

Krzysztof Lewandowski

dr inż.

Politechnika Wrocławska, W10/K-9

krzysztof.lewandowski@pwr.edu.pl

DOI: 10.35117/A_ENG_16_09_02

The proposal of the integration of the railway tourist offer on Lower Silesia

Abstract: The aim of this article the proposal of the integration of railway transports and tourist attractions placed along or beside railway lines on the Lower Silesia region. This article presents the proposal of the yearlong calendar of the railway tourist events for Lower Silesia and proposal for integration about information of the bus lines to the tourist places around the railway station in Wałbrzych City.

Keywords: Transport; Rail; Offers Tourism; Integration

Railway and tourist in Lower Silesia

Lower Silesia as a geographical region is crossed by railway lines having different attraction to people wanting to explore the region. The railway can be treated only as a means of transportation or as an element of visual attractiveness of the area. The attractiveness of railway lines in Lower Silesia and the activities for railway enthusiasts was previously analysed by some authors [8] [16].

The current state of access to tourist attractions in Lower Silesia by means of railway is inadequate. The Marshal Office of the Lower Silesia is focused on the passenger railway in working days. Therefore, the offer of railway connections in weekends, when tourists often move from home to discover the Lower Silesia, is insufficient. It is not only concerns the frequency of connections, but also communicated transfers.

Problems of coordination of transfers for passengers on the railways

The coordination of transfers of passengers is known from the time of first use of railway transport for transporting people in 1830. Analysis of several publications of the 19th and 20th centuries [1], [3], [9], [15], [17], shows that the main problems of coordination of transfers passengers are:

- a) distribution platforms for better communication for passengers who change the train to go in a different direction:
 - on the same railway line category
 - from the main railway line to a lower category of railway line
- b) distribution of platforms at railway station and cooperation in the carriage of passengers for:
 - trams and buses in cities,
 - buses and taxis, and earlier for horse-drawn carts.

A very good example here is the city Mieroszów in Lower Silesia. Here you can see that several carriages waiting for passengers from a train in Wrocław. [10]

- c) the time interval between train departures in order to provide time to change trains for passengers who are strongly associated with knowledge of the structure of the railway station and is not sufficient for the transfer of passengers.

Example of Lower Silesia shows that even if the structure of the railway station is good, the main problems for the passengers were:

- a) bad time interval between train departures in order to provide time to change trains for passengers when an arriving train is delayed,
- b) disrespect for passengers' rights by the management of the railway carrier to co-ordinate transfers passengers between different categories of railway lines, train departs from the station before the arrival of the delayed train of the larger category
- c) poor planning timetable for transfers passengers. There is a bad example of coordination timetable of Lower Silesia valid from June 2015 to December 2015 between the main directions of Wrocław - Wałbrzych Main and the direction of Wałbrzych Main- Kłodzko Main [13].

In the days off, there were four train connections between the Wałbrzych Main and Kłodzko Main. Only three intervals between departures of trains have been coordinated with arriving trains from Wrocław Main. Then the total travel time, for example to Bartnica station was at 2:20. There were trains: R 79601 Kamięńczyk at 9:06 from Wrocław Main, at 10:34 in the station Wałbrzych Main, at 10:38 there was departure of connecting train KD 69392, in Bartnica at 11:04 AM; KD 69875 at 14:58 Wrocław Main, at 16:27 at the station Wałbrzych Main, at 16:39 there was departure of connecting train KD 69,396, in Bartnica at 17:05 and at 17:05 KD 69,879 from Wrocław Main, at 18:40 in Wałbrzych Main, at 18:57 there was departure of connecting train KD 66,084, in Bartnica at 19:23.

Bizarre was the course of the first passenger train on weekends KD 69390 to Kłodzko. To Kłodzko Main, the train was leaving the station Wałbrzych Main at 6:48. The first train from Wrocław Main, the express TLK 26222, arrived at the station Wałbrzych Main at 7:05, the passenger train KD 69865 was at 7:42 or 8:00. To take the passenger train 69390 KD, passengers had to leave the train KD 69885 Wrocław Main at 23:09 the previous day. As a result, the total travel time from Wrocław on weekends to Bartnica station was 8 hours and 6 minutes [13]. Many passengers said that it was a "butterfly effect" the reconstruction of a railway bridge in Wrocław on the Grabiszyńska Street. Thus, tourists lost about 6 hours for waiting on the platform of the station Wałbrzych Main, because the station building from 2015 has been closed.

