



The Logistics Industry in Turkey

REPUBLIC OF TURKEY PRIME MINISTRY
INVESTMENT SUPPORT AND
PROMOTION AGENCY



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Glossary of Terms

Acronym	Definition
3G	Third Generation
3PL	Third Party Logistics
4PL	Forth Party Logistics
5PL	Fifth Party Logistics
ADSL	Asymmetric Digital Subscriber Line
AEO	Authorized Economic Operator
AGR	European Agreement on Main Traffic Arteries
ATR	Admission Temporaire Roulette
AZR	Azerbaijan
BALO	Great West Anatolia Logistics Organization
BMI	Business Monitor International
BOT	Build-Operate-Transfer
BOTAŞ	Petroleum Pipeline Corporation
BRIC	Brazil, Russia, India and China
BSEC	Black Sea Economic Cooperation
C&F	Carrying & Forwarding
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CB	Customs Brokerage
CE	Communauté Européenne/European Community
CEO	Chief Executive Officer
CIF	Cost, Insurance and Freight
CIS	Commonwealth of Independent States
CMA CMG	Compagnie Maritime d'Affrètement Compagnie Générale Maritime
DENTUR	Turkish Marine Industry Association
DHMI	State Airport Administration General Directorate of Infrastructure
DLH	Investments for Ministry of Transportation, Maritime Affairs and Communications
DTD	Railway Transport Association

Acronym	Definition
DWT	Deadweight Tonnage
EATL	Eurasia Transport Links
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
EC	Exporter Company
ECOTA	Economic Cooperation Organization Trade Agreement
EE	Eastern European
ESCAP	Economic and Social Commission For Asia and the Pacific
EU	European Union
EUI	Economist Intelligence Unit
Ex Work	A trade term requiring the seller to deliver goods at his or her own place of business.
FI	Foreign Investment
FOB	Free on Board
FX	Foreign Exchange
GDP	Gross Domestic Product
GT	Gross Tonnage
HP	Hewlett-Packard
IATA	International Air Transport Association
IBM	International Business Machines
IDO	Istanbul Sea Ferries
IMF	International Monetary Fund
IMC	Intermodal Container
IMO	International Maritime Organization
IRN	Iran
IRQ	Iraq
IRU	International Road Transport Union
KM	Kilometers



Glossary of Terms

Acronym	Definition
kph	Kilometers per hour
KUW	Kuwait
LODER	Logistics Association
LPI	Logistics Performance Index
LSCI	Linear Shipping Connectivity Index
M&A	Mergers and Acquisitions
MFN	Most Favored Nation
MSC	Mediterranean Shipping Company
N/A	Not Available
NGO	Non-Governmental Organizations
OOG	Out of Gauge
OPEX	Operational Expenditure
ÖSYM	Student Selection and Placement Center
PPP	Public-Private Partnership
QTR	Qatar
R&D	Research and Development
RAYDER	Association of Rail Transport Systems
RODER	Ro-Ro Vessel Operators & Combined Transporters' Association
RO-RO	Roll-on/Roll-off
RUS	Russia
RUSF	Resource Utilization Support Fund
SAR	Saudi Arabia
SCT	Special Consumption Tax
sm3	Cubic Centimeter
TANAP	Trans Anatolian Natural Gas Pipeline Project
TBD	To Be Determined
TCDD	Turkish State Railways

Acronym	Definition
TDİ	Turkish Maritime Organization
TEM	Trans-European South-North Motorway Project
TEU	Twenty Foot Equivalent Unit
TL	Turkish Lira
TOR	Transfer of Operating Rights
TPAO	Turkish Petroleum Corporation
TRACECA	Transport Corridor Europe-Caucasus-Asia
TRK	Turkmenistan
TTH	Trans Turkey Highways
Turkstat	Turkish Statistical Institute
TÜDEMSAŞ	Turkish Railway Machines Industry Inc.
TÜLOMSAŞ	Locomotive and Engine Industry of Turkey
TÜRKLİM	Port Operators Association of Turkey
TÜVASAŞ	Turkish Wagon Industry
UAE	United Arab Emirates
UITP	International Association of Public Transport
UK	United Kingdom
UKAT	International Road Transporters and Agents
UNCTAD	United Nations Conference on Trade and Development
UND	International Shipping Association of Turkey
UNECE	United Nations Economic Commission for Europe
UNIFE	The Association of the European Rail Industry
USA	United States of America
USD	United States Dollar
VAT	Value Added Tax
WTO	World Trade Organization
y-o-y	Year Over Year



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Executive Summary

- Turkey plans to be one of the top **10 global economies by 2023**. Stable macroeconomic growth over the last decade has resulted in an expansion of international trade. Trade in Turkey has been rising significantly and the region has more of a presence in world trade. In 2012, **1.2% of all global trade** volume was conducted by Turkey. Turkey's share in global trade is expected to **exceed 1.5% by 2025**.
- Turkey's advantageous geographical location that stretches from Asia to Europe and Russia to Africa, allows it to be a hub for over USD 2 trillion freight carried in the region.
- According to LODER, Turkey's current logistics industry size is estimated to be **USD 80-100 billion** and is forecast to reach **USD 108-140 billion** by 2017.
- A strong and diversified economy will contribute to the expansion of the logistics industry. Since many industries support or rely on the logistics industry, their growth would indirectly stimulate growth in logistics.
- Global logistics players are keen to invest in Turkey because of the growth potential within the Turkish economy and its proximity to Europe and Asia. Turkey has already attracted big global players such as **DP World and APM terminals**.
- Turkey has one of the largest and youngest labor pools in Europe with **more than 65%** of the population aged between 24 and 54. The strength of Turkey's labor force is reflected in the logistics industry. Investors can easily hire a **talented workforce at competitive costs** to address the complex demands of the industry.
- Turkey is implementing **rail freight corridors**, coastal freight corridors and **international highway corridors** to become a leading logistics hub. These corridors will support the movement of a greater volume of **traffic** between countries neighboring Turkey.
- Turkey is building logistics centers/villages that will serve to **lower the costs** of transportation by offering various different modes of transportation within these centers/villages. It is estimated that by 2023, total freight carried in the centers/villages will reach a total of **USD 500 billion**. According to TCDD's investment program, TCDD plans to spend **TL 514.9 million** on building these logistics centers/villages.
- **Turkish 3PL** companies will take advantage of these decreasing costs and will increasingly move into international markets through ventures and acquisitions. For example, Horoz Logistics has started airway and seaway transportation between Turkey and Africa through Bolloré Africa Logistics.



I. General Overview of the Logistics Industry in Turkey



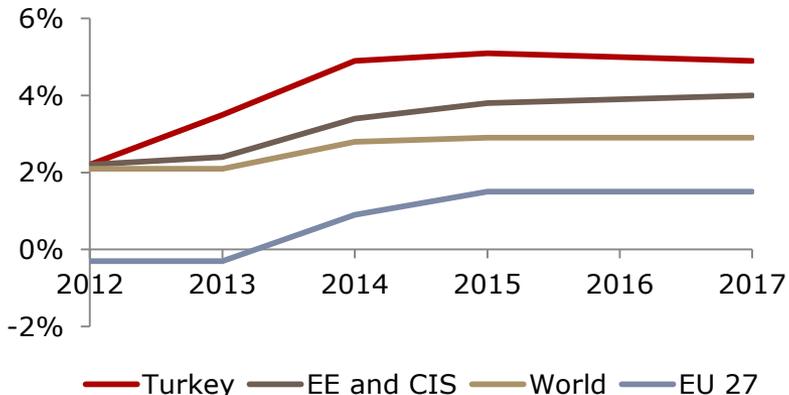
A. Macroeconomic Overview of the Industry in Turkey

- i. Overview of the Logistics Industry in Turkey
- ii. Industry Wide Effects of the Logistics Industry
- iii. Overview of the Value Chain
- iv. Overview of Logistic Service Providers in Turkey
- v. Turkey's Rank in Global Indices



The logistics industry growing in parallel with the GDP

Figure 1: Real GDP Growth Forecasts by Region, 2012-2017

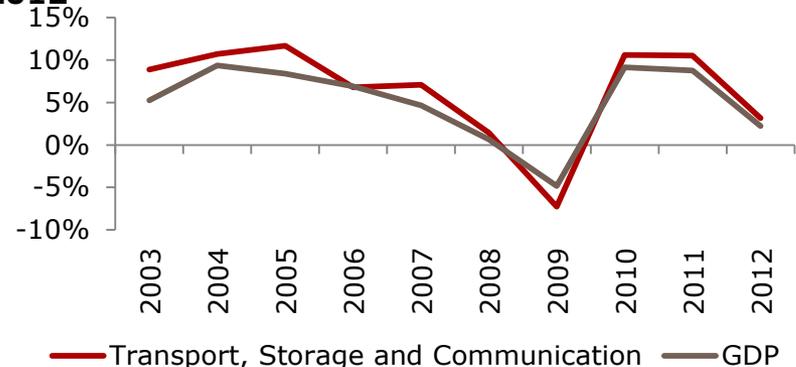


Source: Economist Intelligent Unit

EE: Eastern Europe and the Baltics CIS: Russia, Kazakhstan, Ukraine and Azerbaijan

- The Economist Intelligence Unit projects Turkey's GDP growth at **3.5% in 2013 and over 5%** per year between 2014 and 2017.
- Between 2013 and 2017, Turkey's GDP is expected to grow more rapidly than the average of all 27 EU countries, as well as the Eastern European and CIS countries.
- Turkey is in close proximity to other leading emerging markets where foreign trade has been increasing: Foreign trade volumes of the **Middle East, African countries and CIS countries** are following a growth trend.

Figure 2: GDP and Transport, Storage and Communication Growth Rates in Turkey, 2003-2012



Source: Turkstat

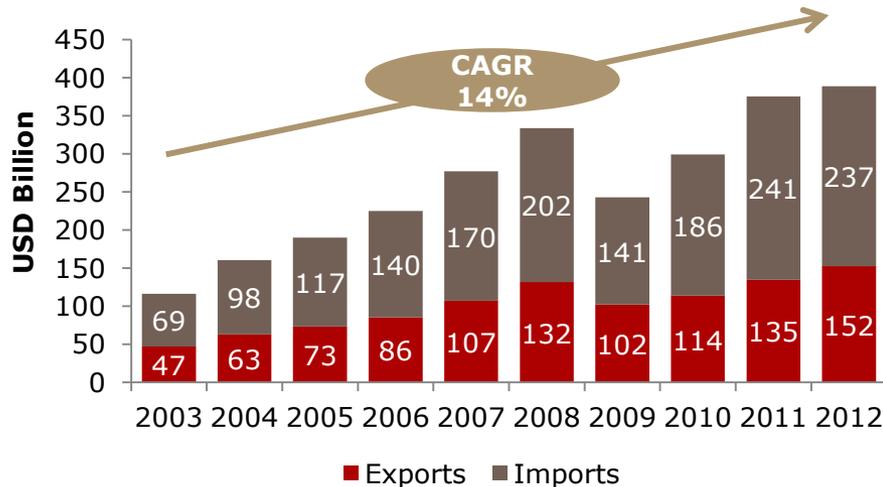
- Logistics industry constitute approx. 10-15% of the total global GDP and is an integral portion of Turkey's economy.
- After rebounding from the 2008-2009 global economic crisis, Turkey achieved a strong GDP growth of almost 9% till 2012. Even with economic activity relatively subdued, the growth in GDP and within the transport, storage and communication sectors had an impressive **2.2% and 3.2% of growth**, respectively in 2012.
- TurkStat indicates that the average growth in the fields of transportation, storage and communication was **6.4% between 2003 through 2012**.



Increase in Turkey's foreign trade volume will lead to above-average growth in the transportation and logistics industries

- Foreign trade statistics include goods which enter/exit the territory of Turkey to/from other countries and are placed in customs under normal import and export procedures as well as inward and outward processing procedures.
- Domestic and international trade are critical components of the logistics industry. Therefore, as the volume of imports and exports increase, this change will be reflected within the logistics industry.

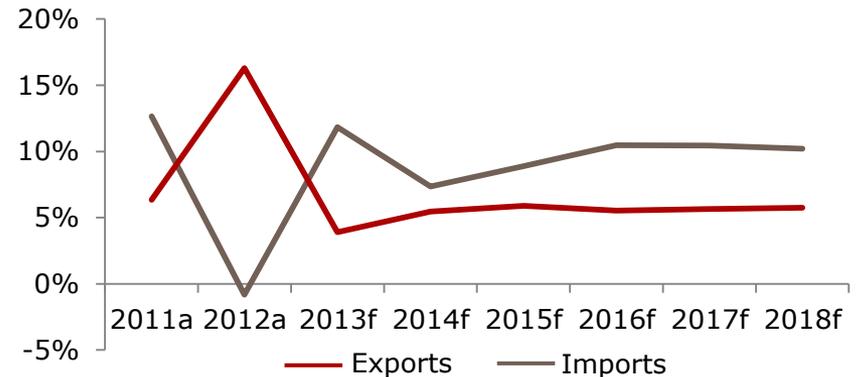
Figure 3: Foreign Trade Volume of Turkey, 2003-2012



Source: Turkstat



Figure 4: Growth of Import & Export of Goods Forecast of Turkey, 2011- 2018



Source: IMF

Note: Valuation of exports are based on free on board (FOB), valuation of imports are based on cost, insurance, freight (CIF).

a: actual f: forecast

- In terms of international trade and the logistics regarding goods, Turkey is positioned on a traditional and historic trade route between Asia and Europe, thus making **it a significant hub**. As Asia's growth continues, **Turkey will be able to reach its full potential** as a hub in international trade. According to the IMF, Turkish exports will grow on average more than 5% from 2013 to 2017, while import growth will exceed 9.5% during the same period.

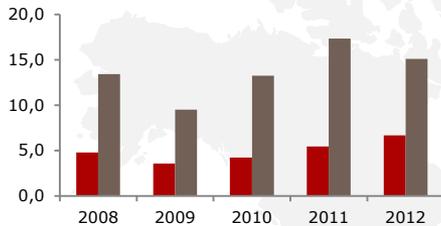
Acceleration in Turkish foreign trade with neighboring as well as distant countries underlines the importance of Turkey as a major trade route

Main export partners → Germany, Iraq, the UK, Italy and Russia
 Main import partners → Russia, China, Germany, the US, and Italy

■ Export
 ■ Import

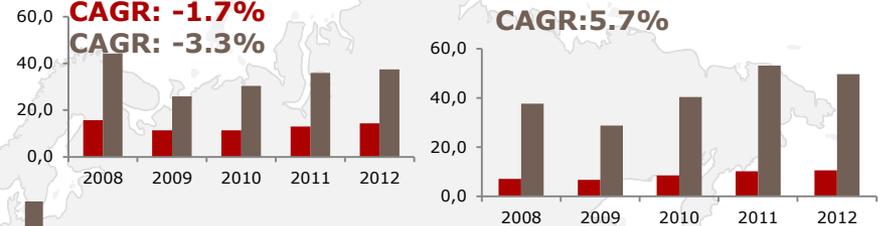
North America

CAGR: 6.8%
 CAGR: 2.4%



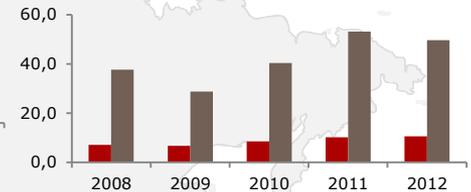
Europe (Other)

CAGR: -1.7%
 CAGR: -3.3%



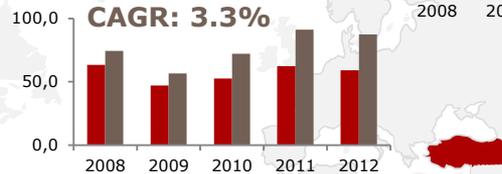
Asia (Other)

CAGR: 8.4%
 CAGR: 5.7%



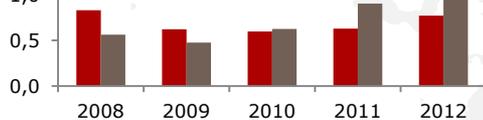
The EU 27

CAGR: -1.4%
 CAGR: 3.3%



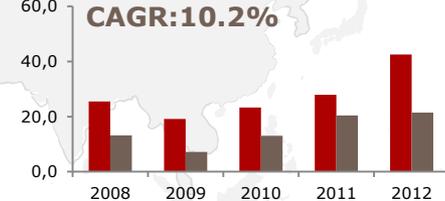
Central America & the Caribbean

CAGR: -1.5%
 CAGR: 13.8%



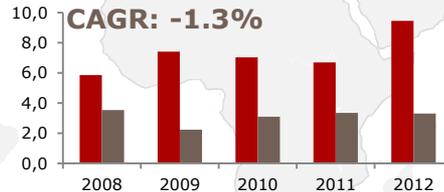
The Near & Middle East

CAGR: 10.8%
 CAGR: 10.2%



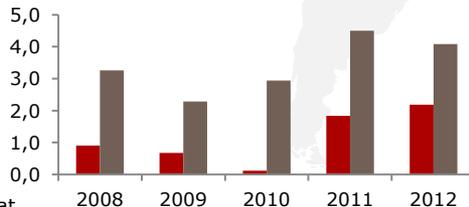
North Africa

CAGR: 10.1%
 CAGR: -1.3%



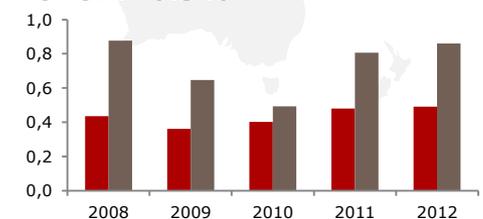
South America

CAGR: 19.4%
 CAGR: 4.6%



Australia and New Zealand

CAGR: 2.4%
 CAGR: -0.3%



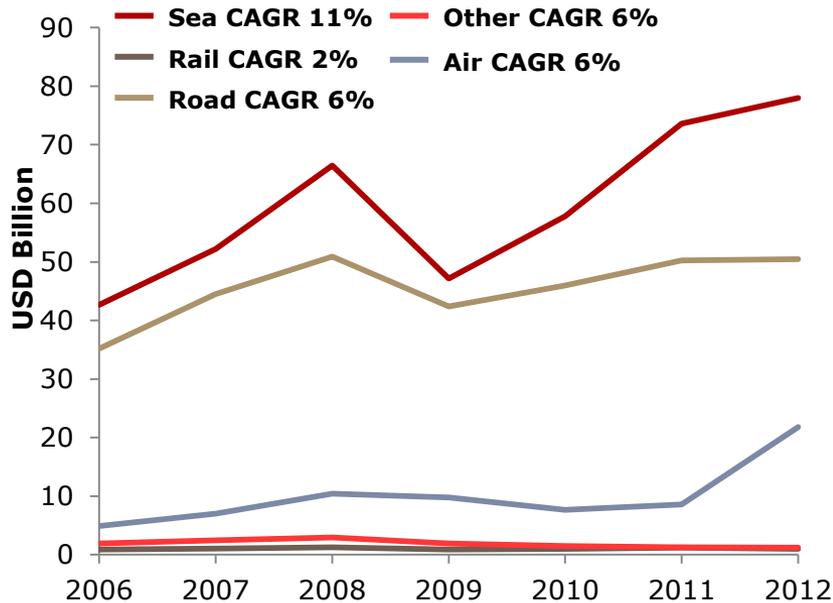
Source: Turkstat

Note: CAGR between 2008-2012



Foreign trade conducted via the sea has the largest share among modes of transportation and experienced the fastest growth between 2006 and 2012

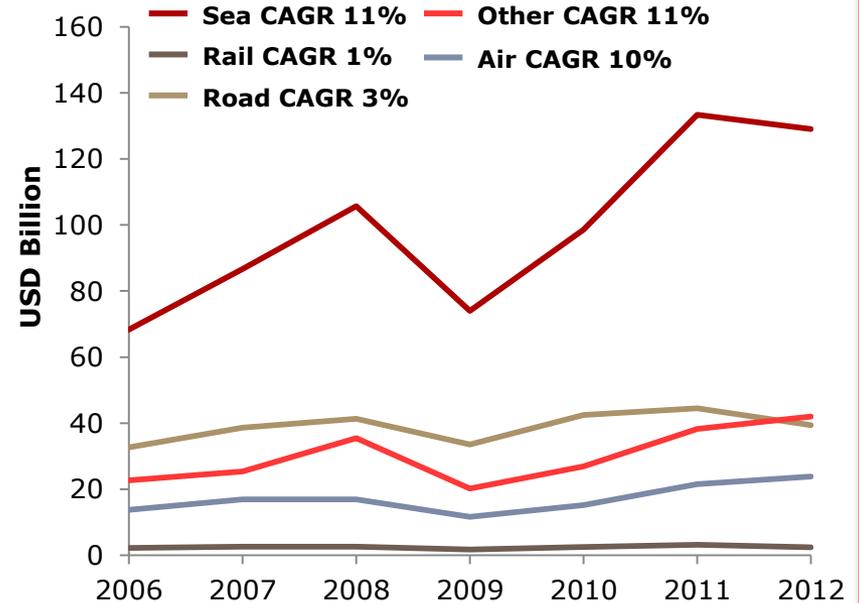
Figure 5: Exports by Mode of Transportation in Turkey, 2006-2012



Source: Turkstat

- Proximity to suppliers and customers makes Turkey an attractive logistics hub for exporting/importing goods. Transportation by sea is by far the largest mode of transportation for exports.
- **According to Turkstat, Turkey's exports grew with a stunning CAGR of 10%** from 2006 to 2012, reaching **USD 152 billion** in 2012.

Figure 6: Imports by Mode of Transportation in Turkey, 2006-2012



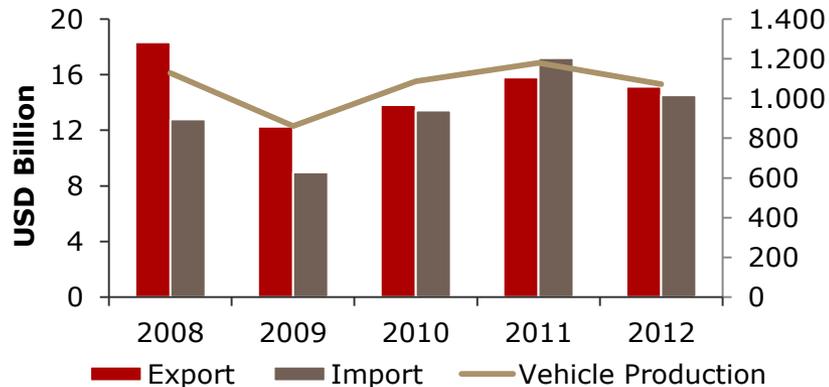
Source: Turkstat

- According to Turkstat, total imports have increased with a **CAGR of 9%** from 2006 to 2012.
- **55% of imports are via sea transport**, 16% via roads, 10% via air, 1% via rail and 18% via other modes of transportation.



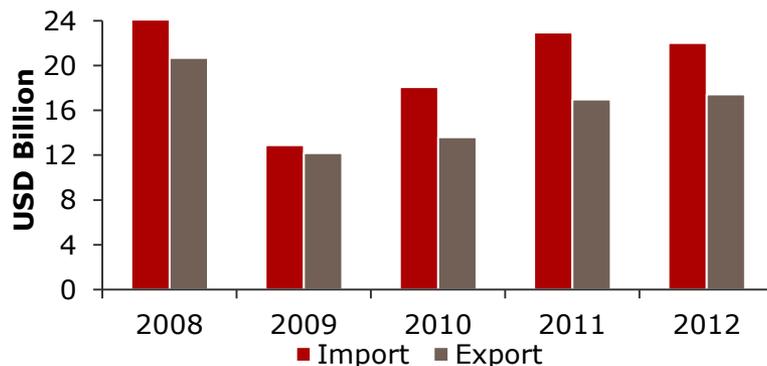
Case Study: Automotive and iron and steel industries facilitate the growth of the logistics industry

Figure 7: Vehicle Production in Turkey, 2008 -2012



Source: Turkstat

Figure 8: Foreign Trade in Iron & Steel Industry



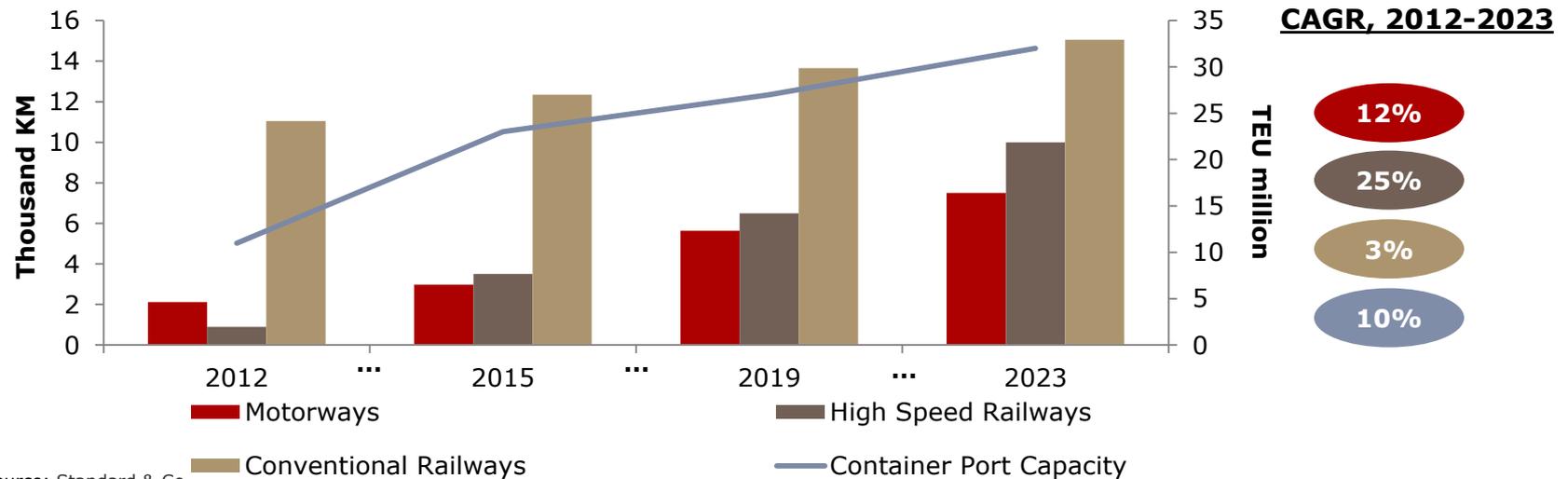
Source: Turkstat

- Turkey is the largest bus manufacturer in Europe and it expects to become the third largest auto manufacturer in Europe by 2015. Turkey has attracted many foreign investors to the country including **Toyota, Ford, Hyundai, MAN, Renault, Fiat, Mercedes and Isuzu**.
- Moreover, automotive spare parts manufacturing is also a highly developed sector which encompasses a large range of products. The interdependence of the automotive industry with its sub-industries creates the need for an on-going, efficient transportation and logistics network.
- The iron and steel industries are among the pillars of Turkish foreign trade. Turkey is the 8th largest crude steel producer in the world.
- Iron and steel industry has the second largest export share after the automobile industry. Imports displayed a **CAGR of 4%** during 2007 to 2012 surpassing **USD 22 billion**, while exports increased a CAGR of 7% to more than **USD 17 billion** in the same period.
- Furthermore, Turkey is the largest importer of scrap steel in the world with over **22 million tonnes** of scrap steel imported in 2012.
- The growth potential of the iron and steel industry will support the growth of the transportation and logistics industry.



