Railways carry Turkey to the future

Interview with İsa Apaydin - Chairman of the Board and Director General of TCDD

TTS: You've become UIC Vice Chairman in 2016. What is the attraction of being an active UIC member for railways that has entered into a dynamic development process?

isa Apaydin: I was elected unanimously for UIC Vice Chairman post in the 89th General Assembly held in St. Petersburg on December 1, 2016.

TCDD has been a member of International Railway Union (UIC) since 1928, which is the biggest organization in the world in the field of railways with its 195 members on 5 continents. On the other hand, our Enterprise is a member of both the European Regional Assembly and the Regional Assembly for Middle East-RAME due to the geographical location of our country. I have been the Chairman of UIC Regional Assembly for Middle East-RAME since 2016.

UIC is an organization focused on improving the cooperation between many intergovernmental and international organizations, looking out for its members' interests in the context of current global-regional transport policies.

Aiming at improving the communication and cooperation between member country railways, UIC is an organization that has managed to detach itself from political affairs of its member countries ever since its establishment. I would like to bring to your attention that I think it is very important for UIC to maintain its attitude concerning its future.

As is known, sustainable railway policies, regional development and cooperation, interconnectivity and interoperability of projects conducted in every member country is necessary for effective use of international corridors in a global world.

UIC emphasizes on the fact that railway standardization, railway research and development investments, wide spreading of digitalization and investment decisions based on life cycle costs are all of vital importance. With all these studies, UIC takes important steps for ensuring the environmentally friendly railway get its due place amongst other modes and these efforts are highly appreciated by our side.

Close and amicable relations has been fostered between both TCDD and Regional Assembly for Middle East and UIC up today and I have a strong belief that these relations will continue to grow.

What are the investment priorities of Turkish railways?

High Speed and Rapid Rail projects redesign the term accessibility by connecting metropoles. They create a new regional development corridor, connecting cities via not only railways but also all other dynamics.

As cities become suburbs to each other with High Speed Trains that decrease the travel time considerably, regional differences are reduced, economic, social and cultural life becomes more dynamic, competitive capacity of employment and industry increases, and advanced railway industry develops.

Based on these benefits of HSR, 23,5 billion USD has been invested in railway sector up today since 2003 when the railways were adopted as a government policy.



isa Apaydin - Chairman of the Board and Director General of TCDD

Born in 1965 in Ankara, Turkey, Mr. İsa APAYDIN graduated from the Department of Metallurgical Engineering of Istanbul Technical University in 1987. He received his master degree from the Department of Metallurgical Engineering of Sakarya University in 1996. Starting to work as an engineer in Directorate General of Turkish State Railways

(TCDD) in 1987 and assigned in different positions, Mr. Apaydın worked as a Deputy Director General and Member of the Board in TCDD between 2005-2015. Mr. Apaydın took office of Chairman of the Board and Director General of TCDD on 13.05.2016. Mr. Apaydın is actively involved in the international railway cooperation as Vice President of the International Union of Railways (UIC) and Chairman of Regional Assembly of Middle East (RAME).

A total of 1.213 km High Speed Rail lines was constructed and put into service including Ankara-Eskişehir in 2009, Ankara-Konya in 2011, Konya-Eskişehir in 2013, Ankara-İstanbul and Konya-Istanbul in 2014.

For High Speed rail construction, Ankara centred core networks have been determined, including Istanbul-Ankara-Sivas, Ankara-Afyonkarahisar-İzmir and Ankara-Konya corridors. On these successfully operated lines, over 38 million passengers travelled with High Speed Trains until today.

Along with Ankara-Sivas, Ankara-İzmir High Speed Rail lines, construction of Rapid Rail lines is underway to transport both passengers and freight. Goods from all the regions of our country from west to east, north to south, will be transported to ports, production and consumption centres fast and safely. As our country's competitive capacity grows, there will be considerable decrease in the transportation expenses within costs.

10.515 km of our current 11.395 conventional rail lines has been renewed until today. Thereby the line capacity, capability and train speed increased, service quality improved and travel times shortened.

Within the scope of modernization of the current system, the efforts of electrifying and signalling of all lines were speeded up. On high speed and conventional lines, 1.637 km of electrification and 2.323 km of signalling works are underway. It has been planned to have all lines electrified and signalled by 2023.

Construction of logistics centres in 21 different locations have been planned in order to increase the competitive capacity of our industrialists and to make our country the logistic centre of its region. Within the scope of the project, construction of 9 logistics centres have been completed so far. Construction, tender, project and expropriation works are underway for the

In order to increase the share of urban transportation, MAR-MARAY in Istanbul, EGERAY in Izmir and lastly BAŞKENTRAY in Ankara has been put into service. The construction of GAZIRAY project in Gaziantep continues.

As our country is laid down with iron network, important steps have been taken towards establishing and developing railway industry and manufacturing railway instruments requiring advanced technology in our country.

With the intend to improve the domestic railway industry in our country, partnerships in Turkey have been established through deeds of partnership with powerful international companies in the railway sector.