As a reference point, I propose to look at other Polish regions which promote train tourism, for example guided and tours in the Beskidy [6] and free tours in the Łódź Province [12]. The desire to promote values of Lower Silesia tends to offer year-round railway tourism in the form of a calendar of events.

The offer of year-round calendar for railway tourism in Lower Silesia

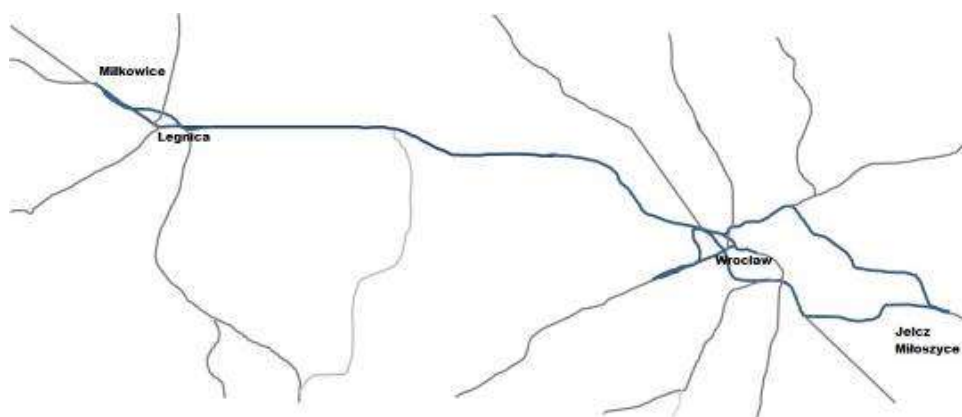
Legal basis to organize and obtain promotional subsidies for travelling is Art.11.1 of the Local Government Regulation [19]:

1. Regional Government defines the strategy of development of the region, taking into account in particular the following objectives: 1) cultivating and developing and influencing the national, civic and cultural consciousness of inhabitants, as well as developing local identity and Art.11.2:
2. The regional government has a policy for development of the region, which consists of: 8) promotion of values and developmental opportunities in the voivodship. As the beginning of the calendar, it is proposed to take the May holidays, which allow the creation of several short-time offers.

May 1-3, Picnic. In those three days, a lot of people take usually free days. They can visit the Lower Silesia by train. This can be combined with the promotion of the Festival of Flower and Art in the castle Książ in Wałbrzych [2] or Bystrzyca Kłodzka days.

It would be appropriate to add to this promotion railway transport to Wałbrzych-Szczawienko and support in the form of buses delivered by the Road Transport and City Maintenance in Wałbrzych (hereinafter referred to as ZDKiUM Wałbrzych) [22]. The buses would be stay in the square near the Wałbrzych-Szczawienko station and after the adoption of passengers they would go to Książ Castle and back. An entry ticket for railway passengers would be bought and cancelled to Wałbrzych-Szczawienko station. Similarly, the return trip from the Castle Książ to Wałbrzych-Szczawienko station would take place on the basis of the ticket purchased to Wałbrzych-Szczawienko station or ZDKiUM Wałbrzych ticket.

Then a tourist train ride could be organized under the name of Lower Silesia four-eyes (Fig. 1), partially subsidized by the local government of Lower Silesia. The route would go along electrified lines within Legnica and Wrocław. The condition of boarding the train would be, besides a ticket, having glasses on his nose, correction glasses, sunglasses or any other. It would be advisable to apply the rolling stock in the form of not rebuilt EZT of type EN57, which has opening windows, in contrast to the newer carriages having window vents (Figure 2). This would allow taking pictures during driving a train without reflections on the glass (Fig. 3, Fig. 4).



