

Development Scheme of Transport Infrastructure in Poland as the European Union Member by Public Private Partnership

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Abstract

In May 2004, Poland with nine other Eastern European countries joined the European Union(EU). After accession to the EU, Poland will accelerate the realization of investment in road sector, and wants to achieve important development of its road network condition in year 2005.

Polish government is not able to afford the whole investment needed for construction of its motorways, so it wants to develop effective techniques of project funding based on the Public Private Partnerships(PPP). Without having high-performance transport networks, one country's economy cannot be competitive. It was the reason for establishing the Trans European Network(TEN) in the European Union. It creates the links, which are still missing between the fifteen countries of Western Europe and the new member countries like Poland. Consequently, Poland will also need to establish a proper transport infrastructure network. This paper will discuss how the PPP scheme can be applied for the transport infrastructure development in Poland as a EU member.

Keywords : EU(European Union), PPP(Public Private Partnership), TEN(Trans-European Networks), ISPA(Instrument for Structural Policies for Pre-Accession), FIDIC(Federation Internationale des Ingenieurs-Conseils)

1. Introduction

The successful enlargement of the European Union (EU) needs a proper transport infrastructure network which supplies the links still missing between the old fifteen EU member countries and Poland. Joining the European Union means increased competition in the domestic market for transport services and transport infrastructure, increased requirements in respect of the carriers and improved quality and safety of the infrastructure(Kozminska, 2003). This will involve the infrastructure being modernized or newly built not just in the new member countries, but also in the existing EU Member States. It is necessary to develop infrastructure projects, especially a road network, because of new traffic between the new and old EU member countries.

Poland, as a new member of the EU, will establish the Trans-European Networks in field of transport. Without high-performance transport networks, economies cannot be competitive. Because of a lack of funds, the Polish government wants to use the Public Private Partnership as a financing method of the TEN.

This paper will discuss the implementation of the PPP financing system for transport development network in Poland.

2. Transport Development Strategy

2.1 Transport Development Strategy Premises

The quality of the transport infrastructure is one of the most important criteria of assessment of the country socio-economical development level and a very important factor stimulating the economic development. Poor quality of the transport infrastructure,

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resulting from investment backlog in this sector, is a burden for the national economy, limiting its competitiveness and economic development possibilities. All transport modes in Poland are facing serious infrastructure investment needs.

The existing system of the transport network, even if considered as proper from a spatial point of view, due to the lack of the complex system of motorways(total length of motorways in Poland is 404 km), express roads, a high-speed train network, doesn't provide an effective allocation of industries and services, and doesn't ensure a proper quality of passenger and cargo traffic services. The lack of road network of adequate standards appears nowadays as the critical barrier to the country development, limiting the potential of the Polish economy competitive advantages such as geographical position and market size. The condition of Poland's roads hampers international trade with the EU and other neighboring countries, and it has a negative impact on foreign direct investments and the mobility of its labor force. Those negative factors result in decreasing Poland's economic competitiveness and create a barrier to the development and innovative processes in Poland.

Due to the poor condition of its road network, improvement of its road's standard is one of the Poland's development priorities. The total length of roads accepting the load of 115 kN/axle(being a basic European standard) is estimated at 447 km(only 2.7% of the total national roads network). As many as 34% of the national roads require an immediate modernization and an additional 37% should be modernized in the nearest future. The main reason for the poor quality of roads is much bigger traffic(doubled in the last ten years) combined with pavement standards not adjusted for the heavy trucks movement.

This situation has resulted in bottlenecks and traffic safety decrease, which in turn leads to a rising of the economic, social and ecological costs of road transport. The road transport is the most dangerous and most expensive in terms of human life. In the 1990s, the accident rate in Poland exceeded 6 fatalities per 10,000 vehicles(passenger cars, trucks, buses) and was almost 3 times higher than the average EU rate. 60 thousand road accidents are recorded each year in Poland. In which, almost 6,000 people are killed and 55 thousands are injured. Social costs of the road accidents are estimated at 2.7% of GDP per year, not including the external costs, which doubles the losses.

To improve it, the construction of access-controlled road networks(motorways and express roads), reconstruction of national

roads, construction of city bypasses and improving road traffic safety are required. Road infrastructure investments allow to minimize the number of accidents.

