



PKP POLSKIE LINIE KOLEJOWE S.A.



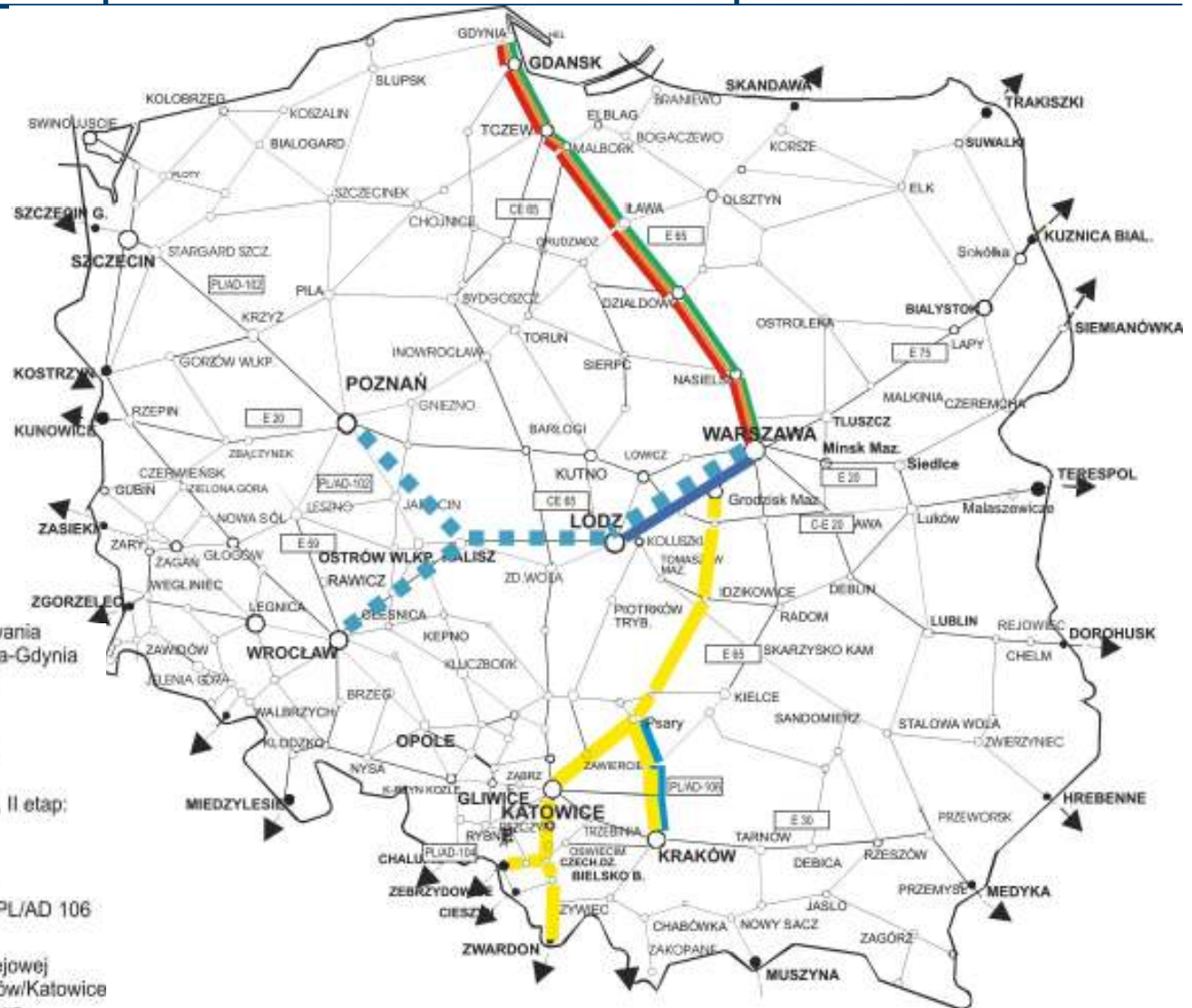
HIGH SPEED RAILWAYS

E65 line modernisation programme – projects directly referring to modernisation



Key

- 2001/PL/16/P/PA/005 Pomoc techniczna dla przygotowania projektu modernizacji linii kolejowej E65 odc. Warszawa-Gdynia
- 2004/PL/16/C/PT/001 Modernizacja linii kolejowej E65 odc. Warszawa-Gdynia, Etap I
- 2005/PL/16/C/PT/001 Modernizacja linii kolejowej E65 odc. Warszawa-Gdynia, Etap II
- SPOT/1.1.1/163/05 Modernizacja linii kolejowej - Łódź, II etap: odc. Warszawa Zachodnia - Skiermiewice oraz Łódź Widzew - Łódź Fabryczna
- Pomoc techniczna dla przygotowania grupy projektów przebudowy i rozbudowy (modernizacji) linii kolejowej PL/AD 106 na odc. Psary - Kozłów - Kraków
- Planowane studium wykonalności modernizacji linii kolejowej E65 - Południe na odcinku Grodzisk Mazowiecki - Kraków/Katowice oraz Katowice - Zwardoń/Zebrzydowice - granica państwa
- Projektowana Linia Dużej Prędkości odc. Wrocław/Poznań-Łódź-Warszawa



E65 South Line modernisation options

The choice of the optimal option requires studies on at least 4 options, herein 3 modernisation options and 1 reference option.

