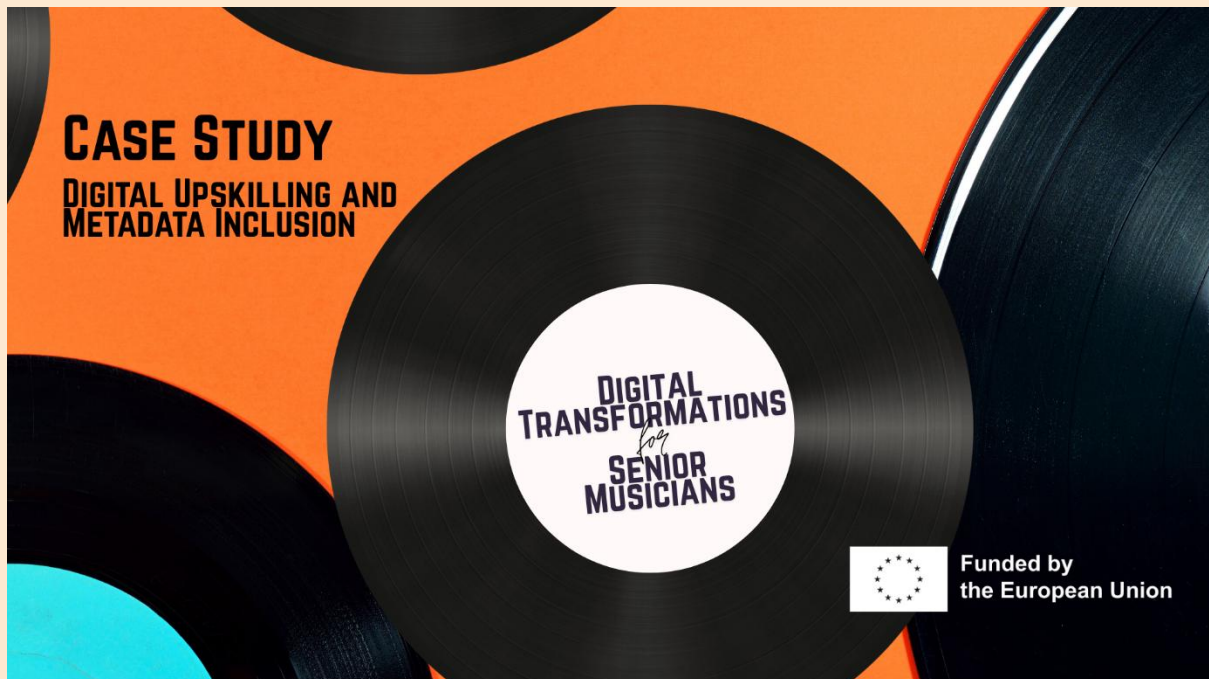


Empowering Digital Transformations for Senior Musicians:

Case Study on Digital Upskilling and Metadata Inclusion



AEGARE
ASOCIACIÓN DE EMPRESARIOS GALLESES
DE ABOGADOS DEL LEBRO



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Preface

The **“Empowering Digital Transformations for Senior Musicians”** project (2023-1-BG01-KA210-ADU-000152921), funded by the European Union under the Erasmus+ KA210-ADU scheme, seeks to bridge the digital divide faced by experienced artists. By promoting lifelong learning and equipping participants with core digital skills—ranging from digital music distribution and metadata management to copyright protection and content monetisation—the project empowers senior musicians to navigate today’s rapidly evolving music landscape. Through hands-on workshops and practical exercises, it tackles the complexities of the modern digital supply chain and combats digital exclusion, ensuring that every musician, regardless of age or background, can share their cultural heritage with a global audience.

This case study underscores how existing metadata standards can inadvertently undermine cultural diversity by failing to recognize vulnerable languages and cultures. Our interactive training process not only equipped senior musicians with essential digital skills but also revealed critical gaps in the metadata frameworks used by digital distributors. These insights, uncovered through hands-on exercises, demonstrated the urgent need to incorporate endangered languages—such as various Romani dialects—into metadata specifications. Without such a collaborative, practice-based approach, these systemic barriers would have remained invisible. The findings from this case study will directly inform our curriculum development and advocate for more inclusive metadata standards that honor Europe’s rich linguistic heritage.