1. "Dolnośląsko Okularnik" Route



2. New and old EZT at the Mainm station in Wrocław. You can see a significant difference in the construction of windows.



3. Ruprechtický Špičák seen from the open window of the train on the line 286 Wałbrzych-Kłodzko



4. Ruprechtický Špičák seen through a window pane with a light reflex

The use of EZT for the route Lower Silesia four-eyes results from the fact that freight bypass of Legnica is electrified, like Wrocław. The use of EZT would reduce the cost of the stock rental and shorten the time to change the train in Miłkowice, Jelcz-Laskowice and Smolec. There is no need to order additional track and time to rotation of the classical stock by a locomotive. In the case of Bystrzyca Kłodzka, guided tours for people with the cancelled ticket to the station could be offered.

Another attraction would be the passage with the steam engine to Sobótka Zachodnia or along the Bóbr river valley from Jelenia Góra to Zebrzydowa.

May 18, Museum Night. That day, the Museum of Technology - Jaworzyna Śląska, as in previous years should be available free of charge, and only selected events, e.g. a drive with the

locomotive can be paid but with the price reduced by $\frac{3}{4}$. Communication service must provide scheduled trains on the line 274 and an additional train at 24:00 from Wałbrzych Main.

June 1, the Railway Technology Days and Children's Day. These days can be combined with two events: Days of Kłodzko City and Polish Championships in Rinsing Gold in Złotoryja. Both events promote their regions and it would be worth to railway join them. In the case of Kłodzko, it is enough to offer sightseeing the city with a guide for people with the cancelled ticket to the Kłodzko stations, Main or City. In the case of Złotoryja, a ride with EZT should be partially subsidized by the local government of Lower Silesia.

In addition, for the youngest children, going to the 6th class of elementary school should be offered a free ride to the station Krośnice with Krośnicka narrow-gauge railway. It would require prior registration and reservation of seats for people with children. The train would go ultimately to Milicz station. Other persons could be suggested a walk from Milicz ponds to Krośnice station or the station in Milicz. This passage would require 2 EZT trains. One would be dedicated only for children with their parents and another for other passengers.

In the months of June, July and August each year, paid trips with tourist trains could be ordered on routes, such as. Lower Silesia Nooks or as proposed in [7].

In July, Lwówek Agates Summer could be combined with passing by tourist train consisting of classic carriages to a diesel locomotive, partially subsidized by the local government of Lower Silesia. The trip would go along the Valley of Bóbr River from Jelenia Góra to Zebrzydowa. Additional trains for passenger service could be also introduced.

In August, Days of Kłodzko Fortress could be connected with passing by tourist train along the 286 line in the route from Kłodzko Main to Wałbrzych Main. The trains would consist of classic carriages and a diesel locomotive partially subsidized by the local government of Lower Silesia.

16-22 September, Days of public transport. These days can be connected with passing by train in the route Wałbrzych Main - Kłodzko Main, consisting of classic carriages and a diesel locomotive partially subsidized by the local government of Lower Silesia.

November 25 Railway Worker Day, presentation of rolling stock in the selected stations and reduced prices of tickets to the Museum of Technology in Jaworzyna Śląska.

In winter months, i.e. in **November, December, January, February and March,** and also in **April,** if the state of snow on slopes and pistes will be appropriate **Railway Skipass from Lower Silesia** must be in force. It includes the ski resorts and the adjacent railway stations.

It is worth to use the pattern of the Province of Silesia, which was applied from 15 December 2012 (Figure 5). It included the right to buy a ticket in the same office or on train board, ski pass and the use of free bus that ferried skiers to the slope in the selected centres [5].

