

Transportation and Logistics Industry in Turkey

Foreign Market Consulting Ltd. Sti.

Istanbul

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FMConsulting prepares market snapshot reports from selected trusted sources in Turkey which are regularly updated. These reports are brief presentations overviewing available facts & figures on major industries in Turkey. If you need a specific research on different segments, please contact with our Head of Market Research Department Mrs. Berna Gurleyen (b.gurleyen@fmconsulting.com). We would be happy to support you.



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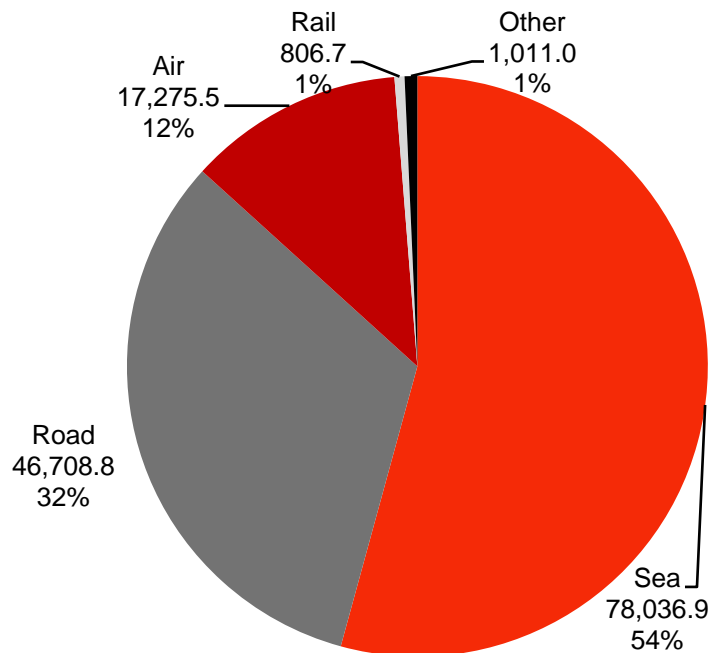


A. Introduction

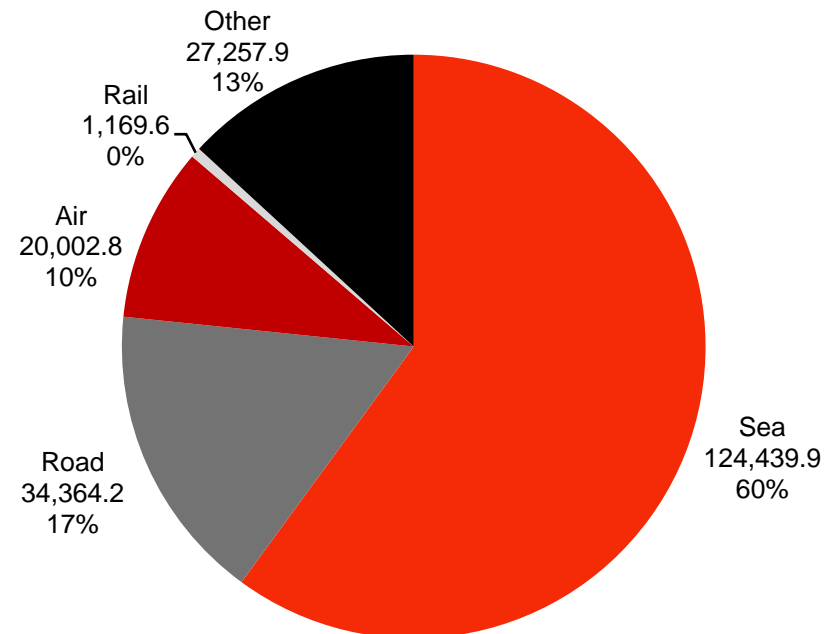
► Overview

- Turkey's geographical location between the **East** and the **West** creates opportunities for T&L activities and projects.
- **144 thousand** companies and **866 thousand** employees active in the T&L industry.
(Source: Social Security Institution, 2016)

**Exports by Mode of Transport,
Volume in USD mn, % Share, 2015**



**Imports by Mode of Transport,
Volume in USD mn, % Share, 2015**

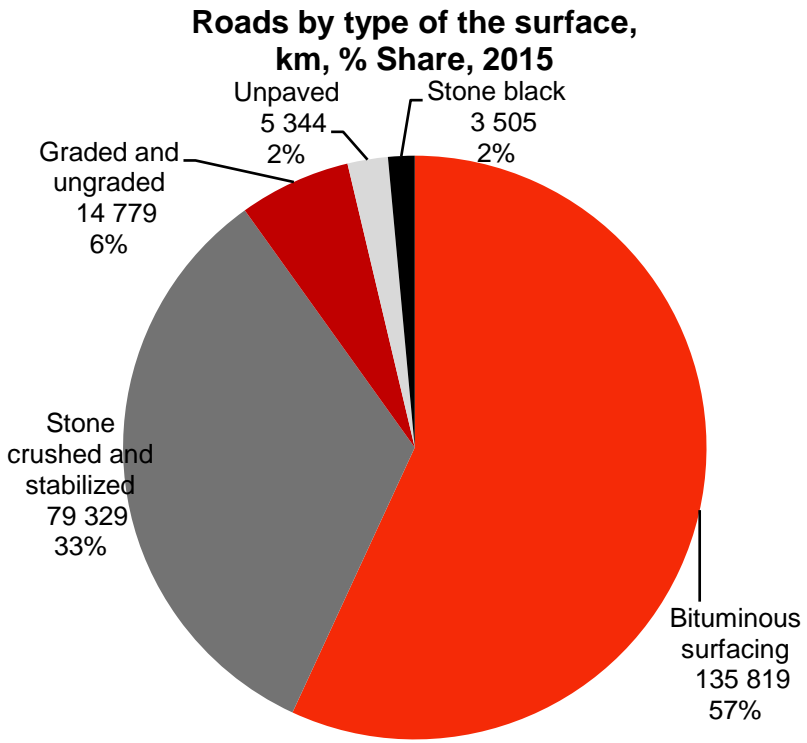
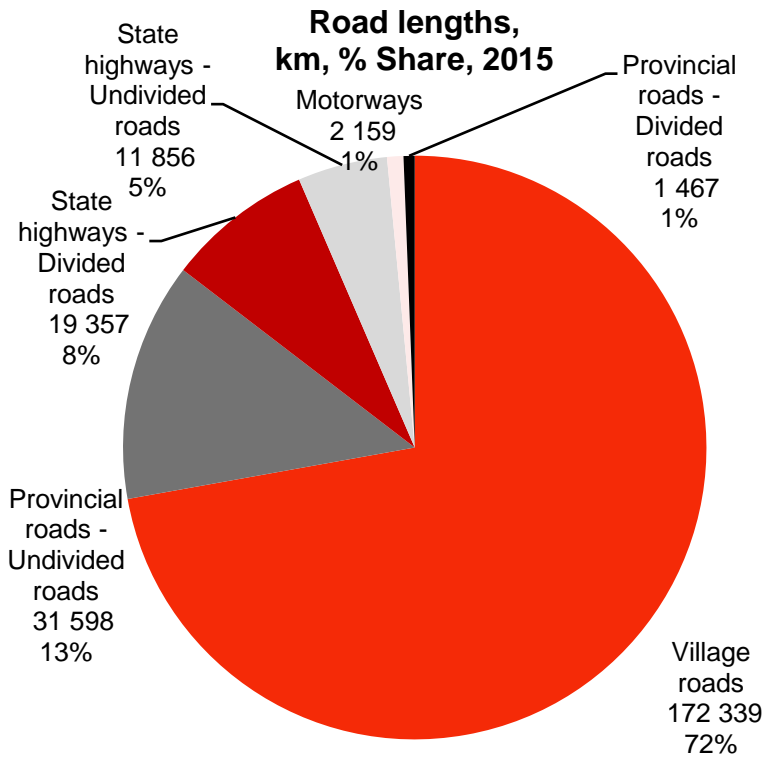




