



Team Details

- a. **Team name:** Big Oh Farm
- b. **Team leader name:** Jagdeesh P
- c. **Problem Statement:** Empowering Farmers Through Price Discovery

Brief Overview of the Idea:

Our solution is a comprehensive, multilingual platform designed to revolutionize price discovery in agricultural markets. It empowers farmers by providing real-time market information, price trends, and negotiation tools while fostering a collaborative social environment that connects all stakeholders—farmers, aggregators, processors, retailers, and volunteers.

1. Real-Time Market Data & Predictive Analytics:

Farmers gain instant access to current market prices and historical price trends through API integrations with government sources. Predictive analytics offer insights into future price trends, helping farmers make informed decisions on when to sell their produce.

2. Social Media Integration & Collaboration:

The platform includes social media-like features where farmers can showcase their products, share knowledge, and collaborate with other farmers. This fosters a community-driven approach to farming, enabling resource sharing and collective problem-solving.

3. Auctioning, Negotiation Tools & Smart Contracts:

Dynamic auctioning and AI-driven negotiation tools enable farmers to secure better deals, while smart contracts ensure transparency and trust in supply agreements. These features streamline transactions and reduce the risk of disputes.

4. Blockchain-Powered Transparency & Volunteer Support:

Blockchain technology ensures all transactions are transparent and traceable, enhancing trust across the value chain. Volunteers provide real-time field support and expert advice, helping farmers optimize their operations.

Opportunities

Differentiation from Existing Solutions:

- Integrates real-time market data with social networking, allowing collaboration and knowledge sharing.
- Unique use of AI-driven negotiation tools, blockchain for transparency and auctioning tools for better deals.
- Provides expert guidance through volunteer support, making it more comprehensive than existing platforms.

Problem-Solving Approach:

- Offers instant access to market trends and future price predictions for informed decision-making.
- Facilitates direct connections and secure transactions, reducing reliance on middlemen.

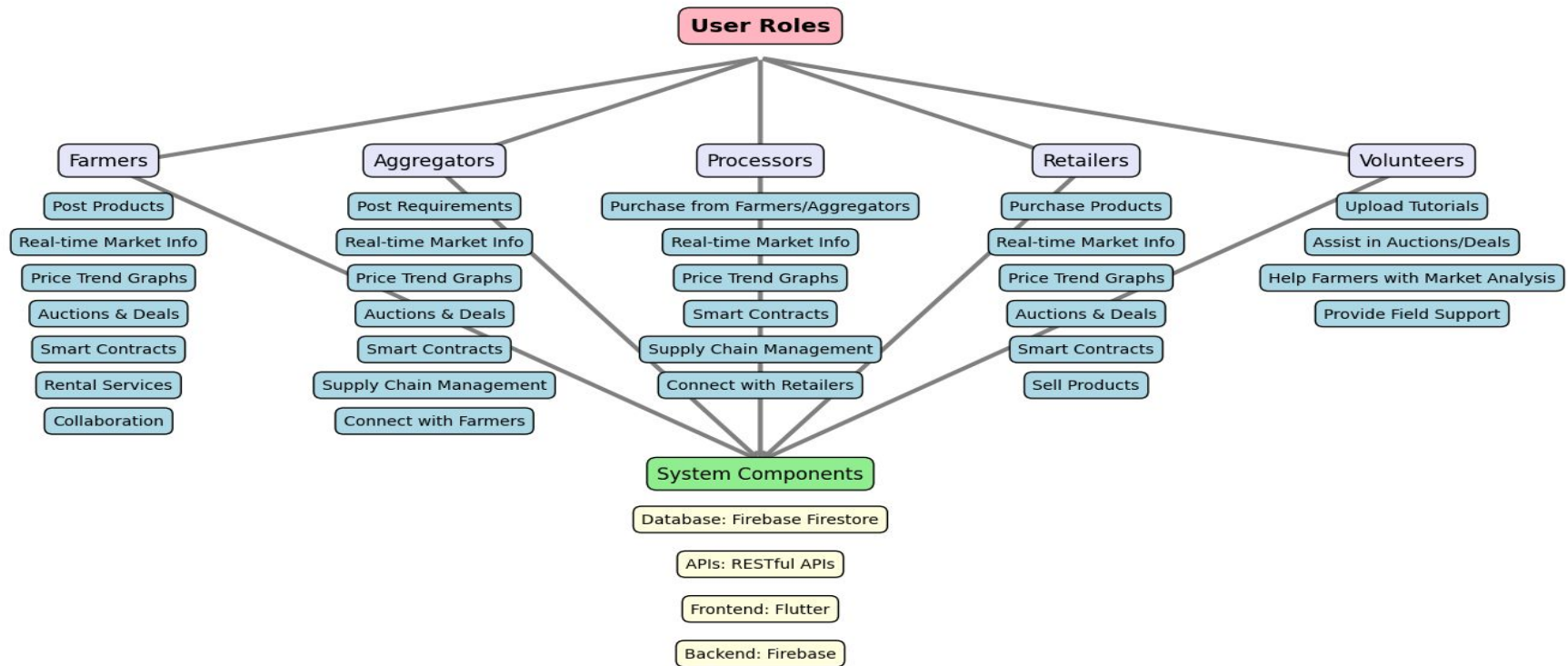
Unique Selling Proposition (USP):

