



JUDEȚUL MARAMUREȘ
CONSILIUL JUDETEAN MARAMUREȘ



OVERCOMING BARRIERS

MARAMUREȘ COUNTY COUNCIL

IMPROVING THE
MOBILITY OF RESIDENTS
OF THE BORDER REGION
OF TRANSCARPATIA
(UKRAINE), MARAMUREȘ
(ROMANIA) AND
SZABOLCS-SZATMAR-
BEREG (HUNGARY)
HUSKROUA
1702/7.1/0076

Hungary-Slovakia-Romania-
Ukraine ENI Cross-border
Cooperation Programme
2014-2020



Partnership without borders

www.HUSKROUA-CBC.EU

The Programme is co-financed by the
European Union



Overall project details

The project was funded through the Hungary-Slovakia-Romania-Ukraine Cross-Border Cooperation Program 2014-2020, *Thematic Objective 7 TO - Improving access to regions, developing sustainable and climate-resilient transport and communication networks and systems, Priority 7.1 Developing transport infrastructure to improve the mobility of people and goods*, in partnership with the Vynohradiv City Council in the Transcarpathian region (Ukraine), the Municipality of Barabás (Hungary), and the Municipal Enterprise "Investment and Development Center" of the Vynohradiv City Council in the Transcarpathian region (Ukraine).



The **primary aim** of the project is to enhance access to the border regions of Transcarpathia (Ukraine), Maramureș (Romania), and Szabolcs-Szatmár-Bereg (Hungary).

The **project duration** is from **September 1, 2019, to December 31, 2023**

The **total project value** is **€1,480,344.27**, with the **Maramureș County Council** as the applicant having a **project value of €350,879.47**.



Our project objectives



What have we been doing till now



What we want to achieve after

OVERCOMING



The main objective in our vision

We want to unlock the potential of sustainable mobility, Maramures County (Romania) is set to witness a transformation in public transportation infrastructure, ensuring efficient and eco-friendly travel solutions for its residents and visitors alike

SPECIFIC OBJECTIVE:

- **Improvement of transport infrastructure** in Vynohradiv City (Ukraine), Maramures County (Romania) and Barabás village (Hungary)
- **The specific objective will be achieved** by a modern monitoring transport system of the public transport in the Maramures (Romania) and by installing pilot bus stations equipped with information technologies
- The specific objective of the project corresponds to the **specific goal 1 of the Program**: Development of transport infrastructure for improving the mobility of people and goods and contributing to the improvement of the transport infrastructure of the border areas in Vynohradiv City (Ukraine), Maramures County (Romania) and Barabás Village (Hungary)

The specific problem within the context

In Maramures County, outdated public transportation infrastructure hindered efficient mobility and connectivity for residents, requiring modernization and technological advancements to meet growing demand

Address the problem?

What if we could implement a comprehensive modernization project, leveraging European Union funding, to upgrade Maramures County's public transportation system, enhancing mobility and connectivity for all?

Maramures County – our activities

Activity 1.1

Acquisition of services for the modernization of public passenger transport – includes 50 GPS mobile tracking devices that were installed on buses to ensure monitoring, measurements of the indoor and outdoor air quality, optimizing routes by correlating with other traffic data sources, connectivity with the bus stations in order to transmit the data and the timetable/ arriving time of the bus to the station.

Activity 1.2

Implementation of the modernized public transport system.

Activity 1.3

Operation of the modernized public transport system.

Activity 1.4

Acquisition of services for the modernization of bus stations – solution contests for the design of technical documentation for the modernization of bus stations. Finally, 4 demonstration, operational, bus stations were built.

Activity 1.5

Elaboration of technical studies for the modernization of the bus stations- Technical study for modernizing the bus stations, building the 4 model/pilot stations.

This project is the SOLUTION

"OVERCOMING BARRIERS" is the "mobility revolution": a transformative project to overhaul Maramures County's public transportation infrastructure, ensuring seamless travel experiences for all residents and visitors

Result 1:

- A modernized operational transport system consisting of 50 buses with additional monitoring systems, feasibility studies and technical projects for the modernization of bus stations and 4 model bus stations

Result 2:

- Reconstructed, modernized transport infrastructure of three countries: Ukraine, Romania, Hungary

Result 3:

- Conference on the exchange of experience in the field of transport infrastructure development in the border area will be held: in Vynohradiv (Ukraine), in Maramures County (Romania); in Barabas village (Hungary)

Result 4:

- Increased number of vehicles using the modernized transport and border management infrastructure (number of vehicles per day) in Vynohradiv city (Ukraine).