Because of the underdevelopment of the urban transport infrastructure, the main urban centres(Warsaw and Silesian agglomerations) are particularly affected by congestion and environmental pollution. Therefore, additional efforts supporting public transportation must be taken. The activity should be also oriented towards improvement of the transport infrastructure in the main cities.

The Polish railways network is well developed, the length of railway network is 20,100 km. It is relatively well electrified, often with two and more lines. Even then in comparison to the other EU countries, the Polish railways infrastructure condition shows much worse technical parameters(very few sections have a maximal train speed above 100 km/h due to bad tracks). The bad condition of the infrastructure resulted in speed limits on many lines, hence giving worse quality service.

A serious problem is that railways are not able to meet the needs of the fast movement of the passenger streams between Warsaw and main Polish cities. Especially, the regional and local Polish railway infrastructure is degraded. This issue will be solved in the long term by restructuring and the expected privatization of selected sections of the railways.

2.2 Transport Development Strategy Objectives and Implementation

The main objectives of the transport development strategy is the improvement of Poland's transport accessibility. The strategy is assumed to be implemented in two phases. The first phase is improvement of connections of Warsaw with European capitals by the year 2006 and the second phase is improvement of connections between main regional centers by 2013. During 2004-2006, EUR 892 million will be spent on improving the uniformity of the Polish transport network, which includes EUR 627 million from the EU funds?SOP(Sectoral Operational Program) Transport and Maritime Economy(Kozminska, 2003). Investments (projects) realized according to these priorities will enable it to accomplish the following goals:

- 1) Ensuring effective road connections needed to facilitate trade within the Common Market,
- 2) Improvement of main urban areas in Poland, constituting vital

- centers of economic development,
- 3) Supporting regional development,
- 4) Improvement of road traffic safety and elimination of high social and economic costs of road accidents,
- 5) Reduction of environmental protection costs because of sustainable development of transport,
- 6) Development of the inter-modal systems.

These goals will help to prepare the transport infrastructure projects, co-financed by the Cohesion Fund and the ERDF(European Regional Development Fund). They are located along no. 3 and no. 5 development axes of the National Development Plan 2004 - 2006, and they support the axes no 1 and 2 of the Plan.

The Cohesion Fund and the SOP Transport Programs will give financial support for the most important roads and railroad lines. It will be financed together with the IROP(Integrated Regional Operation Program). The purpose of the IROP is to increase the competitiveness of underdeveloped regions, in order to promote their long-term economic development, and the economic, social and territorial uniformity of the country(Kozminska, 2003). It will focus especially on the voivodship roads co-financed by the European Regional Development Fund, which will serve the strength of the potential development of the regions.

All the projects realized within the strategy will fulfil the criteria of economic effectiveness and minimize adverse effects on the environment. They will contribute to increase competitiveness of the transport sector, will improve competitiveness of Polish economy on the Common Market and ameliorate Poland's connection with the EU country.

The development of city transport in agglomerations is aimed at constructing a comprehensive public transport system in the Warsaw and Katowice agglomerations. This undertaking stipulates the completion of inter-linked projects in respect of public city transport, which would provide for the integration of public rail transport(tramway, subway, commuter railways) and other forms of communication(airports, bus transport, private transport).

2.3 Actions Towards the Transport Infrastructure Development

Development of the air/land connections of the capital and main economic centers in Poland with the EU and neighbour countries will increase trade and attract foreign investors.

This objective will be realized by 2013 through:

- 1) Construction of the A-2 motorway, within the Pan-European

- Corridor II, linking agglomerations of Warszawa, Lodz and Poznan with the road transport system of the EU(by connection with German motorway no. 12 in Swiecko) and Belarus(by connection with Byelorussia main road M1 in Kukuryki).
- 2) Construction of the A-4 and A-18 motorways, within the Pan-European Corridor III, linking agglomerations of Wroclaw, Katowice and Krakow with the road transport infrastructure of the EU(by connection with German motorways nos. 4 and 5, in Zgorzelec and Olszyna accordingly) and Ukraine(by connection with Ukrainian road M10 in Korczowa).
- 3) Construction of the A-1 motorway, linking agglomerations of Gdansk, Torun, Lodz and the Silesian Voivodship with countries situated in the Baltic Sea region and Czech Republic(by connection with Czech motorway no. 47 in Gorzyczki).
- 4) Reconstruction of the A-6 motorway from Szczecin to the western border and its connection with German motorway no. 11 in Kolbaskowo.
- 5) Reconstruction of the national road no. 8(Via Baltica) in the I Trans-European Corridor up to the express road parameters, connecting Warsaw, Bialystok with the Lithuanian border in Budzisko.
- 6) Construction of the S22 express road in the European transport corridor Ia connecting Gdansk with the Russian border in Grzechotki.
- 7) Modernization and extension of F. Chopin Airport in Warszawa to maximize its capacity by 2010-2015, to the level of 10-15 million passengers per year. Modernization and adaptation of the Gdansk-Rebiechowo, Krakow-Balice airports

