

Handbook for Musical Instruments crafting



Root4Dig - "Rediscovering our Common Cultural Roots and Digitalizing them for Future Generations" is a collaborative initiative dedicated to the rediscovery, digitization, and preservation of cultural heritage within the Carpathian region. The project unites technical universities across the region, fostering cooperation and innovation in the field of cultural heritage management.



Root4Dig is funded by the Interreg NEXT Hungary–Slovakia–Romania–Ukraine 2021-2027 (HUSKROUA) Programme, with support from the European Union. The programme strengthens cross-border cooperation and sustainable development in the region by funding projects that bring people, institutions, and communities together across borders. Focus areas include cultural heritage, skills, innovation, mobility, and community links.

Projects are delivered by partnerships spanning the programme area to create shared, long-term impact..

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Authors: *Eliza Maria IURA, Mariana KIFA, Daniel Danci*
Coordinator editors: *Liudmyla ARKHYPOVA, Ramona DEMARCSEK, Olivian CHIVER, Cristian BARZ*

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4DIG



Project period: 01 Mar 2025 → 28 Feb 2026

Total EU contribution: 263 695.82 EURO

Total budget: 292 995.36 EURO

Root4Dig contributes to Priority 2 by promoting cultural well-being, inclusive skills, and sustainable cultural tourism—making the cross-border area more attractive to live in, study in, and visit.

- **Safeguards and valorises shared Carpathian heritage.**
- **Builds cross-border competencies through joint camps and training.**
- **Creates digital access (3D, 360°, archives) that supports education and tourism**

Our primary objectives include raising awareness of the rich cultural heritage of the Carpathians, promoting collaboration among technical universities, and enhancing access to cultural resources through digital technologies. We aim to create a lasting impact on the preservation and understanding of this unique heritage.

Project Partners are Ivano-Frankivsk National Technical University of Oil and Gas (IFNTUOG), Technical University of Cluj-Napoca - North University Center of Baia Mare (TUCN-NUCBM) and Association Academic Organization for Research, Innovation and Professional Development (AAORIPD)

