

ITI0209: User Interfaces

02. Design Process: Double Diamond

Martin Verrev

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Why projects fail?



Let's do this great project...



now let's promise a deadline that we can never meet



let's add more to the scope and make drastic changes



wonder why can't I measure the progress



it's time to break the rules and do our own thing



let's not care about budget or time restrictions...



This project has been dragging on for quite a while



let's do a review to see what's going wrong



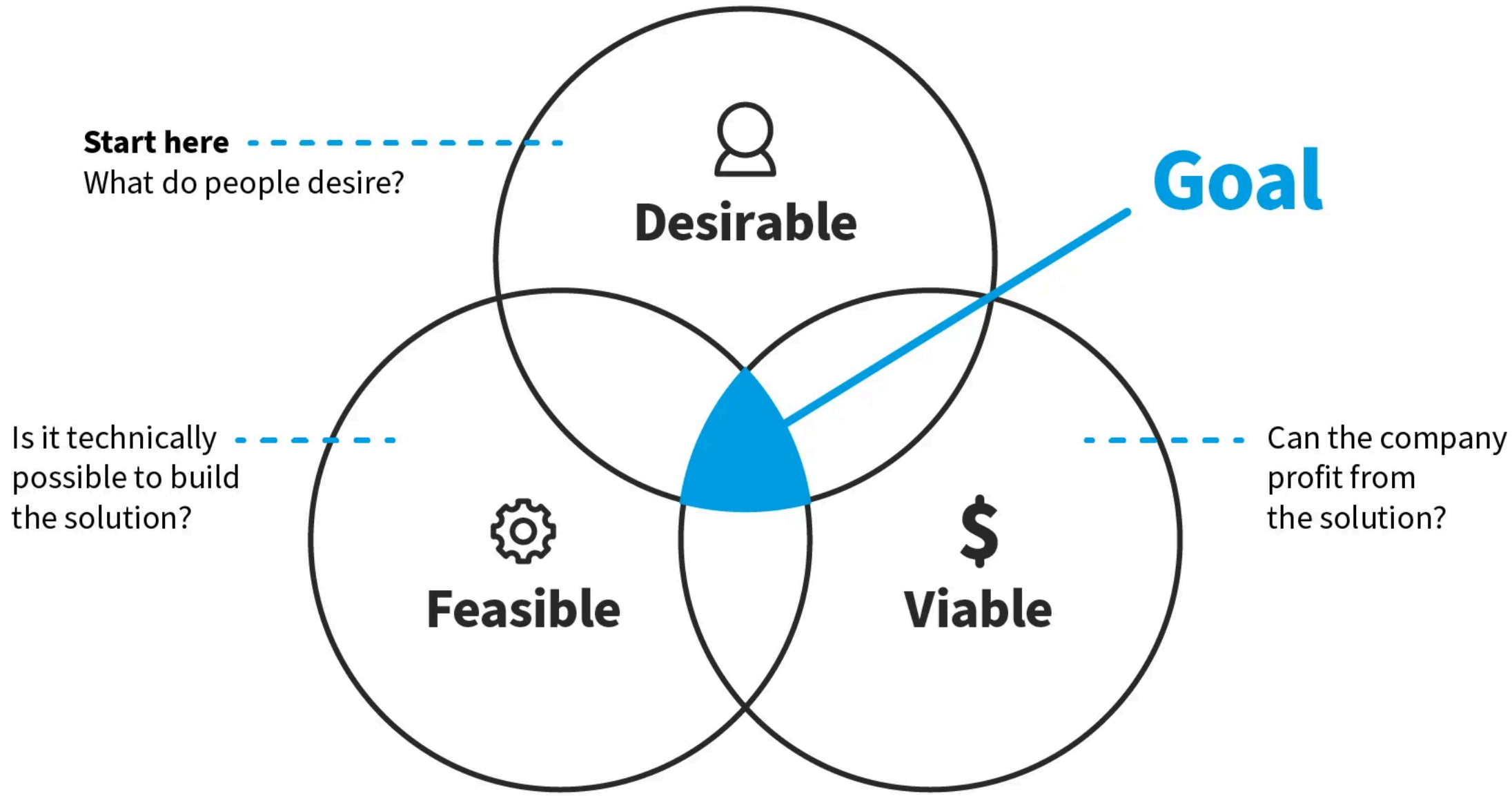
the project is going to be late and over budget, it is better to cut our losses now!

