



# Podlibre: Podcast Audio Editing for the AI Age



# I am Benjamin Bellamy.



- I ❤️ Podcasts, I ❤️ FOSS
- Business Development Manager for Truely-Open-Source-AI Solutions at **LINAGORA**
- Founder of **Ad Aures**
- Father of **Castopod**
- Photographer for **WikiPortraits**

# Who are you?

- Are you a developer?
- Are you podcaster?
- What is your workflow?

# Podlibre – Dictionary Entry

**pod·li·bre** | /pəd.libr/ | noun, masculine

## Etymology

From Spanish/French/English "pod" (podcast) + "libre" (free/open). Blend emphasizing both podcast focus and open-source philosophy.

## Definition

**1. *Computing, Audio*** An open-source, cross-platform desktop application designed specifically for podcast editing, emphasizing local processing, privacy, and workflow customization through a plugin-based architecture.

"I switched to Podlibre because I wanted full control over my podcast workflow without sending my audio to the cloud."

**2. *by extension*** A philosophy of podcast production centered on sovereignty, decentralization, and open standards.

"The Podlibre approach means owning your entire production chain—from recording to RSS feed."

# Once upon a time...

# We couldn't find what we needed, so we built it

- Started with Castopod (2020) - couldn't find podcast hosting connected to the Fediverse
- Built it as a side project



# A community we're deeply grateful for

- 800+ GitHub stars
- 1,000+ podcasts hosted
- 46,000+ episodes published
- 1.7M+ hours of content
- 30+ language translations, 50+ contributors
- ~4,000 followers on the Fediverse