- Combines real-time data, AI, blockchain, and community support into a single, powerful platform.
- Empowers farmers and enhances transparency and efficiency across the agricultural value chain.

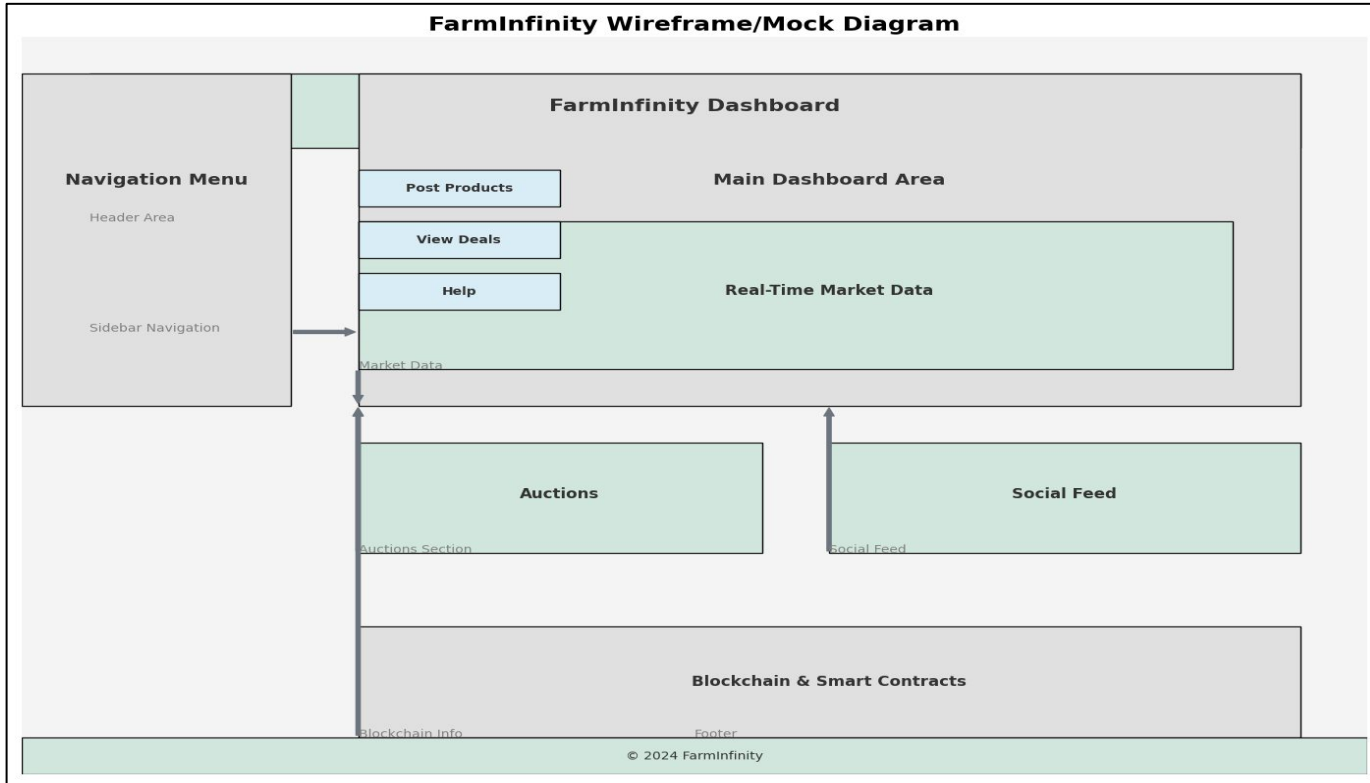
Features Offered by the Solution

- 1. Real-Time Market Data: Access current prices and trends instantly.**
- 2. Predictive Analytics: Get insights into future price trends.**
- 3. Social Networking: Connect, share, and collaborate with other farmers.**
- 4. AI-Driven Negotiation: Automated tools for better deal-making.**
- 5. Blockchain Transparency: Secure and transparent transactions.**
- 6. Volunteer Support: Real-time expert guidance in the field.**
- 7. Smart Contracts: Streamlined digital agreements.**
- 8. Auction & Direct Deals: Tools for selling produce directly or through auctions.**

