Amrood labs

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Overview

BauTask is a mid-sized construction firm in Germany managing dozens of active sites with 50+ employees. Before this engagement, day-to-day coordination relied heavily on spreadsheets, email, and ad-hoc updates, making it difficult to track progress, maintain documentation, and plan resources across multiple locations.

Amrood Labs delivered a custom, web-based operations platform that unified Construction Sites, Tasks Board, Calendar, Directory, Fleet, Teams, and Timesheets into one system, built for secure, multi-tenant use and accessible on desktop and mobile.

The rollout created measurable gains: project overruns fell by 15%, task completion improved by 25%, fleet downtime reduced by 30%, and payroll-related admin effort dropped significantly (saving ~10 hours per week per manager).

Company Background

BauTask delivers commercial and residential construction projects. With multiple concurrent sites and a mix of field and office staff, the company needed a reliable source of truth for tasks, documentation, and time tracking, without increasing administrative overhead.

Problem Statement

BauTask's challenges were often described as "technical," but the root issues were operational: fragmented processes across sites created delays, duplicated work, and limited visibility for managers.

1. **Multi-site data separation and scale:** Operating across multiple sites required tenant-safe data isolation and performant queries to avoid cross-site leakage and bottlenecks.
2. **Planned hours and labor forecasting gaps:** Planned hours were not consistently available, making it hard to estimate and compare planned versus actual effort.
3. **Document handling friction:** Construction documentation needed structured folders, previews across common formats, and reliable large uploads without timeouts.
4. **Security and controlled access:** Sensitive site documents and exports needed password protection and role-aware access controls.
5. **KPI reporting without performance trade-offs:** Leadership needed site- and task-level KPIs while keeping the system responsive.
6. **Time tracking and payroll delays:** Timesheets were inconsistent and difficult to export, slowing approvals, allowances, and payroll processing.
7. **Resource management blind spots:** Employee and fleet information was scattered, leading to slower assignments, maintenance delays, and downtime.

Proposed Solution

We built an integrated platform designed around a simple workflow: plan work, execute on-site, capture proof, and report outcomes. Key modules included:

- **Construction Sites:** Site lifecycle management with planned vs actual hours, KPIs, team assignment, PDF exports, duplication for repeatable projects, and full data downloads for auditing.
- **Tasks Board:** Kanban-style task flow with pre-approval (“Requested”), drag-and-drop status changes, employee assignment, due dates, and estimated hours.
- **Calendar:** Task and site scheduling with automated reminders and time-bound updates to reduce missed deadlines.
- **Directory & Teams:** Centralized employee profiles, access/role management, and structured teams to speed assignments and coordination.
- **Fleet:** Fleet tracking with damage reporting, evidence uploads, and proactive maintenance to reduce downtime.
- **Timesheets:** Accurate time tracking with filters by employee/site, approval states, heatmaps, allowances, and exports (Excel/PDF) for payroll.

Implementation

The platform was implemented as a modern web application with secure role-based access, responsive UI, and automation for recurring operational tasks.

- Backend: Ruby on Rails with Hotwire for reactive updates.
- UI: TailwindCSS for a clean, mobile-friendly experience.
- Auth & Authorization: Devise and Pundit (role-based access control).
- Data: PostgreSQL with a multi-tenant approach to ensure isolation across sites/organizations.
- Files: S3-backed attachments with structured folders and support for large uploads (including chunked uploads).
- Automation: Scheduled jobs via Whenever (cron) for reminders and recurring sync.
- Deployment: Dockerized deployment on DigitalOcean with CI/CD.
- Integrations: Two-way SevDesk sync with conflict resolution and rate-safe scheduling.

Results

After rollout, BauTask reported improvements across delivery reliability, resource utilization, payroll operations, and overall business performance.

Metric	Before	After	Change
Project overruns	Frequent overruns with limited real-time visibility	Real-time tracking and reminders reduced overruns	-15%
Task completion	Slower throughput due to manual coordination	Kanban workflow + pre-approval improved completion rate	+25%
Fleet downtime	Reactive maintenance and limited visibility into damage	Proactive maintenance alerts and logging reduced downtime	-30%
Assignment speed	Manual matching of teams to site needs	Teams module streamlined assignment flow	+20% faster
Timesheet accuracy	Inconsistent inputs and delayed reconciliation	Structured timesheets with heatmaps and approvals	95%
Payroll admin effort	Exports and approvals required manual consolidation	Exports streamlined payroll processing	~10 hours/week saved per manager
Overtime costs	Overtime driven by uneven capacity visibility	Heatmaps and reporting improved scheduling	-10%

- Additional business impact reported by BauTask:
- Profitability improved by 18% through fewer delays, reduced errors, and more accurate pricing and allowances.
- Operational scalability: the company expanded to 30 new sites without adding administrative staff.
- Employee satisfaction improved, contributing to a 12% reduction in turnover through streamlined tools and mobile access.
- Compliance and safety improved through secure data handling and stronger fleet damage reporting.

Analysis

Effective Outcomes

- End-to-end visibility (Sites + Tasks + Calendar) reduced overruns and increased delivery predictability.
- Centralized directory, teams, and fleet data reduced coordination friction and improved utilization.
- Timesheets plus exports improved accuracy and removed payroll bottlenecks.

Initial Challenges

- Designing tenant-safe isolation while keeping multi-site reporting performant.
- Supporting real-world document workflows: hierarchy, access controls, previews, and large uploads.
- Building KPI aggregation that remains fast and reliable as usage scales.

Key Insights

1. Visibility reduces operational chaos: real-time progress and due dates lower overruns and escalation load.

2. Security must be workflow-native: permissions, password protection, and controlled exports prevent leakage and enable collaboration.

3. Profitability follows accurate time and cost capture: high timesheet accuracy and allowances reduce underbilling and payroll churn.

Conclusion

BauTask's platform transformation consolidated fragmented processes into one operational system. By combining task execution, scheduling, documentation, workforce and fleet management, and timesheets, BauTask improved delivery performance, reduced overhead, and scaled to new sites without adding administrative staff.

Three strategic lessons emerged from the engagement:

- Build around daily workflows, not isolated features, field execution, documentation, and reporting must connect.
- Automate reminders and recurring routines; small automations compound into large time savings at scale.
- Make exports and auditability first-class; construction operations depend on proof, compliance, and client-ready reporting.