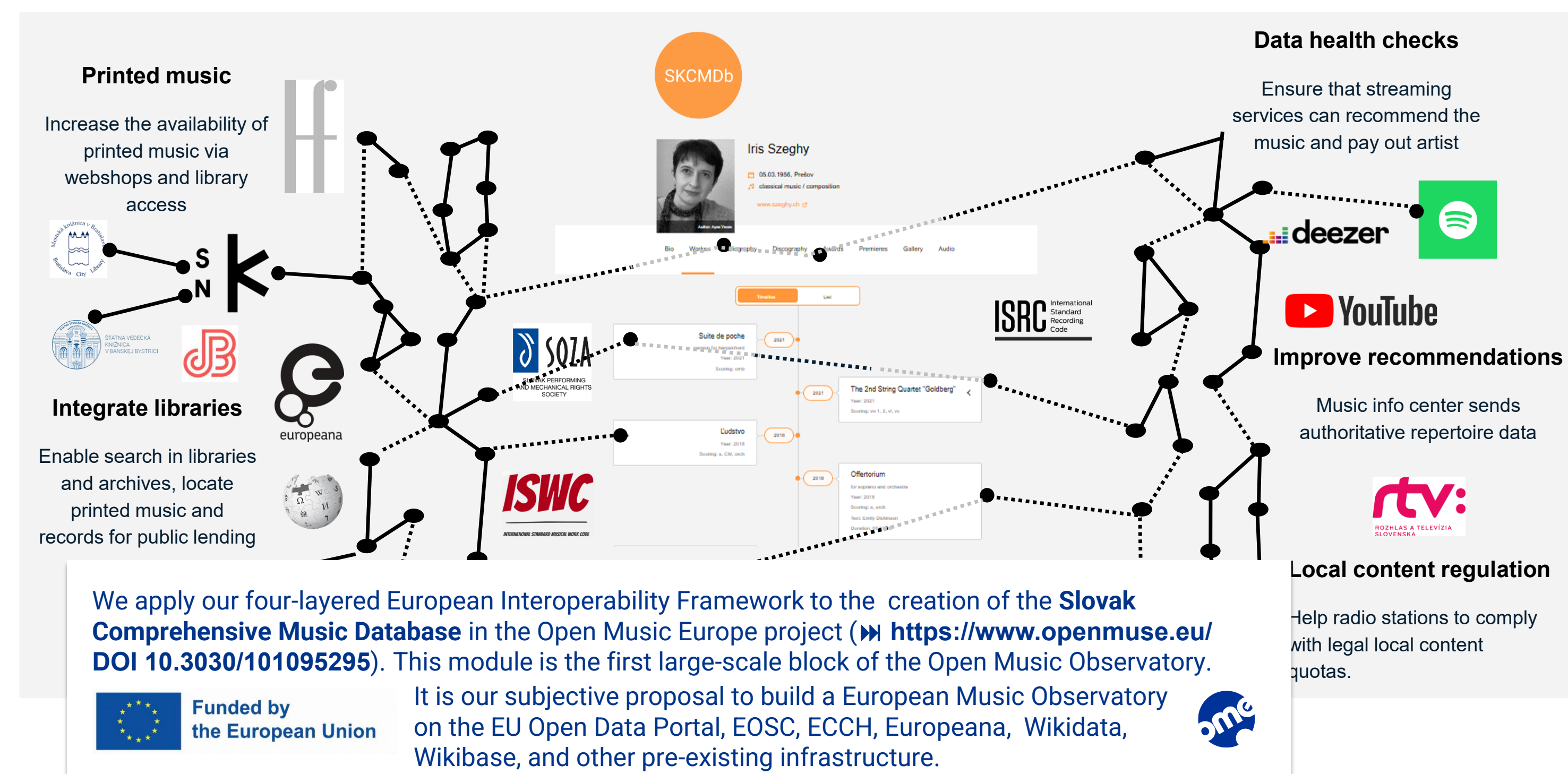# The Open Music Observatory

The Slovak Comprehensive Music Database (**SKCMDb**) connects libraries, the Slovak Music Centre, SOZA, the Music Fund, and platforms through a shared metadata backbone built on open ontologies. It makes Slovak music more discoverable across streaming, archives, and education. As