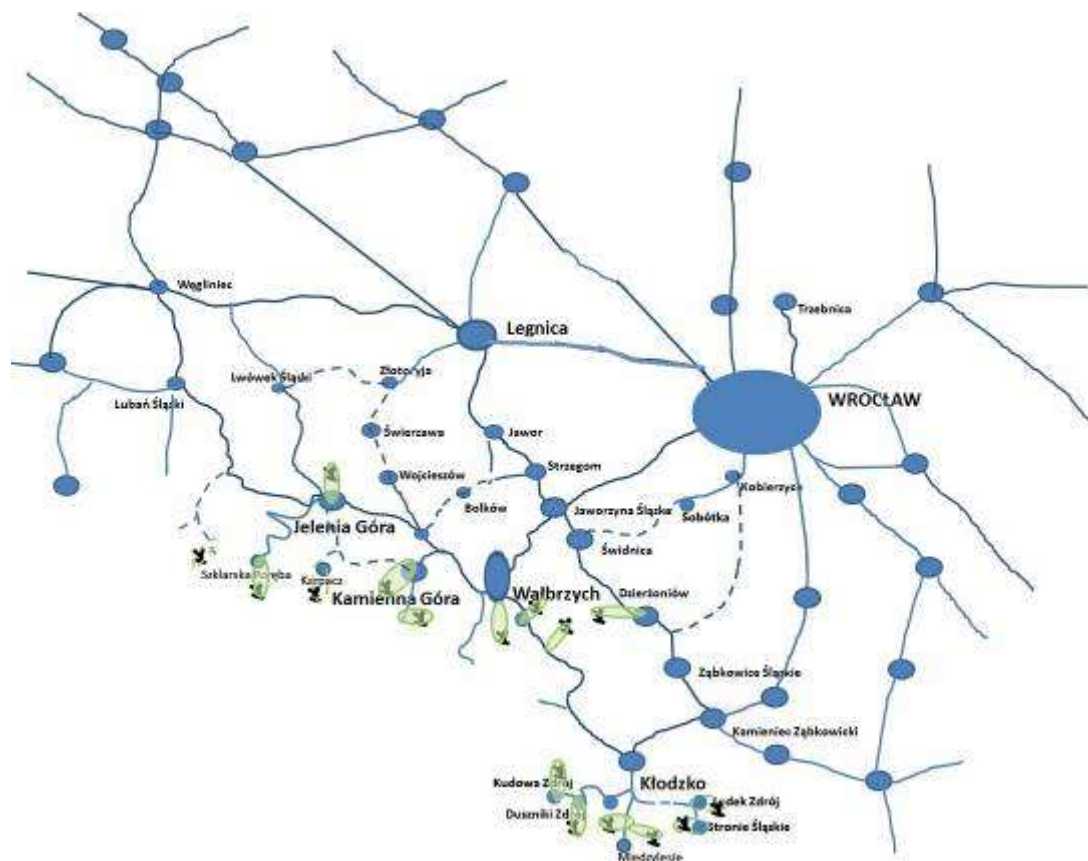
In Lower Silesia, there are also several ski resorts [14]:

- Bielawa – Krasnal , at a distance of 6.6 kilometres from the active station Dzierżoniów, 1.1 km from the station Bielawa,
- Bielice - Art-Ski, at a distance of 42 km from the active station Kłodzko City, 13.4 km from the station Stronie Śląskie,
- Czarnów, at a distance of 21 km from the active station Marciszów, 10.7 km from the station Kamienna Góra,
- Dziwiszów, at a distance of 10.1 km from the active station Jelenia Góra, city bus line 10 goes there,
- Jedlina Zdrój-Karolinka, at a distance of 10.1 km from the active station Jedlina Górna,
- Karpacz, at a distance of 22 km from the active station Jelenia Góra, 4.5 km from the station Karpacz,
- Kudowa Zdrój - Pod Świnim Grzbietem, at a distance of 1.5 km from the active station Kudowa Zdrój
- Łądek Zdrój – Trojak, at a distance of 25.7 km from the active station Kłodzko City, 3.5 km from the station Łądek Zdrój,
- Lubawka- Święta Góra, at a distance of 18.4 km from the active station Sędziszów, 3.3 km from the station Lubawka used only in summer,

