

CENTRALNY PORT KOMUNIKACYJNY A HIGH-SPEED NETWORK FOR POLAND

The Polish government is developing plans for a new central airport west of Warszawa, which will also be a hub for a new national network of high-speed lines. **Mike Bent** examines the ambitious CPK megaproject.

CPK (Centralny Port Komunikacyjny: Central Communications Hub) also known as the Port Lotniczy Solidarność (Solidarity Airport), is an ambitious proposal to reorientate Poland's air and inter-city rail networks around a central node. Designed for a throughput of around 45 million passengers annually, it will become the main operating base of national airline LOT. Between 2020 and 2034 it is envisaged that the rail network will be significantly enhanced to bring the CPK within a 2h30 train journey of all major urban centres in Poland. This forms part of rail infrastructure manager PKP PLK's investment programme for the period up to 2040, which envisages expenditure of over PLN 150

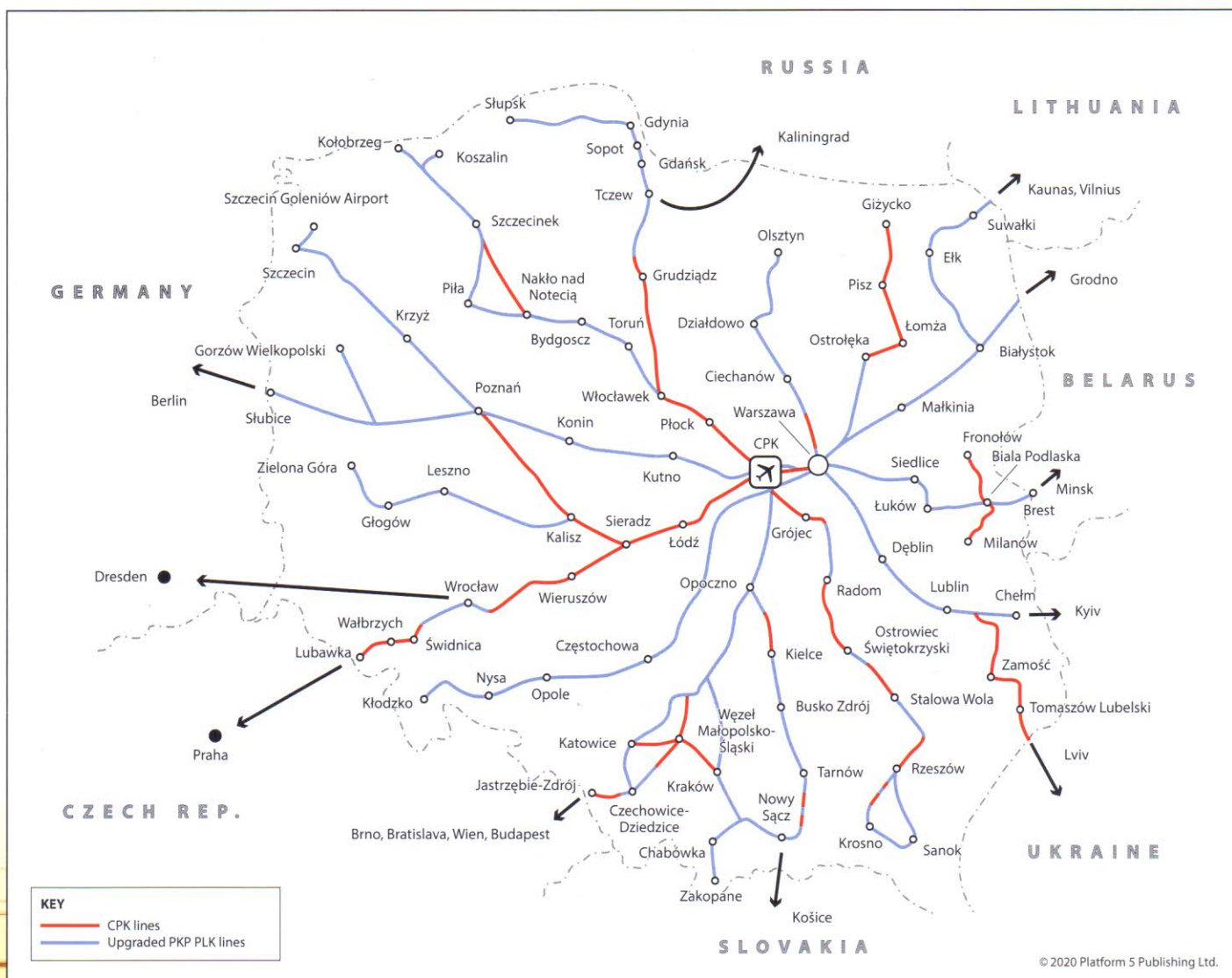
billion (€33.5 billion) to revolutionise travel standards and journey times on the national network.

