

Envora Platform - UI/UX Design Plan (MVP)

- v2

Version: 2.0

Date: December 2025

Audience: Design & Engineering Teams

Focus: Project-Centric, Discipline-Based Navigation, Real-Time Collaboration

1. Design Philosophy

Core Principles

1. **Project-First:** Everything revolves around projects. Users land on projects, work in projects, complete work within projects.
2. **Discipline-Centric Navigation:** Organization by discipline (Overview, Financial, Schedule, Design, Service) matches how teams actually work.
3. **Effortless Navigation:** 3-click maximum to reach any important feature. No deep nesting.
4. **Non-Technical Approachability:** Design for field engineers and ops staff, not power users. Clear, simple, large targets.
5. **Momentum:** Fast page loads, instant feedback, zero "loading" states where possible. Real-time updates via SignalR.
6. **Persistent Collaboration:** Notes, comments, and @ mentions available on every tab (like YouTube/Teams), creating a lightweight, contextual communication layer.
7. **Information Hierarchy:** Show what matters now. Hide complexity behind progressive disclosure (tabs, expandable sections).
8. **Consistency:** Reuse patterns across entire app. Users learn once, apply everywhere.

Visual Identity

- **Color Palette:** Deep teal primary (#1A4A5E), warm orange accent (#E67E22), clean grays, clear status colors (green=ok, amber=warning, red=error)
 - **Typography:** Inter font family (clear, modern, highly legible)
 - **Spacing:** 4px grid unit (4, 8, 12, 16, 24, 32, 48, 64px)
 - **Touch Targets:** Minimum 48px height for all clickable elements
 - **Contrast:** WCAG AAA compliant (high contrast for readability)
 - **Responsive:** Mobile-first, works on phone/tablet/desktop
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2. Information Architecture (IA)

Mental Model: Projects as Central Hub with Discipline Groups

User Login

↓

Dashboard (Global View)

↓

Project Selection (Quick Switcher in Header)

↓

Project Detail (All work happens here)

- └─ OVERVIEW (Summary, docs, team, activity, notes)
 - └─ Summary (project info, customer, key dates)
 - └─ Team (members + messaging)
 - └─ Documents (repo, filterable by discipline)
 - └─ Activity (project audit trail)
 - └─ Notes (collated project notes, filterable)
 - └─ Settings (project configuration)
 - └─ FINANCIAL (Budget, contracts, costs)
 - └─ Financials (contract, estimates, margin)
 - └─ Budget (v2)
 - └─ Costs (v2)
 - └─ Change Orders (v2)
 - └─ Invoices (v2)
 - └─ SCHEDULE (Dates, milestones, warranty)
 - └─ Timeline (key dates, milestones)
 - └─ Warranty (project warranty + product summary)
 - └─ Milestones (v2, detailed scheduling)
 - └─ Gantt (v2, dependencies)
 - └─ DESIGN (Equipment, points, diagrams, sequences)
 - └─ Equipment (HVAC schedule)
 - └─ Points (control points)
 - └─ Schedules (BOM, valves, dampers, custom)
 - └─ Drawings (Visio exports, PDFs)
 - └─ Sequences (sequences of operation)
 - └─ SERVICE (Post-delivery, close-out, support)
 - └─ RFIs (requests for information)
 - └─ Issues (problem tracking)
 - └─ IOMs (installation & operations manuals)
 - └─ Commissioning (v2, field notes)
 - └─ Warranty Claims (v2)
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3. Global Navigation

Sidebar (Left, Collapsible)

▢ Dashboard	
▢ All Projects	
▢ OVERVIEW	
▢ FINANCIAL	
▢ SCHEDULE	
▢ DESIGN	
▢ SERVICE	
⚙ Admin	
▢ Profile Settings	
? Help	

Behavior: Fixed on desktop, collapse icon on mobile. 260px when expanded, collapses to icon-only on small screens.

Note on CRM Access: Companies & Contacts NOT in sidebar: Accessible via: Global search (CMD+K), inline creation, or Admin dashboard.

4. Project Detail - Discipline-Based Tabs

OVERVIEW Discipline

Tab 1: Summary

- Project info, customer, key dates
- Team assignments panel (right column)
- Progress tracking (right column)

Tab 2: Team

- Team members list (left column)
- Online status, messaging capability
- Activity log (right column)

Tab 3: Documents

- Filterable by discipline (Design, Financial, Service, General)
- Upload capability, version management
- Preview & download functionality

Tab 4: Activity

- Project audit trail (read-only)
- Filter by user, timestamp
- System-level activity tracking

Tab 5: Notes

- Collated project notes (all tabs)
- Filterable by discipline or user
- Contextual jump to original tab/data

Tab 6: Settings

- Project configuration (rarely changed)
- Basic info, financial summary, key dates
- Team assignments, customer info