Overall, the industry is expected to experience strong growth in the near future...

Figure 9: Growth Projections of Turkey



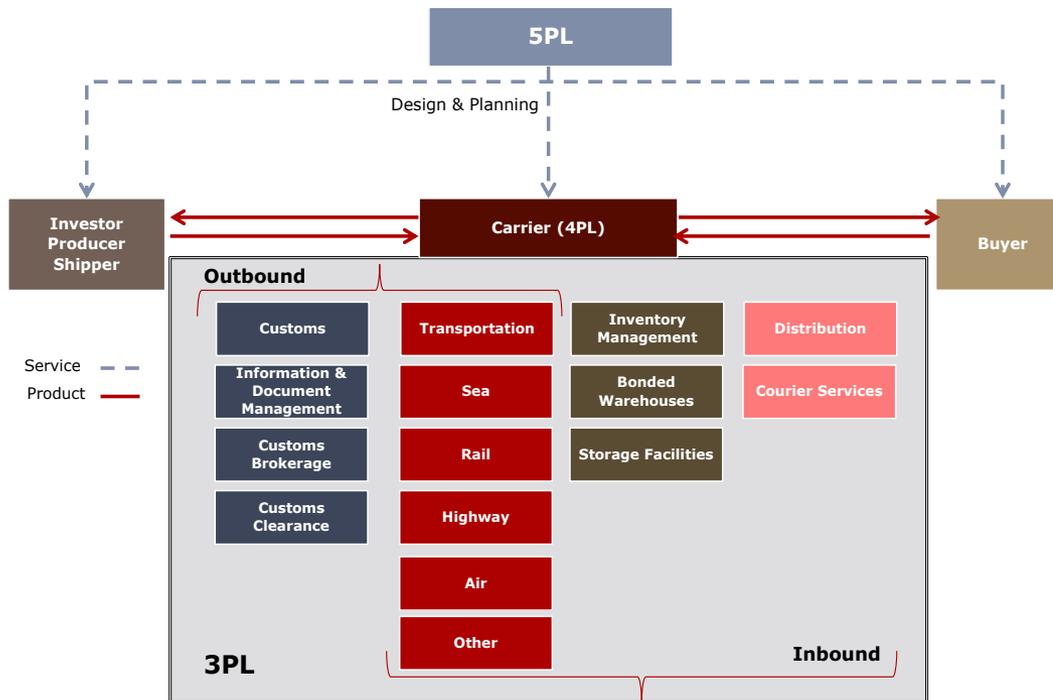
Source: Standard & Co.

- Turkey has ambitious targets for 2023 for the logistics industry. In order to attract more investors to the logistics industry, Turkey is diversifying its modes of transportation for carrying freight and passengers.
- According to the Ministry of Transport, Maritime Affairs and Communication, in 2011, **80% of freight and 90% of passengers** were transported via roads while only **5% of freight and 2% of passengers moved via railway** within Turkey. Turkey is determined to diversify the modes of transportation in order to reach a more balanced state. Thus, it plans to decrease the percentage of freight carried via roads to 72% by 2023 and increase the share of railway transport to 10%.
- Moreover, Turkey's 2023 foreign trade target of **USD 1.1 trillion**, in which USD 500 billion will be exports, will bring forth the need for development in the transportation and logistics industry and diversify the modes of transportation.



... and logistics companies are keen to take advantage of this growth

Figure 10: Value Chain



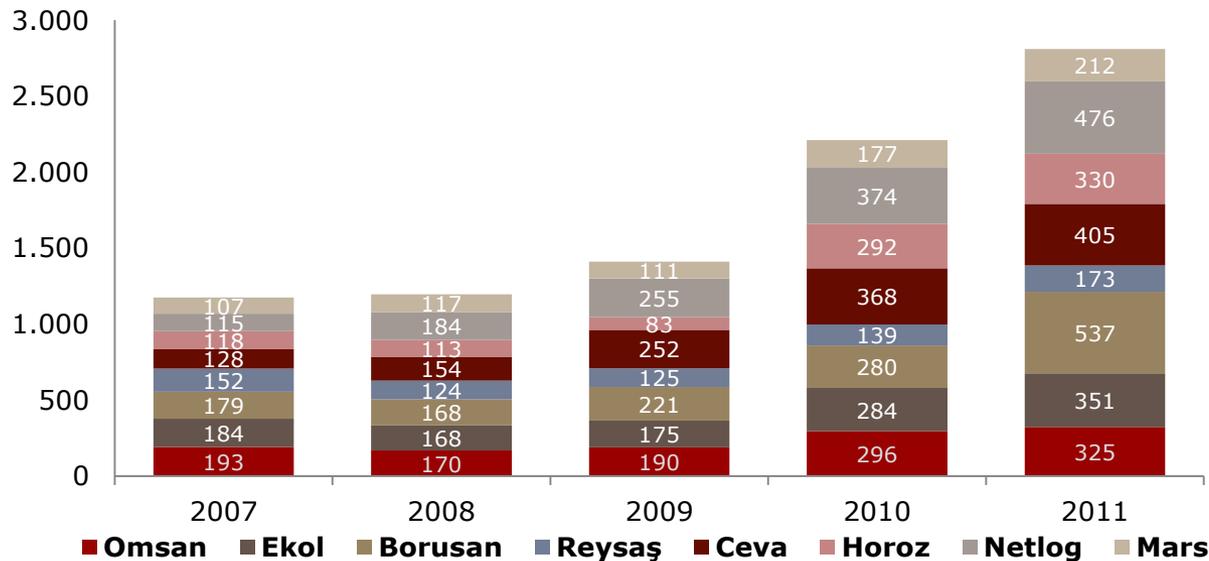
Source: Deloitte Analysis

- A **3PL firm** is a firm that provides and manages logistics services within the supply chain between manufacturer/shipper/wholesaler and distributor/customer. All of the **top 10 global 3PL** companies have understood the strategic importance of **Turkey** and either directly operate or have agencies in Turkey.
- A **4PL provider** creates value by redesigning everything from the business perspective to processes as it manages logistics for carriers, forwarders or warehouses.
- Another emerging sub-sector is for **5PL firms**, who are logistics service providers that plan, organize and implement logistics solutions on behalf of a contracting party by using the appropriate technologies as needed.
- **Turkey** has enough room for the **3PL, 4PL and 5PL** companies to flourish. Currently, there are no 5PL companies operating in Turkey, but a few companies do provide 4PL services.



Revenues of the major 3PL companies in Turkey have increased in recent years

Figure 11: Revenues of the Major Local Players, 2008-2012



Source: Capital 500

- With high growth rates in its logistics industry, Turkey has attracted global logistics companies. All of the top global logistics companies presently in Turkey are conducting operations either alone or through joint ventures.
- Turkish 3PL companies have also excelled in this sector. The leading local logistics companies are Omsan, Netlog, Reysaş, Mars, Borusan and Ekol. The total revenues of these companies grew with a stunning **CAGR 21%** from 2008 to 2012. This shows how highly profitable the 3PL market is and why it offers great opportunities within the industry.

2007-2011
CAGR



Investment Tip: Due to the hot logistics industry, revenues of major 3PL companies grew double digits in recent years. There is also an untapped 4PL and 5PL market in Turkey.



3PL companies can take advantage of Authorized Economic Operator certificates in Turkey

- An 'Authorized Economic Operator' (AEO) is an international status that grants specific customs privileges for authorized logistics companies that fulfill their customs obligations. These privileges include handling of customs operations without any paperwork and performing customs clearance operations in their own facilities.
- Organizations that have been active for at least 3 years are considered reliable. In order to get AEO status in Turkey, firms have to first receive an ISO 27001 certificate. Once inspections are completed, AEO status is granted by the Ministry of Customs and Commerce.

Advantages of an AEO Certificate

- Decreases the time and costs of customs operations.
- An AEO grants firms the opportunity to combine the import declaration with the declaration summary so that the vehicle can go directly to the warehouse.
- Less and privileged document control or examination.
- Possibility of making declarations with incomplete documents.
- Access to the Blue Line Document, which is a document that decreases the waiting time of the goods in customs

Table 1: Current Status for AEO Certificate of Major Logistics Firms in Turkey

Company	State of AEO
Ekol	Received
Barsan	Received
Netlog	Applied
Omsan	Received
Kita	Applied
Gefco	Applied
DHL	Applied
CEVA	Applied
MARS	Applied

Source: Interview with companies



Single window application and e-customs allow for easy customs procedures

Single Window

- The single window is a trade facilitation system that allows international traders to submit required documents at a single location and/or to a single entity. This system helps traders, who may have had difficulties with government agencies in multiple locations, to procure necessary documentation and permission more easily. With the implementation of the single window system, necessary documentation for imports and exports are entered into a single system and confirmations are also obtained through the same system in a timely fashion.
- Benefits of the single window system can be summarized as:
 - Increased efficiency and time saving
 - Cost saving
 - Reduced dealings with multiple government agencies
 - Reduced waiting time of goods in customs

E-Customs and Customs Brokerage

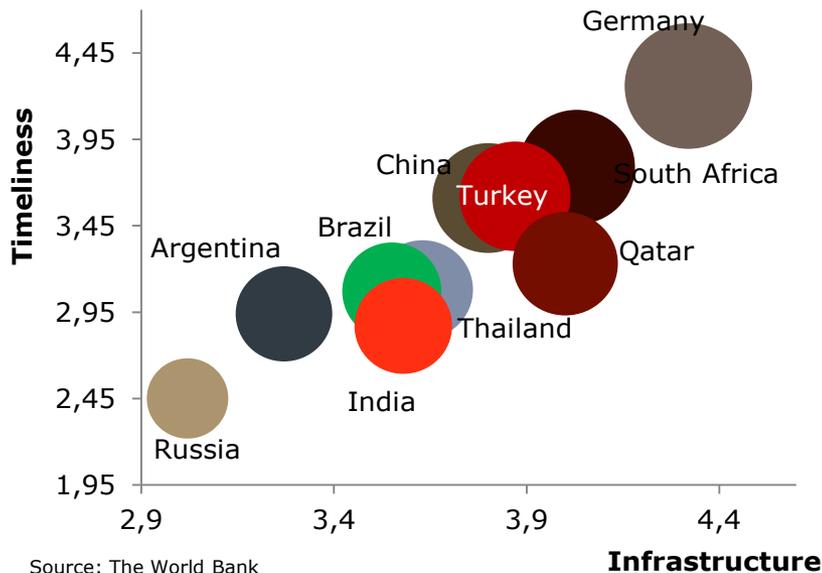
- The e-customs system provides an integrated electronics trade documentation system that allows the trading community to submit applications electronically for customs processing.
- E-customs and customs brokerage are integrated with single window application.
- There are around 1,270 private customs brokerage companies in Turkey that liaise with custom authorities.

Investment Tip: Single window allows for one- stop processing for customs procedures, making it very efficient and effective for logistics companies that import/export goods.



Growth and opportunities in the industry were reflected in the LPI as Turkey ranked 27th out of 155 countries in 2012...

Figure 12: Logistics Performance Index, 2012



Source: The World Bank

Note: 1-very low, 5- very high

Size of the bubble indicates the total score received from the LPI index

- The Logistics Performance Index (LPI) measures the logistic "friendliness" of 155 countries. A country's score is measured in six key areas:

1. The efficiency of the clearance process with border control agencies and customs;
2. The quality of infrastructure related to trade and transport;
3. The level of arrangement of competitively priced shipments;
4. The quality and expertise of logistics services;
5. How well the consignments are tracked and traced;
6. The rate at which shipments reach their destination within the scheduled and/or expected delivery time.

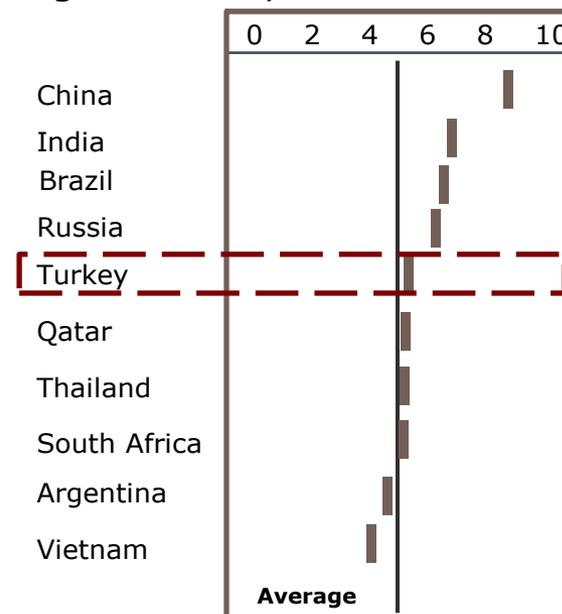
- Turkey **moved up from 39th place in 2010 to 27th in 2012**, out of the 155 countries in the index.
- Moreover, it is ranked third in the top 10 upper middle income performing countries.
- According to the index, **Turkey performed better than 3 out of 4 BRIC** countries - Brazil, Russia and India. It is also indexed better than most of the countries in Eastern Europe and the Middle East & Africa.



...and Turkey ranks well in other global indices

- Transport Intelligence is one of the world's leading providers of information and research about the logistics industry. **Transport Intelligence** prepared the Agility Emerging Markets Index together with Agility, a provider of supply chain and logistics services which assessed the transportation and logistics industry of emerging markets.
- While the **BRIC economies** have attracted foreign investment for some time, alternative markets such as Turkey present increasing opportunities for logistics companies.
- Although Turkey is smaller in size than BRIC countries, it offers a stable environment and fast growth for the logistics industry as a whole.
- According to Agility Emerging Markets Logistics Index, **Turkey is ranked as the 11th best country in logistics out of 41** emerging markets.
- The index scores markets in three broad categories on a scale of 1 - 10: (i) market size and growth attractiveness, (ii) market compatibility and (iii) connectedness. **Turkey scored, 6.77, 4.73 and 4.97**, respectively, in these categories averaging a total score of 5.80. Turkey has moved up one place and has received a better score than in 2011 where it averaged a total of 5.65.

Figure 13: Agility Emerging Markets Logistics Index, 2012



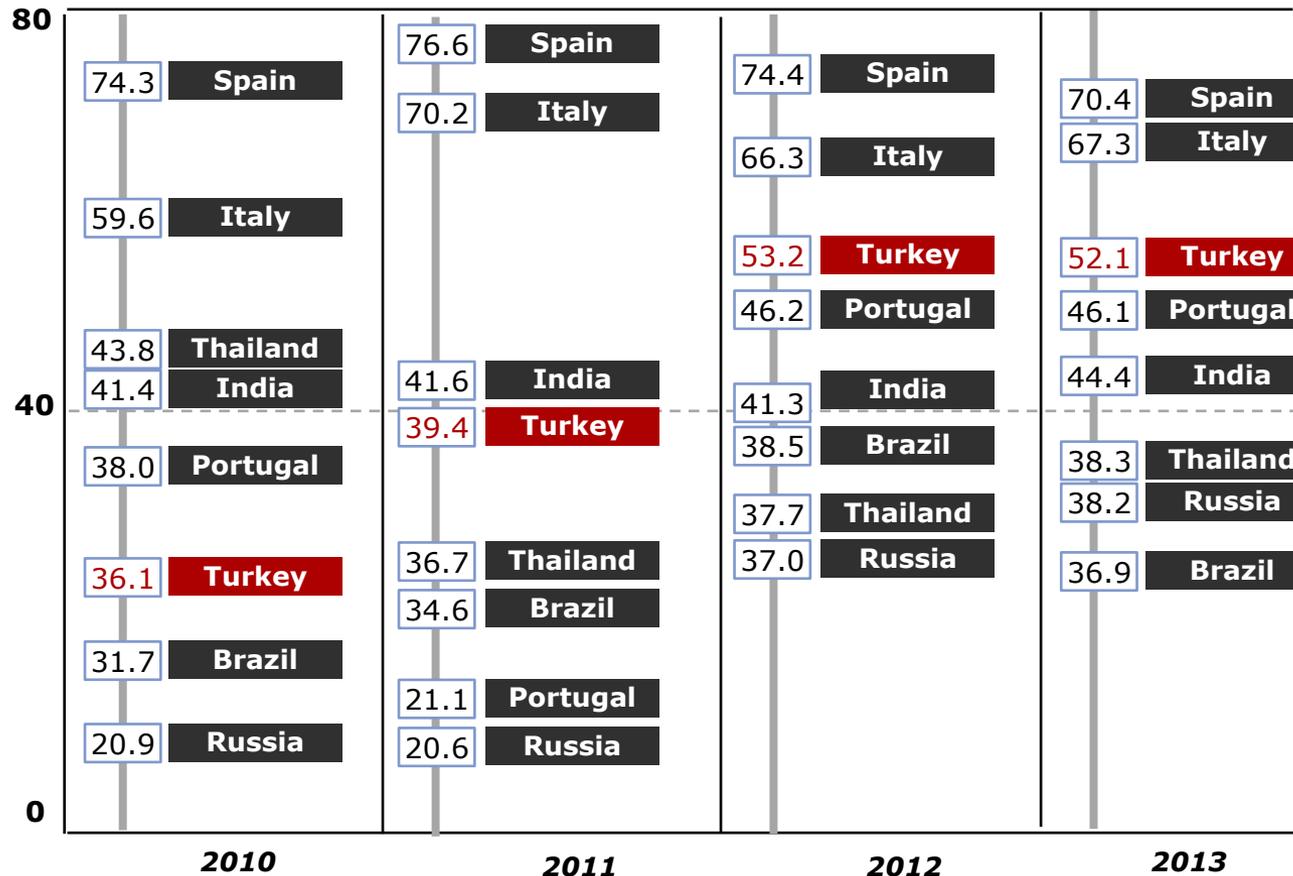
Source: Transport Intelligence
Note: Scores are given out of 10

- Transport Intelligence indicates that apart from Russia, Turkey is the only European country to be perceived as a major logistics market. The report notes that Turkey is regarded as a high profile emerging market.



Through the years, Turkey has been a rising star in Linear Shipping Connectivity Index

Figure 14: Linear Shipping Connectivity Index (LSCI)



- The LSCI mainly measures the containerization of trade and access to containerization transports.
- The LSCI is generated from five components: (i) the number of ships; (ii) the total container-carrying capacity of those ships; (iii) the maximum vessel size; (iv) the number of services and (v) the number of companies that deploy container ships to and from a country's ports.
- Turkey has moved up **9 places** from 2010 to 2013, establishing itself at **20th place**, surpassing India, Russia and Brazil.

Source: UNCTAD



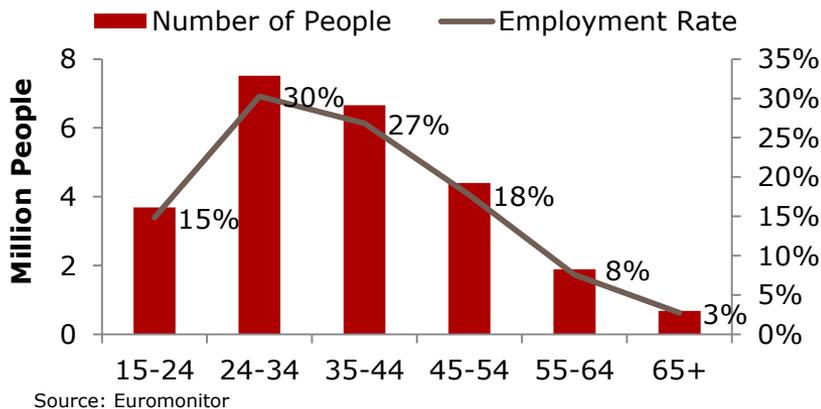
B. Turkey's Competitiveness

- i. Turkey's Young and Skilled Labor Force
- ii. Doing Business in the Logistics Industry in Turkey
- iii. Profit Margins in Turkey
- iv. Major NGOs in the Logistics Industry



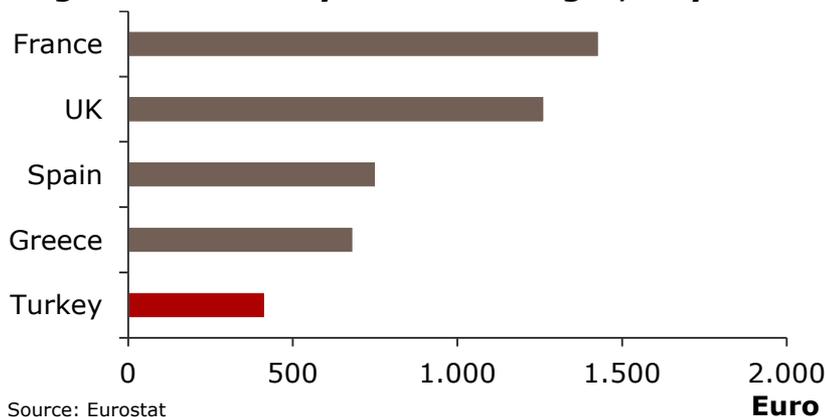
The positive outlook from the human resources side: a young and cost effective labor force...

Figure 15: Employed Population, 2012



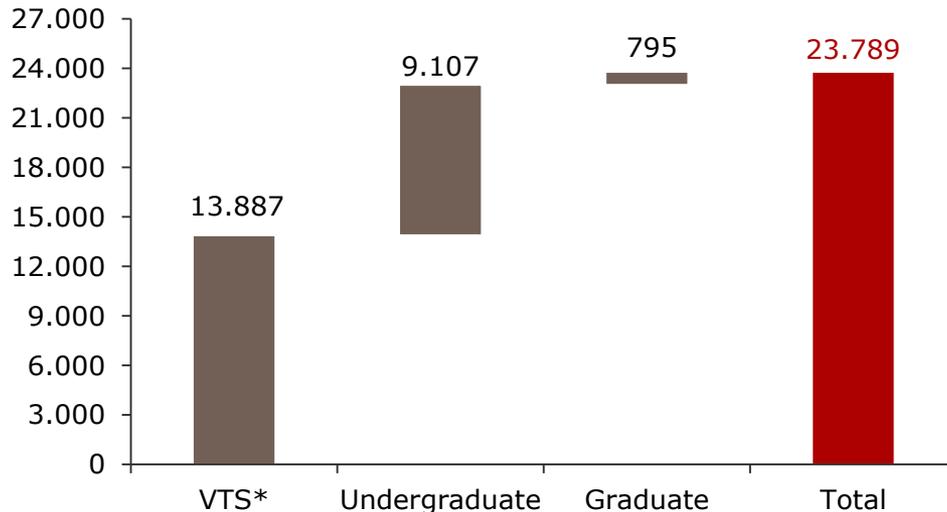
- The workforce in Turkey is one of the **youngest and largest** in **Europe**. It has the necessary education, training, skills, technology & management experience required for the ever-growing industry.
- **More than 65%** of the population is aged **between 24 and 54** giving Turkey a huge advantage in this aspect.
- Euromonitor indicated that the qualified workforce for the transportation and communication industry increased by **37%** from 2006 to 2011, reaching over **900,000 people**.
- In 2011, the total annual labor cost for Turkey was **USD 27 million**, which was an increase of **CAGR 10%** from 2006.
- Average salaries remained fairly stable from 2006 to 2011, increasing roughly around **CAGR 3.6%** for the industry.
- Turkey has one of the lowest minimum wage rates in Europe.

Figure 16: Monthly Minimum Wages, July 2013



... with highly specialized skills specifically for the logistics industry

Figure 17: Number of Graduates for the 2011-2012 period in Transportation and Logistics Industry



Source: OSYM, Deloitte Analysis

*Vocational Training Schools

- Vocational training schools and universities are educating a large number of people in transportation and logistics. These graduates provide the skilled workforce needed to enhance the sector.

- Turkey realizes the demand for highly skilled workforce and is concentrating on structuring one. There are over 23,000 graduates that have graduated from programs specifically designed for transportation and logistics industry.
- The programs include; customs administration, imports and exports, logistics management, railroad transportation management, naval architecture and transportation in vocational training schools, while university programs include logistics engineering, supply chain management, international trade and logistics, marine management and administration, civil aviation management in undergraduate and graduate levels.

Investment Tip: Turkey's well-trained world-class talent pool at competitive wage rates is a prominent asset for the sector.



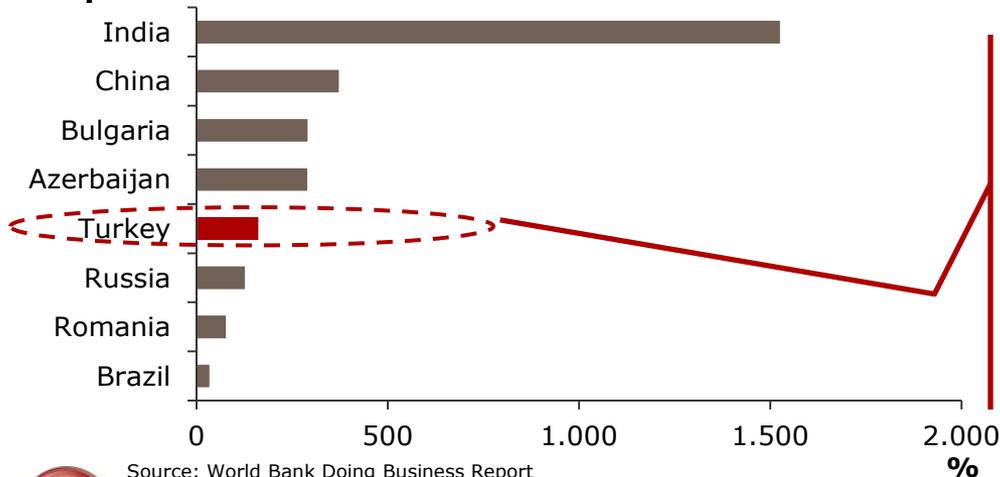
Cost items like warehouse construction are also relatively low in Turkey

Table 2: Construction of a warehouse in Turkey

	2006	2007	2008	2009	2010	2011	2012	2013
Number of Procedures	23	23	23	23	23	23	23	20
Days Required	189	189	189	189	189	189	189	180
Cost (% of Income Per Capita)	431.5	385.8	357	240.6	211.2	223.5	197.7	164.3

Source: World Bank Doing Business Report

Figure 18: Cost as a Percentage of Income Per Capita



Source: World Bank Doing Business Report

- According to data collected by the World Bank, dealing with construction permits for warehouses in Turkey requires **20 procedures, takes 180 days** to complete and costs **164.3% of income per capita**.
- The procedural cost of building a warehouse that has 2 stories with an area of 1,300.6 square meters is approximately **USD 15,000***. The estimated value of a warehouse in Istanbul is **TL 449,650 (USD 252,953*)**. The number of procedures and the amount of time required to build a warehouse have decreased in 2013 due to successful reforms implemented by the government.