B. Road Transportation

▶ Road Lengths

- Total length of roads: **238,776 km**



*Divided Road: A highway composed of a separator that distinctly divides the traffic in one direction of the same highway from the traffic of other direction.



B. Road Transportation

► Freight and Passenger Transportation

Freight and Passenger Transportation and the Circulation on the State Roads, Provincial Roads and Motorways (Million)												
	Vehicle-km				Ton-km				Passenger-km			
Year	Total	State road	Provincial road	Motorway	Total	State road	Provincial road	Motorway	Total	State road	Provincial road	Motorway
2011	85 495	62 276	7 512	15 707	203 072	147 631	8 548	46 893	242 265	167 851	19 779	54 635
2014	102 988	70 246	13 983	18 759	234 492	163 918	16 845	53 729	276 073	183 566	32 307	60 200
2015	113 274	77 273	15 420	20 581	244 329	170 029	17 425	56 875	290 734	193 427	34 785	62 522
CAGR*	7.3%	5.5%	19.7%	7.0%	4.7%	3.6%	19.5%	4.9%	4.7%	3.6%	15.2%	3.4%

Vehicle-km: Unit measure of vehicle traffic corresponding to the conveyance of a vehicle over a distance of one kilometer.

Ton-km: Unit measure of goods traffic corresponding to the conveyance of goods over a distance of one kilometer.

Passenger-km: Unit measure of passenger traffic corresponding to the conveyance of a passenger over a distance of one kilometer.

*Compound annual growth rate btw. 2011-2015

Source: TUIK, 2016



B. Road Transportation

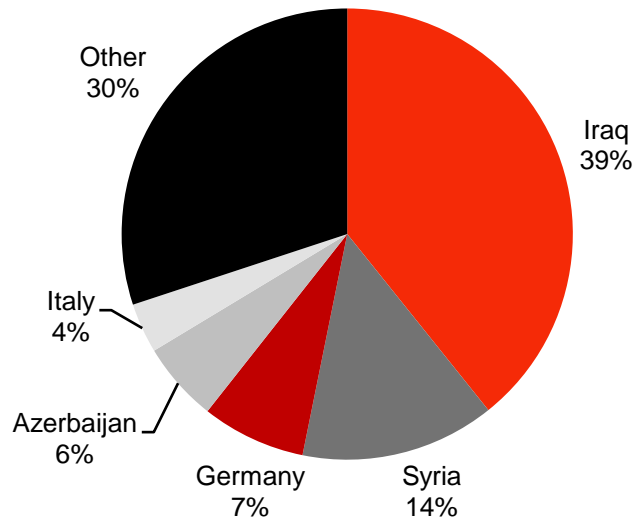
▶ International Road & Ro-Ro Transports

- The wars in Syria and Iraq, as well as the stagnation in the European economy, have slightly affected the growth trend in international road and ro-ro transports.

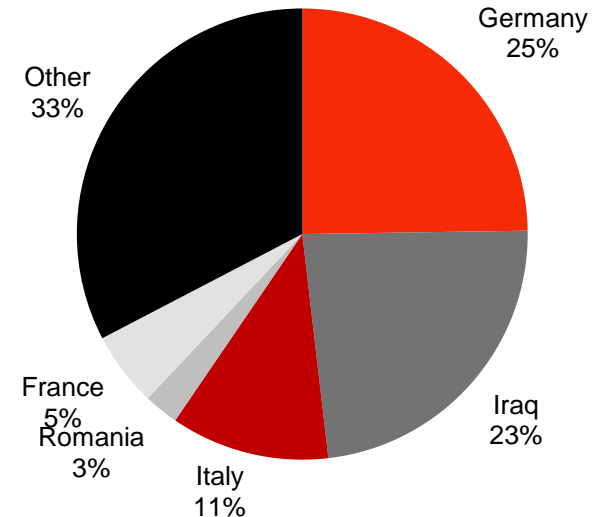
Number of Transports	2010	2014	2015	2015/8	2016/8	CAGR (2015-2010)	% Change (2016-8/ 2015-8)
Total Export Transports	1,349,947	1,559,125	1,505,472	972,986	974,188	2.2%	0.1%
Export Transports to EU	440,801	481,835	495,596	313,591	349,369	2.4%	11.4%
Total Import Transports	460,572	625,604	625,719	431,342	392,912	6.3%	-8.9%
Import Transports from EU	354,214	396,616	408,418	272,838	286,333	2.9%	4.9%

Source: International Transporters Association of Turkey (UND), 2016

Main Destinations of Export Transports, 2015



Main Departure Countries of Import Transports, 2015



Source: International Transporters Association of Turkey (UND), 2016



B. Road Transportation

▶ International Roads in Turkey



Source: General Directorate of Highways, 2016



B. Road Transportation

▶ The Northern Marmara Motorway and the Yavuz Sultan Selim Bridge

- Built and operated by **IC Ictas – Astaldi** Consortium
- Northern Marmara Motorway of nearly **115 km** length
- **8 lane** highway and **2 lane** railway on the bridge
- The widest suspension bridge in the world with a width of **59 m** and the longest spanning one that has a rail system on it, with a main span of **1,408 m**
- The suspension bridge with the highest tower of the world, with a height of more than **322 m**
- Construction commenced in **2013** and completed in **2016**
- Project volume of **USD 3.5 bn**





