croatia**, Czech Republic, Estonia, Hungary, Poland, Portugal, Romania, Slovakia, **Greece**

Implementation schedule Start date: February 2016 End date: December 2020

Budget: Estimated total cost of the action: €63,782,919 Maximum EU contribution: €52,231,657

Percentage of EU support: 81.97%

Project Coordinator: SESAR Deployment Manager www.sesardeploymentmanager.eu

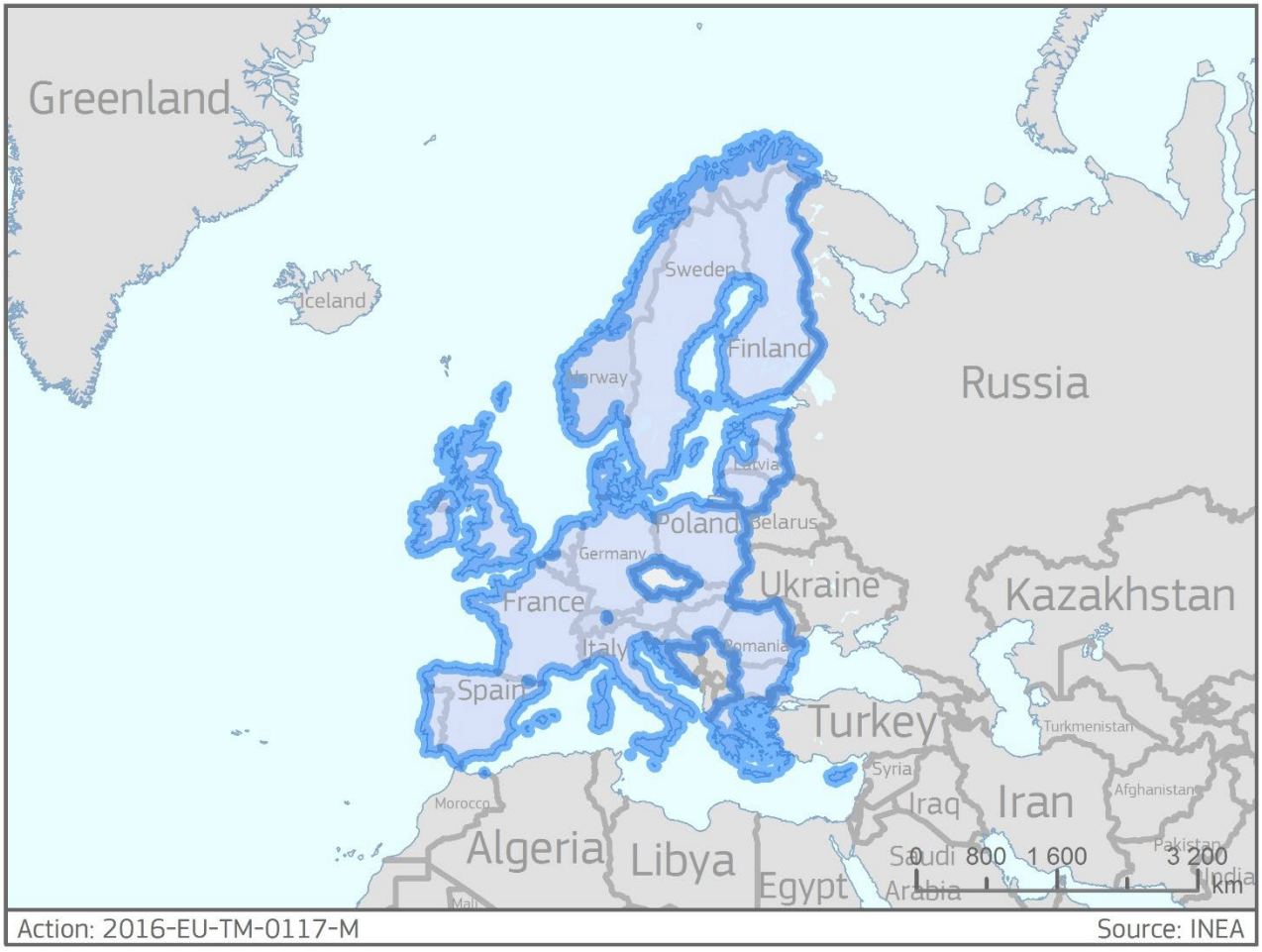
2.2.3.5 SESAR Deployment Programme implementation 2016 – Cluster 1: General

The Action[135] contributes to the deployment of SESAR and is aimed at facilitating the coordinated and synchronised deployment of a cluster of 69 Implementation Projects (IPs) in 27 EU Member States. These

[135] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2016-eu-tm-0117-m

IPs are aligned with the Pilot Common Projects (PCP, Regulation (EU) 716/2014) and will enhance ATM performance.

Figure 74 Countries involved at SESAR Deployment Programme implementation 2016 – Cluster 1: General



This Action's IPs cover all six ATM Functionalities (AFs):

- AF1 Extended Arrival Management and Performance Based Navigation in high density Terminal Manoeuvring Areas
- AF2 Airport Integration and Throughput
- AF3 Flexible Airspace Management and Free Route
- AF4 Network Collaborative Management
- AF5 Initial System Wide Information Management
- AF6 Initial Trajectory Information Sharing

Location of the Action: Austria, Belgium, Bulgaria, **Croatia**, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, **Greece**, Hungary, Ireland, **Italy**, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, **Slovenia**, Spain, Sweden, United Kingdom

Implementation schedule: February 2017 to December 2022

Maximum EU contribution: €246,713,144

Total eligible costs: €599,049,346

Percentage of EU support: 41%

Coordinator: SESAR Deployment Alliance Association Internationale Sans But Lucratif (Belgium)

https://www.sesardeploymentmanager.eu/

2.2.3.6 SESAR Deployment Programme implementation 2016 – Cluster 2: Cohesion

The Action[136] contributes to the deployment of SESAR (Single European Sky Air Traffic Management Research) and aims at facilitating a coordinated and synchronised deployment of a cluster of 5 Implementation Projects (IPs) in Bulgaria, Croatia, Czech Republic, Hungary, Slovakia and Slovenia. These IPs are aligned with the Pilot Common Project (PCP, Regulation 716/2014) and will enhance ATM performance in Europe.

This Action covers two out of six ATM Functionalities (AFs):

- AF3 Flexible Airspace Management and Free Route
- AF5 Initial System Wide Information Management

Location of the Action: Bulgaria, **Croatia**, Czech Republic, Hungary, Slovakia, **Slovenia**

Implementation schedule: February 2017 to December 2021

Maximum EU contribution: €6,642,004

Total eligible costs: €7,852,522

Percentage of EU support: 85%

Coordinator: SESAR Deployment Alliance Association Internationale Sans But Lucratif (Belgium)

https://www.sesardeploymentmanager.eu/

[136] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2016-eu-tmc-0113-m

Figure 75 Countries Involved at SESAR Deployment Programme implementation 2016 –Cluster 2: Cohesion

2.2.3.7 DP Implementation

The present Action[137] contributes to SESAR (Single European Sky ATM Research) and it aims to facilitate the coordinated and synchronised deployment of 86 implementation initiatives within 5 of the 6 Air Traffic Management Functionalities (AFs) identified by the Pilot Common Project supporting the implementation of the Air Traffic Management Master Plan:

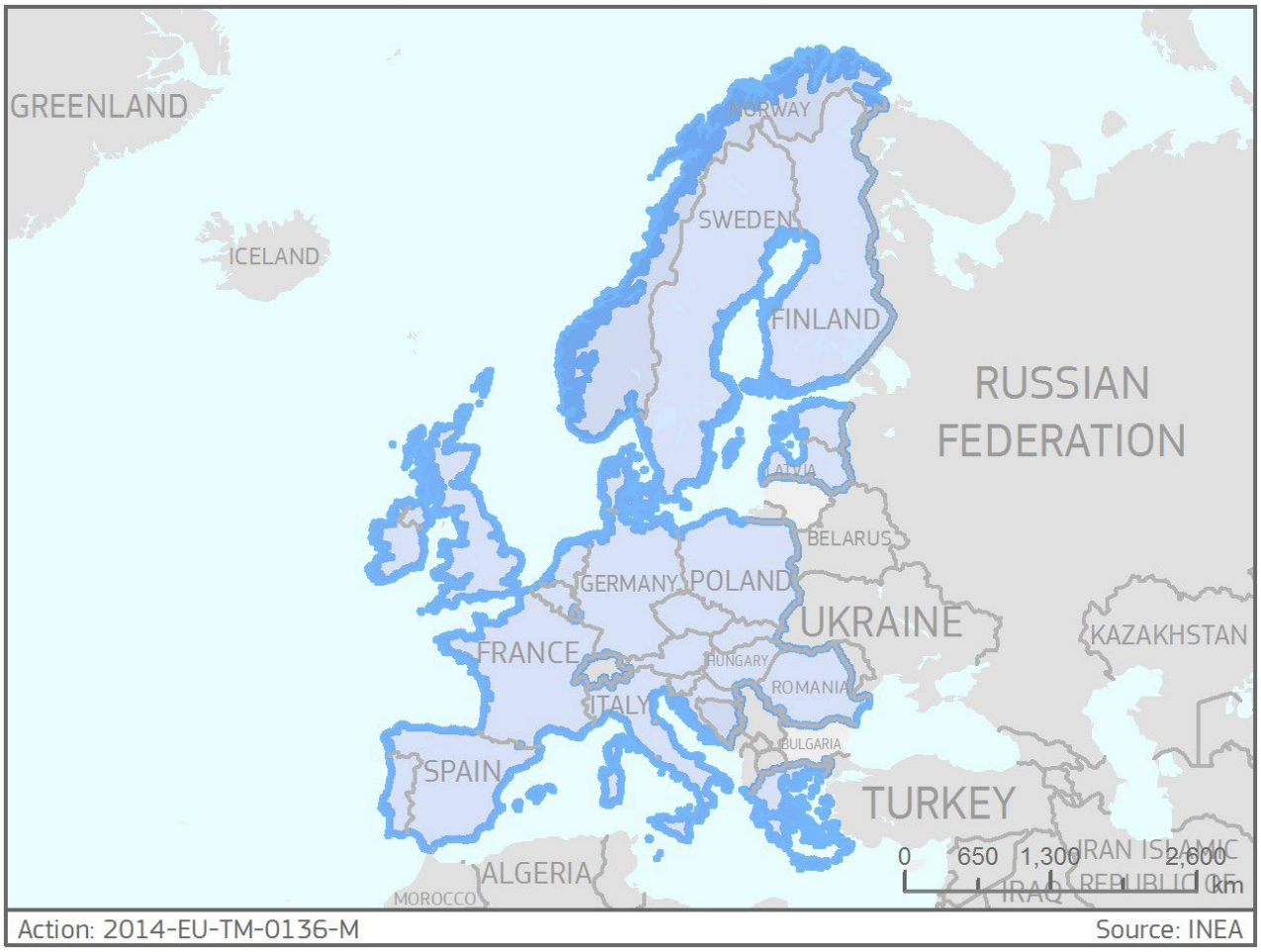
- AF1 Extended Arrival Management and Performance Based Navigation in high density Terminal Manoeuvring Area implementation,
- AF2 Airport Integration and Throughput implementation,
- AF3 Flexible Airspace Management and Free Route implementation,
- AF4 Network Collaborative Management implementation,
- AF5 Initial System-Wide Information Management implementation.

The Action will be implemented by 45 beneficiaries in 23 Member states plus Norway and Bosnia Herzegovina.

[137] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2014-eu-tm-0136-m

Location of the Action: Austria, Belgium, **Bosnia and Herzegovina, Croatia**, Czech Republic, Denmark, Estonia, Finland, France, Germany, **Greece**, Hungary, Ireland, **Italy**, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, **Slovenia**, Spain, Sweden, United Kingdom

Figure 76 Countries Involved at DP Implementation



Implementation schedule: January 2014 to December 2020

Maximum EU contribution: €289,733,197 Total eligible costs: €586,107,115

Percentage of EU support: 49%

Coordinator: SESAR DEPLOYMENT ALLIANCE ASSOCIATION INTERNATIONALE SANS BUT LUCRATIF (Belgium)

https://www.sesardeploymentmanager.eu/

2.2.3.8 The eGAFOR Project

The idea for the eGAFOR[138] Project arose from the need to provide faster and better weather services to general aviation users. Currently general aviation users in Europe have very different and un-harmonized meteorological products available, primarily due to a large number of countries, different forecasting areas, un-harmonized forecasting methods and different meteorological products. On the other hand, general aviation is the most sensitive and most vulnerable part of aviation to hazardous weather phenomena.

The goal of the eGAFOR Project is to provide general aviation pilots with easily understandable meteorological information on the condition of a particular route, and it is based on the co-operation of aviation meteorological service providers in Central and Southeastern Europe.

Due to the Project goal – easier informing and flight preparation and better connectivity between countries – the Innovation and Networks Executive Agency (INEA), the European Commission body, has recognized the eGAFOR Project and is co-financing it with 85% through the CEF Transport Call 2016.

Figure 77 Countries Involved at the eGAFOR Project

[138] https://project.egafor.eu/

The result of the Project will be the eGAFOR forecast – a uniform graphical forecast of meteorological phenomena hazardous for aviation on the general aviation route network that will be available to users through this website upon completion of the Project.

The countries participating in the Project are Bosnia and Herzegovina, Croatia, Hungary, Montenegro, Romania, Serbia, Slovakia and Slovenia.

Project partners are:

CCL (**Croatia**) – the initiator and lead partner of the Project

ARSO (**Slovenia**)

BHANSA (Bosnia and Herzegovina)

OMSZ (Hungary)

ROMATSA (Romania)

SHMU (Slovakia)

SMATSA (**Serbia and Montenegro**)

IBL (Slovakia) – an industrial partner

The eGAFOR Project started on 03.07.2017 and will end on 31.12.2020.

Disclaimer: The map above shows only the territorial scope of the eGAFOR Project and does not reflect the state borders of individual states.

2.2.3.9 Convergence of DSNA and COOPANS ATM Systems step 1B (CODACAS 1B) - General part

COOPANS Alliance[139] is an international partnership between the air navigation service providers of Austria (Austro Control), Croatia (Croatia Control), Denmark (Naviair), Ireland (Irish Aviation Authority) and Sweden (LFV).

The CODACAS Programme was launched by DSNA (Direction des Services de la Navigation Aérienne, France) and COOPANS with the objective of ensuring by the mid-2020s harmonisation of their ATM systems ('Common Build'). Phase 1A of the Global Project was already co-funded under Action 2013-EU-40001-S and ended in December 2015.

The Action - twinned with Action 2015-EU-TM-0388-S - addressed the second step (Phase 1B) of the Global Project. The study defined the common core of the ATM System; assessed its technical, operational and financial feasibility; and developed strategies for its procurement and its integration into the partners' ATM systems.

In the long run, the Action was an essential contribution to the technical defragmentation and harmonisation of ATM Systems in Europe and therefore reduces costs and increases efficiency.

Implementation of the Action has been successfully completed.

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[139] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2015-eu-tm-0387-s

Location of the Action: Austria, **Croatia**, Denmark, France, Ireland, Sweden

Implementation schedule: February 2016 to June 2018

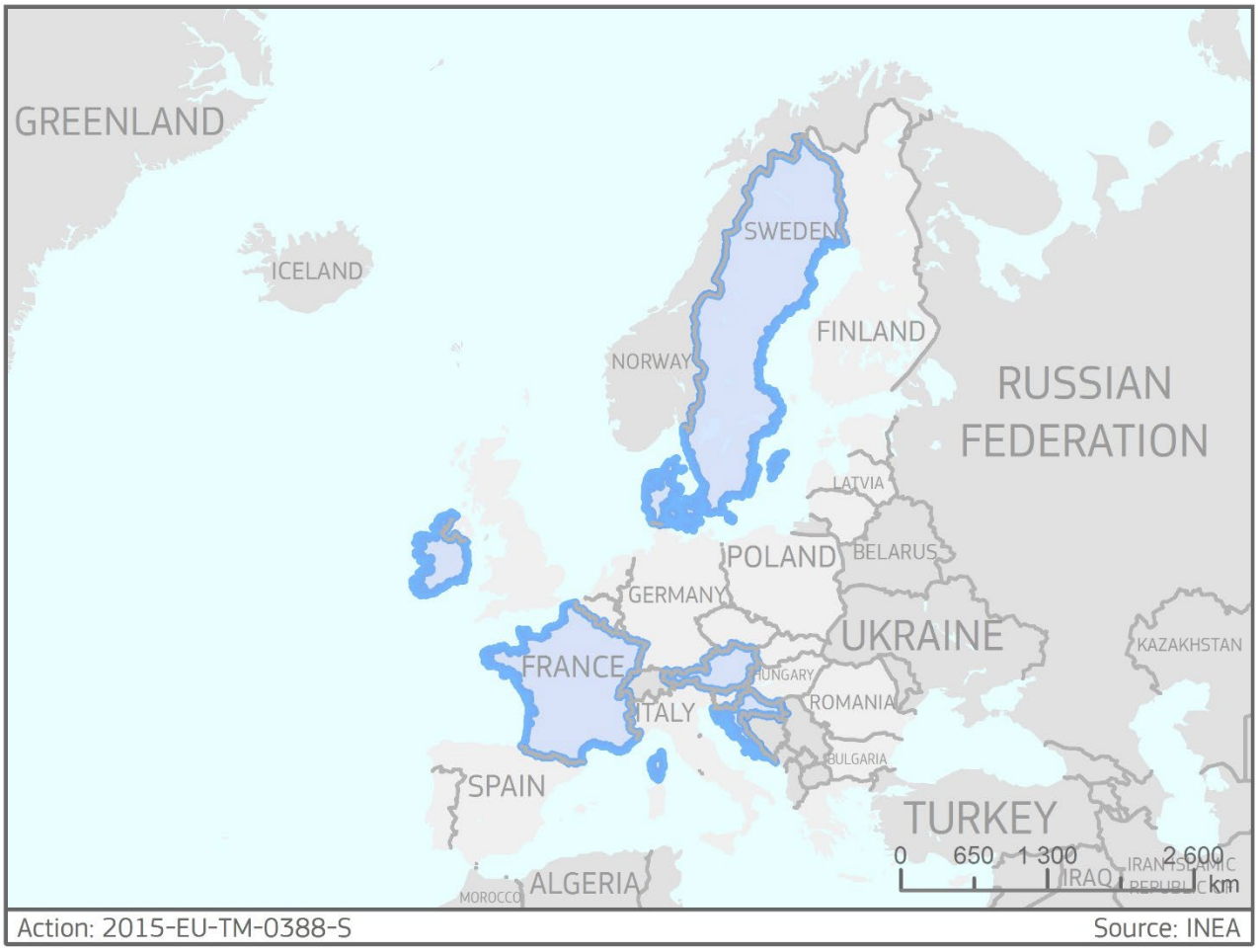
Maximum EU contribution: €1,048,897

Coordinator: The French Republic - Ministry of the Environment

Energy and the Sea DGAC (Direction Générale de l'Aviation Civile) DSNA (Direction des Services de la Navigation Aérienne) (France)

https://www.ecologique-solidaire.gouv.fr/controle-aerien

Figure 78 Countries Involved at Convergence of DSNA and COOPANS ATM Systems step 1B (CODACAS 1B) - General part



2.2.3.10 Convergence of DSNA and COOPANS ATM Systems step 1B (CODACAS 1B) – Cohesion Part

COOPANS Alliance[140] is an international partnership between the air navigation service providers of Austria (Austro Control), Croatia (Croatia Control), Denmark (Naviair), Ireland (Irish Aviation Authority) and Sweden

[140] https://ec.europa.eu/inea/sites/default/files/fiche_2015-eu-tm-0388-s_final.pdf

(LFV). The CODACAS Programme has been launched by DSNA (Direction des Services de la Navigation Aérienne, France) and COOPANS with the objective to ensure by the mid-2020s a harmonisation of their ATM systems ('Common Build'). Phase 1A of the global project was already co-funded under Action 2013-EU-40001-S and ended in December 2015. The Action - twinned with 2015-EU-TM-0387-S -addresses the second step (Phase 1B) of the global project. The study will define the common core of the ATM System; assess its technical, operational and financial feasibility; and develop strategies for its procurement and its integration into the partners' ATM systems. In the long run, the Action is an essential contribution to the technical defragmentation and harmonisation of ATM Systems in Europe and will therefore reduce costs and increase efficiency.

Figure 79 Countries Involved at Convergence of DSNA and COOPANS ATM Systems step 1B (CODACAS 1B) - Cohesion part

Member State(s) involved: Austria, Denmark, France, **Croatia**, Ireland, Sweden

Implementation schedule Start date: February 2016 End date: June 2018

Budget: Estimated total cost of the action: €775,000 Maximum EU contribution: €658,750

Percentage of EU support: 85%

Project Coordinator: The French Republic - Ministry of the Environment, Energy and the Sea DGAC/DSNA www.developpement-durable.gouv.fr

2.2.3.11 Speeding up harmonisation and convergence of ATM

The Action[141] is part of a Global Project, which aims at achieving higher levels of harmonisation and standardisation between the COOPANS (Cooperation of Air Service Providers) alliance through further development of the COOPANS ATM System platform in line with the TopSky roadmap. Furthermore, it ensures a common baseline onto which SESAR solutions can be deployed more efficiently.

The scope of this Action is to implement 4 software upgrades (builds):

- Build 2.6.1 concerns Controller Pilot Datalink Communication (CPDLC) operation, training improvement and system capacity increase
- Build 2.6.2 for training improvement, Online data interchange interoperability (OLDI IOP) & coordination
- Build 3.1 enables Safety Nets convergence to the TopSky standard product
- Build B3.2 provides CPDLC improvement, system capacity increase and operational improvements

[141] https://ec.europa.eu/inea/sites/default/files/fiche_2014-eu-tm-0376-m_final.pdf

Figure 80 Countries Involved at Speeding up harmonisation and convergence

In addition to the four main builds the Action includes a study to assess the possibility for harmonising all COOPANS partners towards a common Java Human Machine Interface (JHMI) and to potentially align with other TopSky users.

Member States involved: Austria, Denmark, **Croatia**, Ireland, Sweden

Implementation schedule Start date: January 2014 End date: June 2017

Budget: Estimated total cost of the action: €24,498,000 Maximum EU contribution: €12,249,000

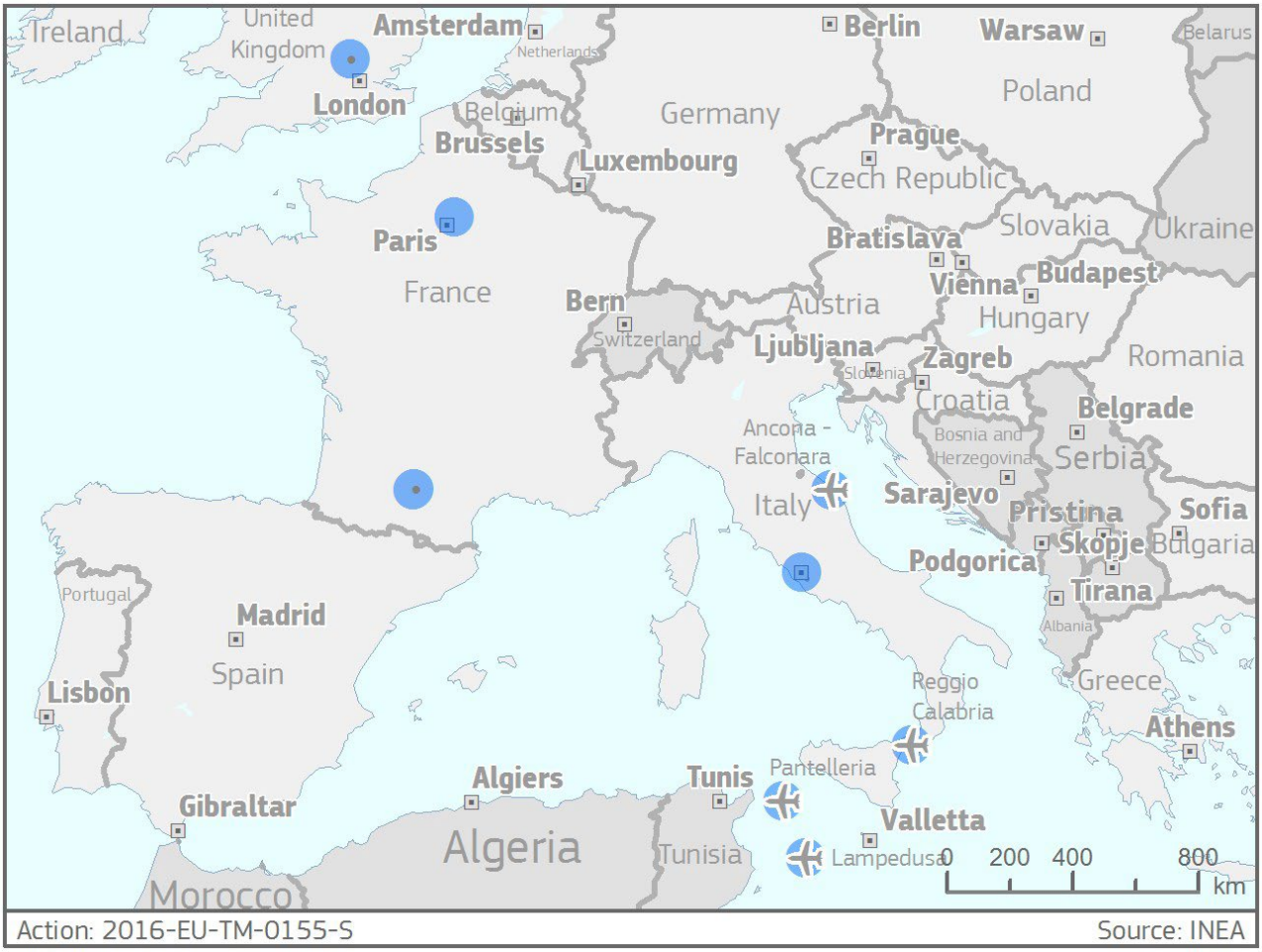
Percentage of EU support: 50%

Beneficiaries & implementing bodies: Austro Control GMBH www.austrocontrol.at Croatia Control Ltd (CCL) www.crocontrol.hr Irish Aviation Authority (IAA) www.iaa.ie Naviair www.naviair.dk Luftfartsverket (LFV) www.lfv.se

2.2.3.12 Deployment of SBAS Cat 1 capability on Airbus A320

The Action[142] is a study with a pilot deployment concerning the deployment of approach capability using SBAS (Satellite Based Augmentation System) for commercial aviation in Europe, and in particular for the Airbus A320 family. The Action aims to deploy existing technology (SBAS Category I) already in use on some business aviation aircraft, and create the conditions for deployment on a larger scale. The benefit of SBAS equipped aircraft is its capability to fly precision approaches without specific airport infrastructure. As a consequence, when weather conditions get difficult, SBAS equipped aircraft benefit from better access to airports.