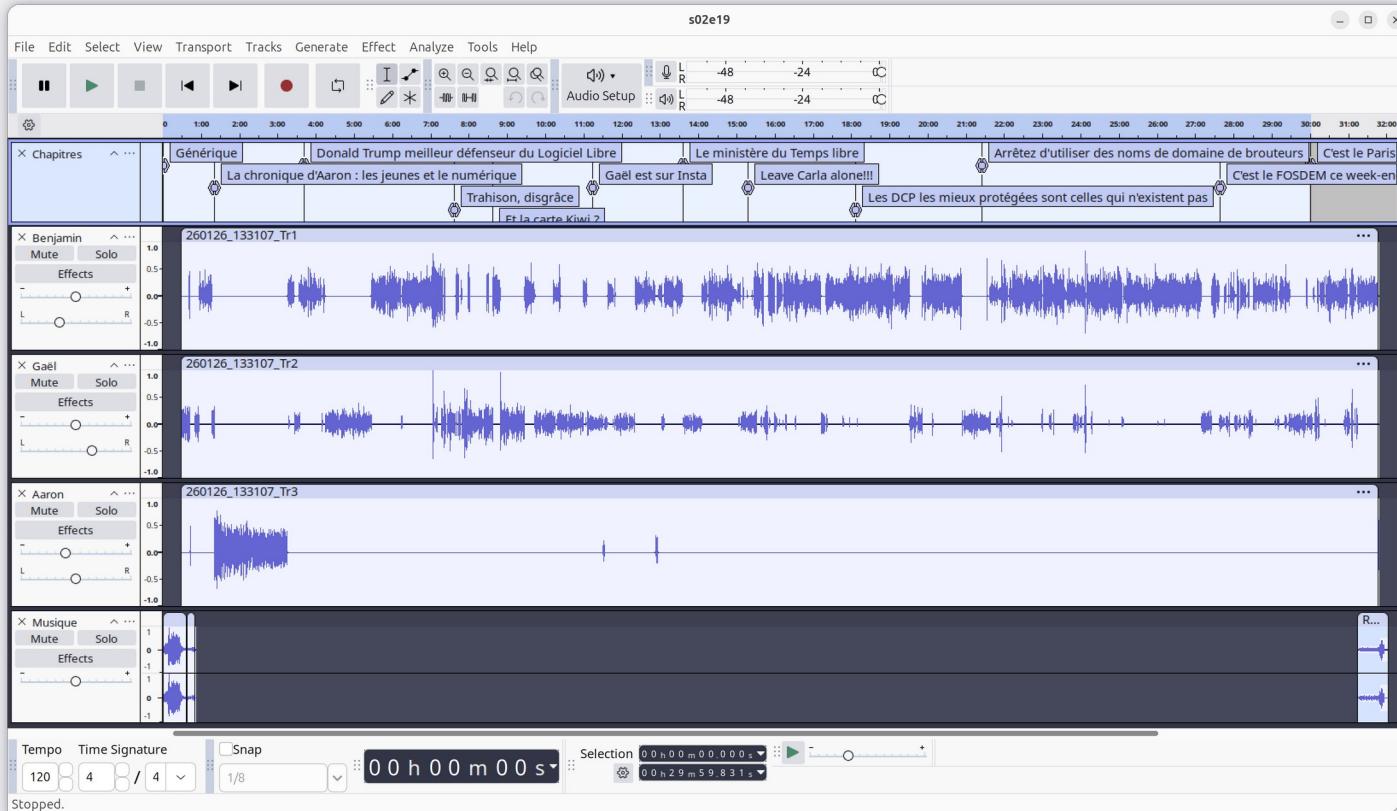
# We're Podcasters Too

- Years of producing podcasts ourselves
- Developed countless Python scripts to patch workflows (mufidiwihi, etc.)
- Realized: We're not the only ones struggling
- Audio editing software exists... but not for podcasters

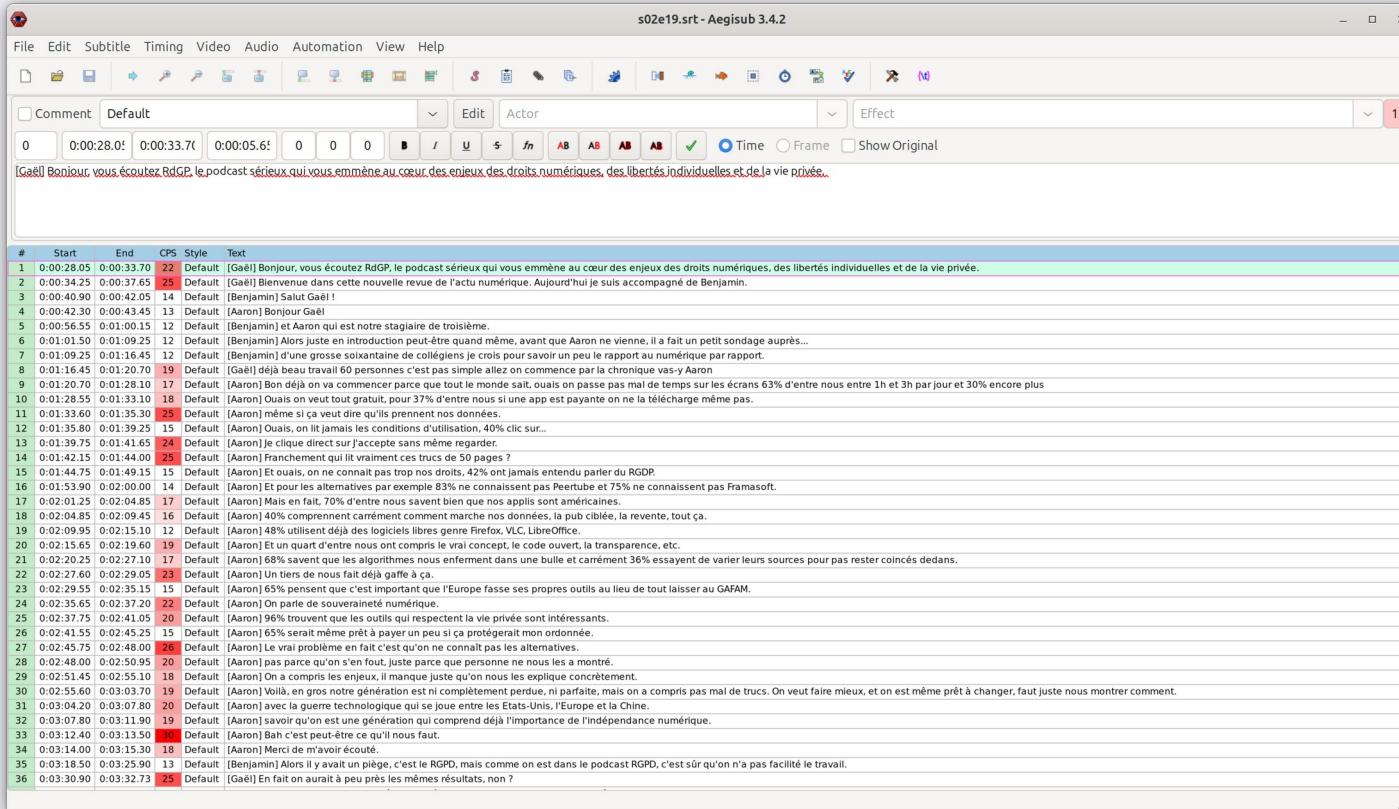
# Current workflow reality

- DAWs (Audacity, Ardour, Zrythm...) designed for music production
- MIDI sequencing? We don't need that
- Complex mixing boards? Overkill for voice
- Workflow doesn't match how podcasters actually work