B. Road Transportation

► Gebze-Orhangazi-Izmir Highway

- Being constructed by **Nurol-Ozaltin-Makyol-Astaldi-Yuksel-Gocay** group
- Construction started in **2013** and will end in **2020**
- Osmangazi Bridge on the Izmit Gulf was commissioned in July 2016. The bridge has a length of **2,682 m**
- The travel time btw. Istanbul and Izmir will decrease to **3.5 hours**, down from 8 hours
- **384 km** highway and **49 km** connection roads, **433 km** in total
- Project volume: **USD 8 bn**

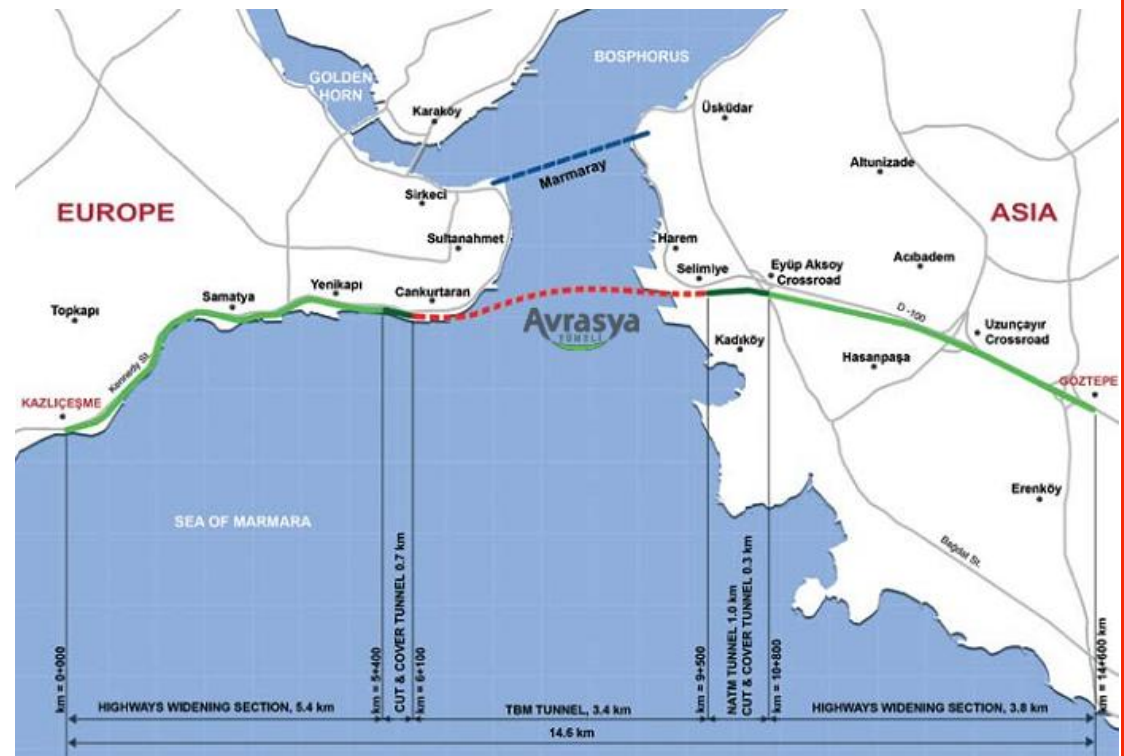




B. Road Transportation

► Eurasia Tunnel (Istanbul Strait Road Tube Crossing Project)

- Being constructed by the partnership of **Yapi Merkezi** from Turkey and **SK E&C** from S. Korea
- Between Kazlıçeşme and Göztepe along a **14.6 km** route including a **5.4 km** twin-deck tunnel that will cross the Bosphorus beneath the seabed
- To be commissioned in **December 2016**
- Investment volume: **USD 1.245 bn**

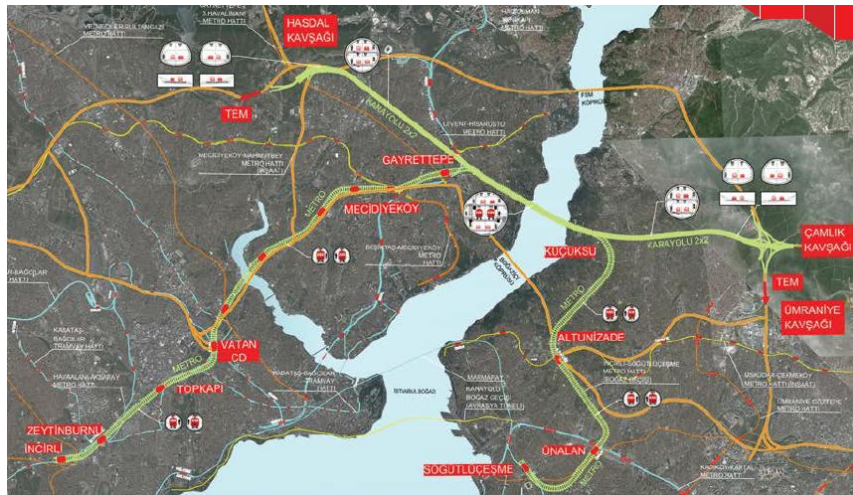




B. Road Transportation

▶ Great Istanbul Tunnel

- Integrated undersea tunnel, consisting **three levels**: Two levels for the highway and one level for the subway
- Length of the three-level section: **6.5 km**
- Depth under the sea level: **110 m**
- The tender for etude, project and engineering services was made in **August 2016**
- The **engineering projects** are planned to be completed in a year
- Expected to serve **6.5 mn passengers** per day
- Expected project cost: **USD 3.5 bn**





B. Road Transportation

▶ Istanbul-Balikesir Highway and Canakkale 1915 Bridge

- Canakkale 1915 Bridge:
 - The tender will be in **January 2017**
 - Construction will start in March 2017 and finish in **2023**
 - Length: **5169 m**
 - The bridge toll will be **EUR 15+VAT**
 - Expected construction cost: **TRY 15 bn**
- Highway:
 - Length: **324 km**
 - Expected construction cost: **TRY 9.8 bn**





C. Rail Transportation

► Length of Railways and Volume of Rail Transportation

Length of Railways, Train, Passenger, Freight Transportation and Ton Kilometer

Year	Length of railways (Km)	Length of High Speed Train Railways (Km) *	Number of passengers ('000)	Number of passengers - High Speed Train ('000) *
2011	12 000	888	85 752	2 557
2014	12 485	1 213	78 404	5 086
2015	12 532	1 213	95 317	5 693
CAGR**	1.1%	8.1%	2.7%	22.2%
Year	Freight Amount - Tonne ('000)	Train kilometer ('000)	Passenger kilometer ('000)	Tonne kilometer ('000)
2011	25 421	40 332	5 882 000	11 677 000
2014	28 747	43 006	4 393 000	11 992 000
2015	25 878	41 873	4 828 000	10 474 000
CAGR**	0.4%	0.9%	-4.8%	-2.7%

Train-kilometer: Unit measure of distance representing the movement of a train over one kilometer.