- Miedzygórze - Diament, at a distance of 11 km from the active station Domaszków.
- Miedzygórze - U Bolka, at a distance of 10.1 km from the active station Domaszków.
- Nowa Morawa, at a distance of 36.2 km from the active station Kłodzko City, 7.5 km from the station Stronie Śląskie,
- Potoczek -Wielka Sowa, at a distance of 13.4 km from the active station Dzierżoniów, 14.1 km from the station Bielawa,
- Rudawa, Góry Bystrzyckie – Dolina Orlicy, at a distance of 15 km from the active station Bystrzyca Kłodzka, or 10.6 km from the active station Długopole Zdrój,
- Rybnica Leśna –Andrzejówka - Gwarek, at a distance of 8.4 km from the active station Wałbrzych Main city bus line 12 goes there,
- Rzecznica, at a distance of 6.9 km from the active station Bartnica,
- Sienna - Czarna Góra, at a distance of 16.8 km from the active station Bystrzyca Kłodzka, 7.1 km from the station Stronie Śląskie,
- Sobótka, at a distance of 13.7 km from the active station Mietków, 1.8 km from the station Sobótka,
- Spalona, at a distance of 12.7 km from the active station Bystrzyca Kłodzka,
- Szklarska Poręba Jakuszyce , at a distance of 0.1 km from the active station Szklarska Poręba Jakuszyce,
- Szklarska Poręba –Szrenica, at a distance of 3.3 km from the active station Szklarska Poręba Górna,
- Świeradów-Zdrój, at a distance of 18.2 km from the active station Gryfów Śląski, or at a distance of 21.2 km from the active station Szklarska Poręba Górna, 2.3 km from the station Świeradów-Zdrój
- Zieleniec, at a distance of 12.7 km from the active station Duszniki Zdrój.



5. Offer advertisement „Kolej na Beskidy” Kolei Śląskich [5]



6. A map of possible skipasses on Dolny Śląsk.

In the first stage, it is proposed to use a similar offer as in Silesian Railways, the idea of ski pass on existing railway connections (Figure 6):

Wrocław-Walbrzych, Szklarska Poręba, Kudowa Zdrój, Międzyzdrój, Walbrzych—Kłodzko and Jaworzyna Śląska- Kamieniec Żabkowicki, where there are regular railway connections and Wrocław-Lubawka, which is used only in summer.

It is ironic that, three other major ski resorts Karpacz, Świeradów Zdrój and Stronie Śląskie do not have a railway connection. It causes local traffic jams on roads. If the announced acquisition and revitalization of the railway lines is realized [4] in routes Jelenia Góra- Karpacz, Gryfów Śląski – Świeradów Zdrój i Kłodzko-Stronie Śląskie the service skiers could provide the carrier rail a good income in the winter season.

The proposal of integration of tourist services to railway and collective transport in Wałbrzych agglomeration

Wałbrzych agglomeration was established in 2011 by 22 districts to solve common problems and search for integrated methods and tools of development, particularly in the fields of communications and transport, environment, tourism, education, social policy and infrastructure (Figure 7) [18].

The communication service to destinations based on city buses ZDKiUM Wałbrzych lines 2,5,12 and 15 buses of private carriers [22].

In the current arrangement of interchange nodes are:

- railway station Wałbrzych City,
- railway station Wałbrzych Main,
- Grunwaldzki Square.

You can see that the communication service of tourist cities such as: Boguszów Gorce, Lubiechów, Szczawno Zdrój and Książ Castle is possible with the use of the urban bus of lines 2 and

8. Getting to other tourist destinations such as: Walim, Jedlina Zdrój, Głuszyca, Sokołowsko, Mioszów and Andrzejówka is difficult.

This is due to the unfavourable course of buses of line 5, 12 and 15.

The line 5, which supports Walim, Jedlina Zdrój, Głuszyca is not connected with any railway station. Its route passes through Piłsudskiego Street to Grunwaldzki Square. It is reasonable that the bus line looped to ride next to the bus stop at Parkowa - Armii Krajowej Streets, the bus stop 1089, when driving from Grunwaldzki Square and back to it (Fig. 8).

Therefore, the tourist also outside of Wałbrzych could use it. Courses that would be performed by the bus of line 5 in Piłsudski Street can be balanced by courses of the bus line 15.

Bus line 12 supports Andrzejówka. It is strange that 4 to 5 courses that remained after the final liquidation [11] end to Chrobry Street, although this line has a course to Szczawienko estate, next to the train station Wałbrzych City at the bus stop Armii Krajowej - Railway City with ID 1093 (Figure 6), only one course goes this entire route. It is reasonable that each course to Andrzejówka goes the entire route next to the train station Wałbrzych City. Even more important is the choice of hours of courses to Andrzejówka. Due to the timetable and the reconstruction of the railway station Wałbrzych City, when the possibility of direct entry to the platform 2 of Żeromskiego Street was eliminated, it is reasonable that courses to Andrzejówka were at the hour X.57 to the bus stop on Armii Krajowej - City Station, the bus stop 1911. In addition, each course from Andrzejówka should enter directly under the station Wałbrzych Main at Gdynia street to the stop Wałbrzych Main Station, the bus stop 9509 (Fig. 9).