Detailed results:

Through meticulous planning and execution, we successfully implemented a comprehensive transportation infrastructure upgrade in Maramures County. This included equipping vehicles providing public transportation on county roads with GPS mobile tracking devices, facilitating real-time monitoring of routes, optimizing travel efficiency, and enhancing overall transportation accessibility and reliability for residents and visitors alike

The culmination of our efforts resulted in the establishment of four pilot bus stations equipped with modern amenities and state-of-the-art information technologies. These stations serve as models for future infrastructure improvements and provide passengers

with enhanced travel experiences. Additionally, we implemented a comprehensive monitoring system, including two video wall displays, for permanent surveillance of public transport operations, ensuring smooth and reliable service delivery.

The operation of the modernized public transport system is facilitated through a user-friendly web application and mobile transport application. Passengers have access to real-time information about bus routes, schedules, and arrival times, improving overall travel convenience. Additionally, technical documentation for the modernization of bus stations was elaborated, laying the groundwork for future infrastructure enhancements and ensuring sustainability in the long run.

In conclusion, the **detailed results** of our project showcase a successful overhaul of transportation infrastructure in Maramures County.

We've set an **ambitious goal**: every public transportation vehicle on county routes must integrate GPS systems to qualify for participation in public transportation tenders. Moreover, we've revolutionized commuter experience by deploying a cutting-edge mobile application, empowering individuals to effortlessly navigate routes and schedules to their preferred destinations. As for the four **pioneering** pilot stations, their groundbreaking documentation is now accessible to other local administrative units, igniting a wave of innovation and progress across our region.

OVERCOMING

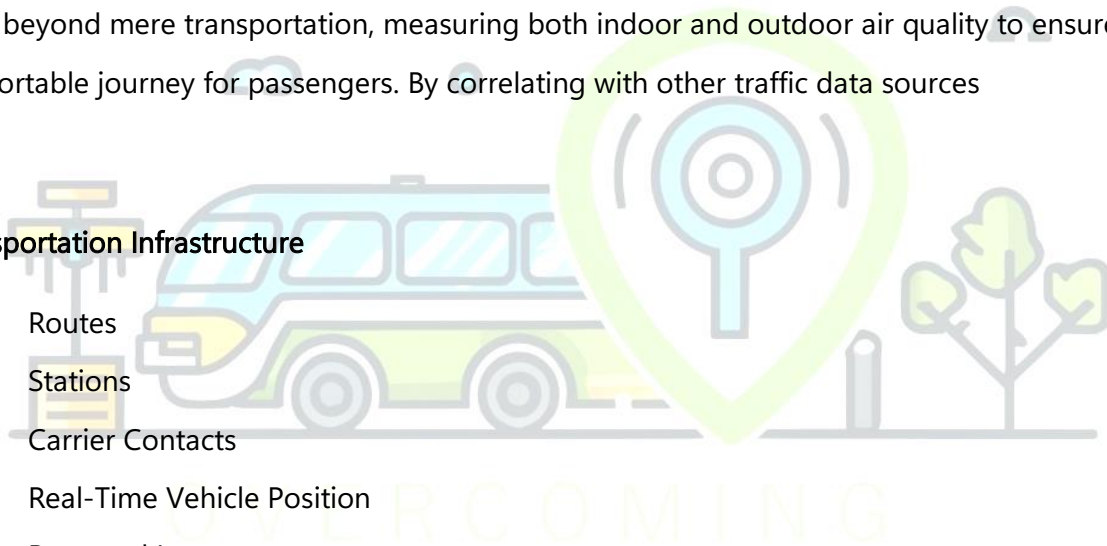
Introducing our advanced **monitoring system**:

- GPS mobile tracking devices for precise vehicle tracking.
- Indoor and outdoor air quality measurements ensure passenger comfort.
- Route optimization by integrating with traffic data sources.
- Seamless connectivity with bus stations for real-time data transmission, including bus timetables and arrival times.

Utilizing GPS mobile tracking devices, we ensure precise tracking of public transportation vehicles, allowing for real-time monitoring of routes and optimizing travel efficiency. Our system goes beyond mere transportation, measuring both indoor and outdoor air quality to ensure a comfortable journey for passengers. By correlating with other traffic data sources

Transportation Infrastructure

- ∂ Routes
- ∂ Stations
- ∂ Carrier Contacts
- ∂ Real-Time Vehicle Position
- ∂ Reported Issues



Discover Our Transport Website: Accessible and User-Friendly!

