Business Requirements Document (BRD): Scrum Poker Application

## **1. Introduction**

**1.1 Purpose** This Business Requirements Document defines the functional and non-functional requirements for a next-generation Scrum Poker application targeting remote-first teams in South Africa. Key differentiators include:

* **Real-time updates** for synchronous planning sessions.
* **Asynchronous voting** for distributed teams across time zones and intermittent connectivity.
* **AI-driven estimation** powered by a local Ollama model, providing intelligent story-point suggestions.

**1.2 Scope** This BRD covers:

* Business goals and objectives
* Detailed business requirements
* User stories and acceptance criteria
* Informational (data) requirements
* Non-functional requirements
* High-level architecture and process diagrams (Mermaid.js)

## **2. Business Objectives & Goals**

| **Objective ID** | **Description** | **Metric / KPI** |
| --- | --- | --- |
| OBJ-1 | Reduce average sprint planning time by 30% through real-time collaboration and AI assistance. | Planning session duration per sprint |
| OBJ-2 | Increase estimation accuracy by 20% via AI-suggested story points and team consensus. | Variance between estimated vs actual effort |
| OBJ-3 | Enable 100% of remote teams to participate through async voting within a 24-hour window. | % of sessions using async mode; team participation |
| OBJ-4 | Achieve 99.9% availability and resilience against intermittent connectivity (e.g., load-shedding). | Uptime; mean time to recover (MTTR) |

## **3. Business Requirements**

| **Req ID** | **Category** | **Requirement Description** |
| --- | --- | --- |
| BR-1 | Real-time Updates | System shall broadcast vote selections to all active participants within 200ms of submission. |
| BR-2 | Async Voting | System shall allow users to cast votes asynchronously up to 48 hours after session creation. |
| BR-3 | Session Persistence | Session state (votes, comments) must persist and be recoverable after disconnections or restarts. |
| BR-4 | AI Estimation | System shall integrate a local Ollama LLM to generate a suggestion for each user story. |
| BR-5 | Integration | System shall provide RESTful APIs and webhooks for Jira, Trello, Slack, and Microsoft Teams. |
| BR-6 | Security | System shall support OAuth2 / OpenID Connect for SSO and enforce RBAC at session and project level. |
| BR-7 | Reporting | System shall auto-generate and export session summaries (CSV, PDF) including AI suggestions. |
| BR-8 | Mobile Support | System shall support mobile-responsive web and React Native / Flutter apps with full functionality. |
| BR-9 | Scalability | System shall auto-scale backend services to support up to 10,000 concurrent users. |
| BR-10 | Compliance | System shall comply with POPIA (South African data protection) and allow data residency options. |

## **4. User Stories & Acceptance Criteria**

### **4.1 Real-Time Collaboration**

| **Story ID** | **As a...** | **I want to...** | **So that...** | **Acceptance Criteria** |
| --- | --- | --- | --- | --- |
| US-RT-01 | Scrum Team Member | see other participants’ votes appear instantly | we maintain the flow of discussion | - Votes appear on all clients within 200ms. - UI highlights when all votes are in. |
| US-RT-02 | Scrum Master | reveal all votes together at the end | prevent anchoring bias | - Votes remain hidden until all members have voted. - “Reveal” action unblocks once all votes are cast. |

### **4.2 Asynchronous Voting**

| **Story ID** | **As a...** | **I want to...** | **So that...** | **Acceptance Criteria** |
| --- | --- | --- | --- | --- |
| US-ASY-01 | Remote Team Member | vote on stories up to 48 hrs after session creation | I can’t attend live meetings | - Voting window configurable (default 24h). - Reminders sent via email/chat at 12h and 1h before deadline. |
| US-ASY-02 | Product Owner | view partial results and comments before deadline | I can follow ongoing estimation progress | - Dashboard shows who has voted and which stories are pending. - Comments are linked to story. |

### **4.3 AI-Driven Estimation**

| **Story ID** | **As a...** | **I want to...** | **So that...** | **Acceptance Criteria** |
| --- | --- | --- | --- | --- |
| US-AI-01 | Scrum Team Member | receive an AI-suggested estimate for each story | I have a baseline for our discussion | - Ollama model returns suggestion within 500ms of story load. - Suggestion shown separately from human votes. |
| US-AI-02 | Scrum Master | compare AI suggestion vs team median | we can analyze estimation variance | - UI displays team median and AI suggestion side by side. - Flag if variance > threshold (e.g., 2 points). |
| US-AI-03 | Team Analyst | download AI performance report showing prediction vs actual | I can retrain or fine-tune the model | - Report includes historical accuracy, bias metrics, and list of outlier stories. - Exportable as CSV. |

## **5. Informational Requirements (Data)**

| **IR ID** | **Data Entity** | **Description & Attributes** |
| --- | --- | --- |
| IR-1 | User Profile | user\_id, name, email, role (Scrum Master, Developer, PO), authentication\_provider, preferences (notification settings, theme) |
| IR-2 | Story / Backlog Item | story\_id, title, description, acceptance\_criteria, priority, labels, imported\_from\_tool (Jira, Trello), imported\_id |
| IR-3 | Session | session\_id, title, created\_by, created\_at, mode (real-time, async), voting\_deadline |
| IR-4 | Vote | vote\_id, session\_id, story\_id, user\_id, vote\_value (including AI\_vote), timestamp |
| IR-5 | AI Suggestion | suggestion\_id, story\_id, session\_id, suggested\_value, model\_version, confidence\_score, generated\_at |
| IR-6 | Comment / Discussion | comment\_id, story\_id, session\_id, user\_id, content, timestamp |
| IR-7 | Integration Record | integration\_id, tool\_name, api\_endpoint, secret\_key (encrypted), last\_sync, status |
| IR-8 | Audit Log | log\_id, user\_id, action (login, vote, session\_create, suggestion\_generate), timestamp, metadata |

## **6. Non-Functional Requirements (NFR)**

| **NFR ID** | **Category** | **Requirement** |
| --- | --- | --- |
| NFR-1 | Performance | System shall respond to user actions (vote, AI suggestion) in ≤500ms under normal load. |
| NFR-2 | Availability | System shall achieve 99.9% uptime (annual) with multi-region deployment and auto-failover. |
| NFR-3 | Scalability | System shall scale automatically to support up to 10,000 concurrent users with no manual intervention. |
| NFR-4 | Security | All data in transit and at rest must be encrypted (TLS 1.2+, AES-256). Support SSO with SAML/OAuth2. |
| NFR-5 | Data Residency | Allow customers to select data region (e.g., South Africa, EU) to comply with POPIA and GDPR. |
| NFR-6 | Reliability | System shall auto-recover from brief outages within 2 minutes and support offline caching for up to 5 minutes. |
| NFR-7 | Usability | First-time users shall complete onboarding in ≤3 minutes without guided tutorial. |
| NFR-8 | Maintainability | Codebase shall achieve ≥80% test coverage; deployments automated via CI/CD; infrastructure as code. |
| NFR-9 | Compliance | System shall comply with POPIA and GDPR; logs stored for ≥1 year; user may request data deletion. |
| NFR-10 | Accessibility | UI shall meet WCAG 2.1 AA standards; support keyboard navigation and screen readers. |

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## **7. Architecture & Process Diagrams**

### **7.1 System Context Diagram**

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### **7.2 Data Flow: Voting & AI Estimation**