

Aksara Writer

Modern Markdown Converter for Indonesian Businesses

Project Showcase & Technical Documentation

Ak'sara Initiative - Completed Project



PROJECT UPDATE - SEPTEMBER 2025


AKSARA WRITER IS NOW AVAILABLE!

Status:  MVP **COMPLETED** and published to NPM!

Quick Install:

```
npm install -g aksara-writer
```

Available Now:

-  NPM Package
-  GitHub Repository
-  VS Code Extension (released)

Executive Summary

Aksara Writer is a modern markdown conversion tool that has been **successfully developed** and published as an open-source project for Indonesian business needs. This project complements the Ak'sara Initiative ecosystem by providing a powerful and user-friendly documentation solution.

Mission Accomplished: The best documentation **Open Source:** Released under **BSD-3-Clause License** - free for everyone, full Indonesian language support and ready-to-use commercial and personal use. business templates - **NOW AVAILABLE!**

3

Months Actual Development

\$0

Bootstrap Cost (Self-funded)

1000+

NPM Downloads (Growing)

Project Overview

Problem Statement

- **Marp limitations:** Focus on presentations, not suitable for business documents
- **Lack of localization:** Existing tools don't support Indonesian language properly
- **Business templates:** No specific templates for Indonesian business needs
- **Complex distribution:** Complex tools difficult for non-developers to use

Proposed Solution

Aksara Writer offers:

- **Multi-format export:** HTML, PDF, PPTX from single source markdown
- **Indonesian-first:** UI and templates in Indonesian language
- **VS Code integration:** Extension with live preview and export
- **Business templates:** Ready-to-use templates for invoice, proposal, reports
- **Easy distribution:** Single binary for command line, extension for VS Code

Market Opportunity

Primary Market

- **Indonesian developers** (500K+ developers)
- **Small-medium businesses** that need professional documentation
- **Content creators** and **technical writers**
- **Government agencies** that need document standardization

Secondary Market

- **Enterprise companies** for internal documentation
- **Educational institutions** for learning materials
- **Freelancers** and **consultants** for proposals and reports

Market Opportunity

Competitive Analysis

TOOL	STRENGTHS	WEAKNESSES	MARKET POSITION
Marp	VS Code integration, multi-format	Presentation-focused, English only	Incumbent
Pandoc	Powerful conversion	Complex CLI, no GUI	Developer tool
Notion	Easy to use	Proprietary, limited export	Consumer tool
Aksara Writer	Indonesian + business focus	New tool	Opportunity

Technical Architecture

Technology Stack

Core Engine (Bun/TypeScript → Rust Migration)

- **Phase 1:** Bun + TypeScript for rapid prototyping
- **Phase 2:** Rust core for performance and single binary distribution
- **Libraries:** Marked.js, Puppeteer, JSZip, Gray-matter

VS Code Extension (TypeScript)

- Extension API for command integration
- Webview for live preview
- Language server protocol for advanced features

Architecture Overview

```
aksara-writer/
├── packages/
│   ├── core/           # Conversion engine
│   ├── cli/            # Command line interface
│   ├── server/         # Preview server
│   └── vscode/          # VS Code extension
├── templates/          # Indonesian business templates
├── themes/             # Document themes
└── examples/           # Example documents
```

Key Features

Core Conversion Features

- **Markdown to HTML**: Styled web pages with Indonesian themes
- **Markdown to PDF**: Professional documents with A4 formatting
- **Markdown to PPTX**: PowerPoint presentations for business
- **Frontmatter support**: Metadata for document properties

Indonesian Business Templates

- **Invoice/Faktur**: Tax-compliant Indonesian invoices
- **Business Proposals**: Professional business proposals
- **Corporate Reports**: Corporate reports and presentations
- **Official Letters**: Official letters and government documents
- **Kontrak**: Legal contract templates

VS Code Integration








- **Live Preview**: Real-time preview while editing
- **One-click Export**: Direct export to PDF/PPTX/HTML
- **Template Gallery**: Insert templates easily
- **Theme Switcher**: Change document theme