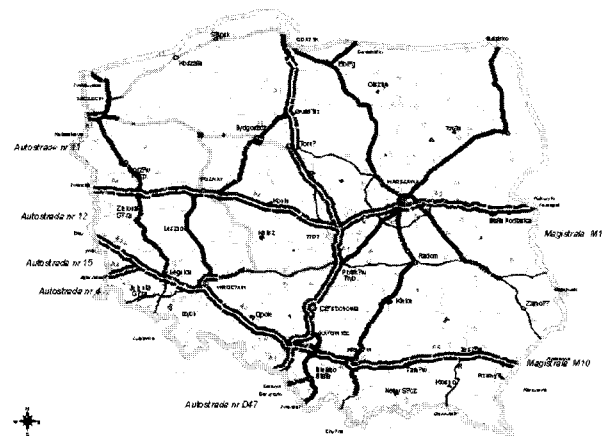


Figure 1. Map of Poland, motorway network by 2013.

to the backup airports standards for transatlantic traffic at Warszawa-Okecie Airport, and the construction of the second airport for Warsaw.

3. Current Status of the PPP in Poland – Last Year Experience

Recent years have seen a marked increase in cooperation between the public and private sectors for the development and operation of infrastructure for a wide range of economic activities.

PPP arrangements are growing in use and acceptance as an alternative and effective method to mobilize additional financial resources and benefits from private sector efficiencies(Crauser, 2003).

The PPP system is a very broad term, which includes almost all financing methods. From the fully private financing approach to the traditional financing(based on the budgetary resources). The parties share the costs in proportion depending on the split of the risks and obligations related to the pursued project.

There are growing role, competence and risk of private partner in PPP model. Figure 2 shows the relationship between various partnership schemes.

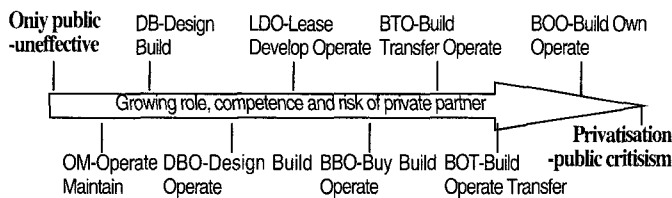


Figure 2. Growing role of PPP

In order to implement the PPP, the Polish Government has set up a task force and competence centers. They are:

- 1) Ministry of Infrastructure initiated Government PPP Working Group: Key ministries(Finance, Economy, European Integration and Public Procurement) are represented,
- 2) PPP Division in the Department for Infrastructure Financing and the EU Funds, the Ministry of Infrastructure,
- 3) PPP Advisory Group in the Ministry of Infrastructure,
- 4) Steering Committee of the PPP Task Force Support Project Representatives of the Ministries of Infrastructure, Economy, and European Integration.

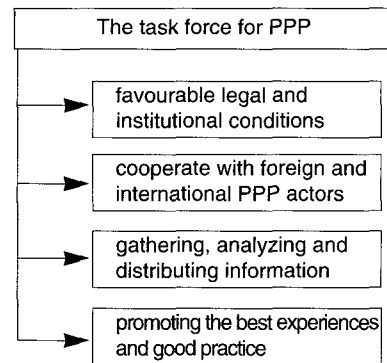


Figure 3. The duties of task force for PPP

Nowadays, in Poland growing business is interested in adopting a PPP market. Some examples of PPP-oriented commercial institutions(private sector) are PPP Poland Ltd, PolandProperty Ltd, and Polish Institute of PPP Foundation.

