

# YOUMOBIL - Pilot final report Croatia

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D.T1.3.6 Pilot Final Report HZPP

Final  
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## 1. Introduction

Croatia's pilot final report summarizes how additional train connections targeting the needs of youth were used and whether the software interface used for its marketing was successful.

The document is the deliverable of Activity A.T1.3. "Piloting smart solutions to enhance rural areas' youth's access to passenger transport networks" and it continues the commitment of the partners in the implementation of the pilots, activities already described in:

- D.T1.3.1 "Launch of novel ICT solutions"
- D.T1.3.2 "Pilot launch reports"
- D.T1.3 "Mid-term data analysis"
- D.T1.3.4 "Transferability assessment"

The current deliverable, closely related to the activities described, is a final step that connects the technological aspects and the pilot designed and summarizes the procedure carried out to create the pilot, in the different technical-economic functions as well as in the timing.



## 2. Pilot imeplementation

Pilot information summary	
Project Partner	PP4 - HŽPP
Location of the Pilot	Zagreb Main Station - Dugo Selo line
Main goal of the pilot	The goal is to increase mobility of young people living in rural areas near the Croatia's capital and to provide them with a new railway service and real-time traffic data. The area in question is historically orientated to Zagreb, due to capital's educational, cultural, working and other opportunities. The railway is well used on this line because it is faster than the road.
General description of the pilot	<p>HŽPP introduced an innovative service of night trains going from Zagreb to Dugo Selo (and back), accompanied by the systematic display of timetable information in the sales application, mobile application and online application. The solution itself is a continuation of an existing process in HŽPP when drafting timetable and preparing the data for online display and usage.</p> <p>The pilot started on 11<sup>th</sup> of July 2020 and ran for a year, until the 11<sup>th</sup> of July 2021.</p> <p>In the 2019/2020 timetable, on Saturdays and Sundays, the train on the route Zagreb - Dugo Selo - Ivanić-Grad departed from Zagreb at 0.30 AM, with stops in Dugo Selo at 0.56 am and Ivanić-Grad at 1.17 AM. In the opposite direction, the train left Ivanić-Grad at 1.31, from Dugo Selo at 1.53 and arrived in Zagreb at 2.19.</p> <p>In the timetable 2020/2021, on Saturdays and Sundays, the train on the route Zagreb - Dugo Selo - Ivanić-Grad departed from Zagreb at 0.28 AM, with stops in Dugo Selo at 0.53 and Ivanić-Grad at 1.16 AM. In the opposite direction, the train from Ivanić-Grad departed at 1.26, from Dugo Selo at 1.50 and arrived in Zagreb GK at 2.16.</p> <p>The pilot communication was facilitated by smart solutions available to HŽPP and stakeholders from Dugo Selo, via social media, intranet, and websites as well as local media and national media.</p>



Progress of the pilot	<p>HŽPP as a railway undertaking has a specific pilot, because it is introducing a new innovative service of night trains, accompanied by a smart solution communication and data display. Infrastructure manager (HŽ Infrastructure Ltd) has an important role in this pilot because it owns the software that is essential to insert the timetables and share them with HŽPP, so it can be displayed on ISPRO interfaces.</p> <p>The pilot communication is facilitated by smart solutions available to HŽPP and stakeholders from Dugo Selo, via available online media.</p> <p>The solution itself is a continuation of an existing process in HŽPP when drafting timetable and preparing the data for online display and usage.</p> <p>All preparatory work for the pilot implementation has been done, regarding the operation and software, in 2019, when the new timetable is drafted. Marketing/media part of the pilot i.e. communication was done in Dugo Selo before the pilot started and nationally, when the pilot was launched.</p>
<b>Description of the pilot area</b>	
Country	Croatia
Region	Continental Croatia - Zagreb County
Population	Zagreb 798.400 (2014), Dugo Selo 17.466 (2011)
Population density	Zagreb 1.246/km <sup>2</sup> , Dugo Selo 273/km <sup>2</sup>
Kind of territory	Flat
Kind of settlement	Small town and surrounding (near the urban center)
Date of launch (start - end)	11/07/2020 - 11/07/2021
Timeframe and milestones	<p>The timing of the preparation activities was carefully planned to be in line with the start of timetable 2019/2020, so all the activities started in the very early stage of the project, for the pilot to be launched in summer 2020. The operation started on 11/07/2020 and lasted until 11/7/2021, on weekends.</p> <p>ICT part of the pilot, displaying data solution on all available platforms was available in June 2020, before the actual service started.</p>
Contact persons	<p>Zrinka Marchioli, zrinka.marchioli@hzpp.hr, +385 1 378 3060</p> <p>Renato Humić, renato.humic@hzpp.hr, +385 1 378 3060</p>