Development Roadmap





Phase 1: MVP Development COMPLETED

Focus: Core functionality with Bun/TypeScript

Features:  **ALL DELIVERED**

-  Basic markdown to HTML/PDF/PPTX conversion
-  CLI interface (`aksara-writer` command)
-  VS Code extension with live preview
-  Template system with business templates
-  Indonesian language support
-  Positioning system for images
-  Table support and code blocks

Deliverables:  **ALL COMPLETED**

-  Working CLI tool (published to NPM)
-  VS Code extension (released)
-  Core library (`aksara-writer-core`)
-  Documentation and examples

Development Roadmap

Phase 2: Business Features (Months 4-6)

Focus: Template library and advanced features

Features:

- ☒ Complete template library (8+ templates)
- ☒ Advanced theme system
- ☒ PPTX export functionality
- ☒ Live preview <-> editor sync
- Indonesian localization

Deliverables:

- ☒ Feature-complete tool
- Template marketplace
- ☒ User documentation

Development Roadmap

Phase 3: Performance & Scale (Months 7-9)

Focus: Rust migration and optimization

Features:

- Rust core for performance
- Single binary distribution
- Advanced PDF generation
- Batch processing capabilities
- Enterprise features





Deliverables:

- Production-ready tool
- Performance benchmarks
- Enterprise partnerships

Project Sustainability

Current Model: Open Source First

Core Project (FREE - BSD License):

-  Complete document conversion system
-  VS Code extension with full features
-  Indonesian business templates
-  Multi-format export (HTML, PDF, PPTX)
-  Self-sustaining development

Community Contributions:

- Template sharing and improvements
- Localization for other regions
- Feature requests and bug reports
- Documentation enhancements

Future Revenue Opportunities

For accelerated development and premium services

1. Professional Services

- **Custom template development:** \$1K-5K per template
- **Enterprise integration:** \$5K-15K per project
- **Training and workshops:** \$500-1K per session

2. Premium Support & Features

- **Priority support:** Response guarantees
- **Custom branding:** White-label solutions
- **Advanced integrations:** Enterprise systems
- **Consulting services:** Implementation guidance

Market Entry Strategy

Phase 1: Developer Community (Months 1-3)

Target: Indonesian developer community

Approach:

- Open source release on GitHub
- Tech conference presentations
- Developer community engagement
- Documentation in Indonesian language

Goals:

- 1,000 GitHub stars
- 100 VS Code extension installs
- Community feedback integration

Market Entry Strategy

Phase 2: Business Users (Months 4-6)

Target: SME and content creators

Approach:

- Business template showcase
- Tutorials and workshops
- Partnership with business consultants
- Case studies from early adopters

Goals:

- 5,000 active users
- 500 premium subscribers
- Template marketplace launch

Market Entry Strategy

Phase 3: Enterprise Market (Months 7-9)

Target: Large corporations and government

Approach:

- Enterprise feature development
- Government procurement participation
- Corporate partnership programs
- Professional services offering

Goals:

- 10 enterprise customers
- Government pilot programs
- \$100K annual revenue

Competitive Advantages

Technical Advantages

- **Modern stack**: Bun + Rust for superior performance
- **Multi-format support**: HTML, PDF, PPTX from single source
- **Indonesian optimization**: Font, layout, compliance for Indonesia
- **VS Code native**: Seamless integration with popular editor

Market Advantages

- **Indonesian-first**: Complete localization and cultural context
- **Business focus**: Templates and features for business needs
- **Community-driven**: Open source with community contribution
- **Price competitive**: 70% cheaper than enterprise solutions

Strategic Advantages

- **Ak'sara ecosystem**: Synergy with Aksara IS platform
- **Developer tool**: Attracts developer community to ecosystem
- **Government ready**: Compliance with Indonesian standards
- **Open source**: Community adoption and contribution

Risk Analysis

Technical Risks

Risk: Complexity of multi-format conversion
Mitigation: Phased development, proven libraries, extensive testing
Risk: Performance issues with large documents
Mitigation: Rust migration, streaming processing, optimization

Market Risks

Risk: Competition from established tools
Mitigation: Indonesian focus, business templates, community building
Risk: Slow adoption due to
Mitigation: Easy migration, VS Code integration, clear value proposition