Passenger-kilometer: Unit measure of passenger traffic corresponding to the conveyance of a passenger over a distance of one kilometer.

Ton-kilometer: Unit measure of operating performance which corresponds to the hauling of one tonne of goods over a routed distance of one kilometer.

•High speed train values are already included in the previous column.

***Compound annual growth rate btw. 2011-2015

Source: TUIK, 2016

C. Rail Transportation

► Railway Map



Black: Conventional lines

Red: High speed train (HST) lines in operation

Blue: HST lines in construction and tender phase

Green: HST lines in project phase

► Logistics Centers

- Logistics centers, aimed to develop combined transportation integrated with other modes of transport, being established throughout Turkey.



Red: In operation
Blue: Under construction

Green: In project and expropriation phase



C. Rail Transportation

► Marmaray

- Planned to connect **European** and **Asian** rail network via a tunnel under the Bosphorus
- Provides an uninterrupted **passenger** and **freight** transportation across the Istanbul Strait
- Started in 2004 and came into operation in **2013**
- **76.3 km** total length, with **1.4 km** immersed tube tunnel
- Capacity of **75,000** passengers per hour per direction

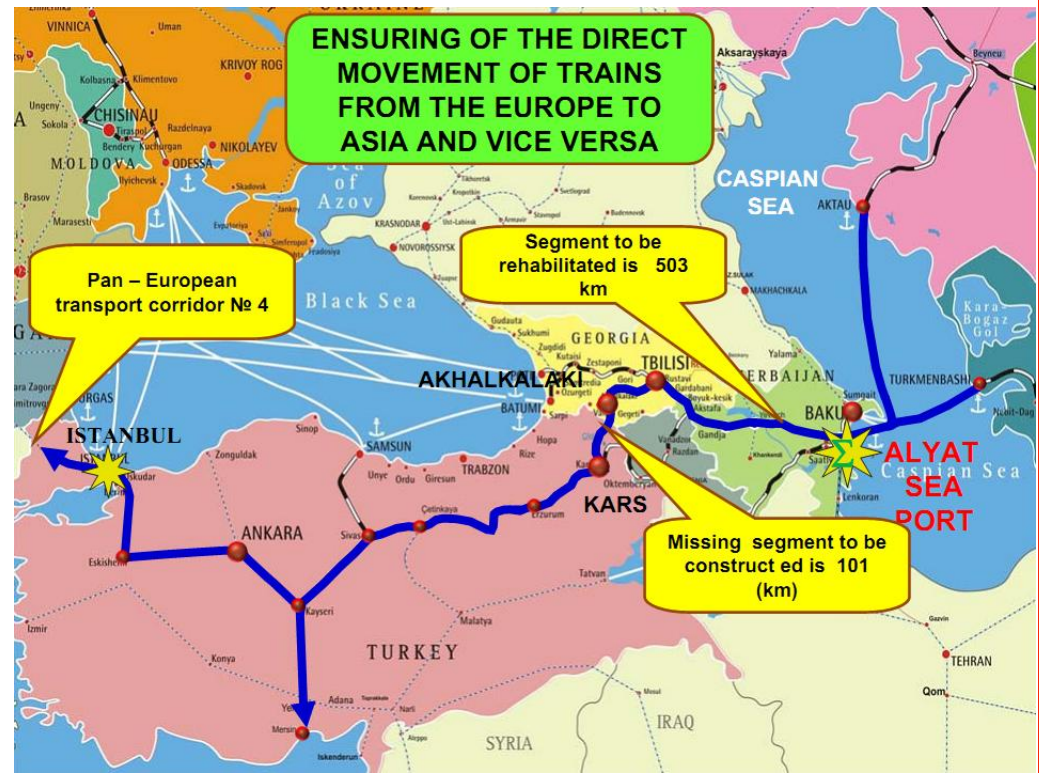




C. Rail Transportation

► Kars-Tbilisi-Baku Railway

- Being constructed on the basis of the **Georgian-Azerbaijani-Turkish** inter-state agreement
- Planned to link Turkey with Central Asia by a continuous railway line
- Length of the new line to be constructed:
 - **79 km** (Turkish side)
 - **29 km** (Georgian side)
- The existing lines in Azerbaijan and Georgia to be rehabilitated: **503 km**
- To be completed in **2017**
- Project value of the Turkish section: **TRY 884 mn**