The CPK project dates back to research by the Ministry of Infrastructure undertaken in 2003 for the siting of a new airport serving Warszawa. Two locations were then identified, announced on 15 January 2004 – Mszczonów, 45 km west of the capital, and Modlin, a disused military airport 35 km to the northeast. Then, on 12 May 2005, the ULC, the Polish Civil Aviation Authority, awarded Spanish engineering consultancy Ineco-Sener a contract to conduct a feasibility study for this future central airport hub. However, the study was

never completed, and many people thought that the project had been abandoned. It then resurfaced in the Government's 2010–2013 Transport Infrastructure Development Strategy, which estimated that the capital's existing airport, then known as Warszawa-Okęcie, would reach capacity (12.5 million passengers per annum) during this period. As a temporary measure, Modlin was rebuilt to handle passengers, and the first commercial flight took off on 15 July 2012.

The CPK concept was subsequently revived by Foreign Minister Witold Waszczykowski in 2016, approved by the Council of Ministers under Prime Minister Beata Szydło on





PKP Intercity ED 250-013 is seen at Warszawa Zachodnia on 10 June 2016. Radek Kopras

7 November 2017, and authorised by an Act of Parliament on 10 May 2018. The construction timescale currently envisages inauguration of the CPK in 2027, with the first commercial flights expected to take off in winter 2027/28.

The airport complex, with two parallel 4000 m-long runways, later to be increased to four, will be built on a site of between 3000 and 6000 hectares 37 km west of Warszawa at Stanisławów in Grodzisk municipality, 1.5 km north of the A2 motorway, and near other major roads. Also in the vicinity are main line railways; Line 1 from Warszawa to Katowice, Line 4, the high-speed *Centralna Magistrala Kolejowa*, and Line 3 (E20) between Warszawa and Berlin.

There is a certain amount of British input into the development of the CPK. In June 2019 an architectural workshop was created, this being proposed by the British and Ulster embassies and the company promoting the airport complex. Six design studios participated in the workshop: Foster + Partners, Grimshaw, Chapman Taylor, Zaha Hadid Architects, Benoy and Pascall + Watson.

Prior to 2011, the cost of the CPK itself (just the airport) was estimated at PLN 12 billion (€3.1 billion). However, with all proposed road and rail transport infrastructure included, the total estimated cost rose in November 2017 to between PLN 30.9 and PLN 34.9 billion – the airport itself between PLN 16 and

PLN 19 billion, the rail programme to between PLN 8 and PLN 9 billion

Plans formulated by the Government, the promoters of CPK and PKP indicate that in connection with its development 1789 km of new railways will have to be built; 670 km for a line speed of 250 km/h or higher, 740 km for 200–250 km/h, and 190 km for 160–200 km/h. Numerous existing lines will be upgraded. This will make it possible to travel by rail between all the largest urban areas in Poland and the CPK or Warszawa within two-and-a-half hours. 12 corridors have been defined (see Table 1 p42), on which improvements are to take place. These will result not only in journey times to and from the airport being improved, but also those to and from Warszawa.