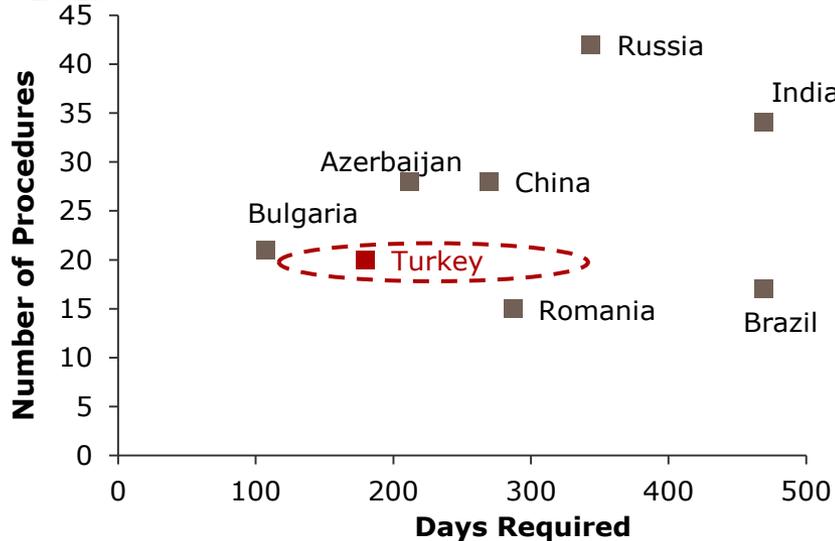
*: CBRT 2012 year end USD/TL FX rate was used to convert

- India has the highest cost with 1,528% of their income per capita and Brazil has the lowest cost with 36%. In this regard, Turkey again performs well above the average with 164% in terms of cost as a percentage of income per capita. From 2006 to 2013, Turkey's cost decreased from 431.5% to 164.3%.



In Turkey there are 20 procedures required for obtaining the necessary registration and permits to construct a warehouse

Figure 19: Number of Procedures and Days Required for Warehouse Construction Permits, 2013



Source: World Bank Doing Business Report

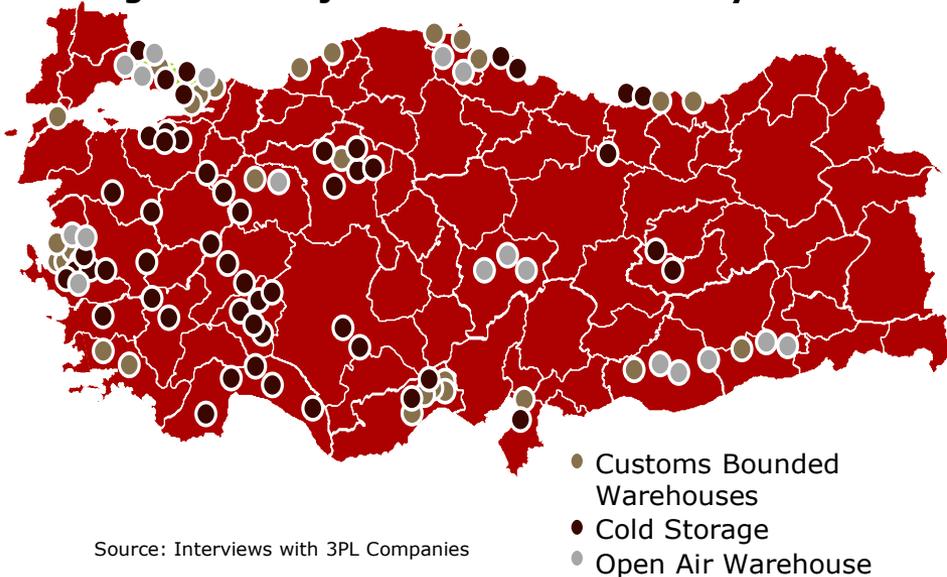
- Figure 19 represents the warehouse construction procedures and days required for these procedures in each country. The hypothetical warehouse plotted for each country in the above graph is assumed to have two stories both above ground, with a total surface area of about **1,300 square meters**, and would be built on a plot of **929 square meters with 150 meter height**.

- The days required indicator shows how much time is required to fill out all the forms needed and to complete procedural applications. It is assumed that each procedure starts on a separate day. It does not include time spent gathering information and does but does reflect actual time spent.
- Turkey performs better than average for the countries shown in the graph with **180 days to complete** this process.
- The number of procedures includes all relevant documents, licenses, clearances and permits and the registration of the warehouse.
- Obtaining connections for water, phone lines and sewerage is also included in the calculation.
- In Turkey the necessary procedures are done at a higher than average rate, which is a good indicator for the investor acknowledging that speed is a priority when building a warehouse.
- Recent reforms and legislation have allowed the number of procedures to decrease over time. This will allow investors to quickly and easily conduct their business.



As the process to build warehouses became easier, their number increased all over Turkey, especially in Istanbul

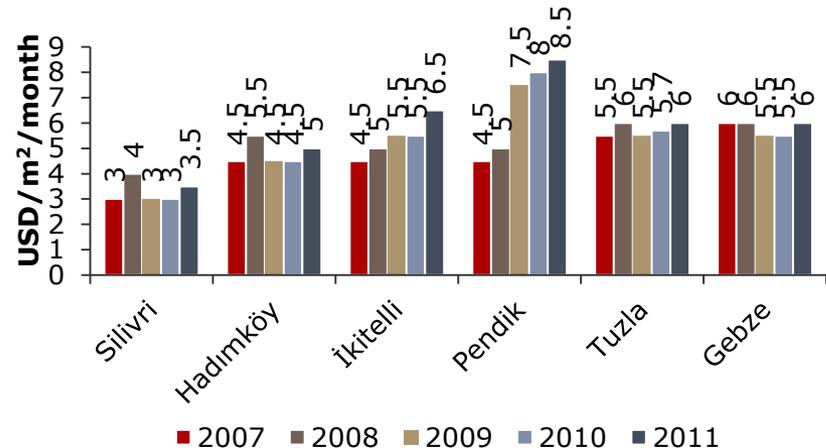
Figure 20: Major Warehouses in Turkey



Source: Interviews with 3PL Companies

- The majority of warehouses are located in western Turkey, where there are a large number of industrial complexes.
- The average rental costs for storage facilities in and around Istanbul, the principal business destination of Turkey, have remained relatively stable or increased slightly in regions except for Pendik. In the region of Tuzla, storage rental costs have increased a mere **CAGR 2% from 2007 to 2011**, while in the region of Gebze rents have relatively stayed the same.
- The increase in **Pendik** is due to investment in A-class storage facilities in the region's logistics. In Pendik, average cost of storage rent has increased to **USD 8.5 per square meter in 2011**.
- There is also an opportunity in building storage facilities to rent. Istanbul Real Estate Valuation and Consulting Inc. predict that more than **1 million meter squares** of storage space is needed in Istanbul. Highly developed transportation and infrastructure is certain to draw new international companies to the market.

Figure 21: Development of Storage Space Rent Costs in Logistic Areas in Istanbul, 2007-2011



Source: Istanbul Gayrimenkul Değerlendirme Logistics Report 2011



Turkish ports are very cost effective compared to major ports around the globe...

- The nominal price tariffs per day are significantly cheaper in Turkey, compared with other major ports around the globe.
- Prices for handling containers may reach as much as **USD 293 per day in ports such as Marseille**. Even the most expensive port in Turkey, Mersin Port, is cheaper than the port of Singapore, which is the cheapest among benchmarked countries within this category.
- Even though Turkey does not apply a free time policy on its ports, **daily prices of Turkish ports are still lower** than others major ports, hence, the cost is easy to compensate.
- Turkish ports are being privatized and moving to a model that has, also, been adopted by the Rotterdam Port. Thus, Turkish ports will be more efficient and shape the future of the transportation and logistics industry.

Table 3: Terminal Container Handling Costs and Warehouse Costs (per day)

	Singapore	Trieste	Hamburg	Rotterdam	Marseille	Haydarpaşa	Izmir	Mersin
Terminal-Handling Container	USD 148	USD 200	USD 240	USD 200	USD 293	USD 85	USD 85	USD120
Warehouse per day	USD 12 (first 3 days free)	USD 20 (first 3 days free)	USD 47 (first 3-5 days free)	USD 47 (first 3-5 days free)	USD 29 (first 5 days free)	USD 9	USD 7	USD 7

Source: TÜSIAD



... and provide different storage options for different types of containers at reasonable prices

- Turkish ports offer many different options in terms of storage and cost-effective solutions to the storage needs of businesses. Even in the ports that are considered pivotal locations, and which are always easily accessible, investors can find rates as low as **USD 7 per day**.
- Table 4 indicates the price for cargo in each port in terms of USD.

Table 4: Storage Costs for Cargo in Turkish Ports (in USD), 2012

Size	Ambarlı	Gemlik- Borusan	Mersin	Limak Iskenderun	İzmit-Evyap	Izmir Port
20' Dry	13 to 23*	10 to 15*	7 to 18*	10 to 15*	10 to 15*	7 to 12*
40' Dry	23 to 33*	15 to 20*	11 to 27*	18 to 23*	18 to 23*	12 to 18*
45' Dry			12.5 to 30.5*	N/A	N/A	30
20' Reefer	60	30	33	40	40 to 50*	50
40' Reefer	80	45	55	55	55 to 70*	N/A
Reefer Monitoring	N/A	N/A	20	N/A	N/A	N/A
20' OOG	60	30 to 40*	N/A	N/A	N/A	N/A
40' OOG	80	40 to 50*	N/A	N/A	N/A	N/A
OOG Cargo	N/A	N/A	+%50 of service price	+%50 of service price	N/A	N/A
20 IMO	35	12 to 18*	N/A	N/A	12 to 18*	8.40 to 14.40*
40 IMO	40	18 to 24*	N/A	N/A	20-26*	24.40 to 21.60*
IMO Cargo	N/A	N/A	+%20 of service price	+%20 of service price	N/A	N/A
Non-OOG Cargo	N/A	N/A	N/A	Same as dry tariff	N/A	N/A

Source: Seago Line

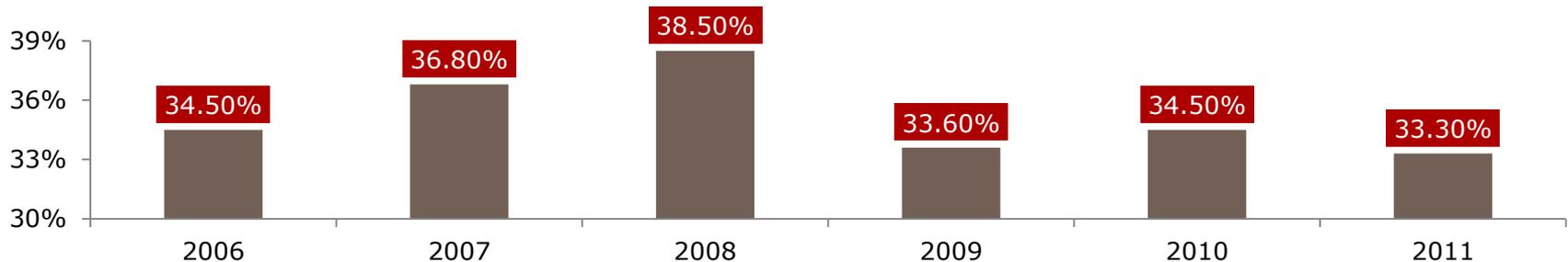
- * Price varies according to the number of days spent in the port
- Each row shows a different type of container of a different size. Generally, 20' (20 foot long) and 40' (40 foot long) containers can be found in every port.
- **Dry** is a storage container in which the interior is kept at a low humidity.
- **Reefers** are refrigerated containers used for the transportation of temperature sensitive cargo.
- **OOG** is an abbreviation used for loads which are higher/wider than standard containers.
- **IMO** is a type of container generally used for hazardous goods.



These low costs are reflected in the profit margins for the different sub-sectors of the industry

- Since the 2009 global crisis, turnover and costs have been relatively stable, as reflected in profit margins.
- According to **LODER**, the Logistics Association of Turkey, the profit margin for logistics is **around 5 - 10%**.

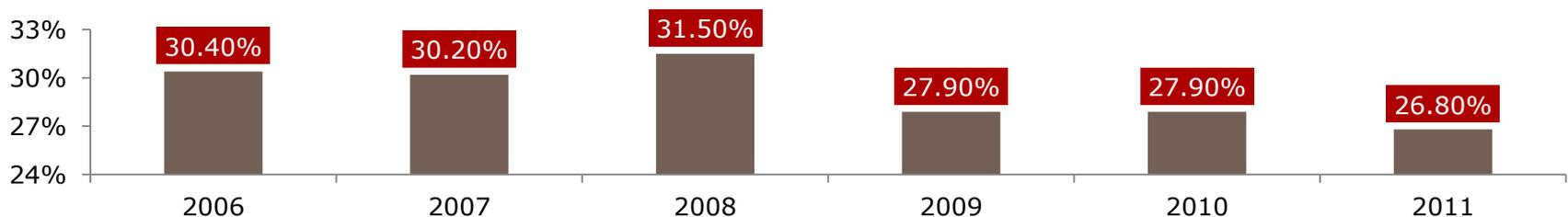
Figure 22: Transportation and Communications Industry - Profit Margins in Turkey



Source: Euromonitor

- The profit margins of cargo handling, warehousing and travel agencies were in line with the trend in transportation and communications industry's profit margins.
- Despite strong competition and increasing costs, companies were able to maintain their EBITDA profit margin at 27% of total turnover in 2011.

Figure 23: Cargo Handling, Warehousing and Travel Agencies - Profit Margins in Turkey



Source: Euromonitor



Major Industry Associations in Logistics Industry

Name	Logo	Web Page	What They Do
Uluslararası Nakliyeciler Derneği – International Shipping Association		www.und.org.tr	Serves as a platform for providing road freight information on a local and international scale.
Lojistik Derneği – Logistics Association		http://www.loder.org.tr/	The association has 750 members including academicians and professionals in the industry and aims to increase effectiveness and efficiency of all aspects of operation.
Uluslararası Taşımacılık ve Lojistik Hizmet Üreticileri Derneği – Association of International Forwarding and Logistics Service Providers		http://www.utikad.org.tr	The association has more than 350 members that belong to forwarding and logistics companies. UTİKAD's objectives are to promote and protect the interests of the industry, and also to achieve standardization within the industry.
Raylı Ulaştırma Sistemleri ve Sanayicileri Derneği– Railway Transportation Systems and Industrial Association		http://www.rayder.org.tr	Rayder supports the expansion of railway systems so that they are in line with EU legislations, and are both modern and technologically competitive.



Major Industry Associations in Logistics Industry

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Raylı Ulaştırma Sistemleri ve Sanayicileri Derneği- Railway Transportation Systems and Industrial Association		http://www.rayder.org.tr	Rayder supports the expansion of railway systems so that they are in line with EU legislations, and are both modern and technologically competitive.
Türkiye Liman İşletmecileri Derneği (TÜRKLİM)- Port Operators Association of Turkey		http://www.turklim.org/	TÜRKLİM was found in 1996 in order to solve sectorial problems of private port operators on a common platform. The association ensures the flow of information between their member operators and relevant state units
Deniz Ticaret Odası (DTO)- Chamber of Marine Trade		http://www.denizticaretodasi.org.tr/	The chamber's main activities include determining rules and standards for marine trading, conducting researches over marine transportation, and informing foreign companies over tariffs of Turkish ports.



C. Government and Public Agency Support

- i. Customs Law
- ii. Import and Export Procedures
- iii. Single Window and E-Customs
- iv. Incentives Provided to the Logistics Industry
- v. Turkey's Targets for 2023



The principal law governing customs is Law no. 4458

Contents

- General Declaration (purpose, scope)
- Person's rights and responsibilities under customs laws and regulations
- Separation of the customs tariff and the tariff classification of goods
- Border Trade
- Transit Requirements
- Temporary Storage of Goods
- Customs' Valuation of Goods
- Keeping the goods under a customs procedure
- Transactions relating to goods which will be liquidated
- Export and Import Requirements
- Customs Bonded Warehouse Requirements
- Goods leaving the customs territory of Turkey
- Goods entering the customs territory of Turkey

Implications

- Adoption of changes made to European Commission Customs Code
- Simplifying and accelerating the procedures of stakeholders in customs
- Enhancing the competitiveness of the economy
- Amendment and correction old application problems
- Compatibility to Community Customs Regulation in light of new changes
- Simplification of regulations

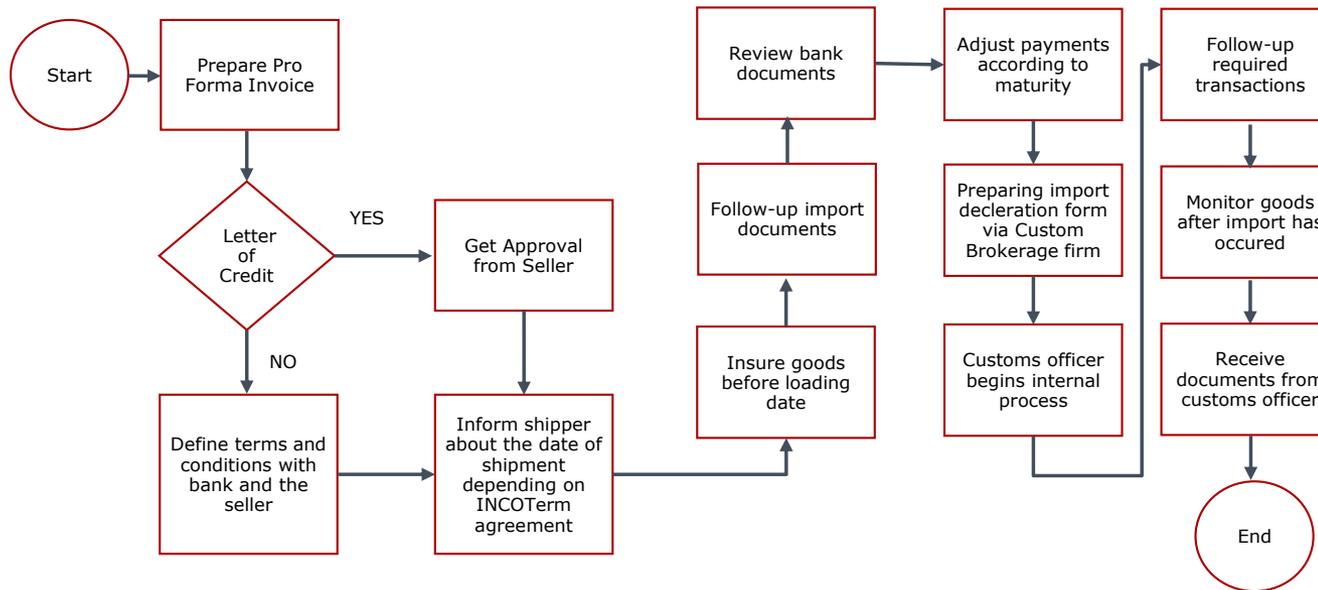
Advantages for Investors

- Provision of assurance control procedures, passenger lounges, temporary storage, customs warehousing and customs enforcement administration with convenient offices for railway, land, sea and air transportation of goods and passengers utilizing stations between Turkey and other countries.
- Provision of physical structures for the separation of goods and passengers.
- Privatization with the **Build-Operate-Transfer** method of customs and other services.
- Provision of additional high-tech equipment for rapid service and the security of the merchandise.
- Delivery of goods to foreign vessels with additional maintenance service.
- Special **allowances for foreign employees** allowing the use of private vehicles that are registered to their respective personal residences.
- **Provision of food and fuel** to ships and other vessels.



Turkey has an easy to follow import process and document flow

Figure 24: Import Process



IMPORT DOCUMENTS

1. Invoice of the goods
2. Packaging and Weight List
3. Shipping License
4. Certificate of Origin
5. ATR and EUR.1 Certificate of Circulation
6. Form A
7. CMR*, Bill of Lading**
8. Insurance Policy
9. İŞGÜM Certificate
10. Documents depending on type of goods
 - a. Health Certificate
 - b. Test Reports
 - c. Technical Documents
 - d. Letter of Clearance
 - e. CE documents

- If the payment type is made via a **Letter of Credit**, the process starts after the shipping order.
- After goods are loaded into the vehicle, loading documents are to be checked. Then necessary payments must be made and documents must be sent to customs brokerage firms so that they can start the transfer process.
- The customs process ends with the arrival of goods to the company destined warehouses.

*: if goods are transported via road

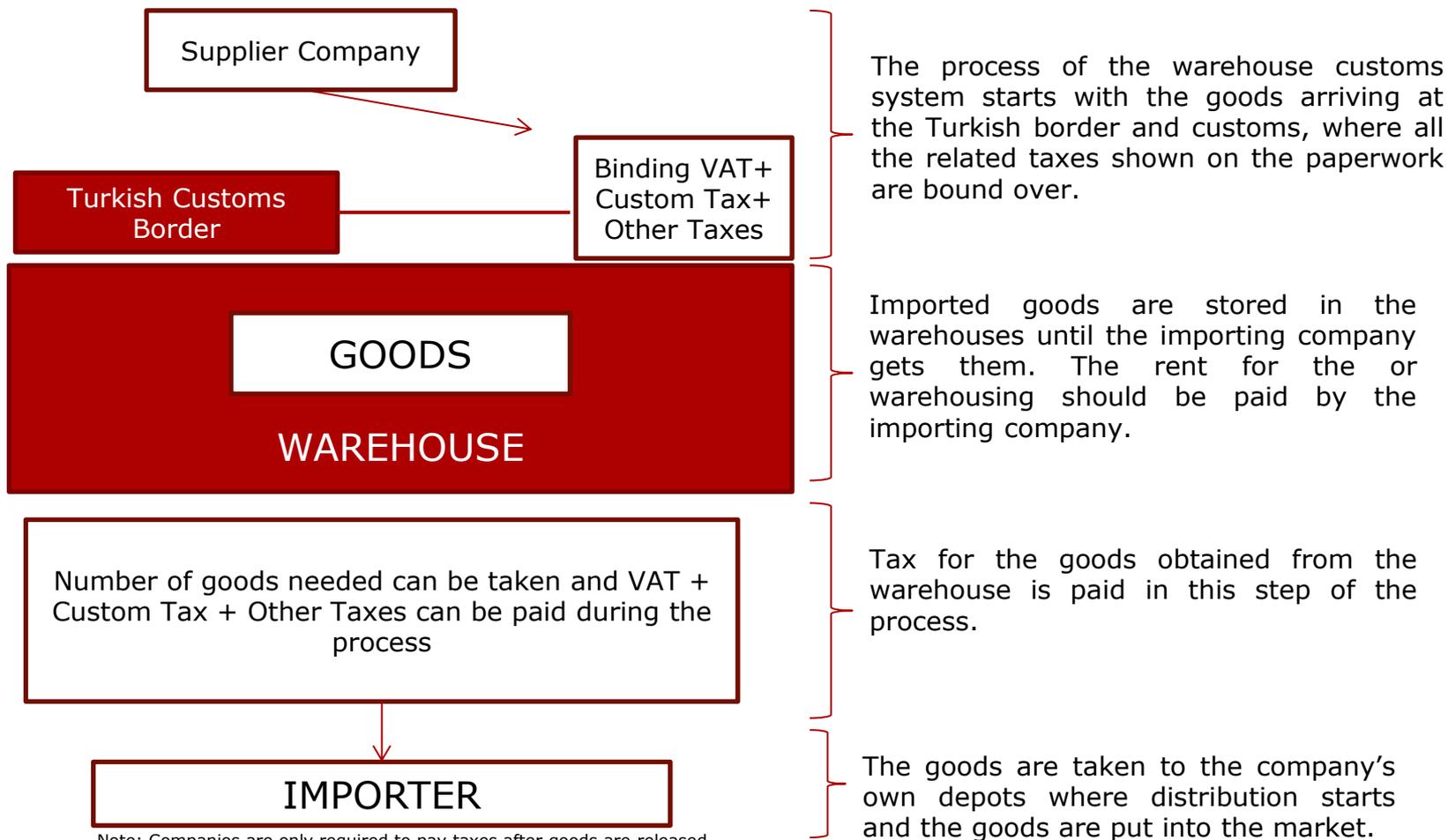
** if goods are transported via sea

Source: Deloitte Analysis



Turkish warehouse custom system

Figure 25: Warehouse Custom System



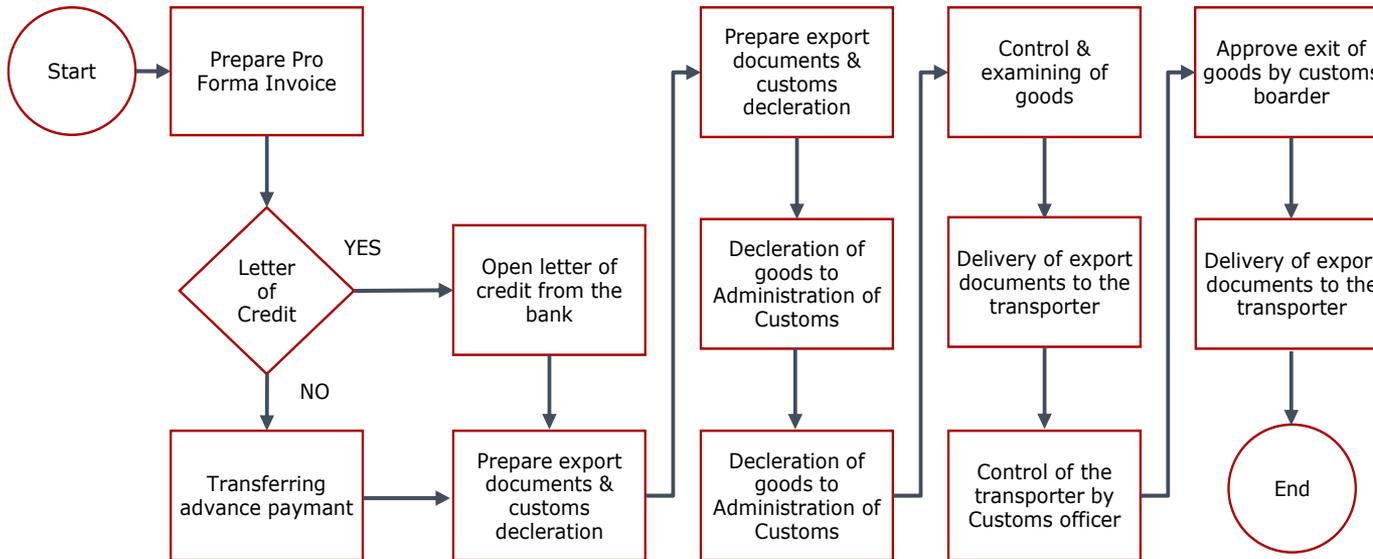
Note: Companies are only required to pay taxes after goods are released into the market from warehouse

Source: Turkish Customs, TOBB



A look at the export process and documents

Figure 26: Export Process



EXPORT DOCUMENTS

1. Invoice
2. Packaging and Weight List
3. CMR*, Bill of Lading**
4. Transport Certificate
5. Certificate of Origin
6. ATR or EUR.1 Certificate of Circulation
7. Insurance Policy
8. Other Documents (Health Certificate, TSE, Technical Documents)

- If the exporter company (EC) has an agreement with a **customs brokerage firm (CB)**, then it contacts the CB to help prepare the documents required for the country that the EC exports its goods. The CB usually pays expenditures on behalf of the EC.
- The EC prepares a packing list that includes insurance information and invoices for the goods.
- The CB gets a clearance **memorandum** registered at the customs directorate.