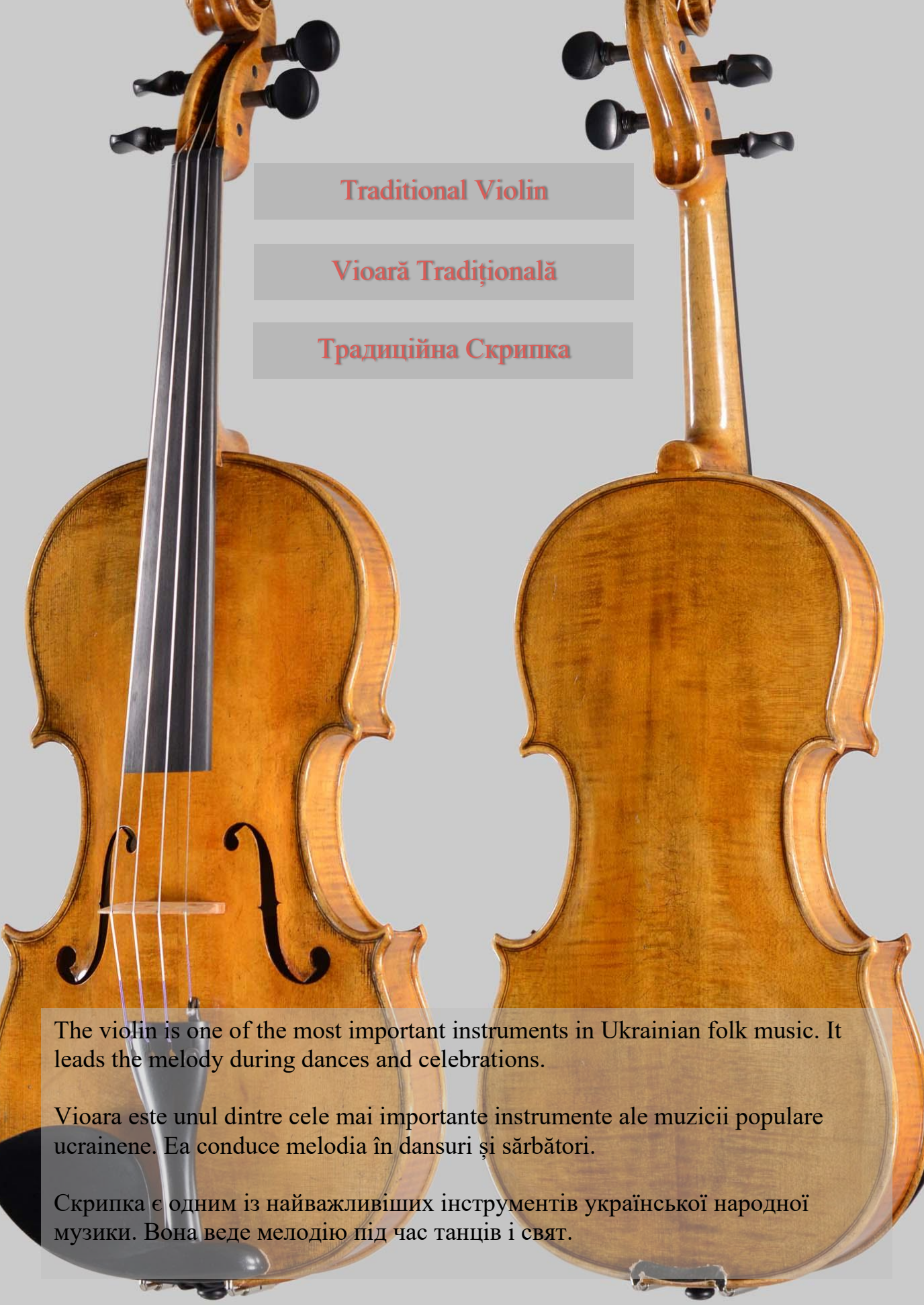




Traditional Musical Instruments as Cultural Heritage
Ukraine–Romania Summer Camp
Instrumente muzicale tradiționale – patrimoniu cultural
Ucraina–România Școală de vară
Традиційні музичні інструменти як культурна спадщина
Україна Румунія Літній табір

ROOT4DIG





Traditional Violin

Vioară Tradițională

Традиційна Скрипка

The violin is one of the most important instruments in Ukrainian folk music. It leads the melody during dances and celebrations.

Vioara este unul dintre cele mai importante instrumente ale muzicii populare ucrainene. Ea conduce melodia în dansuri și sărbători.

Скрипка є одним із найважливіших інструментів української народної музики. Вона веде мелодію під час танців і свят.





















