

Architecture Roadmap

Version: 1.5.0 Date: 2025-12-20 Active Release Target: 0.136.1-Beta

1. Executive Summary

Current Status: HYBRID ARCHITECTURE (Stabilization In Progress). The project has successfully deployed the **Hotfix** (TECH-001) and restored report generation. The **Session Manifest** (ARCH-002) architecture has been partially deployed: the QSO Dashboard (`qso_dashboard`) is fully modernized and reading from `manifest.json`, but the Multiplier Dashboard (`multiplier_dashboard`) currently relies on legacy filesystem scanning. Immediate priority is completing the migration of the Multiplier Dashboard to the Manifest architecture.

2. Active Development Tracks

Track A: Reporting Engine Modernization (Visualization)

- **Goal:** Eliminate Matplotlib, standardize branding (3-Line Titles), and enforce "Smart Scoping".
- **Status:**
 - ☑ **Phase 1: Presentation Layer** (Branding/Footers) - *Completed.*
 - ☑ **Phase 1.1: Smart Scoping** (Redundancy Logic) - *Completed.*
 - ☑ **Phase 1.5: Standardization (Plotly)** - *Completed.* (Hotfix Applied).
 - ☐ **Phase 2: Stabilization & Manifest** - *IN PROGRESS.*
 - * **Hotfix:** Centralize filename logic. *Completed.*
 - * **Manifest (Infrastructure):** `manifest_manager.py` implemented. *Completed.*
 - * **Manifest (QSO Dash):** Migrated to Manifest. *Completed.*
 - * **Manifest (Mult Dash):** Migration Pending. *IMMEDIATE PRIORITY.*
 - ☐ **Phase 3: Text Report Standardization** - *Pending.*
 - ☐ **Phase 4: Chart Migration** (Butterfly/Propagation) - *Pending.*
 - ☐ **Phase 5: Animation Migration** (WRTC HTML) - *Pending.*

Track B: Web Dashboard (Architecture)

- **Goal:** Robust, stateless file handling.
- **Status:**
 - ☑ **Identity Agnostic Uploads** - *Completed.*
 - ☑ **Public Log Archive Fetcher** - *Completed.*
 - **[!] Artifact Discovery** - *HYBRID.*

- * QSO Dashboard: Robust (Manifest-based).
- * Multiplier Dashboard: Fragile (Legacy `os.listdir`).

3. Feature Backlog & Technical Debt

ID	Priority	Component	Description
TECH-001	Critical	<code>plot_*.py</code>	Fix <code>NameError</code> Crash. Restore <code>is_single_band</code> logic via utility.
ARCH-002	High	<code>views.py</code>	Session Manifest. Replace <code>os.walk</code> with deterministic JSON man
DEBT-003	Medium	<code>*.py</code>	Matplotlib Removal. Port final static charts to Plotly.
FEAT-004	Low	<code>animations</code>	WRTC HTML Animation. Replace MP4/FFmpeg dependency.