

Incongruous Checklist

ID	Reqr ID	Classification	Rationale
IR-01	BR-03	Inconsistent with another requirement/Substantively invalid	Manual categorization (BR-08) is required for items without barcodes, but proposes Auto-population via GS1 database (TR-08)
IR-02	BR-06	Not feasible or unrealistic	Impractical 72-hour alert window. May be too late for many perishables (milk, bread) and too early for others (canned goods)
IR-03	BR-08	Inconsistent with another requirement	Price synchronization frequency vs. performance. May create stale pricing during promotions. Frequent sync conflicts with offline caching strategy (TR-09).
IR-04	BR-09	Ambiguous & Inconsistent with another requirement	Undefined "High Risk" stockout. Unverifiable and potentially inconsistent with auto-list generation logic (BR-07).
IR-05	BR-10	Ambiguous, Inconsistent, and/or Compound requirements	OTP via registered contacts (BR-10) and time-limited tokens (TR-13) are different implementations for the same feature. Ambiguous registered contacts (email/phone).
IR-06	TR-04	Unseemly prioritized	Desirable precedence contradicts Essential TR-03, hyperscale significantly increases cost and complexity for a home inventory app.
IR-07	TR-06	Not feasible or unrealistic	Mandating Java/XML conflicts with modern Android practices. Kotlin is Google-preferred.
IR-08	TR-07	Unseemly prioritized	Desirable camera integration for Essential item scanning (BR-02). If TR-07 fails, BR-02 cannot be implemented.
IR-09	TR-08	Not feasible or unrealistic	Expensive and restrictive for GS1 API access. Conflicts with budget-friendly (TR-05) and may violate the offline-first requirement (TR-09).
IR-10	TR-09	Inconsistent with another requirement	Local caching (TR-09) creates sync conflicts with stock updates (BR-04) from the server. Missing a conflict resolution.
IR-11	TR-11	Suspected incompleteness	No clear business owner or maintenance plan for a parallel web development track.
IR-12	TR-12	Suspected incompleteness	Final documentation handover lacks interim documentation requirements for agile development throughout the project lifecycle.

The indicated incongruent requirements are in the requirements tree provided in Appendix A for reference.

Appendix A - Requirements Tree

L0: SmartReplenish

 └ L1: Business Requirements

- └ User Management:
 - └ BR-01 User Account (Essential)
 - └ BR-10 Forgot Password (Essential) [IR-05]
- └ Inventory Management:
 - └ BR-02 Item Scanning (Essential) [IR-08]
 - └ BR-04 Stock Tracking (Essential)
 - └ BR-05 Low-Stock Alerts (Essential)
- └ Shopping List Generation:
 - └ BR-07 Auto-List (Essential) [IR-10]
- └ Manual Entry:
 - └ BR-03 Manual Entry (Desirable) [IR-01]
- └ Expiry Management:
 - └ BR-06 Expiry Tracking (Desirable) [IR-02]
- └ Price & Risk Features:
 - └ BR-08 Price Sync (Desirable) [IR-03]
 - └ BR-09 Risk Suggestion (Acceptable) [IR-04]

 └ L1: Technical Requirements

- └ Infrastructure:
 - └ TR-01 Azure Singapore (Essential)
 - └ TR-02 Cloud-Native REST (Essential)
 - └ TR-03 Azure SQL + backups (Essential)
 - └ TR-04 Hyperscale/Serverless (Desirable) [IR-06]
- └ Mobile Platform:
 - └ TR-05 Android 6.0+ (Essential)
 - └ TR-06 Java/XML (Desirable) [IR-07]
 - └ TR-07 Camera 1D/2D (Desirable) [IR-08]
- └ Data & Integration:
 - └ TR-08 GS1 Database (Acceptable) [IR-09]
 - └ TR-09 Local Caching (Desirable) [IR-10]
- └ Security & Compliance:
 - └ TR-10 PDPA Compliance (Essential)
 - └ TR-13 Secure Password Reset (Essential)
- └ Admin & Documentation:
 - └ TR-11 Admin Dashboard (Acceptable) [IR-11]
 - └ TR-12 API Documentation (Acceptable) [IR-12]