

Solution Requirements:

The toy manufacturing industry depends heavily on timely insights about consumer preferences, regional sales performance, and seasonal demand fluctuations. ToyCraft Tales aims to deliver these insights using interactive Tableau dashboards built on real-world sales and demographic data. Our analytics solution consolidates toy sales from multiple sources and delivers strategic insights to marketers, planners, and executives for better production and distribution decisions.

Functional Requirements:

FR No.	Functional Requirement (Epic)	Sub-Requirement (Story / Task)
FR-1	Data Collection & Import	- Import sales data from CSV/Excel files or ERP exports - Validate formats for toy category, region, and age
FR-2	Data Cleaning & Harmonization	- Standardize product names and regions - Handle missing values in age or location data
FR-3	User Authentication & Security	- Secure login via Flask - Roles: Analyst, Manager, Viewer - Access segmentation by department or zone
FR-4	Data Segmentation	- Filters: Season, Toy Type, Age Group, Region - Support demographic breakdown and category-wise analysis
FR-5	Dynamic Visualization	- Sales trends, heatmaps, pie/bar charts, line plots - Interactive tooltips and regional drill-downs
FR-6	Dashboard Customization	- Enable users to customize layout - Save personal filtered views or scenarios
FR-7	Storyline Presentation	- Create multi-slide dashboards explaining product lifecycle or trend evolution
FR-8	Stakeholder Communication	- Schedule weekly insights via email - Auto-export dashboards to PDF or PNG
FR-9	Publication & Embedding	- Embed Tableau dashboards in Flask portal - Enable role-based dashboard access via URL
FR-10	Iteration & Feedback Integration	- Collect team feedback and revise dashboards - Allow sandbox mode for internal experimentation

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	Dashboards must be user-friendly for non-technical staff (marketing, sales).
NFR-2	Performance	Dashboards should render within 3 seconds for 10,000+ sales entries and filters.
NFR-3	Security	Role-based access control; data encrypted over HTTPS; credential protection via environment vars
NFR-4	Availability	99% uptime during work hours; dashboards auto-refresh weekly or on upload.
NFR-5	Maintainability	Modular Tableau dashboards with replaceable data sources and easily editable visuals.
NFR-6	Auditability	Track changes in filters, visuals, and user activity for version control and compliance.
NFR-7	Scalability	Future support for e-commerce integration or predictive demand analytics.
NFR-8	Integration Compatibility	Compatible with retail ERPs and embeddable via Flask/iframe APIs into internal portals.