

# 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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- 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 ILHRF 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

## 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



## 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

## 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

## 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 onboarding 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.

**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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