Learning from the international experience, has helped the Polish task force to get more ideas about PPP. Some of the international activities are listed below:

- 1) Conferences provide an important forum to exchange experiences and information,
- 2) International consultants have been involved in different advisory projects. Potential project participants, such as banks, consultants(legal, financial, technical), insurers, rating agencies, underwriters, etc. assist to implement PPP models in Poland,
- 3) Long experience in co-operation with IFI's (International Financing Institution) is of great educational value,
- 4) Long experience in the EU Programmes like PHARE (Poland and Hungary Aid for the Reconstruction of the Economy) and ISPA(Instrument for Structural Policies for Pre Accession),
- 5) Internationally applicable procedures(EU, IFI, FIDIC, etc.),
- 6) Bilateral co-operation, i.e. very good relationship and vital contacts of the Polish Ministry of Infrastructure and Spanish Ministry of Development (Ministerio de Fomento),
- 7) Learning from individual experiences gained by other EU countries.

The main Public Private Partnership objectives of the Polish Government are increasing the scale and effectiveness of private capital engagement in infrastructure development and also supporting the State Budget in terms of co-financing, pre-financing and refunding of the EU project(Siwiek, 2003).

4. Legal Changes

Successful PPPs require an effective legislative and control framework and for each partner to recognize the objectives and needs of the other(Crauser, 2003).

The Polish Government prepared the Special Act on PPP with executive regulations and changes of valid Acts regulating particular public tasks(sector tasks). Proposals for government acceptance were submitted at the end of 2003.

The Polish Government proposed the following law on PPP:

- 1) Legalization of PPP agreements,
- 2) Definition of PPP agreements in terms of their subject and eligible partners,
- 3) Removing legal barriers to PPP agreements,
- 4) Recommendations on the procedure and agreement scope(rights and responsibilities of PPP parties, risk sharing between private and public partners),
- 5) Establishment of a special government institution for PPP(or assigning new responsibilities to an existing one).

In the Polish financial law(2003) important changes were introduced on public finance and taxes:

- 1) Long term financial obligations vs. annual budget planning
- 2) Limit of the public finance sector deficit
- 3) Tight boundaries on the maximum of public debt at the national and community levels
- 4) Preventing double taxation
- 5) Tariffs on particular public service

Introducing the Amendment of Public Procurement Act(2003) which aimed adoption of the EU standards made legal changes in public procurement(e.g. raising the threshold of public procurement value) and a new Public Procurement Law has been under preparation.

It should introduce changes regarding:

- 1) permission of the Chairman of Public Procurement Office for agreements exceeding 3 years,
- 2) unrestricted choice of sub-suppliers or subcontractors
- 3) prolongation of legal binding by the offer(45 days as far).

Legal changes in the transport sector took place by introducing the Amendment of Toll Motorways Act(2003), which took effect on first day of 2004. Main points of this act are:

- 1) establishment of the KFD(National Road Fund) to finance construction, modernization, and maintenance of motorways,

express roads and other national roads

- 2) introduction of the fuel charge as an important source of KFD road infrastructure financing, including PPP and EU projects;

5. Sources of Financing and Tender

5.1 Traditional Financing

The basis for the realization of this strategy in the years 2004-2006 is: Cohesion Fund Strategy 2004-2006, Sectoral Operational Programme Transport 2004-2006 and the transport part of the Integrated Operational Programme for Regional Development 2004-2006.

This strategy will be financed from the following sources(as shown in Figure 4): public funds, funds deriving from planned fuel charge, the EU funds(ISPA, Cohesion Fund, Structural Funds), the EIB(European Investment Bank), the WB(World Bank) and another IFI(International Financing Institution) loans, as well as from concessionaires resources. It is planned to establish the National Road Fund, which will be the leading institution in the process of the road infrastructure development financing in Poland.

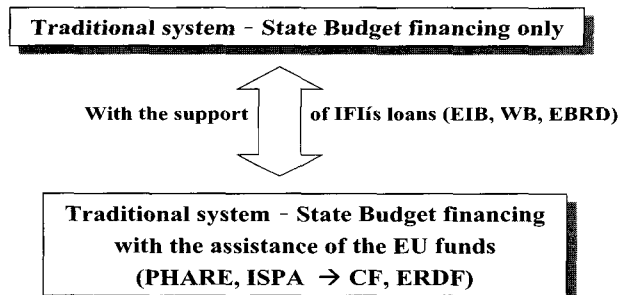


Figure 4. Traditional Financing Strategy.

Cohesion Fund resources will be concentrated on railway and road projects located on TEN. Structural funds(ERDF) will go for projects included in the Sectoral Operational Programme Transport. These projects will aim at achieving a more balanced development of the national transport system and safer transport infrastructure.