part of OpenMusE, it is a first large-scale module of a decentralised **European Music Observatory** integrated with European open science and data platforms. Developed by Reprex, it uses open-source AI to support even the smallest institutions.
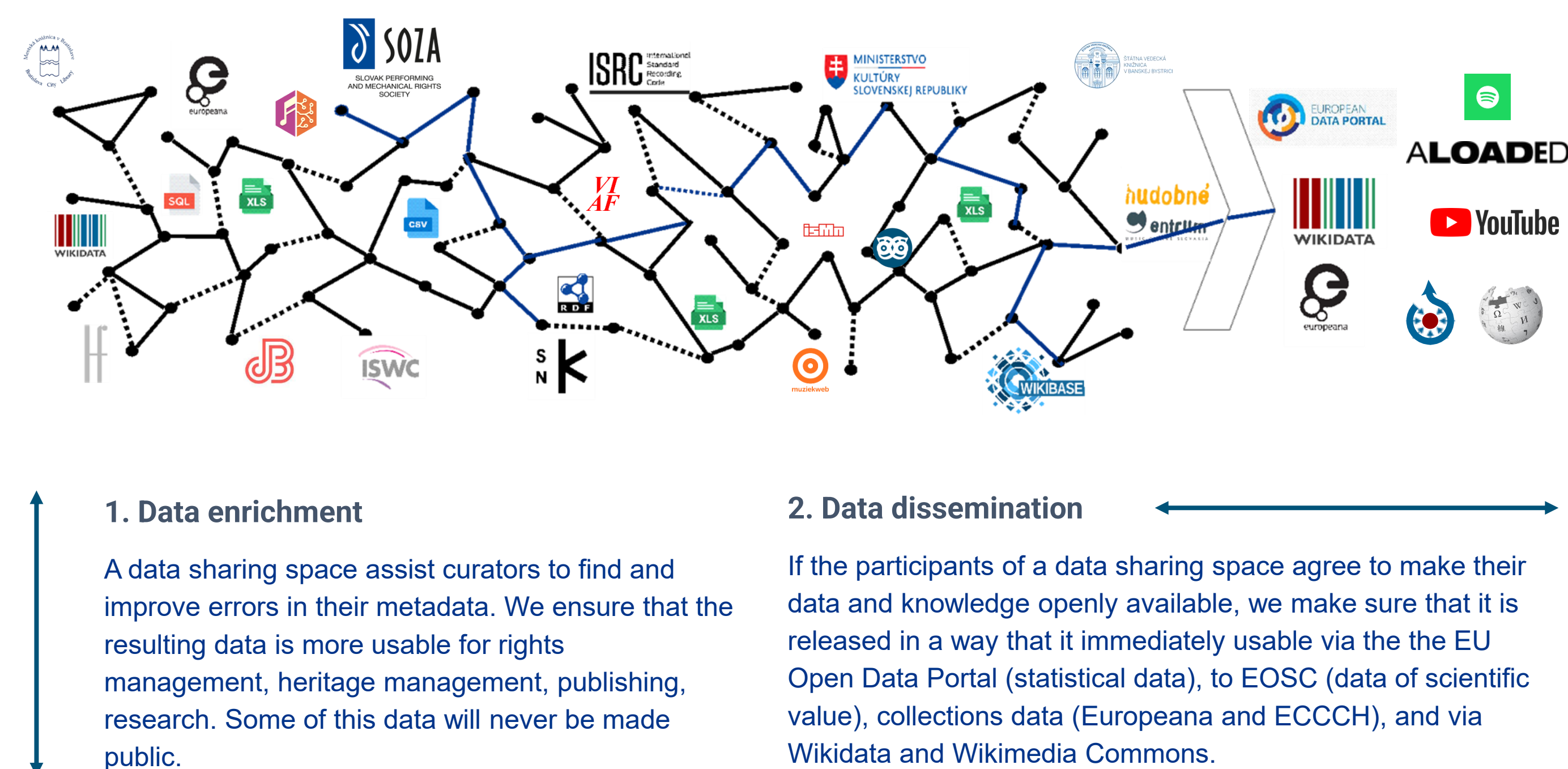
Libraries as Portals to the Digital Life of Music