However, since the scheme was given the green light by the PiS-controlled government in spring 2018 the project has trundled on and on without tenders being invited or contracts awarded. Managers employed by the promoting company, Spółka Centralny Port Komunikacyjny, are on high salaries. According to Łukasz Bernatowicz, Vice-President of the Polish Business Centre, the only way the CPK could stimulate the economy would be by “starting to turn over the earth.” That is not happening – yet. Bernatowicz is sceptical of the project. He feels that the airport itself could become a white elephant. That may happen, if Covid-19 is not eliminated quickly or

if travel habits change as a result of “Flygskam” (flight shaming), and a substantial fall in demand for short-haul (including domestic) flights occurs.

While reduced air travel in the wake of the pandemic is welcome news for the environment, reduced rail travel is not. Thankfully, rail passenger numbers are already making a cautious recovery in Poland and other countries. Even if the airport scheme were to flop, and the necessary rail infrastructure investments were realised in full, the benefit to the Polish rail network, starved of investment and modernisation over decades, would be enormous.

Reshaping Poland's rail network

According to the CPK's elaborate website (www.cpk.pl), a timescale for the reconstruction and expansion of the Polish rail network has already been drawn up (see Table 2).

It is anticipated that one of the first rail projects to be tackled in the CPK programme

will be Line 85, the new high-speed line linking Warszawa, the CPK, Łódź and Poznań. This will enable a journey time by rail from the CPK to the capital of just 15 minutes, with 25 minutes for the run from the airport hub to Łódź.

If the project does go ahead, and gets carried through to completion, Poland's rail network will be transformed out of all recognition over the coming 14 years. Evidently, there will also be substantial orders for new trains, both high-speed and conventional, although no mention of rolling stock requirements has yet been made.

The future of the new airport depends, of course on various factors. In February 2019 it was reported that the regional airports in Poland were used by a record number of passengers in 2018 – 28.1 million, up by 15.3% on the 2017 figure. If all Polish airports are taken into account (including the two in Warszawa), the total number of passengers was 43.7 million, compared with 37.7 million in 2017. Of all passengers using Polish airports, only 4% were on domestic flights, 72% on flights to and from

EU destinations, and 24% on flights to and from destinations outside the EU.

This increase was considerably higher than the 6% rise recorded for all European regional airports, and was the third highest rate of growth within the EU, behind only Lithuania and Slovakia. The Polish rankings were led by Kraków (6.76 million passengers) followed by Gdańsk (4.98 million) and Katowice (4.83 million). Bottom of the rankings came Zielona Góra, with just 21 000 passengers. The greatest increase in usage was Poznań (33.7%).

The annual capacity limit of all these regional airports is estimated at around 32 million passengers. In February 2019 the prospects were that this figure would soon be reached, and plans had been drawn up to invest around €960 million in measures to ease the problem. The Covid-19 crisis has completely changed the situation, although for how long, and in what ways it is impossible to say or predict at present. The travel industry, airlines and economists are all hoping for a ‘bounce back’.

Table 1. CPK corridors

Corridor	Route	Infrastructure	
		New line (km)	Upgraded line (km)
1	CPK-Kołobrzeg-Koszalin-Słupsk-Gdańsk	417	698
2	CPK-Olsztyn	33	15
3	CPK-Ostrołęka-Giżcko-Białystok-Trakiszki/Kuźnica Białostocka	141	318
4	CPK-Terespol	Not known yet	Not known yet
5	CPK-Chełm/Belzec	89	107
6	CPK-Rzeszów-Sanok	256	269
7	CPK-Katowice-CZ/Kraków-Zakopane/Muszyzna-SK/ Skarżysko-Kamienna	289	367
8	CPK-Kłodzko	8	86
9	CPK Łódź-Wrocław-CZ/Poznań-Szczecin/Zielona Góra/DE/Gorzów Wielkopolski	587	574
10	CPK-Poznań	Not known yet	Not known yet
11	Szczecin-Szczecin airport-Goleniów	17	23
12	Stalowa Wola-Lublin-Biała Podlaska-Białystok	92	
Total		1789 (built by CPK)	2430
		140 (built by PKP PLK)	

