

# 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

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### 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

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Dashboard (Global View)

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Project Selection (Quick Switcher in Header)

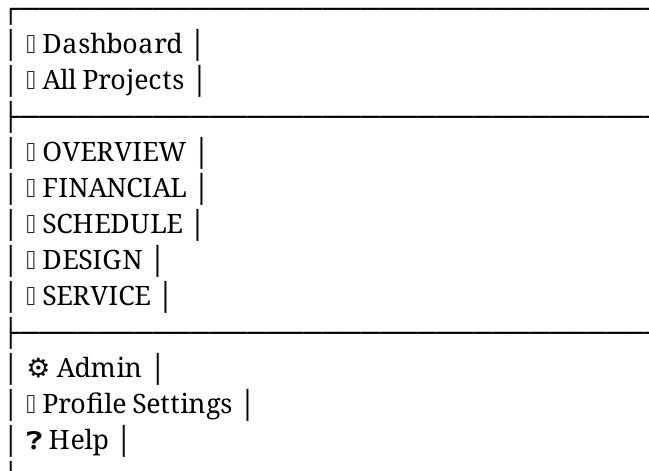
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Project Detail (All work happens here)

- 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)



**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.

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### 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

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## **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)**

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## **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)**

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## **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

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### **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

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

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## **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.

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## 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

## 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.

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## 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.

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## 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

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## 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

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### Document Version History

Version	Date	Author	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