SMART

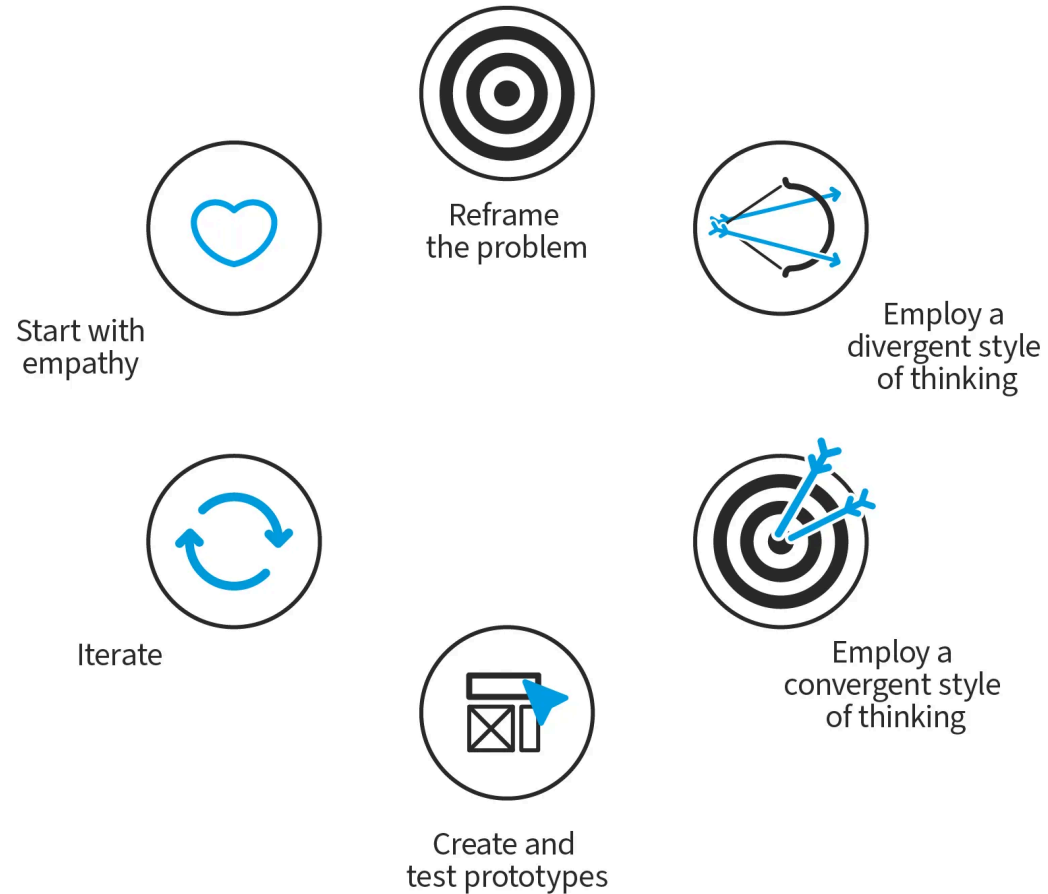
**Specific. Measurable. Achievable.
Relevant. Time-Bound.**

Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.”

