

## **SMART STATIONS IN SMART CITIES**

6<sup>th</sup> International Conference on Railway Stations

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#### **SMART RAILWAY SERVICE MANAGEMENT** - LODZ AGGLOMERATION RAILWAY CASE

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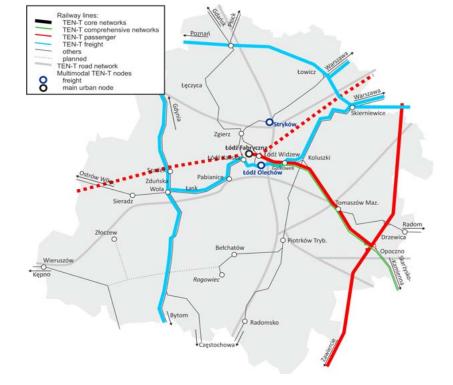


# THE CITY AND THE RAILWAY

Łódź – the city in the centre of Poland, important TEN-T node. Łódź is in the course of the process of the revitalization from the 19th century industrial city towards to the city of new technologies.

Population (millions)

- City Łódź 0,7m
- Agglomeration 1,1m
- Region 2,5m

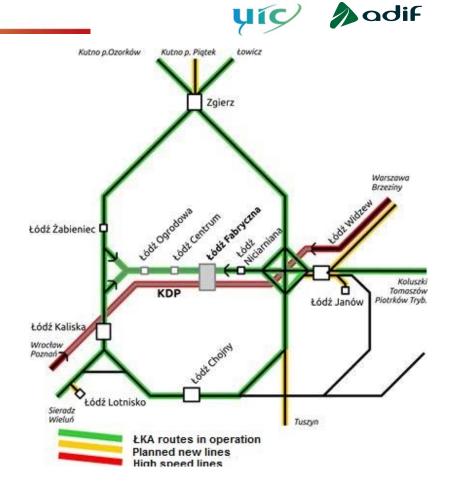




# **HISTORY OF THE PROJECT**

Within the high speed railway project in Poland also the program of Łódź node restructurisation has been worked out. Main elements:

- New underground station in the city center (central multimodal hub)
- New cross city tunnel
- New system of agglomeration railway (LKA)

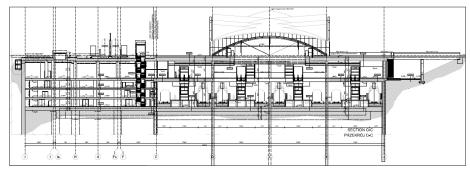




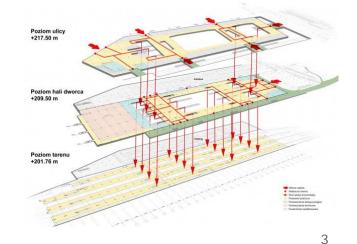


# NEW STATION ŁÓDŹ FABRYCZNA

- All categories of trains: high speed, intercity, regional, suburban
- Centralised traffic control system for whole railway region
- Easy and simply access to the city and regional transport stops









# **CENTRAL MULTIMODAL HUB**

For all transport modes:

- Trains
- Long-distance and regional buses stops
- Multi-level car parking
- Public transport: tram and bus, bike station



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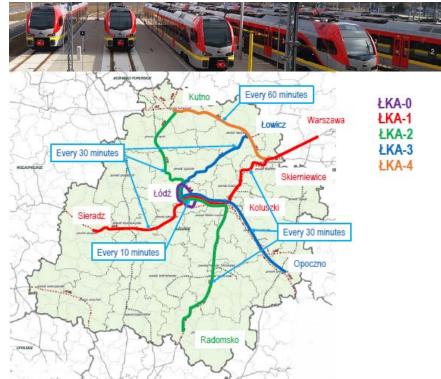


## LODZ AGGLOMERATION RAILWAY

Construction planned on several stages:

- to provide acces to the central station to HS trains and IC trains
- to service for the region and agglomeration together with the city transport and P&R



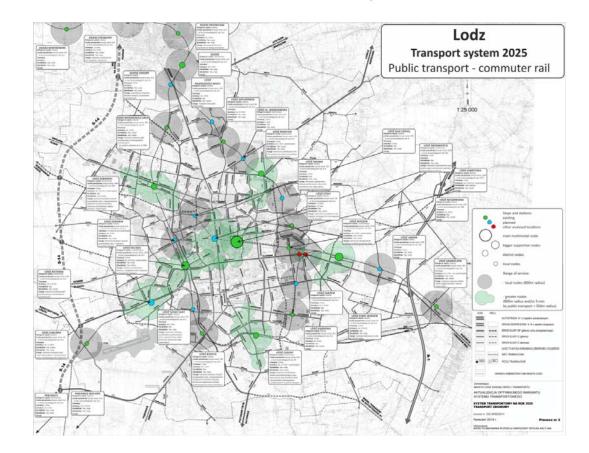






# RAILWAY AND THE CITY

- 34 multimodal train stops
- 0,5 mln citizens living closer than 10 minutes from the nearest stop
- High level accessibility to trains in the most urbanised areas







#### INTEGRATED MANAGEMENT SYSTEM IN ŁKA RAIL

RST monitoring	<ul><li>Status of vehicle</li><li>Automatic vehicle localisation</li></ul>	
RST maintenance	<ul><li>Remote monitoring</li><li>Vehicle data storage</li></ul>	Data delivered by infrastructure manager
Passenger service	<ul><li>Automatic passenger counting</li><li>Montoring ticketing sales</li></ul>	Real time timetable
Staff management	<ul> <li>Staff management system (drivers, conductors)</li> </ul>	ERTMS data



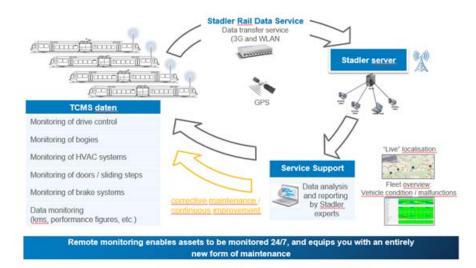
## **MAINTENANCE SYSTEM OF ROLLING STOCK**

- 20 units FLIRT 3 Stadler fully comply with TSI
- Maintenance within 15 years contract with the producer
- Dedicated modern maintenance facilities



#### **RAIL DATA SERVICE**

RDS/TWC: The condition of the fleet at a glance and at all times



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#### **WBA – ONE TICKET FOR THE WHOLE JOURNEY**

WBA – (single ticket) is a special offer of an integrated ticket fare for people travelling by train and using public transport in both in the agglomeration and in cities of region



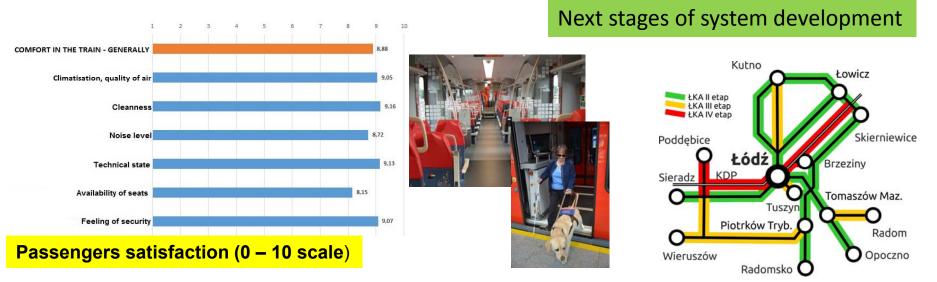






## **RESULTS FROM PASSENGER POINT OF VIEW**

All innovative solution is highly accepted by passengers. Number of travellers is growing from year to year of more than 10%.





# CRACIAS

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