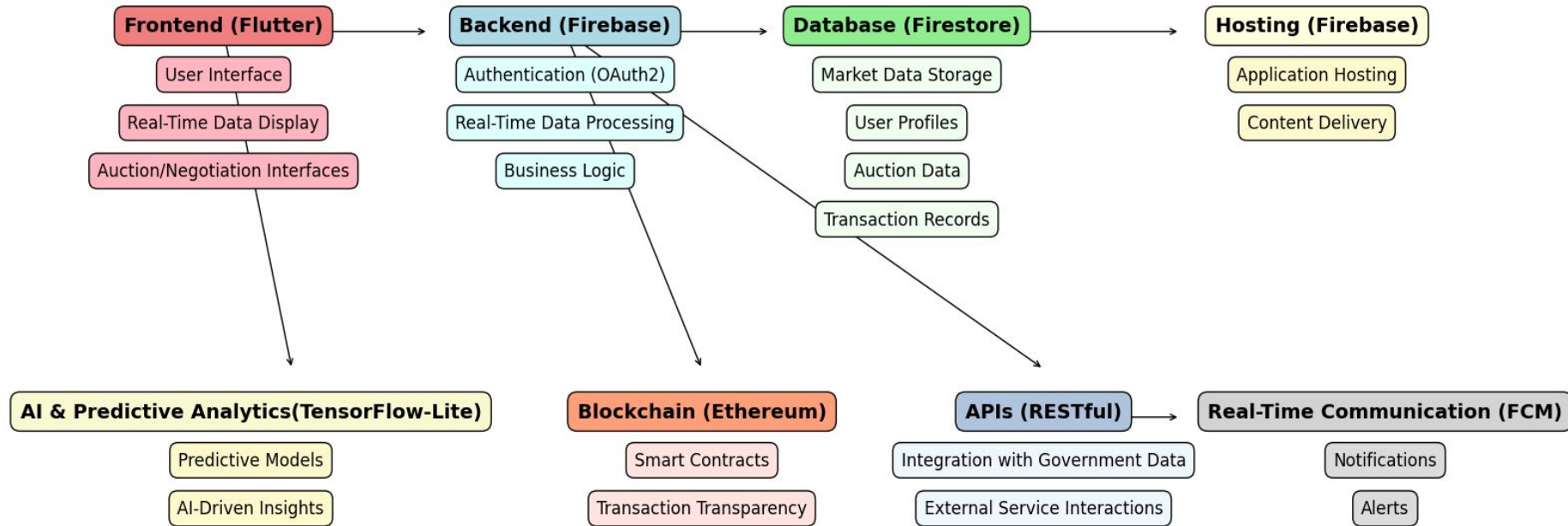
Process flow diagram or Use-case diagram



