

1. Overview

This proposal presents a development plan for a private, internal-use dashboard application tailored for Daikibo Industries. The main objective of this dashboard is to enable centralized, real-time visibility into the operational health of critical machinery in Daikibo’s manufacturing network. Specifically, the system will monitor 9 machines at each of the company's 4 factories—Meiyo, Seiko, Berlin, and Shenzhen—collecting telemetry data that indicates their current status and historical performance.

The proposed solution will be deployed exclusively within Daikibo’s intranet and will integrate seamlessly with the company's internal authentication system. This ensures that only authorized employees can access the dashboard using their existing company-wide credentials. The application will be designed as a secure single-page web interface that provides an overview of all monitored machines, with expandable sections for detailed insights at the factory and machine levels.

The outcome of this project will be a reliable, easy-to-use tool that aids operations and maintenance teams in early fault detection, machine performance tracking, and decision-making related to asset health and uptime.

2. Scope

The dashboard will be a centralized interface that displays the real-time health status of machines located in Daikibo’s four factories. Designed as a single-page application, the system emphasizes clarity, responsiveness, and ease of use for factory operators and engineering staff. The interface illustrated in the wireframe (next page) reflects the features outlined below:

**1. Intranet-Based Deployment**

* The application will be securely deployed within Daikibo’s internal network (intranet).
* It will be inaccessible from the public internet, ensuring data privacy and protection of operational telemetry.

**2. Authentication Integration**

* Access to the dashboard will be restricted to authenticated users via the company’s internal authentication service (e.g., LDAP or SSO).
* Users will use their company-wide accounts, avoiding the need to create or manage separate logins.

**3. Single-Page Structure**

* The dashboard will be a single-page web app (SPA), ensuring fast, seamless user interactions.
* No full-page reloads; components will update asynchronously for optimal performance and responsiveness.

**4. Factory Overview Panel**

* Lists all four factories:
  + Daikibo Factory Meiyo
  + Daikibo Factory Seiko
  + Daikibo Berlin
  + Daikibo Shenzhen
* Each factory row includes:
  + Status icon (green = healthy, red = issue)
  + Expand/collapse icon
  + Last update timestamp (e.g., “<1min ago”)
* Clicking on a factory expands its row to reveal all associated machines.

**5. Device-Level Monitoring**

* Each factory has 9 devices (e.g., CNC, LaserCutter, SpotWelder, Furnace, etc.).
* Each device row contains:
  + Device name and icon
  + Status indicator (✓ or ✕)
  + Last update time
  + Expand button for detailed view
* Devices are displayed in a clean vertical stack, allowing users to scroll easily.

**6. Status History & Details**

* Devices such as “CNC” can be expanded to show recent status events.
  + For example: “Status: Unhealthy” (2min ago), “Status: Healthy” (12min ago).
* Statuses are visually marked using icons.
* A **“Load More”** button is available to fetch additional historical data on demand.

**7. Design & UI Elements**

* Clean, minimalist layout focused on quick readability.
* Interactive elements (arrows for expanding/collapsing, buttons for loading more) are intuitive and accessible.
* All status elements are color-coded for rapid identification:
  + Green = normal operation
  + Red = fault detected
* Icons are used for factories and devices to support visual recognition.
* Last update timestamps ensure transparency of monitoring frequency.

**8. Performance & Usability**

* The dashboard is optimized for modern desktop browsers (Chrome, Edge, Firefox).
* Real-time updates are supported through backend telemetry data feeds.
* Designed to function smoothly even under high data volumes or frequent machine status changes.
* 3. Estimate

The table below provides a breakdown of the estimated effort required to complete the dashboard project. The estimate includes development, integration, testing, deployment, and documentation.

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| --- | --- |
| **Task Area** | **Hours** |
| Requirements Analysis & Planning | 20 |
| Frontend Development (SPA) | 50 |
| Backend Development & Authentication | 40 |
| Telemetry Data Integration | 30 |
| Testing (Unit, Functional, UAT) | 20 |
| Deployment to Intranet | 10 |
| Documentation & Training Materials | 10 |

The project will be completed by a dedicated development team including a full-stack developer, QA engineer, and project lead.

4. Timeline

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| |  |  | | --- | --- | | **Date** | **Milestone** | | 1st September 2025 | Design phase begins. | | 5th  September 2025 | UI mockups and system architecture completed. | | 12th September 2025 | Backend development and authentication integration. | | 19th September 2025 | Frontend dashboard implementation. | | 26th September 2025 | Telemetry data integration. | | 1st October 2025 | Testing and bug fixing. | | 5th -7th October 2025 | Final deployment on intranet and project handover and user training completed. | |
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5. Support

We offer full post-deployment support to ensure the system continues to meet operational requirements. Our support offering includes:

* **Bug Fixes**: All critical issues will be addressed within 24–48 hours of being reported.
* **Ongoing Technical Support**: Clients can raise tickets for any functional or technical issues, with responses provided within 1–2 business days.
* **Feature Enhancements**: Any additional functionality needed post-deployment can be scoped and delivered through follow-up development sprints.
* **Monitoring & Maintenance**: Optional monthly maintenance packages are available, which include telemetry checks, performance monitoring, and dashboard health reviews.
* **Training & Documentation**: Comprehensive user documentation and quick-reference guides will be provided to support onboarding. Live or recorded training sessions can be arranged upon request.

We are committed to ensuring long-term reliability, usability, and scalability of the system.