*: iif goods are transported via road

** if goods are transported via sea

Source: Central Anatolian Exporters Union, Deloitte Analysis



Free trade areas provide investors with a wide variety of opportunities

- There are 19 free trade zones in Turkey, where export-oriented production is encouraged and no legal or administrative legislations is applied (or partly applied). There are many advantages and incentives to companies on free trade zones, which can be summarized as:
 - Companies are **exempt from corporate and income tax** until Turkey becomes a European Union member*.
 - Companies, who at least export 85% of the products' FOB value have a right to deduct employee salaries from corporate tax,
 - Companies are exempt from VAT, and customs **tax**,
 - Profits can be transferred domestically or to abroad without any permit,
 - Companies **have easy access to** world class infrastructure,
 - Any monetary transactions of companies are conducted by foreign currency. Therefore, companies are not affected by inflation.
- Aegean free trade zone has the biggest share of the total trade volume with 23% followed by Mersin with 17%.
- Total trade volume in free zones exceeded **USD 23 billion**, in 2012.

Figure 27: Cities with Free Trade Zones in Turkey



Table 5: 2001-2013 Investment Incentives for the Transportation and Logistics Industry (TL million)

Capital Type	Fixed Investment*	Employment
Domestic Capital	39,895	95,360
Foreign Capital	6,960	25,125
Total	46,855	120,485

Source: Ministry of Economy

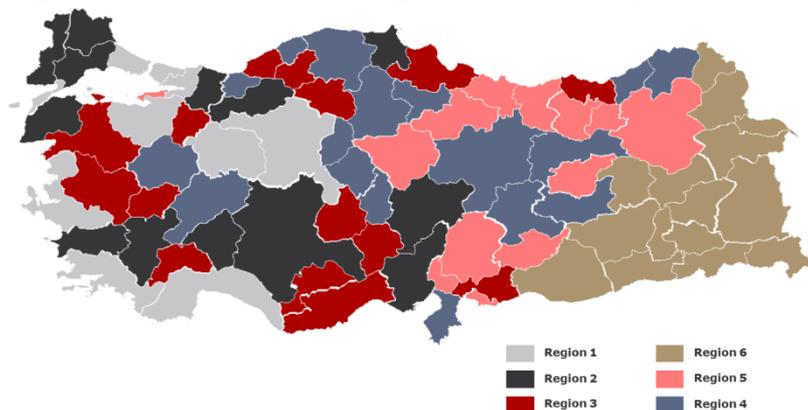
Note: Includes trade, storage and transportation

*: The incentive is given only to companies with Production related Operation License



Several incentives are available both for CAPEX and OPEX: The Turkish Investment Incentives Program

Figure 28: Incentive Regions in Turkey



- All investment types, except the ones that are specifically excluded from the investment incentives program, will be supported by the General Investment Incentives Program. Under this scope, the minimum fixed investment amount is TL 1 million in Region 1 and 2 and TL 500,000 in Regions 3, 4, 5 and 6.
- Railroad and maritime transportation investments are regarded as specific priority investment subjects to be supported by measures of Region 5 even they are made in Regions 1, 2, 3 and 4.

Table 6: The Incentive System in Turkey

Support Measures	General Investment	Regional Investment	Large Scale Investment	Strategic Investment
Vat Exception	✓	✓	✓	✓
Customs Duty Exemption	✓	✓	✓	✓
Tax Deduction	☒	✓	✓	✓
Land Allocation	☒	✓	✓	✓
Interest Support	☒	✓	☒	✓
Vat Refund	☒	☒	☒	✓
Employer's Social Security Premium Contribution	☒	✓	✓	✓
Only For Region 6				
Income Tax Withholding Contribution	✓	✓	✓	✓
Employer Contribution for National Insurance	☒	✓	✓	✓

REGIONAL INVESTMENTS INCENTIVE SCHEME MEASURES							
Region	OIZ	1	2	3	4	5	6
Tax Reduction (%)	Out of OIZ	15	20	25	30	40	50
	Within OIZ	20	25	30	40	50	55
Employer's Social Security Premium Support Period (years)	Out of OIZ	2	3	5	6	7	10
	Within OIZ	3	5	6	7	10	12

Source: Ministry of Economy



There are incentives specifically designed for the maritime and railway sector

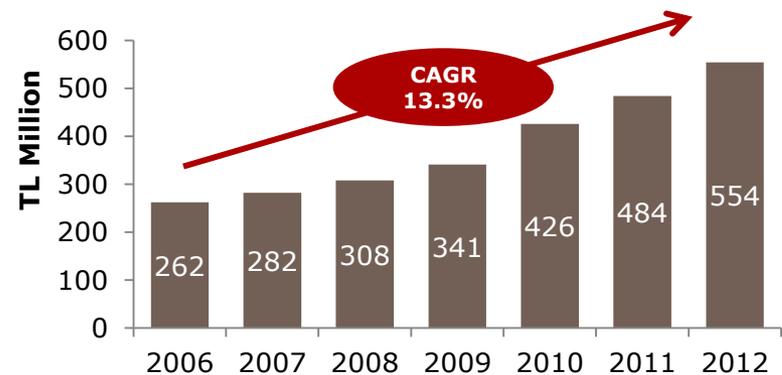
Railway Incentives

- Government incentives for the railway sector will speed up the privatization process in this sector.
- Railway and cable car locomotives and/or wagon manufacturing investments are included in large scale investments.
- If railway freight and passenger transportation investments are to happen in the 1st, 2nd, 3rd, 4th or 5th investment region, then they are to benefit from the 5th investment region's incentive program.
- Large scale investment incentives for railway investments above **TL 50 million include:**
 - 2-10% corporate tax for investments that started before December 31, 2011.
 - Social security support for **7 years to employers** who started investing before December 31, 2011.
 - Allocation of land to the investments with Investment Incentive Certificates, in accordance with the rules and principles determined by the Ministry of Economy.

Source: Ministry of Economy

Fuel Incentives for Maritime Transportation

Figure 29: Total Amount of Incentives Given



Source: Ministry of Transport, Maritime Affairs and Communications, Ministry of Economy

- The above figure shows the incentive amount of zero-SCT fuel given. This incentive is provided to ships that carry freight and passengers in cabotage lines, fishing vessels, scientific research vessels, commercial yachts and service vessels. Moreover, after 2009 vessels that operate in inland waterways can also benefit from the incentive.
- In terms of metric tonnes, the incentives given as zero-SCT fuels were **283,445 metric tonnes** in 2006. This amount increased to **364,734 metric tonnes** in 2012.



Through investment and incentive support, the Ministry forecasts a total of 625 billion tonnes-km of freight will be transported in Turkey by 2023

Figure 30: Freight Shares Tonnes-Km in Turkey, 2023

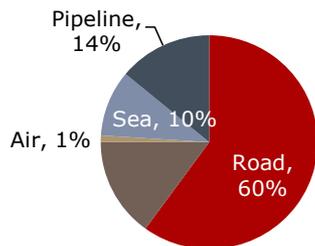
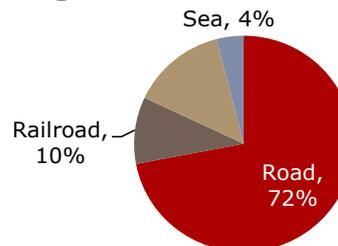


Figure 31: Freight Shares Passenger-Km in Turkey, 2023



Source: Ministry of Transport, Maritime Affairs and Communications

Road	Rail	Air	Sea
<ul style="list-style-type: none"> The total passenger and freight transportation via the road network are expected to reach 378 billion passenger-km and 422 billion tonnes-km, respectively. In order to keep up with the growing demand for roadways, Turkey will invest a total of TL 166 million by 2023. The government will conduct 15 road project tenders on a BOT basis by 2023. The total length of the projects will be 5,500 km. 	<ul style="list-style-type: none"> The share of railways will increase 15% in freight transportation and 10% in passenger transportation, thus, reducing the transportation share of roadways. To achieve this target Turkey will build 5,000 km of new, conventional railway and 10,000 km of high speed railway by 2023. The public sector will spend TL 70 billion for new rail lines by 2023. The railway sector will be privatized. Istanbul subway line will reach 235 kms by 2023. 	<ul style="list-style-type: none"> At least 10 of the airports located near shorelines will be connected to all other modes of transportation. The civil air transport industry will have a total of 750 aircrafts. The airport of 7 regions will be redesigned to include cargo handling airports. New airports with a total annual capacity of 400 million passengers will be constructed. 	<ul style="list-style-type: none"> Freight transportation via the sea will constitute 10% of total freight transportation and containerization will increase 15% TEU by 2023. There will be different opportunities for stakeholders that range from designing and building vessel traffic management systems to increasing the capacity of ports and/or adding new ports. The Ministry estimates the costs to be USD 34 billion by 2023. World's largest port will be built by 2019. Dry bulk handling capacity will be increased to 500 million tonnes and liquid bulk handling to 350 million tonnes by 2023. The number of yacht ports will reach 100



II. The Logistics Industry in Turkey



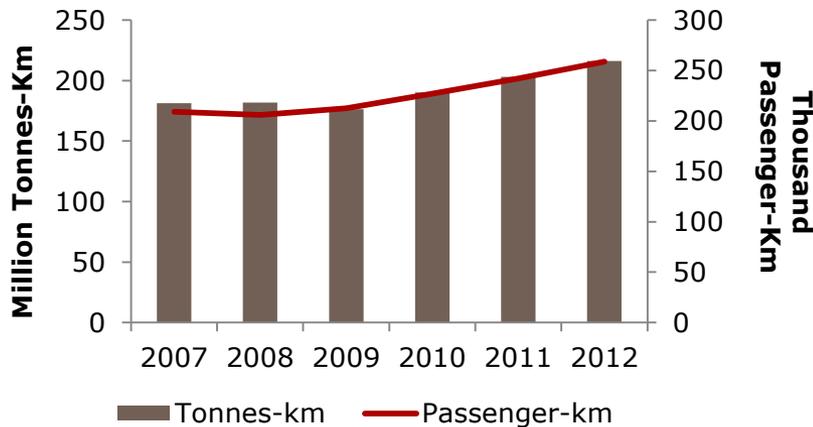
A. Road Logistics

- i. The Development of Freight and Passenger Transportation via Roadways
- ii. The Targets: Road Logistics
- iii. International Road Projects Passing Through Turkey
- iv. Major Infrastructure Projects in Turkey
- v. Success Stories in Road Logistics
- vi. The Major Players in Logistics



Road logistics has the largest share in domestic freight transportation...

Figure 32: Total Freight and Passengers Carried via Roadways in Turkey, 2007-2012

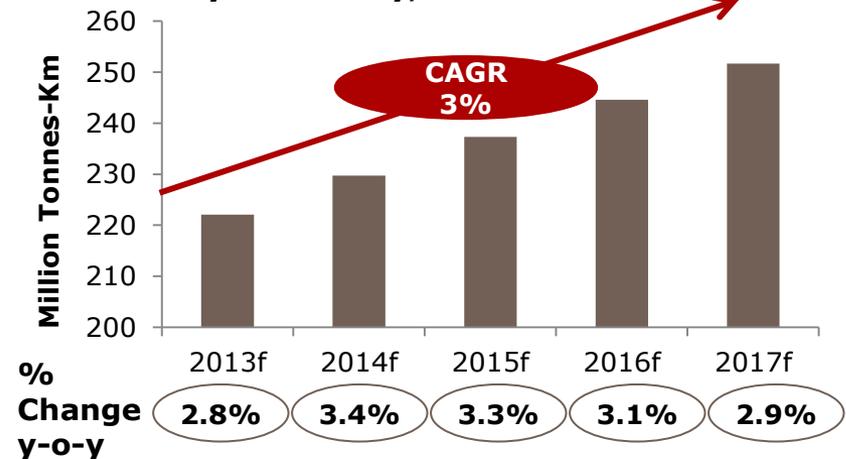


Source: Ministry of Transport, Maritime Affairs and Communications

- In Turkey, roadways are the predominant mode of transportation of freight and passenger cargo. Turkey has one of the most developed road network in its region. As a result, cargo handling and transport has been in expansion.
- The growth of freight and passenger transported via road has been impressive. The tonnes-km and passenger-km grew with a **CAGR of 3.57% and 4.36%**, respectively from 2007 to 2012.
- Over the medium term the freight carried via roadways is expected to continue its growth with a **CAGR 3%** and reach **251.7 million tonnes-km**.

- Moreover, Turkish license plated trucks' freight transportation number increased from over 929,000 in 2009 to more than 1.1 million in 2012, indicating a 28% increase.
- Total freight transportation number via road by Turkish and foreign license plated trucks exceeded 1.5 million in exports and 500,000 in imports. Turkish license plated trucks had a share of 80% in total exports, while 70% in total imports.

Figure 33: Growth Projection of Freight Carried Via Roadways in Turkey, 2013-2017



Source: BMI, Deloitte Analysis

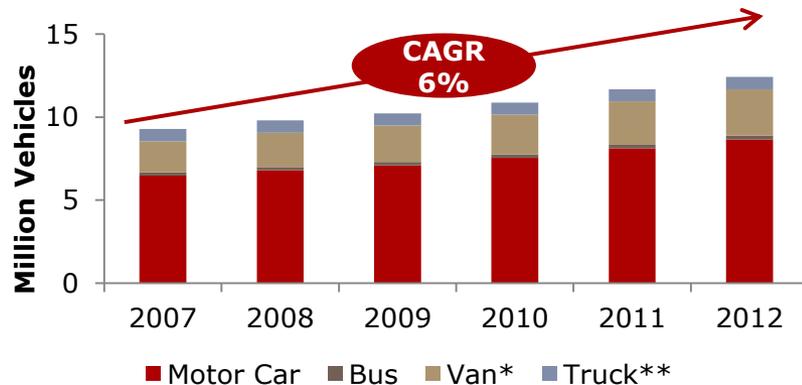
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Note: BMI growth rates were used with actual 2012 tonnes-km amount.



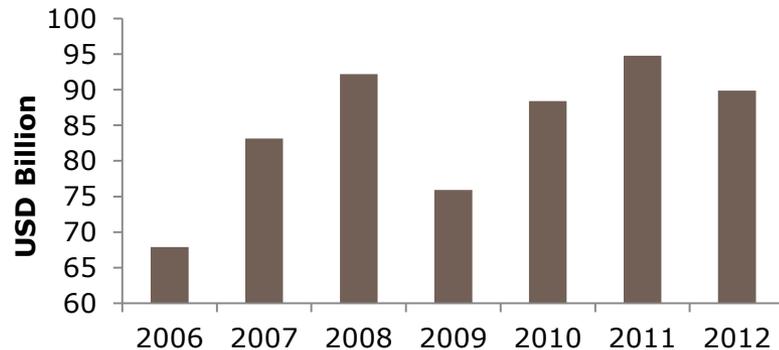
... and it is also set to benefit from a growth in foreign trade

Figure 34: Number of Vehicles in Turkey, 2007-2012



Source: Turkstat
 *Includes land vehicles
 ** Includes heavy tonnage vehicles

Figure 35: Total Freight Value in Net Foreign Trade Transported via Roadways in Turkey, 2006-2012



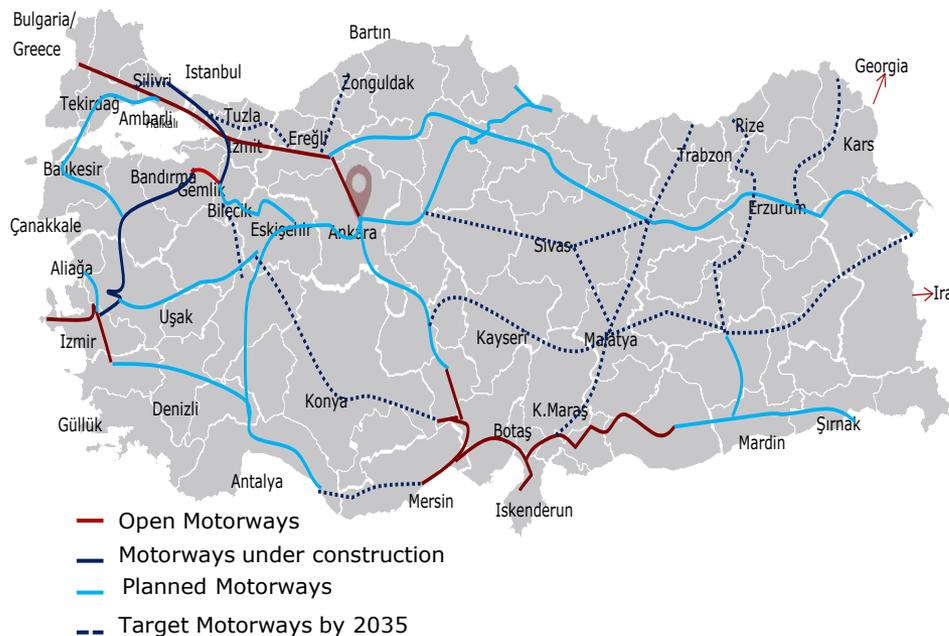
Source: Turkstat

- Turkey achieved strong growth in each vehicle segment. Therefore, the total number of vehicles in 2012 was **more than 12 million**.
- The number of vans had an impressive increase with a **CAGR of 8%** reaching an **excess of 2.7 million**. Turkey also has the largest truck fleet in Europe. The number of trucks increased by a **CAGR 1% to more than 750,000**.
- It is quite evident that as circulation improves so will the value of total freight carried. Despite the economic downturn in 2009, total freight value in foreign trade transported via roadways grew at a **CAGR of approx. 5%** from 2006 to 2012. Freight carriage via road is expected to grow a yearly average 10% over the next five years. Freight carried reached 77 countries in 3 continents.
- As Turkey's growth in the industry becomes more evident, the road network will continue to improve, as well. According to the Ministry of Transport, Maritime Affairs and Communication, as of 2013, there are **2,127 km of motorways, 31,375 km of state highways** and **31,880 km of provincial roads** that add up to a total of **65,382 km** of road network.



New highway projects will support the projected growth in roadway freight transportation

Figure 36: The 2023 and 2035 Targets for the Highway Network



- Currently, there are more than 2,100 km of operating motorways. There is an excess of 513 km of ongoing construction.
- By 2035, 4,130 km of new motorways will be built.

Major International Highways

International E-ways Network

- The E-ways network was started by AGR and UNECE after World War II. There are two main roads that interconnect Turkey with Europe. They are E-80 from the Bulgarian border and E-90 from the Greek border.
- Turkey provides connection to Asia and the Middle East through its southern and eastern borders.
- The total length of E-ways is 9,361 kilometers.

Trans-Europe North-South Motorway (TEM)

- TEM is the oldest and most developed project in Europe's transportation history. There are 15 members and 4 observer countries that are part of this project. Turkey connects Europe to Asia and the Middle East with TEM roads. The total length of TEM roads are 6,970 kilometers.

Trans-Eurasia Highways (EATL)

- The project EATL plans to connect Pan-Europe corridors with the main regions of Asia.
- Turkey's EATL roadway covers a distance of 5,663 kilometers. Moreover, 208 kilometers to the Filyos and Çandarlı port will connect to the EATL.



Source: Ministry of Transport, Maritime Affairs and Communications, UNECE

The growth in road freight is not a coincidence. Major projects like TRACECA underscores Turkey's significance in connecting Europe and Asia

- TRACECA is an interstate program designed to support political and economic development in the Black Sea region, the Caucasus and Central Asia by means of international transportation.
- The project was started in May 1993 and until 2012 the European Union financed **62 technical assistance and 14 investment projects**.
- The aims of the project as proposed by the Intergovernmental Commission were:
 - Supporting economic relations, trade and transport communication in Europe, the Black Sea region and Asia.
 - Ensuring access to the world market for road and rail transport and commercial navigation.
 - Ensuring traffic security, cargo safety and environment protection.
 - Standardization of transport policy and its legal structure in the field of transport.
 - Providing level playing field in terms of competition for transport operations.

Figure 37: TRACECA Project Map



Source: IGC TRACECA, Ministry of Transport, Maritime Affairs and Communications

- The above map shows the highways and roads that have been built under the scope of the project. The total length of TRACECA roads is approximately **8,365 kilometers**.
- **10 different ports** connect TRACECA roads to Europe and the Balkans with more than 11 maritime routes.
- Additionally, there are **12 airports in Turkey** that have connection to TRACECA.

Source: IGC TRACECA, Ministry of Transport, Maritime Affairs and Communications



Projects like the 3rd Bosphorus Bridge and the North Marmara Highway...

The 3rd Bosphorus Bridge – Yavuz Sultan Selim Bridge

- The bridge will be **59 meters wide and 320 meters high**. It will be the biggest suspension bridge in the world with a railway.
- Apart from freight vehicles passing, the project will also provide an extra railroad network across the Bosphorus, thereby supporting the transportation of goods across Trans-Asian Railways.
- The bridge will be built by **İçtas Insaat Sanayi Ticaret AS – Astaldi Partnership Enterprise Group** with a total investment of **USD 2.5 billion**.
- The trains that cross the 3rd Bridge or the Marmaray will continue on their way to **Halkalı then to Bulgaria as well as to Europe**, where goods can travel without any customs restrictions according to the EU-Turkey Customs Union Agreement that was signed on December 31, 1995.

North Marmara Highway

- The North Marmara Highway is the **largest BOT** project in Turkey to date and is considered a very large scale construction project which includes both a **300 km** new highway and a bridge construction at an estimated cost of **USD 4 billion**.
- A joint venture between the Turkish construction firm İçtaş and Italian construction group Astaldi was created for the construction of the bridge.
- The project is designed to reduce traffic and ease freight and passenger transportation time in Istanbul.
- The project will manage the transit cargo traffic passing through **Istanbul**. Truck shipping traffic passing through Istanbul will not cross the center of the city.
- The project will prevent **USD 1.45 billion** energy consumption and **USD 355 billion** workforce expenditure through more efficient use of time waiting in traffic.
- Thanks to bypassing the city center of Istanbul, the truck shipping companies will save considerable time and money.
- There will be reduction of carbon emission due to reduced fuel consumption due to the shortened time at traffic.



Source: Today's Zaman, trt.net, Haberturk.com, thenational.ae, reflectionsturkey.com, Emerging Markets Insight

...and the Çanakkale Bridge and other highway projects will contribute to Turkey's rise in the logistics industry

Çanakkale Bridge

- A three-lane suspension bridge is being planned between Lapseki and Gelibolu in Turkey's northwestern Çanakkale region and would become the country's longest bridge at **3,623 meters**.
- The bridge will be part of the **Çanakkale-Tekirdağ-Kınalı-Balıkesir highway** project.
- The Çanakkale Bridge will increase the prominence of Turkey's Thrace region and will significantly lessen the load and traffic on Istanbul's bridges. It will also facilitate access to Izmir.
- Tekfen Holding has already begun designing the bridge after winning the design tender. The construction tender is expected to be offered in 2015, after which work can begin. The exact location of the bridge has not yet been decided.

Istanbul-Izmir Highway

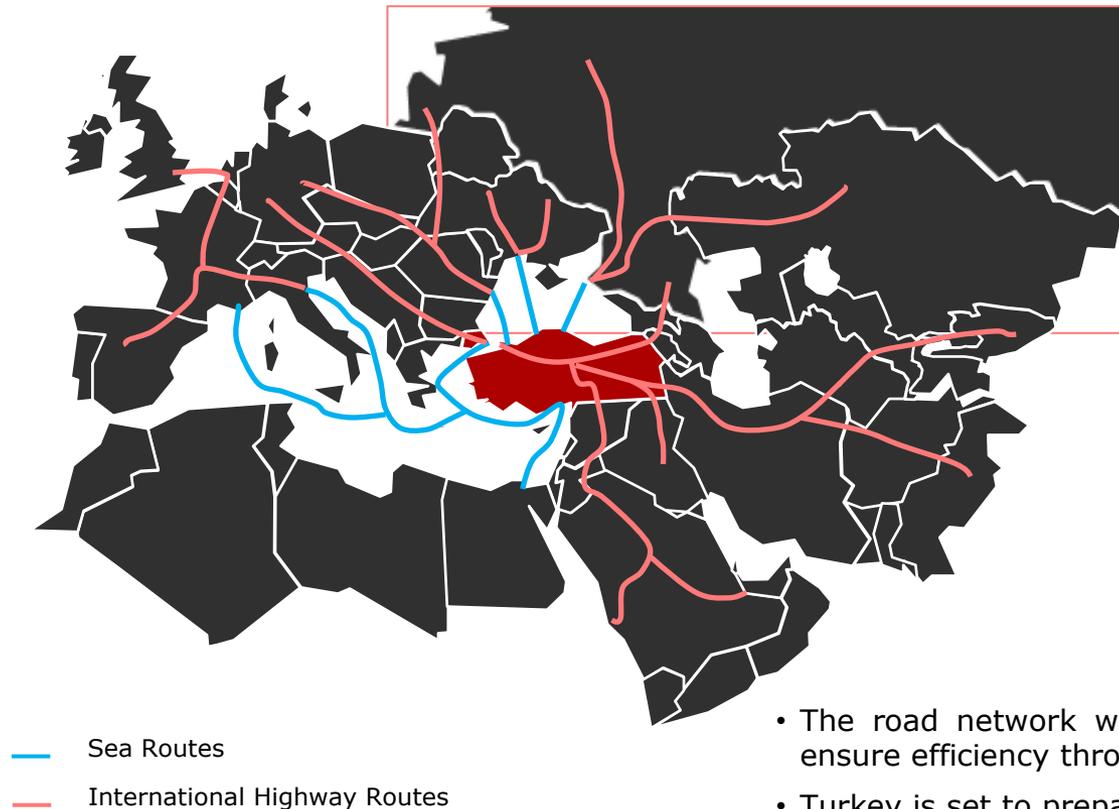
- The highway will reduce travel time between Istanbul and Izmir from **six hours 30 minutes to about three hours** when it is completed in 2017.
- The **USD 11 billion** mega-project will include the world's second-longest suspension bridge built over the Gulf of Izmit.
- The consortium – consisting of Turkish construction firms Nurool, Özaltın, Makyol, Yüksel and Gökçay and Italian-based Astaldi – for this BOT project will transfer the highway to government control in roughly 22 years, which would include construction time.

