Scrum App Feature Expansion Plan

This document outlines the features and functions that need to be added to the existing Scrum App repository in order to transform it from an MVP into a fully functional and robust Scrum application. It is structured by phases, reflecting priority and logical build order. Each phase can be translated into a development milestone.

# Phase 1 — Core Scrum Depth (close the MVP gaps)

- Epics & hierarchy: Epics → user stories → tasks/subtasks; cross-sprint stories; epic progress by story points.

- Backlog refinement tools: Templates (story definition, acceptance criteria, DoR checklist), bulk edit (labels, assignee, points), drag-rank with audit.

- Estimation: Planning Poker (real-time session + anonymous votes + reveal), Fibonacci/modified scales, average/median chooser.

- Sprint planning: Team capacity per member (hours or points), auto-fit suggestions, spillover handling, sprint goal & DoD attestation.

- Definition of Done/Ready checklists: Per team/project with enforcement.

# Phase 2 — Delivery Workflow & Quality

- Workflow rules: WIP limits per column, required fields on status change, blockers with reason & dependency links.

- Code integration: Link PRs/commits/branches to stories; auto-transition on PR merge; show CI status on the card.

- Reviews & QA: Built-in review tasks, test case links, 'Awaiting review' vs 'Verified' lanes; attach screenshots/videos.

- Real-time collab: WebSockets for board updates, typing presence, @mentions, comment threads, reactions.

# Phase 3 — Reporting & Insights

- Velocity & forecasting: Velocity chart (rolling 5–8 sprints), capacity vs. commitment, predict sprint completion date ranges.

- Burndown/Burn-up: Story points & count variants; scope change overlays; weekends/holidays calendar awareness.

- Cumulative Flow Diagram (CFD): Lead time, cycle time, queue health; aging WIP report.

- Release tracking: Fix versions/releases with 'what’s shipped' notes; changelog export.

# Phase 4 — Scale & Portfolio

- Multi-project/portfolio views: Cross-team roadmaps, portfolio epics with drill-down, program increments (PI planning support).

- Dependencies & risk: Hard/soft dependencies visualization, risk register with probability/impact, auto risk flags.

- Objectives & key results (optional): Map sprint goals to quarterly objectives; progress roll-ups.

# Phase 5 — Admin, Security, and Ops

- RBAC & SSO: Roles beyond PO/SM/Dev (Viewer, Contributor, Admin), SSO (SAML/OIDC), per-project permissions.

- Audit & compliance: Immutable audit log, data retention policies, backups, export/import options.

- Custom fields & automations: Text/number/select fields; rule engine for workflow automations.

- Notifications: Email/Slack/Teams digests, @mentions, reminders for ceremonies and due dates, quiet hours.

# Phase 6 — UX Polish & Accessibility

- Saved views & advanced search: Query builder, saved filters per user/team.

- Board ergonomics: Swimlanes, compact mode, keyboard shortcuts, multi-select drag.

- I18n & a11y: Full localization, WCAG-compliant components, color-blind friendly charts.

- Mobile-friendly PWA: Quick daily-scrum updates on phone; offline notes sync.

# Implementation Notes (Tailored to FastAPI + React + MongoDB Stack)

- Realtime: FastAPI + uvicorn + WebSockets (or Socket.IO) with Redis pub/sub for scale; React hooks on the client.

- Search & filters: MongoDB compound indexes; server-side pagination; text search.

- Rules/automations: Persisted rules table + background worker (Celery/RQ) for triggers.

- Reports: Precompute daily aggregates into a metrics collection for fast charts.

- Integrations: Git providers (GitHub/GitLab) via OAuth apps; Slack/Teams webhooks; CI status APIs.

- RBAC: Route guards in React; backend scope checks on every endpoint.

- Testing: API tests with pytest + httpx; React tests with RTL/Jest; e2e with Playwright.

# Minimal Acceptance Checklist

- Epics/stories/tasks: CRUD, reorder, define AC, link PRs, subtasks roll up points.

- Planning Poker: invite team, vote anonymously, reveal, set estimate.

- Sprint planning: set capacity, commitment ≤ capacity, carryover tagged.

- Reports: velocity (last 8 sprints), sprint burndown, CFD; export PNG/CSV.

- Security: SSO, project-level permissions, audit log events.