Our affiliated companies are manufacturing new generation diesel-electric locomotives, wagons and coaches and diesel and electric multiple unit sets. In facilities established with the participation of TCDD, Marmaray and İZBAN sets, high speed rail switches and sleepers are also manufactured.

High-speed rails are manufactured in Kardemir. Wagons and sleepers continue to be manufactured in our facilities that were established with private sector enterprise.

In other respects, "National Train Project", design and project of which belongs to our country has been launched, aiming at domestic manufacture, to improve advanced railway industry and to manufacture new generation railway vehicles.

Within the scope of the National Train Project, we have set off to manufacture the National High Speed Train set, the National Diesel Multiple-Unit Set (DMU), the National Electric Multiple-Unit Set (EMU) and the National New Generation Freight Wagons.

Our first national freight wagon was manufactured in 2017, and works are underway to manufacture our national EMU sets.

19 High Speed Train Sets has joined the fleet to be operated on HSR lines, 12 of which is compatible with 250 km/h, 7 of which with 300 km/h. Works are underway to procure 106 HSR sets to be operated on current and future HSR and Rapid Rail lines.

What are financial resources for railway investments planned in Turkey in coming years?

For the construction of Ankara-İstanbul HSR line which was completed in 2011, some foreign financing was utilized. On the point of procuring some modernization works and railway vehicles, some foreign financing was utilized. It is intended to afford all of the projects planned to be executed by 2023 with domestic equity.

What is the role of high speed railway lines in development plans of Turkish railways? Why did Turkey decide to construct high speed railway lines?

High speed trains are the important types of transportation primarily for national welfare for countries. As they have high speed, trains have considerably reduced travel time between the routes they connect compared to highways, they have contributed to regional development and increased economic activities on their routes.

High speed trains have saved considerable time for passengers travelling on the Ankara-İstanbul and Ankara-Konya routes which were put into service in Turkey. They have become more economical in terms of energy consumption compared to highway vehicles and planes, reduced the number of traffic accidents compared to highway vehicles and led to serious reduction in CO_2 emission as they are clean transportation.

With the study conducted by our Enterprise in order to measure the social, economic and environmental effects of high

speed trains from 2009, the year they were put into service, to the end of 2016, it has been found out that the emission of approximately 375 thousand tons of $\rm CO_2$ from high speed trains has been prevented. Total of the savings from the

- Energy saving
- Time saving
- Saving from accident costs
- Saving from maintenance costs
- Saving from CO₂ emission

which were achieved in the period when the calculation is based on, were calculated as approximately 500 million \$.

This result shows that economic, social and environmental effects of railway investment have a significant contribution economically.

Are the results of the existing activities in the high speed railway sector satisfactory?

High speed railway lines have connected Ankara, the capital of our Republic, and İstanbul, our country's biggest province in terms of economy, and its hinterland; so high speed railway lines have provided opportunities for fast, comfortable and safe transportation.

The travel time between Ankara and Eskişehir, which was around 3,5 hours by conventional trains, is reduced to 1 hour 30 minutes. Travel time between Ankara and İstanbul is reduced from averagely 8 hours to 4 hours. Travel time between Ankara and Konya is reduced from 14 hours to averagely 1 hour 50 minutes. Therefore, in the lines with HSR, railway has become more advantageous than road.

The number of passengers carried by railway between Ankara and Eskişehir has increased from 8 percent to 72 percent with high speed railway lines. HSRs have created a new demand of 12 percent.

Our Enterprise, which did not previously receive a share from passenger transportation between Ankara and Konya, has started to carry 66 percent of the total passenger with HSRs. HSRs have created a new demand of 14 percent on the route. So far, over 38 million passengers have had privilege to travel by high speed trains. Travel time has also been reduced by high speed train + conventional train and high speed train + bus combined transportation.

As cities become suburbs to each other with High Speed Trains that decrease the travel time considerably, regional differences are reduced, economic, social and cultural life becomes more dynamic, competitive capacity of employment and industry increases, and advanced railway industry develops.

Who is traveling by high speed railway in Turkey?

The core of the existing network of high speed railway line in our country is Ankara and the runs between Ankara and Eskişehir, Ankara and İstanbul, Ankara and Konya, İstanbul and Konya have been in operation. Especially the presence of universities in Eskişehir and Konya makes those lines very attractive for students.

According to surveys on high speed trains, 29,4% of passengers use high speed train for business purposes while 12,7% of passengers use it for the purpose of going to and returning from school. While women mainly use high speed train for the purpose of family and acquaintance visit (40,7%), men mainly use it for business purposes (37%).

Perspectives

In addition to the discount tickets such as student, teacher and return tickets, High Speed Train Travel Card, which provides an opportunity for unlimited travels within 30 days in order to make the travels by high speed trains more economic and provide convenience for frequent travellers, has been put into service.

Furthermore, disabled passengers can travel free of charge by high speed trains.

What are the future plans for the development of high speed network?

TCDD plans to construct lines until 2023, which is the 100th anniversary of our Republic, and 2035. Those lines have been planned as to transport freight and passenger continuously in the east-west and north-south transportation corridors of our country. The majority of those planned lines are High Speed and Rapid Rail projects.

