

# International Linguistic Heritage Research Foundation (ILHRF)

Preserving and Advancing Global Linguistic Diversity & Creating  
Datasets

## ILHRF Founding Members

International Linguistic Heritage Research Foundation

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# Our Vision

- Safeguard global linguistic heritage through cutting-edge research and technology.
- Bridge the gap between official and non-official languages worldwide with modern AI technologies, ensuring no voice is lost.
- Foster inclusive innovation by empowering low-resource, vulnerable, and endangered languages globally.
- Create sustainable research foundation through open-source datasets and paid services.

**“Languages are the soul of a nation.”**

**“Let us not let the languages of our ancestors die out. Let us revive them for tomorrow.”**

# Mission

- Build comprehensive datasets and tools for computational linguistics in all languages and extend to other languages.
- Collaborate with academia, industry, and communities to drive sustainable preservation.
- Promote open-source resources that enable AI applications in education, healthcare, and culture.

## Core Focus

Prioritizing low-resource languages as models for scalable impact across all languages and beyond.

# The Language Crisis: Low-Resource Languages

## Current Reality

40% of the world's 7,000+ languages are endangered [3]

2,500 languages have fewer than 1,000 speakers [1]

Languages are disappearing at rate of 1 every 2 weeks

90% of languages lack basic digital resources

Indigenous knowledge systems at risk of permanent loss

# UNESCO Classification: Language Vitality

## Safe Languages

- Spoken by all generations with intergenerational transmission
- Used in education, administration, media, and daily life
- No immediate endangerment threat

## Vulnerable Languages

- Most children speak the language, but it may be restricted to certain domains
- Used orally by all generations but increasingly by adults only
- UNESCO: Languages with developing endangerment [2]

# UNESCO Classification: Endangered Languages

## Definitely Endangered

Children no longer learn the language as mother tongue

Spoken mainly by parental generation and up

UNESCO: Languages with fewer than 100 speakers in some cases [2]

## Severely Endangered

Language spoken by grandparents and older generations

While parents may understand it, they do not speak it to children

UNESCO: Languages spoken by fewer than 100 people [3]

# UNESCO Classification: Extinct Languages

## Critically Endangered & Extinct

**Critically Endangered:** Spoken only by few members of oldest generation

**Extinct:** No speakers remaining, but may survive in recorded form

UNESCO: Languages with 0 speakers or only ceremonial use [3]

## UNESCO Assessment Factors [2]

Intergenerational transmission

Absolute number of speakers

Proportion of speakers within the total population

Trends in existing language domains

Response to new domains and media

Materials for language education and literacy

# Why Immediate Action is Critical

## Cultural & Knowledge Loss

- Traditional ecological knowledge disappears with languages
- Medicinal plant knowledge lost forever
- Cultural narratives and oral histories vanish
- Indigenous governance systems undermined
- Community identity and social cohesion threatened

## AI & Digital Exclusion

- Low-resource languages excluded from AI advancements
- Digital divide widens between majority and minority languages
- Educational opportunities limited for speakers of endangered languages
- Healthcare access reduced due to language barriers in AI systems

# The Foundation's Urgent Mission

## Why LHRF Must Start Immediately

Languages are disappearing faster than we can document them

AI technology evolves rapidly - low-resource languages risk permanent exclusion

Community elders are aging - oral knowledge must be preserved now

Global collaboration needed before critical mass is lost

Foundation must be established to coordinate worldwide efforts

## Our Commitment

Establish sustainable infrastructure for language preservation

Build global community of researchers and speakers

Create open-source tools accessible to all communities

Ensure no language is left behind in the AI revolution

# Key Objectives

- Collect and annotate 1,000 hours of conversational speech data per language for robust ASR models in each language.
- Develop datasets tailored for training large language models (LLMs) in each language.
- Create specialized NLP datasets: POS tagging, NER, anaphora resolution, dependency parsing in each language.
- Build OCR datasets for each language scripts, including historical manuscripts in each language.
- Construct multilingual knowledge graphs linking dialects and cultural contexts.
- Design tools for dialectal variation analysis and language revitalization in each language.
- Enable cross-lingual transfer learning for endangered languages.
- Integrate sociolinguistic insights into AI for equitable language tech.