Figure 81 Countries Involved at Deployment of SBAS Cat 1 capability on Airbus A320



Location of the Action: France, **Italy**, United Kingdom

Implementation schedule: February 2017 to December 2022

Maximum EU contribution: €3,146,690 Total eligible costs: €10,273,369

Percentage of EU support: 31%

[142] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2016-eu-tm-0155-s

Coordinator: Airbus Operations SAS (France)

http://www.airbus.com/

2.2.3.13 Implementation of the A-SMGCS system at Zagreb International Airport

The Action[143] concerns Zagreb International Airport which is part of the European Core Transport Network. The overall objective of the Action is to implement an Advanced Surface Movement Guidance and Control System (A-SMGCS) at Zagreb International Airport. As current tower technology at Zagreb Airport is not sufficient, the Action will provide a proper technological solution for traffic management in order to follow planned traffic growth in a safe and efficient way. Implementation of A-SMGCS aims at providing surveillance, guidance and control of aircraft and vehicles on the airport maneuvering area and at maintaining the declared surface movement rate under all weather conditions. The Action will contribute to a better capacity and throughput, a better flight efficiency and greater environmental benefits, increased safety as well as cost effectiveness.

Member State(s) involved: **Croatia**

Implementation schedule Start date: February 2016 End date: June 2018

Budget: Estimated total cost of the action: €4,383,700 Maximum EU contribution: €3,726,145

Percentage of EU support: 85%

Beneficiary: Croatia Control Ltd (CCL) www.crocontrol.hr

2.2.3.14 Croatia Airlines joining the EGNOS family

The aim of the Action[144] was to equip six aircrafts of the Croatian Airlines Dash-8 Q400 fleet with equipment enabling LPV (Localiser Performance with Vertical guidance) approaches using EGNOS (European Geostationary Navigation Overlay Service). This upgrade allows more robust, continuous and safer operations for the benefit of all EU citizens, becoming at the same time more economically and environmentally friendly.

Location of the Action: **Croatia**

Implementation schedule: October 2017 to December 2019

Maximum EU contribution: €603,898

Coordinator: Croatia Airlines (Croatia)

https://www.croatiaairlines.com/

2.2.3.15 Implementation of ADS-B OUT function on Dash 8 and Airbus fleet

The Action[145] aimed to implement the Automatic Dependent Surveillance-Broadcast (ADS-B) Out function in Croatia Airlines' fleet: on six DASH 8 aircraft and six Airbus aircraft. As part of the European Air Traffic Management (ATM) Master Plan, the new upgrade complies with the requirements for the performance

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[143] https://ec.europa.eu/inea/sites/default/files/fiche_2015-hr-tm-0023-m_final.pdf
[144] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2016-hr-tmc-0165-w
[145] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2017-hr-tm-0100-w

and the interoperability of surveillance by supporting all surveillance techniques currently used and planned to be used within the Single European Sky.

The Action complies with Commission Implementing Regulation 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the Single European Sky and further amendments in particular the equipage of aircraft fleet.

Location of the Action: **Croatia**

Implementation schedule: May 2018 to May 2020

Maximum EU contribution: €150,000

Coordinator: Croatia Airlines D.D. Croatian Air Transport Company (Croatia)

https://www.croatiaairlines.com/

2.2.3.16 AIA's evolution into a high-performing node within the European ATM network

The general objective of the Action[146] is to enable Athens International Airport (AIA) to implement new and advanced concepts for management of airport operations and information sharing. The Action aims specifically to implement Airport Collaborative Decision Making (A-CDM) and Airport Operations Plan (AOP) and to prepare the airport for Total Airport Management (TAM).

The Action will enhance operational efficiency and will enable an optimum use of the airport's available capacity, achieving optimum performance at airport level and contributing to enhanced performance at network level.

The Action will bring benefits not only to AIA, but also to all airport's stakeholders, in multiple areas of performance such as reductions in terms of delays per flight at the airport or taxi-out time savings leading to environmental benefits (reduction of CO2 emission and fuel consumption).

The Action will be implemented through six activities including Project management and implementation support (activity 1), New airport operational concept (activity 2), Collaborative integrated airport information systems (activity 3), Aircraft process management through A-CDM (activity 4), Extended aircraft process management (activity 5) and Extended AOP towards Total Airport Management (Activity 6).

Location of the Action: **Greece**

Implementation schedule: February 2019 to December 2023

Maximum EU contribution: €2,250,000 Total eligible costs: €4,500,000

Percentage of EU support: 50%

Coordinator: Athens International Airport S.A. (Greece)

https://www.aia.gr/

[146] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2017-el-tm-0158-w

2.2.3.17 ATM Data 'as a service'

The proposed Action[147] develops and deploys a prototype to demonstrate that ATM data can be provided as a service by one distributed ATM System to one or more civil Air Traffic Service Units. The Action will study how yo upgrade an existing IT infrastructure to deliver ADSP services with proper contingency and disaster recovery. It will also determine the impact of this development for main ATM systems. The Action is complementary to ongoing SESAR work where Common Services and CWP / Services are being studied. The Action can be used at European level to consider - based on a real case developed by different ANSPs - the technical feasibility and benefits of a Virtual Centre or ATM data 'as a service' to defragment the ATM system.

Evaluation Remarks: The relevance of this action is good. It will contribute to the Single European Sky by addressing the provision of air navigation services and the fragmentation of the European ATM system. The action is mature as it builds on a previous activity developed by MUAC. The impact of the action is good but the benefits will be achieved only at the level of the global project. Overall, the proposal is of good quality. Both MUAC and Slovenia have put in place standard management and decision-making processes.

Member State(s) involved: Belgium, Germany, Luxembourg, The Netherlands, **Slovenia**

Implementation schedule: Start date: January 2015 End date: June 2017

Total eligible costs: €4 894 588 Requested funding: €2 447 294

Requested EU support: 50.00%

2.2.3.18 Initial Airport Operations Plan

The Action[148] concerns Ljubljana Airport which is a part of the European Core Transport Network. The overall objective of the Action is to implement an Initial Airport Operations Plan (IAOP), improving the efficiency of airside operations by sharing real-time information data. The implementation of an IAOP will enable Airport Ljubljana to enhance the efficiency of airport operations, in particular the turn-around process at the airport. The Action seeks to implement a centralised database for information sharing among all stakeholders in order to work together more efficiently and transparently. This will also allow for better decision making, based on more accurate and timely information. Currently, data exchange is often insufficient, belated or non-existent. Additionally, an IAOP is considered fundamental for the future implementation of Airport Collaborative Decision Making (A-CDM).

Member State(s) involved: **Slovenia**

Implementation schedule Start date: April 2016 End date: May 2017

Budget: Estimated total cost of the action: €890,733 Maximum EU contribution: €445,367

Percentage of EU support: 50%

Beneficiary: Aerodrom Ljubljana, d.o.o. (LJU) www.lju-airport.si

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[147] https://ec.europa.eu/inea/sites/default/files/2014-eu-tm-0032-s.pdf
[148] https://ec.europa.eu/inea/sites/default/files/fiche_2015-si-tm-0021-w_final.pdf

2.2.3.19 Slovenia Wide Area Multilateration System – SLOWAM

The Action[149] concerned the installation of the Slovenia Wide Area Multilateration System (SLOWAM) in 19 locations across Slovenia.

The implementation of SLOWAM resulted in an independent surveillance chain in Slovenian airspace that increases robustness and availability of surveillance services leading to safety improvements and reduction of environmental footprint in surveillance domain with decreased power consumption and carbon emissions.

Location of the Action: **Slovenia**

Implementation schedule: April 2018 to November 2020

Maximum EU contribution: €772,500

Coordinator: SLOVENIA CONTROL Slovenian Air Navigation Services Limited (SLOVENIA CONTROL Ltd) (Slovenia)

https://www.sloveniacontrol.si/

2.3 Albania

To provide details of the air transport planned project and investment for Albania, the National Transport Strategy and Action Plan, National Transport Plan for Air Transport, TEN-T extensions of the Comprehensive and Core Network in Western Balkans projects, Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans and the Albania Local Single Sky Implementation Overview (LSSIP 2021) are studied.

2.3.1 Albania National Transport Strategy and Action Plan

The Government of Albania adopted the Sectorial Strategy of Transport (SST) and Action Plan 2016- 2020[150] through the Decision of the Council of Ministers, No. 811, dated 16th of November 2016, “For the approval of the Transport Strategy and Action Plan 2016-2020”.

The strategy's primary goal is to integrate an efficient transport system into the region and the EU network, promoting economic development and upgrading citizens' quality of life. The overall objective of the Sectorial Strategy of Transport and Action Plan 2016-2020 is to (i) further develop Albania's national transport system and in addition (ii) to significantly improve its sustainability, interconnectivity, interoperability, and integration with the international and European broader transport system and region.

In 2016, the European Union (EU) supported the strategy by selecting it to receive EUR 21 million in budget support and EUR 3 million in complimentary support through a Sector Reform Contract (SRC). The first monitoring report of SST highlighted the successful implementation of the transport strategy and fulfilled the obligations under SRC to receive this budget support.

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[149] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/2017-si-tm-0086-m

[150] https://www.infrastruktura.gov.al/wp-content/uploads/2020/07/3rd-Monitoring-Report-of-Sectorial-Transport-Strategy-and-Action-Plan-2016-2020_June-2020.pdf

The EU acknowledged the progress made in transport sector reforms, and the fixed tranche of EUR 6 million was granted and payment made to the State Treasury by the end of 2018. The second monitoring report presented in June 2019 showed satisfactory progress in the relevant fields of the transport sector. Based on these achievements, we received the first variable tranche of EUR 4,062,500 for 2019, out of the EUR 5 million allowable maximum.

The following information is provided from the 3rd Monitoring Report of the Strategy. It aims to measure the progress achieved so far in implementing the strategy's action plan and identify the challenges and issues that need to be reviewed in the action plan. This monitoring report covers the progress achieved during 2019. The methodology is based on information gathered from different institutions implementing this strategy. The strategy identified 43 Policies (Priority Actions) for the 5-year period, which are deeply interlinked, and strike a balance between soft measures and investments. Each priority action is detailed in specific tasks required for its attainment.

The total cost for implementing the strategy's Action Plan 2016-2020 is 1,001.06 million euros. The cost for the infrastructure investment for implementing the Action Plan proposed for 2016-2020, foreseen by budget funds, is 793.34 million EUR. The proposed plan of total investments for 2016-2020, according to the primary and optimistic scenario of the strategy, is provided in the table below:

Table 29 Albania Investment Plan for Basic & Optimistic Scenario of the Strategy of Each Transport Sector

Transport mode	Base Scenario Investment mln EUR	%	Optimistic Scenario Investment mln EUR	Increase Million EUR
Transport sector as a whole	-	0	-	0
Roads	750.35	79.89	1,084.00	333.65
Railways	123.18	9.08	123.18	0
Maritime-Ports	74.33	7.11	96.44	22.11
Civil aviation	9.9	0.73	9.90	0
Intermodal-Combined Transport	43.3	3.19	43.30	0
Total investment 2016-2020	1,001.06	100	1,356.83	355.76

The following table shows the Real Expenditures across transport modes 2016 – 2020, with a total of 10.49 million Euros for the civil aviation sector:

Table 30 Albania Real Expenditures Across Transport Modes 2016 – 2020

(EUR* million. Source: Directorate of Budget, MIE)

Transport mode	Base Scenario Investment	2016	2017	2018	2019	2020 *indicative*	Total Expenditure
Roads	750.35	103.24	173.82	182.61	189.93	182.37	831.96
Railways	123.18	3.62	3.22	3.6	5.08	4.77	16.37
Maritime-Ports	74.33	7.34	0.99	1.26	1.14	0.37	15.02
Civil aviation	9.90	0.11	0.12	0.03	0.08	10.15	10.49
Intermodal-Combined Transport	43.30	0	0	0	0	0	0
Total investment 2016-2020	**1,001.06**	**114.31**	**178.15**	**187.49**	**196.23**	**197.66**	**873.84**

The following are the Detailed Real expenditures for the transport sector 2016-2020, with a total of 178.89 million Euros for the air transport sector:

Table 31 Albania Detailed Real Expenditures for Transport Sector 2016-2020

(EUR million. Source: Directorate of Budget, MIE)*

PROGRAMME	2016		2017		2018		2019		2020		2016-2020
	Budget (EUR)		Budget (EUR)		Budget (EUR)		Budget (EUR)		Budget (EUR)		Totals
Transport Sector	Recurrent exp	Capital exp.*	Recurrent exp.	Capital exp.	Recurrent exp.	Capital exp.	Recurrent exp.	Capital exp.	Recurrent exp.	Capital exp.	Rec. +Capital exp.
Roads	14.07	89.17	14.76	159.13	15.06	167.55	14.09	175.84	12.15	170.22	665.01
Railway	2.95	0.67	3.11	0.11	3.24	0.36	3.36	1.72	3.43	1.34	19.95
Maritime	0.53	6.81	0.73	0.26	0.73	0.53	0.76	0.38	0.01	0.36	10.92
Air	0.96	0.02	0.11	0.01	0.01	0.02	0.08	0	0.16	9.99	178.89
Overall Total Budget	**17.65**	**96.66**	**18.68**	**159.47**	**19.03**	**168.46**	**18.29**	**177.94**	**15.75**	**181.91**	
TOTAL	**114.31**		**178.15**		**187.49**		**196.23**		**197.66**		**873.84**

*Exchange rate is from Bank of Albania (yearly average)

***Capital expenditures include domestic and foreign financing.*

The main challenges in the aviation sector for the 2016-2020 planning period are

1. The development and construction of new airport infrastructure;
2. The creation of suitable conditions for a more competitive market with liberalized air services will bring the possibility to reduce travel costs for passengers;
3. The implementation and unification of international standards for air safety.

The following tables provide information regarding the Status of Priority actions – ACTION PLAN 2016 – 2020 for the air transport sector:

Table 32 Albania Status of Priority Actions for Air Transport

Strategic Priority 1	Development of new airports	Implementation status
Goal 1.1	**Expected Result**	
Increase economic and tourism activity in the North and South, and competition between Tirana, Kukes and a "Southern" airport for more air carriers to serve the region	Develop a National Airport Master Plan. Start operations at Kukes Airport. Initiate development of Southern airport into a hub for Intra-European and Mediterranean flights.	
Priority Action AIR 1	**Specific tasks**	
MoTI to seek Consultancy for preparation of a National Airport Master Plan study for Albania for next 20 years with emphasis on airport in Southern Albania, Tirana airport expansion beyond 2025, and Kukes operational infrastructure upgrade	Planning & investment – **2016 – 2017**: MoTI and ACAA to prepare tender documents for initiating calls for tenders from bidders for a National Airport Master Plan studies for next 20 years for Albania. Study shall evaluate needs for any airport in south, expansion of Tirana airport beyond 2025, and degree of development for making Kukes airport operational and for type of operations. Study to also look at possibilities of low cost carrier options for the airports.	Competed
	– **2017**: ACAA to carry out in parallel and finalise technical studies for making Kukes operational as general aviation airport for flying club activities, aviation training and unscheduled flights with specific aircraft types of category B. Take policy decision for scope of civil works implementation and services equipment or no decision on any development of Kukes pending Master Plan.	Competed
	– **2018**: Review Airport Master Plan bids received and decide on starting a Master Plan Study by successful bidder.	In progress
	– **2019**: Decide works for Kukes. Complete works for upgrading Kukes to operational readiness. Award an entity to operate Kukes through public bidding. – **2019**: MoTI to decide airport developments in country further to Master Plan conclusions. Seek consultancy for assisting MoTI in preparation of Design Bids from bidders, and Calls for Tenders.	Completed Not started yet
	– **2020**: Review Tenders for design of airport in south: and select Design Consultancy.	
Strategic Priority 1	Development of new airports	
Goal 1.2	**Expected Results**	
– Increase economic and tourism activity in the North and South, and competition between Tirana, Kukes and a "Southern" airport for more air carriers to	Develop a National Airport Master Plan Start operations at Kukes Airport Initiate development of Southern airport into a hub for Intra-European and Mediterranean flights	

serve the region		
Priority Action AIR 2	**Specific Tasks**	
Upgrade of Kukes airport and development of southern airport for enhancing air transport operations in Albania and for promoting tourism growth	Planning & investment – **2017**: MoTI to organize cross cutting initiatives with Tourism Ministry to develop and attract tourism services and enable appropriate measures to actively engage tourism service operators for air travellers visiting Albania and south of country.	In progress
Strategic Priority 2	Creation of a more competitive market with liberalized air services	
Goal 2.1	**Expected Results**	
More choices for passengers, cargo, flights, and destinations possible with competitive services in quality and fares	Consumers, including the Albanese diaspora, have wider range of fares and types of services, and more routes and frequency	
Priority Action AIR 3	**Specific tasks**	
Transpose and implement EC regulations and directives in respect of market access, insurance requirements for carriers, and competition rules to enable mix of scheduled and low cost flights, and possible investments for air operators by Albanians and others	Operational, regulatory & licensing – **2016**: MoTI and ACAA to do the transposition of remaining EC regulations and directives, and to develop documentation and expertise on market access and competition rules; – **2017**: ACAA to implement the rules for the industry; – **2018- 2019**: transposition of remaining EC regulations and directives.	Completed Completed Completed
Strategic Priority 2	Creation of a more competitive market with liberalized air services	
Goal 2.1	**Expected Result**	
More choices for passengers, cargo, flights, and destinations possible with competitive services in quality and fares	Consumers, including the Albanese diaspora, have wider range of fares and types of services, and more routes and frequency.	
Priority Action AIR 4	**Specific tasks**	
Strengthen capacity building of policy, operational and oversight bodies involved in air transportation policies and decisions for assisting in the implementation of EU regulations	Institutional & organizational – **2017**: ACAA to develop job profiles/functional description of these officers, and markets, competition issues, social aspects as per the transposed rules (so that policy decisions are formulated in full understanding of the rules) – **2018**: ACAA to induct specialist in air transport economics and markets, competition issues, social aspects as per the transposed rules, so that policy decisions are formulated in full understanding of the rules. – **2019**: ACAA to organise review of airport charges/AVSEC fees towards best practices for competitive charges.	Completed In progress
Strategic Priority 3	Implementation and unification of international standards for air safety	
Goal 3.1	**Expected Result**	
Complete the transposition of EU regulations and Directives as per the latest version of the Annex to the ECAA agreement and ensure	Albania to complete the Phase I and II of the ECAA agreement in respect of rules listed in Annex I to ECAA agreement including air safety, security, market access and competition, and social and environmental rules.	

compliance with ICAO SARPs		
Priority Action AIR 5	**Specific tasks**	
Transpose all outstanding EC regulations and directives within an adopted timescale and work on USOAP corrective action plan to further reduce the *lack of Effective Implementation* (EI)	*Operational, regulatory & licensing* - **2016 – 2020: ACAA to accelerate efforts for transposing remaining SARPs and EC rules into Albanian aviation regulations.** o Ensure that ACAA implements the rules through competent staff using documented procedures and guidance materials, audits are followed till closure, and sanctions taken against operators or aviation personnel for non-compliance or at worst authorizations/approvals are removed. o ACAA to Work on the Corrective Action Plan established by Albania towards its response on USOAP audits to reduce non-compliance with SARPs. To ensure that ICAO Continuous Monitoring Approach (CMA) office is apprised of all positive actions taken on responding to Protocol Questions of the USOAP audit such that lack of Effective Implementation is continuously being reduced. o ACAA puts efforts to improve areas where Albania is below the world average legislation, licensing, operations, airworthiness, accident investigation and aerodromes. In organisation and air navigation services, Albania has a good score above the world average but must continue the efforts further. o ACAA must improve all the areas and by 2016 must be seen to have gone beyond the world average of 62.69% from its present average of 55.48%. Albania shall envision an effective implementation of 70% by end of 2017 or the second quarter of 2017. Aerodrome Certification must be completed by second quarter of 2016 while the exercise of ANSP certification must be re-activated and the ANSP certified again. o ACAA shall initiate preparation of the State Safety Programme as part of the ICAO Global Aviation safety Plan. A draft shall be made ready by end of 2017. ACAA shall work with MoTI for developing a National FAL Committee responsible for the implementation of the FAL programme (to complete by 2017). o Albania shall implement the Performance Based Navigation (PBN) in respect of instrument approaches at the Tirana Airport in accordance with ICAO Global Air Navigation Plan and with EC Regulations (Albania is member of ECAA agreement). o In cooperation with Eurocontrol, ACAA to develop its five-year Strategic Business Plan for Albania for 2016 to 2020 in respect of SES and ATM with 7 strategic objectives of i) safety and ATM security; ii) optimisation of airspace capacity; iii) optimisation of cost services; iv) SES implementation and adoption of legislation; v) meet environmental standards, vi) excellence objective in national and international standards; and vii) enhancement of human resources management. o ACAA shall put in place a working website for dissemination of information to the public in respect of aviation matters, and for the public to communicate with the ACAA. The latter shall also arrange for its guidance materials, procedures and AIP/AIC to be made available on line.	In progress – on track
Strategic Priority 3	Implementation and unification of international standards for air safety	
Goal 3.1	**Expected Result**	
Complete the transposition of EU regulations and Directives as per the latest version of the Annex to the ECAA agreement and ensure compliance with ICAO SARPs	Albania to complete the Phase 1 and II of the ECAA agreement in respect of rules listed in Annex I to ECAA agreement including air safety, security, market access and competition, and social and environmental rules.	
Priority Action AIR 6	**Specific tasks**	
Strengthen the ACAA capacity towards staff and inspector requirements, competency, and guidance materials for certification,	Institutional & organizational - **2016 – 2020**: Continuously ensure that: guidance materials and procedures, inspectors' manuals, specific documentation for approvals and certification, are all kept up to date in line with changes to any rules as amended, ensuring quality in all documentation and procedures for certification and approval	In progress – on track

approval, and for oversight/monitoring of the aviation industry in all areas of safety, security, and work towards the Albanian National Safety Programme and towards 'One Stop' Security procedures	systems, and the surveillance of operators	
	- **2016 – 2020**: Training systems shall continue to ensure competency of inspectors and that *initial*, *advanced* and *recurrent* training are essential components for inspector competency in their jobs	In progress – on track
	- **2016 – 2020**: ACAA shall continue to ensure that the critical elements for the safety oversight system are always maintained. ACAA shall ensure that sanctions and penalties are applied in cases of offenses against aviation regulations.	In progress – on track
	- **2016 – 2020**: Albania shall work on implementing procedures for a 'One Stop' security for all flights from Albania as per EU regulation 2015/2426, on recognition of third countries applying security standards equivalent to EU common basic ones when Albania is added to the same regulation.	In progress – on track
Strategic Priority 4	Reduction in travel costs for passengers	
Goal 4.1	**Expected Result**	
To make air travel more accessible to the citizens of Albania and to increase growth in air traffic, cargo and destinations	Affordable and easy air travel for Albanians (including diaspora), visitors and tourists, and businesses and have wider choices for air travel in respect of destinations, fares and airlines	
Priority Action AIR 7	**Specific tasks**	
Review of airport and air navigation charges with possibility of lowering these component charges as well as reduction in government taxes and aviation security surcharges, which will influence lower airfare pricing while more flights and increased economic activities leading to more government revenues	Pricing, taxation & subsidies - **2017 - 2018**: ACAA shall carry out such a methodology to validate the charges imposed by Tirana airport and the other surcharges such as aviation security and government taxes. ○ It is expected that such reduction can only be achieved when more airlines provide the service and low cost carriers can enter the market at some stage, for example, when an airport is operational in the south of the country. ○ The increase in tourists entering the country through other gateways like airport in the south and Kukes will certainly see traffic volume increase and possible load factor increase in flights through better tourism development in the south and the coastal areas, and the roads link up to the archaeological sites in the South. ○ Tourism development and an airport in the South will assist for more air passenger traffic and more opportunities for movement of people for tourism or tourist travel thus spreading the extent of the busy traffic season, more load factor and possible fare reduction.	In progress

2.3.2 Albanian National Transport Plan for Air Transport

According to the Second Five Years Review of the Albanian National Transport Plan (ANTP3)[151] The following Investment Plan is proposed due to this extensive analysis of the surveys carried out and the transport model results. The information shown in the table below is their budget, the tentative time frame for the implementation, the level of prioritization (high, medium, or low), possible sources of funding, stakeholders involved (stakeholders in charge of implementing the projects) and inter-dependence with other programs or general comments.