Training Overview and Objectives

The “Empowering Digital Transformations for Senior Musicians” project is designed to upskill older generations of musicians and address age-related barriers in the digital era. In the Sofia training (7–10 April 2025), experts guided 16 on-site and 3 online participants through interactive modules covering key topics in digital music production and distribution. The curriculum included:

Copyright & Licensing: Fundamentals of music copyright, rights management, and licensing strategies to protect artists’ works.

Metadata Management: How to properly tag and organize music metadata (song titles, credits, genres, etc.) for digital platforms and archives.

Audio Encoding & Formats: Best practices for encoding audio (e.g. WAV, MP3) and understanding quality settings and file formats for online distribution.

Streaming Platforms & Distribution: An overview of major streaming services and digital aggregators, and how content gets delivered to platforms globally.

Monetisation Strategies: Techniques for earning revenue from music online (streaming royalties, content ID, digital sales, and performance rights).

These topics were chosen to directly address challenges that senior musicians often face in the modern music industry—many older artists struggle with tasks like uploading music to streaming services, managing metadata, or monetizing their catalogs due to systems not designed with them in mind. By the end of the training, participants were able to confidently use digital tools and strategies to share their work and reach audiences, earning a Europass certificate to recognize their new competencies.

Having established the curriculum, the team moved into an interactive workshop to apply these concepts in real-world distribution.



Practical Digital Distribution Workshop: Uncovering Metadata Gaps

Day 3 of the training featured a pivotal hands-on exercise in digital distribution.

In this interactive session, participants uploaded their own tracks to a digital aggregator and, through the process of audio encoding and metadata entry, uncovered critical omissions in language support—insights that directly shaped our case study’s findings.

This practical session walked them through the entire process of preparing a song for worldwide digital distribution, including:

Audio Preparation: Encoding the audio file in the appropriate format and bitrate for streaming services. Participants learned to create high-quality yet platform-compatible files (e.g. 16-bit/44.1k WAV or high-bitrate MP3), ensuring their music meets industry standards for streaming playback.

Metadata Entry: Entering detailed metadata for the release – song title, artist name(s), release date, genre, and importantly the **language** of the song’s title and lyrics. Accurate metadata is crucial for searchability and proper indexing on platforms.

Identifier Codes: Learning about and inputting standard industry identifiers for the track. Trainers explained the use of codes like the **International Standard Recording Code (ISRC)** – a 12-character code that uniquely identifies each sound recording, and the **International Standard Musical Work Code (ISWC)** – an

11-character code identifying the underlying musical composition. By including codes such as ISRC and ISWC, artists help ensure their recordings and compositions are properly registered, tracked, and monetized across platforms.

This exercise turned senior artists into their own digital publishers, demystifying how a song moves from studio to global platforms like Spotify and Apple Music.

During this practical workshop, participants attempted to upload a traditional Romani song—complete with its authentic Romani title—entering metadata for both title and recording language. Because Romani was not offered in the aggregator’s language fields, they discovered that translating the title into English, transcribing it in Latin script with Romani vocabulary, or selecting English each led to validation failures or moderation rejections. None of these options allowed the song to pass metadata checks without compromising its cultural integrity.



The Metadata Challenge: Romani Language Exclusion

During metadata entry exercise, participants discovered that **Romani** was absent from the “Title Language” and “Sound Recording Language” dropdowns. They were forced to select **English**—a workaround recommended by some distributors—which led to two major issues:

Discoverability Issues: Romani-language tracks cannot be found under non-English filters or recommendations, excluding them from their rightful audience.