# Language Phase 1 (2026-2028)

## Priority Languages: English (Indian Accent), Hindi, Marathi, Konkani

- Foundation building with major Indian languages
- Establish data collection and annotation pipelines
- Create baseline AI models and tools
- Pilot applications in education and community engagement

# Language Phase 2 (2029-2030)

Additional Languages: Bengali, Telugu, Tamil, Gujarati, Urdu

- Expand to major Dravidian and other Indian languages
- Leverage Phase 1 infrastructure and methodologies
- Cross-lingual transfer learning experiments
- Regional collaboration partnerships

# Language Phase 3 (2031-2032)

Additional Languages: Kannada, Odia, Malayalam, Punjabi, Assamese

- Maithili, Santali, Kashmiri, Nepali, Sindhi
- Focus on North and North-East Indian languages
- Special emphasis on tribal and minority languages
- Integration with existing linguistic research networks

# Language Phases 4-6 (2033-2038)

Phase 4 (2033-2034): Manipuri, Dogri, Meitei, Bodo, Sanskrit

Phase 5 (2035-2036): Bhili, Gondi, Kurukh, Khandeshi, Tulu

Phase 6 (2037-2038): Khasi, Ho, Garo, Mundari, Tripuri

- Priority on highly endangered and tribal languages
- Community-driven data collection approaches
- Preservation of oral traditions and cultural contexts
- Global collaboration opportunities

# Task Phased Approach

## Dataset Collection (Parallel across all language phases)

- 1000 hours of conversational speech per language
- Speech-to-Text Translation datasets
- 1000 hours, 4 speakers Text-to-Speech per language
- Text-to-Speech Translation per language
- 1M POS Tagged Sentences per language
- 1M NER Tagged Sentences per language
- 1M Anaphora Tagged Sentences per language
- 1M Sentiment Tagged Sentences per language
- 1M Emotion Tagged Sentences per language
- 1M Bidirectional Multiple Pairs of Translation per language
- 1M Sentences for Transliteration per script

# Web Platforms for Data Collection

## Crowdsourcing Platform (Launch: December 2026)

- Open to everyone worldwide for voluntary contributions
- Supports spontaneous speech, scripted speech, token classification
- Enables translation, transliteration, and affect tagging
- Languages and scripts added based on community needs

## Language Experts Platform (Invite-Only)

- Restricted access - admins approve participants only
- Higher quality annotations and reviews than crowdsourcing
- Focus on annotation and review of uploaded datasets
- Datasets collected offline by data collection teams

# Foundational Model Building

## AI Model Development

- ASR (Automatic Speech Recognition) models
- Speech-to-Text Translation models
- Text-to-Speech models
- Text-to-Speech Translation models
- Speech-to-Speech Translation Models
- Language models (SLMs, LLMs)
- Machine Translation models
- POS Tagging and Syntactic Analysis models
- Named Entity Recognition (NER) models
- Sentiment and Emotion Analysis models
- Transliteration models
- Voice AI Agents and conversational systems
- Multimodal models (speech + text integration)

## Multi-Channel Revenue Strategy

**Commercial Services:** API access, custom training, consulting

**Data Licensing:** Premium datasets, research partnerships

**Government Grants:** Cultural preservation, research funding

**Corporate Partnerships:** Tech companies, language services

**Educational Products:** Training programs, certifications

**Membership Programs:** Institutional access, premium support

# Commercial Technology Services

## API & Technology Access

- Language model APIs with usage-based pricing
- Speech-to-text/speech APIs for multiple languages
- Machine translation APIs with quality guarantees
- Custom model hosting and inference services
- Real-time language processing services

## Enterprise Solutions

- Custom model training for specific domains
- Multi-language chatbot development services
- Voice assistant integration for businesses
- Linguistic consulting for AI product development
- Data annotation services for enterprises

# Data Licensing & Research Partnerships

## Dataset Monetization

- Premium access to curated language datasets
- Research partnerships with data licensing agreements
- Commercial dataset licensing for AI companies
- Specialized corpora for industry applications
- Historical and cultural text collections

## Academic & Research Collaborations

- Sponsored research projects with industry partners
- Joint publications and IP sharing agreements
- Technology transfer partnerships
- Collaborative grant applications
- Student internship and research programs

# Government & Institutional Funding

## Grant-Based Revenue

- UNESCO cultural preservation grants
- Government research and development funding
- Indigenous language revitalization programs
- Educational technology innovation grants
- International development agency funding

## Policy & Advisory Services

- Language policy consulting for governments
- Impact assessments for language technology projects
- Cultural preservation strategy development
- Educational curriculum design services
- Regulatory compliance consulting

# Educational Products & Training

## Training Programs

- Low-resource language technology certification courses
- AI for linguistic research workshops
- Cultural preservation technology training
- Data annotation and quality assurance training
- Computational linguistics bootcamps

## Educational Technology

- Language learning platform licensing
- Educational content development services
- Assessment and evaluation tools
- Teacher training materials and programs
- Digital language preservation toolkits

# Membership Programs & Community Support

## Institutional Memberships

- Tiered membership levels for universities and research institutions
- Premium access to datasets and research tools
- Priority support and technical assistance
- Collaborative research opportunities
- Early access to new language models and tools

