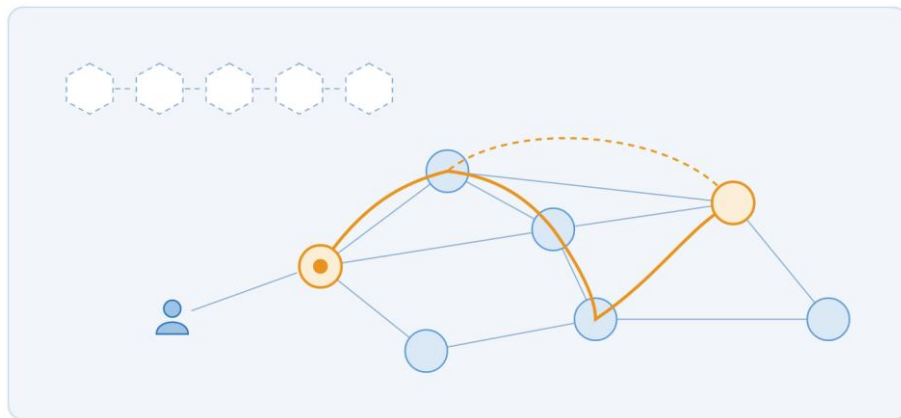


## State of the art

# Design Thinking

---

Reference map of current professional knowledge



Updated September 2026

## About this document

This document is a curated map of the knowledge, practices and models in professional use as of its publication date for tackling ill-defined problems through design thinking: understanding and reframing the problem, generating alternatives deliberately, making them tangible in order to learn, co-creating with the people affected, and widening the view from the user to the system. For each entry, the map places it in context, indicates its degree of adoption in current professional practice and points to where to find reference information.

Use it as an observatory and reference point to check whether the professional knowledge you rely on is aligned with current practice and at the leading edge.

It is complemented by an in-depth companion guide that develops each concept and by the training and assessment platform in Skill Arena. In the [Design Thinking](#) area you can test your level of knowledge and, if you pass, obtain a diploma that provides curricular accreditation of professional competence and currency in this area.



## State of knowledge

Knowledge about Design Thinking evolves slowly at its core, gradually in its reorientation, and very fast in its artificial intelligence layer: the frameworks are fifteen to thirty years old and the techniques of observation, synthesis, ideation, and prototyping rest on decades of practice and evidence; since 2016 its own institutions have reread it as a set of abilities rather than a five-step process, and since 2023 AI has made synthesis, ideation, and prototyping cheap and shifted the value of design work toward deciding which problem matters, who takes part, and what is learned. In this map, CONSOLIDATING marks above all those reorientations that the reference institutions have already made and that mainstream training has yet to absorb. Throughout the document, the labels (ESTABLISHED, CONSOLIDATING, EMERGING) help identify the maturity of each concept:

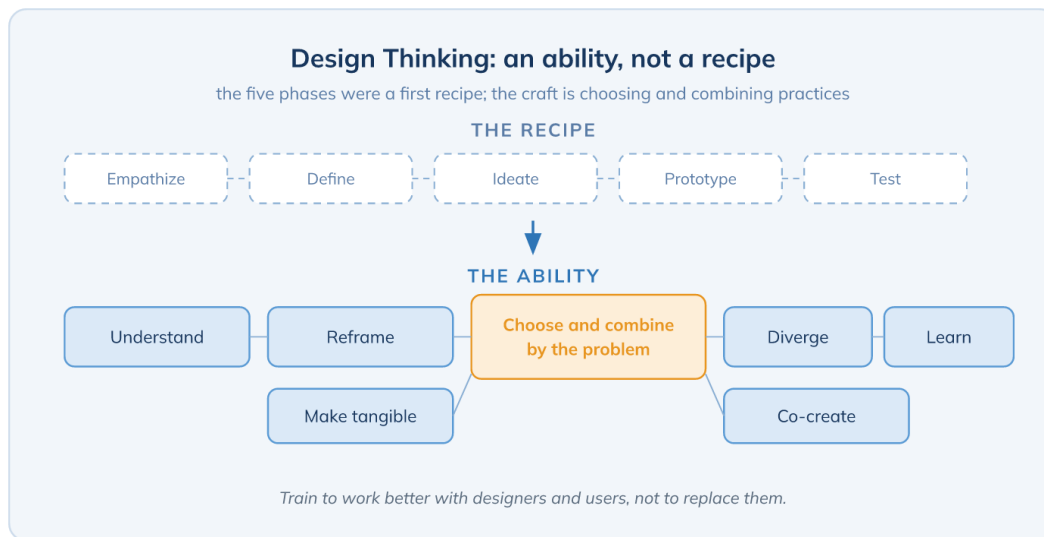
**ESTABLISHED** settled consensus; knowledge taken as required.

