

# MerdekaOS

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## Arch-based Linux Distribution for Indonesian Users

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Project Proposal & Strategic Analysis

*Ak'sara Initiative - Phase 3 Project*

# Executive Summary

**MerdekaOS** adalah distribusi Linux berbasis Arch yang dirancang khusus untuk user Indonesia, dengan fokus pada kemudahan penggunaan, performa optimal, dan dukungan hardware lokal yang excellent.

**Vision:** Menciptakan alternatif OS yang powerful, ringan, dan mudah digunakan untuk mengurangi ketergantungan Indonesia pada sistem operasi proprietary.

**12-18**

Bulan Pengembangan

**\$200K**

Estimasi Budget

**1M+**

Target Users

# Strategic Context

## National Technology Independence

- **Dependency Reduction:** Mengurangi ketergantungan pada Windows dan macOS
- **Local Hardware Support:** Optimasi untuk laptop dan PC yang dijual di Indonesia
- **Government Adoption:** Alternatif untuk institusi pemerintah
- **Educational Impact:** Platform pembelajaran untuk computer science

## Market Opportunity

- **Indonesia PC Market:** 15M+ units sold annually
- **Linux Adoption:** <2% market share, huge growth potential
- **Price Sensitivity:** Indonesian users need cost-effective solutions

## Ak'sara Ecosystem Integration

- **Bundled Software:** Pre-installed Aksara IS dan Aksara Writer
- **Development Platform:** Optimized untuk Indonesian developers
- **Business Ready:** Templates dan tools untuk SME digitalization

## Key Benefits

- **Zero License Cost:** Completely free alternative to proprietary OS
- **Performance Optimized:** Lightweight for older hardware
- **Indonesian Language:** Full localization and support
- **Developer Friendly:** Pre-configured development



# Technical Specifications

## Base System Architecture

### Foundation: Arch Linux

- **Rolling release:** Always up-to-date packages
- **Lightweight:** Minimal base installation
- **Performance:** Optimized untuk resource efficiency
- **Customizable:** Flexible configuration options

### Desktop Environment: Custom GNOME

- **Modern interface:** Clean, intuitive user experience
- **Indonesian localization:** Complete Bahasa Indonesia support
- **Performance tuned:** Optimized animations dan resource usage

## Hardware Optimization

### Indonesian Laptop Brands Focus:

- **Advan:** Driver optimization dan power management
- **Axioo:** Hardware compatibility testing
- **Polytron:** Performance tuning untuk specifications typical

### Common Hardware Support:

- **Intel/AMD processors:** Optimized scheduling dan power management
- **Integrated graphics:** Intel HD, AMD Radeon optimization
- **WiFi chipsets:** Robust driver support untuk common adapters
- **Bluetooth:** Seamless device pairing dan management

# Key Features

## User Experience Enhancements

### Installation Experience:

- **Graphical installer:** User-friendly setup wizard
- **Hardware detection:** Automatic driver installation
- **Partition management:** Safe dual-boot setup dengan Windows
- **User setup:** Indonesian keyboard, timezone, language

### Desktop Experience:

- **Indonesian theme:** Batik-inspired visual design
- **Local applications:** Banking, e-commerce, government apps
- **Font optimization:** Beautiful Indonesian text rendering
- **Input methods:** Support untuk various Indonesian input

## Pre-installed Software Suite

### Productivity Applications:

- **LibreOffice:** Fully localized dengan Indonesian templates
- **Aksara Writer:** Markdown converter untuk business documents
- **Web browsers:** Firefox dengan Indonesian bookmarks dan settings
- **Media tools:** VLC, GIMP untuk multimedia needs

### Development Tools:

- **VS Code:** Pre-configured dengan Indonesian extensions
- **Node.js/Bun:** Modern JavaScript development
- **Python:** Data science dan web development

# Market Analysis

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## Target User Segments

### Primary Users:

- **Office workers:** Government employees, SME staff
- **Students:** University students learning computer science
- **Developers:** Indonesian software developers
- **Small businesses:** Shop owners, freelancers

### Secondary Users:

- **Educational institutions:** Schools dan universities
- **Government agencies:** Cost-conscious departments
- **Internet cafes:** Gaming centers, co-working spaces
- **Tech enthusiasts:** Linux users, open source advocates