Source: Emerging Markets Insight



Road networks will continue to boost the development of the industry as Turkey connects to the world

Figure 38: Main Routes Used by Transporters



Source: Ministry of Transport, Maritime Affairs and Communications

- Turkey has bilateral highway transportation agreements with **58 countries** and operates in a region that includes Europe, the Middle East and Africa. According to the Ministry of Transport, Maritime Affairs and Communications, **bilateral agreements** have enabled transporters to have more business and increased the volume transfers between countries.
- 50% of the total world trade will be handled around regions neighboring Turkey. Moreover, Turkey's export volume is expected to reach USD 1.2 trillion by 2023. The road network of Turkey would be able to meet this rapid growth in freight traffic both within Turkey and in international freight traffic that passes through the country.
- The road network would be close to ports and railways to ensure efficiency through the whole logistics system.
- Turkey is set to prepare a logistics master plan. The President of **LODER, Prof. Mehmet Tanyaş** indicated the need for a logistics master plan which would be of essence for effectively planning future logistics networks and for shifting to a multimodal network. The master plan would reduce the waste in logistics.



Success Story: DHL

- DHL is a logistics company that operates globally and is a world market leader in transportation and air mail. DHL operates in Turkey along with its division units DHL Supply Chain, DHL Express and DHL Global Forwarding.
- The DHL Supply Chain Turkey wants to emulate a hospital-oriented logistic service that was developed in England. With the spread of private hospitals in Turkey, DHL wants to introduce logistic services to improve material distribution, inventory management and hospital storage in the designing of these hospitals. This division of the company would also increase its storage capacity to 500,000 square meters by the end of 2013.
- DHL Express Turkey plans to invest in a new facility and buy a new airplane based in Sabiha Gökçen Airport to meet the increasing demand Turkey is placing on the international courier.
- DHL Global Forwarding Turkey has increased its competitiveness by introducing an airway/railway solution for Turkish customers who trade with China. The Turkish division has grown 25% in 2012 and is planning to operate in the expected third airport of Istanbul.

"In front of us we have a very fast growing economy and market. Turkey is one of DHL's fastest growing markets. For this reason we want to make new investments in Turkey and carry the investments we have in Europe into Turkey."

Graham Inglis, CEO of DHL Supply Chain, 2013



Source: Dünya Gazetesi



Success Story: DSV

- DSV is a global supplier of transport and logistics solutions that operates in more than 70 countries with approx. 22,000 workers.
- DSV has decided to invest in Turkey, its most promising market. According to DSV Turkey CFO Aykut Karataş, DSV Turkey has maintained a staggering 60% growth rate for the last 5 years. Karataş has also emphasized that DSV has been experiencing its highest growth rate in Turkey and therefore closely monitoring the growth of Turkey's economy.
- Because of the previous statement, Karataş noted that DSV Turkey has also made investment plans with respect to Turkey's 2023 goals. Karataş said "We have experienced organic growth up until today, but it is time for us to acquire companies. Our negotiations have been proceeding in a positive way and we might buy four companies simultaneously."

"We have been watching Turkey's growth with interest and have come to trust Turkey's economy. The company wants to invest more in the country and Turkey has always responded positively to our investment demands."

Aykut Karataş, CFO, 2013



Source: Dünya Gazetesi



Success Story: Mars Logistics

- Japanese logistics service provider Hitachi Transport System, Ltd. entered the Turkish market by acquiring 51% of the shares of Mars Logistics, a leading logistics company in Turkey. The deal will be closed in October 2013.
- The 18th largest company in the world with 326,000 employees and a revenue of USD 108 billion, Hitachi plans to step up its global business expansion, strengthen its current business in Europe and expand into the logistics market in the Middle East and North Africa with this deal.
- Mars Logistics has become one of the most important players in the Turkish logistics market with a market value of USD 50 billion and EUR 224 million revenue in 2012. The firm currently holds 1,000 TIR in its fleet and has opened branch offices in Luxembourg, Italy and China.
- Turkey is a convenient transport junction for Europe, Russia, North Africa and the Middle East and also has high potential within the economic market because of its affluent labor force. Furthermore, Turkey expects that sustainable economic growth will continue in future.

"Hitachi views Turkey as a central logistics base for Russia, Turkic Republics, the Middle East, Europe and even North Africa. Hitachi will make Turkey its regional base with this partnership.

Ali Tulgar, Vice General Manager of Mars Logistics, 2013

The logo for Mars Logistics features the word "MARS" in a bold, red, italicized font, followed by "LOGISTICS" in a grey, italicized font. A thin red swoosh underline is positioned beneath the "MARS" text.

Source: Dünya Gazetesi



Major Players in Roadway Logistics

OMSAN LOGISTICS

- Omsan Logistics was founded in 1978. Omsan Logistics is headquartered in Istanbul.
- Omsan Logistics is a member of the **International Air Transport Association** and the **International Federation of Freight Forwarders**

**Revenue in 2011:
TL 530 million**



EKOL LOGISTICS

- Ekol Logistics was founded in 1990. Ekol logistics is headquartered in Istanbul.
- Ekol Logistics has a combined structure that offers **3PL integrated** logistic services globally.
- **Ekol Logistics** offers customized solutions tailored specifically for its customers' varied needs.

**Revenue in 2011:
TL 509 million**



NETLOG LOGISTICS

- Netlog Logistics is a local logistics company that provides supply chain management, storage and (international) freight services for textile, automotive, dry food, pharmaceutical and construction industries.
- The company employs 3,500 people, owns **2,000 vehicles**, 51 storage areas, 12 companies and has transported 4 million tonnes of freight in 2010.

**Revenue in 2011:
TL 670 million**



REYSAŞ TRANSPORT

- Reysaş Transport and Logistics was founded in 1989 with its headquarters in Ankara.
- It carries on its operation with more than **1,500 vehicles**, both domestically and **internationally**.
- Recently, they moved their official headquarters to Istanbul.

**Revenue in 2011:
TL 436 million**



Source: Fortune 500 Turkey



Some of the major stakeholders in road logistics:



İCİTAŞ İnşaat



MARS LOGISTICS



INFRASTRUCTURE
100

EKOL®



AYGM
Altyapı Yatırımları Genel Müdürlüğü



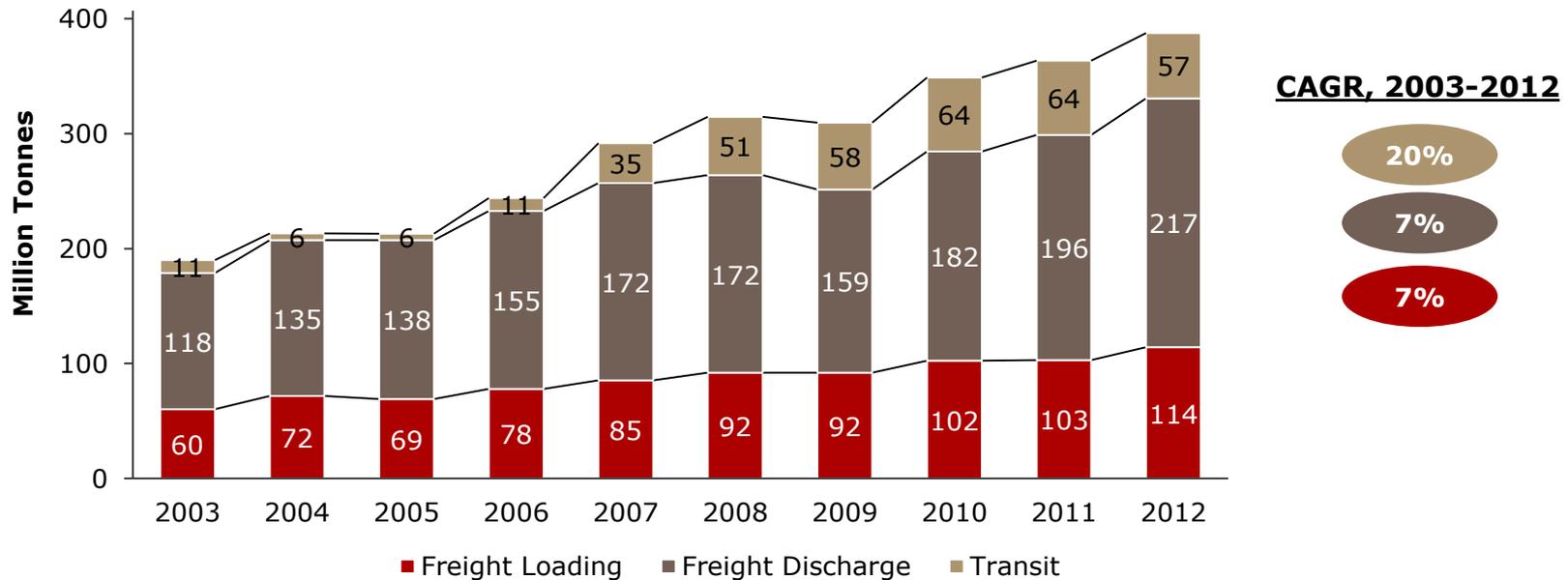
B. Maritime Logistics

- i. Development of Freight and Passenger Transportation via the Sea and through Ports
- ii. Foreign Trade via Maritime Routes
- iii. PPP's in the Maritime Sector
- iv. Overview of TCDD Ports
- v. Water Logistics in Turkey
- vi. Major Infrastructures Investments in the Maritime Sector
- vii. Success Stories
- viii. Major Players in the Maritime Sector



The freight handling capacity in Turkey's ports has been steadily increasing over the years

Figure 39: Total Freight Handled in Turkish Ports, 2003-2012



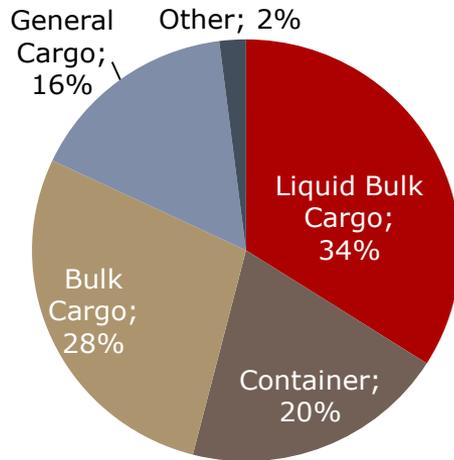
Source: Ministry of Transport, Maritime Affairs and Communications

- Consistent high growth rates were achieved in total freight handling in Turkish ports as it grew at a **CAGR 8.2%** from 2003 to 2012.
- **56% of the goods handled** were freight discharged in ports, while **29% was freight loaded** into vessels and around **15% was transit cargo**.



This increase can be attributed to a wide range of services that ports provide...

Figure 40: Types of Freight Handled in Ports in Turkey, 2012



Source: Maritime Trade Statistics Report 2013

Note: General cargo refers to packaged merchandise.

- Kocaeli ports emerged as the leading ports in cargo handling. This can be attributed to their proximity to manufacturing and business centers. Izmit's port had the highest share in cargo handling with **16% of the total freight** handled in all of the ports.
- Ambarlı's port handled more than 3 million TEU of containers in 2012, coming in as the top container handler among Turkish ports, followed by Mersin with **over 1.2 million TEU** and Izmir with approximately **700,000 TEU**. Thus, **Ambarlı constituted 42%** of the total number of containers handled in Turkey.

- Turkish ports can handle a variety of cargo, including bulk cargo, general cargo, container and liquid bulk cargo.
- The majority of cargo handled was liquid bulk cargo with more than **132 million tonnes** in 2012, followed by bulk cargo in excess of **107 million tonnes**, during the same period.

Source: Maritime Trade Statistics Report 2013.



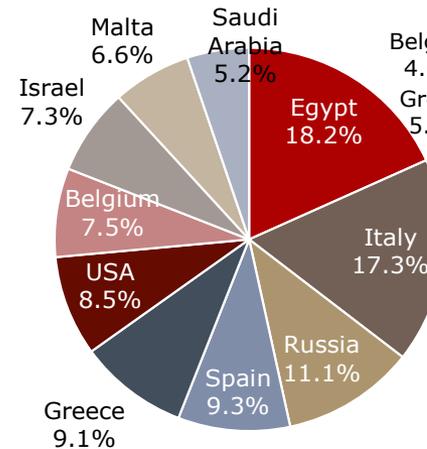
...since a significant portion of foreign trade passes through ports

Figure 41: The Development of Foreign Trade Freight Handling in the Maritime Sector, 2003-2012



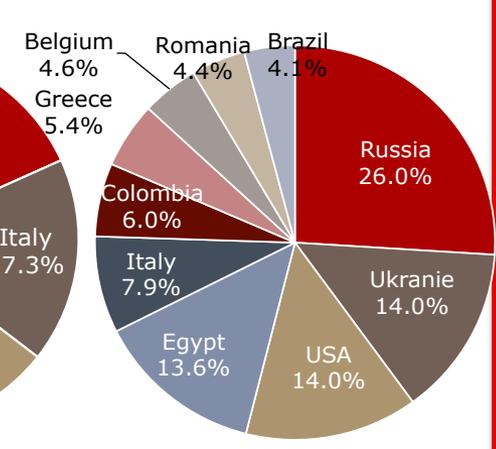
Source: Ministry of Transport, Maritime Affairs and Communications

Top 10 Countries Turkey Exports, 2012



Source: Ministry of Transport, Maritime Affairs and Communications

Top 10 Countries Turkey Imports, 2012

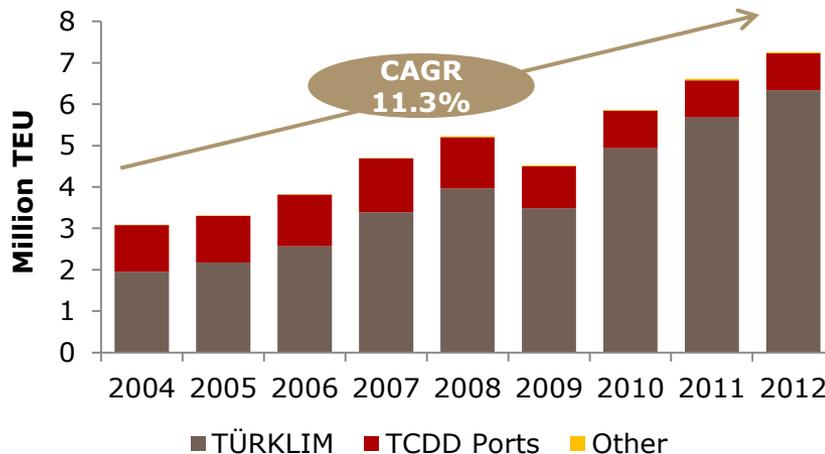


- Turkey's significance in international trade was reflected in its foreign trade freight handling numbers. Total foreign trade freight handling **grew CAGR 7%** from 2003 to 2012 surpassing 280 million tonnes.
- In 2012, foreign flagged ships **constituted 86%** of the total freight carried, while the rest belonged to Turkish flagged ships. That is a **CAGR 9% increase** in foreign flagged ships from 2003 to 2012.
- Total volume of exports during 2003 to 2012 grew at a **stunning CAGR 8%**, with more than 90 million tonnes in 2012. The imports during the same period grew at a **CAGR 7%** reaching 193 million tonnes.
- In 2012, **18.2% of maritime exports** were made to Egypt followed by Italy and Russia with 17.3% and 11.1%, respectively. The majority of Turkey's imports came from neighboring Russia followed by the Ukraine, the USA and Egypt.



Total traffic in ports has more than doubled in the past 8 years thanks to increasing trade

Figure 42: Traffic Development in Turkey's Ports



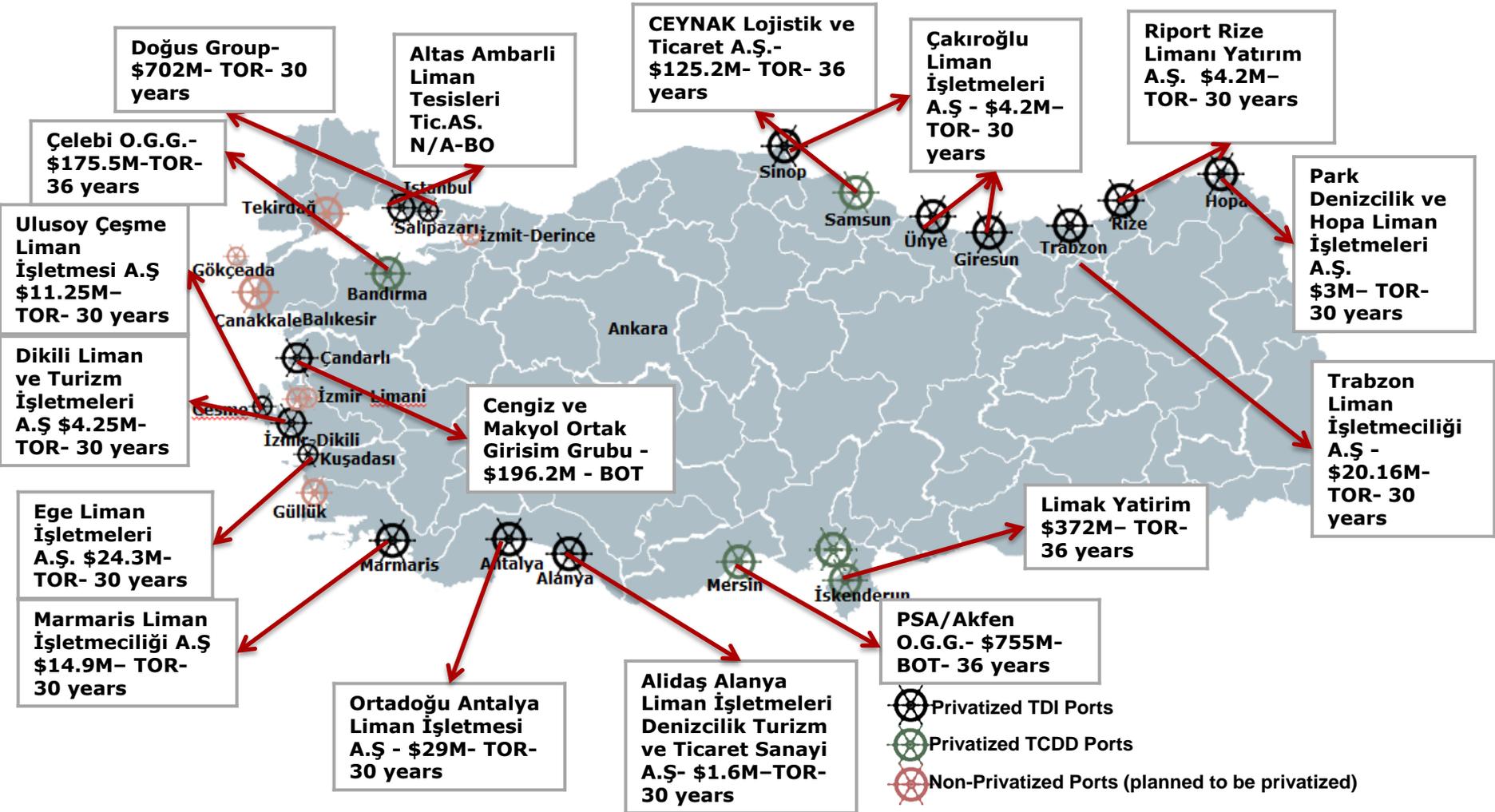
Source: TÜRKLIM

- Ports provide an interface between sea transport and land based transport. Ports represent a great opportunity in Turkey, given the country's more than 8,200 km of coastline.
- Currently, there are **more than 50** ports in Turkey.
- Turkish ports are structured in order to serve multiple types of loads.
- In 2012, in terms of TEU, containers held in Türklım ports, which are the ports that are members of the Port Operators Association of Turkey, constituted the major share with **87% of total traffic**.
- Total traffic in ports increased at a **CAGR 11%** from 2004 to 2012. During the same period, traffic in Türklım ports increased at a **CAGR 16%**.
- There are **60 customs directorates** for sea border crossings, of which **14 directorates** are temporary.

Source: TÜRKLIM



PPPs have fired up the Turkish maritime sector



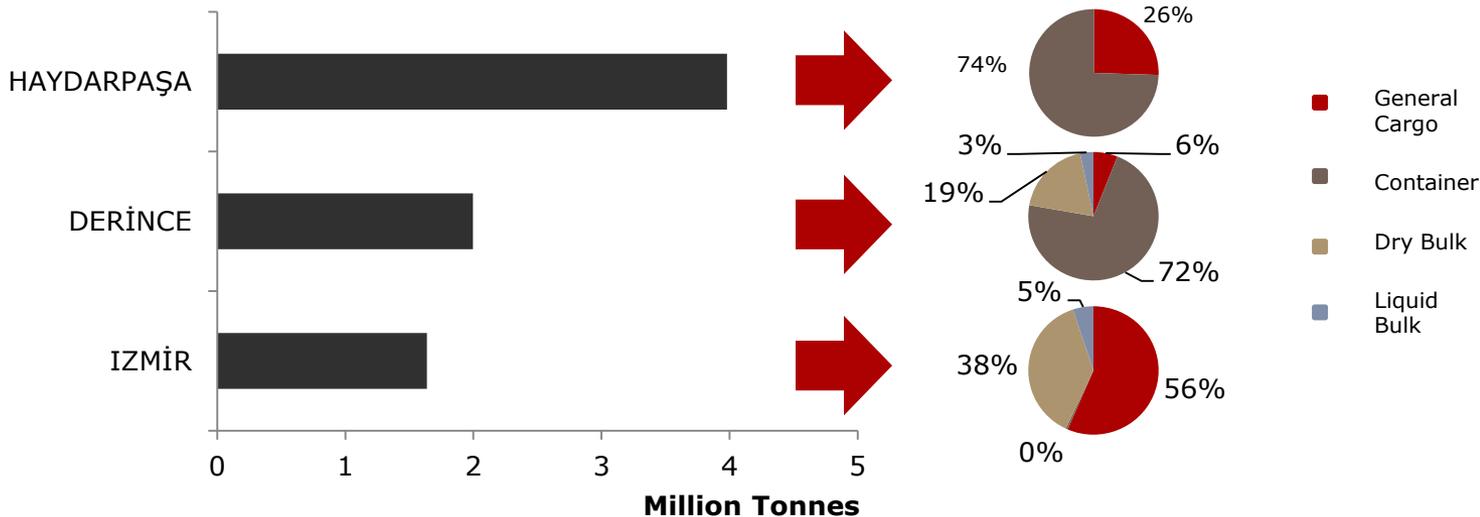
- Güllük (BOT), Çanakkale (BOT), Gökçeada and Pasaport Pier are to be private boating ports. Some of the other yachting ports are Dalaman, Datça, Gazipaşa, Muğla-Oren, and Kumkuyu.
- The Derince Port, Izmir Cruiser Port, Izmir Loads Ports and Tekirdağ Port are to be used for commercial use and become transportation and logistics bases. The tenders for these ports have not been conducted.

Source: Emerging Markets Insight, Republic of Turkey Prime Ministry Privatization Administration, Ministry of Economy



TCDD is a big player in ports and controls some of the major ports in Turkey

Figure 43: Distribution of the Main Cargo Groups Handled at the TCDD Ports, 2012



Source: TCDD

- Currently, **TCDD operates 3 ports**, namely, **Haydarpaşa, Derince and Izmir** ports. Ports such as Bandırma, Iskenderun, Mersin and Samsun were privatized using the transfer of operating rights method.
- The biggest of these ports is Haydarpaşa. It has an extensive capacity includes technology of, bulk freight handling facilities and ferry boats that provide service to train ferries working between Sirkeci and Haydarpaşa.
- The Haydarpaşa port handled almost **4 million tonnes of freight in 2012**, while Derince and Izmir handled close to 2 million tonnes. The main type of cargo handled in these ports was containers.



Privatization of national ports continue as part of government's market liberalization reforms.

Table 7: Privatized TCDD Ports

Ports	Acquirer	PPP Type	Date	Winning Bid (USD million)	Duration
Bandırma	Çelebi OGG	TOR	5/18/2010	175.5	36-year operating license as of 2008
Iskenderun	Limak Yatırım Enerji Üretim İşletme Hizmetleri ve İnşaat A.Ş	TOR	12/30/2011	372	36-year operating license as of 2011
Mersin	PSA Akfen OGG	TOR	5/11/2007	755	36-year operating license as of 2005
Samsun	Ceynak Lojistik ve Ticaret A.Ş	TOR	3/31/2010	125.2	36-year operating license as of 2008

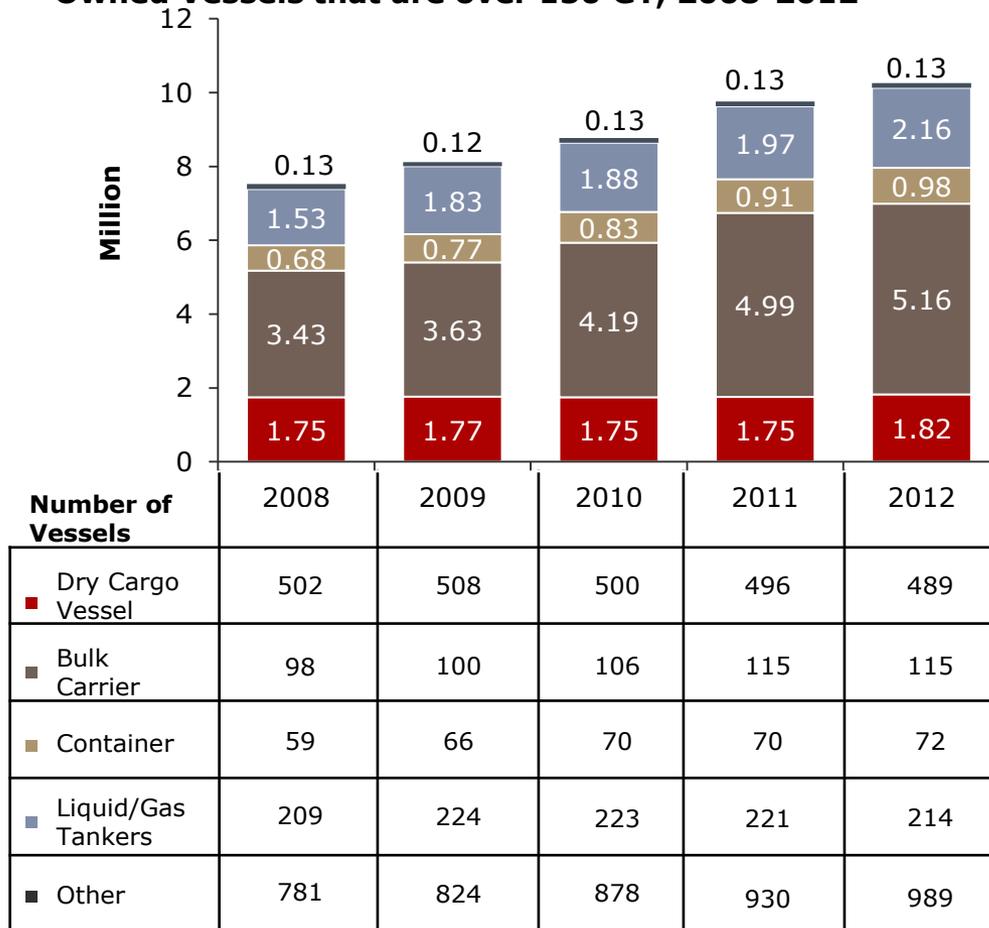
Source: TCDD

- TCDD ports were transferred to the Privatization Administration by a decision on December 30, 2004. Four TCDD ports have already been privatized by the Privatization Administration via the Transfer of Rights (TOR) system. The total proceeds for these tenders have been USD 1.4 billion.
- According to TOR contracts, ports have to remain operational at all times and a certain amount of investment has to be made into each port by the acquirer. This investment is usually made as capacity increases. Port acquirers are requested to report to the TCDD.
- The acquirers of the ports have the right to operate the port for a period of 36 years.
- Currently, the Privatization Administration has added **Izmir Port Enterprise** and **Derince Port Enterprise** privatizations to its portfolio. These privatizations will be conducted on a TOR basis. Zoning plan studies for both ports are ongoing. The Turkish government is trying to involve foreign investors in the privatization process by making the necessary infrastructure investments to the ports. The investment amount of the **Izmir Port Enterprise** project is about **USD 300 million**.