**CONSOLIDATING** gaining adoption fast; not yet universal but already relevant.

**EMERGING** recent frontier; high relevance and high volatility.

## Block A — What Design Thinking is and what it is for

*A way of working on ill-defined problems that matches what people need with what is feasible and viable, and that is understood today as an ability rather than a recipe.*



### What Design Thinking is, what it is not, and where it fits · ESTABLISHED

Design Thinking is a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and viable as a business, and its reason for being is ill-defined problems, those in which formulating the problem is already part of solving it. Its boundaries with user experience, product discovery, and service design are porous; in product work it is a discovery technique and a cross-cutting ability, not a phase prior to development, and what it learns feeds into the opportunities and the Product Backlog.

**Why it is here now.** Tim Brown's 2008 definition remains the accepted one in professional practice, the desirable, viable, and feasible triad is reproduced by IDEO, NN/g, and the business schools, and product sources treat Design Thinking as one more technique of continuous discovery. The Scrum Manager certification framework places it in the Product Owner area and in the innovation focus; no agile certification accredits it.

**Where to look.** [Scrum Manager BoK — Design thinking](#) · [Brown — Design Thinking \(HBR, 2008\)](#) · [Rittel and Webber — Dilemmas in a General Theory of Planning](#) · [Cagan — The origin of product discovery](#) · [Schneider — Understanding Design Thinking, Lean, and Agile](#)

### The critique of Design Thinking and what it teaches · CONSOLIDATING

Since 2011 it has been reproached for being run as a recipe, manufacturing empathy out of two hours of interviews and a wall of sticky notes, producing ideas nobody implements, privileging the designer over the people it serves, and lacking peer critique. Its institutions have answered with deeds: from process to abilities, from empathy to care, more time in the field, and attention to second-order consequences. The evidence on its effectiveness is of cases and plausible mechanisms, not controlled trials, and it should be said that way.

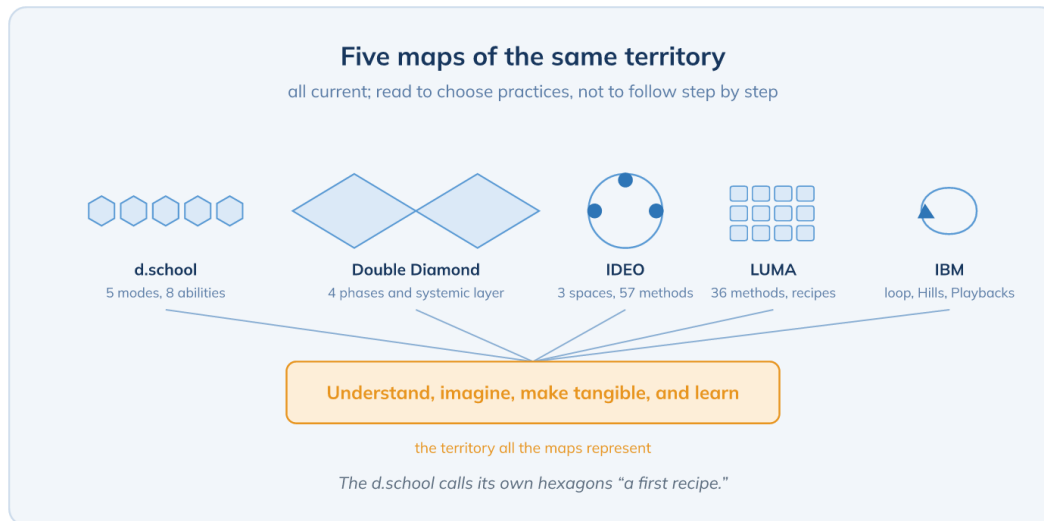
**Why it is here now.** The critique is doctrine today at the d.school, IDEO, and the Design Council, but mainstream training still teaches the five phases without it. Knowing it protects against the whole-

approach antipatterns, among them innovation theater, the project that ends before implementing, the team that does not share a definition, and the designer who closes ambiguity too early.