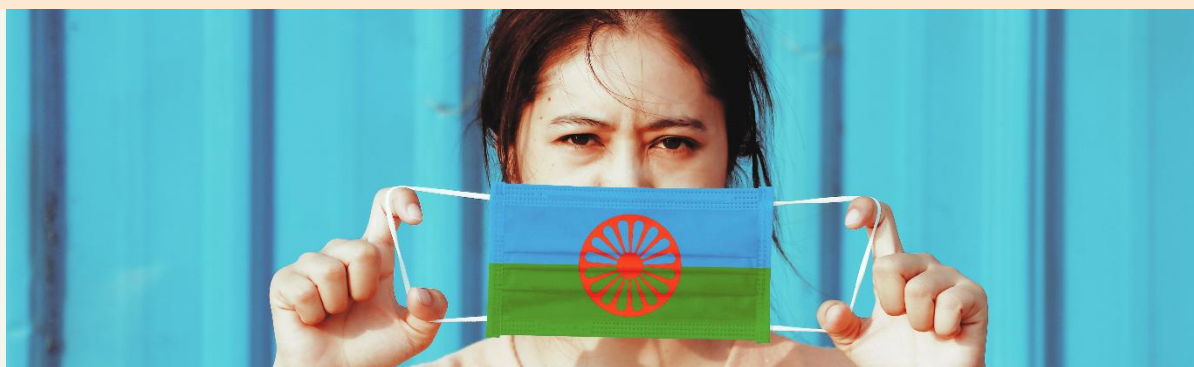
Cultural Misrepresentation: Labeling a Romani song as English erases its cultural identity, effectively rendering the music invisible in its own language context.

To proceed with the release, the only workaround was to **select “English” as the language** for the track, since English was the closest acceptable option in the platform’s list. This approach of using English as a stand-in for an unsupported language is even recommended by some distributors: for example, DistroKid advises artists that if their language isn’t listed, the best practice is to choose English and input the titles using the language’s romanized spelling. In our case, the senior musician had to tag their Romani song as an English-language track.

However, this workaround raises **serious concerns**. First, it creates a **discoverability issue**: users searching for Romani-language music or using filters for non-English content would not find this track, since it would be misclassified as English. The song might also be fed into recommendation algorithms that cater to English-language listeners, missing its actual target audience. Second, it poses a risk of **cultural misrepresentation**. Labeling a Romani song as English dilutes its cultural identity – an issue akin to mislabeling the ethnicity or origin of the music. What should have been a proud identification of the music’s Romani heritage instead becomes effectively “invisible” in the metadata. Participants noted that this felt like an **unintentional digital exclusion**: the very systems meant to distribute music globally were not built to include one of Europe’s significant minority languages.

Key Fact: The **ISO 639-2 code “rom”** exists for the Romani macrolanguage, yet it is omitted from most metadata standards—an unintentional barrier to inclusion.

This case highlights a gap in current music metadata standards. Digital aggregators and streaming services support only a predefined list of languages, typically those most demanded in the market. Niche or less widely-used languages like Romani have been overlooked in these standards, making it difficult for artists to accurately represent their work. In an industry that is increasingly data-driven—where everything from search algorithms to royalty allocations relies on metadata—such omissions can sideline entire communities. The senior musicians in the workshop openly discussed how disheartening it is to see their language absent from the very platforms that promise worldwide reach.



Romani as a Vulnerable Language: The UNESCO Context

The issue encountered is not just a technical oversight; it ties into the broader context of minority languages struggling for recognition in the digital age. **Romani** (or *Romany*) is the mother tongue of the Roma people, an ethnic group with an estimated 10–12 million members across Europe. UNESCO’s *Atlas of endangered languages* classifies multiple **Romani dialects** – including *Balkan Romani*, *Caló*, *Central Romani*, *Sinte Romani*, and *Vlax Romani* – as “**Vulnerable**” languages.

A “vulnerable” classification means that while these dialects are still learned by children as a first language, their use may be restricted to certain domains (often within family or community settings). In other words, Romani is at risk of further decline if efforts are not made to support and promote it, especially in public and professional domains.

Digital platforms and standards that ignore Romani arguably exacerbate this vulnerability. When a language isn’t officially supported in metadata, it effectively remains **hidden online** – which can discourage content creators from using it and limit the content available in that language. This undermines efforts to preserve and cultivate the language among younger generations of Roma. It is especially ironic because music is a **vital part of Romani cultural heritage**; Roma musicians have historically been influential across Europe, and their songs often carry the Romani language and traditions. If the digital music industry fails to accommodate Romani, it indirectly pressures artists to switch to dominant languages (like English) to achieve visibility, contributing to the cultural homogenization that imperils linguistic diversity.