SKCMDb enables music libraries and national music centres to offer modern, interconnected discovery, loan, and access services. Using a semantic browser backed by a Wikibase and knowledge graph, libraries can expose their holdings—such as scores or CDs of Iris Szeghy—alongside streaming platforms, print retailers, and video archives. This helps educators, curators, and performers explore Slovak works more easily, even in countries where music libraries face resource constraints and low public visibility. Libraries become portals to the full digital life of music.

We apply our four-layered European Interoperability Framework to the creation of the **Slovak Comprehensive Music Database** in the Open Music Europe project (▸▸ https://www.openmuse.eu/ DOI 10.3030/101095295). This module is the first large-scale block of the Open Music Observatory.

Funded by the European Union

It is our subjective proposal to build a European Music Observatory on the EU Open Data Portal, EOSC, ECCH, Europeana, Wikidata, Wikibase, and other pre-existing infrastructure.

Invisible Music in the Digital Ocean

Our feasibility study, funded by the Slovak Arts Council, found that valuable Slovak music is often invisible to both listeners and algorithms. Metadata gaps lead to works being omitted from recommendations or misattributed—undermining royalties and discoverability. With 55% of top artists reporting delayed or missing payments, the problem is systemic: underfunded libraries, low documentation by small music labels, and fragmented cataloguing. Music platforms cannot repair metadata when both public and private data are incomplete—and the entire ecosystem suffers.

From Feasibility Study to working prototype: blog posts, access to our Wikibase Suit and the working prototype of the semantic browser: visit ▸▸ www.reprexbase.eu/skmdb
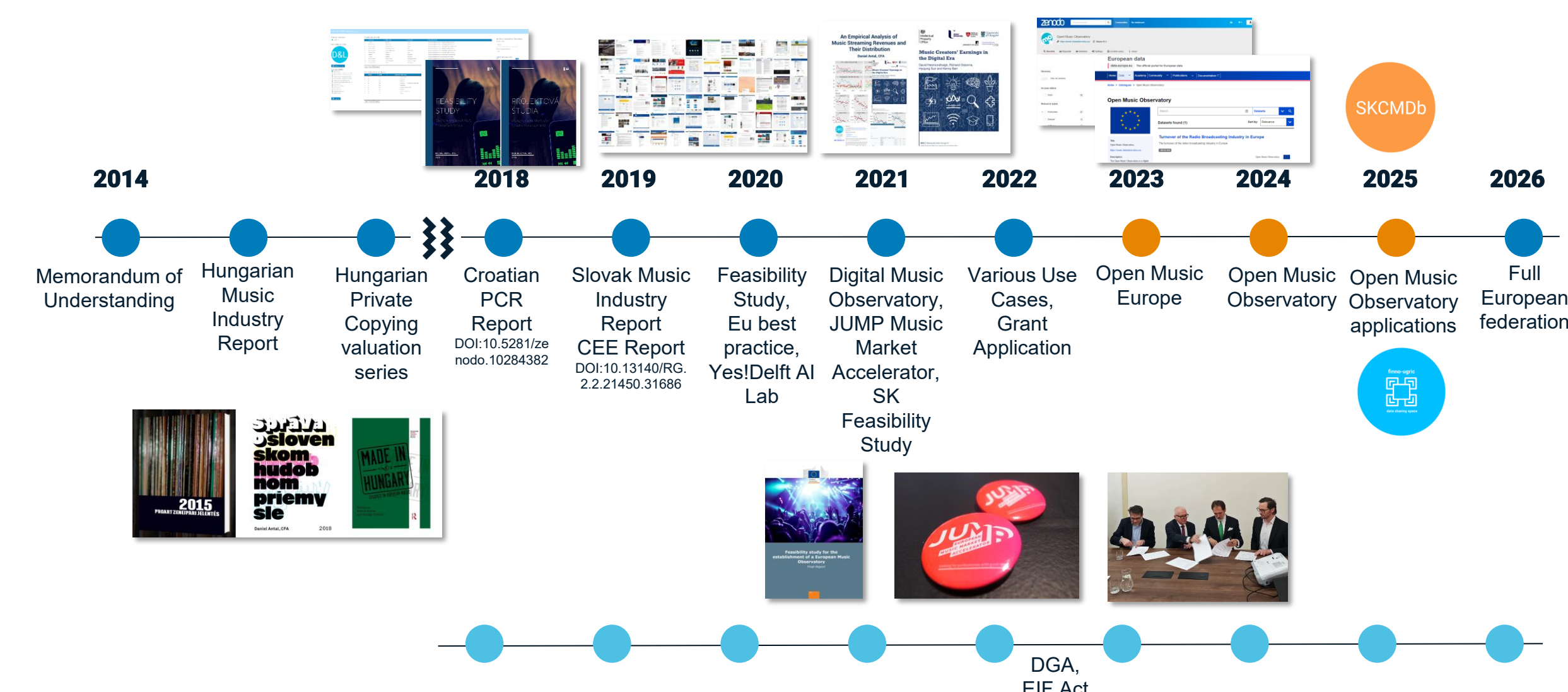
Cooperation to Avoid Redundant Metadata Work