**Where to look.** [Ackermann — Design thinking was supposed to fix the world \(MIT Technology Review\)](#) · [Fayard and Fathallah — Design Thinking Misses the Mark \(SSIR\)](#) · [Jen — Design Thinking is Bullshit \(via Core77\)](#) · [Kolko — The Divisiveness of Design Thinking](#) · [Blank — Innovation theater](#) · [NN/g — What Is Design Thinking, Really?](#)

## Block B — Frameworks as maps

*Five representations of the same territory, all current, read as maps for choosing practices and not as recipes to follow.*



### The d.school and the Double Diamond: from phases to abilities and to the system · ESTABLISHED

Stanford's d.school popularized the five modes (empathize, define, ideate, prototype, and test) and in 2016 relativized them from within, calling them a first recipe for beginners and proposing eight design abilities, among them navigating ambiguity and designing your design work. The Design Council's Double Diamond (discover, define, develop, deliver) fixed the alternation of divergence and convergence, and its two extensions, the Framework for Innovation and the Systemic Design Framework, added the organizational and the systemic layers.

**Why it is here now.** The two frameworks are still the most taught and their institutions keep them alive (2018 Bootleg with a Spanish version; an instrument to measure navigating ambiguity in 2026; Double Diamond under Creative Commons since 2023), but they no longer present them as sequences to follow. Teaching them without that rereading would be teaching the Design Thinking of 2015.

**Where to look.** [Carter — Let's stop talking about THE design process \(d.school\)](#) · [d.school — Design Thinking Bootleg](#) · [d.school — measuring the ability to navigate ambiguity](#) · [Design Council — History of the Double Diamond](#) · [Design Council — Systemic Design Framework](#)

### IDEO, LUMA, IBM, and Liedtka: systems of methods and questions · ESTABLISHED

IDEO organizes human-centered design in three spaces (inspiration, ideation, and implementation) and in a catalog of methods with its Field Guide; LUMA gathers thirty-six methods under looking, understanding, and making, and teaches how to combine them in recipes; IBM's Enterprise Design Thinking adds the observe, reflect, and make loop with its three keys, Hills, Playbacks, and Sponsor Users; and Liedtka orders the work in four questions: what is, what if, what wows, and what works.

**Why it is here now.** They are the systems of methods with the widest reach in business and in executive education, and they should be known with their current facts. LUMA has been a Mural

subsidiary since 2025, IBM is rebuilding its badge program, and IDEO's Field Guide has been translated into Spanish. None of them prescribes a single sequence.

**Where to look.** [IDEO — Design Kit, methods](#) · [IDEO.org — The Field Guide to Human-Centered Design](#) · [LUMA Institute — LUMA System](#) · [IBM — Enterprise Design Thinking](#) · [Liedtka and Ogilvie — Designing for Growth](#)