Action Pilot details	
Main general aspect/Description	<p>HŽPP was introducing an innovative service of night trains going from Zagreb to Dugo Selo, accompanied by the systematic display of timetable information in the sales application, mobile application and online application. The solution itself was a continuation of an existing process in HŽPP when drafting timetable and preparing the data for online display and usage.</p> <p>The pilot was primarily intended for young people (high-school students, university students and young employed adults) that have a need to go to Zagreb from the rural area of Dugo Selo and back. Since Dugo Selo doesn't have any (or at least close to metropolitan quality) cultural or entertainment industry, the young people go to the movies, clubbing and to theatre to Zagreb. Many also work in Zagreb.</p> <p>The goal was to increase mobility of young people living in rural areas near the Croatia's capital and to provide them with a new railway service and real-time traffic data. The area in question is historically orientated to Zagreb, due to capital's educational, cultural, working and other opportunities. The railway is well used on this line because it is faster than the road.</p> <p>The pilot started on 11<sup>th</sup> of July 2020 and run for a year, until the 11<sup>th</sup> of July 2021.</p> <p>The pilot communication was facilitated by smart solutions available to HŽPP and stakeholders from Dugo Selo, via social media, intranet and websites as well as local media and national media.</p>
Implemented by	PP4 - HŽPP
Managed by (if different)	/
Innovation aspects	<p>The innovative character of the pilot mostly concerns the service. It was focused on creating customer-oriented timetable with online information provision.</p> <p>The other aspect is close cooperation and coordination with local community representatives by including them in the service planning and communication.</p>
Technical issues	
Quantitative indicators (if pertinent):	<ul style="list-style-type: none"> <li>▪ No. of passengers per trip</li> <li>▪ No. of passengers per month</li> <li>▪ number of youths involved in the youth workshops (D.T1.4.1) and raised awareness for the pilot service</li> <li>▪ young users' level of satisfaction (e.g. score scale to be defined) of the YOUMOBIL service collected during the youth workshops</li> </ul>
Target satisfaction	<ul style="list-style-type: none"> <li>▪ closer cooperation with local community representatives</li> <li>▪ improvement of service frequency</li> <li>▪ improvement of information provision</li> </ul>
ICT solutions	<p>ICT part of the pilot, displaying data solution on all available platforms was available in June, before the actual service started.</p> <p>The software development planned was not an actual development but a part of the process to introduce the train into operation. The procedure consisted of HŽPP asking HŽ Infrastructure (separate State-owned company, railway infrastructure manager) for a train path with all its specifications, confirming it and then the information about the requested timetable was inserted into the system called ROMAN-P. This data was,</p>