[151] https://www.arrsh.gov.al/te-ngarkuara/pdf/TR4689-FINAL-ANTP3-PART-I-ED1.pdf

As a result of the Investment Plan, the total budget foreseen for 20 years (2019-2038) is 4,888.03 M Euro. 4,458.53 M Euro corresponds to public projects, while 429.5 are private (toll) projects. The investment, according to the time frame, is as follows:

- Short Term (2019-2023)
- Medium Term (2024-2028)
- Long Term (2029-2038)

The values shown in the table are indicative, having obtained most from official sources. They correspond to construction costs. Operation, maintenance, and financing costs (in the case of PPP or concession projects) are not considered.

Table 33 Albania Summary of Investment Plans for Air Transport

Type of investment	Budget (M EURO)	Time frame	Level of prioritisation	Sources of funding	Short Term	Medium Term	Long Term	Stakeholders involved	Inter-dependence / Comments
AIR TRANSPORT									
▪ *New Southern airport (PPP)*	107	2020-2022	Medium	PPP, GoA		107		MIE, ACAA	NSPP
▪ *Expansion of the Tirana Airport beyond 2025*	TBD	TBD	Low	TIA				MIE, ACAA	
▪ *Kukes airport upgrading and operation*	8	2020-2022	Medium	Toll project				MIE, ACAA	NSPP
▪ *Airport Master Plan for Albania to consider helipads drones and general aviation taking account of traffic forecast considering economic and tourism development*	1	2019-2020	High	IPA	1			MIE, ACAA	NTS

2.3.3 Albanian National Transport Action Plan for Air Transport

The Action Plan has also been prepared. The Action Plan will constitute the roadmap of actions to be implemented in the next 20 years in the transport sector. As in the Investment Plan, the Action Plan includes their budget, the tentative time frame for the implementation, the level of prioritization (high, medium, or low), possible sources of funding, stakeholders involved (stakeholders in charge of implementing the projects) and interdependence with other programs or general comments.

Table 34 Albania Summary of Action Plan for Air Transport

Type of action	Budget (M EURO)	Time frame	Level of prioritisation	Sources of funding	Stakeholders involved	Inter-dependence
AIR TRANSPORT						
▪ Budgetary program for the Civil Aviation Authority exceeding one year.	N/A	Medium term	Medium	N/A	MIE, ACAA	
▪ Lower airport and navigation charges as well as reduction in government taxes and aviation security surcharges, which will create more flights and subsequent increasing economic activity leading to more Government revenues.	N/A	2022-2025	Medium	N/A	MIE, ACAA	NTS
▪ Consolidation of the ACAA outreach in air transport matters with competent transport specialists in air transport economics, systems, etc. as well as to strengthen the ACAA capacity and independence towards staff and inspector requirements, competency, and guidance materials for certification, approval, and for oversight/monitoring of the aviation industry in all areas of safety, security…	0.3	2020-2025	Medium	National budget, IPA	MIE, ACAA	NTS
▪ Training programmes for increasing competences in the air transport sector staff. Need of piloting schools	0.4	Short term	High	National budget, IPA	MIE, ACAA	
▪ Creation of a more competitive market with liberalized air services	0.3	2020-2022	Medium	IPA	MIE, ACAA	NTS
▪ Implementation and unification of international standards for air safety	N/A	Medium term	Medium	N/A	MIE, ACAA	

2.3.4 Overview of Albania Air Transport Projects of TEN-T Core and Comprehensive Corridors in the Western Balkans

The project under TEN-T Core and Comprehensive Corridors in the Western Balkans is the Rehabilitation of the Durres - Tirana Railway Public transport terminal PTT and the construction of the new Tirana - Rinas branch line.[152]

The project has been contracted as a design and build project. Detail design is in progress, and work will begin as soon as it is finished. A 41 km railway line on the Core Network should be rehabilitated and constructed by 2023, connecting Tirana airport with the railway line. The cost of the project is estimated at 90.45 million EUR.

2.3.5 Overview of Albania Air Transport Project Based on Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans

The Tirana Airport Railway line connection project is among the flagship project based on the Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core

[152] COMMISSION DELEGATED REGULATION (EU) 2016/758 of 4 February 2016 amending Regulation (EU) No 1315/2013 of the European Parliament and of the Council as regards adapting Annex III

Network in Western Balkans Document published in April 2022 by the Permanent Secretariat of Transport Community. The following table provides the details of the project. [153]

Currently, no airports in the western Balkans have direct railway connections. Once the project is completed, Tirana will become the first airport to have a rail connection.

Table 35 Albania Air Transport Related Project Based on TEN-T Extension of the Comprehensive and Core Network in Western Balkans

Project 1: Modernisation of Rail ROUTE 2					
Regional Partner: Albania					
Section: Vore – Hani Hotit (border with MNE)					
Project description	Technical maturity	Current stage	Action needed	Key milestones	
				2023	2027
Section: Tirana – Durres					
Tirana Durres with direct connection to the airport is a 41 km rail line.	Detail design is ready. Construction permit issued	Works are ongoing (30 January 2022).	Solving issues regarding land acquisition	All legal issues solved	Completion of works

The expected benefits of the project includes:

- upgrade of a stretch on the Core Network and enhancing connection with neighbors (currently this is the only Albanian railway border connection):
- create better conditions for the development of passenger and freight services;
- improve transport capacity;
- develop multimodal and intermodal transport in Albania and the wider region;
- integrate the line into the regional and EU railway networks.[154]

The following table provides details of the estimated costs and timeline of the project.

Table 36 Albania Air Transport Related Project Details Based on TEN-T Extension of the Comprehensive and Core Network in Western Balkans

Corridor / Route / Node	TEN-T Network	Regional Partner	Project Name	Project cost (M€)	Expected Completion
ECONOMIC AND INVESTMENT PLAN FOR WESTERN BALKANS					
FLAGSHIP 3 – CONNECTING THE COASTAL REGION					
Railway projects					
Route 2b	Core	ALB	Rehabilitation of Vore – Han i Hotit Railway Line	260	2028

[153] https://www.transport-community.org/wp-content/uploads/2022/05/Five-Year-Rolling-Work-Plan-for-Development-of-Indicative-TEN-T-Extension-of-the-Comprehensive-and-Core-Network-in-Western-Balkans.pdf
[154] https://www.transport-community.org/wp-content/uploads/2022/05/Five-Year-Rolling-Work-Plan-for-Development-of-Indicative-TEN-T-Extension-of-the-Comprehensive-and-Core-Network-in-Western-Balkans.pdf

2.3.6 Albania Local Single Sky Implementation Overview

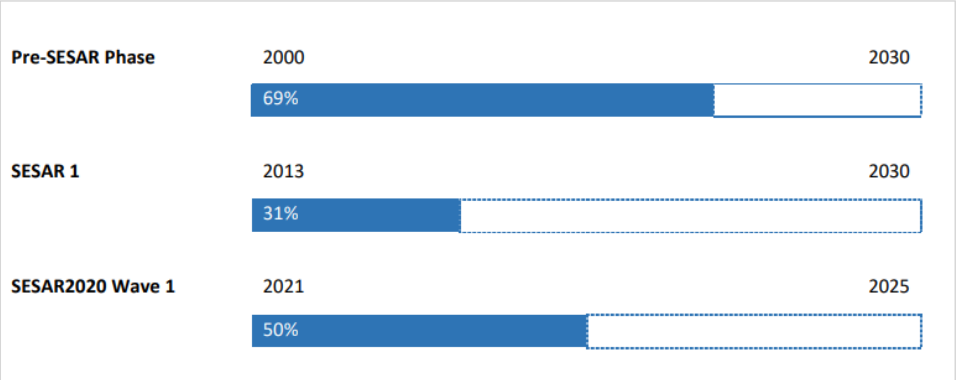
The Local Single Sky Implementation (LSSIP) documents, as an integral part of the Master Plan (MP) Level 3 (L3)/LSSIP mechanism, constitute a short/medium-term implementation plan containing ECAC States' actions to achieve the Implementation Objectives as set out by the MP Level 3 and to improve the performance of their national ATM System. This LSSIP document describes the situation in the State at the end of December 2021, together with plans for the following years. [155]

2.3.6.1 Summary of 2021 Developments

Some of the significant development in the aviation sector in Albania are listed below:

- Certification and opening of the new International Airport of Kukes in the northern part of Albania,
- Accreditation of the Albcontrol (Air Navigation Service Provider in Albania) based on the EC regulation 373/2017,
- Integration of the Montenegro Radar into the Albcontrol FDP/RDP System
- Implementation of the SCSIFRA in Albania
- The ongoing expansion of the Mother Teresa Airport to increase Pax and a/c capacity.

Figure 82 Albania Progress per SESAR Phase

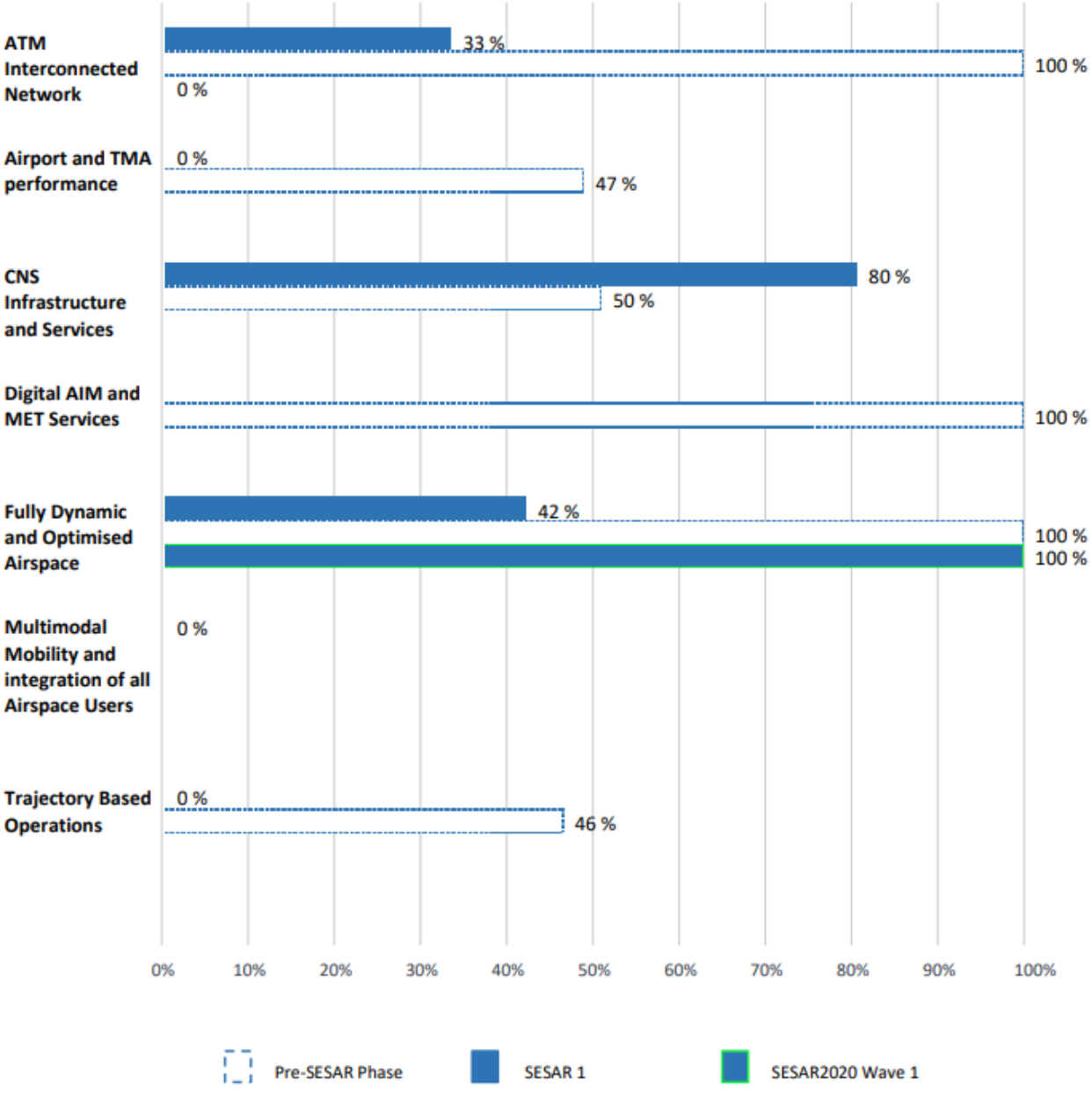


Source: LSSIP DB

The figure below shows the progress made so far, per SESAR Essential Operational Changes, in implementing the SESAR baseline and the SESAR phases. The percentages are calculated as an average, per EOC, of the same objectives as in the previous paragraph.

[155] https://www.eurocontrol.int/sites/default/files/2022-05/eurocontrol-lssip-2021-albania.pdf

Figure 83 Albania Progress per SESAR Essential Operational Changes and Phase



Source: LSSIP DB

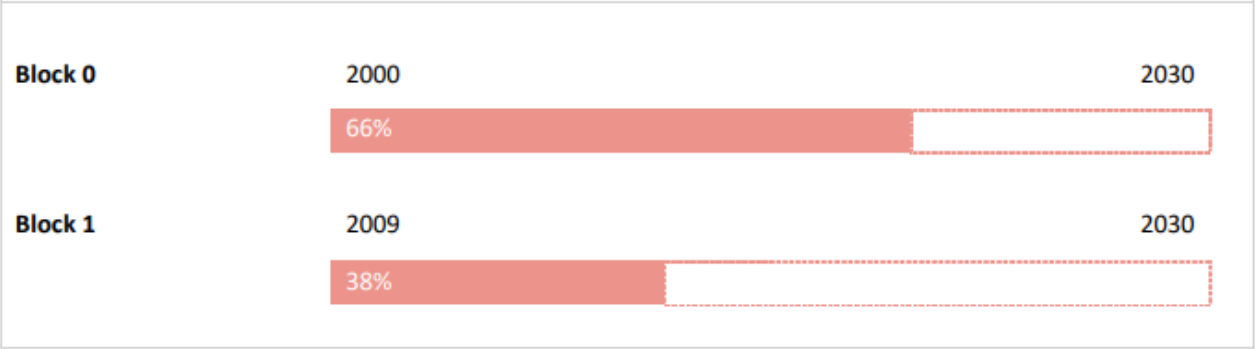
The figure below shows the progress made in implementing the ICAO Aviation System Block Upgrades (ASBU) Blocks 0 and 1, according to ICAO Global Air Navigation Plan 6th Edition (2019). The overall percentage is calculated as an average of the relevant Objectives contributing to each ASBU block.

The Global Air Navigation Plan (Doc 9750) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management

Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). Developed in collaboration with and for the benefit of stakeholders, the GANP is a key contributor to the achievement of ICAO's Strategic Objectives and has an important role to play in supporting the United Nations 2030 Agenda for Sustainable Development.

The GANP drives the evolution of the global air navigation system to meet the ever growing expectations of the aviation community. The purpose of the GANP is to equitably accommodate all airspace users operations in a safe, secure and cost-effective manner while reducing the aviation environmental impact. To this end, the GANP provides a series of operational improvements to increase capacity, efficiency, predictability, flexibility while ensuring interoperability of systems and harmonization of procedures. [156]

Figure 84 Albania ICAO ASBU Implementation Progress – Blocks 0 and 1



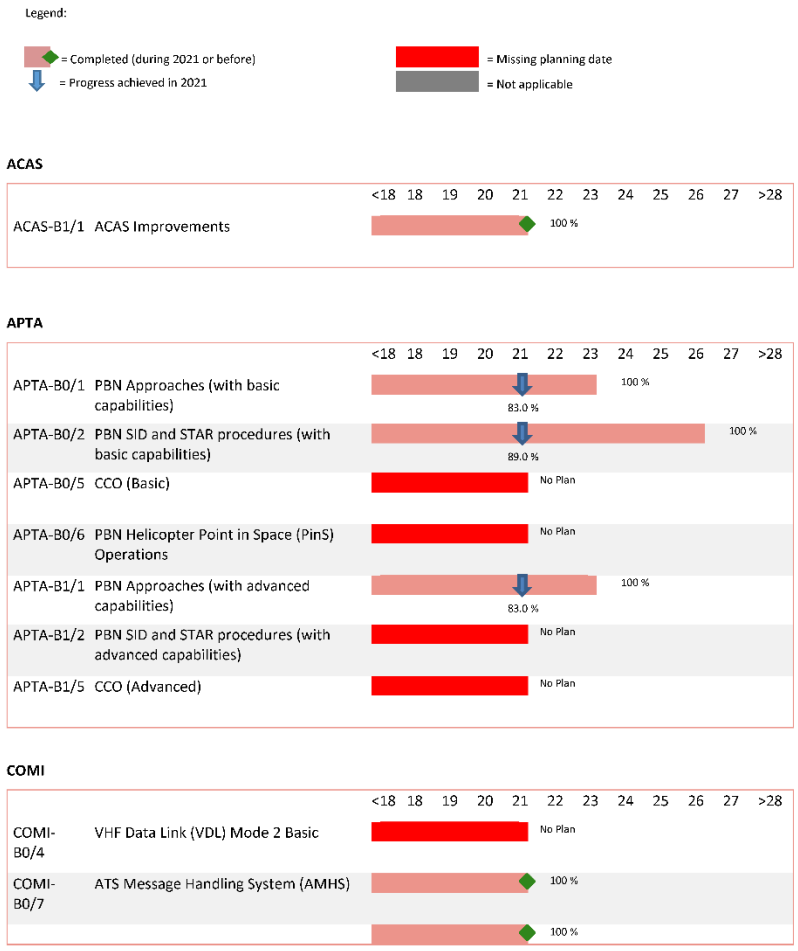
Source: LSSIP DB

The following tables show, for each of the ASBU Elements belonging to a particular ASBU Thread and Block, the overall status, the final date foreseen for completion and the percentage of progress achieved in the current cycle.

The final set of Block 0 and Block 1 ASBU elements to be monitored in ICAO EUR Region has been approved through written consultation by European Aviation System Planning Group (EASPG) in May 2021, based on the conclusions of the EUR Global Air Navigation Plan (GANP) Transition Project Team. Results below were determined using the LSSIP Year 2021 declared statuses and progress of the relevant Implementation objectives in accordance with the updated mapping approved by the EASPG/3 meeting.

[156] https://www4.icao.int/ganpportal/?_gl=1*12193we*_ga*MTA4MjI1Mjk0Mi4xNjkyODc4NTA0*_ga_992N3YDLBQ*MTY5NTgwMzE1OC4zLjAuMTY5NTgwMzE1OC4wLjAuMA

Figure 85 ICAO ASBU Implementation progress in Albania



COMI-B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	
COMI-B1/2	VHF Data Link (VDL) Mode 2 Multi-Frequency	No Plan
COMI-B2/1	Air-Ground ATN/IPS	100 % / 83.0 %

DAIM

		<18	18	19	20	21	22	23	24	25	26	27	>28
DAIM-B1/1	Provision of quality-assured aeronautical data and information								100 %				
						72.0 %							
DAIM-B1/3	Provision of digital terrain data sets						100 %						
DAIM-B1/4	Provision of digital obstacle data sets						100 %						

FICE

		<18	18	19	20	21	22	23	24	25	26	27	>28
FICE-B0/1	Automated basic inter facility data exchange (AIDC)						100 %						

FRTO

		<18	18	19	20	21	22	23	24	25	26	27	>28
FRTO-B0/2	Airspace planning and Flexible Use of Airspace (FUA)								100 %				
						83.0 %							
FRTO-B0/4	Basic conflict detection and conformance monitoring								100 %				
						68.0 %							
FRTO-B1/1	Free Route Airspace (FRA)						100 %						
FRTO-B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data								100 %				
						83.0 %							
FRTO-B1/4	Dynamic sectorization						No Plan						
FRTO-B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring								100 %				
						68.0 %							
FRTO-B1/6	Multi-Sector Planning						No Plan						
FRTO-B2/3	Large Scale Cross Border Free Route Airspace (FRA)						100 %						

NAVS

		<18	18	19	20	21	22	23	24	25	26	27	>28
NAVS-B0/2	Satellite Based Augmentation Systems (SBAS)					83.0 %			100 %				

NOPS

		<18	18	19	20	21	22	23	24	25	26	27	>28
NOPS-B0/1	Initial integration of collaborative airspace management with air traffic flow management					83.0 %			100 %				
NOPS-B0/2	Collaborative Network Flight Updates					100 %							
NOPS-B1/1	Short Term ATFM measures					No Plan							
NOPS-B1/4	Dynamic Traffic Complexity Management					No Plan							
NOPS-B1/5	Full integration of airspace management with air traffic flow management					83.0 %			100 %				
NOPS-B1/6	Initial Dynamic Airspace configurations					No Plan							
NOPS-B1/8	Extended Arrival Management supported by the ATM Network function					No Plan							

RSEQ

		<18	18	19	20	21	22	23	24	25	26	27	>28
RSEQ-B1/1	Extended arrival metering					No Plan							

SNET

		<18	18	19	20	21	22	23	24	25	26	27	>28
SNET-B0/1	Short Term Conflict Alert (STCA)					100 %							
SNET-B0/2	Minimum Safe Altitude Warning (MSAW)					46.0 %			100 %				
SNET-B0/3	Area Proximity Warning (APW)					46.0 %			100 %				
SNET-B0/4	Approach Path Monitoring (APM)					46.0 %			100 %				
SNET-B1/1	Enhanced STCA with aircraft parameters					No Plan							

SURF

		<18	18	19	20	21	22	23	24	25	26	27	>28
SURF-B1/1	Advanced features using visual aids to support traffic management during ground operations					No Plan							

Source: LSSIP DB

2.3.6.2 Implementation Projects

The tables below show high-level information about the main projects currently ongoing in Albania according to the 2021 published document mentioned above.

The following table shows the national projects:

Table 37 Albania National Ongoing Air Transport Projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
A-CDM survey and data analysis.	ACAA (AL), Albcontrol (AL), EUROCONTROL, Mother Teresa Airport (AL)	01/12/2021 - 31/12/2022	A first gap analysis meeting will be held on April 2022 in Albania with all representatives.	L3: AOP05
AIRFIELD 2020	Mother Teresa Airport (AL)	Start in 2019 End of 2021	Airfield 2020 is a project owned by Tirana International Airport (TIA), which include (i) repaving of the runway (ii) reconstruction of the existing taxiway and and new Taxiway Bravo, (iii) extending the APRON with two additional parking positions and implementing STOP Bars in all taxiways. On Going	-
Aeronautical data quality	ACAA (AL), Albcontrol (AL), Mil. Authority (AL), Mother Teresa Airport (AL)	31/12/2019 31/12/2022	ONGOING	-
Albania joins SECSI FRA	AUSTROCONTROL, Albcontrol (AL), Croatia Control Ltd, M-NAV, SLOVENIA CONTROL, bhansa, smatsa	Albcontrol is a full member of SECSI FRA as of 2 December 2021	-	L3: AOM21.2
CAA Strategic Business Plan (2022-2026)	ACAA (AL)	2022	The purpose of the document is to identify the challenges and opportunities lying ahead and proposing tangible solutions in order to allow ACAA to satisfy the requirements stemming from the Single European Sky (SES) Regulation and National Legislation in the field of Aviation.	-
Implementaiton of FUA tool PRISMIL to support FUA indicators.	ACAA (AL), Albcontrol (AL), Mil. Authority (AL)	31/12/2021-2022	ALBCONTROL has implemented LARA by the end of 2019. FUA tool PRISMIL to support FUA indicators will be installed by the end of 2021.	L3: AOM19.1
Implementing Regulation (EU) 2020/469.	ACAA (AL)	01/12/2021 - 31/12/2022	Transitioning & Implementing Commission Implementing Regulation (EU) 2020/469.	-
Integration of Podgorica's Mode S signal into Albcontrol's ATM system	Albcontrol (AL), smatsa	This project started by the end of 2019. There were delays because of the pandemic. It is expected to be finalized by the end March 2022.	1. Assessment of expected benefits from integrating Mode S signal into our system; 2. Service level agreement concluded with SMATSA; 3. Preparation of technical specifications for the integration into the ATM system; 4. Preparation of safety assessment; 5. Notification of the Competent Authority of the upcoming changes; 6. Factory acceptance test (FAT); 7.SAT; 8. Review of Safety Assessment and fulfilment of safety requirements and the last step is going operational.	-
Obtaining EGNOS services	ACAA (AL), Albcontrol - Meteorological Directorate (AL)	01/05/2021 - 31/12/2023	Prepare and review Safety assessment documents.	-
Performance Plan for RP3	ACAA (AL)	01/06/2021 - 31/12/2022	Preparation of the Performance Plan for RP3 in shadow mode is ongoing.	-
RNAV - APV Approach procedures	Albcontrol (AL)	31/12/2022	Ongoing	L3: NAV10

The following table presents the FAB (Functional Airspace Block) projects:

Table 38 Albania FAB (Functional Airspace Block) Projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
ATM System upgrade and SESAR Programme	ACAA (AL), Albcontrol (AL), Mil. Authority (AL), Mother Teresa Airport (AL)	Recurrent activities 2014-Open	ONGOING	-
Flight Efficiency Plan	ACAA (AL), Albcontrol (AL), Mil. Authority (AL), Mother Teresa Airport (AL)	Recurrent activity 2014-open	ONGOING	-
Radar sensor data exchange SLA, Surveillance Performance & Maintenance Plan	ACAA (AL), Albcontrol (AL), Mil. Authority (AL), Mother Teresa Airport (AL)	31/12/2019 31/12/2021	ONGOING	L3: ITY-SPI

The following table shows the multinational air transport projects:

Table 39 Albania Multinational Projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
SECSIFRA	Albcontrol (AL)	Albcontrol is a full member of SECSI FRA as of 2 December 2021	-	L3: AOM21.2

2.3.7 Summary of Air Transport Projects

The following table summarizes Albania's planned and ongoing air transport projects, including project description, timeline, estimated costs, and expected impacts.