Low metadata depth, shallow archival coverage, and economic limits make traditional, siloed documentation unsustainable. Describing a collected work and its movements—then linking it to scores, recordings, and rights—should not be done in parallel by libraries, rights societies, labels, and platforms. SKCMDb offers a shared metadata backbone where stakeholders contribute once, and reuse across the ecosystem. Cooperation replaces redundancy with interoperability, saving effort and increasing visibility.

1. Data enrichment

A data sharing space assist curators to find and improve errors in their metadata. We ensure that the resulting data is more usable for rights management, heritage management, publishing, research. Some of this data will never be made public.

2. Data dissemination

If the participants of a data sharing space agree to make their data and knowledge openly available, we make sure that it is released in a way that it immediately usable via the the EU Open Data Portal (statistical data), to EOSC (data of scientific value), collections data (Europeana and ECCCH), and via Wikidata and Wikimedia Commons.

A Data Sharing Space with Shared Ontological Patterns

SKCMDb is a data sharing space where legal and organisational agreements enable semantic and technical interoperability. Built on shared ontological patterns, it aligns the descriptive needs of libraries, archives, rights organisations, and music services. Using a Wikibase, a Blazegraph SPARQL endpoint, and a Sampo-UI semantic browser, it allows stakeholders to co-curate metadata on works, recordings, and scores—ensuring that contributions made once can be reused across platforms and institutions.

Subsidiarity, multi-modality

▸▸ **Finno-Ugric Data Sharing Space**

Not only for national institutions. Seto death metal, Udmurt folktronica, Mari ethnopunk, Livonian folk? Our experimental module for regional cultures, language, and multimodality.

public service integration   **Application layer**   private service integration

Enterprise and open **graph coordination**

Our peer-reviewed, scientific software libraries and ontological patterns **standardise the data**

