Co-Design Your Intervention – Detailed Guidance

By using user-centered design principles, evidence-based interventions can be optimized to solve specific problems

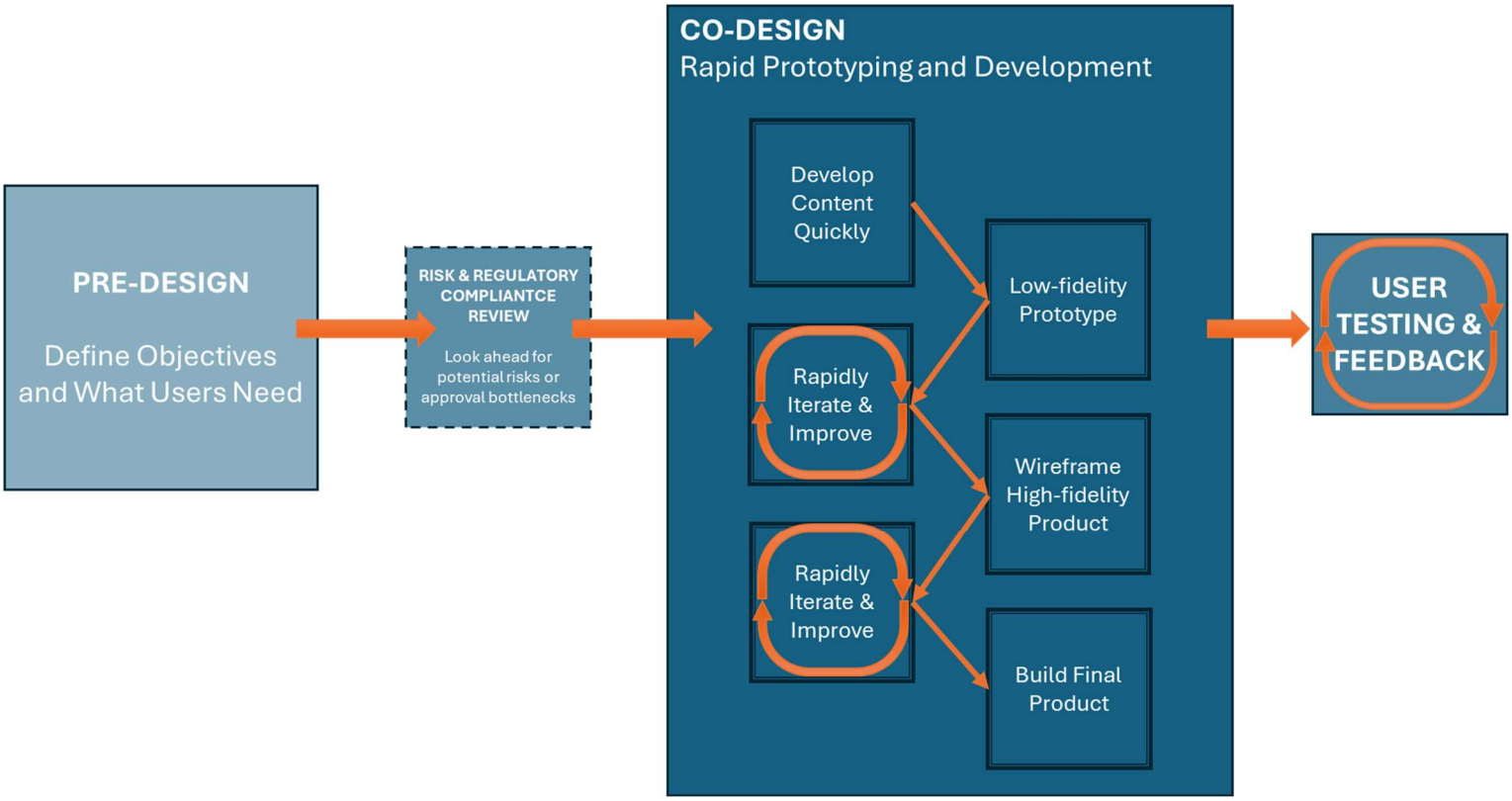
Review the guidance organized by elements below.

We recommend using a worksheet to help teams gather and reconcile the information quickly and clearly.

Traditional research often moves at a slow pace - too slow for the real-world needs of patients, clinicians, and end-users. Our approach changes that. By embedding design principles into your process, you can accelerate rigorous projects without sacrificing quality.

Whether you're developing a new intervention, drafting a manuscript or grant, or collaborating with computer engineers, these principles of rapid iteration in response to feedback are essential. They help you design solutions that matter, are faster, and with rigor to promote confidence that they'll work in practice.

Figure 1. Co-Design* for Rapid and Rigorous, Pragmatic Interventions



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* Key steps of Co-Design are organized in Figure 1. This process is meant to be cyclical and will rarely be linear. The process outlined in the figure represents elements of traditional user-centered design for technology-focused tools. We have adapted and combined elements in our guidance here to better generalize to pragmatic work.

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1. Pre-Design: Define Objectives and What Users Need

Why It Matters

Shared clarity on goals keeps design, operational, and clinical partners aligned and keeps progress moving in the intended direction. Early agreement on what success looks like lets you evaluate progress instead of debating it later.
You might have done this already in the step Define the Problem, but part of co-designing is ensuring that your end-users are also sharing their needs.

Actions Steps

- If adapting an intervention, **identify evidence-based interventions** relevant to the use case.
- **Engage relevant partners** (see Engagement) across roles to help define objectives.
- **Set user-focused objectives** and early success indicators.
- When possible, **plan integration** with existing systems and design features that can scale independently.
- **Identify barriers** that might limit the usability of your intervention for specific populations.