Table 40 Summary of Planned and Ongoing Air Transport Projects of Albania

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Tirana Airport (Rinas)	Rehabilitation of Tirana – Durres rail line. The project also covers the construction of a new 7.4 km-long track connecting Tirana city to the Tirana International Airport (Rinas)	90.45M	2024	Landside Connection
Tirana Airport	Rehabilitation of Vore – Hani Hotit Railway Line | Tirana Durres with direct connection to the airport is a 41 km rail line.	260 M	2028	Landside Connection
Tirana Airport	Expansion of Tirana Airport Beyond 2025	TBD	beyond 2025	Increase of Capacity
New Southern Airport	New Southern Airport (PPP)	107M	2020-2022	Increase of Capacity
Kukes Airport	Kukes Airport upgrading and operation	8M	NA	Increase of Capacity
Albania	Airport Master Plan for Albania to consider helipads, drones, and general aviation, taking account of traffic forecast considering economic and tourism development	1M	2020-2022	Increase of Capacity
Albania	A-CDM survey and data analysis	NA	2022	Single European Sky - SESAR
Mother Teresa Airport	AIRFIELD 2020 | Airfield 2020 is a project owned by Tirana International Airport (TIA), which includes (i) repaving of the runway, (ii) reconstruction of the existing taxiway and new taxiway Bravo, (iii) extending the APRON with two additional parking positions and implementing STOP Bars in all taxiways	NA	2021	Increase of Capacity
Albania	Aeronautical data quality	NA	2022	Single European Sky - SESAR
Albania	CAA Strategic Business Plan (2022-2026) | The document aims to identify the challenges and opportunities ahead and propose tangible solutions to allow ACAA to satisfy the requirements stemming from the Single European Sky (SES) Regulation and National Legislation in the field of Aviation.	NA	2022	Single European Sky - SESAR
Albania	Implementaiton of FUA tool PRISMIL to support FUA indicators. ALBCONTROL implemented LARA by the end of 2019. FUA tool PRISMIL to support FUA indicators will be installed by the end of 2021	NA	2022	Single European Sky - SESAR

Albania	Implementing Regulation (EU) 2020/469. Transitioning & Implementing Commission Implementing Regulation (EU) 2020/469.	NA	2022	Single European Sky - SESAR
Albania	Integration of Podgorica's Mode S signal into Albcontrol's ATM system. 1. Assessment of expected benefits from integrating Mode S signal into our system; 2. Service level agreement concluded with SMATSA; 3. Preparation of technical specifications for the integration into the ATM system; 4. Preparation of safety assessment; 5. Notification of the Competent Authority of the upcoming changes; 6. Factory acceptance test (FAT); 7.SAT; 8. Review of Safety Assessment and fulfillment of safety requirements; the last step is going operational.	NA	2022	Single European Sky - SESAR
Albania	Obtaining EGNOS services. Prepare and review Safety assessment documents.	NA	2023	Single European Sky - SESAR
Albania	Performance Plan for RP3 Preparation of the Performance Plan for RP3 in shadow mode is ongoing.	NA	2022	Single European Sky - SESAR
Albania	RNAV - APV Approach procedures	NA	2022	Single European Sky - SESAR
Albania	ATM System Upgrade and SESAR Programme	NA	NA	Single European Sky - SESAR
Albania	Flight Efficiency Plan	NA	NA	Single European Sky - SESAR
Albania	Radar sensor data exchange SLA, Surveillance Performance & Maintenance Plan	NA	NA	Single European Sky - SESAR

2.4 Bosnia and Herzegovina

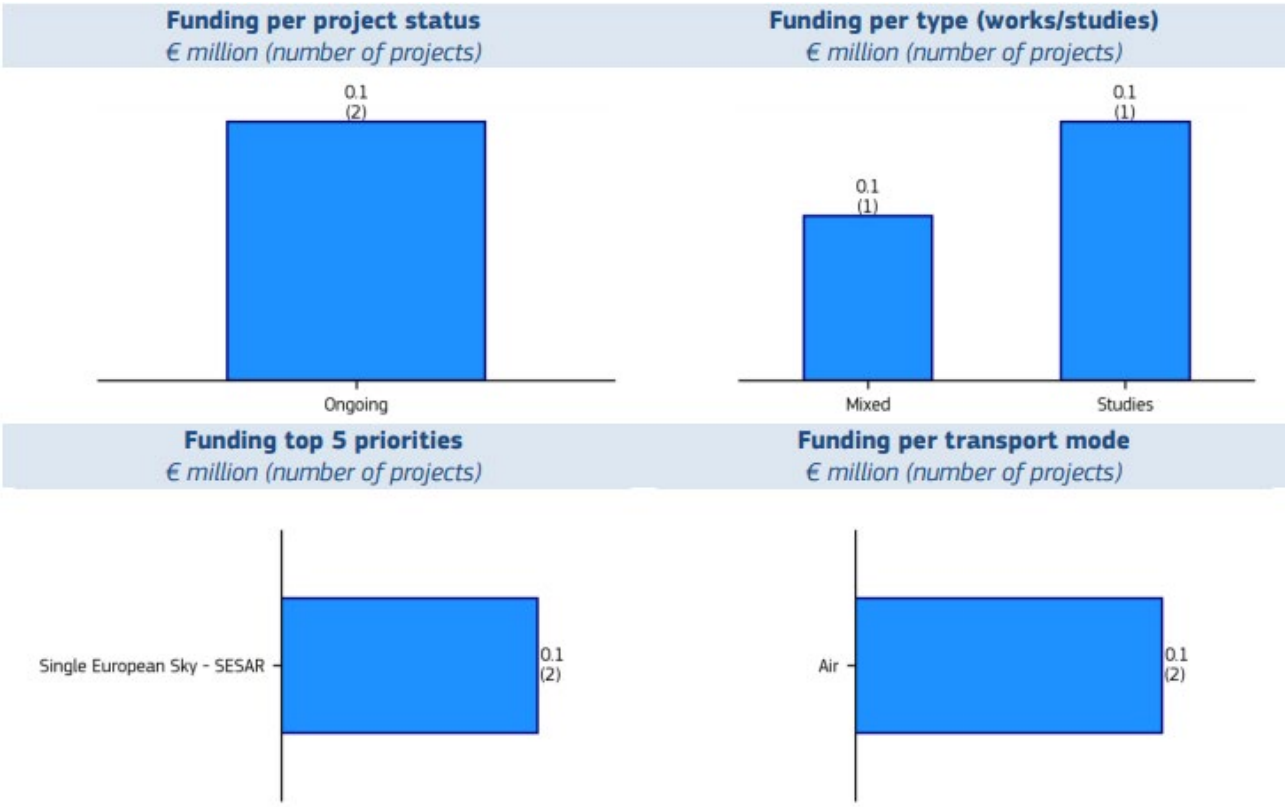
To provide details of the air transport planned project and investment for Bosnia and Herzegovina, the Connecting Europe Facility (CEF) – Transport grants for Air Transport, TEN-T extensions of the Comprehensive and Core Network in Western Balkans, and Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans projects are studied.

When drafting this report, information regarding Air transport projects in The National Transport Plan and The National Air Transport Strategy was not found.

2.4.1 Overview of Projects with CEF Transport Funding from Bosnia and Herzegovina

Beneficiaries from Bosnia and Herzegovina participate in 2 projects and receive €0.1 million in CEF-Transport co-funding[157], with investments in these projects of €0.2 million. Out of these, two are located in Bosnia and Herzegovina. The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from Bosnia and Herzegovina. For details on such projects in the Air Transport sector, refer to the Bosnia and Herzegovina beneficiaries list.

Figure 86 EU Funding Details for Transport Sector in Bosnia and Herzegovina



2.4.2 List of Air Transport Projects with Beneficiaries from Bosnia and Herzegovina

The following table lists the air transport projects funded by CEF with beneficiaries from the country.

[157] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_bosnia_and_herzegovina.pdf

Table 41 Bosnia and Herzegovina CEF funded projects for Air Transport

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for Bosnia and Herzegovina Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for Bosnia and Herzegovina Beneficiaries (€)
Air						**291,389,847**	**144,632**	**588,056,115**	**216,463**
2014-EU-TM-0136-M	DP Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2020	289,733,197	56,232	586,107,115	112,463
2016-EU-TMC-0075-S	eGAFOR	Ongoing	Single European Sky - SESAR	Studies	30/06/2021	1,656,650	88,400	1,949,000	104,000

2.4.3 Overview of Bosnia and Herzegovina Air Transport Projects of TEN-T Core and Comprehensive Corridors in the Western Balkans

The project under TEN-T Core and Comprehensive Corridors in the Western Balkans is Sarajevo Airport Terminal B Extension and Modernization.[158]

This project includes extending the passenger terminal and constructing a business administration building for the Operations Centre. It is part of a more extensive program of strategic projects at Sarajevo International Airport that should provide additional capacity and improve quality of service.

The project cost is estimated at 26.7 million EUR, and it is estimated to be completed by 2021.

2.4.4 Overview of Bosnia and Herzegovina Air Transport Project Based on Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans

The Increase of operational airport capacities for the International Airport of Sarajevo is among the Mature Priority Projects based on the Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans Document published in April 2022 by the Permanent Secretariat of Transport Community. The following table provides the details of the estimated costs. [159]

Table 42 Bosnia and Herzegovina Air Transport Project Based on TEN-T Extension of the Comprehensive and Core Network in Western Balkans

Corridor / Route / Node	TEN-T Network	Regional Partner	Project Name	Project cost (M€)	Expected Completion
Airports					
Sarajevo	Core	BIH	Increase of operational airport capacities for International Airport Sarajevo	43.6	

2.4.5 Summary of Air Transport Projects

The following table summarizes the planned and ongoing air transport projects for Bosnia and Herzegovina, including project description, timeline, estimated costs, and expected impacts.

[158] COMMISSION DELEGATED REGULATION (EU) 2016/758 of 4 February 2016 amending Regulation (EU) No 1315/2013 of the European Parliament and of the Council as regards adapting Annex III

[159] https://www.transport-community.org/wp-content/uploads/2022/05/Five-Year-Rolling-Work-Plan-for-Development-of-Indicative-TEN-T-Extension-of-the-Comprehensive-and-Core-Network-in-Western-Balkans.pdf

Table 43 Summary of Planned and Ongoing Air Transport Projects of Bosnia and Herzegovina

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Sarajevo Airport	Sarajevo Airport Terminal B Extension and Modernization	26.7M	2021	Increase of Capacity
Sarajevo Airport	Increase of operational airport capacities for International Airport Sarajevo	43.6 M	NA	Increase of Capacity
Bosnia and Herzegovina	DP Implementation	586,107,115	31/12/2020	Single European Sky - SESAR
Bosnia and Herzegovina	eGAFOR	1,949,000	30/06/2021	Single European Sky - SESAR

2.5 Croatia

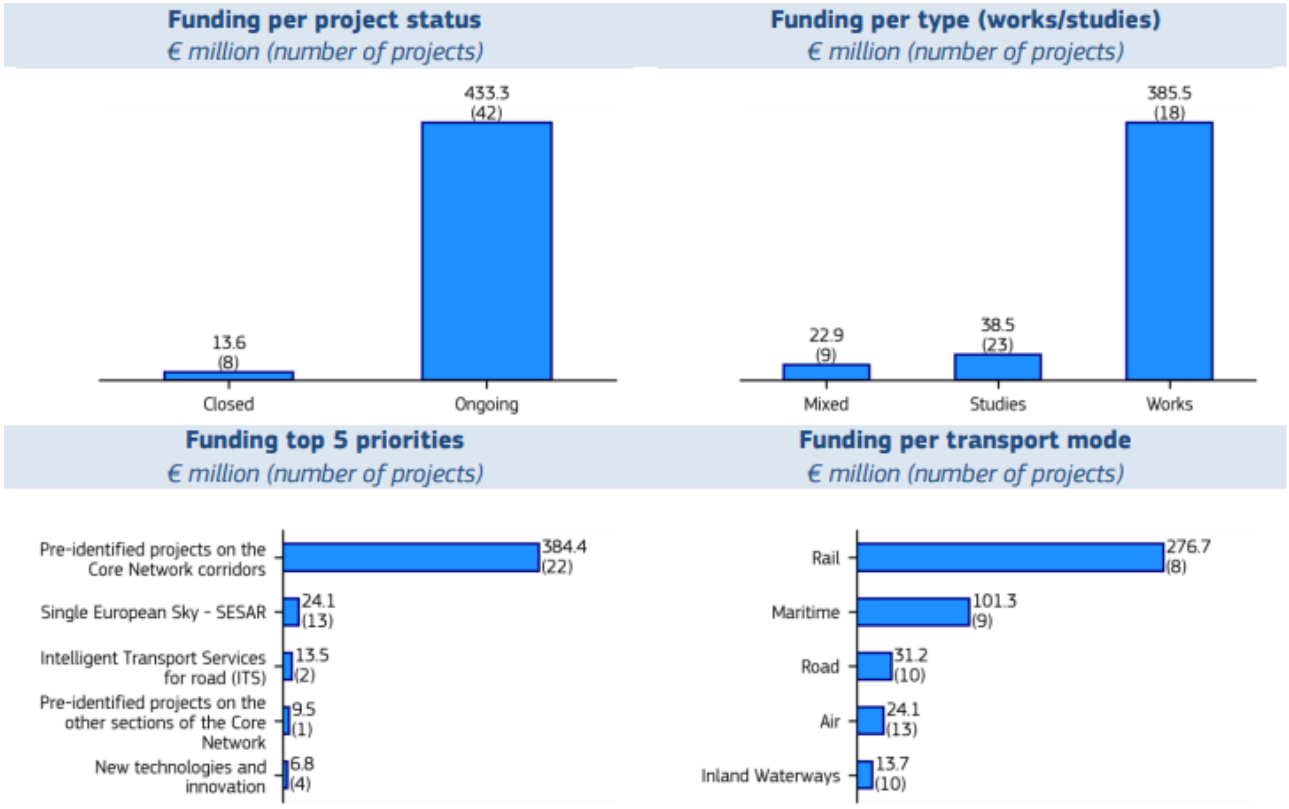
The Connecting Europe Facility (CEF) – Transport grants for Air Transport and the National Recovery and Resilience Plan (NRRP) of Croatia are studied to provide details of Croatia's planned air transport project and investment.

When drafting this report, information regarding Air transport projects in The National Transport Plan and The National Air Transport Strategy was not found.

2.5.1 Overview of Projects with CEF Transport Funding from Croatia

Beneficiaries from Croatia participate in 50 projects and receive €446.9 million in CEF-Transport co-funding[160], with investments in these projects of €557.5 million. Out of these, 48 are located in Croatia. The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from Croatia. For details on such projects in the Air Transport sector, refer to the list of projects with beneficiaries from Croatia

Figure 87 EU Funding Details for Transport Sector in Croatia



[160] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_croatia.pdf

2.5.2 Overview of Additional Projects Located in Croatia

Additionally, four projects are located in Croatia but without the involvement of beneficiaries from Croatia. These projects correspond to €21.2 million of CEF-Transport funding and a total investment of €81.1 million. These amounts equal the total budget of those actions and not only the share benefiting Croatia. For details on such projects, please refer to the list of projects located in Croatia without beneficiaries from Croatia.

2.5.3 List of Air Transport Projects with Beneficiaries from Croatia

The following table lists the air transport projects funded by CEF with beneficiaries from the country.

Table 44 Croatia CEF Funded Air Transport Projects with Beneficiaries from Croatia

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for Croatia Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for Croatia Beneficiaries (€)
Air						**1,245,272,898**	**24,109,381**	**2,689,086,620**	**34,663,302**
2014-EU-TM-0136-M	DP Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2020	289,733,197	136,884	586,107,115	273,767
2014-EU-TM-0376-M	Speeding up harmonisation and convergence of ATM	Closed	Single European Sky - SESAR	Mixed	30/06/2017	10,527,360	1,544,425	21,054,720	3,088,851
2015-EU-TM-0193-M	SESAR Deployment Programme implementation 2015 – Cluster 1	Closed	Single European Sky - SESAR	Mixed	31/12/2019	82,574,058	101	205,955,187	251
2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 – Cluster 2	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	328,649,349	1,034	747,676,567	2,068
2015-EU-TM-0197-M	SESAR Deployment Programme implementation 2015 – Cluster 3	Ongoing	Single European Sky - SESAR	Mixed	31/12/2021	47,660,373	8,480,443	58,404,938	9,977,036
2015-EU-TM-0388-S	Convergence of DSNA and COOPANS ATM Systems step 1B (CODACAS 1B) - Cohesion part	Closed	Single European Sky - SESAR	Studies	30/06/2018	75,324	75,324	88,616	88,616
2015-HR-TM-0023-M	Implementation of the A-SMGCS system at Zagreb International Airport	Closed	Single European Sky - SESAR	Mixed	30/11/2018	2,937,484	2,937,484	3,455,864	3,455,864
2016-EU-TM-0117-M	SESAR Deployment Programme implementation 2016 – Cluster 1: General	Ongoing	Single European Sky - SESAR	Mixed	31/12/2022	246,713,144	36,328	599,049,346	84,206
2016-EU-TMC-0075-S	eGAFOR	Ongoing	Single European Sky - SESAR	Studies	30/06/2021	1,656,650	340,000	1,949,000	400,000
2016-EU-TMC-0113-M	SESAR Deployment Programme implementation 2016 – Cluster 2: Cohesion	Ongoing	Single European Sky - SESAR	Mixed	31/12/2021	6,642,004	4,583,635	7,852,522	5,392,525
2016-HR-TMC-0165-W	Croatia Airlines joining the EGNOS family	Closed	Single European Sky - SESAR	Works	15/12/2019	603,898	603,898	710,469	710,469
2017-EU-TM-0076-M	SESAR Deployment Programme Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	227,350,056	5,219,825	456,032,277	10,439,650
2017-HR-TM-0100-W	Implementation of ADS-B OUT function on Dash 8 and Airbus fleet	Closed	Single European Sky - SESAR	Works	01/05/2020	150,000	150,000	750,000	750,000

2.5.4 List of Projects with Implementation in Croatia without Beneficiaries from Croatia

The following table lists the air transport projects funded by CEF without beneficiaries from the country.

Table 45 Croatia CEF Funded Air Transport Projects without Beneficiaries from Croatia

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Beneficiary EU contribution	Eligible costs (at project level)(€)	Out of which: Eligible costs for Croatia Beneficiaries (€)
Air						**1,048,897**		**2,097,793**	
2015-EU-TM-0387-S	Convergence of DSNA and COOPANS ATM Systems step 1B (CODACAS 1B) - General part	Closed	Single European Sky - SESAR	Studies	30/06/2018	1,048,897		2,097,793	

2.5.5 The National Recovery and Resilience Plan (NRRP) of Croatia

The NRRP of Croatia[161] consists of 146 investments and 76 reforms. They will be supported by €6.3 billion in grants. 40.3% of the plan will support climate objectives, and 20.4% of the program will foster the digital transition. The projects related to air transport are the following:

[161] https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/croatias-recovery-and-resilience-plan_en

- **Modernization and greening of Zadar Airport infrastructure** C1 .4. R5-I1 - Zadar Airport plans to become the first energy-independent airport in Croatia by investing in infrastructure modernization and installing photovoltaics. The modernization of the infrastructure of Zadar Airport includes the reconstruction and expansion of the main apron and the provision of apron elements for new aircraft positions following the current regulations of the taxiway. To mitigate the apron's greenhouse gas emissions, buried electricity supply units will be installed to obtain directly from the passenger terminal's power supply and air supply, which would also be connected to aggregates that are an integral part of the airport's infrastructure. The project plans to invest in constructing a 610 kW photovoltaic power plant to produce energy from renewable sources. The pilot project is to create the first energy-independent airport to ensure the total electricity consumption necessary to maintain the airport from entirely renewable energy sources. Estimated cost HRK 70,000,000. Implementation period: 6/2021.-12/2024.
- **Greening and digitization of Pula Airport** C1 .4. R5-I2. The objective is the creation of new, modern, and ecological infrastructure for the airport, which aims to meet all safety and spatial conditions. The airport's modernization is expected to increase the airline further and the number of passengers. The project envisages the completion of works on asphalting an apron for aircraft, the purchase of 3 solar electric pumps for electric vehicles, and the purchase of 4 electric vehicles. The project will raise awareness of information security, digitalization and sustainability, and airport operations efficiency. Estimated cost HRK 7,000,000. Implementation period 4/2021.-12/2023.
- **Reconstruction of passenger building at Osijek Airport** C1 .4. R5-I3. The aim is to reduce costs by changing heating energy sources so that heating oil is replaced by electricity produced from renewable sources, as well as on cooling and eliminating losses by substituting worn-out and permeable water supply and drainage installations, with the construction of wastewater purifiers and installation of savings lighting bodies and consumes. The reconstruction, and thus the modernization of the passenger building, ensuring the safe and rapid flow of passengers using modern equipment for the protection of civil aviation, will increase competition in the regional airport market, contributing to the growth of passenger traffic in ZL Osijek. The project envisions the construction of two new gates, a room for the Ministry of Interior and Customs, a room for the Operational Centre and Protection Service, changes to the external envelope of the building, installation changes, installation of heating and cooling systems, connections to the water supply and drainage network, computerization, video surveillance, and X-ray devices. It is planned to install panels with photovoltaic cells on the roof of the building to green ZL Osijek. The solar power plant on the roof will produce electricity for heating and cooling systems and heating sanitary water. A final building permit was obtained for the project. The estimated cost is HRK 30,000,000. Implementation period 12/2021.-6/2026.

2.5.6 Summary of Air Transport Projects

The following table summarizes all the previously mentioned planned and ongoing air transport projects for Croatia, including project description, timeline, estimated costs, and expected impacts.