	<p>and is, consequently displayed on all ISPRO channels, ISPRO being a new IT sales system developed by HŽPP. Channels in question are ticket-office terminals, on-board terminals, mobile application and on-line sales system.</p> <p>The timing of the preparation activities was carefully planned to be in line with the start of timetable 2019/2020, so all the activities started in the very early stage of the project, for the pilot to be launched in summer 2020. The operation started on 11/07/2020.</p> <p>The software cost for HŽPP doesn't exist because all the activities regarding timetable display on all channels are calculated in the train service itself and not separately.</p>
Marketing campaigns	<p>The workshops with the youth confirmed that the communication aspect was developing in the right direction - online as much as possible, new technologies included. When conducting the workshops, before the COVID-19 pandemic, the youth were very much supportive of the new service.</p> <p>All the smart solution communication activities began in June 2019, including social media coverage and online promotion by the City of Dugo Selo and HŽPP. This was due to timely inclusion of local community representatives (City government and Youth Council), who were very supportive of this initiative.</p> <p>HŽPP published an article about the project, announcing the pilot in 2019 and pilot launch in July 2020. An article was also published in local media of Dugo Selo (Dugoselska kronika). The information about the pilot was published on Dugo Selo website on two occasions and on their FB page. Press release was published few days before the pilot began. Printed materials (flyers) were distributed in Dugo Selo and Zagreb Main Station, together with communication items. Posters (with all programme visibility requirements) are placed on both main stations, as well as intermediate ones. Smart solutions such as social media and online content will support the activities, assisted by the Youth Council of Dugo Selo.</p>
Legal issues	<p>HŽPP's legal team had no issues to deal with since everything was resolved with ISPRO system introduction.</p> <p>No tendering was necessary in this case because HŽ Infrastructure is the only infrastructure manager that can provide the complete service of introducing trains into operation, including information insertion into already existing software. The display of the information is under HŽPP's ownership.</p>
Economic issues	<p>Cost related to YOUMOBIL project: 51.750,00 Euro</p> <p>This budget has covered external service costs during the 1-year pilot implementation. The external services consist of infrastructure fees (train track, electricity, train formation, delays, use of passenger stations) and vehicle maintenance.</p> <p>The ticket price on line Zagreb GK – Dugo Selo is 14,30 Kuna (about 1,9 Euro), per person.</p>

### Benefits and advantages

Potential benefits for the **provider** are identified:

- Potential revenue. Although current costs exceed revenues by far, it is intended to show potential of night train service.
- Efficiency due to automated process development.



- Risk that new service can reduce with regards to the competition.
- Sustainability by reducing environmental impact when transferring people to public transport.
- Digital asset to facilitate further business development.
- Data quality to ensure timely, up-to-date and correct data for the users, as well as feedback.
- Service quality improvement by adding new core service (train operation) and accompanying service (data display).
- Contribution to brand identity by communicating involvement in EU co-financed project.

Potential benefits for the **users** are identified:

- Cost reduction due to new available service that is cheaper for end user than individual transport.
- Time savings due to fast railway connection compared to road transport.
- Service quality improvement for existing railway users and diversity for public transport users.
- Life quality improvement by ensuring enhanced mobility.

### Limit and disadvantages

There are a couple difficulties encountered:

1. Economic: due to the COVID-19 pandemic, where there has been a 1.5 months discontinuance of railway public passenger transport in the spring 2020, the financial aspect is very important. This will reflect on the planned incomes that should have covered a part of the operating costs.
2. Social: People tend to avoid using public transport, when possible. Also, this type of behaviour is justifiably encouraged by the health department. This could lead to poor effectiveness of the pilot in terms of passenger numbers.
3. Communication aspect (public): piloting service can be communicated to the general public and especially target group, but, due to health department recommendations, it is not advisable to invite people to use it, during the pandemic.
4. Communication aspect (stakeholders): Local politicians are used to frequenting locations and having public appearances that lead to media coverage. This type of media communication was planned but now it is replaced by the written word to media. The expected results are absent.

Most of the challenges, caused by the Covid-19 epidemic, are not under the influence of HŽPP and although the pilot implementation is going as planned, the expected results might be worse than expected.

### Assessment

Key metrics/results	<p>Number of passengers per trip: averaged 15</p> <p>Number of passengers per month: averaged 120</p> <p>Number of youths involved in the youth workshops (D.T1.4.1) and raised awareness for the pilot service: <math>21 + 11 + 7 + 32 = 71</math></p> <p>Young users' level of satisfaction of the YOUMOBIL service collected during the youth workshops: 32 answers, average score (for railway transport in Croatia in general) is 3,2/5, all the respondents expressed their wish that the service of night trains continued</p>
Success factors/strengths	<p>Railway service:</p> <ul style="list-style-type: none"> <li>• Tailor-made</li> <li>• Unique</li> <li>• Fast</li> <li>• Cost-effective for users</li> </ul>