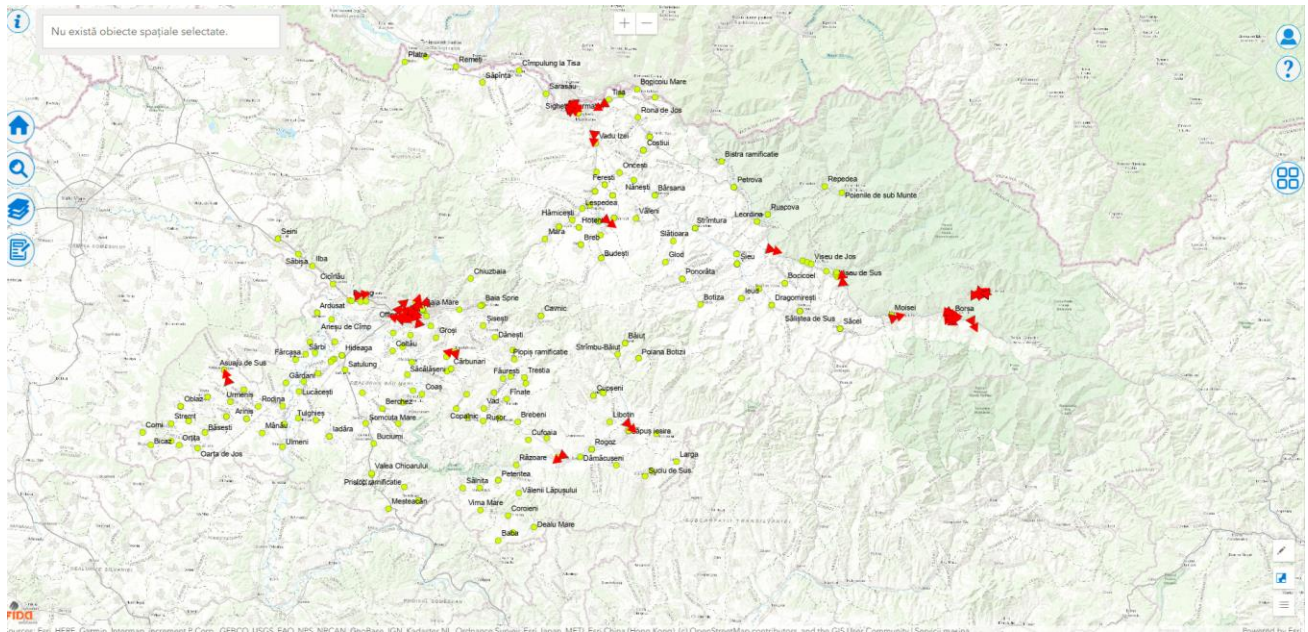
Our transport website is designed for everyone who wants to stay informed and engaged with the latest developments in Maramures County's public transportation system. It's incredibly easy to create an account and start exploring all the features we offer.

- **Easy Account Creation:** Signing up is simple and quick, allowing you to access all the information and resources you need in just a few clicks.
- **Comprehensive Information:** Stay updated with real-time bus schedules, routes, and arrival times.
- **Interactive Features:** Provide feedback, report issues, and participate in community discussions to help shape the future of our transportation system.

Functionalities of the Web Component:

- **Web GIS Application:** Integrated natively with the Beneficiary's Web GIS application, including GIS layers and application windows.
- **Vehicle and Sensor Monitoring:** Tracks the positions of vehicles and the sensors mounted on them.
- **Data Processing Algorithms:** Develops algorithms to process data from vehicle-mounted equipment, displaying, monitoring, and reporting processed and aggregated information (e.g., automatically highlighting vehicles in red when sensor values exceed predefined thresholds).
- **Dashboard:** Provides statistical information and real-time data from field sensors.

- **Delay Monitoring:** Tracks real-time delays of transport vehicles against the standard schedule for specific routes and days.
 - **Transport Route and Operator Management:** Manages transport routes and operators.
 - **User Management:** Manages internal users of the Beneficiary, transport operators, and authenticated public users.
 - **Routing Algorithms:** Processes routing algorithms to calculate estimated times of arrival (ETA).
 - **Sensor Data Management:** Displays, manages, and monitors data from mounted sensors.
 - **Graphical Reports:** Generates graphical reports.
 - **Abuse Monitoring:** Monitors operator abuses, such as exceeding passenger capacity, alcohol consumption, and exceeding air quality thresholds.
 - **Alert and Problem Monitoring:** Tracks alerts and issues reported by citizens via mobile applications.
 - **Bidirectional Reporting and Communication:** Allows reporting and communication with users who report problems, including resolutions and measures taken.
 - **Emergency Command Management:** Manages emergency situations such as winter events, incidents on transport routes, blockages, collapses, and other urgent issues
- 