# Audacity



# Aegisub



# Benchmark

Category	Name	Open-Source	Local/Online	Pro	Con
DAW	Audacity	✓	Local	Free, easy to use	Limited, not fully non-destructive
DAW	Ardour	✓	Local	Open source, can be free, non-destructive	Not easy to use
DAW	Reaper	✗	Local	Popular for podcasters, Ultraschall plugin	Not open source, not free
DAW	Logic	✗	Local	Powerful	Not open source, expensive, macOS only, not recommended for podcasters
DAW for Journalists	Hindenburg	✗	Local	DAW with features for podcasters	Windows/macOS only, not open source, not free
Adobe	Adobe Podcast	✗	Online	Disruptive features (e.g., sound enhancement)	Not open source, not free, studio still in beta
Podcaster Tool	Riverside	✗	Online	Record and edit	Not open source, not free
Podcaster Tool	Ultraschall	✓	Local	Made for podcasters, popular in Germany	Requires Reaper which is not open-source and not made specifically for podcasters
Transcript edition	Aegisub	✓	Local	Open source, does the job	UX is not seamless
Transcription	VOSK	✓	Local	Open-source, well supported	Really not easy to use, trained models may be hard to find
Transcription	Whisper AI	✓	Local	Open-source, accurate, many trained models available	Not easy to use
Transcription***	Castmagic, Podium, Podsqueeze, Swell AI, Descript, Happy Scribe, Otter.ai	✗	Online	Good transcription, many features, good UX	Workflow not customizable (not open source), not free

# What podcasters actually need

- Transcript-driven editing
- Noise reduction & mouth click removal
- One place for ALL metadata
- Chapter management
- Multi-platform publishing
- Static hosting support
- Customizable workflows
- Plugins for common tasks

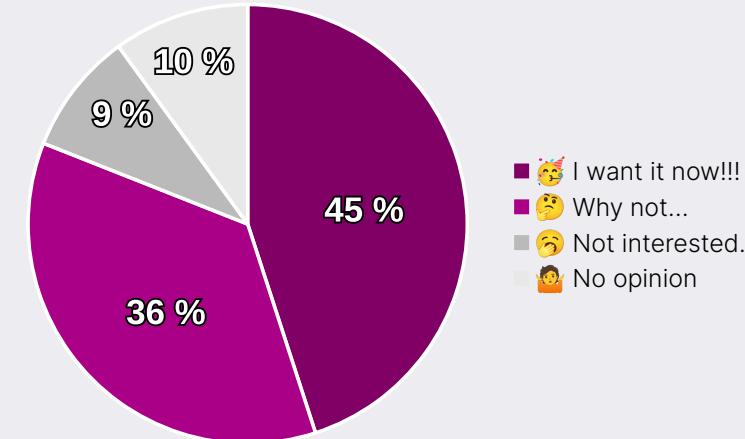
# We Asked, You Answered

⚡ Poll: Please Vote and Boost! ⚡

We're considering developing an open-source desktop app (Linux, Windows, Mac) for podcast creation.

It will feature a customizable workflow where every tool is a plugin, including:

- 🎧 Noise reduction
- 🗣 Mouth noise editing
- 🔊 Simple multi-channel audio editing
- 🎵 Music insertion
- ✍️ Automatic local transcription, manual correction
- 📖 Chapter editing
- 🏷️ Metadata editing (ID3, RSS) with LLM
- 💾 Local publishing
- 🌐 Publish to host (including Castopod support, but not only)