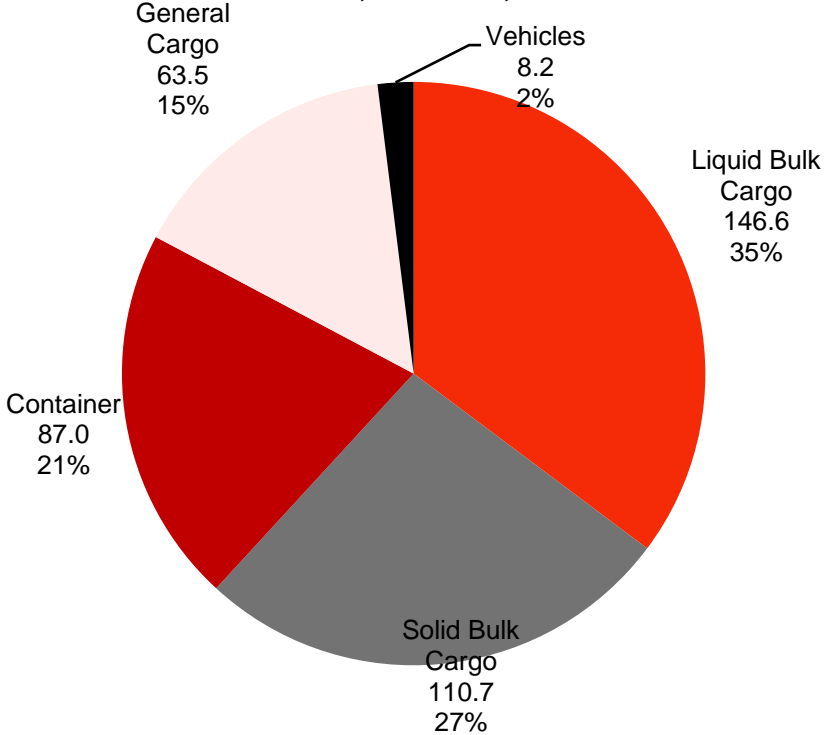


D. Maritime Transportation and Shipbuilding

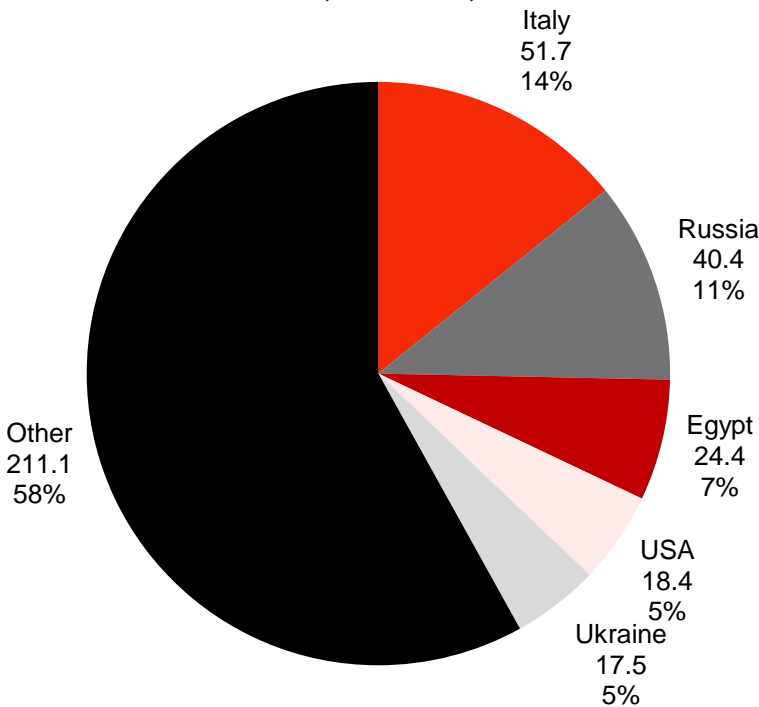
► Freight Handling in Ports

- **416 mn tons** of cargo was handled in Turkish ports in 2015.