Schedule of Services Passing Through a Station

Rute care trec prin statia 'Baia Mare Casa Rosa'

Copy Excel CSV Arată 10 înregistrări pe pagină Căutare:

Nr. crt.	Denumire ruta	Sens	Ora	Transportator
31	Baia Mare- Poiana Botizei	spre Baia Mare	13:55	SC Podea& Co TRANS SNC
32	Baia Mare- Poiana Botizei	spre Baia Mare	15:40	SC Podea& Co TRANS SNC
33	Baia Mare- Poiana Botizei	spre Poiana Botizii	16:20	SC Podea& Co TRANS SNC
34	Baia Mare- Poiana Botizei	spre Poiana Botizii	18:25	SC Podea& Co TRANS SNC
35	Baia Mare- Targu Lapus	spre Baia Mare	07:25	SC Grup ADM Tur SRL
36	Baia Mare- Targu Lapus	spre Tîrgu Lăpuș parcare Cinema	08:35	SC Grup ADM Tur SRL
37	Baia Mare- Targu Lapus	spre Baia Mare	09:25	SC Grup ADM Tur SRL
38	Baia Mare- Targu Lapus	spre Tîrgu Lăpuș parcare Cinema	10:05	SC Grup ADM Tur SRL
39	Baia Mare- Targu Lapus	spre Baia Mare	11:55	SC Grup ADM Tur SRL
40	Baia Mare- Targu Lapus	spre Baia Mare	12:25	SC Grup ADM Tur SRL

Arată 31 - 40 din 50

<< < 1 2 3 4 5 > >>

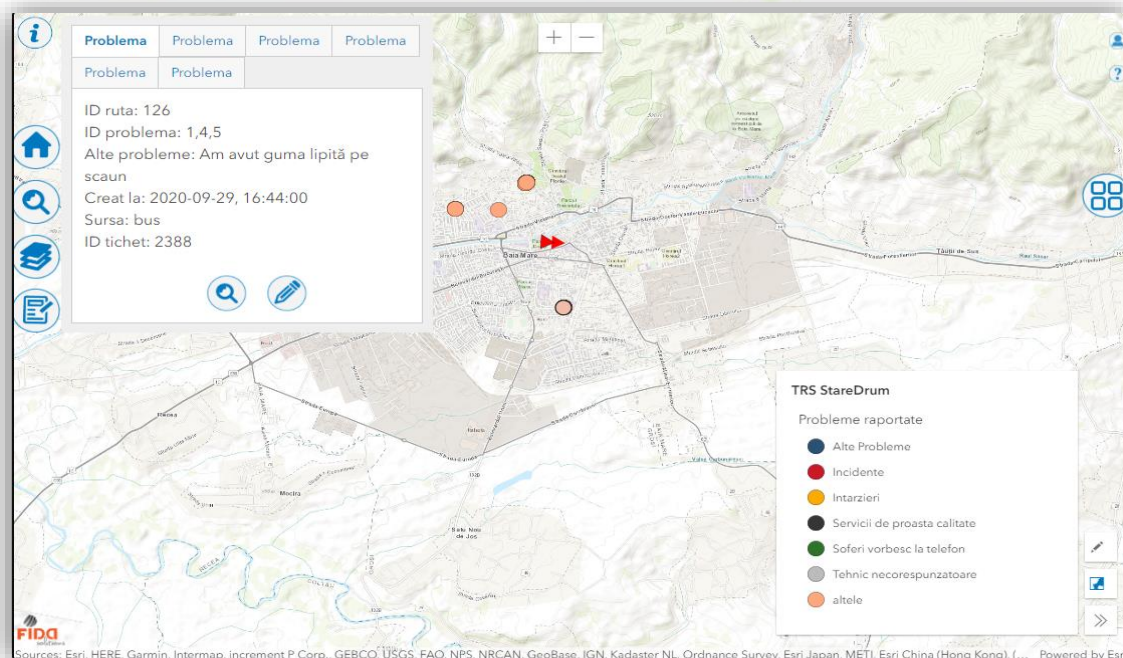
Stations Associated with a Route

Statii disponibile pe ruta "Targu Lapus"

Copy Excel CSV Arată 25 înregistrări pe pagină Căutare:

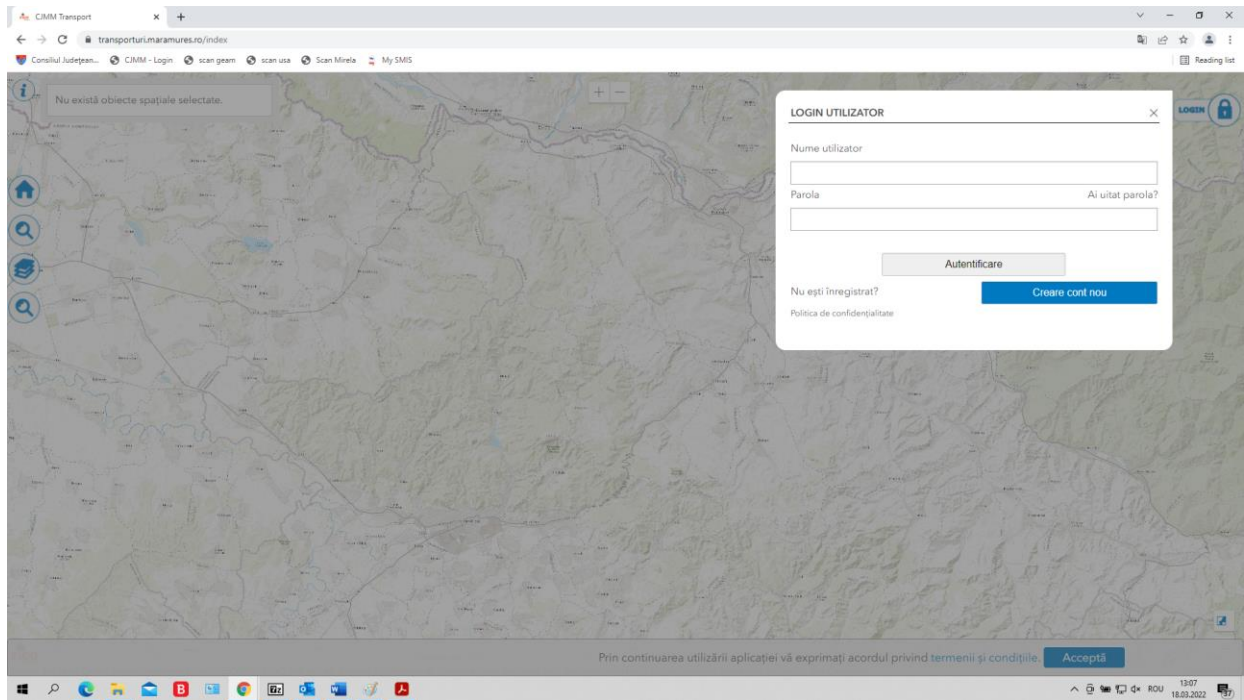
Nr. crt.	Statie	Nr. ordine	Nr. km	Transportator
1	Baia Mare	1	0	SC Podea& Co TRANS SNC
2	Parcare Str. Mihai Eminescu	2	3	SC Podea& Co TRANS SNC
3	Baia Mare Casa Rosa	3	4	SC Podea& Co TRANS SNC
4	Cărbunari	4	15	SC Podea& Co TRANS SNC
5	Berința ramificatie	5	21	SC Podea& Co TRANS SNC
6	Copalnic	6	25	SC Podea& Co TRANS SNC
7	Copalnic-Mănăștur	7	27	SC Podea& Co TRANS SNC
8	Rușor	8	31	SC Podea& Co TRANS SNC
9	Cernești	9	32	SC Podea& Co TRANS SNC
10	Tîrgu Lăpuș parcare Cinema	10	46	SC Podea& Co TRANS SNC
11	Dămăcușeni	11	49	SC Podea& Co TRANS SNC
12	Rogoz	12	53	SC Podea& Co TRANS SNC
13	Lăpuș centru	13	61	SC Podea& Co TRANS SNC
14	Poiana Botizii ramificatie	14	70	SC Podea& Co TRANS SNC
15	Poiana Botizii	15	74	SC Podea& Co TRANS SNC

Road Conditions and Reported Issues



If we access this link: <https://transporturi.maramures.ro>

We arrive here for the register/login page:



and after registration, anyone can access it to visualize the location of the busses, the routes and other useful information


The mobile app provides quick and easy access to real-time information on routes, schedules, and fares. Stay connected and informed with just a few taps on your device.

Functionalities of the Application:

- **User-Friendly Interface:** Available in at least Romanian and English.
- **User Registration:** Users register using an email and password.
- **Secure Payment Information:** Users can save their payment cards, with data stored exclusively on the payment processor's servers. The mobile app only stores a card hashtag (identifier).