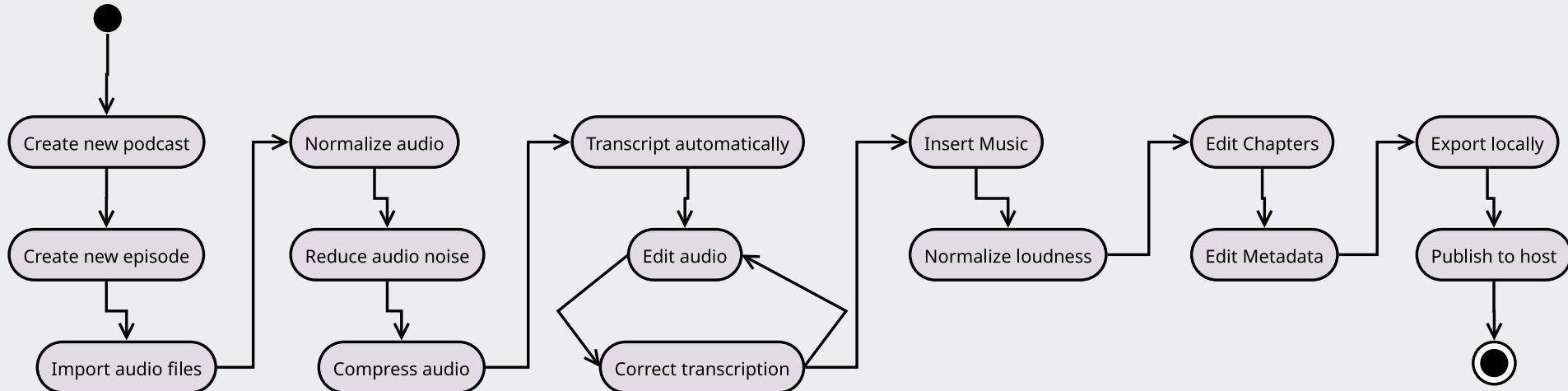
# A podcast editor built *by* podcasters *for* podcasters

- Transcription *before* editing (not after)
- *One* place for all metadata (ID3, RSS, Podcasting 2.0 tags)
- Upload to *any* hosting platform
- Local, open AI - no cloud required
- Plugin-based architecture
- Cross-platform (Linux, Windows, macOS)

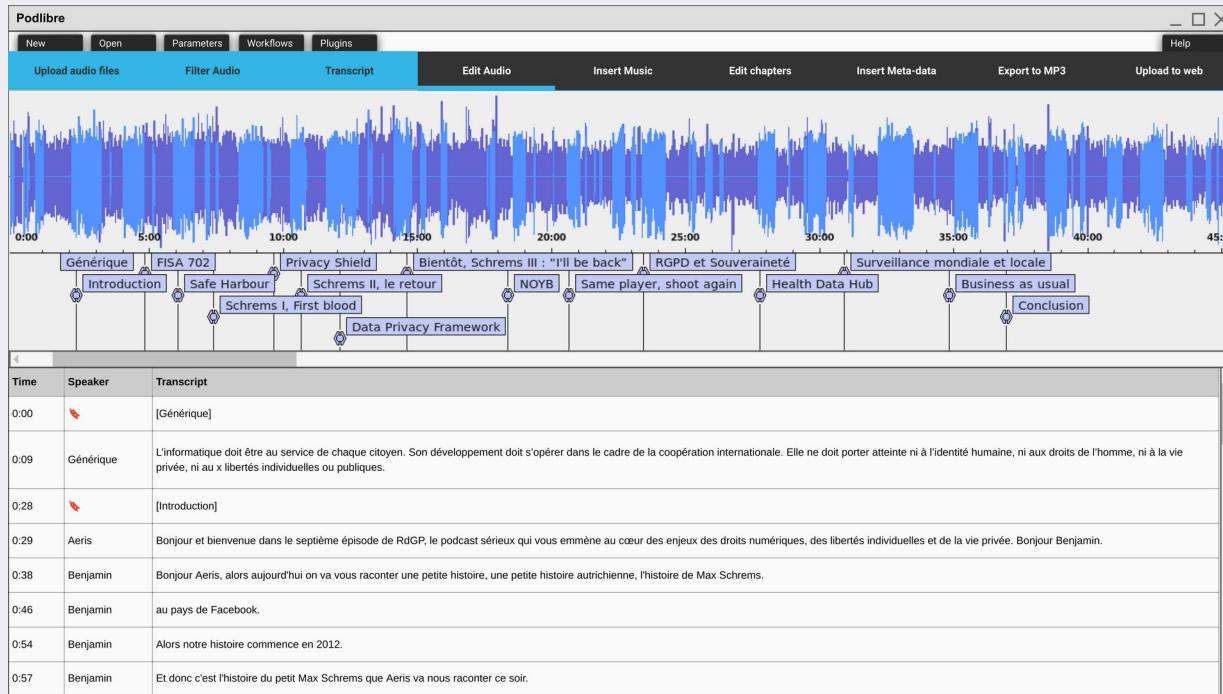
# Key Principles

- Cross-Platform (Linux, macOS, Windows)
- Privacy focused
- Plugin-based architecture
- Open Source
- Offline-capable