Trembita

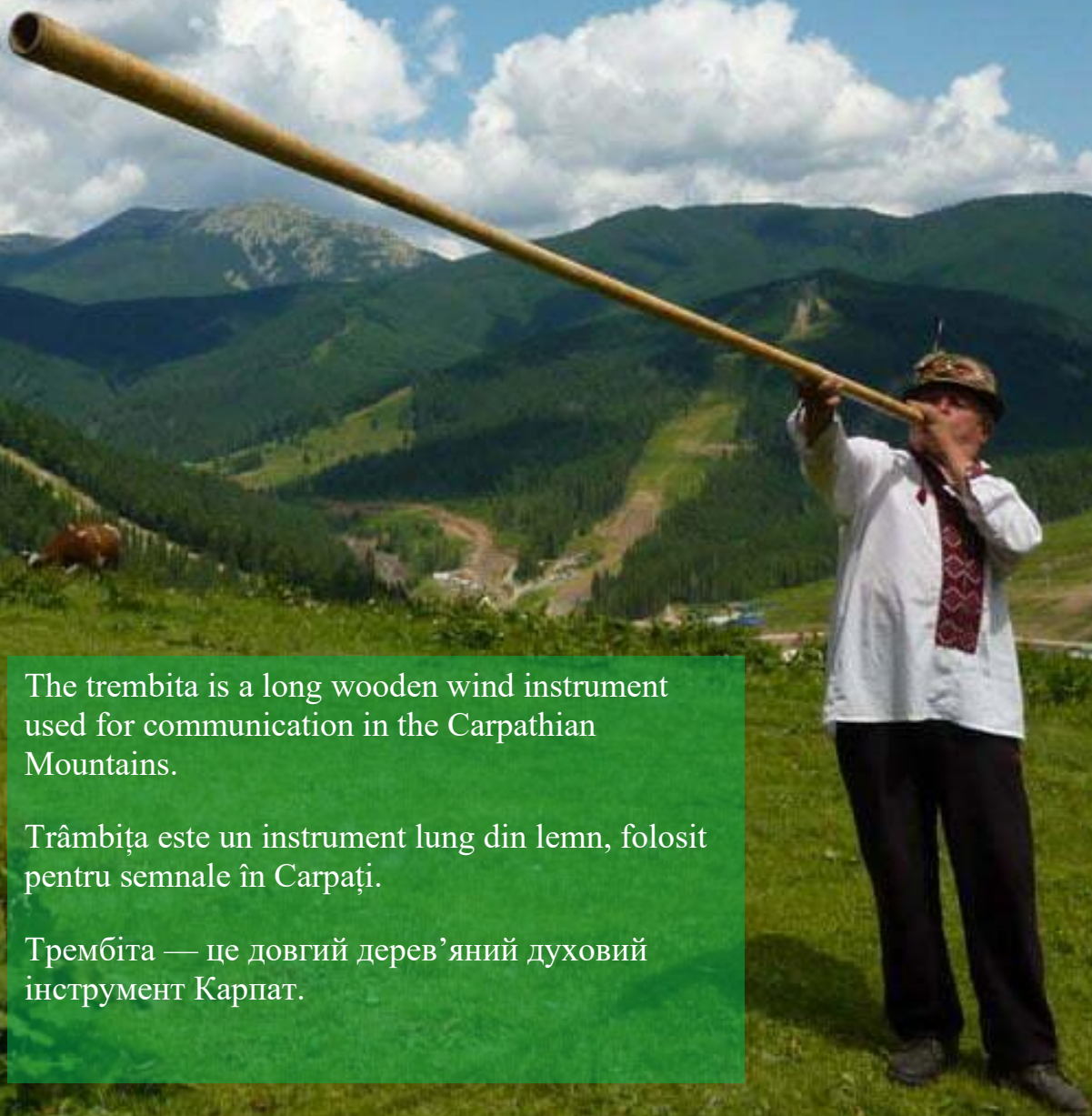
Trâmbiță

Трембіта

The trembita is a long wooden wind instrument used for communication in the Carpathian Mountains.

Trâmbița este un instrument lung din lemn, folosit pentru semnale în Carpați.

Трембіта — це довгий дерев'яний духовий інструмент Карпат.



















Ukrainian Bagpipe

Cimpoi Ucrainean

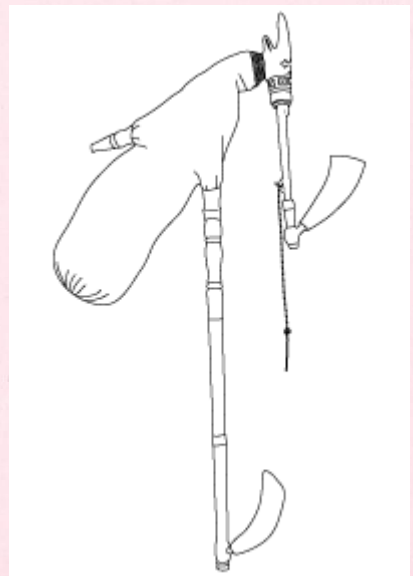
Українська Дуда



The Ukrainian bagpipe produces continuous sound and is played during dances and celebrations.

Cimpoiul ucrainean produce un sunet continuu și este folosit la sărbători.

Українська дуда звучить безперервно та використовується під час свят.















Ukrainian Lyre (Hurdy-Gurdy)

Liră Ucraineană

Українська Ліра

The Ukrainian lyre is a traditional string instrument played by turning a wooden wheel that rubs the strings. It was used by folk musicians and storytellers, called *lirnyks*, to accompany songs, legends, and spiritual music. The sound is continuous and deep, creating a meditative atmosphere.

Lira ucraineană este un instrument tradițional cu coarde, care se cântă prin rotirea unei roți din lemn ce pune corzile în vibrație. Era folosită de muzicanți populari numiți *lirnici*, pentru cântece, legende și muzică spirituală. Sunetul este continuu și profund.

Українська ліра — це традиційний струнний інструмент, на якому грають за допомогою обертового дерев'яного колеса. Її використовували народні музиканти — *лірники* — для пісень, легенд і духовної музики. Звучання ліри протяжне та глибоке.

















Traditional Drum

Tobă Tradițională

Традиційний Барабан

The traditional drum is a percussion instrument made of wood and animal skin. It is used to keep the rhythm in Ukrainian folk music, especially during dances, celebrations, and village events. Often, the drum is played together with metal cymbals to create strong rhythmic accents.