Turkey's growing presence in sea freight transportation is reflected in the increase in number of Turkish owned vessels

Figure 44: DWT of Ships and Number of Turkish Owned Vessels that are over 150 GT, 2008-2012



Source: Ministry of Transport, Maritime Affairs and Communications

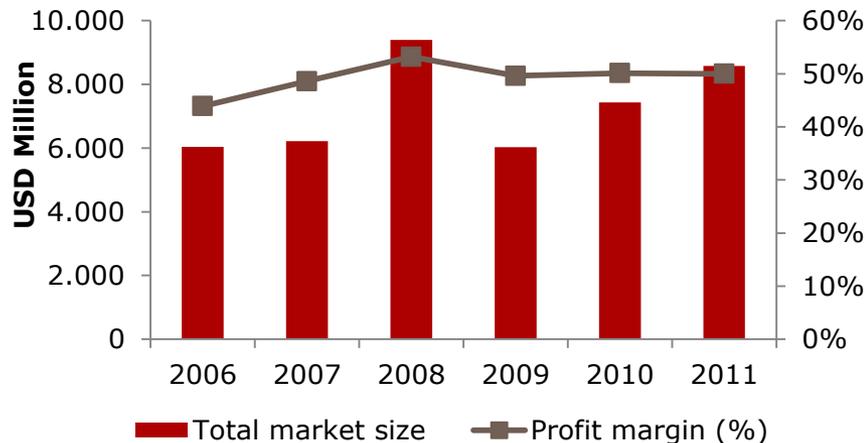
- The significance of maritime trade lies in the ability to carry high scale loads on a relatively cost efficient basis. Turkey has an especially high potential to assert itself as a significant maritime hub.
- Turkey's geographic location allows it to be connected to the Atlantic Ocean via the Gibraltar, the Arabian Peninsula and Indian Ocean via the Suez Canal and the Black Sea, Aegean, Mediterranean and Eurasia via the Turkish Straits.
- The significance of Turkey has been reflected in the Turkish maritime fleet numbers. **Total DWT for ships over 150 GT** has increased **36%** over 2008-2012 reaching more than 10 million DWT.
- The number of the Turkish maritime trade fleet that is over 150 GT increased approx. 14% over the same period. The total number of vessels/ships as of 2012 is over 1,800. That ranks Turkey as the **25th largest maritime fleet** globally in this category.



The water transport market in Turkey has experienced a CAGR of 7% from 2006 to 2011

- Water transport is the aggregation of sea, coastal transport and inland water transport.
- The water transport market in Turkey has **experienced a CAGR of 7%** from 2006 to 2011. It quickly gained momentum after a dip in 2009 due to global economic recession and increased **42.4% from 2009 to 2011**.

Figure 45: Total Market Size of Water Transport in Turkey



Source: Euromonitor International

- The strong economic recovery after the 2009 global economic recession and advantageous market conditions increased the profit margins of the water transport sector to a **stunning 50% profit margin** in 2011.
- There is still room for competition in the market. In 2011 there were only two large water transport companies, namely, IDO Istanbul ferries and Arkas with more than 250 employees, and they generated more than **52% of the total turnover**.
- Seven medium-sized companies accounted for 14% of total turnover. About 99% of all operators in the market were micro-sized or small companies, with total turnover of **TL 3.5 billion** and a 25% share of total turnover.

Source: Euromonitor International



Investment in the maritime sector has been lucrative for private players

Table 8: M&As in the Sector

Acquirer	Origin	Target	Stake	Deal Value (USD million)	Year
A.P. Moller–Maersk Group	Denmark	Maersk Denizcilik	40.0%	N/A	2008
Carlyle Group	USA	TVK Shipyard	50.0%	N/A	2008
Containerships Group	Finland	Contaz Denizcilik	100.0%	N/A	2009
Global Port Operation	Turkey	Middle-East Antalya Port Operations	60.0%	49.3	2010
Venice European Investment Capital	Italy	Global Liman	22.1%	77.4	2011
Tepe-Akfen-Souter-Sera	Turkey / Scotland	Istanbul Sea Buses (IDO)	100.0%	861.0	2011
Tarros SPA	Italy	Tarros Denizcilik	50.0%	N/A	2011
Yıldırım Group	Turkey	Gemport	54.0%	N/A	2012
CMA	France	CMA CMG Marine Agency	20.0%	N/A	2012

Source: Deloitte Annual Turkish M&A Review

- There have been many mergers and acquisitions in the maritime sector. The largest deal announced was the acquisition of Istanbul Sea Buses with an amount of more than USD 860 million in 2011.
- The dynamism of the industry is expected to continue as new investment opportunities come to the fore.



The construction of new ports will facilitate increased exports/imports

Filyos Port

- As part of the Filyos Valley project, development plans for the Filyos port were completed in 2012. For the port and industrial region in the surrounding area 6 million cubic meters were re-zoned for use.
- The Filyos port will support Kardemir, which is a company that produces crude steel, as it expands its capacity of crude steel production to **3 million metric tonnes/year**. The port will be located in the Black Sea region and will facilitate exports of steel.
- The port project will be funded by the European Union. The port will have **25 million metric tonnes/year throughput** capacities by 2020.

Çandarlı Port

- Çandarlı Port is to be the **biggest port of Turkey and 10th largest** in the world when its construction ends.
- The Supreme Planning Council's approval was received for plans to announce the BOT model tender notice. The project is estimated to cost around EUR 950 million.
- Preparatory infrastructural works will include a 900 meters long breakwater, which has been built. Also, a dock of 2,000 meters is to be built. 300 meter long 6 ships will be able to approach and draw near at the same time.
- Çandarlı port will have a **capacity of 12 million TEU**.

Investment Tip: Investment in ports will move traffic from congested ports to less crowded ports, thus achieving efficiency and reducing shipment and storage costs.

Source: Emerging Markets Insight, Dünya Gazetesi



Success Story: Petkim Container Port

- The project's target is to increase the port's cargo handling capacity to 1.5 million TEU at first and then to 4 million TEU in the long term.
- The project will be executed in partnership with APM Terminals, which is a Dutch company that is the world leader on container terminal management.
- Petkim Port's initial handling capacity will be 1.5 million TEU containers and 20 million tonnes of liquid cargo. Petkim Port is set to become a milestone in Turkish port operations.
- It will be the first port that ships a capacity of 11,000 TEU.
- For container storage, 42 hectares of the port area with 6 hectares set aside for a back end logistics center will be constructed next to the Izmir-Çanakkale highway.
- 500 permanent employees are to be hired and during the various phases of the project an additional 260 workers may be employed.
- The terminal will fulfill all of the capacity needs until 2025.

"There are not enough ports to handle Turkey's demand, which is one of the fastest growing economies. Our investment will increase the port capacity of Turkey hence, accelerate foreign trade."

Kenan Yavuz, Petkim, SOCAR Turkey CEO and Petkim Board of Directors Member, 2013



Source: PETKIM, Emerging Markets Insight



Success Story: IDO

- Souter Investments is the private investment arm of transport tycoon, Sir Brian Souter.
- Sir Brian Souter has pioneered mega-cheap express coach services in the UK, the US and Europe. He also has launched a revolutionary new travel concept in Turkey that combines express bus and ferry services in 2012. With this new structure, the journey from Istanbul to Izmir will decrease to 6.5 hours from the previous 8-10 hours.
- IDObus.com is the latest service to be launched by Istanbul Deniz Otobüsleri (IDO) – the Turkish ferries company that Sir Brian’s Scottish-led consortium has acquired for USD 861 million in a privatization tender.

“With a population of more than 13 million, Istanbul is the main driver behind Turkey’s fast improving, high growth economy. The purchase of IDO gives us the opportunity to play our part in driving infrastructure improvements in the region.”

Andy Macfie, Souter Investments, Souter Investment Leader, 2012



Source: Souter Investmnets



Case Study: Turkey is constructing ports that will compete with leading ports around the globe

AsyaPort



- AsyaPort is an international transit port that is still being constructed in Tekirdağ and is expected to be completed in 2013. AsyaPort is a joint venture of companies MSC (Italy) and AsyaPort (Turkey)
- AsyaPort's annual **capacity will be 2.5 million containers**, but will begin with **1 million** its first year.
- The project's total investment cost is USD 400 million. When finished, it will be Europe's third largest transit port.
- Railway and highway projects that connect AsyaPort to Turkey and Europe have either been completed or commissioned.

DP World



- DP World is a world leader in marine terminal operations.
- DP World acquired a greenfield coastal area featuring **1,200 meters of berth, 16 meters draft alongside** and a total 48 HA site at Yarımca, Turkey for **USD 105 million** to develop a container terminal. The terminal will be solely owned and developed by DP World.
- This container terminal will be located 1 kilometer away from the Trans-European Motorway.
- With a **capacity of 1.3 million** this terminal will be one of the biggest container terminals in Turkey.



Source: Emerging Markets Insight, Asya Port

Major Players in the Maritime Sector

Arkas Holding

- Arkas Holding operates in many different fields including logistic services that integrate, sea, land, rail and air.
- Currently, Arkas has a total of 50 offices globally, 13 of which are in Turkey.
- Arkas is one of the leading companies in the Turkish shipping and logistics sector and is ranked 23rd of Turkey's Most Valuable Brands at a value of USD 347 million.



Maersk Denizcilik

- Maersk Line is a division of A.P Moller – Maersk Group and is dedicated to reliable sea and ocean transportation.
- It is the world's largest container shipping company with over 600 container ships and 3.8 million 20 foot equivalent unit containers.
- Maersk Denizcilik, which is a division of Maersk Line, opened in Turkey in 2001.



Source: Arkas Holding, Maersk, Emerging Markets Insight



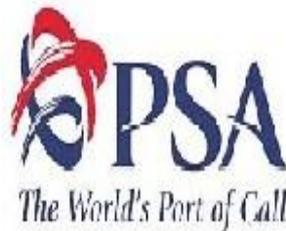
Some other major stakeholders in the maritime sector



 MAERSK LINE



CEYNAK
LOJİSTİK



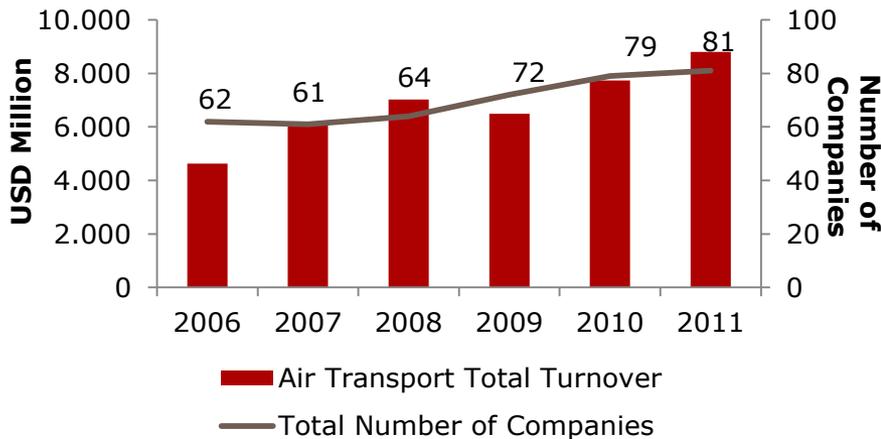
C. Air Logistics

- i. Market Size of Air Transportation
- ii. Development of Freight and Passenger Transportation via Airways
- iii. Technical Maintenance in the Aviation Sector
- iv. Major PPP Infrastructures in the Aviation Sector
- v. Major Players in the Aviation Sector



Turkey's air transportation market has significant growth potential and is keen on development...

Figure 46: Total Air Transport Market Size in Turkey, 2006-2011



Source: Euromonitor International

- Air transport revenue includes passengers and freight transferred via air.
- The total air transport market size increased at a **CAGR 14%** from 2006 to 2011 and reached a value of more than **USD 8.8 billion by 2011**.
- EU standardizations and the privatization process enabled the deregulation of the industry. Currently, there are more than **80 companies** actively operating in the air transport sector.

- Even with the increasing cost pressure due to high jet fuel prices, **profit margins** were stable and reached **13%, in 2011**.
- Meanwhile, the rapidly growing industry created over **4,000 new jobs** throughout 2006-2011.
- Euromonitor International expects the industry to continue expanding at an annual rate of 13% between 2012 and 2017.
- Furthermore, daily airline traffic is expected to double between 2012 and 2030.

Investment Tip: There are more than 370 passenger planes and 20 cargo planes operating in Turkey. 2023 targets indicate a higher percentage in freight transportation via air. Therefore, more cargo planes will be needed in the near future to carry the increasing freight demand via air.

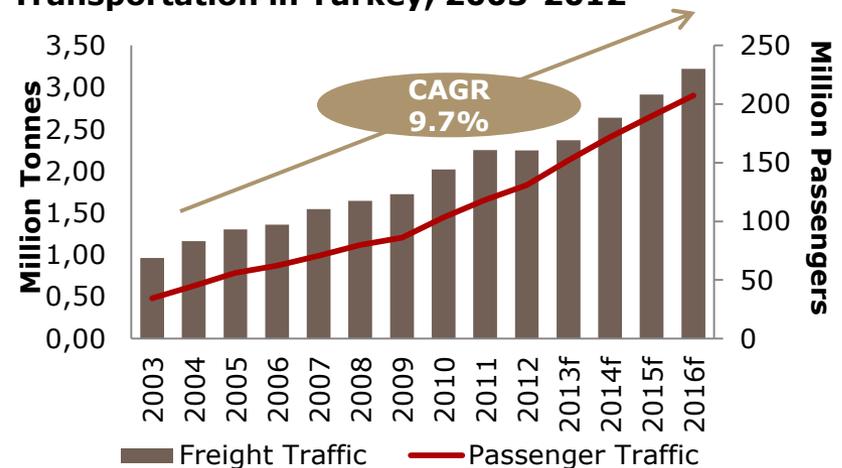
Source: Euromonitor International



...as air freight and passenger transportation continues to grow

- Air transportation is becoming a widely used mode of transport as people and companies rely on fast ways to transport their goods.
- Freight carried via air transportation has **increased at a CAGR 10%** from 2003 to 2012.
- As more airports open and existing airport capacities increase, freight carried via air will increase. Future air freight trends also point towards larger growth in this mode of transportation. Air freight industry is expected to continue grow at a **CAGR 9.4% from 2012 to 2016**, reaching to a total of **3.2 million tonnes**.
- The biggest portion of the freight carried comes from international lines. These lines constitute around 72% of the total freight carried in 2012.
- Currently, Atatürk Airport in Istanbul has the largest capacity and is the most significant airport in Turkey. More than half of the total air freight in 2012 passed through Istanbul Atatürk Airport. Parallel to the increase in air carriers and passengers in Istanbul Atatürk Airport, the total amount of freight surpassed **1.2 million tonnes** in 2012. That is a **15% increase** from 2011.
- The passenger traffic increased by a **CAGR 16%** from 2003 to 2012 with over **130 million passengers** carried in 2012.

Figure 47: Development of Air Freight Transportation in Turkey, 2003-2012



Source: DHMI

f:forecast

Note: Forecasts are DHMI projections, CAGR indicates the growth in freight traffic.

- Istanbul Atatürk International Airport was the seventh busiest airport in Europe in terms of passengers in 2012.
- The industry will further profit from the new planned airport that will replace **Atatürk International Airport**. The new airport will be far more superior in technology and will have more capacity than its predecessor.
- Total number of customs directorates in **air border crossings is 49**. 21 of the directorates are temporary.

Source: TAV Airports, Ministry of Customs and Trade



Turkey can also provide maintenance services for global airline companies that choose it as a hub for air transportation

THY Teknik

- THY Teknik A.Ş. provides maintenance and repair services for airline companies in 4 hangars that operate in a total closed area of 73,500 square meters located in Istanbul and Ankara.
- THY Teknik A.Ş. provides services such as track maintenance, base maintenance and component maintenance. The company provides «component pool» services not only to THY's air fleet, but also to other airlines' fleets, the number of airlines other than THY reached 10 by 2012.
- THY Teknik A.Ş. can provide track and base maintenance services for airplane classes such as Boeing 737's classic and new series, Boeing 777, Airbus A320 series, Airbus A300, Airbus A310, Airbus A330, Airbus A340, Gulfstream G-IV, Gulfstream 550, Cessna 172 and Diamond DA42.
- THY Teknik hopes to grow through its new HABOM project that was mostly complete by 2012. With this project, THY plans to increase capacity by 370,000 square meters and boost its revenues to \$1.5 billion by 2015. THY Teknik is expected to be the 6th largest maintenance company in the world within the aeronautics industry.

- THY Teknik acquired MNG Teknik Uçak Bakım Hizmetleri A.Ş. in order to meet the increasing demand for air fleet services. MNG Teknik A.Ş. has a capacity of 60,000 square meters in the Istanbul Ataturk Airport.

myTECHNIC

- myTECHNIC is the world's first lean greenfield MRO located at Sabiha Gökçen Airport.
- The company wanted to take advantage of the geographical proximity of Turkey to Europe and Asia.
- myTECHNIC is owned by the China based integrated operator with investments in industries such as air travel, modern logistics and modern finance service industries.
- The company has obtained many certificates and has the approval of the Turkish DGCA, EASA, ISO 9001, and ISO 14001.
- The company provides services in engine maintenance, component maintenance, engineering services, calibration services and training.

Source: Turkish Airlines, myTechnic



In order to access capital and attract foreign investments, the government has put PPP in place

Table 9: PPPs in the Sector

Acquirer	Target	Deal Value	PPP Type	License Duration
Limak-GMR Group & Malaysian Airlines Joint Venture	Sabiha Gökçen Airport	USD 3.1 billion	BOT	20-year operating license as of 2008
IC İçtaş İnşaat Sanayi ve Ticaret A.Ş.- FRAPORT AG Frankfurt Airport Services	Antalya Airport (1 st and 2 nd International Terminals)	USD 3.197 billion	BOT	17-year operating license as of 2007
TAV Yatırım Yapım ve İşletme A.Ş.	Istanbul Atatürk Airport (International Terminal Building)	USD 2.96 billion	BOT	15.5-year operating license as of 2005
TAV Yatırım Yapım ve İşletme A.Ş.	Izmir Adnan Menderes Airport(International Terminal Building)	USD 610 million (will be USD 1 billion with additional investments)	TOR	18-year operating license as of 2014
TAV Yatırım Yapım ve İşletme A.Ş.	Ankara Esenboğa Airport	USD 251 million	BOT	15 -year operating license as of 2006
Limak-Kolin-Cengiz-MaPa-Kalyon Joint Venture	Istanbul 3 rd Airport Project	EUR 22.2 billion	BOT	25-year operating license as of 2017
Zonguldak Özel Sivil Havacılık Sanayi ve Ticaret A.Ş.	Zonguldak Çaycuma Airport	N/A	Long-Term Rent	Starting from 2007
Sky Line Havacılık- Zonguldak Özel Sivil Havacılık Joint Venture	Çukurova Regional Airport	EUR 357 million	BOT	Approx. 10-year operating license as of 2014
IC İçtaş İnşaat	Zafer International Airport	N/A	BOT	30-year operating license as of 2014

Source: Emerging Markets Insight, Deloitte Analysis



Turkey will continue to expand the air logistics sector through new airport projects

The New Airport Project in Istanbul

- This project will provide a new era of transportation that will connect the city of Istanbul to the east via the new bridge.
- The airport is part of a larger urban development plan. A new settlement area will be built to the south of the third airport which will cover about 42,000 hectares of land, in which **9,400 hectares** will be covered by the airport, and the rest will be home to **1-1.5 million people**.
- The airport will be constructed by the Turkish joint venture consortium of Cengiz-Kolin-Limak-Mapa-Kalyon with a total bid of **EUR 26 billion** including value added tax for a 25-year lease starting from 2017.
- The airport is planned to be one of the largest airports in the world, with a yearly capacity of **150 million passengers**.
- The airport will be constructed in 3 phases. The first phase will have 2 independent parallel runways, 1 cross runway and 3 parallel taxiways. The second phase will be built in Tayakadın-Yeniköy front. There will be 1 independent parallel runway, and 1 parallel taxiway. In the southern region of the airport, there will be 1 cross runway and 1 parallel taxiway.

Izmir, Çeşme Airport

- The airport will enable an easier transfer process to one of the major tourism destinations of Turkey.
- The airport will have **1 runway that is 2,100 meters**, a **150x120** meter apron and a **200x24** meter taxiway.
- It will ease transportation to tourism destinations and is projected to be commissioned in 2014-2015.

Izmir, Vecihi Hürkuş Airport

- The airport will be built in the northern districts of Izmir, in close proximity to tourism destinations and industry.
- The airport will be the second airport in Izmir.
- It will have **1 runway that is 3,000x45** meters, an apron of **240x120** meters and a taxiway of **265x24** meters.
- The project is included in Turkey's investment program and the airport will be commissioned in 2014.



Major Players in Air Logistics

Turkish Airlines

- Turkish Airlines is the **4th biggest** airline company in the world in terms of number of destinations flying to over 180 countries.
- Turkish Airlines made **USD 9 billion in revenue** in 2012.
- Turkish Airlines has more than **200 planes** in total and 213 planes on order, which will be delivered by 2020.
- The cargo fleet of Turkish Airlines has **10 planes** and **2 orders** waiting to be delivered.
- It is a member of IATA and Star Alliance



Pegasus Airlines

- Pegasus Airlines was founded in 1990 through the partnership of **three different** companies.
- In 2005, ESAS Holding acquired Pegasus.
- Pegasus Airlines flies to more than **70 destinations** in **29 countries**.
- Pegasus made USD 1.06 billion in revenue in 2012.
- Currently, it has an operating fleet of **42 airplanes** and has ordered 75 airbus aircrafts with an option to add 25 more aircraft for **USD 12 billion**.
- Pegasus offers services to other companies in the airlines sector such as maintenance and crew, pilot and technical education.



MNG Airlines

- MNG Airlines was founded in 1996 as a subsidiary of MNG Holding.
- MNG Airlines built a warehouse in Istanbul in 2000 which is **10,000 m²** in area and **60,000 m³** in volume.
- Total freight capacity of the company is **350 million tonnes**.
- Bonded warehouse, registration, boarding, cargo search and cargo delivery services are all available in the warehouse through barcode technology.
- MNG Airlines has IATA Operational Safety Audit Certification.
- Total revenue of MNG Airlines in 2012 was **USD 100 million**.
- It has a fleet of **11 aircrafts**.



Source: THY, Pegasus, MNG, Airbus, Boeing



Some of the major stakeholders in aviation



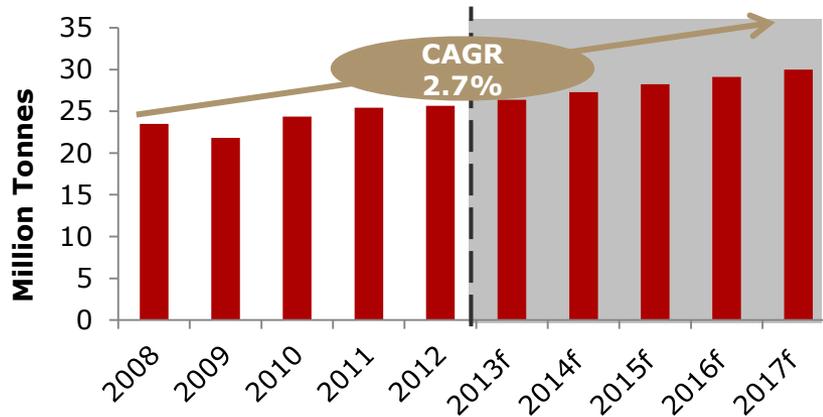
D. Railway Logistics

- i. Development of Freight and Passenger Transportation via Railway
- ii. Overview of TCDD
- iii. Liberalization in the Railway Sector
- iv. High Speed Railways
- v. Future Targets in the Railway Sector
- vi. Major Investments in the Railway Sector
- vii. Major International Connections and Projects in Railways
- viii. Major Players in the Railway Sector



Railways are enjoying a period of significant and sustained investment in Turkey...