Option 1: V=200/220 km/h, DC 3000V -
line modernisation

Option 2: V=250/270 km/h, AC 2x25kV, 50 Hz –
line constructing/reconstructing

Option 3: V=300/350 km/h, AC 2x25kV, 50 Hz –
line reconstructing/constructing

Option 4: reference

Analytic duties for preparing E65 South Line modernisation

Technical and studial analysis is expected to be conducted in the following way:


Duty 1. for Grodzisk Mazowiecki – Zawiercie (CMK) section

Duty 2. for Góra Włodowska/Zawiercie – Katowice section

Duty 3. for CMK – Kraków branch line:
Włoszczowa/Psary/Góra Włodowska – Kraków

Duty 4. for E65-South line sections:
Katowice - Zwardoń – PL/SK border
and Katowice – Zebrzydowice – PL/SK border

Work stages

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- Stage I** – Railway infrastructure and rolling stock analysis
 - Stage II** – Study on options of path and technical analysis of the particular modernisation options
 - Stage III** – Marketing analysis for modernisation options
 - Stage IV** – Environmental analysis
 - Stage V** – CBA analysis
 - Stage VI** – Influence on environment report for the particular option

Work stages (sequel)

Stage VII – Study on pre-design documentation

Stage VIII – Study on requests on issuing decision on environmental conditions of consent to project realisation

Stage IX – Study on requests on issuing decision on development conditions and localisation of public object invest

Stage X – Study on technical and economical analysis of the project

Stage XI – Study on requests on EU finance

Stage XII – Study od bidding papers

Detailed duties for performers (1)

1. Prepare preliminary building project
2. Draw up real estate register for construction permit
3. Ground transformation analysis for realisation of the project
4. Engineering objects analysis for environmental impacts permit
5. Underground development infrastructure analysis
6. Cooperation with heritage conservator, communication management as well as with local council authorities
7. Prepare building works chamfer project

Detailed duties for performers (2)

8. Prepare old-use materials management conception
9. Study on diagnostics and line maintenance principles (exclusively 1st part of the project)
10. Perform dynamic researches of objects for $v \geq 200$ km/h
11. Analysis of trembling influence caused by train operations
12. Prepare regulations and standards register, that are used in the project
13. Realisation of Czechowice Dziedzice station modernisation building project
14. Obtaining a building permit

Formal requirements for performer

- For full realisation of the service contained in OPZ Performer should employ qualified personnel that guarantees appropriate quality and punctuality of executed project works
- Required Performer personnel:
 - ❖ Project Coordinator
 - ❖ Designers
 - ❖ Experts

Substantial requirements for performer

- Project Coordinator should have technical education as well as experience in work connected with team management
- Designers should have building qualifications for non-limited designing in appropriate specialisation, registration of appropriate professional associations, confirmed with certification issued by these authorities, including specified validity date, in accordance with Building Regulations (DZ.U. z 2006r. nr 156, poz. 1118)

Requirements for Performer – designers team

Performer should prove that is vested with:

➤ designers team particularly in the following specialisations:

- ❖ railways
- ❖ constructing and building
- ❖ bridge construction
- ❖ railway lines construction
- ❖ telecommunications (knowledge of ERTMS/ETCS and GSM-R)
- ❖ heat, gas and sewerage tract network and appliances
- ❖ electric and power tract network and appliances

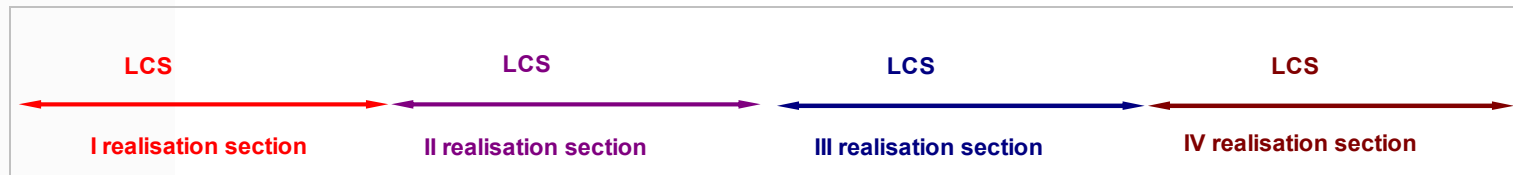
Requirements for Performer – experts team