FINANCIAL Discipline

Tab 1: Financials (MVP v1)

- Read-only contract overview
- Contract amount, estimates, margin
- Billing & retainage summary

Tabs 2–5: Budget, Costs, Change Orders, Invoices (v2)

SCHEDULE Discipline

Tab 1: Timeline

- Key project dates & milestones
- Contract, start, completion, warranty dates
- Milestone tracking (target vs. actual)

Tab 2: Warranty

- Project warranty dates & status
- Product warranty summary (by equipment)
- Days remaining calculation

Tabs 3–4: Milestones, Gantt (v2)

DESIGN Discipline

Tab 1: Equipment

- HVAC equipment list (tag, type, manufacturer, location)
- Add, import, delete capabilities
- Quick drill-down to equipment details & associated points

Tab 2: Points

- Control points organized by equipment
- Add, edit, delete capabilities
- Min/max values, controller assignments

Tab 3: Schedules

- Sub-tabs: Equipment Schedule, BOM, Valves, Dampers, Custom
- Download as PDF, export to Excel
- Auto-calculated from equipment data

Tab 4: Drawings

- Visio exports, uploaded PDFs
- Upload, regenerate, download, delete
- Real-time job status via SignalR

Tab 5: Sequences

- Sequences of Operation documents
- Upload, replace, delete capabilities
- Preview functionality

SERVICE Discipline

Tab 1: RFIs

- Request for Information tracking
- Status (open, pending response, resolved)
- Due dates, assignee, reply capability

Tab 2: Issues

- Problem tracking & resolution
- Priority levels, status, assignment
- Reopen/close capability

Tab 3: IOMs

- Installation & Operations Manual closeout package
- Build new IOM (leverages submittal-builder engine)
- Version history, date-stamped packages
- Final package: as-builts + device IOMs + warranty letter + transmittal

Tabs 4–5: Commissioning, Warranty Claims (v2)

5. Persistent Notes Pattern (Every Tab)

Location: Bottom of every tab content (always visible)

Features:

- Ready-to-type text box at top (no "Add Note" button)
- Threading: Click "Reply" to nest comments

- @mentions: Type @ to mention teammates (triggers notification)
- Reactions: Quick emoji reactions (👍, ❤️, 😊, etc.)
- Edit/Delete: Click "More ▼" to manage own notes
- Real-time: Via SignalR, team sees notes instantly
- Searchable: Global search finds notes + context
- Filterable: Overview → Notes tab filters by discipline or user

Why Every Tab: Creates lightweight collaboration layer, context-aware, reduces context switching, reduces notification fatigue.

6. IOM Workflow

Path: SERVICE → IOMs tab → "+ Build New IOM Package"

1. Select as-builts (redlined drawing package from field)
 2. System auto-populates device IOMs (from Equipment used)
 3. Add warranty letter + transmittal letter
 4. Submit → Cloud orchestrates PDF build (leverages submittal-builder engine)
 5. Date-stamp applied (marks as-builts)
 6. Final package downloadable, emailable, archivable
 7. Becomes permanent record in Service tab (library/reference)
 8. Not editable once stamped (archive/reference only)
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7. Dashboard (Global View)

Section 1: KPIs (Top, Full Width)

- In Progress Projects, At Risk Projects, Pending Submittals, Pending Approvals

Section 2: My Priority Queue (Left Column)

- Overdue items, due today, upcoming
- Quick navigation to project

Section 3: Recent Projects (Right Column)

- Quick access to frequently-used projects
 - Progress snapshot (Design %, Programming %, etc.)
 - Team snapshot (AE, PM)
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8. Secondary Pages

All Projects List

- Filterable by status, customer
- Searchable by project number or job name
- Click to navigate to project detail

Admin Dashboard

- User Management (create, edit roles, deactivate)
- Data Management (Companies, Contacts, bulk import/export)
- Equipment Templates (manage RTU, AHU, VAV templates)
- System Settings (Azure, email, notifications)
- Audit Log (all changes, who, when, what)
- Reports (project summary, utilization, financial)

Profile Settings

- Name & contact info
 - Role & permissions
 - Preferences (theme, notifications, email digest)
 - Security (password change)
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9. Implementation Phases

Phase 1 (Weeks 1–2): Core Navigation & Dashboard

- Header + project switcher
- Sidebar with 5 discipline groups
- Dashboard (KPIs, priority queue, recent projects)
- Responsive layout

Phase 2 (Weeks 3–4): OVERVIEW Discipline

- Summary, Team, Documents, Activity, Notes, Settings tabs
- Persistent notes on all tabs
- Real-time activity tracking