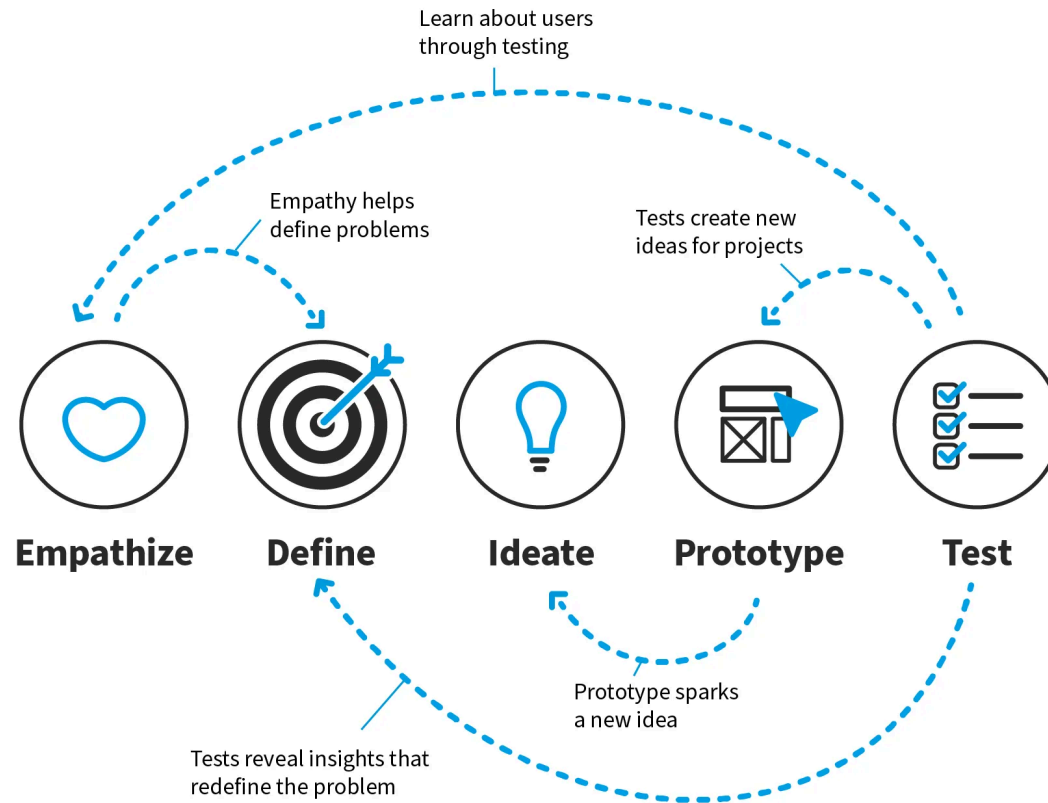
— Tim Brown, CEO of IDEO



Common Elements of Design Thinking Frameworks



Design Thinking: a Non-Linear Process



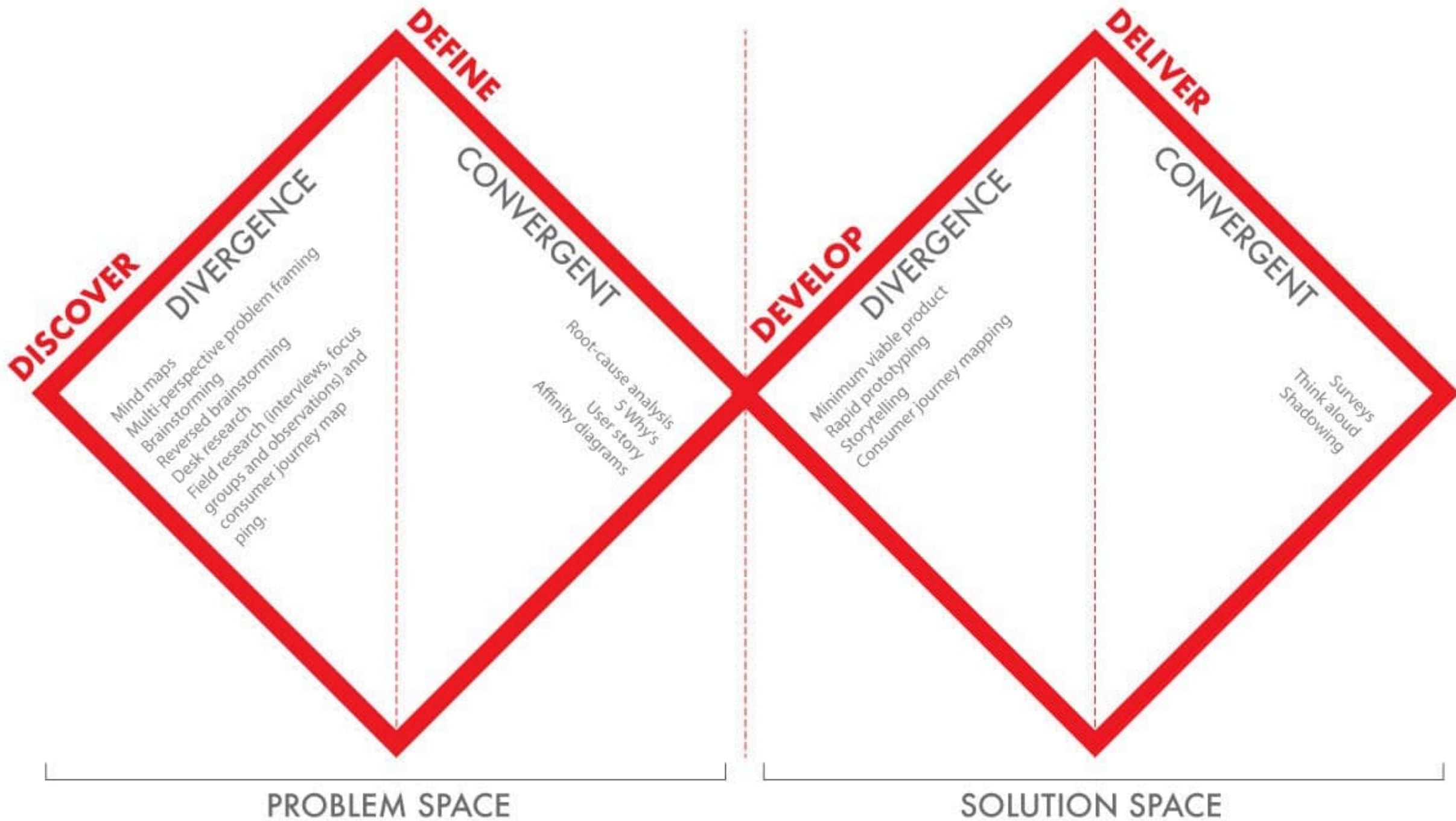
Design Thinking vs Agile

<https://i.imgur.com/bjcux5Z.png>

	Design Thinking	Agile
Origins	It primarily originates in design and borrows from multiple disciplines, including psychology, systems thinking, and business strategy.	It primarily originates from software development and borrows from disciplines such as manufacturing and project management.
Primary Focus	Problem-solving and innovative solutions.	Efficient product delivery.
Phase of Application	Usually, toward the beginning of a project. Aims to define the problem and test and pick a solution.	Usually, after teams have a clear solution. Aims to deliver that solution and continuously iterate on the live product.
Structure and Documentation	Fluid process, less formal and relatively lesser documentation.	Structured and formal process with extensive documentation.
End product	An idea or solution, usually with a prototype, may not be tangible.	Tangible, working product (usually software) shipped to end users.

The Double Diamond is a simple visual map of the design process. The model is divided into 4 phases: Discover, Define, Develop and Deliver.

Like any of the Design Thinking methodologies, the process is iterative. This means that ideas are developed, tested and refined several times, with weak ideas dropped in the process.



1st Diamond (research): Discover & Define

Design the right thing →

2nd Diamond (implementation): Develop & Deliver

→ **Design things right**

Benefits

- 1. Avoid solving the wrong problem.** Without the proper research, we can't know what the real problem is and may instead end up solving an assumed problem.
- 2. Make problems tangible and therefore solvable.** To make sense of any challenge, we need to frame the problem. Without knowing what the problem is, it can't be solved.
- 3. Prevent skipping important steps.** The process serves as a checklist and as an inventory of methods the team can apply to each project.
- 4. Uncover emerging challenges and opportunities.** Research often reveals additional challenges and opportunities that we weren't aware of yet.