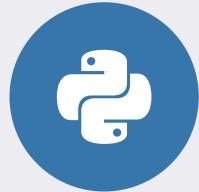
# Workflow



# Mockup



# The Stack



- **Python** - Accessible, huge ecosystem, works everywhere
- **PyQt6** - Mature, cross-platform UI framework
- **Whisper** - Local automatic transcription (MIT license)
- **PyTorch/TorchAudio** - Audio processing with GPU acceleration
- **noisereduce & DeepFilterNet** - Open noise reduction
- **Pydub** - Simple, high-level audio manipulation
- **Plugin** architecture from day one - Extensibility baked in

# Publishing & Integration

**Castopod** - Native API client integration  
**Funkwhale** - Federated music/podcast server connector  
**Faircamp** - Static site generator exporter  
**Local/Static hosting** - File generation for self-hosting  
**FTP/SFTP** - Upload to any server

# Development & Distribution

**PyInstaller / cx\_Freeze** - Application packaging  
**Woodpecker CI / Forgejo Actions** - CI/CD pipeline  
**pytest** - Testing framework  
**MkDocs** - Documentation

## Plugins

Plugin **Manager** - Load, unload, discover plugins  
Plugin **API** - Standard interface for all plugins  
**Built-in** plugins - Essential functionality  
**Third-party** plugins - Community extensions  
**Hooks & events** system - Integration points

## Core Application

**Workflow engine** - Orchestrates plugin chains  
**Project management** - Podcast and episode organization  
**State management** - Application state  
**Undo/redo system** - Action history  
**Export/render pipeline** - Final audio generation  
**i18n/l10n** - language support

## UI

**PyQt6** - Main UI framework (GPL3)  
**Waveform visualization** - Audio display component  
**Timeline editor** - Multi-track editing interface  
**Transcript editor** - correction interface  
**Metadata forms** - ID3, RSS, Podcasting 2.0 tags  
**Plugin UI components** - Custom plugin interfaces

## Data & Storage

**TinyDB** - Per-podcast database  
**File system** - Audio and media file storage  
**JSON** - Configuration and preferences

## Audio Processing

**PyTorch + TorchAudio** - GPU acceleration  
**Pydub** - High-level audio manipulation  
**soundfile/librosa** - Audio I/O and analysis  
**noisereduce** - Spectral gating noise reduction  
**DeepFilterNet** - Advanced deep learning filtering  
**PedalBoard, pyo...**

## A.I.

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## Platform Layer

Linux · macOS · Windows

# We built the very first brick

- Work in progress (alpha stage)
- Core architecture taking shape
- Plugin system functional
- Funded development underway  
(Ad Aures + NLnet Foundation support)



# What this means

- Things will break
- UI will change
- Your feedback shapes everything
- Now is the best time to get involved 😊

# Technical hurdles

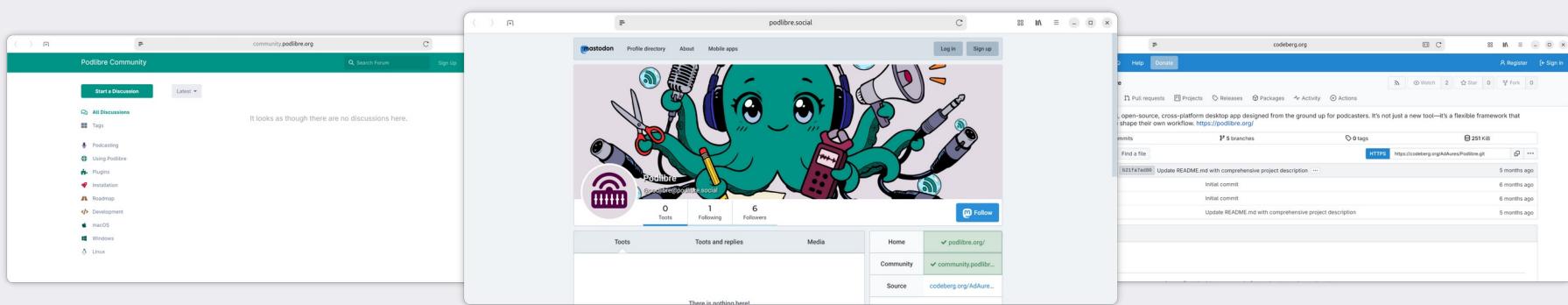
- Multi-platform compatibility (Linux, Windows, macOS)
- GPU acceleration with PyTorch on all platforms
- Managing compatibility between Python modules
- Stability is paramount - podcasters need reliable tools

# Community challenges

- Engaging third-party developers to build plugins
- Growing beyond Castopod users
- Creating an ecosystem, not just a tool

# Join Us Now!

- <https://podlibre.org/>
- <https://community.podlibre.org/>
- <https://codeberg.org/AdAures/Podlibre>



# Thank you!