Figure 48: Development of Railway Freight Transportation in Turkey, 2008-2012



Source: TCDD, Deloitte Analysis with BMI growth rates
f: forecasted

- Turkish State Railways (TCDD) is the national railway carrier, established in 1953. It is headquartered in Ankara and operates through seven regional directorates countrywide.
- Moreover, TCDD operates sea ports and has three affiliated companies including
 - **locomotive manufacturer, Tülomsaş,**
 - **passenger coach producer, Tüvasaş, and**
 - **freight wagons maker, Tüdemtaş.**

- In 2012, more than **25 million tonnes of freight was transferred via railway**. That is a CAGR 2% increase from 2008. The majority of this load were domestic freight, while only 8% was international. However, as international connectivity of railroads increase international freight handling will also increase.
- According to Deloitte analysis, Turkey's train freight volume is set to grow **CAGR 3.2% surpassing 29 million tonnes** between 2012 and 2017. Tonne kilometer, which is a critical performance indicator for modes of transport, increased for railroads **CAGR 4.9% from 2002 to 2012**.
- A number of major cities have urban rail networks, light transit systems and underground subways of some sort. In Istanbul alone, there are plans to provide more than 100 km of new lines by the end of 2018 and over 270 km of lines by the end of 2023.
- Turkey sees railways as a preferred mode of transportation for freight and is trying to identify ways to increase its share.
- Furthermore, Turkey plans to carry freight and passengers from hubs around the country via high speed train networks that will be connected to international railroads.

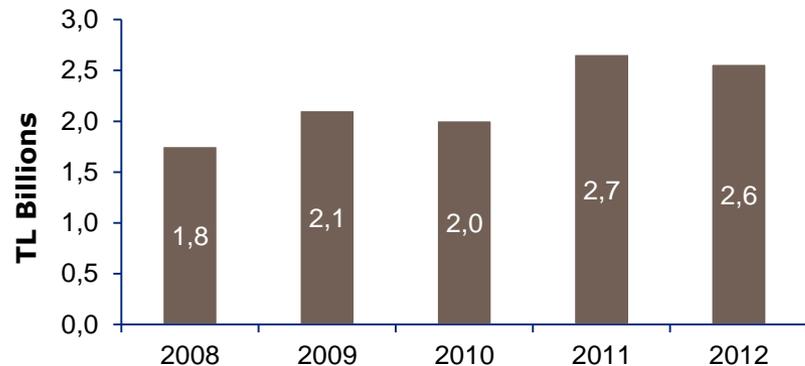
Source: TCDD, Rail Turkey Report, Ministry of Transport, Maritime Affairs and Communications



...with the pulse that Turkish State Railways (TCDD) provided to the sector

- It operates freight and passenger transportation and is a part of the Ministry of Transport, Maritime Affairs and Communications.
- The TCDD is a vertically integrated company. Other than its transportation operations, it has manufacturing and maintenance facilities. TCDD's activities are extensive and diverse going beyond railroad transportation. It has three affiliates performing these services, namely, **TÜLOMSAŞ** (the Locomotive and Motor Corporation of Turkey) based in Eskişehir which is a licensed locomotives manufacturer, **TÜVASAŞ** (the Wagon Industry Corporation of Turkey) based in Adapazarı which manufactures passenger coaches and **TÜDEMSAŞ** (the Railway Machines Industry Corporation of Turkey) based in Sivas that manufactures freight wagons.
- DLH, which is the General Directorate of Infrastructure Investments for the Ministry of Transport, Maritime Affairs and Communications designs, constructs and manages large infrastructure projects for the railway network such as the Ankara subway and the Marmaray project.
- The railway sector presents golden opportunities for investors such as:
 - Expansion of high speed railway network.
 - Rehabilitation of existing lines.
 - Modernization of infrastructure and technology.
 - Enhanced logistics and transportation operations.
- In addition to railway transportation, TCDD also operates some of the biggest ports in Turkey such as the Haydapaşa, Derince and Izmir ports.

Figure 49: Total Revenue of TCDD, 2008-2012



Source: TCDD



The acceleration of the industry is set to continue with the railway sector's liberalization process

- As of May 1, 2013, the new law associated with the liberalization of railway transportation in Turkey breaks the monopoly of the state for rail networks and replaces it with a competitive and free market environment. This law enables TCDD to act as the railway infrastructure operator and it will establish TCDD Taşımacılık A.Ş within a few months*.
- The affects of the new law foresees improvement and expansion of the railway network with investments from both private and public investors.
- The new law permits private and public companies to conduct:
 - Construction of the railways which will be under authority of the said company.
 - Operation of railway which is leased or constructed.
 - Operation of trains using the state railway network.
- The Ministry of Transport, Maritime Affairs and Communications will grant operating rights to private companies that want to build and operate railways to conduct freight and passenger transportation operations.
- According to the law, "when companies want to construct railway infrastructure, the property required for the railway infrastructure will be expropriated by the Ministry and cost will be collected from the company and easement right will be given to company so as not to exceed 49 years".
- As investments due to liberalization process in railways speed up, an integrated network among logistic villages, industrial zones and airports will boost Turkey's economy even further.

Investment Tip: Logistics companies can take advantage of the liberalization process by establishing their own rail transportation services.

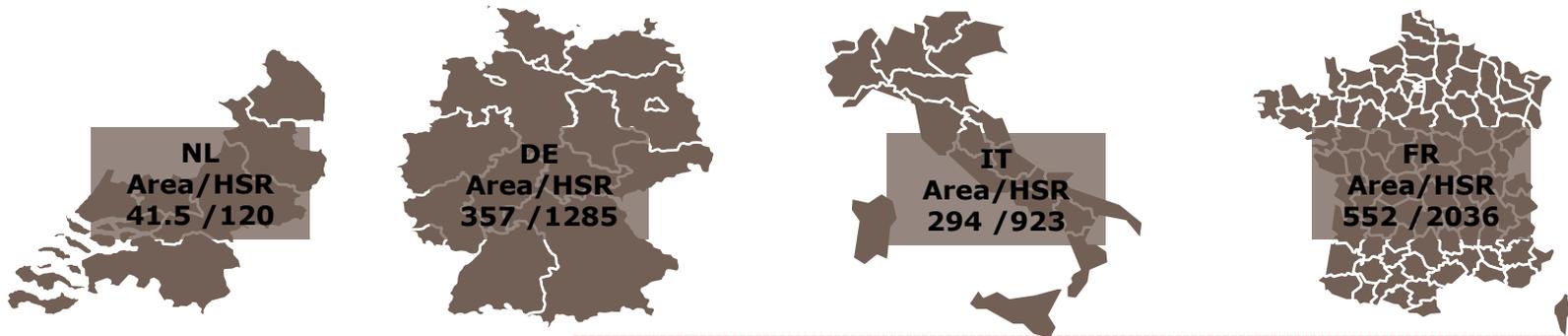
Source: TCDD, Emerging Markets Insight, Rail Turkey

* As of preparation date of this Report

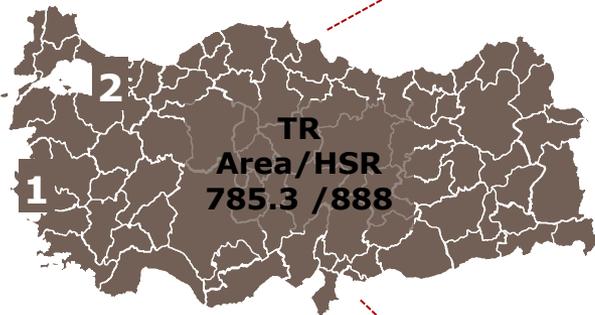


The sector is experiencing a change in technology and is switching to high-speed rail...

High-Speed Railway Network, 2011



- A high-speed rail network refers to any train that goes at least 250 kph for any part of its trip.
- There is a total of 888 km of high-speed railway network in Turkey. It is not enough for the total land area of 785.3 thousand square kms. However, the Turkish government has plans to expand the lines and invest a total of more than USD 23.5 billion into the sector through 2023.
- High-speed rail between Ankara and Istanbul will be 533 km long. The travel time from Ankara to Istanbul will be reduced to only 3 hours.
- The high-speed train between Ankara and Istanbul is expected to be finished by the end of September 2013.
- The Marmaray project is to be the continuation of this line. Thus, it will connect Anatolia to Europe.
- European Investment Bank (EIB) realizes the strategic significance of Turkey as a major trade route. The Bank invested a total of EUR 1.5 billion to Turkish railway system. EIB also provided EUR 200 million for Istanbul-Ankara high speed railway.



Source: Europe Transportation Statistics 2012

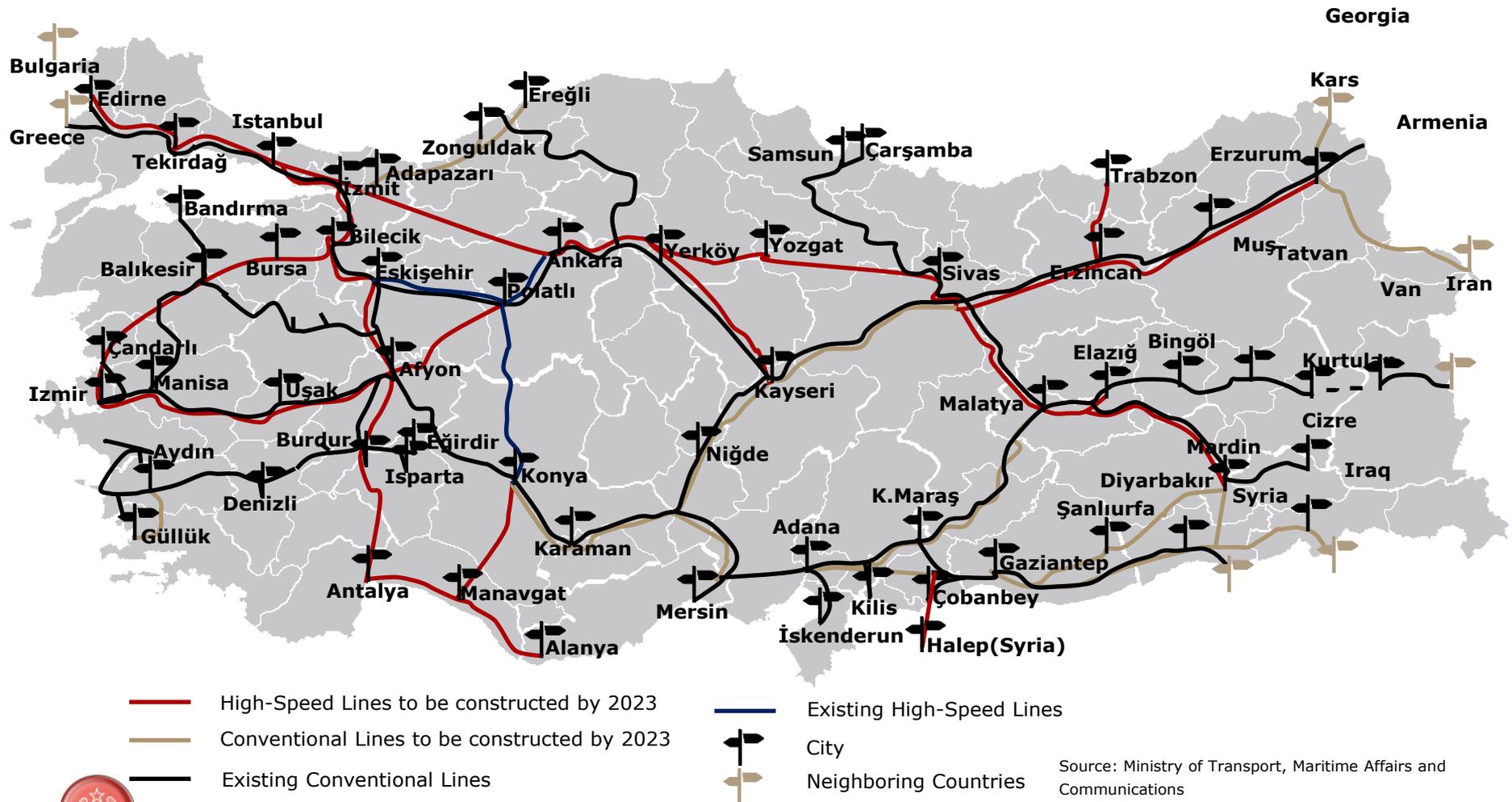
Note: Area is given as 1000 km²

HSR: High Speed Railway Network in terms of km



...thereby making the Turkish railway network one of Europe's best networks

Figure 50: Turkish Railway Network by 2023



Railways are among the top priorities of the government of Turkey

- The government encourages private sector companies to work with **TCDD to make faster railways** and create a better railway infrastructure. Bringing public and private resources together for the development of railways, rail connectivity to ports, logistics villages, factories and other manufacturing plants is a significant initiative. Implementing the public-private model to railway development creates many assets. Some of these assets are the workforce coming from partnership, better planning and implementation, more funding, more expertise coming from mature experienced companies within the industry.
- One of the many opportunities that come with privatization and partnerships is connecting railways to existing factories, trading companies, logistics centers and ports. Even after exceeding the renting time and **PPP is finalized**, the partnerships between the public and private sector will not cease.
- The method enables TCDD to reduce operating costs and increases efficiency since private companies supply labor and equipment.

Table 10: PPPs in the Sector

Acquirer	Target	Deal Value
Limak, Kolin and Cengiz Construction	TCDD Ankara High-Speed Train Station	N/A – Operating license for 19 years, 7 months
Eoro Rapid TR	TCDD Antalya-Alanya Railway Project	USD 5.5 billion
Kolin İnşaat-Savronik-GCF	TCDD Ankara-Sincan Railway Northern Line Project	TL 69.7 million
YSE Yapi-Tepe İnşaat	TCDD Bursa-Bilecik High Speed Railway Project	TL 1.3 million
CNR China	TCDD Ankara-Konya High-Speed Railway Project	USD 263.5 million
The China Civil Engineering Construction Cooperation	TCDD Ankara-Konya High-Speed Railway Project(2023)	USD 35 million



Source: Emerging Markets Insight, Deloitte Analysis

Major Railway Projects: Pakistan-Iran-Turkey Railway Project and the Marmaray Project

Pakistan-Iran-Turkey Railway Project

- There is a railway track that connects China to the Middle East and Turkey via the Pakistan-Iran-Turkey rail corridor.
- For the development of this project, several agreements between countries were signed. These agreements include; **ECOTA Agreement, Economic Cooperation Organization Trading Agreement, Istanbul-Teheran-Islamabad Container Train Collaboration Agreement.**
- This provides a different route from China to Istanbul.
- The total distance of the railway is **6,566 km**. The train travels this distance in 13 days.
- The value of goods transported each year is **USD 1 trillion**.
- Rather than building track ways around the rugged shoreline, the goods are transported via train ferry across Lake Van.
- There are two ferries, each with a **16 coach capacity**, capable of making 3 trips per day.

Marmaray Project

- This project will provide the non-stop transport of goods via railway from China to London.
- The route will also be connected to Istanbul's subways. It will operate from Halkalı (an important logistics village) to Gebze.
- The Japanese International Cooperation Agency (JICA), the Council of European Development Bank and the European Investment Bank all invested in the project.
- The total length of the railway line will be 76.3 km when finished.
- There will be **440 wagons by 2015** and a total of 40 stations. The train will reach a maximum speed of 100 kph.
- There are several costs included:
 - BC1 (pathway through the Bosphorus): Taisei-Gama Nurol Partnership, **TL 3.3 billion**
 - CR1 (Haydarpaşa to Gebze and Sirkeci to Halkalı): EUR 1 billion
 - CR2 (cost of cars): Provided by the Turkish Ministry of Transport, Maritime Affairs and Communications, **USD 585 million**

Source: Emerging Markets Insight, www.marmaray.com



Major Railway Project: Baku-Tbilisi-Kars Railway

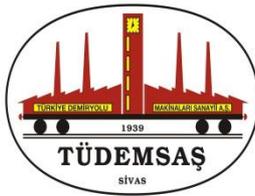
Baku-Tbilisi-Kars Railway Project

- The project connects China to the Middle East, Russia, Ukraine, Georgia and China to Turkey, and links Turkey to other countries and emphasizes its position as a major logistics hub. The line will be a part of the 2,000 km Trans-Asia Railway after completion.
- This project is included in the TRACECA's, an international program aimed at strengthening transport communications in the regions of the Black Sea basin, the southern Caucasus and Central Asia, known as the "Silk Wind" Container Block Train Project from Kazakhstan to Turkey/Black Sea.
- 76 km part of track lies on the Turkish side. The remaining infrastructure and superstructure construction works was awarded to Şenbay Madencilik and Ermit Mühendislik Joint Venture for a bid of TL 549.2 million. The construction work includes 30,437,310 cubic meters total, landfill works of 10,132,291 cubic meters, 321,163 cubic meters of concrete work, and the construction of 64 culverts, 28 underpasses, 11 overpasses, 2 viaducts and 1 station.
- Azerbaijan allocated USD 775 million for the project.
- It is expected that 17 million tonnes of cargo will be transported per year via the route. However, this capacity will gradually increase and will be 1 million passengers per year and 6.5 million tonnes of freight per year.
- The route will become a direct route to the European rail network.
- The project will also be connected to the major sea ports of Turkey, including Mersin, Samsun, Haydarpaşa and Iskenderun ports
- According to deputy head of JSC Azerbaijan Railways' Gurban Nazirov, the route will be fully commissioned by the end of 2014.

Source: Emerging Markets Insight



Some of the major stakeholders in railway sector



E. Multi-Modal Logistics

- i. Overview of RO-RO Transportation
- ii. Overview of RO-LA Transportation
- iii. Success Story



Backed by Turkey's strong trade relationships with Europe, RO-RO transportation has become an essential transportation medium in Turkey

Figure 51: RO-RO Routes

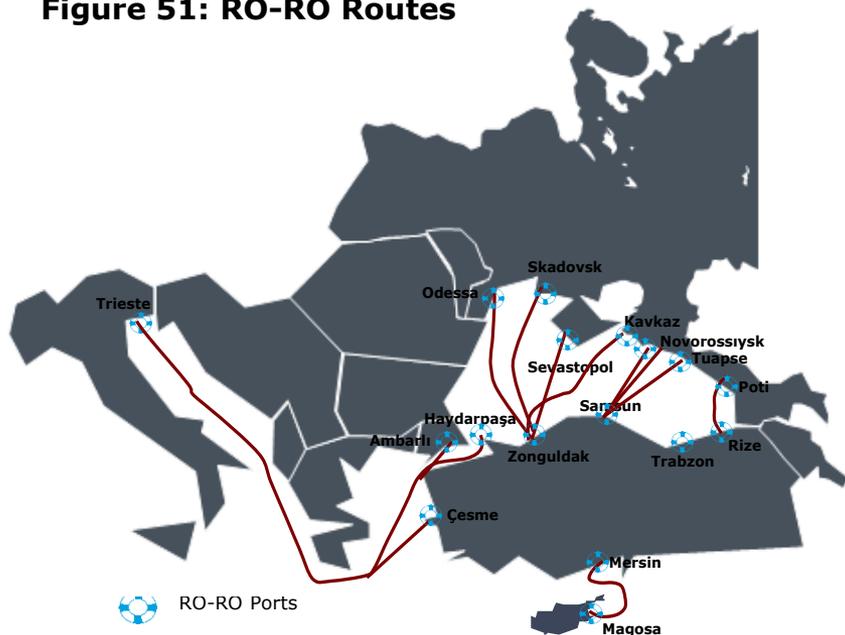


Table 11: RO-RO Route Statistics

Year	Destination	# of Ships Arriving From	# of Vehicles
2011	Trieste	790	237,438
	Toulon	81	25,063
	Marseille	7	2,130
	Other	1,578	96,252
	Total	2,456	360,883
2012	Trieste	815	221,214
	Toulon	118	37,505
	Marseille	0	0
	Other	2,707	139,358
	Total	2,910	398,077

Source: Maritime Trade Statistics Report 2013

- Multimodal logistics is designed to cut transit times, decongest heavily used modes of transport and reduce logistics cost.
- RO-RO transportation mode allows transportation companies to avoid dealing with certificates (and associated costs) imposed by Balkan countries to pass through these countries. Moreover, it reduces expenditures of companies thus, increasing efficiency.

- The Trieste port is favored among Turkish logistics operators due to its ease of access to major locations in Europe and over USD 190 billion trade volume conducted with the continent in 2012.
- The number of vehicles transported via **RO-RO increased CAGR 7%** from 2003 to 2012.
- Turkey operates a RO-RO line that is an alternative to the Syria border gate and carries approximately 100,000 vehicles to the Middle East using this line.

Source: Ministry of Transport, Maritime Affairs and Communications, Maritime Trade Statistics Report 2013



New RO-LA routes will further connect Turkey to Europe

- RO-LA is the way of transporting highway vehicles (lorry, truck) on railroads. It is widespread in most developed countries such as Austria, Sweden, Italy and Germany. **22% of the combined transport in Europe (460,000 tonnes)** is handled via RO-LA.
- The TCDD started this project in order to improve infrastructural bases for RO-LA transportation. Bulgarian, Romanian, Slovenian and Hungarian railroads and private sector companies such as UND have been selected as partners for the project.
- Logistics centers that are on the Trans-Asian Railways and ones that are on the Aegean side of Turkey are included for RO-LA transportation in the future.
- Aegean Logistics Villages will be put into the RO-LA network in Turkey to diminish the traffic of load. The RO-LA route will be from Istanbul to **Bandırma and Mudanya**, where it will connect the to Aegean Railway line.

Figure 52: RO-LA Routes for Turkey



Routes	Distance (km)	Time Elapsed (hours)
Turkey-Bulgaria-Romania-Hungary-Austria	2,119	87
Turkey-Bulgaria-Serbia and Montenegro-Croatia-Slovenia-Austria	1,962	72
Turkey-Bulgaria-Serbia and Montenegro-Hungary-Austria	1,840	70

Source: RODER, RAYDER



KKR's acquisition of UN RO-RO is a leap forward for both the industry and intermodal logistics

UN RO-RO

KKR

- KKR & CO. L.P. (KKR) is a leading global investment firm with deep roots in private equity, with diversified capabilities, and an impressive track record.
- KKR has invested in UN Ro-Ro, a Turkish transportation company that offers alternative routes to improve integrated transport services and serves international road transport companies who transport the majority of Turkish exports. KKR has also contributed to UN Ro-Ro's investment of EUR 260 million.

Investment Tip: RO-RO allows logistics operators in Turkey to easily access major ports in not only Europe, but to ports in the Middle East and Africa.

Source: UN Ro-Ro, KKR



III. Logistic Centers/Villages



A. Overview of Logistics Centers/Villages

- i. Overview of Private Sector Logistics Centers/Villages
- ii. Overview of TCDD's Logistics Centers/Villages
- iii. Major Players in Logistics Center



Logistics centers and villages will be an integral part of the logistics chain

The logistics centers are integrated to all transportation systems and help lower costs and increase efficiency of logistic networks. The logistic centers listed below are planned to be built around the Trans-Asian Railway Network in Turkey either by TCDD or the private sector.

It is estimated that by 2023 the total freight carried in the villages will reach USD 500 billion.

According to TCDD's investment program, TCDD plans to spend **TL 514.9 million on building logistics centers. TL 111.4 million has already been spent on the project since 2006.**

TCDD's Logistics Centers

- 1- Istanbul (Halkalı) Logistics Center
- 2- Istanbul (Yeşilbayır) Logistics Center
- 3- İzmit (Köseköy) Logistics Center
- 4- Samsun (Gelemen) Logistics Center
- 5- Eskişehir (Hasanbey) Logistics Center
- 6- Kayseri (Boğazköprü) Logistics Center
- 7- Balıkesir (Gökköy) Logistics Center
- 8- Mersin (Yenice) Logistics Center
- 9- Habur (Şırnak) Logistics Center
- 10- Uşak Logistics Center
- 11- Erzurum (Palandöken) Logistics Center
- 12- Konya (Kayacık) Logistics Center
- 13- Denizli (Kaklık) Logistics Center
- 14- Bilecik (Bozüyük) Logistics Center
- 15- Kahramanmaraş (Türkoğlu) Logistics Center
- 16- Mardin Logistics Center
- 17- Kars Logistics Center
- 18- Sivas Logistics Center

Private Sector Initiated Logistics Villages and Centers

- 1- Ankara Logistics Base
- 2- Tekirdağ Logistics Center
- 3- Çorlu (Tekirdağ) Logistics Center
- 4- Marmara Ereğlisi (Tekirdağ) Logistics Area
- 5- Muratlı (Tekirdağ) Intermodal Railway Freight Terminal
- 6- Havsa (Edirne) Logistics Center
- 7- İskenderun (Hatay) Logistics Village
- 8- Antakya (Hatay) Logistics Center
- 9- Osmaniye Logistics Center
- 10- Kocaeli Logistics Village
- 11- Samsun Logistics Village
- 12- Trabzon Logistics Center
- 13- Şanlıurfa Logistics Center
- 14- Diyarbakır Logistics Center
- 15- Konya Logistics Center
- 16- Bursa Logistics Center
- 17- Karabük Logistics Center
- 18- Mersin Logistics Domain Organized Industrial Zone
- 19- Izmir Kemalpaşa Logistics Village

Source: TCDD, Transport Dergi



There are many private sector and TCDD initiated logistics centers/villages

Table 12: Private Sector and TCDD Logistics Centers/Villages

Logistics Center	Information
Eskişehir – Hasanbey	<ul style="list-style-type: none"> The cargo handling capacity will be 1,366,000 tonnes per year covering an area of 625,000 square meters. Iron and steel, construction equipment, refrigerator, container and tiles will be transported to or from the center. Total cost of the project will be in excess of TL 90 million.
Samsun - Gelemen	<ul style="list-style-type: none"> This logistic center was Turkey's first logistics center. The first stage of construction was completed in 2007 and the center was created to handle 500,000 tonnes of freight. The total cost of the first stage was approximately TL 10 million. With the construction of the second stage, the total yearly freight capacity will increase to over 1.1 million tonnes. Coal, cement, lumber, wheat and fertilizers, scrap and copper will be transported from this logistic center.
Balıkesir - Gökköy	<ul style="list-style-type: none"> The center is designed to connect with the Tekirdağ-Bandırma train ferry and the Baku-Kars-Tbilisi railway. Freight carried via the center will be 1 million tonnes per year in an area of more than 210,000 square meters. Cost of construction will be TL 28 million. Vehicles, food and beverages, marble, military equipment, iron ore and other industrial products will be carried through the center. The logistics center is due to open at the end of 2013.
Kayseri - Boğazköprü	<ul style="list-style-type: none"> The amount of freight carried will increase from 717,000 tonnes per year to 1.8 million tonnes per year. The total cost of the project is TL 47 million. Iron and steel, sheet metal, cotton, military equipment, zinc, furniture and cable will pass through the logistic center.
Kahramanmaraş - Türkoğlu	<ul style="list-style-type: none"> The center will have 1.9 million tonnes of freight capacity in a 797,000 square meters space. The project's estimated cost is TL 67 million.

Source: TCDD, Transport Dergi



Implementing new logistic centers will meet Turkey's aspirations of becoming a logistics hub...

Logistic Center	Information
İzmit - Köseköy	<ul style="list-style-type: none"> The freight handling capacity will reach 2 million tonnes per year. The center will be built on an area of more than 748,000 square meters. Wood, sheet metal, pargeet, and glue will be carried using this logistic center. The aggregate cost of the project is over TL 47 million.
Istanbul Halkalı	<ul style="list-style-type: none"> The center will be suitable for RO-LA carriage. The total freight handling capacity will be 2 million tonnes per year and built in an area of 220,000 square meters. The center will transport, import and export goods, textiles, spare auto parts, trucks, paper and pipes. The cost of the logistic center will be TL 17 million.
Erzurum - Palandöken	<ul style="list-style-type: none"> The total freight handling capacity will double from 200,000 tonnes/year to 437,000 tonnes/year. Total investment amount is expected to exceed TL 33 million.
Mersin - Yenice	<ul style="list-style-type: none"> Yearly capacity of the Mersin-Yenice logistic center will be 896,000 tonnes. The center will cover an area of over 415,000 square meters. The total cost of the project is estimated to be TL 24 million.
Kars	<ul style="list-style-type: none"> The logistic center will be built over a 315,000 square meter area and have a capacity of 412,000 tonnes/year. It will include 8 railway lines, 9 warehouses and customs consultancy facilities. The center will be constructed at the crossroads of Kars-Tbilisi and Kars-Iğdır railways. Coal, military supply, animal feed and fertilizer will be stored and transported using the center. The aggregated cost is expected to be TL 41 million.
Bilecik - Bozüyük	<ul style="list-style-type: none"> The center will host 1.9 million tonnes/year of freight in 400,000 square meters. The tender process of the project was made on January 2012 and Assignia-Elit Project Partner Group won the tender with a total bid of TL 23,298,000. The center will be located on the crossroads of high-speed train lines. Expropriation and construction of the center has been started.
Sivas	<ul style="list-style-type: none"> The logistic center will have 1 million tonnes of capacity over 200,000 square meters. The logistic center will be used to for coal, iron ore, construction equipment, administrative and military supply products and is expected to cost TL 46 million.
Uşak	<ul style="list-style-type: none"> Construction of Uşak's logistic center is completed. The center has a yearly capacity of 246,000 tonnes in an area of 140,000 square meters. Raw, plastic material, machinery equipment, marble, thread and food are transported via the logistic center.

Source: TCDD, Transport Dergi



...and support the shift towards a balanced network design

Logistics Center	Information
Denizli - Kaklık	<ul style="list-style-type: none">The center will transport freight to Izmir's ports. The freight handling capacity of the center is 500,000 tonnes/year over 120,000 square meters. The logistic center construction tender was won by Sözmen İnşaat Taah. Tic. Ltd. Şti. with a TL 8,261,000 bid.
Konya	<ul style="list-style-type: none">The logistic center's yearly capacity will reach 1.7 million tonnes. The center will occupy an area of more than 1 million square meters. Expected cost of the center is TL 64 million, the tender process has not started yet.
Mardin	<ul style="list-style-type: none">The logistic center will have 1.5 million tonnes of capacity over more than 400,000 square meters. The tender process is expected to be made in late 2013 and the expected cost is TL 41 million. Currently, estate works and field surveys are being conducted. The center will be used for the transportation of ceramic products, military supplies, insulating material and iron and steel products.
Istanbul - Yeşilbayır	<ul style="list-style-type: none">The facility will be able to handle over 6 million tonnes of cargo per year in a space covering 1 million square meters. The project's cost is more than TL 73 million.
Izmir	<ul style="list-style-type: none">The logistic center will have 1.2 million tonnes of capacity in 3 million square meters. There will be 14,211 square meters of container storage and 173,000 square meters of closed storage availability. The cost of the logistic center will amount to TL 22 million excluding expropriation.

Source: TCDD, Transport Dergi



The TCDD's logistics centers are planned to be between 200 and 1,000 square meters

Logistics Center	Information
Ankara	<ul style="list-style-type: none"> It is the first international logistic center of Turkey and will be built over a 398,000 square meter area; of this total 198,000 square meters is covered and 191,000 square meters is open. The total investment amount is TL 100 million and more than 400 companies are operating within it. The center has a capacity of 2,500 trucks/TIR and is expected to be connected to the railway network.
Tekirdağ	<ul style="list-style-type: none"> Maritime trade and container freight traffic have played vital roles for the development of international trade. A logistic center close to the Tekirdağ Harbor and Asyaport (an international container port that in the planning stages) would increase import/export freight activity and decrease transportation cost and time.
Çorlu	<ul style="list-style-type: none"> Çorlu is advantageously located on an international highway and railway transportation routes. The Çorlu Logistics Center will be connected to the Anatolian side by the Third Bosphorus Bridge when the Northern Marmara Highway is ready. The region is sought after by domestic and international investors because of its rapid growth and logistic clustering capability because of its advantageous location. Çorlu is close to industries in Hadımköy, Kırac and İkitelli and to other logistics firms and to Trakya's sole airport.
Marmara Ereğlisi	<ul style="list-style-type: none"> Marmara Ereğlisi is an active region where petroleum is dispatched through the Martaş port and Botaş port. This region stands out with its LNG, petroleum, scrap metal, agricultural products and cast-in freight transportation which leads to a synergy between this port and the others in Tekirdağ.
Muratlı	<ul style="list-style-type: none"> The intermodal railway freight terminal that is to be built in Muratlı or Büyükkarıştıran will ensure a more efficient use of the railway tracks of the Trakya region. The project operating model will be decided by the Ministry and TCDD. With the advance of the BALO project, freight wagons from Anatolia will reach Europe through the Tekirdağ port.
Havsa	<ul style="list-style-type: none"> The infrastructural needs of Havsa International Industry and Logistics Center are complete. The center's close proximity to border crossings has drawn investors. The center creates an opportunity to store and process agricultural goods because of its proximity to the fertile fields of Edirne and has the opportunity to become a point where agricultural and animal products are processed, packaged and sent to target markets.

Source: TCDD, Transport Dergi



Logistics centers will provide warehousing services, freight handling services and accommodate many other services as well

Logistics Center	Information
İskenderun	<ul style="list-style-type: none"> A logistics village will be built in Iskenderun along with a logistic center each in Antakya and Osmaniye. The location of the village in Iskenderun has not been decided. Otherwise, the locations of the centers in Antakya and Osmaniye are set, though the Osmaniye location is still waiting for approval.
Kocaeli	<ul style="list-style-type: none"> The KOLMAP study shows that freight counts in Kocaeli would be high. Various simulations have been run with the data obtained to construct logistic strategies. The results of these studies showed that two logistics centers in Kocaeli should be built to decrease highway traffic by transferring freight to railway transportation.
Samsun	<ul style="list-style-type: none"> There is a plan to build a logistic center in Samsun for the further development of the cities of Samsun, Amasya, Çorum and Tokat. The project has been approved and feasibility, capacity and construction studies are in progress.
Trabzon	<ul style="list-style-type: none"> A logistic center is to be built in Trabzon. The project is currently seeking the opinions of logistics companies about how to build an efficient and competitive logistics center.
Şanlıurfa	<ul style="list-style-type: none"> According to studies, with the completion of irrigation projects Şanlıurfa's agricultural production will increase, the industry will develop quickly and the city's export volume and logistic activities would also increase. 456 acres of land is allocated for logistics by taking into account the center's long term goals.
Diyarbakır	<ul style="list-style-type: none"> Diyarbakır's logistics potential is not realized enough to satisfy the country's average activity level. It is expected that the logistics sector will develop with the increasing trade in the region and the investments that regional incentives to attract. According to the project, balancing a logistics center to create a customs field will speed up foreign trade procedures.
Izmir	<ul style="list-style-type: none"> The project cost will be USD 250 million and 2,000 people will be employed. The logistics center will be located in Kemalpaşa where overland and railway freight can be transported together.

Source: TCDD, Transport Dergi



Logistics centers will add USD 40 billion to the economy and improve efficiency

Logistics Center	Information
Konya	<ul style="list-style-type: none">The area assigned for the logistics center by TCDD will be increased from 300 to 1000 acres. The number, type and features of facilities that will be built on the 700 acre region that is right outside TCDD's 300,000 square meter railway freight transfer station will be decided according to the demands of logistics companies that will be operating in Konya.
Bursa	<ul style="list-style-type: none">Bursa's logistic potential is linked to the industrial and commercial growth of the city, as long as there is growth there will be a need for investments in the logistics sector. Currently, there is a need for carefully planned investments to organize the storage and logistic activities in a city where industrial districts are scattered around the region, save for 13 industrial districts. A railway freight transfer station and a consolidation center will be built and the operation volume of the center will be increased.
Karabük	<ul style="list-style-type: none">Its developed iron-steel industry, developing forestry, mining and textile industries, proximity to (grand) Central Anatolian markets, possession of a railway station and being on the intersection of the Istanbul-Ankara-Samsun highway all made Karabük a high potential location to become a logistics center. There are three possible sites for where the logistics center can be built. Each has its advantages and disadvantages, the choice will be finalized in the near future.
Mersin	<ul style="list-style-type: none">The logistics center will be built 14 km away from the city center to support the development of the freight and storage industries and minimize logistic costs. The project will be completed in 3 years and an industrial district will be built on 3 million square meters.

Source: TCDD, Transport Dergi



Major Logistic Center Players

Table 13: PPPs in Logistics Centers

Acquirer	Target	Deal Value	Handover Type
Assignia SA-Elron İnşaat Joint Venture	Kemalpaşa-Izmir Logistics Village Infrastructure Construction	TL 21.9 million	Auction date for second construction is TBD - BOT-
Elron Construction Firm	Palandöken-Erzurum Logistics Village Construction	TL 26.2 million	BOT
Assignia-Elit Joint Venture	Bilecik Logistics Village Construction	TL 23.3 million	BOT
Netlog Lojistik Grubu	South Aegean Logistics Village	TL 20 million	BOT
Ulusoy Lojistik AŞ	Mersin Logistics Village	N/A	BOT
Klv-Arc İnşaat Firmasi	Mersin Logistics Village Construction	TL 22.3 million	BOT
AZD Praha	Hasanbey Logistics Center Construction	EUR 3.5 million	BOT

Source: www.rayhaber.com, www.rayturk.net

Investment Tip: Logistics centers will allow logistics companies to benefit from economies of scale and reduce transit times, warehouse and storage costs.



Success Story: Great Anatolian Logistics Organization Project (BALO)

- The project is set to connect Anatolian products to Europe and expand Turkish businesses and trading via railways.
- BALO will contribute significantly to the export goals of Turkey.
- The cost of the project is TL 50 million.
- The project connects logistics villages in Turkey to villages in Europe.
- The Great Anatolian Logistic Organization (BALO) train, aiming to transport domestic Turkish products to Europe at a lower cost, has already a major achievement such as reaching Germany in only four days, which is a substantially short time given the bureaucratic procedures and formalities.
- According to the logistics design of the project, shipments will be collected in Bandırma from Anatolian provinces via railways and from there containers will be shipped to Tekirdağ. The loads will then be transported to Europe via trains.
- BALO was established by the Union of Chambers and Commodity Exchanges of Turkey and the Association of International Forwarding and Logistics Service Providers as well as more than 90 other private sector representatives.

"BALO will be able to cut logistics costs up to 30% since it transports goods via railways."

Rifat Hisarcıklioğlu, Union of Chambers and Commodity Exchanges of Turkey, Radikal, 2013

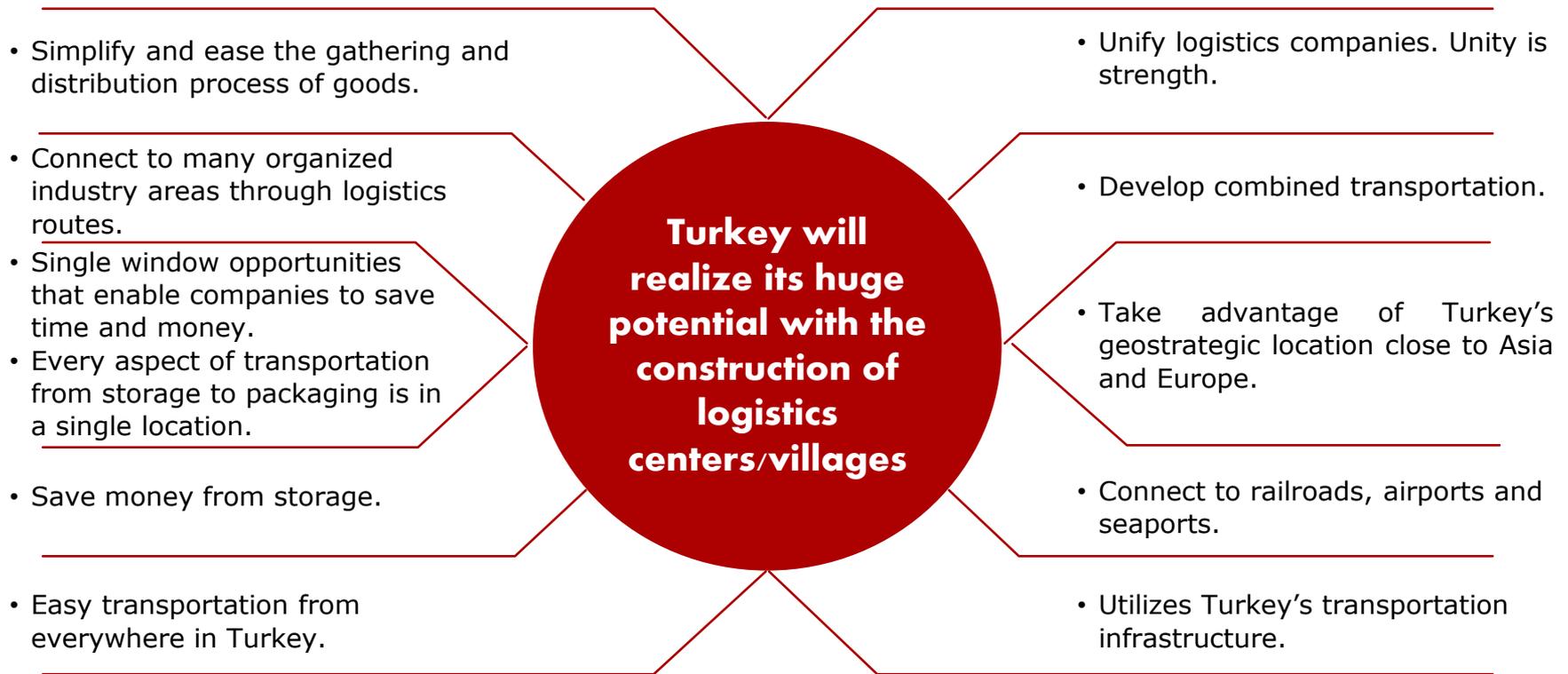


Source: The Union of Chambers and Commodity Exchanges, Radikal Gazetesi



Opportunities will arise from logistics centers/villages

Why would you want to invest in these logistics villages in Turkey?



Source: Deloitte Analysis



IV. Turkey as an Energy Hub



A. Turkey's Role in Energy

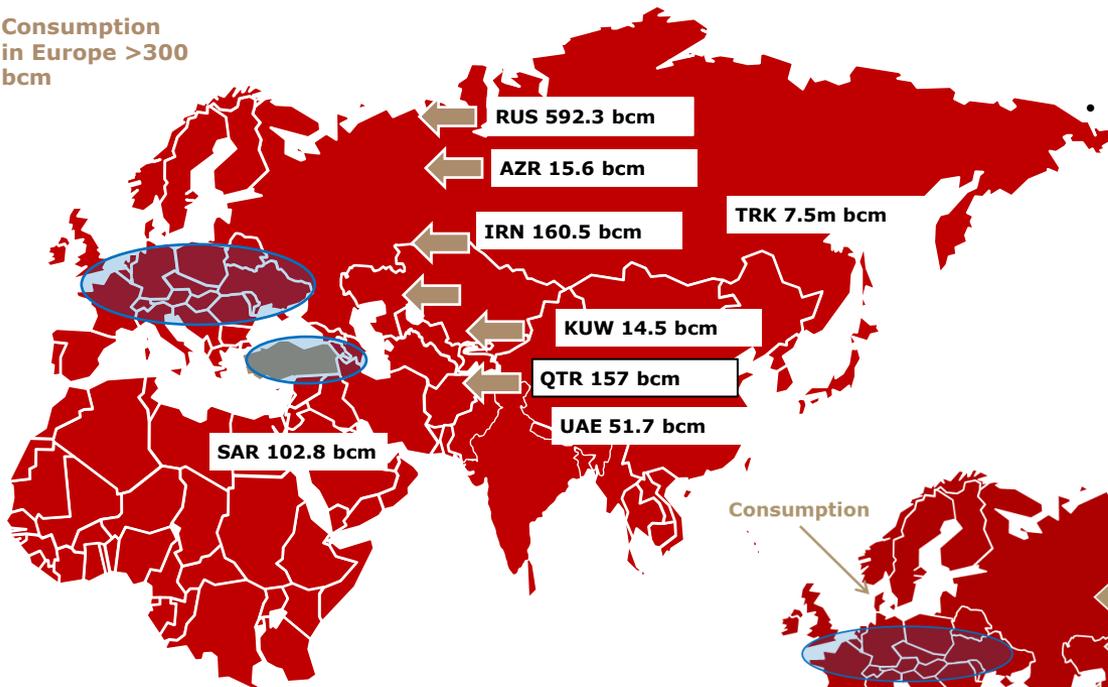
- i. Turkey as an Energy Corridor
- ii. Overview of Oil Pipelines and Transportation
- iii. Overview of Natural Gas Pipelines and Transportation
- iv. Success Story



Turkey is at the crossroads of consumption and production: a natural bridge

Figure 53: Gas Production

Consumption
in Europe >300
bcm

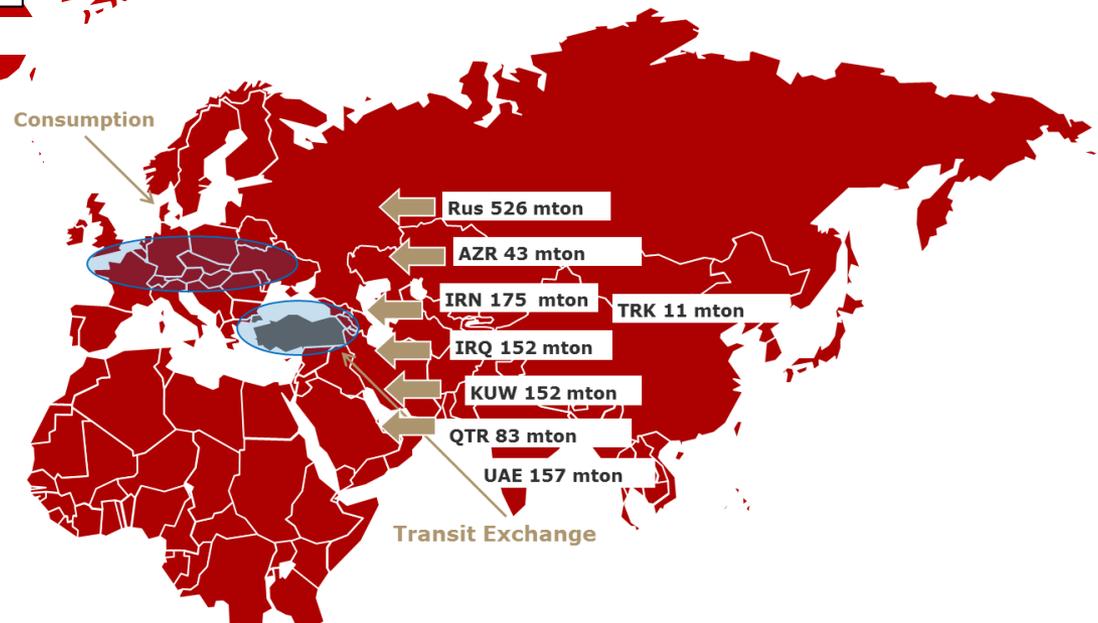


Source: BP Statistical Review 2013

- Turkey's position is **critical for export and import of petroleum** as it integrates the demand rich west to the supply rich east.

- Even though Turkey has limited generation in primary energy resources and is dependent on imported energy, it acts as a bridge between the world's most crucial supply and demand regions.
- Having a central position adjacent to **Europe, the Balkans, the Aegean, the Black Sea, the Caucasus-Caspian Basin and Central Asia**, Turkey is a natural transit country for maritime and pipeline transportation of gas and oil.

Figure 54: Petroleum Production

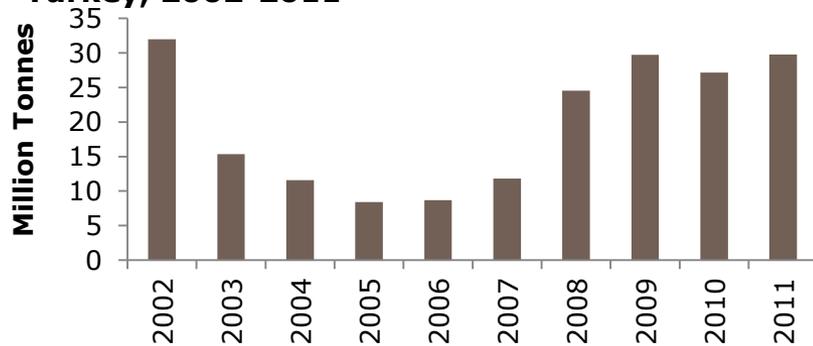


Source: BP Statistical Review 2013



Turkey stands between the demand rich west and the supply rich east

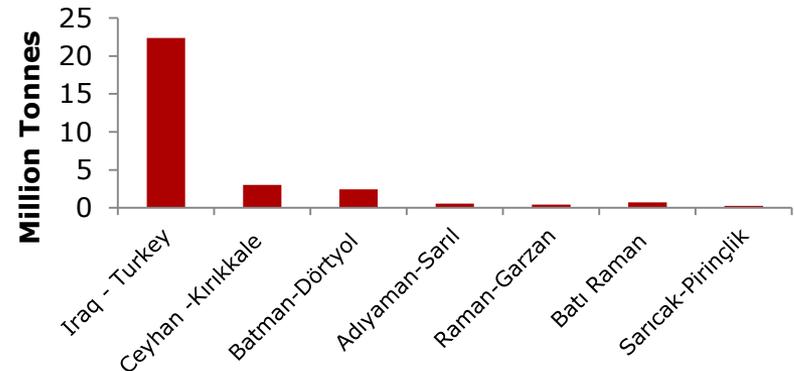
Figure 55: Volume of Transported Petroleum in Turkey, 2002-2011



Source: Turkstat

- Turkey stands between the energy rich Middle East countries, CIS countries and energy demanding European countries. Therefore, it stands between supply and demand routes and is a critical passage way.
- Turkey is a crude oil importing country. It has transported **more than 29 million tonnes of petroleum** in 2011 and imported more than 18 million tons of crude oil in 2011.
- Approximately, **75% of the transported petroleum is from Iraq** through Iraq-Turkey pipeline which is over 1,800 km.

Figure 56: Breakdown of Total Volume Transported by Country, 2011



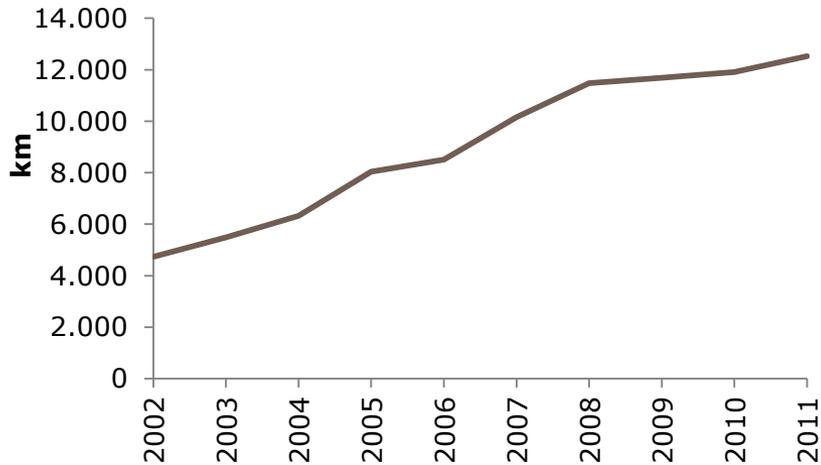
Source: Turkstat

- The total petroleum pipeline within Turkey is **3,038 km as of 2011**.
- **Baku-Tbilisi-Ceyhan Pipeline:** The pipeline transports oil from Baku to Ceyhan. The total capacity of the pipeline is expected to reach 50 million tonnes. The total cost of the project is USD 3 billion.
- **Iraq-Turkey Pipeline:** The amount of oil transported by the pipeline is 71 million tonnes. The oil is extracted from Kerkük, Iraq and reaches the Ceyhan sea terminal.



Not only oil, but natural gas pipelines will be of importance to Turkey

Figure 57: Length of natural gas pipeline in Turkey, 2002-2011



Source: Turkstat

- Total length of natural gas pipelines has **increased 164% from 2002 to 2011**, reaching over 12,500 km. 98% of these pipelines belong to BOTAŞ, which is the state owned natural gas transporter, while the rest is owned by TPAO, which is the Turkish Petroleum Corporation.
- More than **43 million sm³** of natural gas had been transported in 2013.

- There are several natural gas pipelines that are established or are in construction stage throughout Turkey. These projects include:

- **Blue Stream Pipeline:** The pipeline is used for transporting natural gas from Russia to Turkey and its length is 1,200 km.
- **Trans Anatolian Natural Gas Pipeline Project (TANAP)*:** The project aims to transport natural gas that is produced in the Shah Deniz-2 field and other fields in Azerbaijan through Turkey to Europe.

*: on-going projects

Source: TANAP, Emerging Markets Insight

Investment Tip: Even though Turkey has limited reserves in natural gas and petroleum, Turkey can utilize its geographic position as a connection between resource rich countries and European countries.



Success Story: Trans Anatolia Natural Gas Pipeline (TANAP)

- The project's goal is to transport natural gas extracted from Shah Deniz-2 from Azerbaijan to Turkey and Europe. Approximately USD 10 billion will be spent for pipeline construction.
- The investment value is expected to reach USD 17 billion by the end of 2023.
- From Georgia to Bulgaria, the total length of the pipeline within the borders of Turkey will be 1,900 kilometers.
- Connection with Greece is going to be approximately 67 kilometers. The transportation capacity of the pipeline will be increased gradually. During the first phase of the project, the line will carry 16 million meter cubes of natural gas. The first phase of the project is due to be completed in 2018.
- By 2023, the pipeline will transport 23 billion meters cube of natural gas. In 2026, it will transport 31 billion meters cube of natural gas.
- Site construction will start in 2014 and will be completed by 2018.
- TANAP will be the future of energy for the region, since it will provide a reliable source of continuous energy and the ensure energy security of Europe and Turkey.

"TANAP will have great importance in the future as a reliable source in ensuring the energy security of Europe"

Elmar Mammadyarov, Azerbaijan Foreign Minister, 2013



Source: Natural Gas Europe



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