Data curation

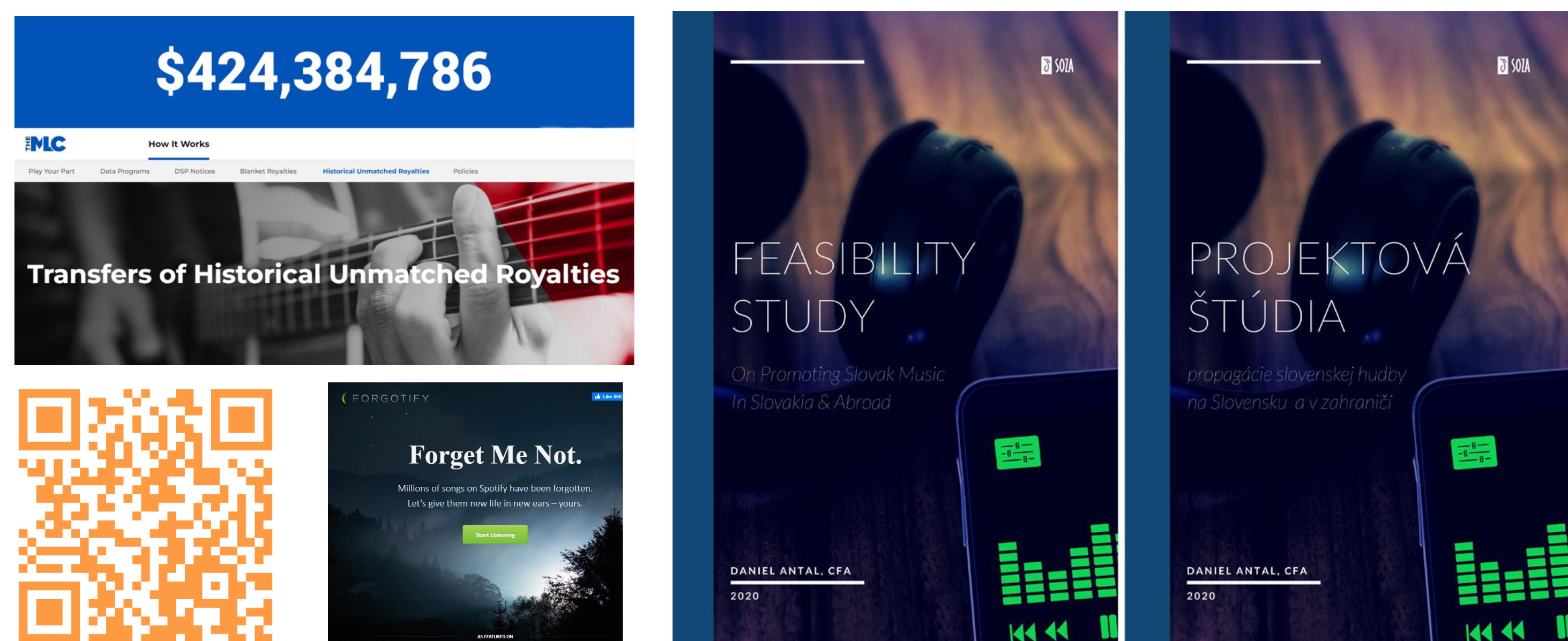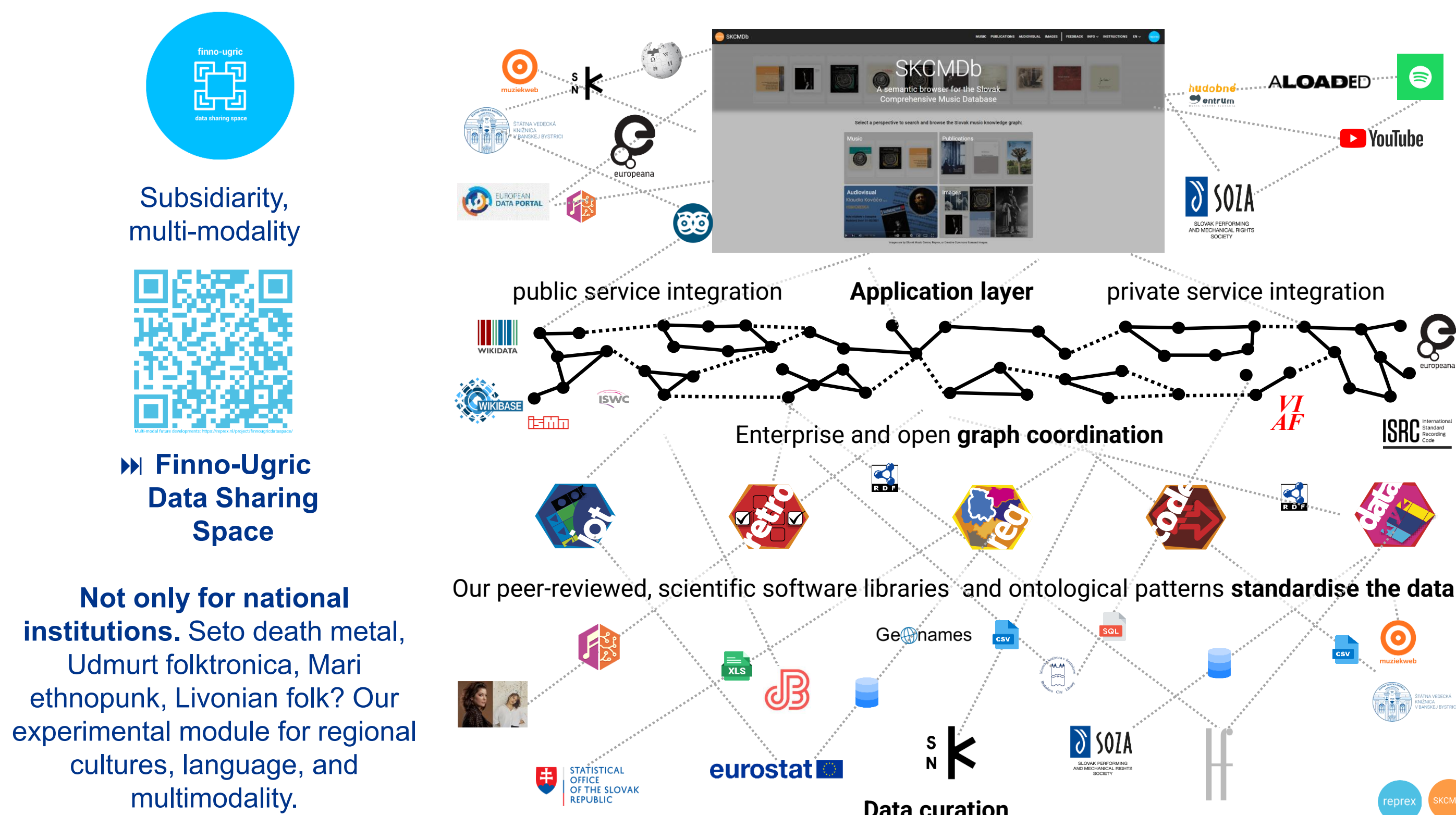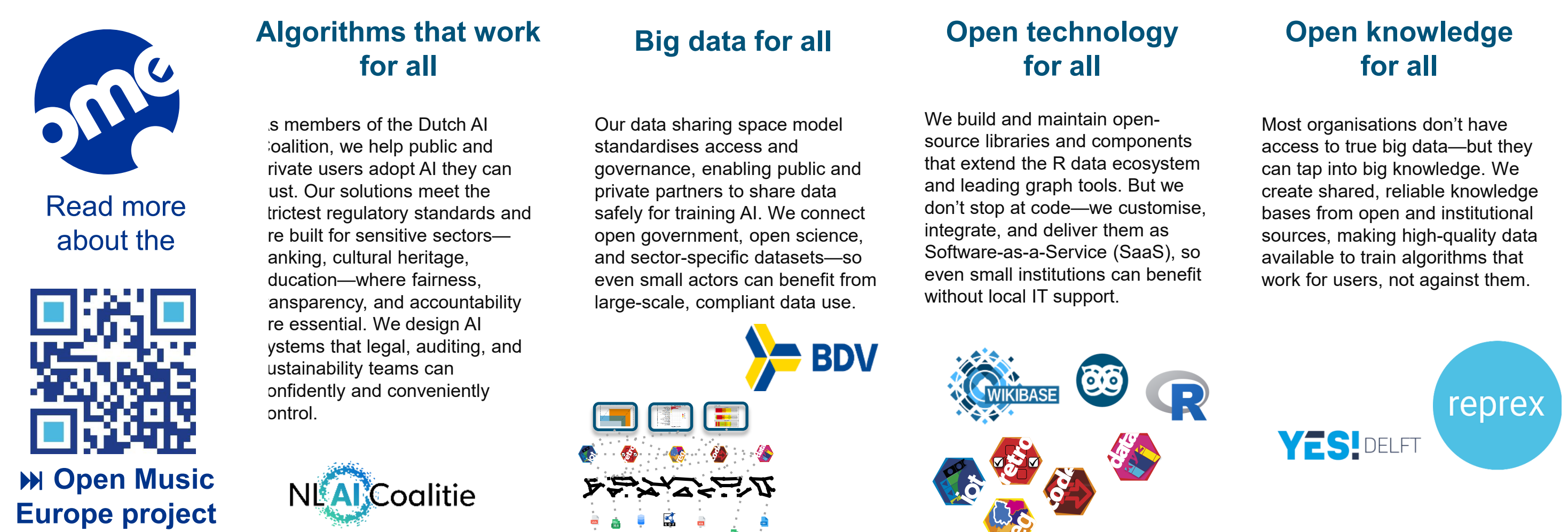## Towards a Truly Inclusive European Music Observatory that works for music libraries and librarians

