Phase 1: Problem Understanding & Industry Analysis — AgriTrust Connect

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Project Title:

AgriTrust Connect

Goal:

The **AgriTrust Connect platform** is designed to digitize the agricultural value chain for smallholder farmers. It aims to:

- Boost farmer profitability,
- Ensure supply chain transparency, and
- Promote sustainable farming practices.

This will be achieved by connecting farmers, agronomists (crop experts), and corporate buyers on a single, data-driven Salesforce platform.

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1. Requirement Gathering

Engaged Stakeholders:

- Smallholder farmers
- Farmer cooperatives
- Field agronomists
- Agricultural lenders
- Corporate procurement managers
- Government agricultural extension officers

Example Requirements:

- Manage farm entities in real time (boundaries, plots, soil health).
- Farmers can log daily activities easily (sowing, irrigation, pest control).
- Avoid conflicting advisories or double resource allocation.
- Automated alerts (weather, pests, harvest time).
- Farm history (yields, fertilizer use, soil health).
- Dashboards (regional yield forecasts, resource usage).

- Integrations with third parties (weather APIs, soil testing labs).
- Task management for agronomists.
- Produce traceability for buyers (farm → plot → crop cycle → harvest).
- Sustainability scoring to help farmers access premium buyers.

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2. Stakeholder Analysis

- **Platform Administrator:** Manages system rules, data integrity, and access.
- **Agronomist (Field Expert):** Onboards farmers, performs tests, issues advisories.
- **Farmer:** Primary user, logs activities, views advice, and updates harvests via mobile.
- **Regional Manager:** Reviews analytics to plan strategies.
- **Corporate Buyer:** Views produce availability, sustainability, and traceability before procurement.
- **Data Analyst:** Uses farm-level data for yield forecasting and risk models.

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3. Business Process Mapping

Farmer's Crop Cycle Journey:

1. Agronomist creates Farm and Plot records.
2. Farmer logs sowing → creates a Crop Cycle.
3. System generates mid-cycle health check for Agronomist.
4. Farmer receives automated hailstorm alert.
5. Farmer logs daily irrigation/fertilization.
6. Agronomist pushes a pest control Advisory.
7. Farmer records harvest details (quantity, quality).
8. System updates produce inventory for buyers.

Procurement & Traceability Flow:

1. Corporate Buyer places order (e.g., 10 tons Grade-A groundnuts).
2. System maps order to available harvest logs.
3. Creates a Traceability Ledger linking buyer order → harvest logs → plots → farms.
4. Logistics updated in real time.
5. Regional Manager views dashboards (order fulfillment, supply-demand).

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4. Industry-Specific Use Case Analysis

- **Agriculture = perishable asset:** Crop once lost cannot be recovered → real-time insights are critical.
- **Farmer experience drives adoption:** Must be simple, mobile-friendly, work offline, and provide immediate value.
- **Fragmented user base:** Thousands of small, independent farmers vs. structured hotel staff. Standardizing data collection is a challenge.
- **High external dependency:** Weather, pests, and markets → integrations with external data (APIs, labs) are essential.

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5. AppExchange Exploration

Existing Platforms:

- **Trimble Agriculture, CropIn, Agrivi.**
- Strengths: Feature-rich, advanced integrations.
- Limitations: Expensive, complex, focus only on parts of the value chain.

AgriTrust Connect Opportunity:

- End-to-end value chain → **seed to buyer**.
- Focus on **smallholder-friendly design**.
- Core USP: **traceability + sustainability scoring** for premium buyers.

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6. Gap Analysis (Existing vs. Proposed)

Existing Systems:

- Complex, costly.
- Limited focus (farm OR buyer side).
- Poor offline usability.

AgriTrust Connect:

- End-to-end digitization.
- Mobile-first, offline support.
- Integrated sustainability + traceability.
- Localized, multilingual advisories.

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7. Technology Landscape & Tools

Platform: Salesforce

- Lightning, Mobile App, Community Cloud

Modules:

- Service Cloud → advisories & farmer support
- Experience Cloud → farmer & buyer portals
- Tableau CRM → dashboards

Integrations: Weather APIs, soil labs, payments

Design: Mobile-first, offline sync, vernacular language support

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8. Risks & Mitigation

- **Farmer resistance:** Simplify UX, add vernacular/voice support.
- **Connectivity issues:** Offline-first sync.
- **Data overload/conflicts:** Validation rules + agronomist approval.

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9. Success Metrics

- Farmer adoption % per season.
- Yield improvement % (baseline vs. current).
- Procurement cycle time reduction.
- Traceability coverage (produce linked to plots).
- Sustainability score adoption rates.

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10. Future Vision

- **AI yield forecasting** for risk mitigation.
- **Blockchain** for tamper-proof traceability.
- **Market pricing insights** for farmers.
- **Scalable model**: region → nationwide rollout.