Table 46 Summary of Planned and Ongoing Air Transport Projects of Croatia

Node or section	Project description	Costs (HRK)	Estimated end year	Impact
Croatia	The Republic of Croatia plans to invest in developing environmentally independent airports by modernizing and constructing energy-independent infrastructure. THE MMPI plans to conclude agreements with three airports in the territory of the Republic of Croatia, which will, through the construction of photovoltaic cells, the purchase of electric vehicles, and the reconstruction of aprons and terminals, create new, modern, and more resilient airports that will lead the air sector as energy	1,687,000,000 223,903,377.80 Euros	2026	Increase of Capacity and Sustainable Fuel
Zadar Airport	Modernization and greening of Zadar Airport infrastructure / The modernization of the infrastructure of Zadar Airport include the reconstruction and expansion of the main apron and the provision of apron elements for new aircraft positions following the current regulations of the taxiway. To reduce the apron's greenhouse gas emissions, buried electricity supply units would be installed that would be obtained directly from the passenger terminal's power supply and air supply, which would also be connected to aggregates that are an integral part of the airport's infrastructure. The project plans to invest in constructing a 610 KW photovoltaic power plant to produce energy from renewable sources.	70,000,000 9,290,596.59 Euros	2024	Increase of Capacity and Sustainable Fuel
Pula Airport	Greening and digitizing Pula Airport / The project envisages the completion of works on asphalting an apron for aircraft, the purchase of 3 solar electric pumps for electric vehicles, and the purchase of 4 electric vehicles. The project will raise awareness of information security, digitalization and sustainability, and airport operations efficiency.	7,000,000 929,059.66 Euros	2023	Increase of Capacity and Sustainable Fuel
Osijek Airport	Reconstruction of passenger building at Osijek Airport / The project envisions the construction of two new gates, a room for the Ministry of Interior and Customs, a space for the Operational Centre and Protection Service, changes to the external envelope of the building, installation changes, installation of heating and cooling systems, connections to the water supply and drainage network, computerization, video surveillance, and X-ray devices. It is planned to install panels with photovoltaic cells on the roof of the building to green ZL Osijek. The solar power plant on the roof will produce electricity for heating and cooling systems and heating sanitary water. A final building permit was obtained for the project.	30,000,000 3,981,684.25 Euros	2026	Increase of Capacity
Croatia	SESAR Deployment Programme implementation 2015 – Cluster 2	747,676,567 99,233,733.76 Euros	31/12/2023	Single European Sky - SESAR
Croatia	SESAR Deployment Programme implementation 2016 – Cluster 1: General	599,049,346 79,507,511.58 Euros	31/12/2022	Single European Sky - SESAR
Croatia	SESAR Deployment Programme Implementation	456,032,277 60,525,884.53 Euros	31/12/2023	Single European Sky - SESAR

2.6 Greece

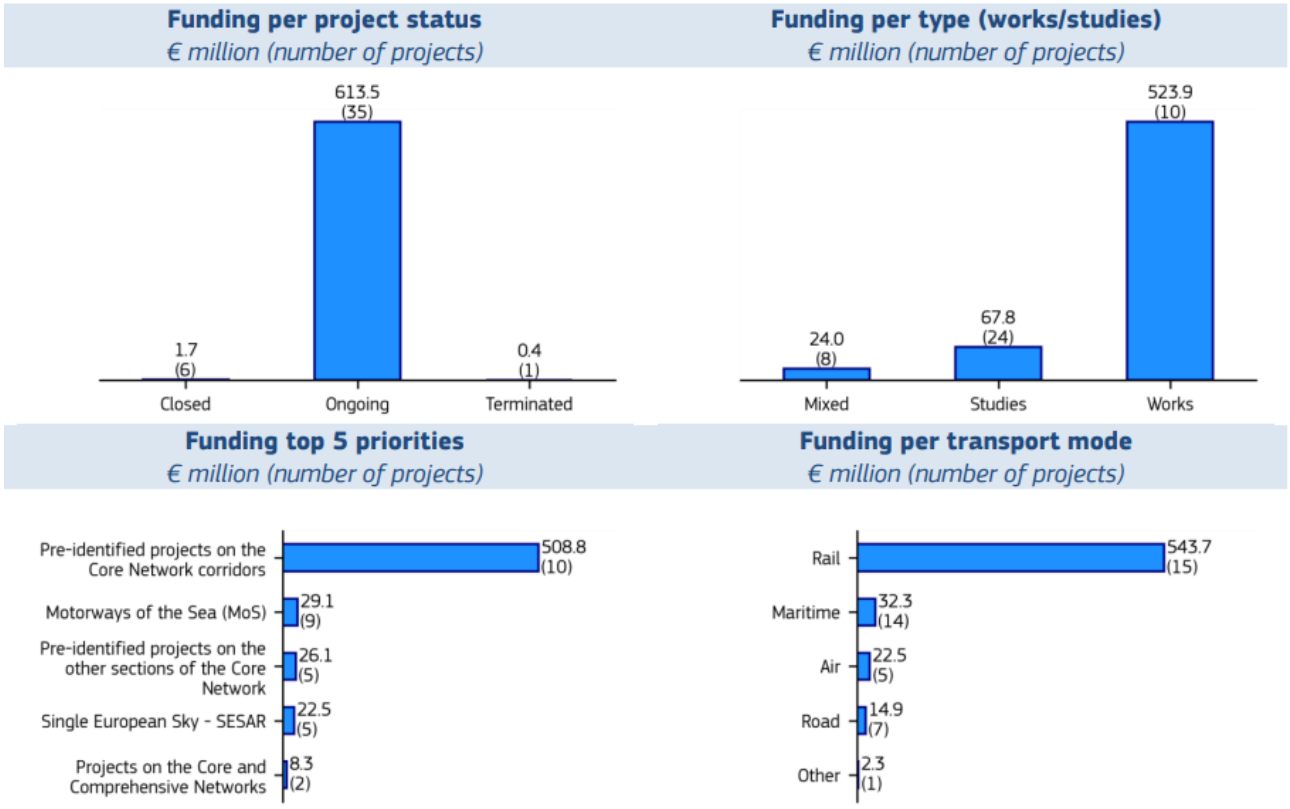
To provide details of the air transport planned project and investment for Greece, the National Transport Plan and the Connecting Europe Facility (CEF) – Transport grants for Air Transport are studied.

2.6.1 Overview of Projects with CEF Transport Funding from Greece

Beneficiaries from Greece participate in 42 projects and receive €615.7 million in CEF-Transport co-funding[162], with investments in these projects of €953.6 million. Out of these, 40 are located in Greece.

The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from Greece. For details on such projects, please refer to the list of projects with beneficiaries from Greece.

Figure 88 EU Funding Details for Transport Sector in Greece



2.6.2 Overview of Additional Projects Located in Greece

Additionally, three projects are located in Greece but without the involvement of beneficiaries from Greece. These projects correspond to €56.3 million of CEF-Transport funding and a total investment of €75.8 million. These amounts equal the total budget of those actions and not only the share benefiting Greece. For details on such projects, refer to the following sub-chapter showing list of projects in Greece with beneficiaries from Greece.

[162] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_greece.pdf

2.6.3 List of Air Transport Projects with Beneficiaries from Greece

The following table lists the air transport projects funded by CEF with beneficiaries from the country.

Table 47 Greece CEF Funded Air Transport Projects with Beneficiaries from Greece

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for Greece Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for Greece Beneficiaries (€)
Air						**1,094,695,746**	**22,457,287**	**2,393,365,305**	**63,482,750**
2014-EU-TM-0136-M	DP Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2020	289,733,197	5,793,000	586,107,115	11,586,000
2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 – Cluster 2	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	328,649,349	10,501,517	747,676,567	38,298,750
2016-EU-TM-0117-M	SESAR Deployment Programme implementation 2016 – Cluster 1: General	Ongoing	Single European Sky - SESAR	Mixed	31/12/2022	246,713,144	3,908,270	599,049,346	9,089,000
2017-EL-TM-0158-W	AIA's evolution into a high-performing node within the European ATM network	Ongoing	Single European Sky - SESAR	Works	29/12/2023	2,250,000	2,250,000	4,500,000	4,500,000
2017-EU-TM-0076-M	SESAR Deployment Programme Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	227,350,056	4,500	456,032,277	9,000

2.6.4 List of Air Transport Projects with Implementation in Greece without Beneficiaries from Greece

The following table lists the air transport projects funded by CEF without beneficiaries from the country.

Table 48 Greece CEF Funded Air Transport Projects without Beneficiaries from Greece

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Beneficiary EU contribution	Eligible costs (at project level)(€)	Out of which: Eligible costs for Greece Beneficiaries (€)
Air						**47,660,373**		**58,404,938**	
2015-EU-TM-0197-M	SESAR Deployment Programme implementation 2015 – Cluster 3	Ongoing	Single European Sky - SESAR	Mixed	31/12/2021	47,660,373		58,404,938	

2.6.5 National Transport Plan for Greece

In November 2014, the Strategic Framework for Investment in Transport (SFIT) was published by the Ministry of Infrastructure, Transport, and Networks of Greece[163]. The report outlines a capital investment framework for the period 2014-2025, developed to meet EU funding requirements. It includes benchmarking of the transport sector's performance and identifies investment projects based on policy goals and consultation. In 2015, the Ministry of Infrastructure and Transport initiated a National Transport Plan for Greece to guide sustainable transport development until 2037. This plan relies on solid data, a Strategic Environmental Assessment (SEA), and a National Transport Model for decision support. Simultaneously, the Ministry aimed to establish a Strategic Planning Unit. The plan aligns with EU directives and incorporates the "Reference Scenario" investments, targeted for completion by 2027.

The Reference Scenario investments for air transport are outlined below and shown on a map at the end of this section.

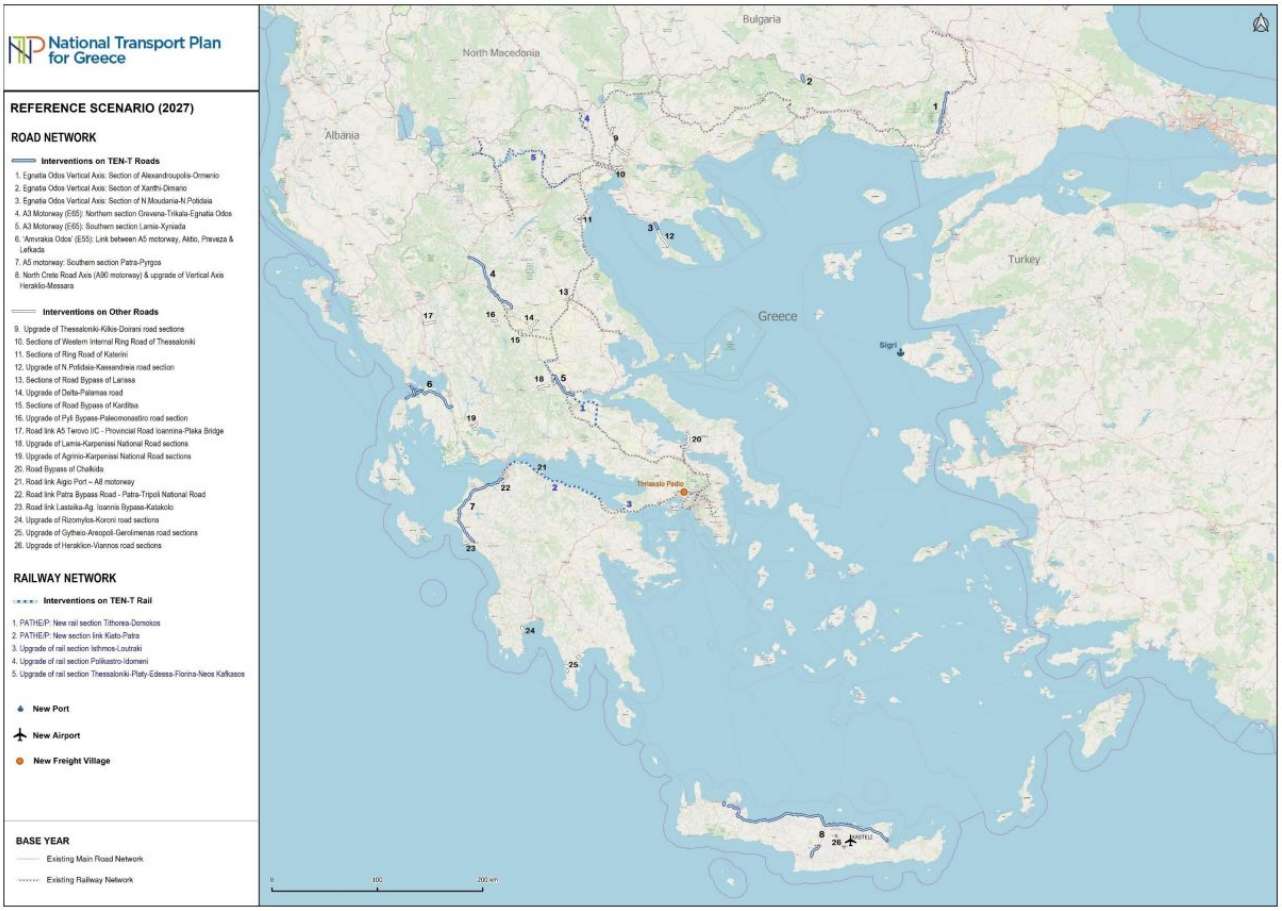
2.6.5.1 Airport projects

More than 20 aviation projects are currently included in the Reference Scenario. Funding is provided partly through EU Funds (Regional Development Funds and Connecting Europe Facility), mainly relating to air navigation systems and modernization of navigation, communication, and monitoring systems. Other projects, implemented through national funds or private financing, are outlined below:

[163] National Transport Plan for Greece - TA2017028 GR GRS - Final Transport Plan Report - JUNE 2019

- The new airport in Heraklion/Crete (Kastelli) is tendered to be under concession.
- The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos
- Chios Airport upgrade
- Paros Airport upgrade and expansion (practically finished and operating)
- Expansion of runway in National Airport of Syros
- Upgrade of National Airport of Thessaloniki "Makedonia" (runway expansion).

Figure 89 Infrastructure investments (Reference Scenario 2027) with planned Kastelli Airport



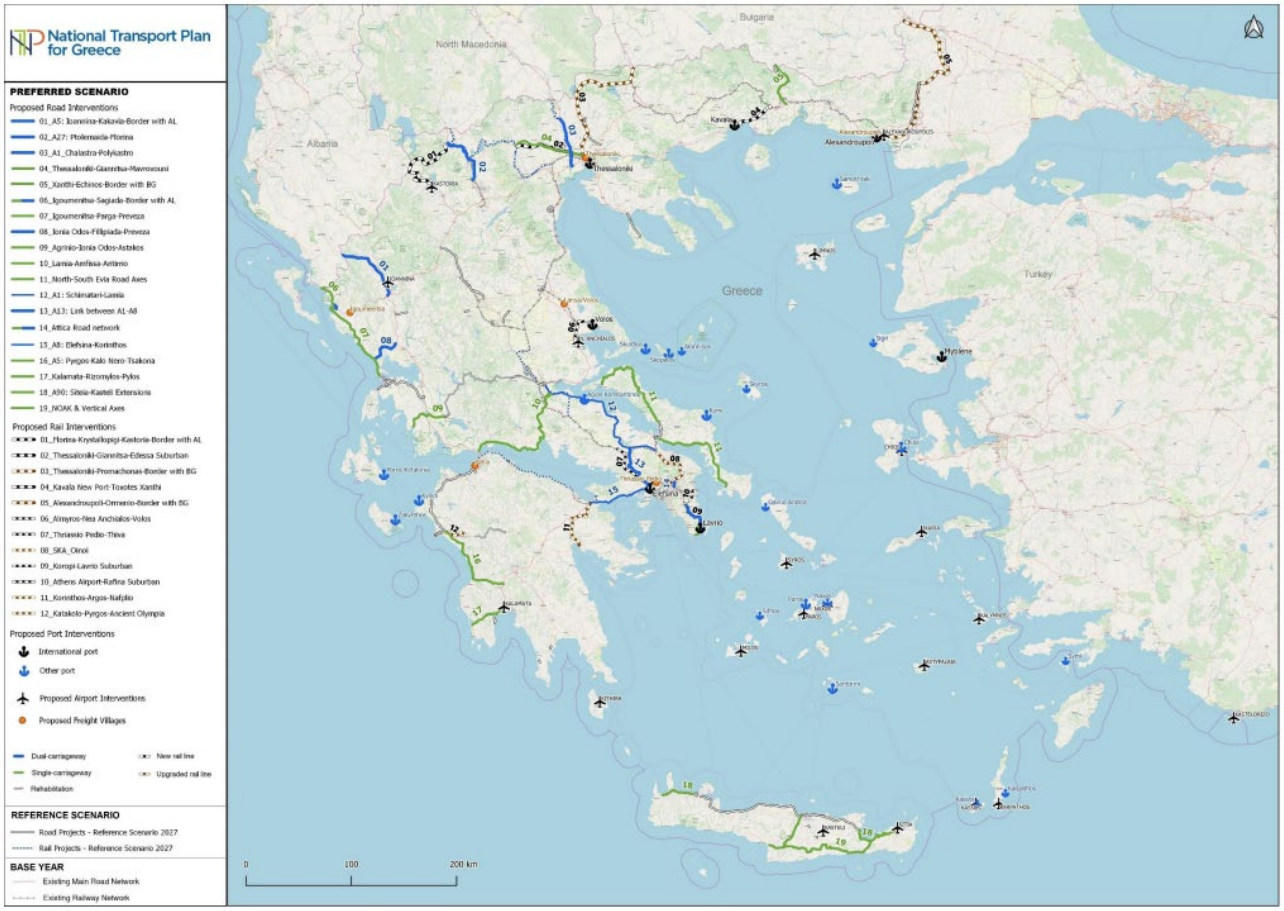
2.6.5.2 Investments Proposed under the Transport Plan

The Ministry of Transport has identified a significant package of new interventions forming part of Greece's final comprehensive Transport Plan. While the Reference Scenario comprises a package of infrastructure investments, the full suite of interventions will also be supported by a range of actions to improve the overall performance of the transport sector, addressing institutional and organizational issues that reduce its overall efficiency.

Concerning infrastructural measures, the following map illustrates the interventions that have been proposed for implementation up to the 2037 horizon for all transport modes. It is noted that the corridors

defined are indicative only, pending the outcome of the relevant preparation and option studies for each intervention.

Figure 90 Infrastructure investments for NTPG (2037), including air transport projects



The following table contains the sub-objectives and the sets of indicators proposed to be adopted for assessing the level of achievement of the high-level objectives for air transport and airports.

Table 49 Sub-objectives and Indicators for High-Level Objectives

High-Level Objectives / Sub-objectives	Transport Mode	Indicator	Base Year Value	Target 2027	Target 2037
Promote Economic Growth and Efficiency					
Improve airport efficiency & capacity	Air transport & airports	Number of airports improving the efficiency of the taxiway, aircraft aprons, and passenger buildings	0	16	39
		Number of runway extension projects	4	8	9
			2	6	7

		Number of airports reaching the maximum runway length according to their category Number of new passenger terminals Number of airports reaching the maximum runway length according to their category	31 airport terminals can handle traffic sufficiently 3~10 aircraft movements per hour	5 6 ~ 12 movements per hour	8 6 ~ 12 movements per hour 39
Increase Regional and International Transport Connectivity					
Improve international air connectivity	Air transport	Number of scheduled air services to foreign cities/countries Number of direct international connections to the islands	scheduled services to 93 cities in 50 countries 18 islands connected to 164 cities in 39 countries		20 islands connected to more than 164 cities in 39 countries
Environmental Sustainability					
Decrease the level of noise at the airport	Air transport	Number of airports operating 23:00-7:00	3	2	2
Increase Personal Accessibility and Social Inclusion					
Improve accessibility to airports	Air transport	Number of airports with rail/metro connections Number of airports with regular public transport connection	1 32		2 35
Safety and Security					
Improvement of airport safety and security	Air transport	Number of airports upgrading RESA (new requirement of ICAO applied when runways are expanded) Number of airports with private security	7		9 30

The following table provides the details of the proposed measures for air transport.

Table 50 Details of Proposed Measures for Greece Air Transport

Measure Code	Measure Title	Background and Rationale	Description
AT-Soft 1	Maintenance and improvement of the Public Service Obligations (PSOs) in the Greek airport system considering synergies between maritime and air PSOs	PSOs have been imposed on scheduled (domestic) air services since 2001. Currently, in the Greek airport system, 28 routes are operating as PSOs: 22 of them are direct airport-to-airport connections (e.g., Athens-Paros, AthensZakynthos), two transit flights (Athens-Kozani-Kastoria & Thessaloniki-Limnos-Ikaria) and four transit flights that serve more than one intermediate airports namely (a) Rhodes-KarpathosKasos-Siteia (b) LimnosMytilene-Chios-SamosRhodes (c) Rhodes-KosKalymnos-Leros-Astypalaia and (d) Corfu-AktioKefalonia-Zakynthos-Kithira. The flight frequency depends on the season: (a) the high season lasts from June until September, (b) the medium season refers to April, May, and October, and (c) the low season lasts from November until March that provides at least three return flights weekly per destination.	PSOs can be further improved in two directions: (a) Further improvement of the PSO contract terms. According to the current schema, air carriers operating the four transit flights are committed to landing in all intermediate airports even though there is no passenger to travel with ("touch and go"). Ways should be investigated for environmental and economic reasons to avoid unnecessary landings. (b) Establishment of synergies between existing maritime and air PSOs (standard ticket, timetable synchronization, port-airport transfer, and similar).
AT-Infra 1a	Planned projects of airports operated by HCAA aiming to resolve safety/security & operational problems	Following the privatization of the Athens International Airport and the 14 international airports of Fraport, the Hellenic Civil Aviation Authority (HCAA) remains responsible for the management, operation, and development of 23 airports (Alexandroupolis, Araxos, Ioannina, Kalamata, Kastoria, Kozani, Nea Anchialos in mainland, Sitia in Crete and Astypalaia, Chios, Ikaria, Kalymnos, Karpathos, Kasos, Kastelorizo, Kithira, Leros, Limnos, Milos, Naxos, Paros, Skyros, and Syros), as well as of the Heraklion airport which will also be privatized. For the above 23 airports, the Problem Analysis revealed various drawbacks and associated HCAA requests/studies to improve the safety of landside and airside airport operations, enhance airport security, alleviate operational bottlenecks, and upgrade the service level increasing their potential for future growth.	Projects aiming to improve the safety of runway and airside operations include Alexandroupolis: Completion of new Air Traffic Control and upgrade of central light control system. Astypalaia: The embankment in the northern part of the runway has been corroded and must be restored. Ioannina: Maintenance of runway lights, airport obstacle lights, and VOR communication. Kalamata: Upgrade of runway and taxiways, construction of Air Traffic Control, construction of the subsidiary building, and upgrade of the electrical network and the illuminated runway/taxiway signs and guidance signs. Kalymnos: Installation of obstacle lights in the wider aerodrome area Kastelorizo: Restoration of safety and obstacle-free zones and maintenance of obstacle lights. Limnos: The airport requires an upgrade of air navigation infrastructure, maintenance of runway and taxiways, water tower construction, and Precision Approach CAT I on edge 04 Milos: Maintenance and upgrade of VOR, installation of the apron lighting system, upgrade of airport security fencing, obstacles removal in runway threshold 08. Runway length expansion by 330 m (up to its maximum of 1200m), width expansion by 30 meters (instead of today's 25m), and improvement of safety zones. Nea Anchialos: Improvement of pavement strength, development of runway/taxiway guidance signs. Paros: Development of Rescue and Fire Fighting Services Station Syros: The hill Neraida is within the Obstacle Limitations Surface of the airport, and HCAA plans to remove it. The runway must be extended by 20 meters. In addition, a safety zone of 60 meters plus a 150 m clearway must be developed on both ends of the runway. Sitia: Supplementary fencing and ground earthworks, maintenance of airfield lights, Projects aiming to alleviate operational bottlenecks and upgrade the level of service the airport offers (including airport-related flight delays and accessibility): Alexandroupolis: The airport serves 160.000 passengers annually and has only four medium-sized aircraft stands. Apron expansion and new taxiway construction are required. Ikaria: Apron expansion, new taxiways, improved road accessibility. Kalamata: The airport serves 230.000 passengers annually, while the existing terminal building is only 2.800 m2. HCAA plans to expropriate land and perform the terminal passenger expansion and rearrangement, plus the apron expansion and new taxiway construction. Kalymnos: The runway length is short (1.015 meters) and should be extended by 60 meters (it cannot be extended more due to the area's geomorphology). Karpathos: The airport offers three aircraft stands while it requests an additional four. Two of these stands can be justified by the current level of airport traffic (during summer). The declared airport capacity is expected to be increased for 4 to 8 airplane movements per hour. The

			island's strong tourism potential (confirmed by the Consultant's model-based analysis) supports the need for two more aircraft stands. It is suggested to develop two new airplane parking stands with area provision for two other places (to be constructed when the traffic is increased). Kasos: The airport of Kasos has very little traffic (about 3.500 passengers per year). The runway length is 983 m, and its orientation is not optimal. An aircraft cannot be landed if the wind speed exceeds 18 knots. The apron provides one aircraft stand. HCAA plans to expand the apron to provide two additional stands. Given the low traffic of the airport, the development of 1 additional aircraft stand (instead of 2) is a more practical alternative. Kastelorizo: The airport's runway is 798 m long by 25 m wide. The terminal building covers only 120 m2, and the apron provides one aircraft stand. HCAA plans to extend the runway by 250 m, increase its width to 30 meters and construct a new passenger terminal of 500 m2. Milos: Terminal building improvement/rearrangement. Paros: The new Paros Airport has been operating since 25/07/2016. In 2016 the annual passenger arrivals doubled. The runway is 1.400 m long, and the terminal building is only 745 m2. HCAA plans to construct a new terminal of 8.400 m2 (main building plus app. 3700m2 for additional spaces) and extend the runway length by 400 m, extend the apron, and develop the vehicle parking area and a fuel farm. Chios: The airport serves annually about 200.000 passengers. The runway length is 1.511 m and should be extended to allow flights from more destinations. HCAA plans to expand the runway to 1.800 m. The area in front of the runway was expropriated, yet there is a need to fence the plot and upgrade the existing passenger terminal of 1.200 m2. There are also plans to develop a new terminal building of 4.000 m2. Kithira: Runway expansion from 1.461 m to 1.800 m. The runway elongation is justified because the older 737 series aircraft, widely used by tour operators traveling to Greek islands, is gradually replaced by the new generation 737- 800 airplanes (also known as 738), which cannot take off from the existing runway of Kithira airport. Naxos: The runway length is only 900 meters and should be increased to 1200 meters to accommodate airline requests. An even longer runway length is out of the question since the airport is adjacent to protected and residential areas. The airport terminal is 350 m2 and doesn't efficiently accommodate passenger traffic (35.135 pax/year in 2016). HCAA plans to extend the runway length to 1.200 m, construct RESA on both sides, construct two new taxiways, extend the apron by 8.000 m2, and expand the terminal building by 2.100 m2.
AT-Infra 1b	Planned projects of the airports operated by HCAA aiming to improve airport potential	Following the privatization of the Athens International Airport and the 14 international airports of Fraport, the Hellenic Civil Aviation Authority (HCAA) remains responsible for the management, operation, and development of 23 airports (Alexandroupolis, Araxos, Ioannina, Kalamata, Kastoria, Kozani, Nea Anchialos in mainland, Sitia in Crete and Astypalaia, Chios, Ikaria, Kalymnos, Karpathos, Kasos, Kastelorizo, Kithira, Leros, Limnos, Milos, Naxos, Paros, Skyros, and Syros), as well as of the Heraklion airport which will also be privatized. For the above 23 airports, the Problem Analysis revealed various drawbacks and associated HCAA requests/studies to improve the safety of landside and airside airport operations, enhance airport security, upgrade the level of service offered, and increase their potential for future growth.	Kastoria: The airport has a runway of 2.700 meters, yet meager annual domestic traffic (7.300 passengers) and little international traffic. The apron offers two stands for small airplanes. The existing terminal covers 1.150 m2. Plans exist for a new terminal building of 3.500 m2 and improvements of its surrounding area, as well as the apron expansion for two more stands and the completion of the new Air Traffic Control Kozani: The airport has a runway of 1.822 meters, yet meager annual domestic traffic (5.600 passengers) and no international traffic. The apron offers one airplane stand. The existing terminal covers 300 m2. The airports of Kastoria and Kozani are close to each other (about 77km). The recent development of the Egnatia Odos motorway has reduced the road connection from Kastoria and Kozani to Thessaloniki (2 and 1,5 hours, respectively), shifting the modal split from air to the road. An option for these airports is to seek a new role to attract international flights for tourism purposes in their region. However, the need for the operation of both airports needs to be investigated. It is proposed to maintain and develop Kastoria Airport focusing on logistics operations and keep Kozani Airport as a

			training center for new pilots and other staff. Nea Anchialos: Besides the projects for pavement and runway/taxiway signs, the airport requires an alternative access road as the entrance to the civil airport installations passes through the military area. A new (yet very expensive) local road must be constructed to resolve this problem. A unique rail access is also proposed to connect the airport with the neighboring industrial areas and the port of Volos. It is thus proposed to further develop air freight and logistics operations at Nea Anchialos airport.
AT-Infra 2	Development of a core network of water airports for the provision of seaplane services from, to, and between islands	The first seaplanes flights were performed in 2005 in the Ionian Sea and then expanded to Patras port. Next, seaplane flights from Lavrio port (in the wider Athens region), Attica to the islands of Cyclades, Dodecanese, Ionian Sea, and Patras were introduced. A main drawback in the operation of these seaplane services was the unfavorable term of Law 3333/2005, which states that it is only possible to operate up to three flights per water airport. In 2007, the Ministers of Mercantile Marine and Transport and Communications announced that they would speed up the procedures for creating new water airports. According to Official Gazette (OG 956/14-06-07), the restriction for two mainland water airports changed. The allowable flight limit for Patras water airport increased to 5 flights per day, and for Lavrio water airport increased to 9 flights per day. Nevertheless, more was needed. Seaplane companies, hoping that their business would go up quickly, had signed leasing contracts for more (than required) seaplanes and long-term contracts with many seaplane pilots. The idle seaplanes and pilots generated high operating costs, and in 2008 the seaplane companies stopped their operations. Later on, Law 4146/2013 eliminated the restrictions on total daily flights for an authorized water airport (Article 43). New legislation is in force for the "Establishment, operation, and occupancy of airports on water surfaces." Following a long "maturing period," the new Legislation Law 4568/2018 (that includes more favorable terms for the establishment and operation of water airports) was presented in the Greek Parliament for discussion (September 2018) and was ratified in October 2018.	A water airport network is under development. Three seaplane bases have been licensed in the ports of Kerkira, Paxoi, and Patras, while four more seaplane bases are under evaluation by the Hellenic Civil Aviation Authority in Thessaloniki, Ios, Heraklion, and Pylos. More than 20 other applications for authorization are pending (awaiting the new legislation approval). Furthermore, in the Athens region, a metropolitan seaplane basis is planned (most probable in Faliro or Agios Kosmas locations).