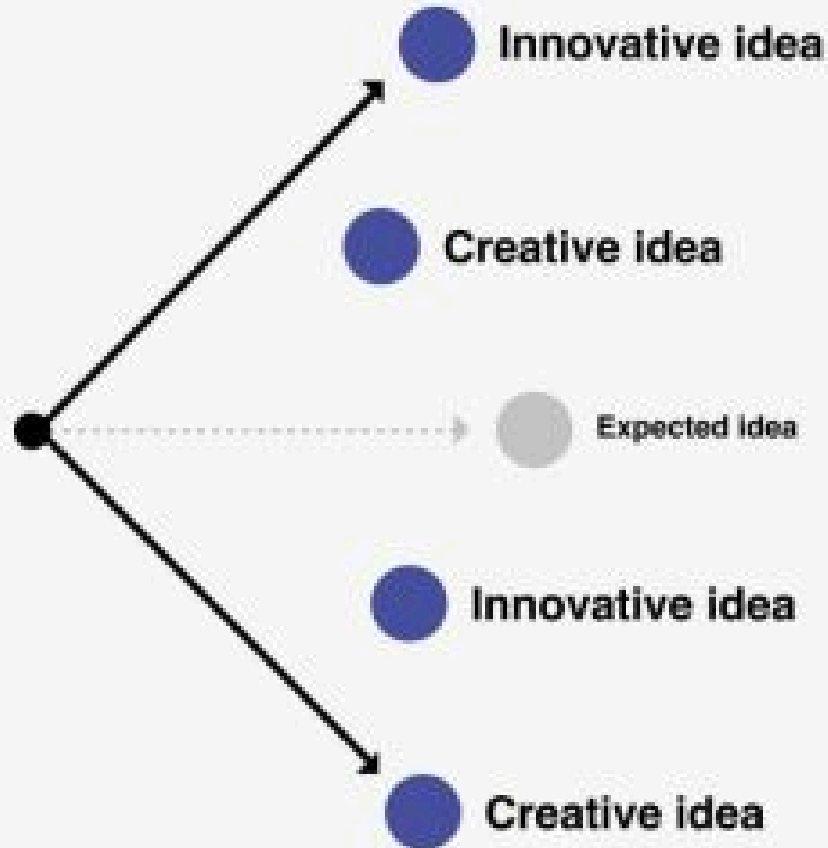
Benefits

5. Improve scoping to secure time and resources. With our checklist of steps in hand and an approximate understanding of the project outcome size, we can more efficiently scope projects and assign resources in advance.

6. Create solid documentation for future reference. With the proper documentation we have lots of research to fall back on and use as a basis for future projects. It also encourages knowledge sharing between project contributors and stakeholders.