Music data is fragmented across public and private actors, competing rights groups, and legacy systems. Decades of centralisation efforts have failed. OpenMusE, funded by the European Commission, is building a decentralised European Music Observatory based on modern governance, interoperability, and trustworthy AI. SKCMDb and the Finno-Ugric Data Sharing Space are federated pilots that integrate music library metadata and services—and we invite IAML and its members to help shape an inclusive observatory that supports national libraries and small-town music collections alike.

2014	2018	2019	2020	2021	2022	2023	2024	2025	2026
Memorandum of Understanding	Hungarian Music Industry Report	Hungarian Private Copying valuation series	Croatian PCR Report DOI:10.5281/ze nodo.10284382	Slovak Music Industry Report CEE Report DOI:10.13140/RG. 2.2.21450.31686	Feasibility Study, Eu best practice, Yes!Delft AI Lab	Digital Music Observatory, JUMP Music Market Accelerator, SK Feasibility Study	Various Use Cases, Grant Application	Open Music Europe, Open Music Observatory, Open Music Observatory applications	Full European federation

DGA, EIF Act

Reprex – Cooperative AI and Open Tools for Open Data

Reprex is a small company that emerged from the Yes!Delft AI+Blockchain Incubator and delivers both private services in the music sector and public services through competitive Music Moves Europe and Horizon Europe grants. As members of the Dutch AI Coalition and the Big Data Value Association, we build cooperative, human-controlled AI that librarians, archivists, and rights managers can trust. By integrating open source tools, we help even the smallest music institutions benefit from big data and data-driven innovation—together.

Read more about the

▸▸ Open Music Europe project

Algorithms that work for all

s members of the Dutch AI coalition, we help public and private users adopt AI they can trust. Our solutions meet the strictest regulatory standards and re built for sensitive sectors—anking, cultural heritage, ducation—where fairness, ansparency, and accountability re essential. We design AI ystems that legal, auditing, and ustainability teams can onfidently and conveniently control.

Big data for all

Our data sharing space model standardises access and governance, enabling public and private partners to share data safely for training AI. We connect open government, open science, and sector-specific datasets—so even small actors can benefit from large-scale, compliant data use.

Open technology for all

We build and maintain open-source libraries and components that extend the R data ecosystem and leading graph tools. But we don't stop at code—we customise, integrate, and deliver them as Software-as-a-Service (SaaS), so even small institutions can benefit without local IT support.

Open knowledge for all

Most organisations don't have access to true big data—but they can tap into knowledge. We create shared, reliable knowledge bases from open and institutional sources, making high-quality data available to train algorithms that work for users, not against them.

Our presentation takes place in the 7 July session of **Music Libraries of Tomorrow: Reaching out to Wider Audiences** at the Mozarteum University E.001 HS Thomas Bernhard room (16:00–17:30)
▸▸ https://reprex.nl/event/2025-07-07-iaml2025/

Want to join our **Open Music Observatory** initative? Test our infrastructure? Any Questions? ▸▸ reprex.nl/contact

Daniel Antal ▸▸ www.linkedin.com/in/antaldaniel