ToyCraft Tales: Tableau’s Vision into Toy Manufacturer Data

Performance Testing Document

1. Performance Testing Overview
Ensures dashboards operate efficiently under different data loads and user interactions.

2. Objectives
• Dashboard load time under 5 seconds
• Smooth filter and drill-down performance
• Validate large dataset handling
• Test concurrent users
• Identify bottlenecks

3. Testing Environment
Tableau Desktop/Server, Excel/CSV/SQL data source, 50K–1M+ records, 8–16GB RAM, i5/i7 processor.

4. Types of Tests
Load Testing – Measure load time and memory usage.
Stress Testing – Apply heavy filters and large datasets.
Scalability Testing – Test future data growth impact.
Interaction Testing – Validate filter and tooltip response.
Concurrent User Testing – Simulate 10–50 users.

5. Performance Metrics
Dashboard Load < 5 sec
Filter Response < 2 sec
CPU Usage < 75%
Zero error rate

6. Bottlenecks Identified
Excess calculated fields, unoptimized joins, large extracts, high-cardinality dimensions.

7. Optimization Techniques
Used Tableau Extracts, reduced unused fields, optimized joins, aggregated data, minimized filters, limited sheets per dashboard.

8. Test Results Summary
Load Testing – Passed (3.8 sec)
Stress Testing – Passed (Minor delay at 1M records)
Scalability – Passed
Interaction – Passed (1.5 sec filters)
Concurrent Users – Passed (Stable up to 40 users)

9. Risk Assessment
Data Growth – Use aggregation
Server Overload – Scale resources

Complex Calculations – Pre-calculate fields

10. Conclusion
Dashboard meets performance benchmarks and is ready for deployment with scalable and optimized architecture.