Product level Use cases

Let’s start methodically with **Step 1: Use Case Inventory**. I’ll walk you through a draft of the most relevant use cases, and then we’ll proceed to extract customer features, system requirements, and traceability.

✅ Step 1: Use Case Inventory

🎭 Actors:

- **User (Cabinet Owner)**
- **Admin / Developer**
- **Cabinet Hardware System (Raspberry Pi + electronics)**
- **Android App**
- **Cloud Backend / Watch DB**
- **Voice Assistant (LLM)**
- **Security System (Biometric, USB Auth)**

📘 Primary Use Cases

ID	Use Case	Actor(s)	Description
UC01	Boot system	User	The Android app launches automatically on boot and hides the Android UI.
UC02	Authenticate user	User	The user logs in with fingerprint for secure access.
UC03	View watch library	User	User browses all watches currently loaded in the cabinet.

UC04	Add new watch (manual)	User	User adds a watch via touchscreen from the global watch DB.
UC05	Add new watch (voice)	User	User adds a watch via voice assistant by name.
UC06	Confirm watch physically placed	User	After adding, the user confirms that the watch is placed physically in the cabinet.
UC07	Request watch retrieval	User	User requests a specific watch by voice or touch.
UC08	Receive watch	User	The cabinet serves the requested watch after state checks.
UC09	View system state	Android App	The UI displays the current cabinet state as reported by the Raspberry Pi.
UC10	Request state change	Android App	The UI sends a new desired state to the Raspberry Pi scheduler.
UC11	Approve/reject state change	Raspberry Pi	Pi responds with current or new state and status (e.g., “in progress”).
UC12	Sync watch DB	Admin	The global watch DB is updated and synced with the app.

UC13	Backup/export user library	System	The user library is exported to JSON and sent over USB.
UC14	Voice assistant interaction	User	The user interacts with the app via LLM voice assistant.
UC15	Handle system error	System	UI or Pi detects an error and alerts the user.
UC16	Power loss recovery	System	System resumes to previous state and data after power loss.