- **Account Data Storage:** Except for bank card data, all user account information is saved on the server.
- **Password Management:** Users can change their password at any time.
- **Route Selection and Payment Calculation:** Registered users select their transport route. Based on the centralized management algorithm, the app calculates the fare from the starting point (using phone location) to the destination and identifies the transport operator owed.
- **Centralized Fare Management:** Route fares are defined in the centralized management server application.
- **Payment Execution:** Users receive a payment confirmation including the selected route, fare zone, travel validity information, and fare details.
- **Ticket Display:** The app displays the user's active ticket.
- **History Section:** Users can view their application usage history, payments made, and accessed routes.
- **Problem Reporting:** Features a geoblog for reporting issues such as incidents, poor service quality, vehicle delays, and technical issues with vehicles.
- **Real-Time Incident Viewing:** Centralized management can view real-time incidents like blocked routes due to snow, rockfalls, snowdrifts, and floods.

4:59

←  Curse și Plată

Curse Disponibile

<input type="radio"/>	Transportator1 Baia Mare	10,50 lei Ocna Șugatag centru	14:00 → 15:14 1h 14min
<input type="radio"/>	Transportator1 Baia Mare	10,50 lei Ocna Șugatag centru	15:00 → 16:14 1h 14min
<input checked="" type="radio"/>	Transportator1 Baia Mare	10,50 lei Ocna Șugatag centru	17:00 → 18:14 1h 14min

Plată

CARD SMS


Prețul biletului pentru 2 pasageri care călătoresc de la Baia Mare la Ocna Șugatag este de:

21.00 lei

Plecarea va fi la data de 15.12.2020, la ora 17:00

Plătește

4:25



Consiliul Județean Maramureș


Adresa de email

Parola


Conectare

Ai uitat parola?

Cont nou



5:35

← Raportează Problema 

Incident

Serviciu de proasta calitate

Autovehicul intarziat

Autovehicul in stare tehnica necorespunzatoare




Soferul vorbeste la telefon

Altă Problemă

Describe altă problemă


Trimite


5:05


 **Autobuze Maramureș**  

BILETE **ISTORIC**

Operator	Pasageri
Transportator 1	2
De la	Plecare
Baia Mare	Azi, 17:35
La	Sosire
Ocna Șugatag Centru	Azi, 18:51







BUS STATIONS

proposed station of Țara Maramureșului, Strâmtura Commune



implemented station of Țara Maramureșului, Strâmtura Commune



proposed station of Țara Lăpușului, Târgu Lăpuș city - Damacușeni



implemented station of Țara Lăpușului, Târgu Lăpuș City - Damacușeni



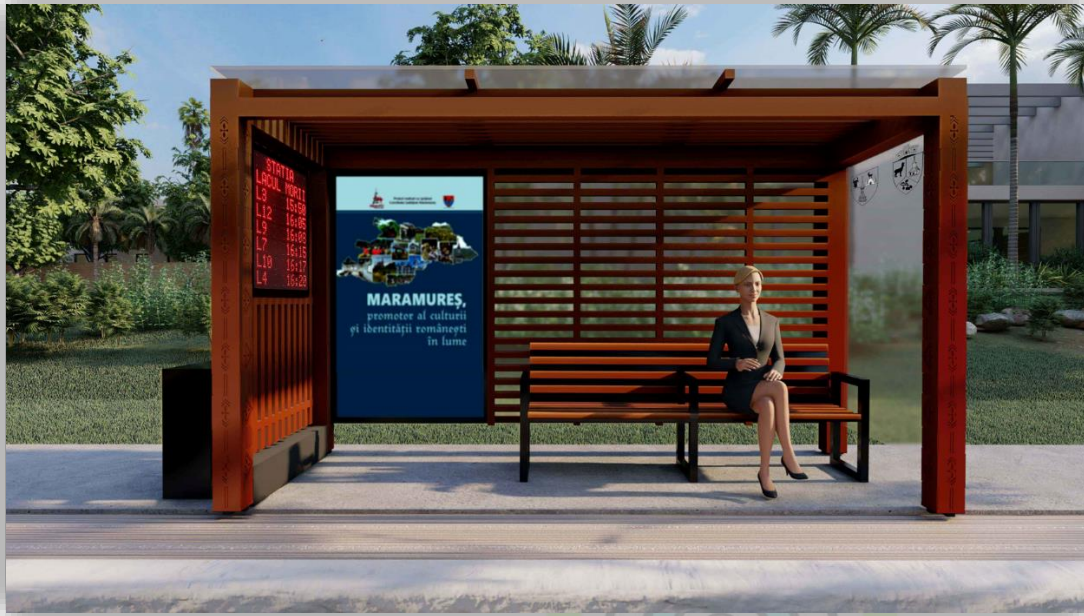
proposed station of Țara Codrului, Gârdani Commune



implemented station of Țara Codrului, Gârdani Commune



proposed station of Țara Chioarului, Groși Commune



implemented station of Țara Chioarului, Satu Nou Commune



Embrace Sustainable Travel: Powered by Solar Energy!