Freight Handling in Turkish Ports by Type
mn tons, % Share, 2015



Freight Handling in Turkish Ports by Country
mn tons, % Share, 2015



Source: UBAK, Directorate General of Merchant Marine, 2016

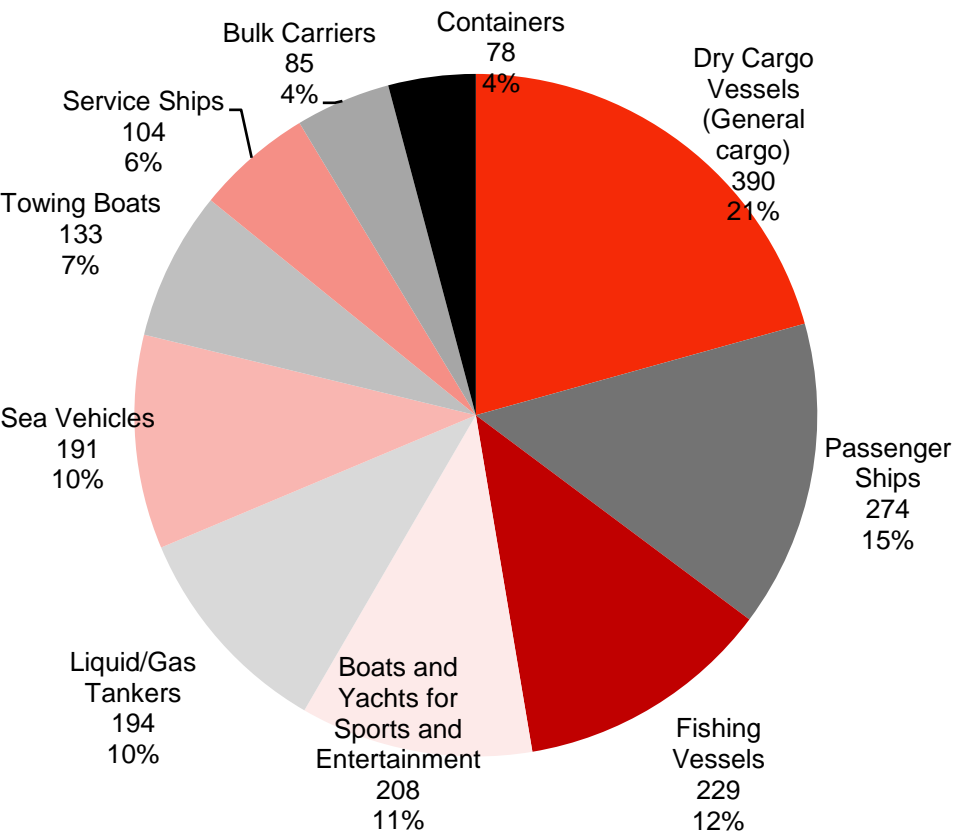


D. Maritime Transportation and Shipbuilding

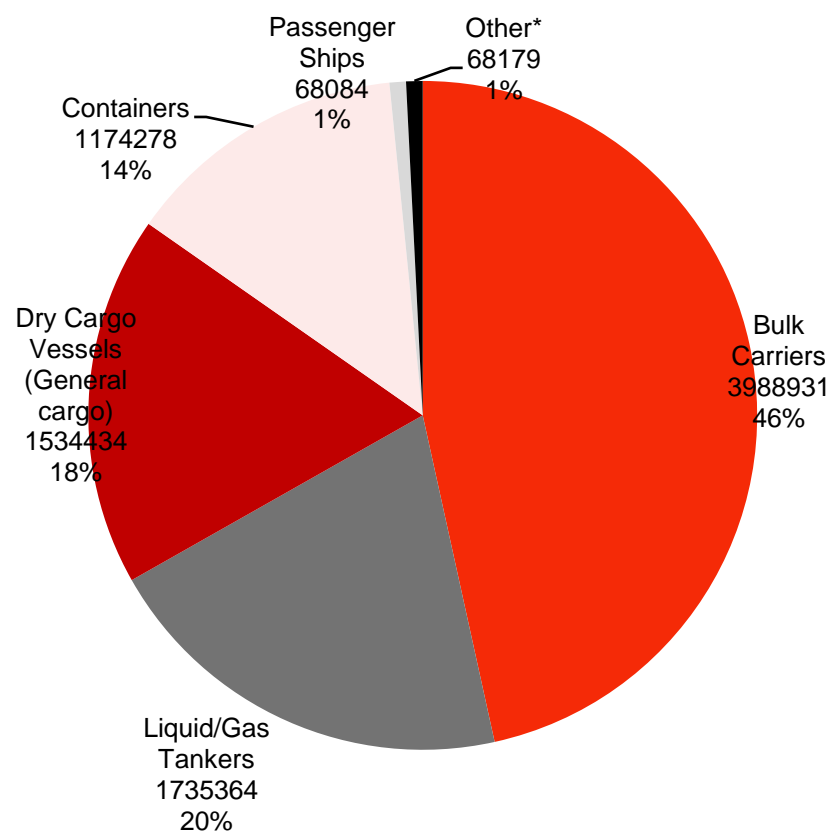
► Mercantile Navy (Ships bigger than 150 GT)

- Turkish mercantile navy is composed of **1,886** ships bigger than 150 GT with a total size of **8.6 mn DWT** in 2015.

**Mercantile Navy By Type
Number of Ships, % Share, 2015**



**Mercantile Navy By Type
DWT, % Share, 2015**



*Other: Service Ships, Sea Vehicles, Fishing Vessels, Towing Boats, Boats and Yachts for Sports and Entertainment
Source: UBAK, Directorate General of Merchant Marine, 2016



► Shipyards

- **77** shipyards, the majority is in three cities: Istanbul (**28**), Yalova (**24**), Aliaga/Izmir (**22**).
- **4.2 mn DWT/year** project capacity in active shipyards
- **19 mn DWT/year** repair and maintenance capacity
- **239,000** tons steel processing capacity
- Turkey is a net exporter of marine vessels: **USD 996 mn** of exports and **USD 532 mn** of imports.
- Main destinations of exports: **Norway, Faroe Islands, Panama**
- Almost **30,000** people are employed in shipyards.
- **113** ships were recycled in 2015 and **602,000** tons of scrap was produced.



D. Maritime Transportation and Shipbuilding

▶ Main Ports

Main Port Regions in Turkey		
PORT REGION	TOTAL HANDLING (Mn Tons, 2015)	Share %
BOTAS (CEYHAN)	78.1	19%
KOCAELI	64.6	16%
ALIAGA	48.8	12%
AMBARLI	36.2	9%
ISKENDERUN	36.1	9%
MERSIN	32.0	8%
TEKIRDAG	15.0	4%
GEMLIK	12.7	3%
KARADENIZ EREGLI	10.4	3%
SAMSUN	9.8	2%
IZMIR	9.6	2%
KARABIGA	9.2	2%
ZONGULDAK	7.5	2%
TUZLA	6.5	2%
ANTALYA	5.9	1%
GULLUK	5.5	1%
BANDIRMA	5.0	1%
CANAKKALE	4.3	1%
ISTANBUL	4.1	1%
TRABZON	3.4	1%
OTHER	11.2	3%
TOPLAM	416.0	100%

Source: UBAK, Directorate General of Merchant Marine, 2016



▶ New Port Projects

- **Candarli Port:** Planned to be the largest container port of Turkey and among **10** largest ports in the world. Construction started in **2011**. The final capacity will be **12 mn TEU/year**.
- **Filyos Port:** Will be a port complex with combined transportation. Expected to decrease the load on Marmara ports and straits, as well as provide an extra link between Central Asia-Black Sea region and the Middle East. The capacity will be **25 mn tons/year**. Planned to be completed in **2020**.
- **Mersin Container Port:** Will be used as a base for transportations to East Mediterranean, Middle East and Central Asia. The capacity will be **12.8 mn TEU/year**.



E. Air Transportation

▶ Aircraft, Passenger and Freight Traffic at the Airports

Air Traffic	2011	2012	2013	2014	2015	CAGR 2011-2015
Passenger Traffic	118,292,000	131,029,516	149,995,868	166,181,339	181,437,004	11%
Aircraft Traffic (excl. overflight)	1,042,369	1,093,047	1,223,795	1,345,954	1,456,673	9%
Freight Traffic (tons)	2,249,473	2,249,134	2,595,317	2,893,000	3,072,830	8%

Source: General Directorate of State Airports Authority (DHMI), 2016



E. Air Transportation

▶ Number of Operators, Aircrafts and Airports

	2014	2015	2015/2014 Change
Number of airline operators	13	13	0.0%
Number of airtaxi operators	50	49	-2.0%
Number of aircrafts of airline operators	422	489	15.9%
Number of aircrafts of airtaxi operators	212	219	3.3%
Seat capacity of aircrafts	76,297	90,259	18.3%
Air cargo capacity (tons)	1,349,875	1,759,600	30.4%
Number of airports (Total)	53	55	3.8%
•Number of airports (Domestic & international lines)	25	39	56.0%
•Number of airports (Domestic lines)	28	16	-42.9%

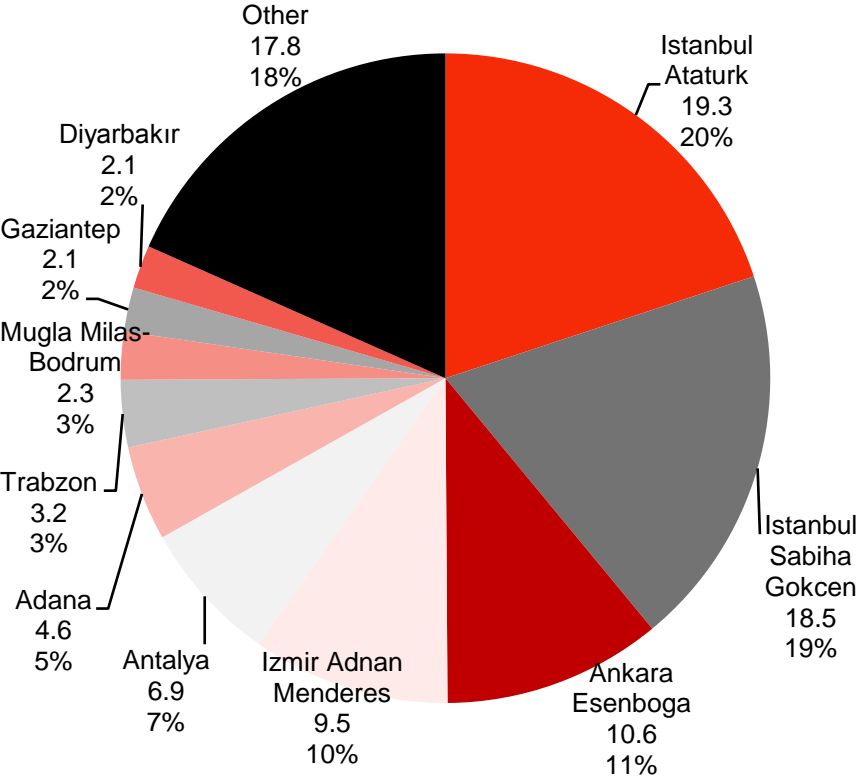
Source: Directorate General of Civil Aviation (SHGM), 2016