The following table details the mentioned air transport measures correlated to pillars.

Table 51 Greece Air Transport Measures Correlation to Pillars

CODE	MEASURE TITLE	PILLAR 1 Enhance Transport Safety, Efficiency, Sustainability & Competitiveness	2 Make PATHE an efficient multimodal corridor	3 Build Stronger International Land Connectivity	4 Support the Tourism Sector	5 Enhance connectivity to Greek islands	6 Improve Efficiency of Logistics Sector	7 Develop efficient Sub/Urban PT System to support national transport	8 Foster Regional Mobility & Growth	TYPE (Institutional, Operational, Infrastructure)
AT-Soft 1	Maintenance and improvement of the Public Service Obligations (PSOs) in Greek airport system considering synergies between maritime and air PSOs				✓	✓			✓	INST
AT-Infra 1a	Planned projects of airports operated by HCAA aiming to resolve safety, security & operational problems	✓			✓	✓				INFRA
AT-Infra 1b	Planned projects of airports operated by HCAA aiming to improve airport potential						✓		✓	INFRA
AT-Infra 2	Development of a core network of water airports for the provision of seaplane services from, to and between islands				✓	✓			✓	INFRA

2.6.6 Summary of Air Transport Projects

The following table summarizes all the planned and ongoing air transport projects for Greece, including project description, timeline, estimated costs, and expected impacts.

Table 52 Summary of Planned and Ongoing Air Transport Projects of Greece

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Kastelli Airport	The new airport in Heraklion/Crete (Kastelli) is tendered to be under concession.	NA	2027	Increase of Capacity
Chios Airport	Chios Airport upgrade	NA	2037	Increase of Capacity
Paros Airport	Paros Airport upgrade and expansion (practically finished and operating)	NA	NA	Increase of Capacity
Syros Airport	Expansion of runway in National Airport of Syros	NA	2037	Increase of Capacity
Thessaloniki Airport	Upgrade of National Airport of Thessaloniki "Makedonia" (expansion of runway)	NA	2037	Increase of Capacity
Aktio Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Zakynthos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Kavala Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Kerkyra Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Kefalonia Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Kos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Mykonos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Lesvos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Samos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity

Santorini Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Rodos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Skiathos Airport	The upgrade of 14 regional airports already under the "Fraport concession," including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos	NA	2037	Increase of Capacity
Kastoria Airport	The airport has a runway of 2.700 meters, yet meager annual domestic traffic (7.300 passengers), and little international traffic. The apron offers two stands for small airplanes. The existing terminal covers 1.150 m2. Plans exist for a new terminal building of 3.500 m2 and improvements of its surrounding area, as well as the apron expansion for two more stands and the completion of the new Air Traffic Control.	NA	2037	Increase of Capacity
Kozani Airport	The airport has a runway of 1.822 meters, yet meager annual domestic traffic (5.600 passengers), and no international traffic. The apron offers one airplane stand. The existing terminal covers 300 m2. The airports of Kastoria and Kozani are close to each other (about 77km). The recent development of the Egnatia Odos motorway has reduced the road connection from Kastoria and Kozani to Thessaloniki (2 and 1,5 hours, respectively), shifting the modal split from air to the road. An option for these airports is to seek a new role to attract international flights for tourism purposes in their region. However, the need for the operation of both airports needs to be investigated. It is proposed to maintain and develop Kastoria Airport focusing on logistics operations and keep Kozani Airport as a training center for new pilots and other staff.	NA	2037	
Alexandroupolis Airport	Completion of new Air Traffic Control and upgrade of central light control system.	NA	2037	Increase of Capacity
Astypalaia Airport	The embankment in the northern part of the runway has been corroded and must be restored.	NA	2037	Increase of Capacity
Ioannina Airport	Maintenance of runway lights, obstacle lights, and VOR communication.	NA	2037	Increase of Capacity
Kalamata Airport	Upgrade of runway and taxiways, construction of Air Traffic Control, construction of subsidiary building and upgrade of the electrical network and the illuminated runway/taxiway signs and guidance signs.	NA	2037	Increase of Capacity
Kalymnos Airport	Installation of obstacle lights in the wider aerodrome area	NA	2037	Increase of Capacity
Kastelorizo Airport	Restoration of safety zones and obstacle-free zones and maintenance of obstacle lights	NA	2037	Increase of Capacity
Limnos Airport	The airport requires an upgrade of air navigation infrastructure, maintenance of the runway and taxiways, water tower construction, and Precision Approach CAT I on the edge 04	NA	2037	Increase of Capacity
Milos Airport	Maintenance and upgrade of VOR, installation of the apron lighting system, improvement of airport security fencing, obstacles removal in runway threshold 08. Runway length expansion by 330 m (up to its maximum of 1200m), width expansion by 30 meters (instead of today's 25m), and improvement of safety zones.	NA	2037	Increase of Capacity

Nea Anchialos Airport	Improvement of pavement strength and development of runway/taxiway guidance signs.	NA	2037	Increase of Capacity
Paros Airport	Development of Rescue and Fire Fighting Services Station	NA	2037	Increase of Capacity
Syros Airport	The hill Neraida is within the Obstacle Limitations Surface of the airport, and HCAA plans to remove it. The runway must be extended by 20 meters. In addition, a safety zone of 60 meters plus a 150 m clearway must be developed on both ends of the runway.	NA	2037	Increase of Capacity
Sitia Airport	Supplementary fencing and ground earthworks, maintenance of airfield lights, Projects aiming to alleviate operational bottlenecks and upgrade the level of service offered by the airport (including airport-related flight delays and airport accessibility)	NA	2037	Increase of Capacity
Alexandroupolis Airport	The airport serves 160.000 passengers annually and has only four medium-sized aircraft stands. Apron expansion and new taxiway construction are required—Ikaria: Apron expansion, new taxiways, improve road accessibility.	NA	2037	Increase of Capacity
Kalamata Airport	The airport serves 230.000 passengers annually, while the existing terminal building is only 2.800 m2. HCAA plans to expropriate land and perform the passenger terminal expansion and rearrangement, plus the apron expansion and new taxiway construction. Kalymnos: The runway length is short (1.015 meters) and should be extended by 60 meters (it cannot be extended more due to the area's geomorphology).	NA	2037	Increase of Capacity
Karpathos Airport	The airport offers three aircraft stands while it requests an additional four. Two of these stands can be justified by the current level of airport traffic (during summer). The declared airport capacity is expected to be increased for 4 to 8 airplane movements per hour. Considering the island's tourism potential (confirmed by the Consultant's model-based analysis), that supports the need for two more aircraft stands. It is suggested to develop two new airplane parking stands with area provision for two additional places (to be constructed when the traffic is increased).	NA	2037	Increase of Capacity
Kasos Airport	The airport of Kasos has very little traffic (about 3.500 passengers per year). The runway length is 983 m, and its orientation is not optimal. An aircraft cannot be landed if the wind speed exceeds 18 knots. The apron provides one aircraft stand. HCAA plans to expand the apron to provide two additional stands. Given the low traffic of the airport, the development of 1 additional aircraft stand (instead of 2) is a more practical alternative.	NA	2037	Increase of Capacity
Kastelorizo Airport	The airport's runway is 798 m long by 25 m wide. The terminal building covers only 120 m2, and the apron provides one aircraft stand. HCAA plans to extend the runway by 250 m, increase its width to 30 meters and construct a new passenger terminal of 500 m2.	NA	2037	Increase of Capacity
Milos Airport	Terminal building improvement/rearrangement.	NA	2037	Increase of Capacity
Paros Airport	The new Paros Airport has been operating since 25/07/2016. In 2016 the annual passenger arrivals doubled. The runway is 1.400 m long, and the terminal building is only 745 m2. HCAA plans to construct a new terminal of 8.400 m2 (main building plus app. 3700m2 for auxiliary spaces) and extend the runway length by 400 m, extend the apron, and develop the vehicle parking area and a fuel farm.	NA	2037	Increase of Capacity and Sustainable fuel
Chios Airport	The airport serves annually about 200.000 passengers. The runway length is 1.511 m and should be extended to allow flights from more destinations. HCAA plans to expand the runway to 1.800 m. The area in front of the runway was expropriated, yet there is a need to fence the plot and upgrade the existing passenger terminal of 1.200 m2. There are also plans to develop a new terminal building of 4.000 m2.	NA	2037	Increase of Capacity
Kithira Airport	Runway expansion from 1.461 m to 1.800 m. The runway elongation is justified by the fact that the older 737 series aircraft, widely used by tour operators traveling to Greek islands, is gradually replaced by the new generation 737-800 airplanes (also known as 738), which cannot take off from the existing runway of Kithira airport	NA	2037	Increase of Capacity

Naxos Airport	The runway length is only 900 meters and should be increased to 1200 meters to accommodate airline requests. An even longer runway length is out of the question because the airport is adjacent to protected and residential areas. The airport terminal is 350 m2 and cannot efficiently accommodate passenger traffic (35.135 pax/year in 2016). HCAA plans to extend the runway length to 1.200 m and construct RESA on both sides, construct two new taxiways, extend the apron by 8.000 m2, and expand the terminal building by an additional 2.100 m2.	NA	2037	Increase of Capacity
Kastoria Airport	The airport has a runway of 2.700 meters, yet meager annual domestic traffic (7.300 passengers), and little international traffic. The apron offers two stands for small airplanes. The existing terminal covers 1.150 m2. Plans exist for a new terminal building of 3.500 m2 and improvements of its surrounding area, as well as the apron expansion for two more stands and the completion of the new Air Traffic Control.	NA	2037	Increase of Capacity
Kozani Airport	The airport has a runway of 1.822 meters, yet meager annual domestic traffic (5.600 passengers), and no international traffic. The apron offers one airplane stand. The existing terminal covers 300 m2. The airports of Kastoria and Kozani are close to each other (approximately 77km). The recent development of the Egnatia Odos motorway has reduced the road connection from Kastoria and Kozani to Thessaloniki (2 and 1,5 hours, respectively), shifting the modal split from air to the road. An option for these airports is to seek a new role to attract international flights for tourism purposes in their region. However, the need for the operation of both airports needs to be investigated. It is proposed to maintain and develop Kastoria Airport focusing on logistics operations and keep Kozani Airport as a training center for new pilots and other staff.	NA	2037	Increase of Capacity
Nea Anchialos Airport	In addition to the pavement and runway/taxiway signs projects, the airport requires an alternative access road as the entrance to the civil airport installations passes through the military area. A new local road must be constructed to solve this issue. However, this is a costly solution. A new rail access is also proposed to connect the airport with the neighboring industrial areas and the port of Volos. It is thus proposed to further develop air freight and logistics operations at Nea Anchialos airport.	NA	2037	Landside Connection and Increase of Capacity
Thessaloniki Airport	The development of a core network of water airports for the provision of seaplane services from, to, and between islands/seaplane bases are under evaluation by the Hellenic Civil Aviation Authority.	NA	2037	Increase of Capacity
Ios Airport	Development of a core network of water airports for the provision of seaplane services from, to, and between islands/seaplane bases are under evaluation by the Hellenic Civil Aviation Authority.	NA	2037	Increase of Capacity
Heraklion Airport	The development of a core network of water airports for the provision of seaplane services from, to, and between islands/seaplane bases are under evaluation by the Hellenic Civil Aviation Authority.	NA	2037	Increase of Capacity
Pylos Airport	The development of a core network of water airports for the provision of seaplane services from, to, and between islands/seaplane bases are under evaluation by the Hellenic Civil Aviation Authority.	NA	2037	Increase of Capacity
Greece	Development of a core network of water airports for the provision of seaplane services from, to, and between islands / More than 20 other applications for authorization seaplane bases are pending (awaiting the new legislation approval) by the Hellenic Civil Aviation Authority	NA	2037	Increase of Capacity
Athens region	In the Athens region, a metropolitan seaplane basis is planned (most probable in Faliro or Agios Kosmas locations).	NA	2037	Increase of Capacity
Greece	Maintenance and improvement of the Public Service Obligations (PSOs) in the Greek airport system considering synergies between maritime and air PSOs / PSOs can be further improved in two directions: (a) Further improvement of the PSO contract terms. According to the current schema, air carriers operating the four transit flights are committed to landing in all intermediate airports even though there is no passenger to travel with ("touch and go"). Ways should be investigated for environmental and economic reasons to avoid unnecessary landings. (b)	NA	2037	Increase of Capacity

	Establishment of synergies between existing maritime and air PSOs (standard ticket, timetable synchronization, port-airport transfer, and similar).			
Greece	DP Implementation	586,107,115	31/12/2020	Single European Sky - SESAR
Greece	SESAR Deployment Programme implementation 2015 – Cluster 2	747,676,567	31/12/2023	Single European Sky - SESAR
Greece	SESAR Deployment Programme implementation 2016 – Cluster 1: General	599,049,346	31/12/2022	Single European Sky - SESAR
Greece	AIA's evolution into a high-performing node within the European ATM network	4,500,000	29/12/2023	Single European Sky - SESAR
Greece	SESAR Deployment Programme Implementation	456,032,277	31/12/2023	Single European Sky - SESAR
Greece	SESAR Deployment Programme implementation 2015 – Cluster 3	58,404,938	31/12/2021	Single European Sky - SESAR

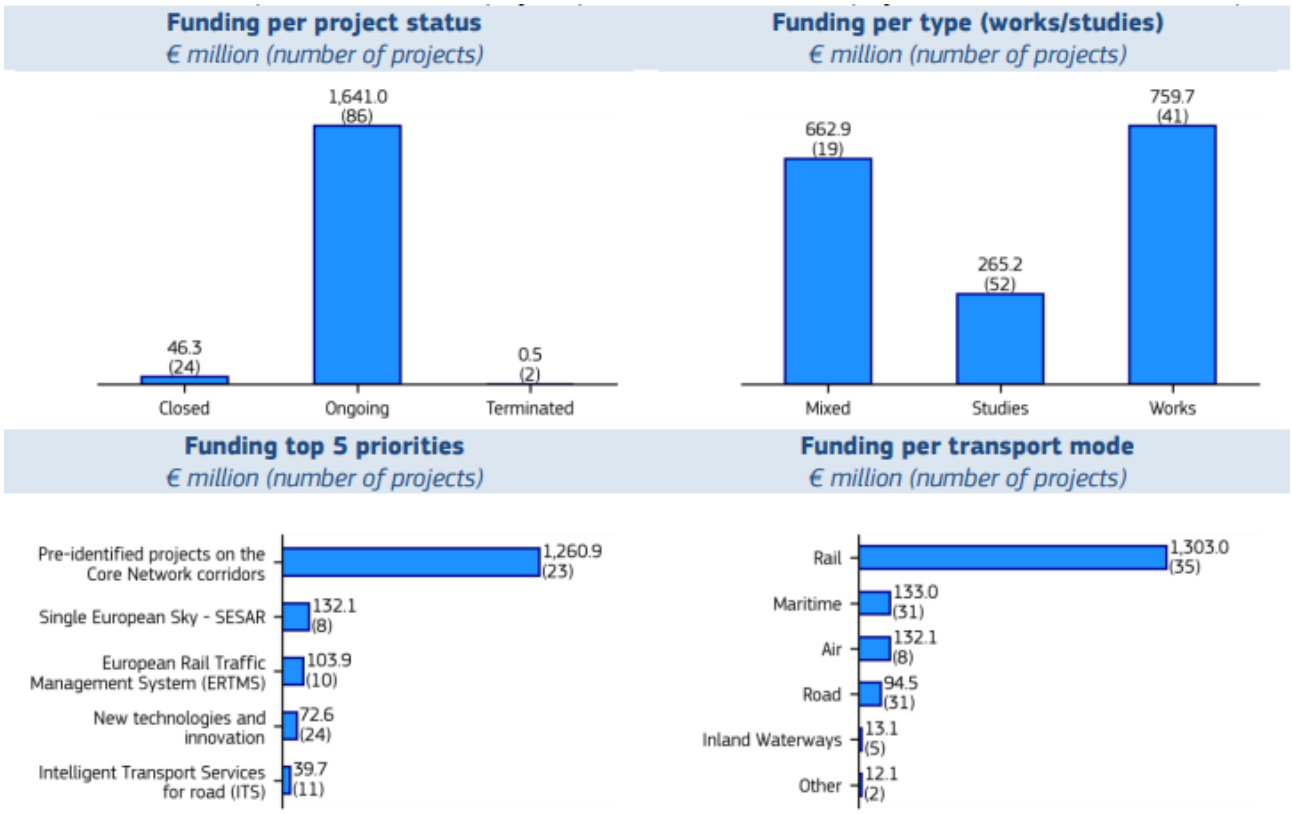
2.7 Italy

To provide details of the air transport planned project and investment for Italy, the Connecting Europe Facility (CEF) – Transport grants for Air Transport, the Italian National Airspace Strategy (NAS), the National Recovery and Resilience Plan (NRRP), and other national and regional transport plans of Italy are studied.

2.7.1 Overview of Projects with CEF Transport Funding from Italy

Beneficiaries from Italy participate in 112 projects and receive €1.7 billion in CEF-Transport co-funding, with investments in these projects of €4.6 billion. Out of these, 109 are located in Italy[164]. The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from Italy. For details on such projects, please refer to the list of projects with beneficiaries from Italy.

Figure 91 EU Funding Details for Transport Sector in Italy



2.7.2 Overview of Additional Projects Located in Italy

Additionally, six projects are located in Italy but without the involvement of beneficiaries from Italy. These projects correspond to €71.0 million of CEF-Transport funding and a total investment of €336.7 million. These amounts equal the total budget of those actions and not only the share benefiting Italy. For details on such projects, please refer to the list of projects in Italy with beneficiaries from Italy.

[164] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_italy.pdf

2.7.3 List of Air Transport Projects with Beneficiaries from Italy

The following table lists the air transport projects funded by CEF without beneficiaries from the country.

Table 53 Italy CEF Funded Air Transport Projects with Beneficiaries from Italy

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for Italy Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for Italy Beneficiaries (€)
Air						**1,232,468,871**	**132,070,181**	**2,671,351,321**	**296,638,978**
2014-EU-TM-0136-M	DP Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2020	289,733,197	38,361,628	586,107,115	76,723,256
2015-EU-TM-0193-M	SESAR Deployment Programme implementation 2015 – Cluster 1	Closed	Single European Sky - SESAR	Mixed	31/12/2019	82,574,058	11,427,266	205,955,187	28,501,744
2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 – Cluster 2	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	328,649,349	8,026,437	747,676,567	29,087,856
2015-EU-TM-0197-M	SESAR Deployment Programme implementation 2015 – Cluster 3	Ongoing	Single European Sky - SESAR	Mixed	31/12/2021	47,660,373	5,843	58,404,938	11,686
2016-EU-TM-0117-M	SESAR Deployment Programme implementation 2016 – Cluster 1: General	Ongoing	Single European Sky - SESAR	Mixed	31/12/2022	246,713,144	42,504,187	599,049,346	98,816,908
2016-EU-TM-0155-S	Deployment of SBAS Cat 1 capability on Airbus A320	Ongoing	Single European Sky - SESAR	Studies	31/12/2022	3,146,690	112,222	10,273,369	232,330
2016-EU-TMC-0113-M	SESAR Deployment Programme implementation 2016 – Cluster 2: Cohesion	Ongoing	Single European Sky - SESAR	Mixed	31/12/2021	6,642,004	1,672	7,852,522	3,344
2017-EU-TM-0076-M	SESAR Deployment Programme Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	227,350,056	31,630,927	456,032,277	63,261,854

2.7.4 The Italian National Airspace Strategy (NAS)

The Italian National Airspace Strategy (NAS)[165] is a collaborative initiative that unites all national aviation stakeholders, including airports, aircraft operators, the Air Navigation Service Provider (ANSP), the Military, the Regulator, and the Government, behind a common goal, to deliver:

"A safe, secure, and efficient Italian airspace that can meet demand balances the needs of all users, and mitigates the impact of aviation on the environment."

The Italian NAS is a crucial part of the more expansive Single European Sky (SES) program that provides the overarching framework for airspace modernization across Europe.

Several significant projects have been successfully implemented since the NAS initiative began in 2018, with many others being in the development phase, driven by the collaborative efforts of ENAV (Italy's ANSP), the airline community, key Italian airports, the Italian Air Force (ITAF) and the Civil Aviation Authority (ENAC).

