Human-Centered AI Development Process Guide

Type: Process Guide

Target Audience: UX Designers, AI Product Managers, Development Teams

This guide provides a step-by-step process for developing AI that augments human capability rather than replacing it. Follow these phases to ensure AI systems serve human needs and values.

Phase 1: Discovery (Weeks 1-4)

Objective: Understand users and context deeply

Activities

- ☐ Conduct user research (interviews, surveys)
- ☐ Perform contextual inquiry (observe users in environment)
- ☐ Complete stakeholder mapping
- ☐ Conduct task analysis
- ☐ Document current workflows

Deliverables: User personas, Journey maps, Pain point inventory, Opportunity areas

Phase 2: Iterative Design (Weeks 5-12)

Objective: Create and test human-centered solutions

Activities

- ☐ Generate concepts (brainstorming, design sprints)
- ☐ Create paper prototypes
- ☐ Conduct user testing (low-fidelity)
- ☐ Develop interface designs
- ☐ Incorporate user feedback iteratively

Design Principles Checklist

- ☐ Augment, don't replace human capability
- ☐ Keep humans in control of key decisions
- ☐ Design for appropriate trust (not over-trust)
- ☐ Provide clear feedback on AI actions and confidence

☐ Enable graceful degradation when AI fails

Deliverables: Interaction designs, UI mockups, User feedback reports

Phase 3: Development (Weeks 13-24)

Objective: Build the system with human-centered principles

Activities

☐ Technical implementation with UX integration
☐ Usability testing throughout development
☐ Accessibility testing (WCAG compliance)
☐ Performance optimization
☐ Integration testing

Key Verification Checks

☐ Does the system explain its reasoning to users?
☐ Can users override AI decisions?
☐ Are confidence levels communicated clearly?
☐ Does the interface prevent automation bias?

Phase 4: Pilot (Weeks 25-32)

Objective: Controlled deployment and validation

Activities

☐ Limited user deployment
☐ Close monitoring of user interactions
☐ Regular feedback sessions with pilot users
☐ Performance measurement against baselines
☐ Issue identification and resolution

Metrics to Track

Metric	Target	Actual
Task completion rate		
Error rate (human + AI)		
User satisfaction score		
Override frequency		
Trust calibration		

Phase 5: Evaluation (Ongoing)

Objective: Continuous measurement and improvement

Key Questions to Monitor

☐ Are users maintaining necessary skills?
☐ Is trust appropriately calibrated (not over/under)?
☐ Are human outcomes improving?
☐ Where does the AI fail and how do users recover?
☐ Are there emerging issues or unintended consequences?

AI System: _____

UX Lead: _____ **Date:** _____