# Market Analysis

## Competitive Landscape

DISTRIBUTION	MARKET POSITION	STRENGTHS	WEAKNESSES
Windows	Dominant (85%)	Familiar, compatible	Expensive, bloated
Ubuntu	Linux leader (40% Linux)	User-friendly	Generic, not localized
Elementary	Design-focused	Beautiful interface	Limited software
MerdekaOS	Indonesian focus	Local optimization	New entrant

# Development Roadmap

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## Phase 1: Core System (Months 1-6)

**Focus:** Stable base system dengan Indonesian optimizations

### Deliverables:

- Arch-based foundation dengan custom repositories
- Indonesian-themed desktop environment
- Hardware compatibility untuk major brands
- Basic installation system
- Alpha release untuk testing

### Team Requirements:

- 2 system engineers



# Development Roadmap

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## Phase 2: Application Integration (Months 7-12)

**Focus:** Pre-installed applications dan user experience

### Deliverables:

- Complete software suite integration
- Aksara IS dan Aksara Writer pre-installation
- Indonesian language packs dan input methods
- Driver packages untuk common hardware
- Beta release dengan community testing

### Team Requirements:

- 1 additional application developer

# Development Roadmap

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## Phase 3: Distribution & Support (Months 13-18)

**Focus:** Public release dan ecosystem building

### Deliverables:

- Stable 1.0 release
- OEM partnerships dengan laptop manufacturers
- Community support infrastructure
- Documentation dan training materials
- Update dan maintenance systems

### Team Requirements:

- 1 community manager

# Business Model & Partnerships

## Distribution Strategy

### OEM Partnerships:

- **Advan, Axioo, Polytron:** Pre-installed OS option
- **Revenue sharing:** \$5-10 per unit dengan manufacturers
- **Support agreements:** Technical support untuk OEM customers
- **Marketing cooperation:** Joint promotional campaigns

### Direct Distribution:

- **Free download:** Community edition dengan basic features
- **Premium edition:** \$25 dengan additional software dan support
- **Enterprise edition:** \$100 dengan management tools dan SLA
- **USB/DVD sales:** Physical media untuk areas dengan limited internet

## Revenue Streams

### 1. OEM Licensing (60% revenue)

- Partnership dengan laptop manufacturers
- Pre-installation revenue sharing
- Support service contracts

### 2. Enterprise Services (30% revenue)

- Custom deployment solutions
- Training dan consultation
- Long-term support contracts

### 3. Application Ecosystem (10% revenue)

- Software store commission



# Technical Implementation

## Custom Package Repository

### MerdekaOS Packages:

- **Optimized kernels:** Power management, hardware support
- **Indonesian applications:** Banking, government, business tools
- **Local mirrors:** Fast download speeds untuk Indonesian users
- **Security updates:** Timely patches dan vulnerability fixes

### Development Infrastructure:

- **Build systems:** Automated package building dan testing

## System Architecture

### MerdekaOS Components:

- Base System (Arch Linux)
- Custom Desktop (GNOME + Indonesian theme)
- Hardware Support (Driver packages)
- Application Suite (Pre-installed software)
- Indonesian Localization (Language, input, fonts)

# Market Entry Strategy

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## Phase 1: Developer Community (Months 1-6)

**Target:** Indonesian Linux enthusiasts dan developers

**Approach:**

- Open source development di GitHub
- Tech conference presentations
- Developer community engagement
- Technical blogs dan tutorials

**Goals:**

- 1,000 alpha testers
- 100 community contributors

# Market Entry Strategy

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## Phase 2: Educational Adoption (Months 7-12)

**Target:** Universities dan technical schools

**Approach:**

- Educational partnerships
- Student developer programs
- Campus deployment pilots
- Computer science curriculum integration

**Goals:**

- 10 university partnerships
- 5,000 student users



# Market Entry Strategy

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## Phase 3: Commercial Launch (Months 13-18)

**Target:** OEM partnerships dan general users

**Approach:**

- Manufacturer negotiations
- Retail channel development
- Marketing campaigns
- Government procurement participation

**Goals:**

- 2 OEM partnerships
- 50,000 users

# Risk Analysis & Mitigation

## Technical Risks 🟡

<b>Risk:</b>	Hardware compatibility issues with Indonesian brands	<b>Mitigation:</b>	Extensive testing program, ecosystem limitations, partnerships with Indonesian manufacturer	<b>Risk:</b>	Software ecosystem limitations, Windows porting	<b>Mitigation:</b>	Focus pada applications, essential software users	<b>Risk:</b>	Update complexity for non-technical users	<b>Mitigation:</b>	Automated updates, simple UI, rollback capabilities
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## Market Risks 🟡

<b>Risk:</b>	User resistance to change Windows	<b>Mitigation:</b>	User migration tools, dual-boot support, training programs	<b>Risk:</b>	Easy reluctance to alternative OS	<b>Mitigation:</b>	OEM support, cooperation	<b>Risk:</b>	Compelling business case, technical support, marketing	<b>Mitigation:</b>	Linux distributions, marketing	<b>Risk:</b>	Competition from international Linux distributions	<b>Mitigation:</b>	Indonesian-specific features, partnerships, community building
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# Success Metrics & KPIs

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## Technical KPIs

- **Boot time:** <20 seconds pada typical hardware
- **RAM usage:** <1GB idle consumption
- **Hardware compatibility:** >95% Indonesian laptop models
- **Package availability:** >80% essential applications

## Adoption KPIs

- **User base:** 10K (Month 6) → 50K (Month 12) → 250K (Month 18)
- **OEM partnerships:** 2 major manufacturers by Month 18
- **Educational adoption:** 25 institutions by Month 18
- **Community:** 500 active contributors, 50 package maintainers



# Resource Requirements

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## Development Team

- **System Architect:** Linux kernel + Arch expertise (\$90K/year)
- **Desktop Developer:** GNOME customization (\$70K/year)
- **Package Maintainer:** Repository management (\$60K/year)
- **QA Engineer:** Testing + hardware validation (\$55K/year)
- **UI/UX Designer:** Indonesian interface design (\$65K/year)

## Infrastructure Costs

- **Build servers:** \$20K/year
- **Package mirrors:** \$30K/year (multiple Indonesian locations)
- **Testing hardware:** \$15K one-time (various laptop models)
- **Development tools:** \$10K/year

# Strategic Impact

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## National Technology Goals

- **Digital sovereignty**: Reduced dependency pada foreign OS
- **Local innovation**: Platform untuk Indonesian software development
- **Educational advancement**: Modern tools untuk computer science education
- **Economic impact**: Support untuk local hardware manufacturers

## Ak'sara Ecosystem Benefits

- **Platform synergy**: Optimized environment untuk Aksara IS dan Writer
- **Developer adoption**: Attracts developers ke Ak'sara tools
- **Government relations**: Demonstrates commitment ke national tech independence
- **Brand recognition**: Establishes Ak'sara sebagai serious tech initiative

# Financial Projections

## 3-Year Revenue Projection

### Year 1: \$50K

- 1,000 premium users × \$25
- 2 OEM pilots × \$12.5K

### Year 2: \$500K

- 10,000 premium users × \$25
- 5 OEM partnerships × \$50K
- Enterprise services: \$100K

### Year 3: \$2M

- 50,000 premium users × \$25
- 10 OEM partnerships × \$125K
- Enterprise services: \$500K

## Investment Requirements

- **Year 1:** \$400K (team + infrastructure)
- **Year 2:** \$600K (scaling + marketing)
- **Year 3:** \$800K (expansion + enterprise features)

### Break-even

• Month 24



# Conclusion

## Strategic Recommendation

### Key Success Factors

- **Technical excellence:** Reliable, performant system untuk Indonesian hardware
- **Strategic partnerships:** OEM cooperation untuk distribution
- **Community building:** Active developer dan user communities
- **Government support:** Alignment dengan national digitalization goals

### Phased Approach Benefits

- **Lower risk:** Gradual development dengan validation di each phase
- **Community-driven:** Open source development model
- **Market validation:** Testing dengan real users before commercial launch
- **Sustainable growth:** Revenue streams develop organically

### Next Steps

- **Core team recruitment:** System architect dan desktop developer
- **Infrastructure setup:** Build systems dan testing environment
- **Alpha development:** 6-month sprint untuk basic functionality
- **Community launch:** Open source release dengan developer community

**MerdekaOS represents a bold vision untuk Indonesian technology independence.** Sebagai long-term strategic project,

### Contact Information:

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