### **Comparing the frameworks, choosing practices, and the Design Sprint as a format** · ESTABLISHED

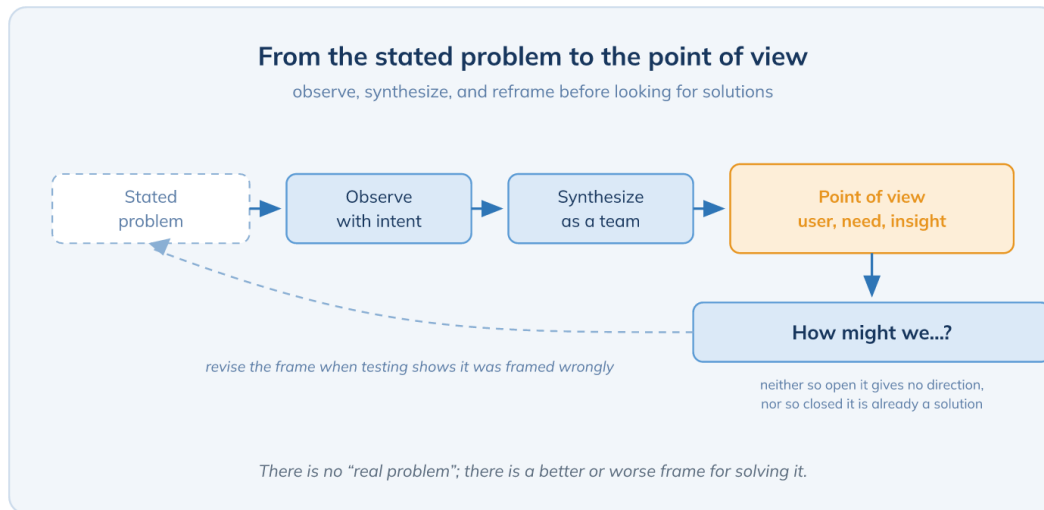
All the frameworks share four things: alternating divergence and convergence, learning from real people, making things tangible early, and iterating; they differ in whether they describe phases or abilities, in whether they offer a catalog or a sequence, and in whether they were born for the workshop or for the enterprise. The Design Sprint packs the sketch, decide, prototype, and test sequence into one week and requires a Decider and five users; it works when the question is how customers react to a proposal, and not when the problem is not yet framed.

**Why it is here now.** Comparison is what allows the frameworks to be read as maps and the practice to be chosen that answers what the team needs to understand, imagine, make tangible, or learn. The Design Sprint is the format organizations ask for most, and its relationship with the inception is already covered by the Agile Inception skill.

**Where to look.** [Scrum Manager BoK — Design sprint](#) · [GV — The Design Sprint](#) · [Knapp — Design Sprint guide](#) · [Skill Arena — Agile Inception](#)

## Block C — Understanding and reframing the problem

*Defining the problem is the decision that conditions all the others, and it is made through observation, collective synthesis, and deliberate reframing.*



### The stated problem and the better frame · ESTABLISHED

The problem that reaches a team is usually a symptom, a solution in disguise, or an inherited formulation. There is no "real problem" to be dug up; there are better and worse frames, and creative solutions almost always come from an alternative definition of the problem. The reframing practices (legitimizing the question, bringing in outsiders, asking for written definitions, asking what is missing, considering several categories, analyzing positive exceptions, questioning the objective) are applied before ideating; the five whys dig deeper into the problem as already defined instead of changing it.

**Why it is here now.** Rittel and Webber stated in 1973 that in a wicked problem the formulation is the problem, and the evidence on the Einstellung effect shows that the first idea biases attention even when the team believes it is looking for alternatives. Wedell-Wedellsborg's survey of 106 executives (85 % rate themselves as poor at diagnosing) still describes the usual situation.

**Where to look.** [Wedell-Wedellsborg — Are You Solving the Right Problems? \(HBR\)](#) · [Bilalić, McLeod, and Gobet — the Einstellung effect](#) · [IDEO — Frame your design challenge](#) · [Torres — Opportunity solution tree](#)

### Observing with intent and empathizing within limits · ESTABLISHED

What people say, what they do, and what they make are three different levels of knowledge, and design work is interested in the contradictions between them, in the workarounds, and in extreme users and analogous contexts. The what, how, and why scaffold separates the observable from the interpretation that must be checked. Empathy has documented limits: projecting one's own experience, replacing people's participation with the team's imagination, and filling in empathy maps and personas without data. The answer is real contact and participation, not more empathy; AI-generated synthetic personas are worth only as hypotheses.

**Why it is here now.** The academic critique of 2018 to 2023 has shifted the center of gravity from empathy as a feeling to problem definition as an act with evidence and participation, and the d.school has removed the empathy map from its Bootleg and replaces "empathy" with "care." The data-gathering techniques are taken as known; what matters here is the interpretive scaffold that belongs to design.

**Where to look.** [Scrum Manager BoK — Empathy map \(Mapa de empatía\)](#) · [Sanders and Stappers — Co-creation and the new landscapes of design](#) · [IDEO — Extremes and mainstreams](#) · [NN/g — Empathy mapping](#) · [NN/g — You are not the user: the false-consensus effect](#) · [Design Justice Network — Principles](#)

### Collective synthesis: from observations to insight · ESTABLISHED

Synthesis is the invisible step of design, the one that is not budgeted because it happens in private, and that is why it is done as a team and in plain view: immediate download of what was observed, story sharing, silent affinity clustering, and joint reading of themes and tensions. An insight is a shift in perspective that reveals an unmet need, and what the team already knew before starting is not one. With AI, automatic clustering is a first-pass proposal that the team reviews, because to cluster is to interpret.