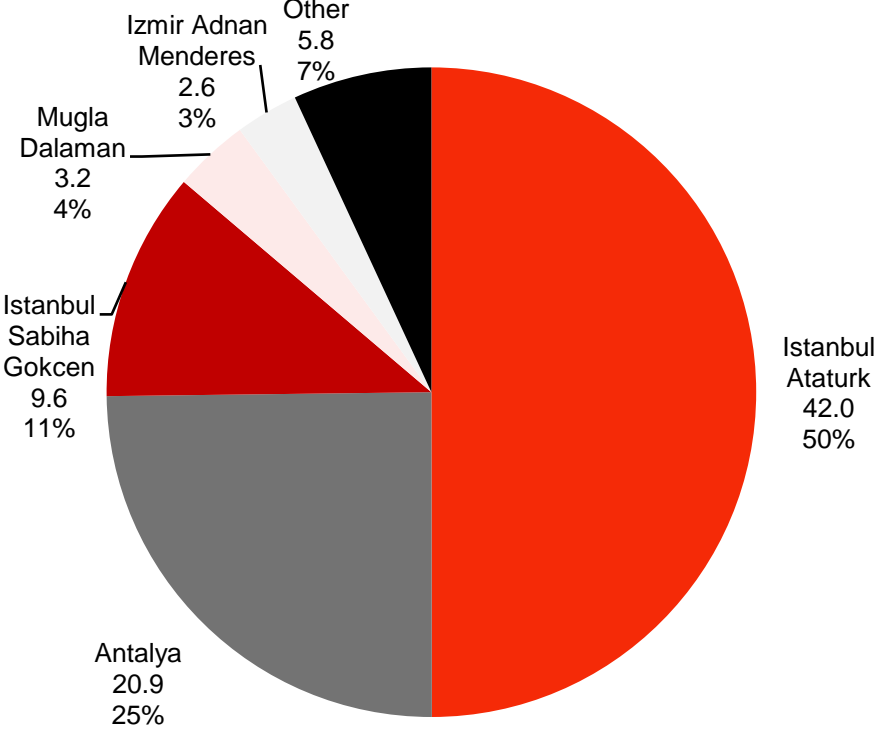
E. Air Transportation

▶ Main Airports

Main Airports by Passenger Traffic (Domestic Lines), mn Passengers, % Share, 2015



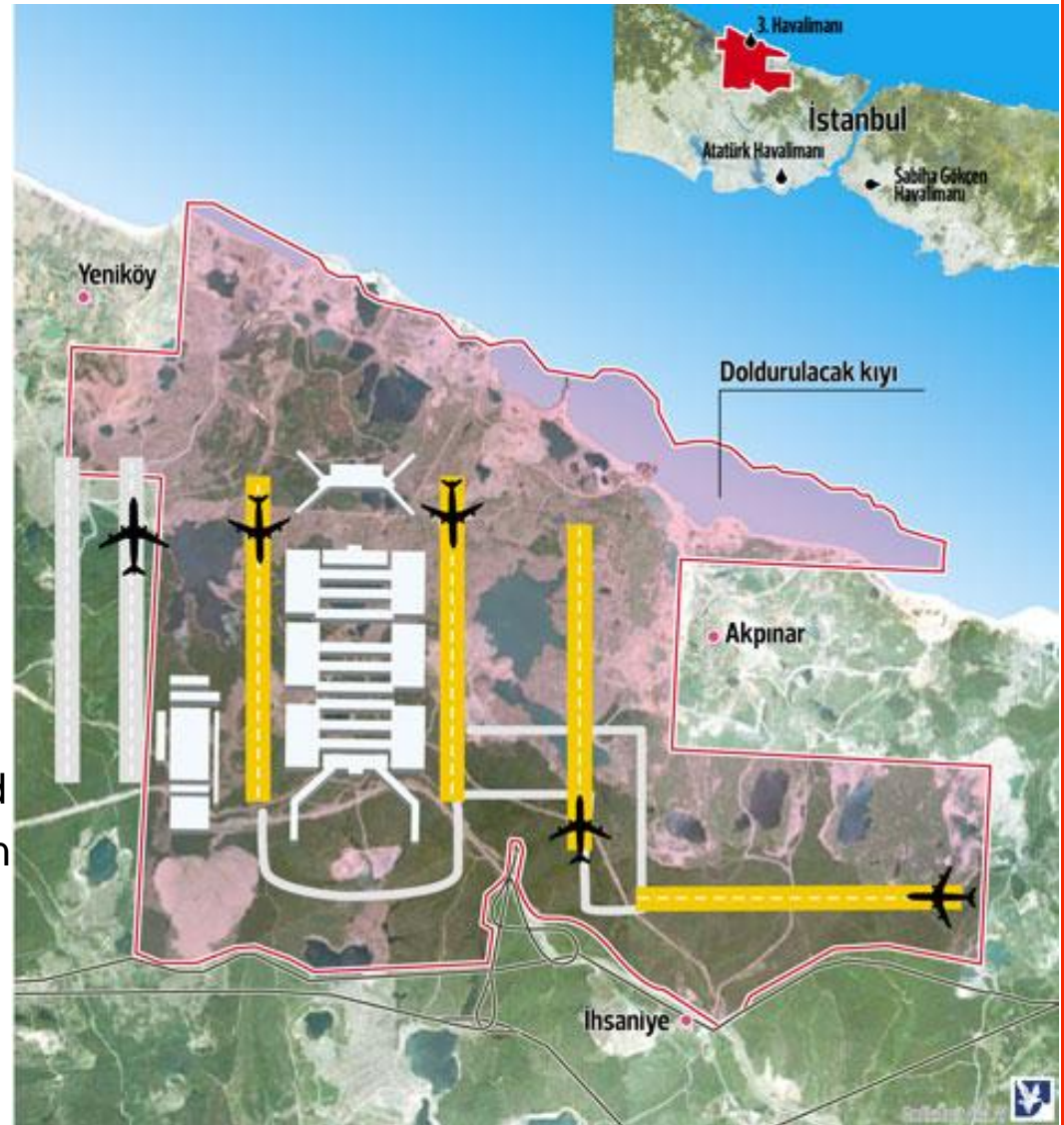
Main Airports by Passenger Traffic (International Lines), mn Passengers, % Share, 2015