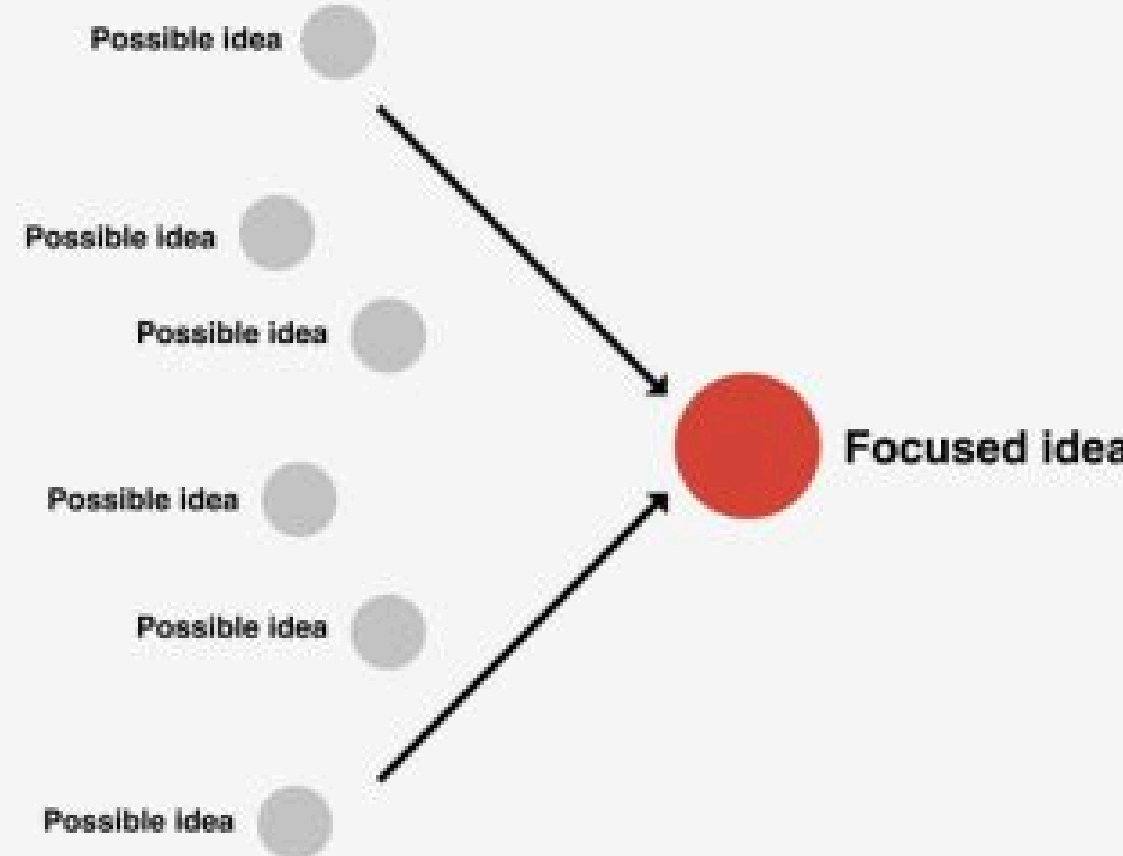
7. Broaden our perspective. The design methods applied during each phase encourage us to collect input from outside the product and design teams.

Divergent Thinking



vs.

Convergent Thinking



Diverging Phases (analyze)

During diverging phases it's important to keep an open mind. Thinking broadly and without limitations lays the groundwork for not limiting your possibilities during the following converging phase.

Converging Phases (synthesize)

During converging phases you do the opposite. You bring your focus back, get your ideas organized, and make sense of your findings. This is when you begin identifying key problems (Phase 2) and viable solutions (Phase 3).

Phase 1: Understand/Discover (*diverging*)

Task: Identify the right problem to solve.

During the first phase, you gain a deep understanding of the problem you're facing, gather insight into the current condition, and build and challenge your understanding of the user's pain points and needs rather than merely assuming it. It involves speaking to and spending time with people who are affected by the issues.

It includes but not limited to:

- User goals, the user journey
- User pain points
- ...

Cast that wide net and try to collect as much applicable data as possible.

Phase 2: Define (*converging*)

Task: Define and frame the problem.

The goal of the second phase is to define and frame your problem by making sense of all findings from the first phase. During this phase you might also uncover potential opportunity areas. The insight gathered from the discovery phase can help to define the challenge in a different way.

It includes but not limited to:

- User personas, user stories
- Project brief and scope
- ...

The synthesized research should all tie back to your project goal & problems. Condense what you learned into diagrams, presentations, or documents.

Phase 3: Develop (*diverging*)

Task: Generate and evaluate solutions.

Throughout the third stage, you begin exploring possible solutions, generate as many ideas as possible, and evaluate them based on the framed problem. Give different answers to the clearly defined problem, seeking inspiration from elsewhere and co-designing with a range of different people.

It includes but not limited to:

- Wireframes, mockups
- User testing
- ...