7. Map Agglomeration Wałbrzyska [11]



8. View from behind the bus station ul. Parkowa - Armii Krajowej in Wałbrzych to Sokołowska and Mioszów and a potential stop to Jedlina Zdrój and Walim, on the other side of the street



9. View of the bus stop of line 12 at ul. Armii Krajowej - City Station in Wałbrzych, a potential stop to Andrzejówka

The bus line 15 supports Sokołowsko and Mioszów in the direction Golińsk - border. All courses from and to Golińsk start and end at the stop Konopnickiej Street – the final stop with the number 8427. The paradox is that this line has courses through the so-called. Beethoven and Nowe Miasto by the stop Parkowa - Armii Krajowej with the number 1698, located directly beside the train station Wałbrzych City. It would be enough to combine these routes and set the courses to Golińska at the hour X.41, from the bus stop Parkowa - Armii Krajowej with the number 1698 (Figure 9) according to the direction Glink Nowy through the Nowe Miasto, Wysockiego - Grunwaldzki Square - Mioszowska - Nowy Glinik, or other direction suited to the arrivals of trains from Wrocław.

The authorities of Wałbrzych city and its agglomeration should know that tourists arriving by railway are not only young people but especially pensioners, who walk on the surrounding hiking trails [20] [21].

The bus arrival time to a tourist town should be chosen to take into account possible delays and slow transition to a stop. As an example can be the timetable in 2015. The train arrived at the station Wałbrzych Main at 8:21 and the bus line 12 had the departure from the station at 8:26 at the stop Niepodległości – Szkolna, with the number 1008 (Fig. 10). If the train was late one minute, many people missed the bus and did not go to Andrzejówka (Fig. 11). Thus, the time of departure of the bus should be at least 30 minutes after the scheduled arrival of the train.

The literature about communication and transport put the emphasis on the reducing time of changes, but it makes sense for regular and frequent connections, e.g. in public transport. For few connecting, i.e. 2, 3, 4 per day, it is more important to ensure passenger to "catch a course". In the case of rare connection, a longer waiting time for the course is a smaller loss than the total loss of communication.

The authorities of Wałbrzych city could communicate with the manager of the railway station Wałbrzych City to add the information board about the possible directions of connections to tourist destinations and position of the bus stops to them with current information about the departures.

It is reasonable to use free space above boards with railway timetables at the station Wałbrzych City (Figure 12) to hang information about the location of bus stops to tourist places around the station (Figure 13). Next to it, a monitor displaying the current departures of buses with indicated stops should hang.

Linia 12		Kierunek: Niepodległości - Poczta	Kierunek: Niepodległości - Wałbrzych
1	10:00	10:00	10:00
2	10:15	10:15	10:15
3	10:30	10:30	10:30
4	10:45	10:45	10:45
5	11:00	11:00	11:00
6	11:15	11:15	11:15
7	11:30	11:30	11:30
8	11:45	11:45	11:45
9	12:00	12:00	12:00
10	12:15	12:15	12:15
11	12:30	12:30	12:30
12	12:45	12:45	12:45
13	13:00	13:00	13:00
14	13:15	13:15	13:15
15	13:30	13:30	13:30
16	13:45	13:45	13:45
17	14:00	14:00	14:00
18	14:15	14:15	14:15
19	14:30	14:30	14:30
20	14:45	14:45	14:45
21	15:00	15:00	15:00
22	15:15	15:15	15:15
23	15:30	15:30	15:30