5.2 Financing using PPP System

The financing of motorways by using PPP system involves the concessionaire, who is a private investor, a concession for the construction and operation(or only operation) of motorway sections.

The appropriate volume of the forecasted traffic, which allows anticipating the future revenues and the risk of investing into such a

big project, is the most critical factor, governing the possibility to obtain financial resources from commercial institutions. Prior to the commencement of construction works, the concessionaire normally must achieve the so-called "financial closing", that is the preparation of the project financing plans for the construction and operation periods.

The Toll Motorways Act(2003) contemplates that the concessionaire may seek support from the government through the NMF(National Motorway Fund). The concessionaire will get financial support from this fund only if that person wants to construct a particular motorway section under the MCP(Polish Toll Motorway Construction Program), which is the biggest investment challenges in Central and Eastern Europe. The MCP includes:

- 1) assurance of covering temporary cash deficiencies in the initial stages of operation,
- 2) participation in financing part of the construction cost in the form of donations or non-interest bearing loans in order to facilitate the achievement of the financial closing far the project by the concessionaire.

The National Motorway Fund has been established in BGK(Bank Gospodarstwa Krajowego) and it is subject to the banking supervision procedures.

The revenues of the Fund include, among others:

- 1) funds provided by the State budget in the amount constituting part of the planned budgetary revenues from the excise tax on vehicles.
- 2) proceeds from the Fund's investments in the securities issued by the State Treasury or the National Bank of Poland and the securities defining the monetary benefits, guaranteed or warranted by the State Treasury or the National Bank of Poland,
- 3) revenues from owned or disposed shares in companies, transmitted by the State Treasury to BGK,
- 4) financial resources from the tolls collected on the motorway and other amounts paid by the concessionaire,
- 5) proceeds from loans taken by the Agency or bonds issued by the Agency,
- 6) proceeds from other public sources.

The MCP financing program should provide fully flexible adjustment of the financing method to specific projects, and in consequence, should significantly facilitate the acquisition of the necessary funds for the implementation of such projects.

5.3 Tender

The tender procedure selecting a concessionaire is defined in the Toll Motorways Act(2003). According to the provisions of the Act, the concessionaire is selected by way of a three-stage tender procedure(Figure 5).

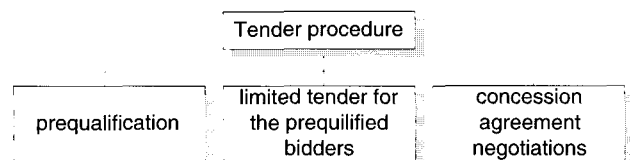


Figure 5. Tender Procedures

After approval by the Council of Ministers with respect to the proposed principles providing financial support from the resources of the National Motorway Fund(if such support is anticipated), the Agency places an announcement of tender in domestic newspapers and also in the Official Journal of the European Communities.

In accordance with the Act, the tender procedure is dedicated to joint stock companies having their establishment in the Republic of Poland, with share capital not less than an equivalent of EURO 5 million, and whose sole objective of enterprise should pursuant to their Statutes, be construction or operation of motorways. At the pre-qualification stage, the participants may request the Agency for further clarifications related to the issues contained in the pre-qualification terms. Also, the Selection Commission may require that the participants of the tender provide additional clarification of information included in their submitted pre-qualification documents.

The Selection Commission evaluates the proposals submitted by the participants selected to the second stage of the tender procedure and presents them to the President of the Agency and he will forward it to the Minister competent for the transport affairs.

The final stage of the tender procedure, which involves negotiations of the concession agreement provisions, is carried out with the company, which proposal has been found most advantageous. Negotiations may proceed simultaneously with more than one company, if their proposals have been found comparable.

Upon completion of the negotiation process, the Minister competent for the transport affairs grants a concession. The tender procedure is finalized with the execution of the concession agreement between the parties not later than 30 days after the granting of the concession.

The concessionaire, who obtained a concession for the construction and operation of a particular motorway section, shall prepare the final design(the final plans and specifications) in consultation with the Agency for Motorway Construction and Operation. The final design will be based on the given technical criteria of the toll motorway and the conditions attached to the location decision issued by the Voivode having jurisdiction over the affected area.

The final design must be prepared in accordance with the existing Building law(1994) and the Ordinance of the Minister of Spatial Economy and Building(1994) on the detailed scope and form of the final design.