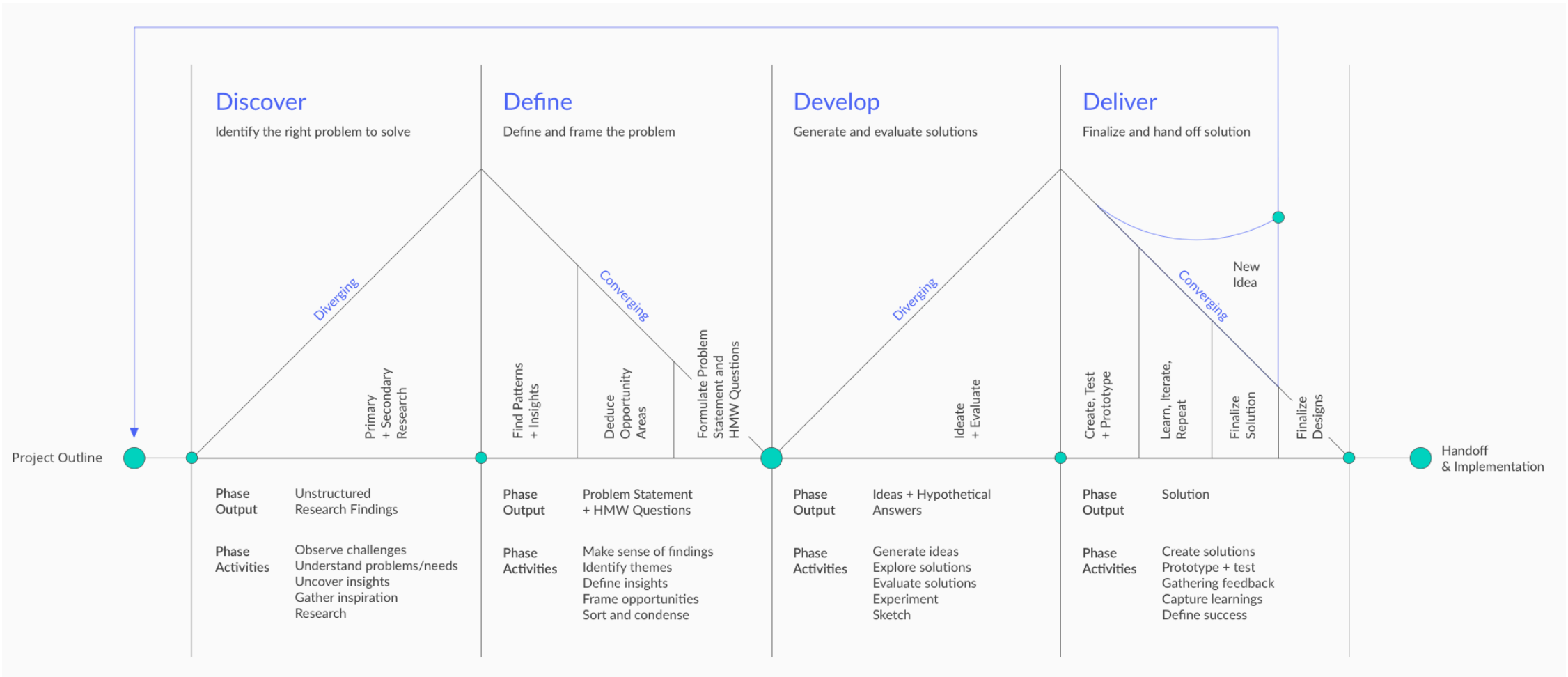
The development stage is a cycle between Implementation → Testing → Iterating.

Phase 4: Deliver (*converging*)

Task: Finalize and hand off solution.

During the last phase, initial ideas are narrowed down until the final solution is evaluated, iterated on, finalized, and delivered. Involves testing out different solutions at small-scale, rejecting those that will not work and improving the ones that will.










! Try to make sure that documentation is clear and in-depth enough for developers to read without any clarifications. It can't hurt to do a final run-through with everyone to clear up questions and confusion.