- expert team in the following fields:
- Geodesy
 - ❖ Geotechnics (mining areas)
 - ❖ Environmental protection
 - ❖ Cost calculating
 - ❖ Operations engineering and transport organisation
 - ❖ Preparing of bidding documentation in accordance with PZP and FIDIC procedure
 - ❖ In the field of railway transport economics

Separately commissioned studies - CMK

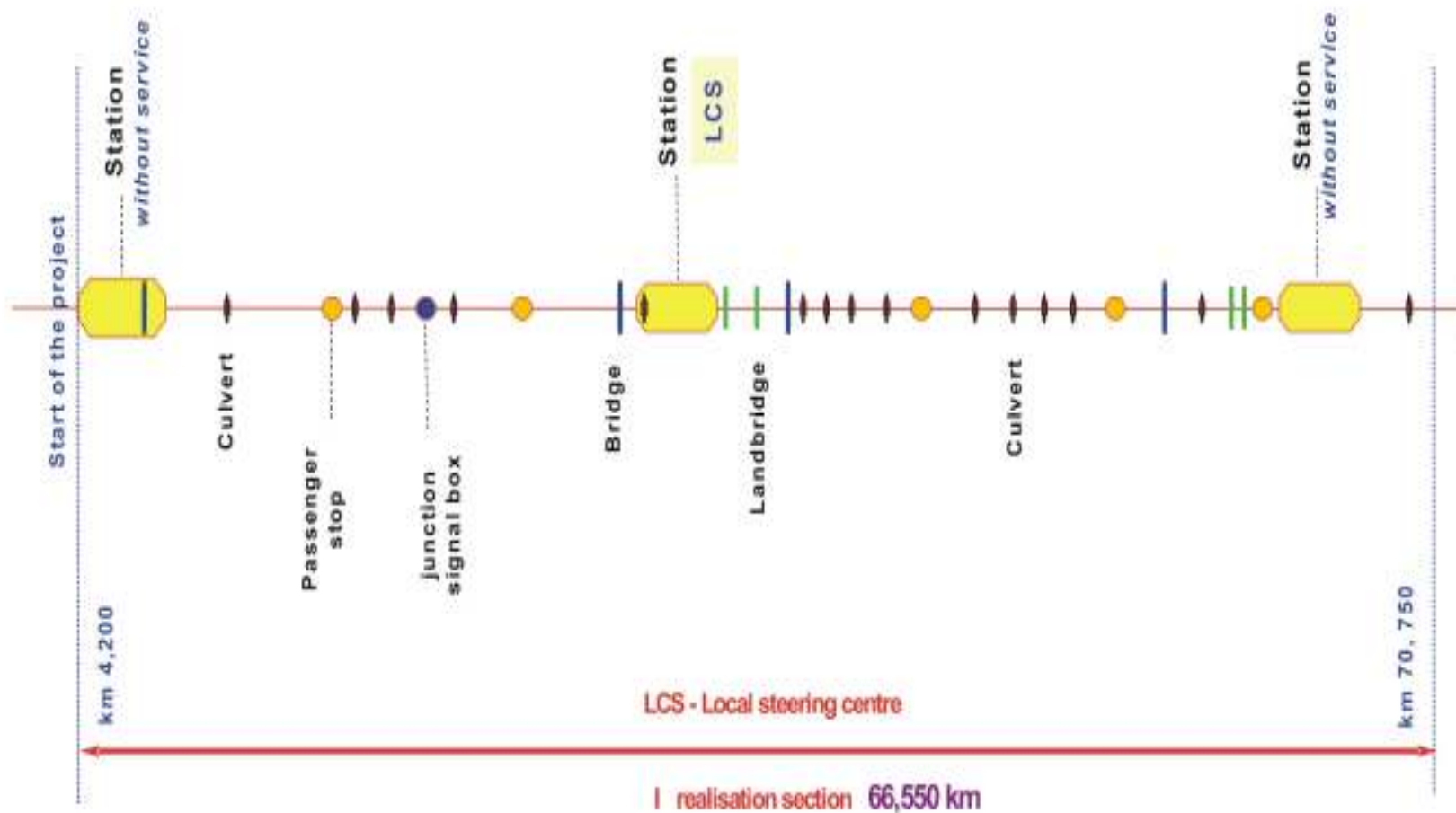
1. GPS geodetic groundwork building
2. Geotechnical studies
3. Geological studies
4. Engineering objects technical evaluation
5. Prepare ortophotomap and maps for project objects
6. Determine legal status of line area grounds
7. Study on functional-utilitarian programmes and programme-spatial conception for particular stations
8. Conduct local view of railway infrastructure and line area grounds
9. Study on railway surface constructional solutions
10. Study on overhead track construction

Principles of dividing the project into realisation sections



- division with regard to high value of the project
- division with regard to railway automatics appliances harmonisation (interlocking appliances)
- division with regard to technical (technological) conditioning

Idea of the project division according to LCS - scheme





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THANK YOU FOR ATTENTION

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