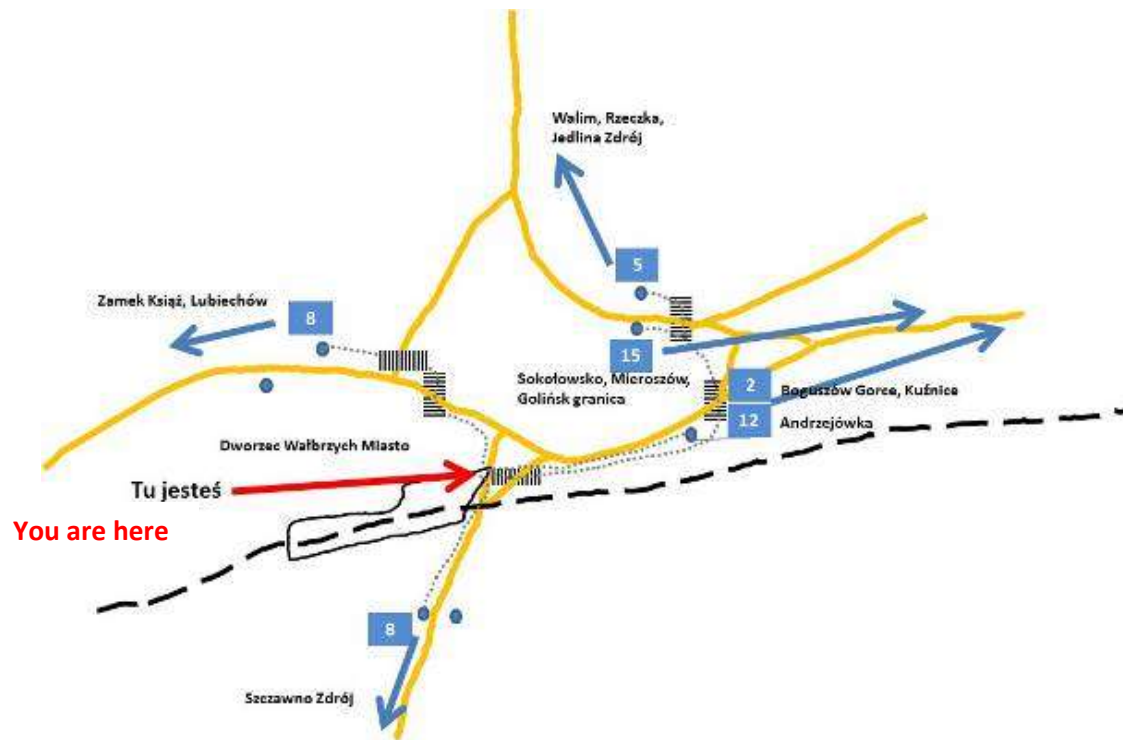
10. Line 12 timetable at the Niepodległości Poczta stop in the direction of Andrzejówka



11. A view towards the Andrzejówka hostel from the Rybnica Leśna Andrzejówka stop



12. A view of the place for an information board for tourists at the Wałbrzych City railway station. Ed. own



13. A view of the information board proposal at the Wałbrzych City station

Summary

The presented paper shows the potential solutions of integration of railway tourist offer in Lower Silesia. The possibilities of communication of the ski centres by railway were presented and a year-round calendar of railway tourism was offered for the region of Lower Silesia. Possible solutions of the integration of railway and urban bus services for tourists in the region of Wałbrzych agglomeration were pointed out. It is reasonable to broaden and deepen this offer for the whole of Lower Silesia.

Source materials

- [1] Edmund Heusinger von Waldegg: Organ für die Fortschritte des Eisenbahnwesens, Tomy 23-24, C. W. Kreidel., 1868
- [2] Festiwal Kwiatów i Sztuki, Zamek Książ w Wałbrzychu, <http://www.ksiaz.walbrzych.pl/turystyka/festiwal-kwiatow/#o-festiwalu>
- [3] Kirchoff, Roger C. : A railroad station, Thesis (B.S.)--University of Illinois, 1913
- [4] Kokozkiewicz Mateusz: Pociągi wrócą na zamknięte linie kolejowe. Tory przejmie...2014-05-24, [Gazeta.pl, http://m.wroclaw.gazeta.pl/wroclaw/1,121414,16022456,Pociagi_wroca_na_zamkniete_linie_kolejowe__Tory_przejmie__.html](http://m.wroclaw.gazeta.pl/wroclaw/1,121414,16022456,Pociagi_wroca_na_zamkniete_linie_kolejowe__Tory_przejmie__.html)
- [5] Koleje Śląskie dla narciarzy, UTK, Urząd Transportu Kolejowego, Serwis dla Pasażerów, Środa, 13 lutego 2013, <http://www.pasazer.utk.gov.pl/pas/aktualnosci/2620,Koleje-Slaskie-dla-narciarzy.html>
- [6] Koleje Śląskie we współpracy ze Spółdzielnią Turystyczną „Turysta” oraz z Urzędem Miasta Wisła uruchamiają specjalną ofertę turystyczną „Kolej na Beskidy”: wycieczki z przewodnikiem po Beskidach w cenie biletu Kolei Śląskich!, <http://kolejeslaskie.com/beskidy/>
- [7] Lewandowski Krzysztof: Dolnośląska górską kolej turystyczną, Przewozy regionalne w Polsce - szanse i zagrożenia. I Konferencja naukowo-techniczna, Wrocław, 21-22

