Defect Metrics

Loan Management System (Waterfall)

Version: 1.0
Release Model: Sequential SDLC (Waterfall)
Document Type: Defect Metrics Document
Prepared By: QA Analyst
Reviewed By: Product Owner
Approval Status: Approved for System Testing

Revision History

Version	Date	Author	Description
1.0	2026-02-18	Sanyogita Herwathe (QA Owner)	Initial Waterfall Enterprise Release Version

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Approval & Sign-Off

Prepared By: QA – Sanyogita Herwathe
Reviewed By: Product Owner
Approved By: Engineering Manager
Approval Status: Approved for Release Governance

1. Purpose

This document summarizes defect trends, severity distribution, build leakage analysis, and closure statistics for the WebLoan LMS Waterfall release cycle.

The objective is to demonstrate:

- Quality trend across builds
- Defect distribution by severity
- Stability improvement over time
- Governance and release readiness validation

2. Overall Defect Summary

Total Defects Logged: 36
Closed: 18
Deferred: 18

3. Severity Distribution

Closed Defects (18)	
Severity	**Count**
Critical	3
High	2
Medium	7
Low	6
Observations:	
Critical defects were resolved within immediate next build.	
Majority of defects were Medium/Low → indicates functional gaps and UI issues rather than systemic failure.	
Deferred Defects (18)	
Severity	**Count**
Critical	3
High	3
Medium	9
Low	3
Observations:	
Deferred Critical defects were business-approved risk items.	
Medium defects largely related to search filtering and minor usability enhancements.	
Low defects primarily cosmetic or mobile view related.	

4. Defect Distribution by Category

Category	Examples
Functionality	Login failures, duplicate loan creation
Control Flow	PDF generation 404
Error Handling	AppFilament resource errors
Load Conditions	500 Internal Server Error
Syntactic	Label misspellings
UI/Usability	Greyed input fields

5. Build Leakage Analysis

Build	Defects Found	Critical		High	Medium	Low
3.1.01	8	2	1	3	2	
3.1.02	4	0	1	2	1	
3.1.03	3	0	0	2	1	
3.1.04	2	0	0	1	1	
3.1.05	1	1	0	0	0	
3.1.06	0	0	0	0	0	
Quality Trend Insight						
Highest defect density in Build 3.1.01 (initial integration build)						
Significant drop after 3.1.02						
Stability improved progressively						
No Critical leakage beyond Build 3.1.05						
Build 3.1.06 considered release-stable						
This demonstrates:						
✓ Effective regression cycles						
✓ Strong defect containment						
✓ Progressive quality stabilization						

6. Defect Aging Analysis

Severity	Average Fix Cycle
Critical	1 build cycle
High	1–2 build cycles
Medium	2 build cycles
Low	2–3 build cycles

Observations:
Critical issues were addressed immediately.
No Critical defect carried forward across multiple releases.
Deferred defects were reviewed under business risk acceptance.

7. Root Cause Trends

Common root causes identified:

- Missing validation logic
- Incorrect navigation routing
- Backend data binding mismatch
- Incomplete API response handling
- UI label configuration errors
- Business rule misalignment

8. Risk-Based Release Assessment

Before release approval:

- All Critical defects resolved OR business approved.
- No open High severity defects blocking core workflows.
- Duplicate loan creation logic fixed.
- Login validation issue resolved.
- Dashboard calculation synchronization validated.
- Release Status: Approved for Production Deployment

9. Quality KPIs Achieved

- Defect Closure Rate: 50% resolved, 50% business-approved deferrals
- Critical Fix SLA Compliance: 100%
- Zero critical post-release leakage
- Stabilization achieved by Build 3.1.06

10. Conclusion

The Waterfall release defect metrics demonstrate:

- Strong QA governance
- Structured build-based validation
- Effective triage and prioritization
- Progressive defect reduction
- Controlled release stabilization
- The defect lifecycle and metrics analysis confirm the release met enterprise QA quality standards.