The training's findings sparked discussion on how metadata standards could be expanded to include Romani. Participants pointed out that Romani has ISO language codes (e.g., **ISO 639-2 code** “rom” covers the Romani macrolanguage), so technically it could be recognized by digital systems. The exclusion seems to be a policy or priority issue rather than a purely technical one. This realization turned the exercise into a learning moment not only about distribution mechanics but also about **advocating for inclusivity** in the music industry's infrastructure.



Algorithmic Bias: Language and Discoverability on Streaming Platforms

Another layer of the problem lies in how **streaming platforms' algorithms** handle content in different languages. Even if a song in a minority language like Romani makes it onto Spotify or Apple Music, the way these platforms **recommend music** and curate popular playlists may inherently favor content in languages with larger listener bases (often English). There is growing concern that recommendation algorithms, driven by engagement metrics and global popularity, create a **bias toward English-language songs** – effectively marginalizing tracks in less common languages.

Evidence of this bias can be seen in the streaming ecosystem. For instance, on Spotify's widely followed “Global Top 50” playlist, almost all songs on any given day are English-language tracks by Anglo-American artists. This reflects a feedback loop: English songs get more exposure, which gains them more listens, which in turn further boosts their algorithmic recommendation

weight. Meanwhile, music in languages like Romani (or other minority and regional languages) rarely surfaces on such global charts or automated playlists, unless they achieve viral popularity through extraordinary means. As one industry analysis noted, the dominance of Anglo-American content on infinite streaming shelves “compounds the competitive problems for non-English recordings”. In practical terms, a Romani song – even if properly tagged – might not be pushed to users beyond niche audiences, because the algorithms have learned to prioritize the mainstream (English) content.

This algorithmic favoritism means that even when minority-language content is technically available on streaming services, it remains less **discoverable**. Listeners who might enjoy Romani music are less likely to encounter it unless they specifically search for it, and Roma artists gain fewer opportunities to break out to broader audiences. It’s a digital age twist on the old issue of representation: not only must the language be supported in the metadata, but platforms should also ensure their recommendation systems do not inadvertently sideline culturally diverse content. Some streaming platforms and experts have begun examining such biases, acknowledging that **global play counts** and uniform algorithms can disadvantage artists from smaller markets or non-English backgrounds. The case raised by our training program puts a spotlight on this concern from the perspective of language inclusion.



Conclusion: Toward Inclusive Metadata and Preservation of Cultural Diversity

This case study from the “Empowering Digital Transformations for Senior Musicians” training underscores a critical point:

Metadata standards can endanger cultural diversity when they omit vulnerable languages like Romani. Our interactive, practice-based approach revealed these systemic gaps—insights that would have remained invisible otherwise.

Europe’s cultural and linguistic diversity must be considered in the digital music infrastructure. The discovery that a major aggregator’s metadata standards exclude the Romani language – thus compelling Roma artists to mislabel their work – is a tangible example of how digital frameworks can unintentionally perpetuate exclusion. When developing metadata standards, software, and policies for the music industry, stakeholders should actively include **minority and vulnerable languages** alongside dominant ones. Something as seemingly simple as adding “Romani” to a dropdown list can make a meaningful difference in validating a culture’s presence online and preventing misrepresentation.

Moreover, the industry should reflect on how streaming and discovery algorithms treat content in various languages. If left purely to market forces and existing biases, these systems will continue to favor English-language and mainstream content, to the detriment of Europe’s rich tapestry of ethnic music heritage. **Policy interventions and conscious platform design** may be required to ensure that the digital revolution in music benefits creators of all backgrounds – for example, by incorporating language diversity in algorithm training, or by

featuring more localized and language-specific playlists so that songs in Romani (and other underrepresented languages) can find their audience.

In conclusion, the experience of senior musicians in this training program highlights both progress and the work still ahead. On one hand, digital upskilling initiatives are empowering veteran artists to bring their music to global platforms, affirming that learning and adaptation can happen at any age. On the other hand, it became clear that true **digital inclusion** goes beyond basic skills – it requires inclusive design at the systemic level. As Europe champions cultural diversity and the preservation of heritage, these values should be embedded in the very code and standards of our digital music services. Ensuring that a Romani-language song can be labeled as such and fairly recommended is not just a technical tweak, but a commitment to honoring and preserving Europe’s multicultural legacy in the digital era.