# Functional Requirement

## 3.1 User Interface Requirements  
  
The system shall:  
- UI-001: Display a real-time synchronization status indicator on the inventory dashboard, updating within 2 seconds of an action.  
- UI-002: Provide a user-friendly interface as defined by a set of usability benchmarks (e.g., time to complete a task under 3 minutes).  
- UI-003: Allow users to customize their dashboard with widgets for inventory, orders, and analytics.  
- UI-004: Require no more than 2 hours of training for new users to perform basic tasks, as measured by a post-training assessment.  
  
## 3.2 Functional Requirements for Inventory Management  
  
The system shall:  
- INVENTORY-001: Allow suppliers to update product inventory in real-time via a dedicated API.  
- INVENTORY-002: Provide a real-time synchronization status for inventory updates, as defined in UI-001.  
- INVENTORY-003: Allow administrators to manage inventory manually when API synchronization is not available.  
  
## 3.3 Functional Requirements for Order Processing  
  
The system shall:  
- ORDER-001: Allow customers to place orders and receive confirmation via email.  
- ORDER-002: Enable suppliers to receive and confirm orders in real-time.  
- ORDER-003: Allow administrators to monitor order status and intervene if necessary.  
- ORDER-004: Provide a centralized dashboard for tracking all order-related activities.  
  
## 3.4 Functional Requirements for Reporting and Analytics  
  
The system shall:  
- REPORT-001: Generate real-time analytics for inventory and sales data.  
- REPORT-002: Allow users to export reports in CSV and JSON formats.  
- REPORT-003: Provide predefined dashboards for common reporting needs.

# External Description

# 5 Constraints  
  
## 5.1 Technical Constraints  
  
The system shall:  
- C-TECH-001: Be developed using a microservices architecture with RESTful APIs.  
- C-TECH-002: Support a maximum of 10,000 active user accounts.  
- C-TECH-003: Be hosted on AWS or Azure cloud platforms.  
  
## 5.2 Regulatory Constraints  
  
The system shall:  
- C-REG-001: Comply with GDPR and other relevant data protection regulations.  
- C-REG-002: Support localization in English, Spanish, and French, with cultural date, currency, and language formats.  
  
## 5.3 Operational Constraints  
  
The system shall:  
- C-OP-001: Be available 24/7 for maintenance and updates.  
- C-OP-002: Allow for scheduled maintenance windows during off-peak hours.