Many different (overlapping) roles

UX roles

From sources across the web

 UX Researcher	 UX Designer	 UI Designer
 UX Writer	 User research	 Information architect
 UX Strategist	 Conduct usability testing	 Visual designer

15 more

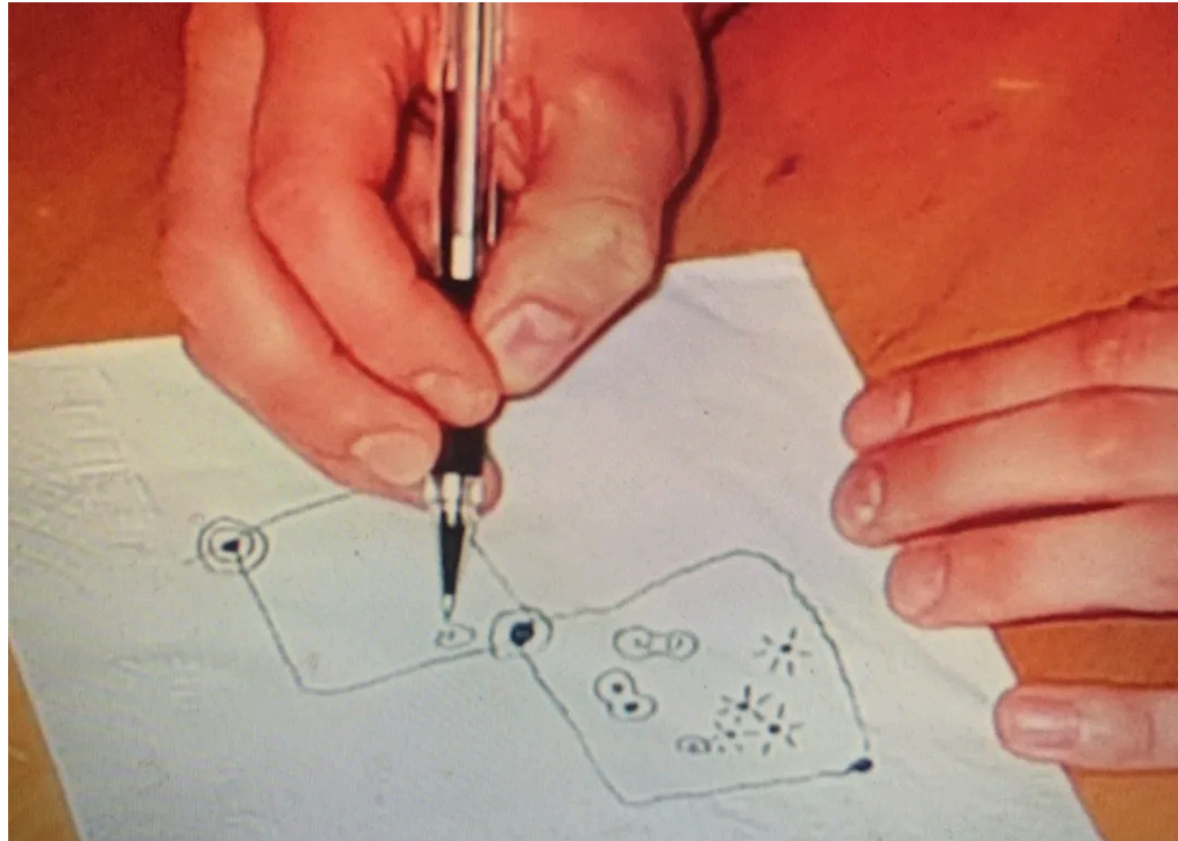
Feedback

<https://www.google.com/search?q=ux+roles>

Roles at minimal

- Customer
- UX Designer
- UI Designer
- Developer
- **User**

History of Double Diamond



Chris Vanstone's image (from twitter) of one of the first sketches of the double diamond

See also: <https://www.designcouncil.org.uk/our-resources/the-double-diamond/history-of-the-double-diamond/>

Links

- Design Thinking (DT). <https://www.interaction-design.org/literature/topics/design-thinking>
- The Double Diamond model: what is it and should you use it?.
<https://www.justinmind.com/blog/double-diamond-model-what-is-should-you-use/>
- Design Thinking models. The Double Diamond. <https://empathizeit.com/design-thinking-models-the-double-diamond/>
- Why the Double Diamond is the Most Precious Diagram in UX Design.
<https://evaschicker.medium.com/why-the-double-diamond-is-the-most-precious-diagram-in-ux-design-40db0476e5d2>

Thank you! :)