- kwietnia 2005 / Red. T. Nowakowski Wrocław : Oficyna Wydaw. "Nasz Dom i Ogród", 2005. s. 39-43.,
- [8] Lewandowski Krzysztof: Turystyka kolejowa na Dolnym Śląsku, Przegląd Komunikacyjny, Nr 12/2013.
- [9] LYFORD W. H.: Co-operation versus Competition, Motor Truck and Railroad Transportation. National automobile chamber of commerce, National motor truck committee, New York city, 1922
- [10] łoś - Administrator °, < <http://dolny-slask.org.pl/> >,: Zmierzających kuracjuszy na dworca poblizu w oczekujący fiakrzy i w dworcowy hotelu Mieroszowie robi i Sokołowska Kowalowej. 2015-12-03, <http://dolny-slask.org.pl/5792214,foto.html?idEntity = 517895>
- [11] PAW: Zmiana rozkładów jazdy, Wałbrzyszek, Piątek, 4 marca 2016, 09:39, ostatnia aktualizacja: 2016-03-04 16:23, <http://www.walbrzyszek.com/news,single,init,article,31225>
- [12] Pociągiem w Łódzkie, Bezpłatne zwiedzanie Województwa Łódzkiego. Wsiądź do pociągu i zobacz piękne zakątki naszego regionu. Wycieczki od maja do sierpnia. <http://pociagiem.lodzkie.pl/>
- [13] PKP Informatyka & PKP S.A. Twój rozkład jazdy. <http://rozklad.sitkol.pl/bin/query.exe/pn?>
- [14] Skistacja, 2007-2014 AKIA, <http://skistacja.pl/node/939>
- [15] Suburban stations and rural homes on the Pennsylvania Railroad, Pennsylvania Railroad, Publisher Office of the General Passenger Agent, Philadelphia, 1875
- [16] Szczęch Marta, Lewandowski Krzysztof: Kolejowe przewozy turystyczne na Dolnym Śląsku, Przegląd Komunikacyjny, Nr 9-10/2011.
- [17] The railway terminal problem of Chicago; a series of addresses before the City club, June third to tenth, 1913, dealing with the proposed re-organization of the railway terminals of Chicago, including all terminal proposals now before the City council committee on railway terminals . City Club of Chicago, 1913
- [18] Urząd Miejski w Wałbrzychu; Aglomeracja Wałbrzyska, 10.04.2011, <http://um.walbrzych.pl/pl/news/aglomeracja-walbrzyska>
- [19] Ustawa o samorządzie terytorialnym Dz.U. 1998 Nr 91 poz. 576, USTAWA z dnia 5 czerwca 1998 r. o samorządzie województwa
- [20] WYCIECZKI JEDNODNIOWE, Polskie Towarzystwo Turystyczno - Krajoznawcze Oddział Wrocławski, <http://www.pttk.wroclaw.pl/wycieczki-jednodniowe>
- [21] Wycieczki w lipcu 2016, Oddział PTTK Wrocław Fabryczna im. Witolda Prelicza, Koło PTTK Nr 6 „Polanka”, http://www.wroclawfabryczna.pttk.pl/www/?page_id=19.
- [22] ZDKiUM Wałbrzych; Rozkład Jazdy Wałbrzych, <http://rozklad.zdkium.walbrzych.pl/>