Toba tradițională este un instrument de percuție realizat din lemn și piele de animal. Este folosită pentru a menține ritmul în muzica populară ucraineană, mai ales în timpul dansurilor, sărbătorilor și evenimentelor din comunitățile rurale. Adesea, toba este cântată împreună cu talgere metalice pentru a crea accente ritmice puternice.

Традиційний барабан — це ударний інструмент з дерева та шкіри тварин. Його використовують для підтримання ритму в українській народній музиці, особливо під час танців, свят і сільських подій. Часто грають разом із металевими тарілками.











Ukrainian Hammered Dulcimer (Tsymbaly)

Țambal Ucrainean (Țambal Tradițional)

Українські Цимбали

The Ukrainian hammered dulcimer, called *tsymbaly*, is a traditional string instrument played by striking the strings with small wooden mallets. It produces a bright, rhythmic sound and is an essential instrument in Ukrainian folk ensembles, often accompanying dances and festive music.

Țambalul ucrainean este un instrument tradițional cu coarde, la care se cântă lovind corzile cu ciocănele din lemn. Are un sunet clar și ritmat și este foarte important în ansamblurile populare ucrainene, mai ales la dansuri și sărbători.

Українські цимбали — це традиційний струнний інструмент, на якому грають, ударяючи по струнах дерев'яними молоточками. Інструмент має яскраве, ритмічне звучання і є важливою частиною українських народних ансамблів.





Shruti Box

Cutie Shruti

Шруті-Бокс



A shruti box is a small bellows-operated instrument that produces a continuous, steady sound (drone). It is used to support singing or other instruments by providing a stable tonal background during musical performances and workshops.

Shruti box este un instrument de dimensiuni mici, cu burduf, care produce un sunet continuu și constant. Este folosit ca instrument de acompaniament pentru voce sau alte instrumente, oferind un fundal sonor stabil în cadrul atelierelor și interpretărilor muzicale.

Шруті-бокс — це компактний інструмент з міхами, який створює безперервний, рівний звук. Його використовують як супровід для співу або інших інструментів, забезпечуючи стабільний звуковий фон під час музичних занять і виступів.











Powder Horn

Corn Pentru Pulbere

Ріг Для Пороху



The powder horn is a traditional horn made from animal horn. Originally used to store gunpowder, it could also be blown to produce short sounds or signals during gatherings or rituals.

Cornul pentru pulbere este realizat din corn de animal. A fost folosit în mod tradițional pentru depozitarea prafului de pușcă, dar uneori era folosit și pentru a produce sunete scurte sau semnale.

Ріг для пороху виготовлявся з рогу тварини. Основне призначення — зберігання пороху, але інколи використовувався і для подачі коротких звукових сигналів.







Jaw Harp (Also Called Jew's Harp)

Drâmbă (Regional: Trompă, Harpă De Gură)

Дримба (Також *Варган*)



The jaw harp is a small traditional musical instrument, usually made of metal. It is held against the teeth or lips and played by plucking a flexible metal tongue. The sound is shaped by the mouth, tongue, and breathing. It is used in folk music and for rhythmic and sound exploration.

Drâmba este un instrument muzical tradițional mic, realizat de obicei din metal. Se ține la gură și se pune în vibrație prin ciupirea limbii metalice cu degetul. Sunetul este modificat cu ajutorul gurii, limbii și respirației. Este folosit în muzica populară și pentru jocuri de sunet și ritm.

Дримба — це невеликий традиційний музичний інструмент, зазвичай виготовлений з металу. Його тримають біля рота та приводять у звучання, щипаючи металевий язичок пальцем. Звук змінюється за допомогою рота, язика та дихання. Інструмент використовується в народній музиці та звукових іграх.









Sopilka (Wooden Flute)

Sopilă (Fluier De Lemn)

Сопілка



Short wooden sopilka with a higher pitch, used for lively melodies.

Sopilă scurtă, cu sunet mai înalt, folosită pentru melodii vioaie.

Коротка сопілка з високим звучанням, використовується для жвавих мелодій.

Medium-length sopilka, the most common type, used in folk music.

Sopilă de lungime medie, cea mai răspândită în muzica populară.

Сопілка середньої довжини, найпоширеніша, використовується в народній музиці.

Long sopilka with a deeper, warmer sound.

Sopilă lungă, cu sunet mai grav și mai cald.

Довга сопілка з глибоким звучанням.