Wireframes/Mock diagrams of the proposed solution



Architecture diagram of the proposed solution



Technologies to be used in the solution

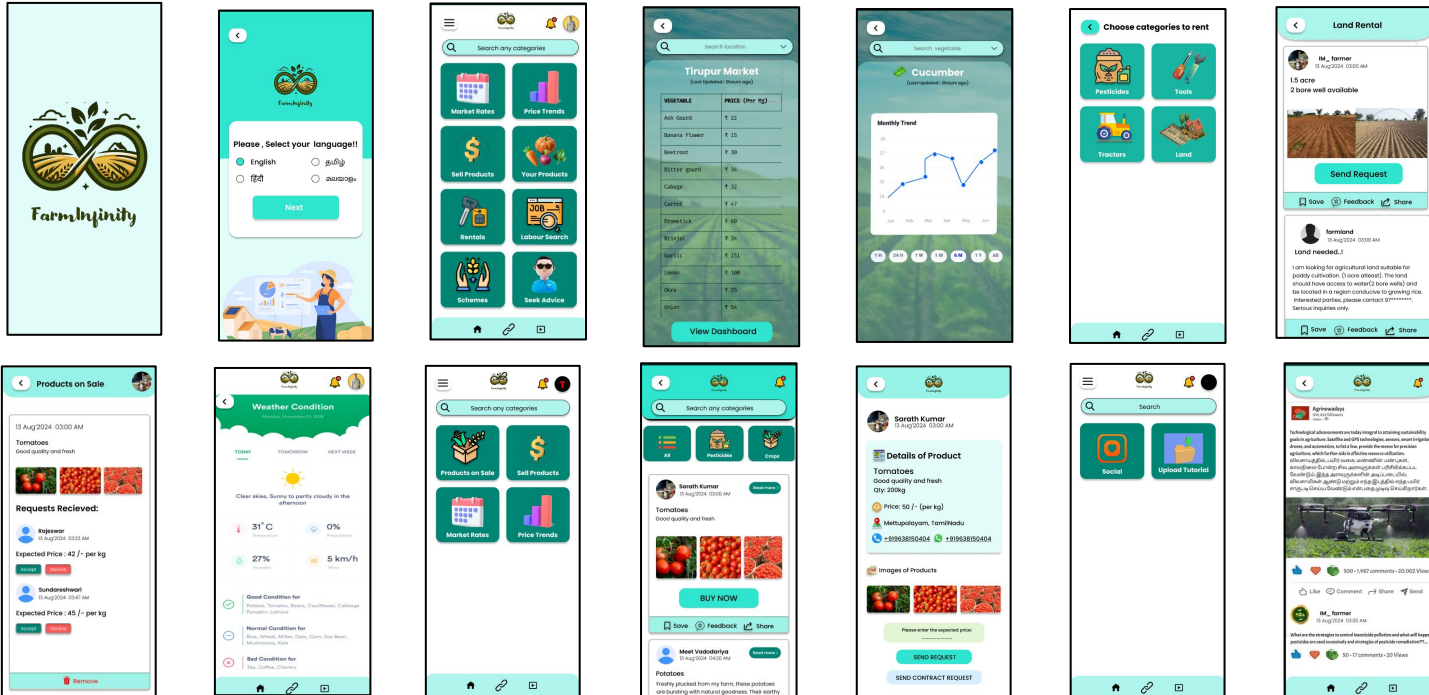
1. **Frontend Development:**
 - Flutter
2. **Backend Development:**
 - Firebase
3. **Database Management:**
 - Firebase Firestore
4. **AI and Predictive Analytics:**
 - TensorFlow Lite
5. **Blockchain Technology:**
 - Ethereum (via Web3 Dart Package)
6. **APIs and Data Integration:**
 - RESTful APIs
7. **Hosting and Cloud Services:**
 - Firebase Hosting
8. **Security:**
 - OAuth2
9. **Real-Time Communication:**
 - Firebase Cloud Messaging (FCM)
10. **Development Tools:**
 - Android Studio
 - Xcode

Estimated implementation cost

Cost Estimation Table

Category	Technology/Service	Cost Estimate (INR)
Backend Development	Firebase	₹2,075/month
Database Management	Firebase Firestore	₹4,150/month
APIs and Data Integration	RESTful APIs	₹4,150/month
Real-Time Communication	Firebase Cloud Messaging (FCM)	₹2,075/month
Security	OAuth2	₹4,150/month
Blockchain Technology	Ethereum (initial)	₹8,300 (initial)
Total Monthly Cost		₹18,975
Initial Setup Costs		₹8,300
Final Total Budget (First Month)		₹27,275

Snapshots of the prototype



Prototype Performance report/Benchmarking

Prototype Overview

- Purpose: Assess design and functionality for agricultural market price discovery and stakeholder collaboration.

Design Assessment

- UI/UX:
 - + Clear layout, intuitive navigation.
 - - Ensure design consistency, add tooltips.
- Visual Design:
 - + Attractive aesthetics, cohesive design.
 - - Verify color contrast.

Functionality Assessment

- Features:
 - + Real-time data, auctions, blockchain for transparency.
 - - Verify feature integration and performance.

Technical Aspects:

- + Responsive across devices.
- - Test for load times.

Benchmarking Criteria

- Usability: Intuitiveness, learning curve.
- Functionality: Feature completeness, integration.
- Design Quality: Visual appeal, accessibility.
- Performance: Load times, responsiveness.

Recommendations

- Enhance: Onboarding process, navigation clarity.
- Increase: Accessibility, design consistency.

Additional Details/Future Development

- **Advanced AI Integration:**

Enhance app functionality with sophisticated AI models for personalized recommendations and predictive analytics.

- **Blockchain Innovation:**

Implement smart contracts and explore cross-chain compatibility for secure and automated transactions.

- **Real-Time Data Processing:**

Adopt real-time data processing and big data tools for immediate insights and efficient data management.

- **Scalability and Security:**

Transition to serverless architecture and advanced encryption technologies to ensure scalability and robust security.

Links:

1. **GitHub Public Repository:** <https://github.com/jagdeeshp21/FarmInfinity>
2. **Demo Video Link (3 Minutes):**
https://drive.google.com/file/d/1MsDnd7GqGDshMqj6BEIDk-yqe2pf2lmy/view?usp=drive_link
3. **Final Prototype Link:**
<https://www.figma.com/proto/O4kopATF64NZ2GOD0WV4KL/FarmInfinity?node-id=0-1&t=zDwOp4Et274izjgc-1>



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Total Cash Prize Worth **INR 1.75 Lakhs**

THANK YOU