Experience eco-friendly transportation like never before with our solar-powered stations. Committed to reducing carbon footprint and aligning with the **European Green Deal**, our stations harness the **power of the sun to fuel** your journey. By integrating solar panels into our infrastructure, we're not just providing efficient transportation solutions – we're paving the way for a greener future.

Say goodbye to reliance on traditional power sources and hello to clean, renewable energy. With our solar-powered stations, you can travel guilt-free, knowing that every stop contributes to a more sustainable planet.

In addition to harnessing solar energy for sustainable travel, our stations offer a modern convenience – **charging sockets for your smartphone or laptop**. Whether you're a busy commuter or a traveler on the move, staying connected has never been easier.

Simply **plug in your device** while waiting for your ride and enjoy the peace of mind knowing that you'll arrive at your destination fully charged and ready **to go**.



Accessible Documentation: Empowering Communities with Information!

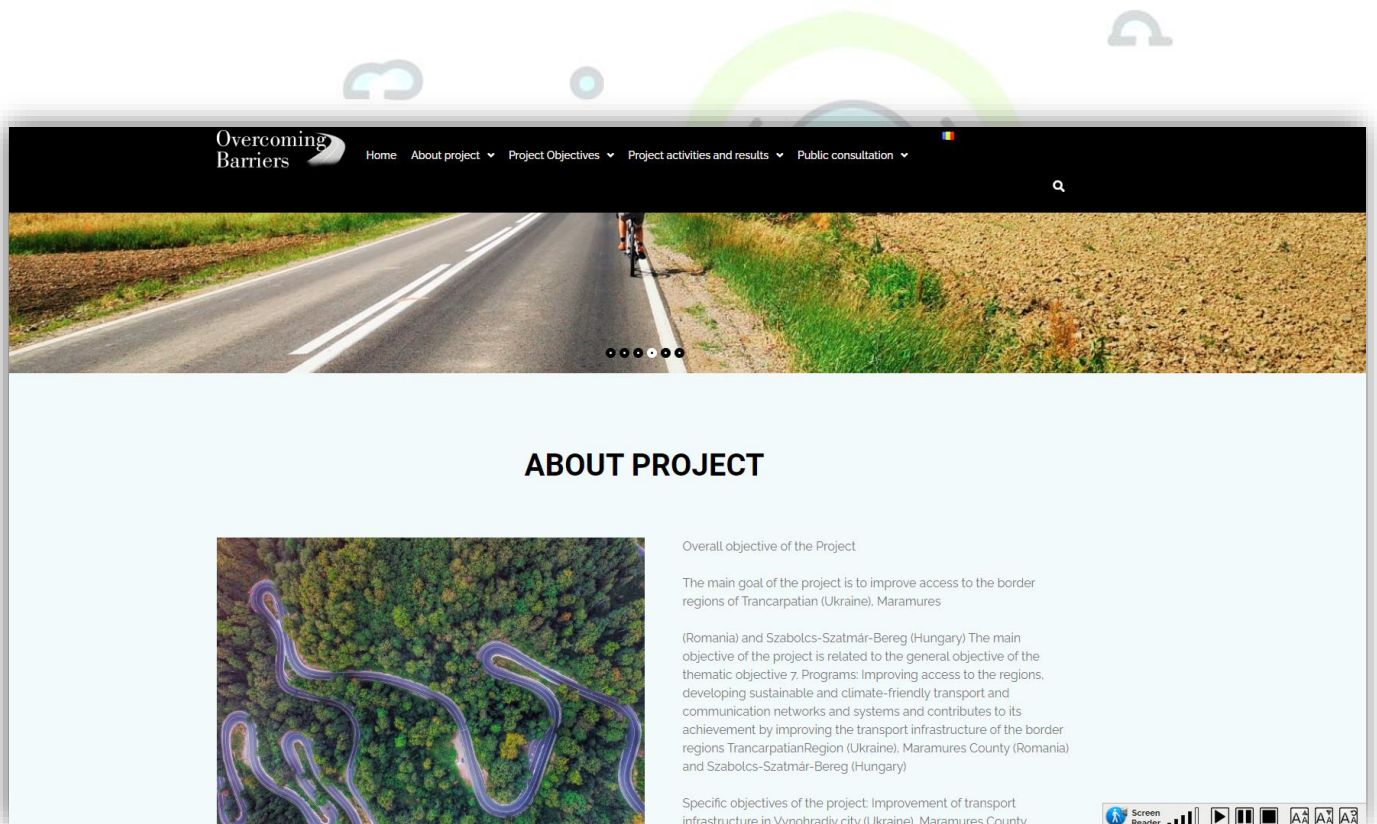
We believe in transparency and accessibility, which is why **the documentation for our bus stations is available to all town halls across the county**. By providing access to this valuable resource, we empower local communities to stay informed and engaged in the development of our transportation infrastructure.