Table 2. CPK proposed planning and construction schedule

Year	Route completed (km)	Under construction (km)	Route project preparation (km)	In early planning stages (km)	Investment planned (billion PLN)
2020	0	0	563	1226	0.0
2021	0	0	1220	569	0.1
2022	0	0	1789	0	1.0
2023	0	531	1258	0	2.7
2024	0	725	1064	0	12.8
2025	0	847	942	0	13.3
2026	0	987	802	0	14.8
2027	531	456	802	0	12.6
2028	693	527	569	0	7.2
2029	847	741	201	0	7.0
2030	987	802	0	0	6.6
2031	1220	569	0	0	6.6
2032	1372	417	0	0	4.8
2033	1588	201	0	0	3.0
2034	1789	0	0	0	1.3



The rare sight of a line-up of three PKP Intercity ED 250 EMUs with ED 250-008 on the left and ED 250-017 in the centre at Warszawa Wschodnia on 13 June 2015. **Keith Fender**

even if a delayed one, but there are also many observers – scientists and environmentalists among them – who would prefer not to see this happen. Perhaps in this latter group we might also find train operators?

Speculation, at the time of writing in July 2020, seems rather pointless. The ideal scenario, in a world with reduced demand for air travel, would be that the CPK airport could absorb, if not all, much of the traffic from regional airports. Given the reductions in travel time by rail, getting to and from the Warszawa airport hub would not, in theory, seem as great an obstacle as at present. The Polish population may even be shamed into reducing their

short-haul and domestic flying activities as a result of “Flygskam”. Here the country is helped by one particular aspect of climatic breakdown. 20 years ago those living on the Baltic coast reckoned that this area could become the “New Mediterranean”. Northern Poland enjoys rather hot and sticky summers, is cheaper than many Mediterranean resorts, and there is no hassle of currency exchange. though, given the latitude, the sun does not tan that easily! The reduction in rail journey times will eliminate most of the time-saving advantages of using domestic flights – very few Polish rail journeys, city centre-to-city centre, will be over three hours in length. so, in theory, the 4% of domestic flight users could easily switch to rail.

Regardless of whether or not the new airport itself materialises, Covid-19 has amply demonstrated, in Poland and elsewhere, that the reduction of passenger traffic creates easier operating conditions for rail freight, with reduced route congestion and the potential for higher operating speeds and greater punctuality. The construction of new lines in Poland as part of the CPK project will have a similar effect.

So, perhaps, even if the CPK project does not result in a mega-airport, should the railway side of the scheme be carried through to completion, it will drag rail travel in Poland into the 21st century, blending existing and new lines to create, at a relatively low cost, a network many other countries could only dream about building – at great expense.

Table 3. Estimated journey time improvements

From Warszawa to	2020	2034
Gdańsk	2h56	2h05
Gdynia	3h22	2h30
Lublin	2h55	1h30
Radom	1h59	1h00
Toruń	2h41	1h30
Bydgoszcz	3h21	1h50
Katowice	2h22	1h30
Kraków	2h20	1h30
Nowy Sącz	5h50	3h00
Wrocław	3h35	2h00
Poznań	3h22	1h55
Szczecin	6h32	3h15
Zielona Góra	5h30	3h35
Gorzów Wielkopolski	6h09	2h40
Stalowa Wola	5h48	2h00
Rzeszów	4h03	2h15



The current face of inter-city rail travel in Poland: PKP Intercity ED1260-005 is seen near Poznań Wschód on 27 November 2015, on a final test run between Szczecin Główny and Kraków Główny before these EMUs entered regular service on this route. **Radek Kopras**