## Community Funding

- Crowdfunding campaigns for specific language projects
- Individual and community donations
- Sponsorship programs for language preservation
- Legacy giving and endowment programs
- Corporate social responsibility partnerships

# Publishing & Content Monetization

## Academic Publishing

- Research publications and conference proceedings
- Open-access journals on linguistic technologies
- Books and monographs on language preservation
- Technical reports and white papers
- Case studies and best practice guides

## Digital Content

- Online courses and educational materials
- Language learning mobile applications
- Cultural content licensing and distribution
- Podcast series on linguistic diversity
- Webinar series and virtual events

# Technology Licensing & IP Management

## Software Licensing

- Open-source software with commercial support options
- Proprietary tools for enterprise use
- Algorithm licensing for language processing
- Platform licensing for educational institutions
- API licensing with service level agreements

## Intellectual Property Strategy

- Patent filings for novel language technologies
- Trademark protection for foundation brands
- Copyright management for educational materials
- Collaborative IP development with partners
- Technology transfer agreements

# Global Partnerships & Sponsorships

## Strategic Alliances

- Technology partnerships with major AI companies
- Academic collaborations with universities worldwide
- NGO partnerships for cultural preservation
- Government agency collaborations
- International organization memberships

## Sponsorship Opportunities

- Language-specific sponsorship programs
- Event sponsorship and naming rights
- Technology showcase sponsorships
- Research project sponsorships
- Community outreach program sponsorships

# Global Implementation Strategy

## Phase 1: Foundation Building (2026–2028)

- Establish data collection infrastructure for Language Phase 1 languages
- Build annotation pipelines and quality assurance processes
- Develop foundational AI models and open-source tools
- Create global collaboration network and partnerships

## Key Milestones

- 4 language datasets completed and publicly released
- Functional AI models for all supported tasks
- Revenue generation through paid services begins
- International partnerships established

# Global Scaling Strategy

## Phase 2: Expansion (2029 onwards)

- Scale operations to Language Phases 2-6 simultaneously
- Leverage parallel funding and international collaborations
- Adapt methodologies for diverse linguistic contexts worldwide
- Build comprehensive global language technology platform

## Global Impact Vision

- Unified platform serving 100+ languages worldwide
- Sustainable funding through commercial services
- Global network of linguistic researchers and communities
- Preservation of endangered languages and cultures

# Academic Division - Tasks & Roles

## Tasks

- Optical Character Recognition (OCR)
- Machine Translation (MT)
- Speech-to-Text (STT)
- Token Classification (POS, NER tagging)
- Affect (Sentiment, Emotion tagging)

## Roles for each task

- Data Collection Team
- Annotation Team
- Review Team

# Academic Division - TTS & Experts

## Text-to-Speech (TTS)

1 Male & 1 Female Voice Artist (20–40 years)

1 Male & 1 Female Voice Artist (41–60 years)

Total: 1000 hours per language, 250 hours per speaker

## Additional Academic Roles

Language Experts (5 per language)

Education Experts (1 per language)

## Support Functions

Support Staff

Management (HR, Product Management)

Finance & Administration

Legal & Compliance Assistance

## Technical Development Teams

Software Developers

NLP Engineers

DevOps Engineers

MLOps Engineers

LLMOPs Engineers

Data Engineers

## Research Specializations

Computer Science Researchers

Linguistic Researchers

Sociolinguistic Researchers

Psycholinguistic Researchers

Computational Linguistic Researchers

# Roadmap & Milestones

Timeline	Milestones
Q1-Q2 2026	Legal registration as Global Foundation; Initial team on-boarding and infrastructure setup.
Q3-Q4 2026	Launch data collection for Phase 1 languages (English, Hindi, Marathi, Konkani).
2027	Complete foundational models and release open-source datasets for Phase 1 languages.
2028	Launch commercial services; Begin Phase 2 language data collection.
2029-2038	Parallel expansion to Phases 2-6 languages with international collaborations.
2038+	Global linguistic technology platform fully operational with 100+ languages.

## Next Steps

Secure foundational partnerships for ethical data sourcing and technological infrastructure.

# Partnerships & Sustainability

**Academic Collaborations:** Universities for expertise and student involvement.

**Industry Ties:** Tech firms for tools and compute resources.

**Community Engagement:** Local stakeholders for authentic data and advocacy.

**CSR Synergies:** Aligning with corporate social responsibility goals in education and heritage preservation to fuel annotation and scaling efforts.

**Together, building a legacy of linguistic innovation.**

# Join Us in Preserving India's Voices

Become a partner: Contribute expertise, resources, or funding.

Volunteer or collaborate: From data annotation to research pilots.

Follow our journey: Updates via [ilhrf.org](http://ilhrf.org) (coming soon).

Thank You!



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