**Why it is here now.** IDEO rates insight statements as the only hard method of its ideation phase and NN/g documents shallow analysis as a common failure; practice converges on concrete rituals (same-day download, affinity without debate) that the Discovery skill takes as known on its analytical side. The Scrum Manager BoK already warns that skipping the discussion when clustering removes the central value of the technique.

**Where to look.** [Scrum Manager BoK — Affinity Mapping](#) · [Kolko — Abductive thinking and sensemaking](#) · [IDEO — Create insight statements](#) · [IDEO — Download your learnings](#) · [NN/g — Thematic analysis](#) · [Skill Arena — Discovery and customer validation](#)

### Defining and reframing: the challenge, the point of view, and "How might we...?" · ESTABLISHED

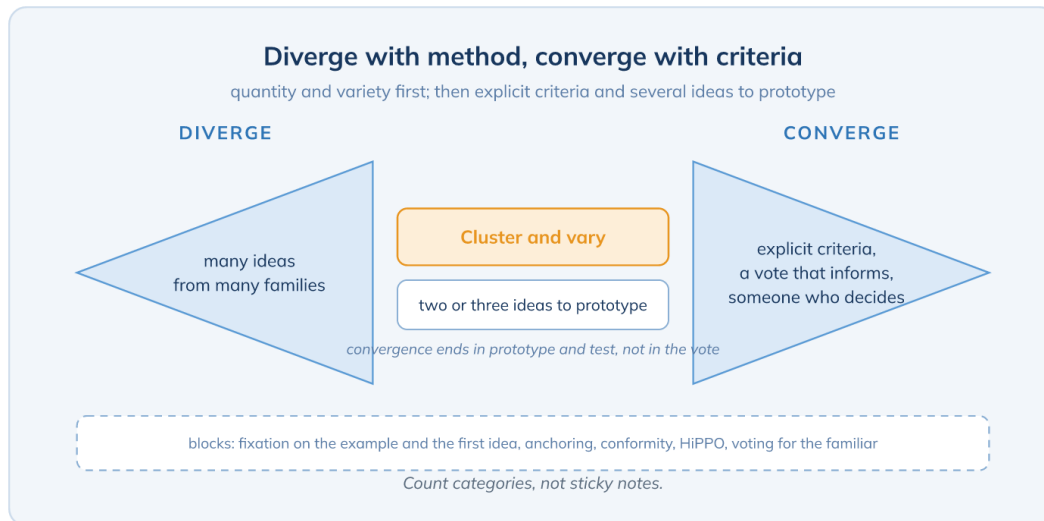
The design challenge is set before researching and is revised; the point of view (POV) is formulated after synthesizing and brings together user, need, and insight. From it come the "How might we...?" questions, neither so open that they give no direction nor so closed that they are already a solution, and abstraction ladders allow climbing with "why" and descending with "how" to an actionable level. Testing with users may reveal that the problem was framed wrongly, so the definition is revised throughout the cycle. Choosing which challenge to explore combines relevance, uncertainty, impact, learning capacity, and relationship to the product objectives.

**Why it is here now.** The point of view and the "How might we...?" are in the three reference programs (d.school, IDEO, LUMA) and the Scrum Manager BoK already fixes the Spanish vocabulary; their origin is documented at Procter & Gamble in the seventies. The criteria for choosing the challenge have no canonical list and are presented as a Scrum Manager proposal.

**Where to look.** [Scrum Manager BoK — How might we](#) · [d.school — Design Thinking Bootleg \(POV, HMW, why-how laddering\)](#) · [Basadur — The origin of How Might We](#) · [IxDF — Define the problem and interpret the results](#) · [LUMA — Abstraction laddering](#)

## Block D — Diverging with method and converging with criteria

*The best ideas come from generating alone, varying for real, and deciding with criteria, not from everyone talking at once and voting for the familiar.*



### Diverging and converging: variety, blocks, and fixation · ESTABLISHED

Separating generation from evaluation is the oldest rule of applied creativity, and the number of ideas is not enough if variety is missing: fluency, flexibility, and originality are different measures, and a session with eighty ideas in four families has diverged less than one with thirty in twelve. The blocks have names and evidence: fixation on the example and on one's own first idea, the Einstellung effect, anchoring, conformity, the highest-paid person's opinion, and the group that generates novelty and then votes for the familiar. Expertise does not immunize against fixation and makes it less noticeable, although it also provides resources to get out of it.