	<p>Software improvements:</p> <ul style="list-style-type: none"> <li>• Real-time information</li> <li>• Online ticket purchase</li> </ul> <p>Strong stakeholder involvement</p>
<p>Difficulties encountered/weaknesses</p>	<p>Railway service:</p> <ul style="list-style-type: none"> <li>• Expensive for provider</li> <li>• Restrictive regarding timetable</li> <li>• Not flexible regarding the accompanying services</li> </ul> <p>Software improvements:</p> <ul style="list-style-type: none"> <li>• Not flexible regarding display options</li> <li>• Not flexible regarding the display of accompanying services</li> </ul>
<p><b>Initial learnings</b></p>	
<p>Target group for this pilot activity were young people living in Dugo Selo, or on the line from Zagreb to Dugo Selo. Initial reactions during the planning phase (workshops) showed excitement because many use this service daily - train is their commute choice due to speed and price on that line.</p> <p>Although the pilot is complex regarding organization and operation, another important challenge to tackle was communication with the general public and young people using smart solutions.</p> <p>Since the pilot was launched, there were 2 months without school/studies and Covid-19 situation discouraged people from using public transport, as well. HŽPP was in touch with the Youth Council from Dugo Selo and regularly asked for feedback until the end of the 2020. Partial lockdown was introduced at the beginning of December 2020 and this particularly affected public transport. Although railway transport was suspended completely in March and April 2020, it operated with reduced capacities the entire pilot lifetime.</p>	
<p><b>Lesson(s) learnt</b></p>	
<ul style="list-style-type: none"> <li>~ There is the essential need to include local communities in activity planning regarding public transport.</li> <li>~ More involvement of the responsible Ministry is needed.</li> <li>~ Rigid railway regulations can be mitigated by communication activities.</li> <li>~ Smaller interventions are more difficult than big ones when it comes to procurement necessary interventions (data display online for example).</li> <li>~ There is an active will to use the public transport, but there are also unrealistic expectations (cheap, no investments, but reliable and comfortable).</li> <li>~ Interest must be found and communicated, for every participating entity.</li> </ul>	



### 3. Annexes

Web application display:

**Zagreb Glavni kol. → Dugo Selo**

Via: odabir kolodvora  
Datum polaska: 08.08.2020.  
Razred: 2. razred  
Broj putnika: 1  
Pretraži

**Zagreb Glavni kol. → Dugo Selo**  
Odobrenje odlazno putovanje

Datum polaska: 08.08.2020. \*akcijske cijene nisu uključene

Polazak	Vlak	Dolazak	Trajanje	Presjedanje	Cijena
00:30	8099	00:56	00:26	0	14,30 kn

Kolodvor	Dolazak	Polazak	Kašnjenje	Čekanje	Vlak	Kategorija i sastav
Zagreb Glavni kol.	00:30				8099	2
Maksimir	00:35	00:36			8099	
Trnava	00:39	00:39			8099	
Čulinec	00:41	00:41			8099	
Sesvete	00:45	00:46			8099	
Sesvetski Kraljevec	00:50	00:51			8099	
Dugo Selo	00:56				8099	

Ukupno trajanje putovanja: 00:26

LEGENDA  
 Vagoni drugog razreda  
 Vagon za prijevoz bicikla  
 Putnički vlak

**Dugo Selo → Zagreb Glavni kol.**

Via: odabir kolodvora  
Datum polaska: 08.08.2020.  
Razred: 2. razred  
Broj putnika: 0  
Pretraži

**Dugo Selo → Zagreb Glavni kol.**  
Odobrenje odlazno putovanje

Datum polaska: 08.08.2020. \*akcijske cijene nisu uključene

Polazak	Vlak	Dolazak	Trajanje	Presjedanje	Cijena
01:53	8090	02:19	00:26	0	14,30 kn