With the target of double track line on East-West and North-South axis supporting the Trans-Asia middle corridor, it is aimed to increase the length of high speed and rapid railway lines to 12,915 km and the length of conventional railway line to 12,115 km. Thus, it is aimed to reach 25,000 km of railway line in 2023.

With those projects, in 2023, HSR will pass through 51 of 81 provinces and will provide a service for 83% of total population.

Which train stations are planned to be constructed in Turkey? Will there be more stations like the high speed train station in Ankara?

As high speed and rapid railway lines expand, High Speed Train stations, which will fulfil the increasing demand of passengers, have also been built. Train stations, which are built by considering not only transportation needs but also social and cultural needs of the passengers, have become the attraction centres of the cities.

After high speed train stations in Polatlı, Bozüyük, Bilecik and Ankara, Eryaman High Speed Train Station in Ankara has started to provide a service since 15 March 2018 within the scope of Başkentray Project. Construction works of Konya High Speed Train Station are going on.

In addition, new high speed train stations have been planned to be constructed in the areas where high speed railway lines are under construction and where high speed railway lines are planned to be constructed.

Can high speed railway help to balance the differences in development between the regions in Turkey?

As it is known, one of the most important indication of the development in the region is related to the size of the infrastructure investment made in this region. One of the most significant infrastructure investment is transportation investment. Highway, railway, airway and, if any, seaway connections have created both economic and population mobility in the regions where they will be constructed.

Especially with the projects which are under construction and which are planned to be constructed between east and west, it is aimed to reduce regional differences in development between east and west provinces.

When will be Asia and Europe connected with high speed railway? Edirne-İstanbul Railway, Marmaray, İstanbul-Ankara, Ankara-Sivas High speed railway line, Sivas-Kars rapid line and Baku - Tbilisi-Kars Railway constitute the most important rings of an uninterrupted railway project from Beijing to London.

After Marmaray, which connects Asia and Europe through the rail systems beneath the sea, was put into service in 2013, an important step has been taken for uninterrupted transportation between Asia and Europe.

Ankara-Eskişehir phase of Ankara-İstanbul high speed railway was put into service in 2009 and Eskişehir-İstanbul (Pendik) phase was put into service in 2014.

Railway line, which is called Modern Iron Silk Road and which will reach Kars by passing through Baku, capital city of Azerbaijan, Tbilisi and Akhalkalaki, provinces of Georgia, was put into service in 2017.

Construction works on the Ankara-Sivas route are going on and works on Halkalı-Kapıkule, Sivas-Erzincan and Erzincan - Erzurum-Kars route are planned to be completed by 2023.

Construction works of rapid line project between Gebze and Halkalı, which is 124 km in length and which passes over the Yavuz Sultan Selim Bridge constructed on Bosphorus in 2016, are going on. With this project planned to be completed by 2023, uninterrupted transportation between Asia and Europe will be provided through rapid trains.

How does Turkish railways plan to take part in the formation of Iron Silk Road which connects Asia and Europe?

In recent years, there has been a massive increase in railway investment around the world.

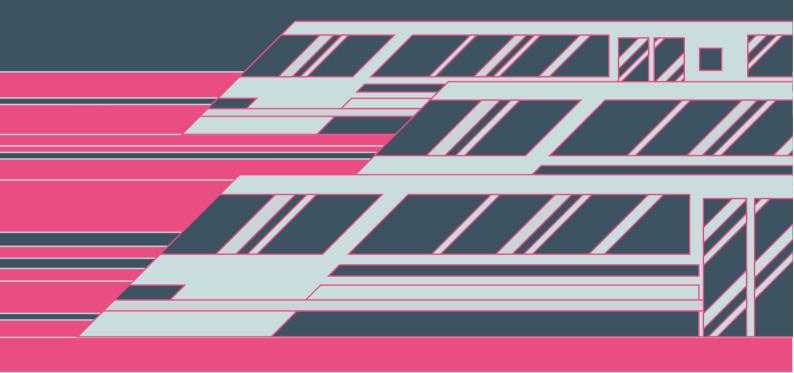
Developments in railway transportation in European countries have triggered Central and Far Asian countries in recent years and created a new cluster of railway industry. As it is known, it is aimed to revive the corridor called Iron Silk Road between Far East and Europe.

With Baku-Tbilisi-Kars railway line which was put into service on 30 October 2017 and with high speed and rapid lines which start from Edirne, pass through Marmaray and reach Kars, Turkey forms "Middle Corridor" of East-West Railway.

After the completion of High Speed Railway Projects in our country, which is located in one of the most strategic regions of the world with its geopolitical position, growing economy and socio-cultural structure, the existing bridge position will be strengthened and the importance of historical silk road will be further increased.

Railway transportation to Europe, Middle East, Middle Asia and China can be provided through our country. The Iron Silk Road that will contribute to world peace, will also turn into a way to peace and fellowship through cultural interactions.

Intervieved by Agata Pomykala



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