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UX Design Diagrams

This folder contains SVG vector diagrams that visualize the user experience, workflows, and system architecture for the **Nye Hædda Barneskole Project Management Simulation**.

All diagrams are created in **Norwegian** to match the application language and are fully scalable vector graphics (SVG) for use in documentation, presentations, and development reference.

Diagram Index

01. User Journey Flow

File: 01-user-journey-flow.svg

Description: Complete user journey from login to successful plan submission, showing all major steps:

- Login authentication
- Dashboard overview
- WBS task selection
- Supplier selection
- AI negotiation loop
- Plan validation (success/failure paths)

Use Cases:

- Onboarding documentation for new users
 - Developer reference for implementing the core game loop
 - Stakeholder presentations
-

02. Dashboard Layout

File: 02-dashboard-layout.svg

Description: Detailed wireframe of the main dashboard view (desktop 1024px+):

- Header with user menu and help button
- Project constraints panel (budget progress bar, deadline status)
- Quick stats (WBS completion, negotiation count)
- Two-column layout: WBS list (left, 2/3 width) + Action buttons (right, 1/3 width)
- Individual WBS item cards showing status (completed/pending)

Use Cases:

- Frontend implementation reference
 - UI/UX testing baseline
 - Responsive design starting point
-

03. Chat Negotiation Flow

File: 03-chat-negotiation-flow.svg

Description: Example of a complete negotiation session with an AI supplier:

- Initial high-price quote from AI (120 MNOK, 90 days)
- User arguments based on budget constraints
- AI counter-offers with justification (110 MNOK)
- Final user push (105 MNOK)
- AI acceptance and data commit

Shows realistic Norwegian dialogue and negotiation dynamics.

Use Cases:

- AI prompt engineering reference
 - User training materials
 - Chat UI implementation guide
-

04. Validation Decision Tree

File: 04-validation-decision-tree.svg

Description: Decision tree showing the plan validation logic:

1. Check: All WBS items have data?
2. Check: Total cost \leq 700 MNOK?
3. Check: Projected end date \leq 15. mai 2026?
4. Success: Show completion modal
5. Failure: Show specific error modal with recommendations

Includes error handling paths and retry loops.

Use Cases:

- Backend validation logic implementation
 - Testing edge cases (over budget, delayed project)
 - Error modal design reference
-

05. WBS Dependency Visualization

File: 05-wbs-dependency-visualization.svg

Description: Complete WBS structure showing all 15 tasks organized by phase:

- 1.1-1.2: Prosjektering (Architect, RIB)
- 1.3: Grunnarbeider (Groundwork, Foundation)
- 1.4: Råbygg (Shell, Roof/Walls)
- 1.5: Tekniske fag (Electrical, HVAC, Ventilation)
- 1.6: Innvendig (Interior walls, Flooring)
- 1.7-1.8: Ferdigstillelse (Painting, Inspection)

Critical path highlighted in red (longest dependency chain affecting deadline).

Use Cases:

- Understanding project structure
 - Critical path algorithm implementation
 - Dependency validation logic
 - Gantt chart feature (post-MVP)
-

06. Mobile Responsive Comparison

File: 06-mobile-responsive-comparison.svg

Description: Side-by-side comparison of layouts across breakpoints:

- **Desktop (1024px+):** 2-column layout, full features
- **Tablet Landscape (768px):** 1-column with sticky actions
- **Tablet Portrait (640px):** Compact vertical layout
- **Mobile (<640px):** Not supported in MVP (marked with warnings)

Includes a feature comparison table showing what works on each device.

Use Cases:

- Responsive design implementation
 - Device testing checklist
 - Stakeholder explanation of mobile strategy
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07. AI Negotiation Strategy

File: [07-ai-negotiation-strategy.svg](#)

Description: Technical deep-dive into how AI suppliers negotiate:

- **System Prompt:** Persona definition (professional Norwegian contractor)
- **Context:** Project constraints and requirements
- **Guardrails:** Hardcoded min/max cost/duration limits (prevents AI hallucination)
- **5-step negotiation flow:** Initial offer → User argues → Counteroffer → User pushes → Final acceptance
- **Difficulty levels:** Easy (0.3 resistance), Medium (0.6 resistance), Hard (0.9 resistance)

Use Cases:

- Backend AI integration (PydanticAI + Gemini 2.5 Flash)
- Prompt engineering
- Balancing game difficulty
- Testing AI agent behavior

How to Use These Diagrams

In Documentation

Reference diagrams in Markdown files:

```
![User Journey Flow](ux/01-user-journey-flow.svg)
```

In Presentations

SVG files scale perfectly for slides. Import into PowerPoint, Google Slides, or Figma.

For Development

Use as reference during implementation:

- **Frontend devs:** Refer to 02 (Dashboard), 03 (Chat), 06 (Responsive)
- **Backend devs:** Refer to 04 (Validation), 05 (Dependencies), 07 (AI Logic)
- **UX designers:** All diagrams provide visual specifications

For Testing

Create test cases based on flows:

- User journey (01): End-to-end test scenarios
 - Validation tree (04): Edge case testing (over budget, delayed)
 - Negotiation (03, 07): AI response quality testing
-

Design Notes

Visual Style

- **Color Palette:** Matches UX Design Specification
 - Blue (#2563EB): Primary actions, headers
 - Green (#16A34A): Success states, completed items
 - Yellow (#F59E0B): Warnings, decisions, in-progress
 - Red (#DC2626): Errors, critical path, not supported
 - Gray (#F3F4F6): Neutral panels, pending items

Typography

- **Sans-serif fonts** for readability
- **Monospace** for code snippets (in diagram 07)
- **Norwegian language** throughout (except technical code)

Accessibility

- High contrast text/background combinations
- Color is supplemented with icons (✓, ○, ✗) for colorblind users

- Clear labels and legends on all diagrams
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Updating Diagrams

All diagrams are **pure SVG** (no external dependencies). To edit:

1. Open `.svg` file in any text editor
2. Modify text content, colors, or layout
3. Preview in browser or VS Code SVG preview extension
4. Commit changes to repository

Recommended tools:

- **Text editor:** VS Code with SVG preview extension
 - **Visual editor:** Figma, Adobe Illustrator, Inkscape (free)
 - **Online editor:** SVGator, Method Draw
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Related Documentation

- **UX Design Specification:** `../ux-design-specification.md` (full component details)
 - **PRD:** `../PRD.md` (functional requirements)
 - **Epics:** `../epics.md` (user stories and implementation plan)
 - **Architecture:** `../architecture.md` (technical stack)
 - **Proposal:** `../proposal.md` (project overview and context)
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Changelog

2025-12-08: Initial creation of 7 UX diagrams

- 01: User Journey Flow
- 02: Dashboard Layout
- 03: Chat Negotiation Flow
- 04: Validation Decision Tree

- 05: WBS Dependency Visualization
 - 06: Mobile Responsive Comparison
 - 07: AI Negotiation Strategy
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For questions or diagram requests, contact the UX team or create an issue in the repository.