Example

A project begins aiming to “improve diabetes follow-up.” Clinicians may expect fewer in-person visits, while patients may expect easier prescription refills. Without alignment, iterations pull in different directions, and the team struggles to stay on their desired timeline.

Impact Summary

Clear scope, fewer iterations, higher clinical relevance, and a more generalizable solution.

Tools and Resources

- Guiding questions worksheet
- Using a Power-Interest Matrix to create a stakeholder map is helpful to visualize the types of partners, the level of power they may have over project success, and how interested they might be, signaling their ability to champion efforts throughout.

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- A RACI chart is a way to map different groups of partners, their level of involvement (Responsible, Accountable, Consulted, or Informed) and at which timepoint they need to be engaged.
- Define the Problem tip sheet

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2. Risk & Regulatory Compliance Review

What we Mean

This process is twofold:
Identifying **risks** for the product failing (e.g., cost, policy) and finding workable solutions, early.
Aligning your design with **regulatory compliance** requirements (e.g., IRB, Admin approvals) to facilitate fast approvals.

Why It Matters

Risk and compliance decisions made late can be costly and delay implementation. Proactive review reduces delays and builds trust with research and clinical personnel.

Looking together at value to clinical teams and/or health systems, usability, safety, equity, security, and operational fit ensures the product is feasible and acceptable from the outset.

Actions Steps

- **Assess likely barriers** and facilitators in local policy, workflow, and technology.
- **Identify relevant regulatory groups and approval committees** and verify their needs/requirements early (HIPAA, GDPR – for technology-related work, etc.).
- **Plan for institutional approvals** that may affect timing. Expect this process to be unclear, non-linear, and take longer than you might initially anticipate.
- **Record major decisions** in an audit trail and create follow-ups as needed with owners and due dates.

Example

Early co-design sessions reveal that integrating the decision tool into the EHR requires approval from multiple groups: IT, clinic leadership, patient engagement boards, and others. Addressing these approvals during design early can avoid costly delays later. At each step the project risks rejection/termination, so it is important to identify these approval groups and their priorities early in the co-design process to increase the chances that the product will be approved.

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Impact Summary

Fewer last-minute blockers, faster approvals, and safer handling of data

Gains buy-in and trust with multi-level partners

Higher confidence in clinical safety and effectiveness, fewer late surprises, faster approvals, and a smoother pilot and scale-up

Tools and Resources

- Data flow diagram
- Privacy Impact Assessment
- Security and compliance checklist
- Governance timeline
- Readiness checklist

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3. Rapid Prototyping and Development

Why it matters

Early, inexpensive, low-fidelity* prototypes are generally built in formats that are simple to iterate with multiple rounds done quickly to find any design and usability issues and false assumptions more quickly before more expensive, higher-fidelity† models are made.

Prototyping

***Low-fidelity** – early, inexpensive, basic, easy to iterate (MS Word, MS PowerPoint, etc.), multiple versions done quickly

†High-fidelity – more expensive, slower to iterate (programmed

Example

A team uses MS Word to create content for a decision tool. Word is easily editable and requires limited technological skill. The team can gather feedback and make changes with this approach moving toward polished final content, rapidly. A clickable prototype shows that patients cannot find the refill request button until it is placed on the home screen. This change is trivial in this design phase but would be expensive after the final product is built.

Action Steps

- **Start simple.** Go from nothing to something as quickly as you can. Start with paper, whiteboard or some other easily modified technological solution (e.g., MS Word, MS PowerPoint).

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- ***Develop content*** first; including text and key aspects of operability planned for the final product. Do this with a ***low-fidelity prototype***. Leverage AI when possible.
- ***Iterate rapidly***, improving versions based on target user and key partner feedback. Leverage feedback from diverse partner engagement with various groups and levels of partners to make iterations.
- **Online or printed?** Consider to review using different modalities (on screen, printed, etc)
- **Increase the quality.** Develop ***higher-fidelity wireframes*** or mockups that cover the core components of the project.
- **Conduct focus group sessions** to gather feedback and refine. Make changes in real-time if possible.
- Build your ***final product***, ready for implementation.

Impact Summary

Higher usability, faster iteration cycles, and reduced development waste.

Improved sustainability or ability to be sustained.

Tools and Resources

- Wireframing tools
  - Figma
  - Balsamiq
  - Wireframe.cc
- Example audit log
- Lean UX
- Agile

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4. User Testing and Feedback

Why it matters

Shortly after your project launches, real-world use will uncover issues that prototyping and development often miss. **Continuous feedback throughout the co-design process and after launch** ensures the product stays aligned with evolving user needs, stakeholder requirements (policies, guidelines, priorities etc), and technology specifications.

Actions Steps

- **Conduct usability testing (e.g. think aloud interviews)** with representative users in realistic contexts.

- **Administer the System Usability Scale** to quantify usability and track improvements.
- **Soft launch** without announcement to a small group of target users to observe real-world behavior and detect issues early.
- Make **regular, iterative improvements** that don't interfere with ongoing project analysis.
- **Leverage analytics** and feedback data to refine and plan for scale-up.
- **Monitor** outcomes and user experience longitudinally; adjust as needed.
- **Identify and address barriers** that limit access or benefit for intended users.

Example

Usability testing with older adults reveals issues with small font size. Increasing font size and contrast improves completion rates. Similarly, a soft launch with a select few target users can surface hidden bugs before full rollout. Think-aloud sessions expose sticking points, while usability scores (System Usability Score – see tools and resources) provide a benchmark for usability over time.

Impact Summary

Higher adoption and satisfaction, improved outcomes, and equitable impact.

Tools and Resources

- Usability Test Plan
- SUS
- Think-aloud
- feedback intake form
- release notes template
- equity monitoring dashboard
- Example audit log

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