Kolodvor	Dolazak	Polazak	Kašnjenje	Čekanje	Vlak	Kategorija i sastav
Dugo Selo		01:53			8090	2
Sesvetski Kraljevec	01:58	01:58			8090	
Sesvete	02:02	02:03			8090	
Čulinec	02:07	02:07			8090	
Trnava	02:09	02:10			8090	
Maksimir	02:13	02:14			8090	
Zagreb Glavni kol.	02:19				8090	

Ukupno trajanje putovanja: 00:26

LEGENDA  
 Vagoni drugog razreda  
 Putnički vlak

Mobile application (HŽPP planer) display:

**Zagreb Glavni kolodvor → Du...**  
8. kol nakon 14:11

Odlazak 00:30 — 26 min — 00:56 Dolazak  
Presjedanja: 0 Cijena: 14,30 HRK  
8099 Nema informacija.  
Harmica → Dugo Selo

Odlazak 04:49 — 26 min — 05:15 Dolazak  
Presjedanja: 0 Cijena: 14,30 HRK  
2201 Nema informacija.  
Zagreb Glavni kolodvor → Koprivnica

Odlazak 05:05 — 25 min — 05:30 Dolazak  
Presjedanja: 0 Cijena: 14,30 HRK  
8003 Nema informacija.  
Zagreb Glavni kolodvor → Dugo Selo

Odlazak 05:36 — 27 min — 06:03 Dolazak  
Presjedanja: 0 Cijena: 14,30 HRK  
8005 Nema informacija.

**8099 Harmica → Dugo Selo**

**DETALJI VLAKA**

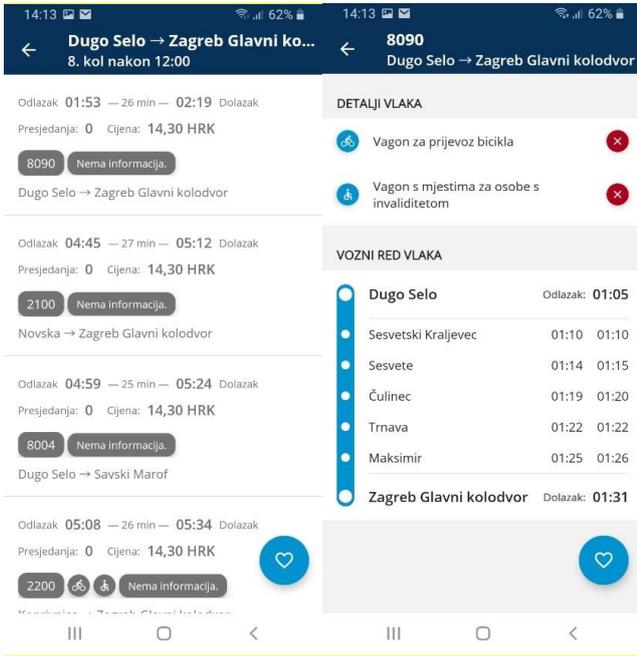
- Vagon za prijevoz bicikla
- Vagon s mjestima za osobe s invaliditetom

**VOZNI RED VLAKA**

	Odlazak	Dolazak
Harmica	23:44	
Sutla	23:46	23:46
Laduž	23:48	23:48
Savski Marof	23:51	23:52
Brdovec	23:55	23:55
Zaprešić Savska	23:58	23:58
Zaprešić	00:01	00:02
Podsused Stajalište	00:07	00:07
Gajnice	00:11	00:11
Vrapče	00:14	00:14
Kustošija	00:17	00:17

**8099 Harmica → Dugo Selo**

Laduž	23:48	23:48
Savski Marof	23:51	23:52
Brdovec	23:55	23:55
Zaprešić Savska	23:58	23:58
Zaprešić	00:01	00:02
Podsused Stajalište	00:07	00:07
Gajnice	00:11	00:11
Vrapče	00:14	00:14
Kustošija	00:17	00:17
Zagreb Zapadni Kolodvor	00:20	00:21
Zagreb Glavni kolodvor	00:25	00:30
Maksimir	00:35	00:36
Trnava	00:39	00:39
Čulinec	00:41	00:41
Sesvete	00:45	00:46
Sesvetski Kraljevec	00:50	00:50
Dugo Selo		00:55



Photographs of night trains:

