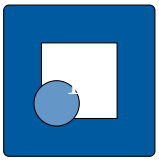

Fabrikator

Democratizing Smart Device Creation

Through AI and Blockchain

Lightpaper v1.0

September 2025

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Executive Summary

Fabrikator revolutionizes smart device creation by combining cutting-edge AI and blockchain technology. Our platform democratizes custom smart device creation—from drones to automated systems—by eliminating technical barriers and offering an intuitive, AI-guided process.

Key Features:

- AI-powered development from concept to creation
- Automated component selection and compatibility checking
- Intelligent wiring and assembly guidance
- 3D modeling and printing optimization
- Decentralized marketplace for AI models and services
- Local manufacturing network

Market Opportunity:

- $500B+ smart device market (2025)
- 15% CAGR in DIY electronics
- 20% CAGR in 3D printing
- 30% CAGR in AI services

Vision & Market Opportunity

Vision

To democratize smart device creation, making it accessible to everyone while building a sustainable ecosystem of creators, developers, and manufacturers.

Market Landscape

The smart device market is experiencing unprecedented growth, driven by:

- Increasing demand for customized IoT solutions
- Growing maker community and DIY culture
- Advancements in AI and manufacturing technologies
- Rising need for rapid prototyping

Market Pain Points

Current challenges in the smart device creation space:

- High technical barriers to entry
- Fragmented development tools
- Limited access to AI capabilities
- Expensive prototyping costs
- Complex manufacturing processes

Market Size

- Smart device market: $500B+ (2025)
- DIY electronics: $15B+ (15% CAGR)
- 3D printing: $35B+ (20% CAGR)
- AI services: $200B+ (30% CAGR)

The Fabrikator Solution

AI-Powered Development

From concept to creation, our AI guides users through every step:

- Natural language to technical specification conversion
- Smart component selection and compatibility checking
- Automated wiring and assembly guidance
- AI-assisted code generation
- 3D modeling and printing optimization

Blockchain-Enabled Marketplace

A decentralized ecosystem for:

- AI model trading
- Computing power exchange
- Component and design marketplace
- Expert services
- Secure transactions

Community Ecosystem

- Bounty system for expert assistance
- Local manufacturing network

Key Innovations

- **AI Orchestration System**: Seamlessly coordinates all aspects of device creation
- **Component Compatibility Engine**: Ensures perfect component matching
- **Real-time Simulation Platform**: Instantly validates code before manufacturing
- **Decentralized Marketplace**: Allowing the platform to grow organically and add new features

User Experience

Intuitive Interface

- Natural language input for device specifications
- Visual design interface with real-time feedback
- Step-by-step guided assembly process
- Interactive 3D model viewer

AI Assistance

- Smart suggestions for component selection
- Automated compatibility checking
- Automated wiring
- Automated code generation
- Real-time error detection and correction
- Context-aware help system

Community Support

- Expert consultation marketplace
- Project sharing and remixing
- Local maker space integration

Marketplace & Professional Services

AI Model Marketplace

- Trading of specialized AI models
- Model performance metrics and ratings
- Usage-based pricing
- Trading of training data

Expert Marketplace

- Bounties for problem resolution
- Custom development services
- Assembly assistance
- 3D printing services

Tools Marketplace

- Simulation plugins
- AI prompts
- Component libraries
- Libraries and code snippets

3D Models Marketplace

- Ready to print specialized parts
- Models of components
- Joints and connectors

AI Training & Improvement

Training Data Sources

- User project data (anonymized)
- Component specifications and datasheets
- Manufacturing guidelines
- Expert knowledge base
- Simulation results

Model Architecture

- Multi-modal AI system
- Specialized sub-networks
- Continuous learning pipeline
- Quality assurance mechanisms
- Performance monitoring

Training Process

- Distributed training on Bittensor
- Automated hyperparameter optimization
- Cross-validation and testing

Tokenomics

Utility

The FAB token is designed as a utility token that primarily serves as an investment vehicle and purchasing power for Fabrikator projects. Unlike traditional utility tokens, FAB is not used for platform fees, governance, or AI service payments.

User Tiers and Data Monetization

Fabrikator offers two user tiers: Free and Premium.

- **Free Users:** Do not pay platform fees. Their project data may be sold by the platform (for FAB tokens) to AI trainers, creating ongoing demand for FAB. Free users pay for AI services in FIAT or TAO and can purchase marketplace content with FIAT or FAB.
- **Premium Users:** Pay a monthly subscription fee in FIAT for enhanced privacy; their project data is neither sold nor used for AI training. Premium users can also purchase marketplace content with FIAT or FAB. Premium users can decide to sell their projects data to earn FAB tokens when their data is used.

Token Utility

- **Project Investment & Purchasing Power:** FAB tokens provide investors with purchasing power for projects created on the platform, enabling them to acquire projects that can be used to train their AI models
- **Project Monetization:** Premium users can sell their completed projects for FAB tokens
- **Bounty Payments:** FAB tokens can be used to pay for bounties on the platform
- **Professional Services:** Assembly and 3D printing professionals can accept FAB as payment for their services
- **Data Purchases:** AI trainers and providers can purchase project data (from the platform or from premium users) using FAB tokens, creating ongoing demand. **All FAB earned from data sales is burned by the platform.**

Token Distribution

- **Investors:** 40% - For project investment and purchasing power
- **Team & Development:** 20% - Vesting over 3 years
- **Ecosystem Growth:** 20% - For platform development and community incentives
- **Liquidity Pool:** 20% - For FAB/TAO liquidity

Payment Model

- **FAB Token:**
  - Used to purchase project data (from the platform or from premium users), marketplace content, and professional services.
  - Demand is created by AI trainers and marketplace participants.
  - 20% of FIAT income from premium subscriptions is used to buy and burn FAB, creating a deflationary mechanic.
- **TAO (Bittensor's native token):**
  - Used for all AI-related services, including model training and inference.
- **FIAT Currency:**
  - Used for premium subscriptions, AI services, and marketplace purchases.
  - 20% of premium subscription income is used to buy and burn FAB.
- **Liquidity:**
  - Liquidity is provided for FAB/TAO trading pairs to ensure smooth conversion between tokens and to support a healthy marketplace.
- **Marketplace Fees:**
  - All marketplace transactions incur a 15% platform fee if they are performed in FIAT.
  - All marketplace transactions incur a 5% platform fee if they are performed in FAB. **This 5% fee is used to burn FAB, creating additional deflationary pressure.**

Token Economics

- Total Supply: 100,000,000 FAB
- Raising 20,000 TAO

Deflationary Mechanism

To ensure long-term value and scarcity, 20% of all FIAT income from premium subscriptions is used by the platform to purchase FAB tokens on the open market, which are then permanently burned. Additionally, the 5% fee collected from all marketplace transactions performed in FAB is also burned, and all FAB earned from data sales to AI trainers is burned, further increasing the deflationary effect and buy pressure on FAB.

Use of Funds

The funds raised and generated through the Fabrikator platform are allocated as follows:

- **20%** of premium subscription FIAT income is used to buy and burn FAB tokens.
- **80%** of premium subscription FIAT income goes to the treasury for platform maintenance, scaling, AI model training, and potential buyouts of successful marketplace models.

- **Marketplace Fees:** 5-15% platform fee is taken from all marketplace transactions.
- **Other allocations:** Funds may also be used for marketing, community growth, and ecosystem partnerships as needed.

These allocations are designed to maximize platform growth, user adoption, and long-term sustainability.

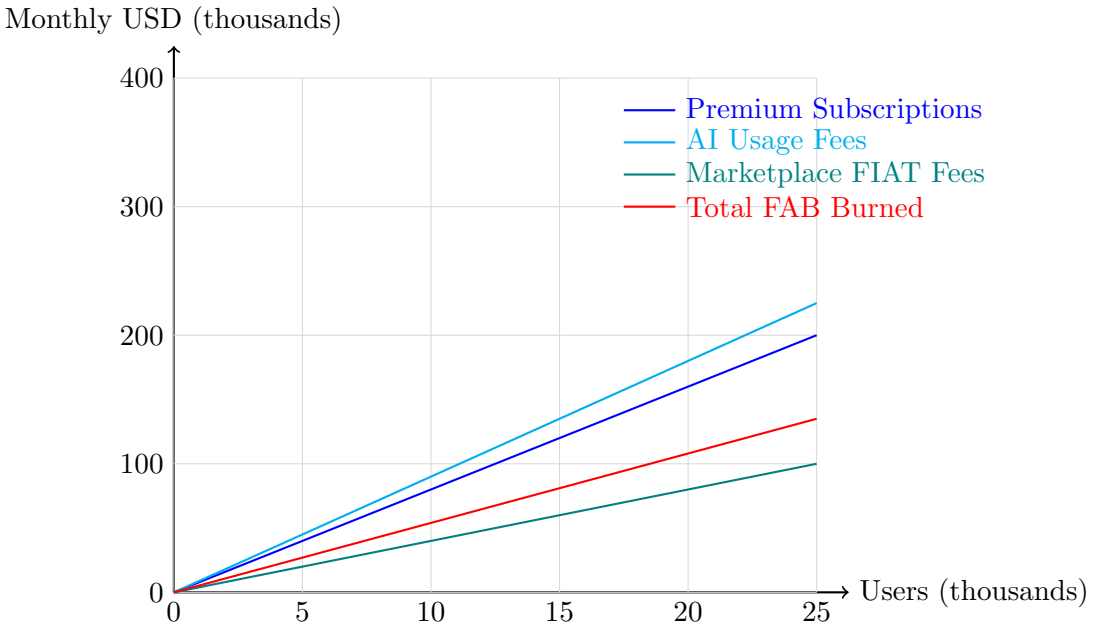
Projected Income

To illustrate the platform's earning potential and the resulting FAB buy and burn pressure, we project monthly income and FAB demand as the user base grows from 1 to 20,000 users. The following assumptions are used:

- 1 in 7 users is a premium user (˜14.3%), 6 in 7 are free users.
- Premium monthly fee: $150.
- All users spend $50/month on AI usage (platform takes 15% fee).
- All users spend $20/month on the marketplace in FIAT (15% fee) and $5/month in FAB (5% fee, **all of which is burned**).
- 20% of premium FIAT income is used to buy and burn FAB.
- **AI trainers purchase data for $1/month in FAB per free user** (˜6/7 of total users), **all of which is burned by the platform**.

Formulas:

- Premium users: $N_{\text{premium}} = \frac{N_{\text{total}}}{7}$
- Free users: $N_{\text{free}} = N_{\text{total}} \times \frac{6}{7}$
- FIAT income from premiums: $I_{\text{premium}} = N_{\text{premium}} \times 150$
- AI usage fee income: $I_{\text{AI}} = N_{\text{total}} \times 50 \times 0.15$
- Marketplace FIAT fee: $I_{\text{mkt,FIAT}} = N_{\text{total}} \times 20 \times 0.15$
- Marketplace FAB fee (burned): $I_{\text{mkt,FAB}} = N_{\text{total}} \times 5 \times 0.05$
- **Total FIAT income:** $I_{\text{FIAT,tot}} = I_{\text{premium}} + I_{\text{AI}} + I_{\text{mkt,FIAT}}$
- **FIAT used to buy and burn FAB:** $B_{\text{FAB,FIAT}} = I_{\text{premium}} \times 0.2$
- **FAB burned (marketplace + data):** $B_{\text{FAB,direct}} = I_{\text{mkt,FAB}} + N_{\text{free}}$
- **Total FAB burned:** $B_{\text{FAB,tot}} = B_{\text{FAB,FIAT}} + B_{\text{FAB,direct}}$



Users	Premium Users	Free Users	Monthly FIAT	Monthly FAB Burned
1,000	143	857	$21,428	$5,397
5,000	714	4,286	$107,143	$26,956
10,000	1,429	8,571	$214,286	$53,941
25,000	3,571	21,429	$535,714	$134,815

Notes:

- **Total FIAT Income** includes premium subscriptions, AI usage fees, and marketplace FIAT fees.
- **FIAT Used to Buy & Burn FAB** is the amount of FIAT from premium subscriptions used monthly to buy and burn FAB (20%).
- **FAB Burned (Marketplace + Data)** includes the 5% fee on marketplace FAB transactions plus the $1 per free user from data sales.
- **Monthly FAB Burned** is the total of all FAB burning mechanisms combined.
- At 20,000 users, approximately $108,000 worth of FAB is burned monthly.

Roadmap

Q4 2025: Fundraising

- Core team assembly
- Platform architecture design
- Initial token distribution
- Proof of concept
- Initial marketing campaign

Q3 2026: Core Features

- Alpha version of the platform
- Integration with Bittensor marketplace
- Beginning of training data collection
- Agressive marketing campaign

Q1 2027: Custom AI models

- Integration of other AI platforms
- Integration with Bittensor marketplace
- Training of custom AI models

Q2 2027: Release Marketplace

- Official release of the building platform
- Introduction of the marketplace
- Users can select AI models from the marketplace

Q3 2027: Professional Services

- Bounties
- Assembly and 3D printing services added to marketplace

Market Strategy

Target Markets

- DIY electronics enthusiasts
- Small businesses and startups
- Educational institutions

Go-to-Market Strategy

- Community-first approach
- Strategic partnerships with AI players
- Strategic partnerships with 3D model platforms
- Content marketing

Growth Channels

- Social media presence
- Technical blog and tutorials
- Industry events and conferences
- Partnership programs
- Referral system

Competitive Advantage

- AI-first approach
- Decentralized infrastructure
- Open ecosystem
- Sustainable tokenomics

Partnership Strategy

- Component manufacturers
- Educational institutions
- Maker spaces
- Technology providers

Conclusion

Fabrikator represents a paradigm shift in smart device creation, combining cutting-edge AI technology with blockchain innovation to democratize access to custom device development. Our platform eliminates technical barriers while fostering a sustainable ecosystem of creators, developers, and manufacturers.

Key Takeaways:

- Revolutionary AI-powered development platform
- Decentralized marketplace for components and services
- Strong focus on community and sustainability
- Clear roadmap for growth and development

Next Steps:

- Launch of initial platform features
- Community building and engagement
- Strategic partnership development
- Token generation event