2.7.5 Additional Air Transport Projects from National and Regional Plans

The following table provides details of the additional air transport-related projects for selected airports of Italy that are part of the EUSAIR region and general projects concerning all airports from national and regional plans. These plans include the following:

- Connettere l'Italia, Strategie per le infrastrutture di trasporto e logistica, 2016
- Connettere l'Italia: lo stato di attuazione dei programmi per le infrastrutture di trasporto e logistica, Documento di Economia e Finanzia, 2018
- Piano delle infrastrutture e dei trasporti per un'Italia ad Alta velocità / L'Italia resiliente progetta il futuro: nuove strategie per trasporti, logistica e infrastrutture / Allegato infrastrutture al Programma Nazionale di Riforma / Ministero delle Infrastrutture e dei Trasporti from 06/07/2020

[165] https://www.iata.org/contentassets/7f593751cebc446aae00952c5ec1ce9b/brochure-nas.pdf

- Progetto definitivo del Nuovo collegamento ferroviario Stazione di Bergamo – "Aeroporto Orio al Serio"

Table 54 Additional Air Transport Projects of Italy

Air Port	Project	Maturity	Costs (Euros)	Estimated end year
Bari Karol Wojtyła Airport (BRI)	Enlargement of the passenger terminal, new cargo area, renewal of landside and mobility	Ongoing	NA	2022
Brindisi Aeroporto del Salento	Airport railway connection	Planned and financed (works to be opened in 2022)	NA	2025
Bologna Guglielmo Marconi Airport (BLQ)	Increasing the capacity of the airport, especially on the landside	Ongoing	NA	2030
Treviso Airport (TSF)	Renewal of the runway, new control tower, adjustment of RESA areas, new fuel depot, and firefighters station, enlargement of the passenger terminal, modifications on viability and parking areas	Masterplan approved	NA	2026 (Cortina Olympic games)
Verona Villafranca Airport (VRN)	Project Romeo - 11.500 Sqm expansion, 10.000 Sqm renewal, five mln capacity pass/year	Ongoing	NA	2026 (Cortina Olympic games)
Brindisi-Papola Casale Airport (Aeroporto del Salento) (BDS)	New connection to the national railway network	Programmed	NA	after 2024
Bergamo Orio al Serio Airport	The railway connection between Bergamo and the Airport	Planned and financed	NA	Dec 2025 (until 2026 Olimpic Games)
Bologna Guglielmo Marconi Airport (BLQ)	People mover connecting Airport and Railway Station Bologna Centrale	Completed and Operational	NA	NA
Marche Airport	Runway Extension	Masterplan approved	NA	NA
Trieste Airport	The Trieste Airport railway station links the passenger terminal directly to the Venice–Trieste railway thanks to a 425-meter-long raised walkway.	Operational	NA	NA
Milan Linate Airport	A project is foreseen to connect the airport metro to the conventional/heavy railway line.	Planned (feasibility study)	NA	NA

Milan Malpensa Airport	A connection to heavy rail will be realized to establish a new high-speed railway connection between the airport and Turin-Milan high-speed rail line.	Planned and financed (feasibility study completed)	NA	NA
Verona Villafranca Airport (VRN)	New Airport Railway Station along a variant of the Verona-Mantova-Modena line	Preliminary project of 2003	NA	NA
Catania–Fontanarossa Airport (CTA)	A new railway station will be activated in 2021. Burying part of the rail to allow the extension of the actual runway and the creation of the new project runway	Programmed (NRRP)	NA	NA
Venice Marco Polo Airport	Railway link between the Airport and Mestre station (no high speed)	Planned and financed (in September 2021, the Italian government approved the final design)	NA	until 2026 Olimpic Games
Accessibility by Railway	Connections to the airports of some of the primary urban nodes via the RFI network (Venice AV, Bergamo AV, Catania, Brindisi) or underground (Naples, Milan Linate, Florence), also through the creation of interchange stops or the improvement of their accessibility or integration (Genoa, Lamezia Terme)	Planned	848M	2030
Air cargo development	Capacity allocation (cargo city, logistic spaces, yards) for competitiveness in the air cargo sector and network integration logistics for the airports of Milan Malpensa, Rome Fiumicino, Naples, Parma, Bergamo Orio Al Serio, Catania, Bologna, Venice	Planned		2030
Development of the airside capacity of current airports	Upgrading of flight infrastructures for runways	Planned	440M	2030
Passenger terminal, security, and passenger experience	Introduction of interventions to improve security and interventions to support passengers to improve the	Planned	1097M	2030

	quality of the service and the traveling experience in general			
Passenger terminal, security, and passenger experience	Terminal capacity expansion for intercontinental hubs (Rome Fiumicino, Milan Malpensa, Venice)	Planned	580M	2030

2.7.6 The National Recovery and Resilience Plan (NRRP)

The NRRP for Italy[166] consists of 132 investments and 58 reforms. They will be supported by € 68.9 billion in grants and €122.6 billion in loans; 37.5% of the plan will support climate objectives, and 25.1% will support the digital transition. The following investments are related to air transport in Italy.[167]:

- Within **Mission 2: Green Revolution and Ecological Transition -** Introduction of 200 new vehicles with hybrid electric-endothermic power supply in airports.
- Within **Mission 3: Infrastructure for Sustainable Mobility** - Interventions of the last railway mile for the connection of airports (Salerno, Olbia, Alghero, Trapani, and Brindisi) and investments for the digitization of airports. These projects will concern the development and connectivity of the Unmanned Traffic Management System - UTM, the digitization of aeronautical information, the creation of cloud infrastructures and virtualization of operational infrastructures, and the definition of a new maintenance model, in addition to sharing secure information.

2.7.7 Summary of Air Transport Projects

The following table summarizes all the planned and ongoing air transport projects for Italy, including project description, timeline, estimated costs, and expected impacts.

[166] https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/italys-recovery-and-resilience-plan_en
[167] PIANO NAZIONALE DI RIPRESA E RESILIENZA – NEXT GENERATION EU REPORT - https://italiadomani.gov.it/it/home.html

Table 55 Summary of Planned and Ongoing Air Transport Projects in Italy

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Bari Karol Wojtyła Airport (BRI)	Enlargement of the passenger terminal, new cargo area, renewal of landside and mobility	NA	2022	Increase of Capacity
Brindisi Aeroporto del Salento	Airport railway connection	NA	2025	Landside Connection
Bologna Guglielmo Marconi Airport (BLQ)	Increasing the capacity of the airport, especially on the landside	NA	2030	Increase of Capacity
Treviso Airport (TSF)	Renewal of the runway, new control tower, adjustment of RESA areas, new fuel depot, and firefighters' station, enlargement of the passenger terminal, modifications on viability and parking areas	NA	2026 (Cortina Olympic games)	Increase of Capacity
Verona Villafranca Airport (VRN)	Project Romeo - 11.500 Sqm expansion, 10.000 Sqm renewal, five mln capacity pass/year	NA	2026 (Cortina Olympic games)	Increase of Capacity
Brindisi-Papola Casale Airport (Aeroporto del Salento) (BDS)	New connection to the national railway network	NA	after 2024	Landside Connection
Bergamo Orio al Serio Airport	The railway connection between Bergamo and the Airport	NA	Dec 2025 (until the 2026 Olympic Games)	Landside Connection
Bologna Guglielmo Marconi Airport (BLQ)	People mover connecting Airport and Railway Station Bologna Centrale	NA	NA	Landside Connection
Marche Airport	Runway Extension	NA	NA	Increase of Capacity
Trieste Airport	The Trieste Airport railway station links the passenger terminal directly to the Venice–Trieste railway thanks to a 425-meter-long raised walkway.	NA	NA	Landside Connection
Milan Linate Airport	A project is foreseen to connect the airport metro to the conventional/heavy rail line.	NA	NA	Landside Connection
Milan Malpensa Airport	A connection to heavy rail will be realized to establish a new high-speed railway connection between the airport and Turin-Milan high-speed rail line.	NA	NA	Landside Connection
Verona Villafranca Airport (VRN)	New Airport Railway Station along a variant of the Verona-Mantova-Modena line	NA	NA	Landside Connection

Catania–Fontanarossa Airport (CTA)	A new railway station has been activated in 2021. Burying part of the rail to allow the extension of the actual runway and the creation of the new project runway	NA	NA	Landside Connection
Venice Marco Polo Airport	Railway link between the Airport and Mestre station (no high speed)	NA	until the 2026 Olympic Games	Landside Connection
Accessibility by Railway	Connections to the airports of some of the primary urban nodes via the RFI network (Venice AV, Bergamo AV, Catania, Brindisi) or underground (Naples, Milan Linate, Florence), also through the creation of interchange stops or the improvement of their accessibility or integration (Genoa, Lamezia Terme)	848M	2030	Landside Connection
Air cargo development	Capacity allocation (cargo city, logistic spaces, yards) for competitiveness in the air cargo sector and network integration logistics for the airports of Milan Malpensa, Rome Fiumicino, Naples, Parma, Bergamo Orio Al Serio, Catania, Bologna, Venice		2030	Increase of Capacity
Development of the airside capacity of current airports	Upgrading of flight infrastructures for runways	440M	2030	Increase of Capacity
Passenger terminal, security, and passenger experience	Introduction of interventions to improve safety and interventions to support passengers to enhance the quality of the service and the traveling experience in general	1097M	2030	Increase of Capacity
Passenger terminal, safety, and passenger experience	Terminal capacity expansion for intercontinental hubs (Rome Fiumicino, Milan Malpensa, Venice)	580M	2030	Increase of Capacity
Italy	Italy NRRP / M2C2 Investment 4.4: Renewal of Bus Fleets, Green Trains /Introduction of 200 new vehicles with hybrid electric-endothermic power supply in airports	NA	2026	Sustainable Fuel
Trapani Airport	Italy NRRP / M3C1 Investment 1.7: Upgrade, Electrification, and Increase the Resilience of Railways in the South / to carry out the interventions of the last railway mile for the connection of airports of (Salerno, Olbia, Alghero, Trapani, and Brindisi)	NA	2026	Landside Connection
Brindisi Airport	Italy NRRP / M3C1 Investment 1.7: Upgrade, Electrification, and Increase the Resilience of Railways in the South / to carry out the interventions of the last railway mile for the connection of airports of (Salerno, Olbia, Alghero, Trapani, and Brindisi)	NA	2026	Landside Connection
Italy	Italy NRRP / M3C2 Investment 2.2: Digital Innovation for Airport Systems / The projects will concern: the development and connectivity of the Unmanned Traffic Management System - UTM, the digitization of aeronautical information, the creation of cloud infrastructures and virtualization of operational infrastructures, the definition of a new maintenance model, in addition to sharing secure information.	0.11 M	2026	Sustainable Fuel
Italy	DP Implementation	586,107,115	31/12/2020	Single European Sky - SESAR
Italy	SESAR Deployment Programme implementation 2015 – Cluster 2	747,676,567	31/12/2023	Single European Sky - SESAR
Italy	SESAR Deployment Programme implementation 2015 – Cluster 3	58,404,938	31/12/2021	Single European Sky - SESAR

Italy	SESAR Deployment Programme implementation 2016 – Cluster 1: General	599,049,346	31/12/2022	Single European Sky - SESAR
Italy	Deployment of SBAS Cat 1 capability on Airbus A320	10,273,369	31/12/2022	Single European Sky - SESAR
Italy	SESAR Deployment Programme implementation 2016 – Cluster 2: Cohesion	7,852,522	31/12/2021	Single European Sky - SESAR
Italy	SESAR Deployment Programme Implementation	456,032,277	31/12/2023	Single European Sky - SESAR

2.8 Montenegro

The following documents are studied to provide details of Montenegro's planned projects and investments in the air transport sector. The Transport Development Strategy 2019-2035, Action Plan 2019-2020, and the Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans are studied.

2.8.1 Montenegro Transport Development Strategy 2019 - 2035

According to the final version (V4) of the "Transport Development Strategy 2019-2035 with the Action Plan 2019-2020"[168] document shared by the authorities during the bilateral meeting, the following are planned for the air transport of Montenegro as a Plan of infrastructure measures 2028-2035.

Transport development strategy – Montenegro for 2019-2035 determines the current state in the transport field and defines infrastructural, organizational, and operative development targets of the transport system, which shall be realized through timed and long-term implementation plans. The Strategy has been made concerning the following principles: compatibility of a document of this type with public policy priorities and targets, cooperation between relevant authorities, transparency, continuity, and economic and rational planning of human, organizational, financial, and material resources.

The Transport Development Strategy implementation plan includes a schedule of actions, a financial plan, and an overview of potential risks to its implementation. The plan is divided into two periods (plan for 2019-2027 and plan for 2028-2035), while action plans for implementing this document shall be adopted successively every two years.

The following is the plan of infrastructure measures and corresponding costs for 2019-2024

Table 56 Montenegro Air Transport Plan of Infrastructure Measures & Corresponding Costs 2019 - 2024

Measure	Infrastructure project	Costs (Euros)
Program single pipeline projects for target years 2027 and 2035. Continue and intensify actions towards completion of the SPP project. Align and coordinate project activities and programming with those of neighboring countries	**Single Project Pipeline (SPP) Projects:** Development of Podgorica Airport Development of Tivat Airport	 94.8M 55.0M
Valorize other airports in Montenegro (besides Podgorica and Tivat)	Berane Airport	20M

Future projects for Podgorica Airport include the extension of the passenger terminal, improving the maneuvering area and apron, expanding air cargo facilities, and relocating the airport's fuel farm and energy station. Podgorica Airport is not included in the urban planning document of the Podgorica Municipality. Therefore, the company "Airports of Montenegro" demanded that the Municipality produce a Local or

[168] Transport Development Strategy – Montenegro 2019-2035 - Contract number 829-4147-Version Final, v4

National location study document for the Podgorica Airport. Until such a planning document enters into force, "Airports of Montenegro" cannot undertake any of the stated development projects.

As for Tivat Airport, its capacity is already insufficient to handle demand during the summer peak season, and therefore an expansion is required. A concept design for modernizing Tivat Airport has been prepared, which includes the following projects:

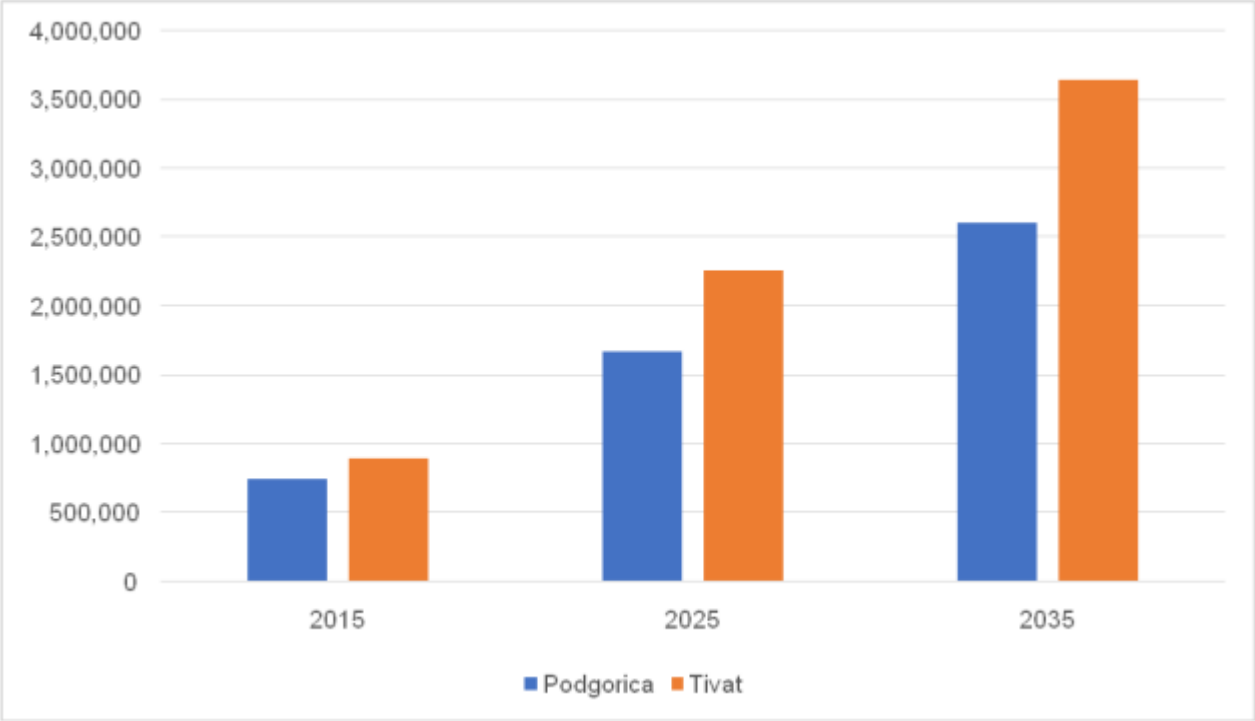
- The existing terminal building (4,050 m2) will be reconstructed, and a new terminal building will be constructed (13,000 m2) and connected to the existing terminal building.
- Part of the old terminal will be refurbished to become the new General Aviation and VIP terminal; all functions for these facilities will be located within the old terminal.

A new airside concept design for the airport will include (1) the rehabilitation of the airport maneuvering area pavements, including the runway, (2) the widening of the commercial aviation apron, its link taxiways to the runway, new proposed taxiway, and utilities, (3) the displacement of the runway thresholds to comply with international safety regulations and (4) the relocation of the Tivat - Ostrvo Cvijeća road.

The two Montenegrin international airports are in a phase where expansions and upgrades are required to cope with increasing seasonal air traffic. Their terminals need to be improved and require expansion. Several projects are planned, especially for the Tivat Airport, for which demand is expected to get a further boost in the future years. Future projects include Berane Airport, where, after a comprehensive analysis, possible valorization options could be assessed, and activities related to Nikšić Airport (Kapino polje) where a business plan for the development of Nikšić airport could be developed with elements of a feasibility study. At the same time, there is an initiative to open an airport in Ulcinj.

The following are the annual passenger traffic estimates for Montenegro" s airports for 2015, 2025, and 2035. Air passenger traffic for the Tivat airport will exceed that of the airport of Podgorica for future years 2025 and 2035.

Figure 92 Annual Passenger traffic forecasts for Montenegro Airports



Montenegro Airlines and Airports of Montenegro are state companies whose restructuring and possibly private sector involvement would allow for new funds and further upgrades of provided service. Restructuring Montenegro Airlines is necessary because of its continuing financial losses and accumulating high debt. As such, concessions and private-sector participation options need to be investigated.

The following measures are identified:

- Reorganization or privatization of Montenegro Airlines air carrier
- Development of concession schemes for Airports of Montenegro (Podgorica and Tivat)

The next is the "Plan of Organizational and operational measures and corresponding costs 2019-2024."

Table 57 Montenegro Air Transport Plan of Organizational & Operational Measures & Corresponding Costs 2019-2024

Organizational and operational measures	Costs (Euros)
Reorganization or privatization of Montenegro Airlines Company	20M
Development of concession scheme for Airports of Montenegro (Podgorica and Tivat)	1M

The following are the details of the ACTION PLAN TDS 2019-2020 for the Strategic/High-Level Objective II: Accessibility, Performance of Operation, and Quality of Services for air transport:

Table 58 Montenegro Air Transport ACTION PLAN TDS 2019-2020 for the Strategic/High-Level Objective

Strategic / High Level objective II		**Accessibility, Performance of Operation and Quality of Services**					
Operative / specific objective 4		***Determine possibilities and needs for revitalization and / or reconstruction of civil aviation transport infrastructure***					
Performance indicator a) Volume of investment in other airports and accompanying infrastructure (besides Podgorica and Tivat)		2018 Baseline: 0	2027 target: no information currently available		2027 target: no information currently available		
Measure	**Results indicator for period 2019-2020**	**Relevant institutions**	**Commencement date**	**Anticipated date of completion of Action plan**	**Funds planned for implementation of activities in 2019**	**Funds planned for implementation of activities in 2020**	**Source of funding**
Valorise other airports in Montenegro (besides Podgorica and Tivat)	Completed Study or an / or Business Plan for Berane Airport	Ministry of Transport and Maritime Affairs, Agency for Civil Aviation	2019	2020	Not applicable		Not applicable for 2019-2020

2.8.2 Overview of Montenegro Air Transport Project Based on Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans

The Podgorica Airport Development is among the Priority Projects under preparation based on the Five-year Rolling Work Plan for Development of the Indicative TEN-T Extension of the Comprehensive and Core Network in Western Balkans Document published in April 2022 by the Permanent Secretariat of Transport Community. The following table details the estimated costs and timeline of the project. [169]

Air transport is a substantial segment in the positioning and development of Montenegro. Investments in airport infrastructure should contribute to long-term improvement of the level of service delivery, as well as increasing the level of safety and security in air transport, to improve the country's accessibility and competitiveness, particularly in tourism.

The Podgorica Airport Development project is a part of several strategic documents: the Transport Development Strategy of Montenegro (2010), the Tourism Development Strategy of Montenegro up to 2020 (2008), the Master Plan for Airport Development to 2030 (2010), Single Project Pipeline, Pre-accession Economic Program for Montenegro 2012-2015 (2012) and the draft National Development Plan 2013-2016 Montenegro (2012). The project is in an early preparation phase; so far, only a conceptual idea has been developed.

The proposed project aims to maintain the safety level of air transport and to meet the demands and standards of national and international regulations. As a part of the project, a new terminal building, capacity of 12,500 m2, should be constructed, and maneuvering areas and apron expanded and reconstructed. A new fuel depot, parking, and ground support facilities (including a shelter) are also envisaged. Podgorica Airport is located on the Core Network, and the total project cost is 94.84 million euros. It has to be pointed out that according to the European Green Deal and EU Sustainable and Smart Mobility Strategy, no EU funds are

[169] https://www.transport-community.org/wp-content/uploads/2022/05/Five-Year-Rolling-Work-Plan-for-Development-of-Indicative-TEN-T-Extension-of-the-Comprehensive-and-Core-Network-in-Western-Balkans.pdf

envisaged to support investment in airport capacity, and more focus should be placed on greening the airports.

Table 59 Montenegro Air Transport Project Based on TEN-T Extension of the Comprehensive and Core Network in Western Balkans

Corridor / Route / Node	TEN-T Network	Regional Partner	Project Name	Project cost (M€)
Airport projects				
Podgorica	Core	MNE	Podgorica Airport Development	94.84

2.8.3 Summary of Air Transport Projects

The following table summarizes all the planned and ongoing air transport projects for Italy, including project description, timeline, estimated costs, and expected impacts.

Table 60 Summary of Planned and Ongoing Air Transport Projects of Montenegro

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Podgorica Airport	Development of Podgorica Airport	94.8M	2024	Increase of Capacity
Tivat Airport	Development of Tivat Airport	55M	2024	Increase of Capacity
Berane Airport	Valorize other airports, including Berane Airport in Montenegro (besides Podgorica and Tivat)	20M	2024	Increase of Capacity
Organizational and operational measures	Reorganization or privatization of Montenegro Airlines Company	20M	2024	Increase of Capacity
Organizational and operational measures	Development of concession scheme for Airports of Montenegro (Podgorica and Tivat)	1M	2024	Increase of Capacity

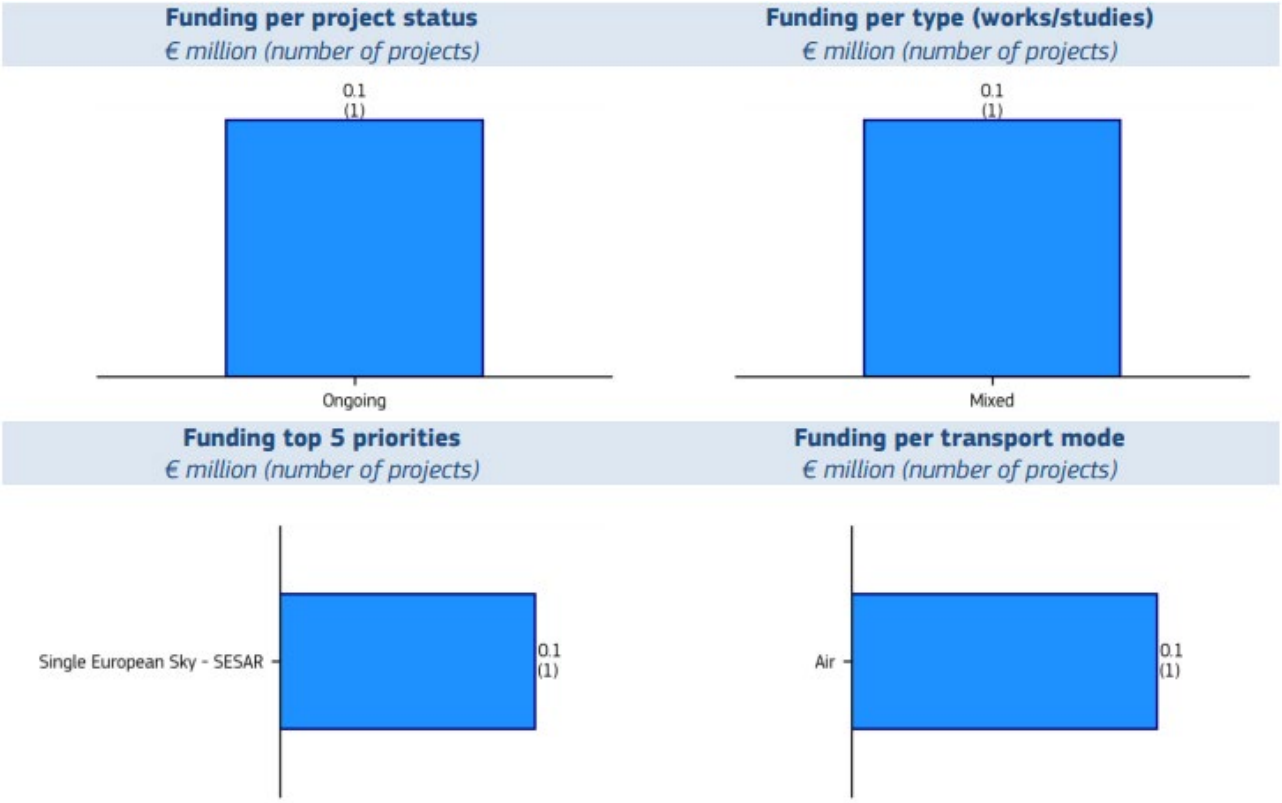
2.9 North Macedonia

The Connecting Europe Facility (CEF) – Transport grants for Air Transport are studied to provide details of the planned air transport project and investment for Italy.

2.9.1 Overview of Projects with CEF Transport Funding from North Macedonia

Beneficiaries from North Macedonia participate in 1 project and receive €0.1 million in CEF-Transport co-funding[170], with investments in these projects of €0.1 million. Out of these, one is located in North Macedonia. The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from North Macedonia. For details on such projects, please refer to the list of projects with beneficiaries

Figure 93 EU Funding Details for Transport Sector in North Macedonia



2.9.2 List of Air Transport Projects with Beneficiaries from North Macedonia

The following table lists the air transport projects funded by CEF with beneficiaries from the country.