Whether it's reviewing plans for future enhancements or understanding the technical specifications of our stations, **town halls can access the documentation they need to serve their residents effectively**. Together, we're building a more connected and informed community, where everyone has a voice in shaping our shared future.

Explore Our Project: Discover All the Details on Our Public Website!

Curious to learn more about our transportation project? Look no further than our dedicated public website, where you'll find comprehensive information about our project and all about the new to come initiatives, progress updates, and future plans.


<https://overcomingbarriers.maramures.ro/>



The screenshot displays the 'Overcoming Barriers' website. At the top, there is a navigation menu with links for 'Home', 'About project', 'Project Objectives', 'Project activities and results', and 'Public consultation'. Below the menu is a large banner image of a road winding through a rural landscape. The main content area is titled 'ABOUT PROJECT' and features an aerial photograph of a winding road through a dense forest. The text describes the project's overall objective and specific goals, including improving access to border regions and enhancing transport infrastructure.

Overcoming Barriers Home About project Project Objectives Project activities and results Public consultation

ABOUT PROJECT



Overall objective of the Project

The main goal of the project is to improve access to the border regions of Transcarpatian (Ukraine), Maramures (Romania) and Szabolcs-Szatmár-Bereg (Hungary) The main objective of the project is related to the general objective of the thematic objective 7, Programs: Improving access to the regions, developing sustainable and climate-friendly transport and communication networks and systems and contributes to its achievement by improving the transport infrastructure of the border regions TranscarpatianRegion (Ukraine), Maramures County (Romania) and Szabolcs-Szatmár-Bereg (Hungary)

Specific objectives of the project: Improvement of transport infrastructure in Vynohradiv city (Ukraine), Maramures County

Screen Reader

Our initiative in Maramures County has ushered in a new era of transportation, marked by modernization, efficiency, and sustainability. Here's a snapshot of our key achievements:

- **Advanced Monitoring System:** Implemented a cutting-edge monitoring system for public transport, ensuring real-time tracking and management of 50 buses equipped with GPS technology.
- **Technical Documentation:** Developed comprehensive technical documentation for the modernization of bus stations, laying the groundwork for future enhancements and ensuring sustainability.
- **Innovative Pilot Bus Stations:** Established four pilot bus stations featuring specific architectural elements and equipped with modern technologies, setting the standard for future infrastructure improvements.
- **Strategic Information Displays:** Installed two video wall displays for continuous monitoring of public transport operations, enhancing reliability and service delivery.
- **Project Visibility:** Increased project visibility through a dedicated webpage and informative leaflets, fostering community engagement and awareness.

These **accomplishments** underscore our commitment to delivering state-of-the-art transportation solutions that prioritize efficiency, sustainability, and the needs of our community.

Our vision is to transform transportation accessibility and efficiency, empowering communities to thrive and flourish. With our innovative initiatives already in motion, we envision a future where seamless mobility enhances every aspect of daily life, fostering prosperity and connectivity across our region.

Transforming Transportation for a Sustainable Future!

Our project in Maramures County is a bold step towards revolutionizing public transportation. By integrating advanced technologies, sustainable practices, and community-focused solutions, we are committed to creating a seamless, efficient, and eco-friendly transport system for all.

With GPS-equipped buses, solar-powered stations, and real-time monitoring, we are not only improving travel efficiency but also reducing our carbon footprint. Our transparent approach, with accessible documentation and a public website, ensures that the community remains informed and engaged every step of the way.

Join us on this journey towards a greener, more connected future. Together, we are shaping a transportation system that benefits everyone, today and for generations to come.



OVERCOMING



EUROPEAN UNION

This publication was produced with the support of the European Union. The content of this publication is the responsibility of the Maramureş County Council and does not necessarily reflect the views of the European Union