Source: DHMI, 2016

▶ Third Airport in Istanbul

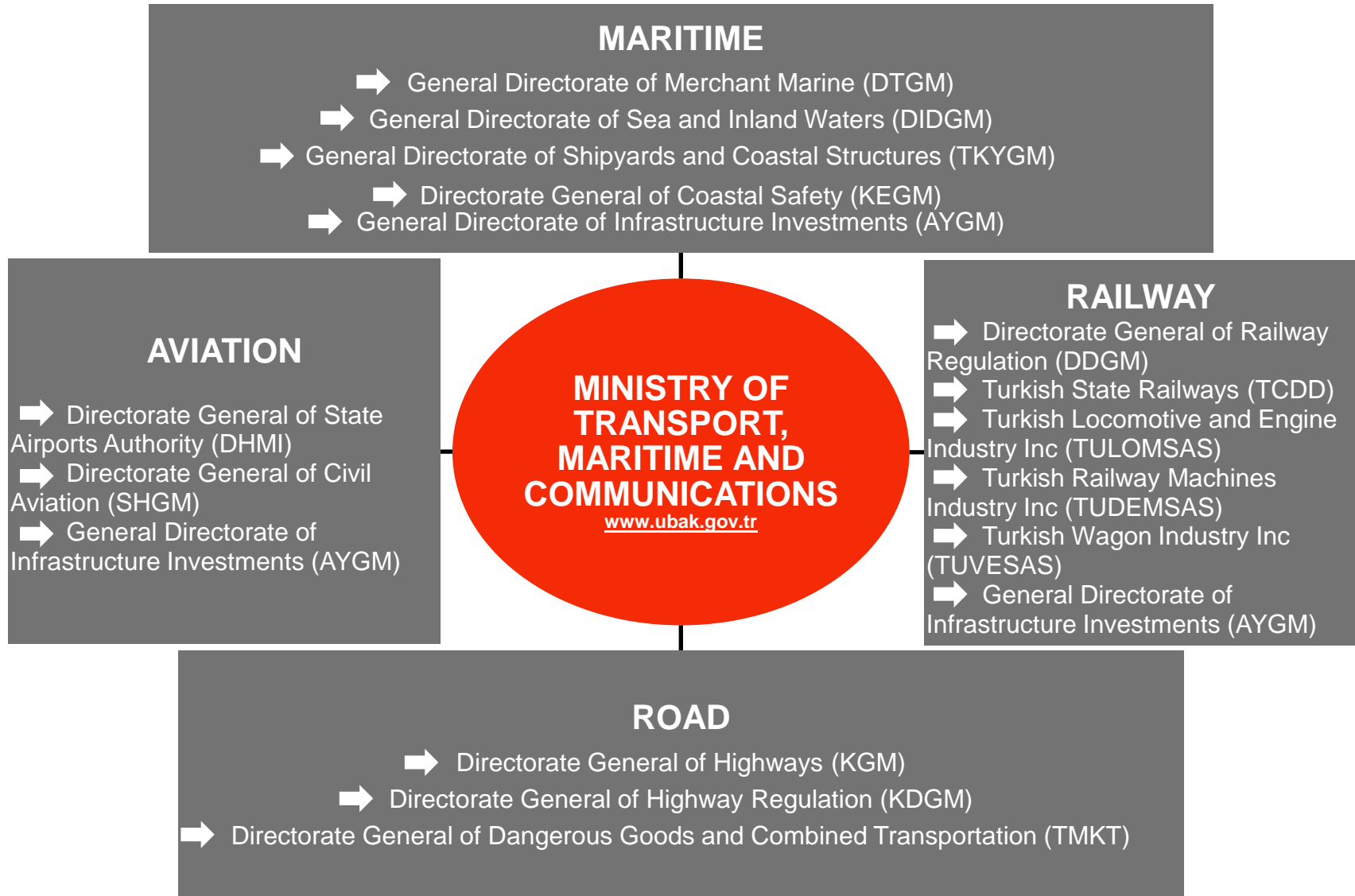
- Will be the largest airport in the world in terms of passenger capacity: **150 mn** passengers/year
- Limak-Kolin-Cengiz-Mapa-Kalyon group won the tender with a proposal of **EUR 22.2 bn**
- Total investment volume will be **EUR 10.2 bn**
- Construction started in **2014** and the first stage will be in operation in **2018**
- **76.5 mn sqm** area





F. Main Institutions & Companies

► Public Institutions





F. Main Institutions & Companies

▶ Main Transportation and Logistics Companies

Company Name	Business Field	Net Sales (TRY mn, 2015)*	Number of Employees
Turkish Airlines	Aviation	28,752.0	27,676
Pegasus Airlines	Aviation	3,488.3	4,967
SunExpress	Aviation	3,379.5	2,584
General Directorate of State Airports Authority (DHMI)	Aviation/ State Institution	3,240.9	9,157
Turkish State Railways (TCDD)	Railways/ State Institution	1,748.1	26,505
Netlog Logistics	Logistics	1,569.7	7,050
Ekol	Logistics	1,512.0	6,580
Borusan Lojistik	Logistics	1,411.0	1,073
Metro Tourism	Bus Transportation	871.3	418
Fasdat Gida	Food Distribution & Logistics	825.6	311

*EUR 1 = TRY 3.021 in 2015

Source: Fortune Magazine, July 2016



▶ 2023 Targets

- **Air transportation: 450 mn** passengers/year capacity in airports.
- **Maritime transportation: 50 mn DWT** Turkish owned merchant navy, being among the top **10** countries in the world.
- **Road transportation: 37,000 km** divided roads, **8000 km** of which will be motorways.
- **Rail transportation: 13,000 km** new railway construction (3,500 km high speed railways, 8,500 km speed railways, 1,000 km conventional railways), to reach **25,000 km** railways in total.

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