**Kalemie Agro Poultry Management System Integration Flowchart**:

**🔄 Flowchart Overview**

The flowchart illustrates how the **12 core modules** of the system interact with and depend on each other to ensure smooth, real-time operations across the poultry farm.

**🧱 1. Infrastructure & Control**

* Acts as the **foundation**.
* Provides farm structure (houses, flocks, sectors) and user accounts.
* **Feeds into**:
  + **Operations** (to locate birds and houses)
  + **HR & Finance** (to assign workers to sectors)
  + **Core System Components** (for access control)

**🛠️ 2. Operations**

* Central to daily activities like feeding, watering, cleaning, egg collection, and slaughter.
* **Depends on**:
  + **Infrastructure** for flock and house data.
* **Feeds into**:
  + **Commerce & Inventory** (e.g., deducting feed stock)
  + **HR & Finance** (e.g., logging worker tasks)
  + **Analytics & Reporting** (e.g., production metrics)
  + **Mobile App** (for field data entry)

**🛒 3. Commerce & Inventory**

* Manages products, stock, orders, and suppliers.
* **Receives data from**:
  + **Operations** (e.g., egg collection, meat processing)
* **Feeds into**:
  + **FinanceApp** (for cost/revenue tracking)
  + **Analytics & Reporting**
  + **Web App** and **Public Website** (for customer orders)

**👥 4. HR & Finance**

* Manages employees, payroll, and financial records.
* **Receives input from**:
  + **Operations** (worker activity)
  + **Commerce** (sales and expenses)
* **Feeds into**:
  + **Analytics & Reporting**

**📊 5. Analytics & Reporting**

* Aggregates data from **Operations**, **Commerce**, and **HR & Finance**.
* Provides dashboards and reports for decision-making.
* **Used by**:
  + **Admin Console**
  + **Web App**

**📡 6. IoT Sensors & Integration**

* Collects real-time data (temperature, humidity, feed levels).
* **Feeds into**:
  + **Operations** (e.g., auto-refill triggers)
  + **Analytics & Reporting**
  + **Admin Console** (for alerts)

**📱 7. Mobile App**

* Used by field workers to log activities.
* **Connects to**:
  + **Operations**
  + **API Layer** (to sync data)
  + **Core System Components** (for authentication)

**🛠️ 8. Admin Console**

* Centralized system configuration and monitoring.
* **Uses**:
  + **Core System Components**
  + **Analytics & Reporting**
  + **IoT alerts** via **NotificationApp**

**🔌 9. API Layer**

* Connects all frontend apps (web, mobile) to backend services.
* **Interfaces with**:
  + **Core System Components**
  + **Web App**
  + **Mobile App**

**⚙️ 10. Core System Components**

* Provides shared services like:
  + Authentication
  + RBAC (Role-Based Access Control)
  + Middleware
* **Used by all modules**

**🌐 11. Web App**

* Main interface for managers and admins.
* **Connects to**:
  + **API Layer**
  + **Analytics & Reporting**

**🏠 12. Public Website**

* Customer-facing site for product browsing and ordering.
* **Pulls data from**:
  + **Commerce & Inventory**
  + **API Layer**

Would you like this explanation added to your documentation or turned into a narrated video or presentation slide?