Business Risks

Risk: Monetization challenges for open source
Mitigation: Freemium model, professional services, enterprise features
Risk: Development resource constraints
Mitigation: Phased development, community contributions, strategic hiring

Success Metrics

Technical KPIs

- **Conversion speed:** <5 seconds for typical document
- **Output quality:** 100% accurate formatting for business documents
- **Extension adoption:** >10K VS Code installs within 6 months
- **Template usage:** >80% users using templates

Community KPIs

- **GitHub engagement:** 1K stars, 100+ contributors
- **Template contributions:** 50+ community templates
- **Documentation:** Complete Indonesian documentation
- **Support:** <24 hour response time for issues

Business KPIs

- **User growth:** 1K → 5K → 25K users within 9 months
- **Revenue:** \$5K (Month 6) → \$25K (Month 9) → \$100K (Year 1)
- **Market penetration:** 5% Indonesian developer community
- **Customer satisfaction:** >4.5/5 rating on VS Code marketplace

Resource Requirements

Development Team

- **Technical Lead**: Rust + TypeScript expertise (\$75K/year)
- **Frontend Developer**: VS Code extension development (\$60K/year)
- **Backend Developer**: Document processing pipelines (\$60K/year)

Infrastructure & Tools

- **Development tools**: \$5K/year
- **Cloud infrastructure**: \$10K/year
- **Design tools**: \$3K/year
- **Testing devices**: \$5K one-time

Marketing & Operations

- **Community management**: \$20K/year
- **Content creation**: \$15K/year
- **Conference participation**: \$10K/year
- **Legal compliance**: \$5K/year

Future Development Opportunities

Current Status: Self-Sustaining Open Source

Aksara Writer v1.0 is **complete and free** under BSD license:

- **✓ No budget required** for current features
- **✓ Self-funded** bootstrap development
- **✓ Community-driven** growth model
- **✓ Commercial-friendly** license

Optional: Enhanced Development Program

For organizations wanting to accelerate advanced features and ecosystem growth

Potential Sponsorship Benefits:

- **Priority feature development:** Custom business templates
- **Professional support:** Training and implementation
- **Custom integrations:** Enterprise systems integration
- **Ecosystem expansion:** Integration with other Ak'sara projects

Potential Development Phases:

- **Phase 2 enhancements:** Advanced templates, enterprise features
- **Support infrastructure:** Enhanced documentation, training materials
- **Community growth:** Marketing initiatives, developer outreach
- **Timeline:** 6-12 months per phase (based on interest and funding)

Note: Development continues **with or without** external funding - the core tool is already complete and sustainable.

Strategic Value

Ecosystem Synergy

- **Aksara IS Documentation**: Tool for platform documentation
- **Developer Community**: Attracts developers to Ak'sara ecosystem
- **Business Templates**: Support for SME in digitalization
- **Government Adoption**: Standard tool for government documentation

Market Position

- **Indonesian market leader** in markdown conversion
- **Developer tool of choice** for Indonesian developers
- **Business standard** for professional

Long-term Vision

- **Platform integration**: Built-in to Aksara IS for documentation
- **International expansion**: Templates for Southeast Asian markets
- **AI integration**: Smart template suggestions and content generation
- **Enterprise suite**: Complete document management solution

Conclusion

Strategic Recommendation

Key Success Factors

- **Technical execution:** Quality conversion engine with excellent performance
- **Indonesian focus:** Deep understanding of local business needs
- **Community building:** Open source adoption and community contribution
- **Business model:** Sustainable freemium with enterprise upsell

Next Steps

- **Team recruitment:** Hire technical lead and frontend developer
- **MVP development:** 3-month sprint for basic functionality
- **Community launch:** Open source release with VS Code extension
- **Business development:** Template marketplace and premium features

Aksara Writer represents a high-impact, strategic project that complements the Ak'sara Initiative perfectly. With focus on Indonesian market needs and technical excellence, this project can become a widely adopted developer tool while serving as a revenue generator for the Initiative.

Contact Information:

- **Project Lead:** [To be assigned]
- **Technical Architect:** [To be assigned]
- **Business Development:** [To be assigned]

Email:

sponsor.aksara@tuta.com

contribute.aksara@tuta.com

partner.aksara@tuta.com

relations.aksara@tuta.com