[170] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_north_macedonia.pdf

Table 61 North Macedonia CEF Funded Air Transport Projects with Beneficiaries from North Macedonia

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for North Macedonia Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for North Macedonia Beneficiaries (€)
Air						**328,649,349**	**50,000**	**747,676,567**	**100,000**
2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 – Cluster 2	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	328,649,349	50,000	747,676,567	100,000

2.9.3 Summary of Air Transport Projects

The following table summarizes all the planned and ongoing air transport projects for North Macedonia, including project description, timeline, estimated costs, and expected impacts.

Table 62 Summary of Planned and Ongoing Air Transport Projects of North Macedonia

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
North Macedonia	SESAR Deployment Programme implementation 2015 – Cluster 2	747,676,567	31/12/2023	Single European Sky - SESAR

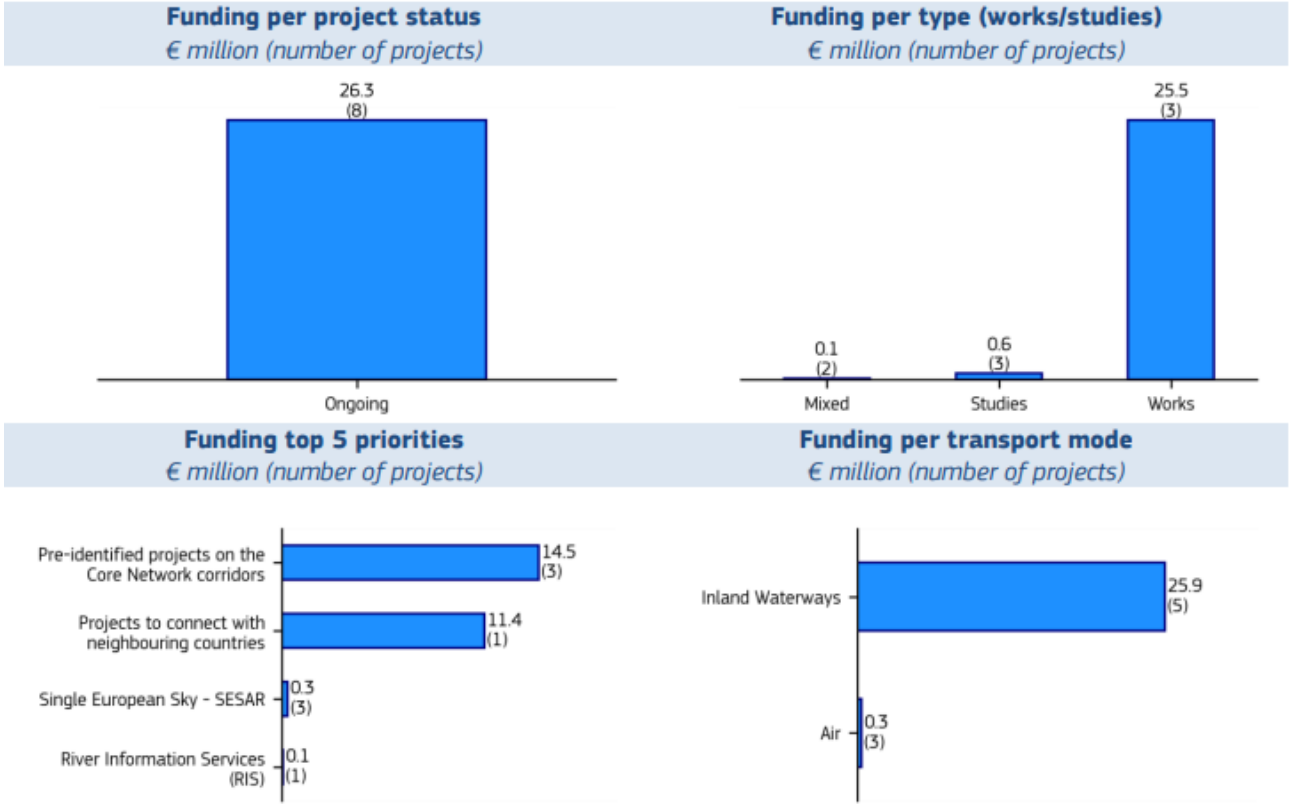
2.10 Serbia

To provide details of the planned air transport project and investment for Serbia, the Connecting Europe Facility (CEF) – Transport grants for Air Transport are studied.

2.10.1 Overview of projects with beneficiaries from Serbia

Beneficiaries from Serbia participate in 8 projects and receive €26.3 million in CEF-Transport co-funding, with investments in these projects of €65.1 million[171]. Out of these, eight are located in Serbia. The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from Serbia. For details on such projects, please refer to the list of projects with beneficiaries from Serbia.

Figure 94 EU Funding Details for Transport Sector in Serbia



2.10.2 List of Air Transport Projects with Beneficiaries from Serbia

The following table lists the air transport projects funded by CEF with beneficiaries from the country.

[171] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_serbia.pdf

Table 63 Serbia CEF Funded Air Transport Projects with Beneficiaries from Serbia

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for Serbia Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for Serbia Beneficiaries (€)
Air						**557,656,055**	**336,050**	**1,205,657,844**	**504,800**
2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 – Cluster 2	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	328,649,349	68,500	747,676,567	137,000
2016-EU-TMC-0075-S	eGAFOR	Ongoing	Single European Sky - SESAR	Studies	30/06/2021	1,656,650	203,150	1,949,000	239,000
2017-EU-TM-0076-M	SESAR Deployment Programme Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	227,350,056	64,400	456,032,277	128,800

2.10.3 Summary of Air Transport Projects

The following table summarizes Serbia's planned and ongoing air transport projects, including project description, timeline, estimated costs, and expected impacts.

Table 64 Summary of Planned and Ongoing Air Transport Projects of Serbia

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Serbia	SESAR Deployment Programme implementation 2015 – Cluster 2	747,676,567	31/12/2023	Single European Sky - SESAR
Serbia	eGAFOR	1,949,000	30/06/202130/06/2021	Single European Sky - SESAR
Serbia	SESAR Deployment Programme Implementation	456,032,277	31/12/2023	Single European Sky - SESAR

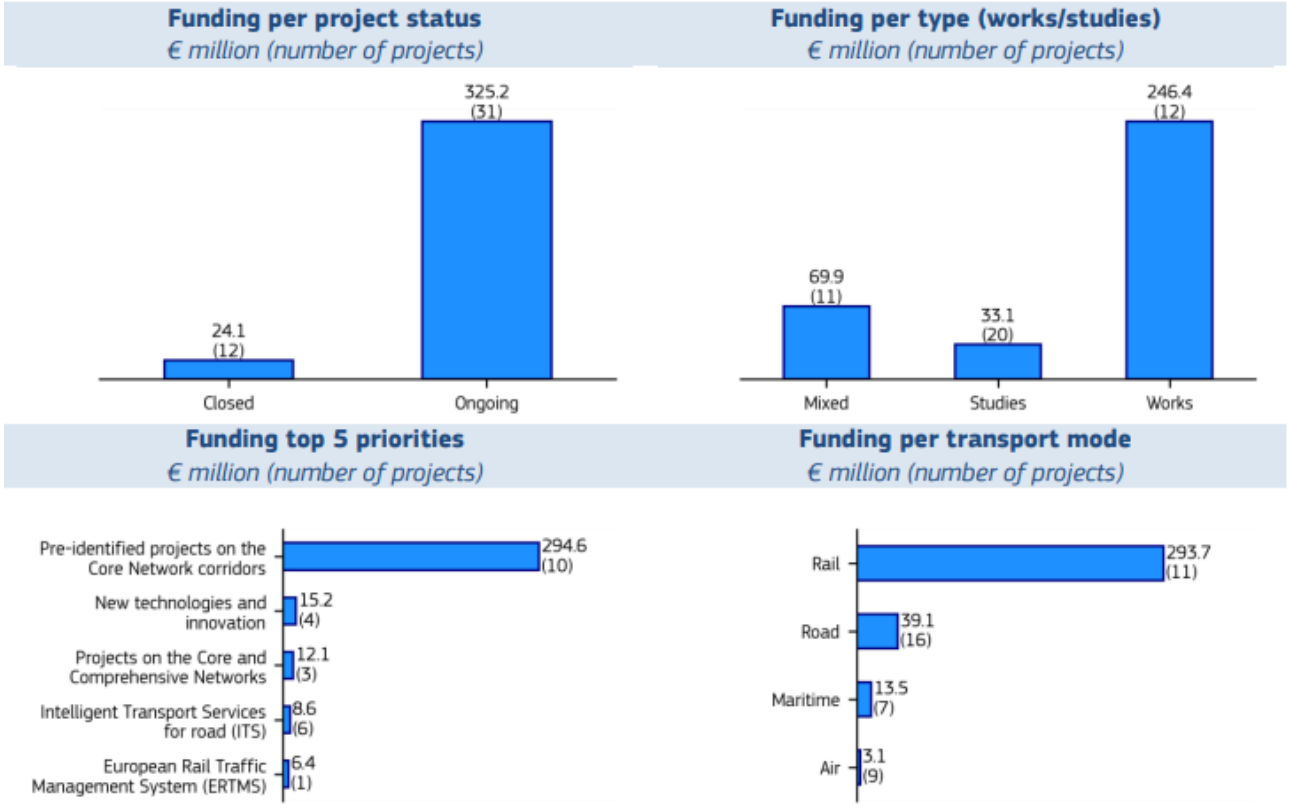
2.11 Slovenia

To provide details of the planned air transport project and investment for Serbia, the Connecting Europe Facility (CEF) – Transport grants for Air Transport are studied.

2.11.1 Overview of projects with beneficiaries from Slovenia

Beneficiaries from Slovenia participate in 43 projects and receive €349.3 million in CEF-Transport co-funding, with investments in these projects of €1.1 billion[172]. Out of these, 43 are located in Slovenia. The amounts and charts refer to the actual (or final for closed actions) CEF Transport funding/investments of beneficiaries from Slovenia. For details on such projects, please refer to the list of projects with beneficiaries from Slovenia.

Figure 95 EU Funding Details for Transport Sector in Slovenia



2.11.2 Overview of additional projects located in Slovenia

Additionally, two projects are located in Slovenia but without the involvement of beneficiaries from Slovenia. These projects correspond to a total of €7.2 million of CEF-Transport funding and a total investment of €14.4 million. These amounts equal the total budget of those actions and not only the share benefiting Slovenia. For details on such projects, please refer to the list of projects located in Slovenia without beneficiaries from Slovenia.

[172] https://ec.europa.eu/inea/sites/default/files/eu_investment_in_transport_in_slovenia.pdf

2.11.3 List of Air Transport Projects with Beneficiaries from Slovenia

The following table lists the air transport projects funded by CEF with beneficiaries from the country.

Table 65 Slovenia CEF Funded Air Transport Projects with Beneficiaries from Slovenia

Transport Mode / Project Code	Title	Project Status	Priority	Type	Actual End Date	Actual CEF co-funding (at project level)(€)	Out of which: Actual CEF co-funding for Slovenia Beneficiaries (€)	Eligible costs (at project level)(€)	Out of which: Eligible costs for Slovenia Beneficiaries (€)
Air						**1,103,487,884**	**3,052,365**	**2,404,153,794**	**6,329,226**
2014-EU-TM-0032-S	ATM Data 'as a service'	Closed	Single European Sky - SESAR	Studies	31/12/2017	1,599,712	557,250	3,199,424	1,114,500
2014-EU-TM-0136-M	DP Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2020	289,733,197	155,020	586,107,115	310,039
2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 – Cluster 2	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	328,649,349	77,500	747,676,567	155,000
2015-SI-TM-0021-W	Initial Airport Operations Plan	Closed	Single European Sky - SESAR	Works	31/12/2018	371,271	371,271	742,543	742,543
2016-EU-TM-0117-M	SESAR Deployment Programme implementation 2016 – Cluster 1: General	Ongoing	Single European Sky - SESAR	Mixed	31/12/2022	246,713,144	943,224	599,049,346	2,193,544
2016-EU-TMC-0075-S	eGAFOR	Ongoing	Single European Sky - SESAR	Studies	30/06/2021	1,656,650	100,300	1,949,000	118,000
2016-EU-TMC-0113-M	SESAR Deployment Programme implementation 2016 – Cluster 2: Cohesion	Ongoing	Single European Sky - SESAR	Mixed	31/12/2021	6,642,004	0	7,852,522	0
2017-EU-TM-0076-M	SESAR Deployment Programme Implementation	Ongoing	Single European Sky - SESAR	Mixed	31/12/2023	227,350,056	75,300	456,032,277	150,600
2017-SI-TM-0086-M	Slovenia Wide Area Multilateration System - SLOWAM	Closed	Single European Sky - SESAR	Mixed	30/11/2020	772,500	772,500	1,545,000	1,545,000

2.11.4 Summary of Air Transport Projects

The following table summarizes all the planned and ongoing air transport projects for Slovenia, including project description, timeline, estimated costs, and expected impacts.

Table 66 Summary of Planned and Ongoing Air Transport Projects of Slovenia

Node or section	Project description	Costs (Euros)	Estimated end year	Impact
Slovenia	DP Implementation	586,107,115	31/12/2020	Single European Sky - SESAR
Slovenia	SESAR Deployment Programme implementation 2015 – Cluster 2	747,676,567	31/12/2023	Single European Sky - SESAR
Slovenia	SESAR Deployment Programme implementation 2016 – Cluster 1: General	599,049,346	31/12/2022	Single European Sky - SESAR
Slovenia	eGAFOR	1,949,000	30/06/2021	Single European Sky - SESAR
Slovenia	SESAR Deployment Programme implementation 2016 – Cluster 2: Cohesion	7,852,522	31/12/2021	Single European Sky - SESAR
Slovenia	SESAR Deployment Programme Implementation	456,032,277	31/12/2023	Single European Sky - SESAR

3 Conclusions and policy recommendations for the Air transport sector

In this chapter a recap of the findings of the previous chapters is proposed, in order to highlight the main issues of the sector in the macro-regions and its outlook. Moreover, suggestions for development guidelines are being proposed.

3.1 Key issues

The following table summarizes all the identified key issues at the country level and their scale of importance from “very relevant”, to “relevant” and “mainly improvements”, representing a decreasing degree of diffusion and extent of the actions needed to solve the issue, based on the studies done in Chapter 1 of this Volume. The criteria presented in each row represent major strategic objectives of the air transport policy in Europe, targeting respectively: the provision of appropriate capacity from airports, the implementation of a modern and efficient air traffic management system (SESAR), the diffusion of alternative fuels in airports and for air transport, and efficient landside intermodal connections for both passengers and cargo.

Table 67 Key issues of air transport sector and their relevance in EUSAIR countries

	Albania	**Bosnia & Herzegovina**	**Croatia**	**Greece**	**Italy**	**Montenegro**	**North Macedonia**	**Serbia**	**Slovenia**
Infrastructure improvement	Mainly improvements	Mainly improvements	Mainly improvements	Mainly improvements	Mainly improvements	Mainly improvements	Mainly improvements	Mainly improvements	Mainly improvements
Implementation of SESAR systems	Very relevant	Very relevant	Very relevant	Very relevant	Relevant	Very relevant	Very relevant	Very relevant	Very relevant

Diffusion of alternative ecological fuels	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant
Connection to highspeed passenger railway	Very relevant	Very relevant	Very relevant	Very relevant	Relevant	Very relevant	Very relevant	Relevant	Very relevant
Connection to railway freight corridor	Very relevant	Very relevant	Very relevant	Mainly improvements	Mainly improvements	Very relevant	Very relevant	Mainly improvements	Mainly improvements

While airports of the Adriatic-Ionian region are in good conditions in terms of infrastructure, most of them have been rehabilitated and improved recently. Investing in o implementation of SESAR systems is necessary, which is missing in most selected and studied airports. Almost none of the airports have installed the equipment for alternative ecological fuels.

The link to high-speed passenger railway is missing in most of the airports except some in Italy, such as Bologna airport with the monorail (people mover); it is noteworthy to mention that there is a passenger railway link already existing or planned in some of the studied airports, although the focus of this issue is high-speed railway connection.

The connection to the railway freight corridor is defined based on the availability of the corridors already passing through Italy, Greece (except the islands), Serbia, and Slovenia. At the same time, the less connected area is the Adriatic coast of Croatia, Montenegro, Albania, and then Bosnia and North Macedonia.

3.2 Outlook

As per details provided in Chapter 2 of Volume 6, several projects are planned and ongoing for improving the air transport infrastructure in different countries across the Adriatic-Ionian region. Projects include modernizing the existing infrastructure and constructing new airport facilities and buildings, including runways, aprons, passenger terminals, and other facilities such as parking garages. The following lists present the main ones in terms of costs and impact.

As concerns **infrastructure improvements and increase of capacity:**

- In Albania, a new international airport in the South of the Country, near Vlora/Valona is being realized;
- In Greece, the new airport in Heraklion/Crete (Kastelli) is tendered to be under concession and other airports are being expanded, such as 14 regional airports already under the "Fraport concession" including the airports of Aktio, Zakynthos, Thessaloniki, Kavala, Kerkyra, Kefalonia, Kos, Mykonos, Lesvos, Samos, Santorini, Rodos, and Skiathos;
- In Italy, upgrades of flight infrastructures for runways, interventions to improve safety and interventions to support passengers to enhance the quality of the service and the traveling experience are planned country-wide, including terminal capacity expansion in the intercontinental hubs of Milan Malpensa and Venice
- In Montenegro, developments of Podgorica Airport and Tivat Airport are planned to be completed in 2024.

As concerns **landside connections**:

- In Albania, the rehabilitation of Vore – Hani Hotit Railway Line, includes a direct connection to Tirana airport, with a 41 km rail line;
- In Italy, connections to the airports of some of the primary urban nodes via the RFI network (Venice AV, Bergamo AV, Catania, Brindisi) or underground (Milan Linate) are being developed, also through the creation of interchange stops or the improvement of their accessibility or integration (Lamezia Terme).

As concerns **SESAR**, currently, different SESAR projects are funded by the Connecting Europe Facility (CEF) for the EU countries of the EUSAIR region. The details are provided in Chapter 2 of this Volume. To ensure the air transport sector meets the TENT required policies allocating a budget for SESAR projects in other countries of the region is necessary and should be considered a high priority**.**

As concerns **alternative fuels**, many projects within the CEF – AFIF (Alternative Fuel Infrastructure Facility) are ongoing to improve the electricity power supply to stationary aircraft and EV chargers for service vehicles within airports premises. Furthermore:

- In Croatia investments are planned for developing environmentally independent airports by modernizing and constructing energy-independent infrastructure, through the construction of photovoltaic cells, the purchase of electric vehicles, and the reconstruction of aprons and terminals, to create new, modern, and more resilient airports;
- In Italy, the PNRR (Piano Nazionale di Ripresa e Resilienza – the National Recovery and Resilience Plan) has a specific mission including: renewal of Bus Fleets, Green Trains / Introduction of 200 new vehicles with hybrid electric-endothermic power supply in airports.

3.3 Development guidelines

Taking into account the above-mentioned objectives and the status of EUSAIR air transport system, the following development guidelines are recommended, grouped into three main policy areas, as for the other transport modes.

Major steps need to be taken in order to fill the enduring gaps in terms of safety within air transport infrastructure (namely concerning the resilience of facilities in case of extreme weather events); to harmonise the implementation of SESAR; to improve the compliance of airports in the macro-region with the policy targets in terms of alternative fuels availability, both landside and for aviation; and to enhance the interventions needed to link airports to the rail network, thus providing the possibility for seamless intermodal connections.

Furthermore, it is worth underlining that since the planned projects are mainly for the major airports, it is recommended to improve air transport infrastructure in smaller airports with touristic purposes and focus on greening and digitalizing the facilities. In addition, it is suggested to monitor the demand regularly, increase flights between the region's countries to improve connectivity and ensure the available infrastructure can accommodate the expected demand.

SAFETY, SECURITY AND RESILIENCE	ENVIRONMENTAL AND SOCIAL SUSTAINABILITY	CONNECTIVITY AND TRAFFIC DEVELOPMENT
• Support projects for improving the resilience of airport infrastructure • Boost the development of projects in the SESAR framework	• Support the diffusion of alternative fuels availability in airports: ✓ Electric power supply to stationary aircraft ✓ EV charging for ground service vehicles ✓ Sustainable aviation fuels • Greening airports (green spaces; hydrogen powered airport operations; and energy efficiency)	• Improve intermodal connections to/from airports, especially in Western Balkan countries

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List of Abbreviations

ACA : Airport Carbon Accreditation Programme
ACAA: Albanian Civil Aviation Authority
A-CDM: Airport Collaborative Decision Making
ACI : Airport Council International
ADRIAIR: Airport Security and Air Taxi Network in the Adriatic project
ADS-B: Automatic Dependent Surveillance-Broadcast
AFs: Action Functionalities
AIA: Athens International Airport
AISBL: Alliance Association Internationale Sans But Lucratif
Albcontrol: Air Navigation Service Provider in Albania
AMAN: Arrival Management
ANS: Air Navigation Service
ANSP: Air Navigation Service Provider
ANTP: Albanian National Transport Plan
AOP: Airport Operations Plan
ARSO: Slovenian Environment Agency
ASBU: Aviation System Block Upgrades
ASM: Airspace Management
A-SMGCS: Advanced Surface Movement Guidance and Control System
ATC: Air Traffic Control
ATM: Air Traffic Management
BHANSA: Bosnia and Herzegovina Air Navigation Services Agency
CCL: Croatia Control Ltd
CCO: Continuous Climb Operations
CDO: Continuous Descent Operations
CEF: Connecting Europe Facility
CFU: Corfu International Airport
CINEA: The European Climate, Infrastructure and Environment Executive Agency
CNG: Compressed Natural Gas
CO2 : Carbon dioxide
CODACAS: Convergence of DSNA and COOPANS ATM Systems
COOPANS: Cooperation of Air Service Providers
CPDLC: Controller Pilot Data Link Communications
CWP: Controller Working Position
DGAC: Direction Générale de l'Aviation Civile of France
DME: Distance-measuring equipment
DSNA: Direction des Services de la Navigation Aérienne of France
DURA: Dubrovnik Development Agency (DURA)
EASPG: European Aviation System Planning Group
EC: European Commission
ECAC : European Civil Aviation Conference
EGNOS: European Geostationary Navigation Overlay Service
EIB : European Investment Bank
ENAC: Italian Civil Aviation Authority

EOC: Essential Operational Changes
ERDF: European Regional Development Fund
EU: European Union
EUSAIR: EU Strategy for the Adriatic – Ionian Region
FAB: Functional Airspace Block
FAT: Factory Acceptance Test
FRA: Free Route Airspace
FUA: Flexible Use of Airspace
GANP: Global Air Navigation Plan
GATMOC: Global Air Traffic Management Operational Concept
HCAA: Hellenic Civil Aviation Authority
HRADF: Hellenic Republic Asset Development Fund
HRK: Croatian Kuna (Currency)
HUM: Mortal Remains
IAA: Irish Aviation Authority
IAOP: Initial Airport Operations Plan
IATA: International Air Transport Association
ICAO : International Civil Aviation Organization
ILS: Instrument landing system
INEA: Innovation and Networks Executive Agency
IPs: Implementation Projects
ITAF: Italian Air Force
KTEL: Thessaloniki Bus Station
L3: Level 3
LAirA: Landside Airports Accessibility
LPG: Liquefied Petroleum Gas
LPV: Localiser Performance with Vertical guidance
LSSIP: Local Single Sky Implementation
MMPI Ministry of the Sea, Transport and Infrastructure (of Croatia)
MoS: Motorways of the Sea
MSW: Municipal Solid Waste
NAS: The Italian National Airspace Strategy
NRRP: National Recovery and Resilience Plan
OASTH: Thessaloniki Urban Transport Organization
OG: Official Gazette
OLDI: Online Data Interchange Interoperability
OMSZ: Hungarian National Meteorological Service
PBN: Performance Based Navigation
PCP: Pilot Common Projects
PSOs: Public Service Obligations
RFC: Rail Freight Corridor
RFS: Road Feeder Services
RNAV: Area Navigation
ROMATSA: Romanian Air Traffic Services Administration
RRF: Recovery and Resilience Facility
RRW: Radioactive Material (Category I White)
RRY: Radioactive Material (Category II - Yellow) and Radioactive Material (Category III - Yellow)

SACBO: Bergamo-Orio al Serio Civil Airport Company
SAF: Sustainable Aviation Fuels
SBAS: Satellite Based Augmentation System
SEA: Strategic Environmental Assessment
SECSI FRA: South East Common Sky Initiative Free Route Airspace
SEETO: South East European Transport Observatory
SES: Single European Sky
SESAR : Single European Sky ATM Research
SFIT: Strategic Framework for Investment in Transport
SHMU: Slovak Hydrometeorological Institute
SLOWAM: Slovenia Wide Area Multilateration System
SMATSA: Serbia and Montenegro Air Traffic Services Agency
SRC: Sector Reform Contract
SSP: Single Project Pipeline
SST: Sectorial Strategy of Transport
SWIM: System Wide Information Management
TAM: Total Airport Management
TAV: Tepe Akfen Ventures
TEN-T: Trans-European Transport Network
TIA: Tirana International Airport
TMAs: Terminal Manoeuvring Areas
ToC: Top of Climb
ToD: Top of Descent
ULD: Unit Load Device
UTM: Unmanned Traffic Management System
VAL: Valuables/money shipments
VHF: Very High Frequency
VIP: Very important person
VOR: VHF omnidirectional range