Upon completion of the construction works, the basic tasks of the concessionaire(Figure 6) will include among others:

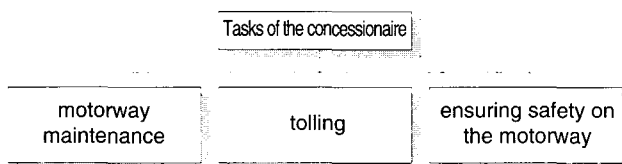


Figure 6. Task of the concessionaire

1) motorway maintenance:

- (1) routine maintenance,
- (2) to ensure uninterrupted traffic ability and access to the motorway throughout the year,
- (3) performance of heavy maintenance and replacement of facilities to ensure adequate comfort and safety for the motorway users,
- (4) upgrading and expansion,
- (5) works related to changes and expansion of the motorway including all civil and utility works, such as provision of new traffic lanes, interchanges, new tolling plazas or stations and alteration of the tolling system, and other works.

2) tolling-the concessionaire is obligated to develop the tolling stations and provide all utilities required for the motorway operation within the specified tolling system. The concessionaire's duties also includes: provision of the traffic and user safety in the tolling places; providing necessary tolling equipment(so the time of collecting tolls even be as short as possible).

3) ensuring safety on the motorway

- (1) the concessionaire shall work together with the Agency and obtain approval from the(motorway) traffic police and the competent rescue services to define the principles of the actions to be taken on the motorway in the case of road accidents and disasters,
- (2) the concessionaire shall carry out effective removal of vehicles or other objects, which may obstruct the traffic on the motorway and shall undertake appropriate actions to protect people and vehicles,
- (3) the concessionaire shall carry out routine controls of the motorway technical conditions,
- (4) the concessionaire shall ensure telephone communication along the motorway (emergency telephones shall be installed after each two kilometers on both sides of the motorway).
- (5) the concessionaire shall work together with the traffic police by defining the scope of competence and the obligations of either party, including financial matters.

6. Conclusion

To improve the economy of Poland, the construction of an access-controlled roads network (motorways and express roads), reconstruction of national roads, construction of city bypasses, and improving road traffic safety are necessary. Road infrastructure investments allow to minimize the number of accidents. In other words, it will mitigate risks of both the travelers and inhabitants of the road side areas and as a consequence, reduction of the related costs. At the same time, it requires considerably less expenditures, in terms of the saving effects they generate. Accession of Poland to the European Union and adaptation of Public Private Partnership to build a Trans European Network will obviously help to achieve transport infrastructure development in Poland.

In the last 9 years only 404 km of a motorway was built. While using PPP system, 2,300 km of a new motorway will be built by 2013.

At last, not the least PPP will certainly be a top priority in Poland, as it:

- 1) Creates better value for money = increased efficiency of infrastructure investments = better use of public money,
- 2) Bridges a financial gap through involving long-term private financial resources,

3) Facilitates the national co-financing of EU Cohesion and Structural Funds.

Many Korean construction companies want to invest in Poland. PPP has existed in Korea for many years, so companies will be able to use their knowledge about PPP.

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요 약

2004년 5월에 폴란드와 다른 동유럽 국가들이 EU에 가입되었다. EU에 가입 후에 폴란드는 도로부분의 투자 현실화를 촉진할 수 있을 것이고, 2005년에 도로 네트워크 상태의 중요한 개선을 이룰 수 있을 것이다. 폴란드 정부는 고속도로의 건설에 요구되는 전체 투자를 하는 것이 불가능하므로, 공공·민간 파트너십에 기반한 프로젝트 투자의 최신의 기법을 개발하기를 원한다. 높은 품질의 교통 네트워크 없이는 경제적인 경쟁을 할 수가 없다.

이것은 EU에서 유럽 교통 네트워크를 구축하려고 하는 이유 때문이다. 유럽 교통 네트워크는 서유럽의 15개국과 폴란드와 같이 새로 가입된 회원국들 사이에 연결 고리를 제공해 줄 것이다. 그 결과로서, 폴란드는 향상된 교통 기반시설 네트워크를 확립할 것이다.

키워드 : EU(유럽연합), PPP(공공·민간 파트너십), TEN(유럽 교통 네트워크), ISPA(Instrument for Structural Policies for Pre-Accession), FIDIC(국제 컨설팅 엔지니어 연맹)