Phase 3 (Weeks 5–6): FINANCIAL & SCHEDULE Disciplines

- Financials (read-only), Timeline, Warranty tabs

Phase 4 (Weeks 7–8): DESIGN Discipline

- Equipment, Points, Schedules, Drawings, Sequences tabs

Phase 5 (Weeks 9–10): SERVICE Discipline + Submittal

- RFIs, Issues, IOMs tabs
- Generate Submittal workflow
- Real-time progress tracking

Phase 6+ (v2): Admin, Profile, CRM

- Admin dashboard (user, data, template management)
 - Profile settings (preferences, security)
 - Bulk CRM operations
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10. Key Design Decisions

1. Discipline-Based Sidebar vs. Tab-Based

Decision: Organize primary navigation by discipline (Overview, Financial, Schedule, Design, Service) rather than workflow tabs. **Why:** Matches how teams think about work. Disciplines are stable; workflows change. Clear mental model for field engineers & ops.

2. Persistent Notes on Every Tab

Decision: YouTube-style comments on every tab by default. **Why:** Reduces context switching, keeps conversations contextual, lightweight collaboration layer. Threading + @mentions enable rich discussion without separate chat tool.

3. Warranty Tab in SCHEDULE (Not SERVICE)

Decision: Project warranty goes in Schedule discipline. Product warranties as Equipment metadata + summary in WARRANTY tab. **Why:** Warranty is scheduling concern (dates, milestones). Product warranties are equipment specs. SERVICE is post-delivery; SCHEDULE is tracking deliverables.

4. Settings in OVERVIEW (Not Separate Tab)

Decision: Project settings in Overview → Settings tab (rarely changed). User preferences in separate main nav item. **Why:** Project settings are reference; once set, rarely touch. User prefs are personal, belong in Profile Settings.

5. CRM Not in Sidebar

Decision: Companies & Contacts accessible via global search, inline creation, or Admin. **Why:** Not core workflow. Project team doesn't need quick-access to CRM. Admin handles bulk operations. Reduces sidebar clutter.

6. IOM as Submittal Variant (v2)

Decision: IOMs built using same submittal-builder engine, but with as-builts + device IOMs + warranty. **Why:** Reuses proven tech. Submittal is pre-design; IOM is post-redlines. Same orchestration needed.

11. Performance Targets

Metric	Target
First Paint	< 1.5s
Largest Contentful Paint (LCP)	< 2.5s
Time to Interactive (TTI)	< 3.5s
API Response Time (P95)	< 100ms
Page Load Time	< 2s

Optimization: Code splitting, caching, lazy loading tabs, virtual scroll for notes, SignalR for real-time.

12. Accessibility (WCAG AAA)

- **Color Contrast:** 4.5:1 normal text, 7:1 large text
 - **Font Size:** Minimum 16px body text
 - **Focus States:** Visible outline (not just hover)
 - **Keyboard Navigation:** Tab, Enter, Arrow keys, Escape
 - **Screen Readers:** ARIA labels on buttons, form fields, dynamic regions, notes panel
 - **Error Messages:** Clear, specific, suggest corrections
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13. Testing Checklist

Visual Testing

- ☐ All pages render on mobile/tablet/desktop
- ☐ Color contrast meets WCAG AAA
- ☐ 4px grid spacing consistent
- ☐ No horizontal scrolling on mobile
- ☐ Discipline groups visually distinct

Functional Testing

- ☐ Navigation works (sidebar, tabs, switcher)
- ☐ Real-time updates (notes, equipment, activity)
- ☐ Persistent notes work on every tab
- ☐ @mentions trigger notifications
- ☐ Threading & reactions work
- ☐ File uploads work
- ☐ Filters & search work

Performance Testing

- ☐ First paint < 1.5s
- ☐ Page load < 2s
- ☐ API responses < 100ms
- ☐ CLS < 0.1 (no layout shifts)
- ☐ Notes render smoothly (60 fps)

User Testing

- ☐ Non-technical users navigate easily
- ☐ New users understand persistent notes
- ☐ Power users appreciate @mentions + threading
- ☐ Field engineers give feedback
- ☐ PMs & ops give feedback

14. Next Steps

1. **Finalize Wireframes:** Create Figma mockups (use this doc as reference)
2. **Component Development:** Build Blazor components (NotesPanel, CommentThread priority)
3. **Integration:** Connect Blazor to [ASP.NET](#) Core API (SignalR for notes)
4. **Testing:** Visual, functional, accessibility, performance
5. **UAT:** Real-world testing with actual project data
6. **Launch:** Phase 1 to pilot users

Document Version History

Vers ion	Date	Autho r	Changes
1.0	Dec 18, 2025	Design Team	Initial UI/UX plan (workflow-based)
2.0	Dec 18, 2025	Design Team	Major restructure: 5 disciplines, persistent notes, IOM workflow, CRM context-based