Hand Bell (Bell Without Clapper)

Clopot De Mână (Clopot Fără Limbă)

Ручний Дзвін (Дзвін Без Язичка)



The hand bell is a traditional sound instrument made of metal. It is held by a handle and produces sound when **struck** or shaken. It has been used in traditional, ceremonial, or signaling contexts and is also suitable for sound exploration and musical activities.

Clopotul de mână este un instrument sonor tradițional, realizat din metal. Se ține de mâner și se produce sunetul prin **lovire** (de obicei cu un bețișor) sau prin mișcare. Este folosit în contexte tradiționale, ceremoniale sau pentru semnalizare, dar și pentru explorarea sunetelor în activități educative.

Ручний дзвін — це традиційний звуковий інструмент, виготовлений з металу. Його тримають за ручку та отримують звук шляхом **удару** або руху. Використовується в народних і обрядових контекстах, а також для звукових ігор та навчальних занять.





A young girl with light brown hair, wearing a white t-shirt with a green cross design, stands in a workshop. She is holding a long, yellowish-brown horn ocarina with several finger holes. The background is filled with various tools hanging on a wooden wall, including hammers, saws, and axes. To the right, there is a wooden shelf with a small model of a house and some other items.

Horn ocarina / Horn wind instrument

Ocarină din corn (instrument de suflat din corn)

Окарина з рогу / Духовий інструмент з рогу

The horn ocarina is a wind musical instrument made from animal horn. It has a hollow body with finger holes. The sound is produced by blowing into the mouthpiece, and the pitch changes by covering or uncovering the holes. It was traditionally used by shepherds and in folk music.

Ocarina din corn este un instrument muzical de suflat realizat din corn de animal. Are corp gol și orificii pentru degete. Sunetul se produce prin suflare, iar înălțimea acestuia se schimbă prin acoperirea găurilor. Este un instrument tradițional, cu sunet natural, folosit în trecut de păstori și în muzica populară.

Окарина з рогу — це духовий музичний інструмент, виготовлений з рогу тварини. Має порожнистий корпус і отвори для пальців. Звук утворюється під час дмухання, а висота змінюється шляхом закривання отворів.

Використовувався пастухами та в народній музиці.



















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WITHOUT BORDERS



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About the project

The main goal of the
activities is to
there, by using
the

Project Partners



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Interreg



Co-funded by
the European Union

NEXT Hungary – Slovakia – Romania – Ukraine

Root4Dig

Rediscovering our Common Cultural Roots and Digitalizing them for Future Generations

About the

Root4Dig is to deepen cooperation between technical universities, promoting our common cultural roots and digitizing them for future generations with the development of soft skills by technical universities for the promotion of cultural heritage in the region.

through:

- Cultural Centers in two technical universities
- Student camps in Ukraine and Romania
- Cultural festivals in Ukraine and Romania
- Music album for the promotion of cultural heritage in Ukraine;
- Events for students of two technical universities.

Technical University

Apoca
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Rediscover
Cultural
them for

About the project

The main goal of the project is to promote the cultural heritage of the region and to create a new cultural identity for the region.

Project Partner



«Rediscovering our Common Cultural Roots and Digitalizing them for Future Generations» (HUSKROUA/23/S/2.2/007)

This publication is produced within the framework of the **Root4Dig** "Rediscovering our Common Cultural Roots and Digitalizing them for Future Generations" is funded by the **Interreg NEXT Hungary–Slovakia–Romania–Ukraine 2021 - 2027 Programme**, a cross-border initiative dedicated to the rediscovery, digitalization, and preservation of the shared cultural heritage of the Carpathian region. The project fosters cooperation among technical universities and partners, encouraging innovation and sustainable approaches to cultural heritage management.

Project partners:



Ivano-Frankivsk National Technical University of Oil and Gas
(Ukraine)



Technical University of Cluj-Napoca – North University Center of
Baia Mare (Romania)



Association Academic Organization for Research, Innovation and
Professional Development (Romania)

The European Union supports cross-border cooperation projects that bring people, institutions, and communities together, strengthening sustainable development, cultural well-being, and mutual understanding across borders.

Root4Dig contributes to the promotion and safeguarding of shared Carpathian heritage by enhancing digital access to cultural resources and supporting education, research, and cultural tourism for future generations.

This Guide was produced with the financial support of the European Union. Its contents are the sole responsibility of Technical University of Cluj-Napoca – North University Center Baia Mare and do not necessarily reflect the views of the European Union.