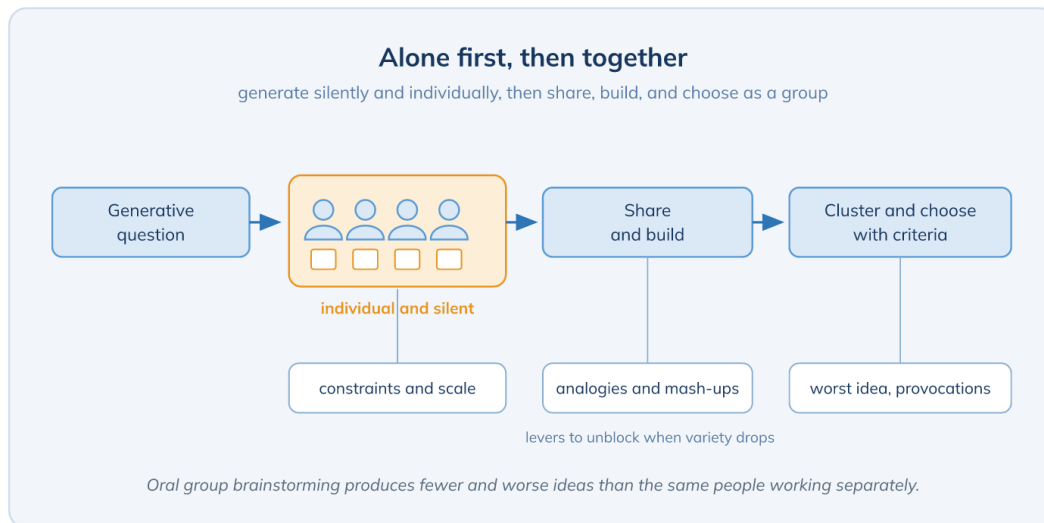
**Why it is here now.** Design fixation has been documented since 1991 in students, professionals, and professors, and recent experiments show that we fixate even more on our own first idea than on someone else's example. Guilford's and Torrance's vocabulary makes it possible to assess an ideation by categories rather than by sticky notes.

**Where to look.** [Leahy et al. — Design fixation from initial examples](#) · [Crilly — Fixation and creativity in concept development](#) · [Bilalić, McLeod, and Gobet — Inflexibility of experts: reality or myth?](#) · [Amabile — Componential theory of creativity](#) · [Creative Education Foundation — What is CPS?](#)

### The hybrid mode and the ideation protocol · ESTABLISHED

The evidence accumulated since 1958 is unanimous: oral group brainstorming produces fewer and worse ideas than the same people working separately, because of production blocking, evaluation apprehension, and conformity. The hybrid mode, generating silently and individually and then sharing, building, and choosing as a group, triples the ideas and improves the best one; building on others' ideas is a second phase, not the main source. The method catalogs share a protocol (generative question, individual generation with time and a quota, collective moment with rules, levers to unblock, clustering) rather than a list of techniques; the most used levers are brainwriting,

rapid sketching, constraints and change of scale, analogies and mash-ups, the worst possible idea, and provocations. With AI, the human round comes first and the prompts force diversity.



**Why it is here now.** The reference programs have converged with the evidence: the Design Sprint bans group brainstorming, the d.school starts every brainstorm with individual work, and IDEO's seven rules govern only the collective moment. The 2024 studies on ideation with AI show the same pattern as with groups, a better individual average and less variety in the whole.

**Where to look.** [Diehl and Stroebe — Productivity loss in brainstorming groups](#) · [Girotra, Terwiesch, and Ulrich — Idea generation and the quality of the best idea](#) · [IDEO — Brainstorm rules](#) · [Knapp — Note and vote](#) · [LUMA — Creative matrix](#) · [Meincke, Mollick, and Terwiesch — Prompting diverse ideas](#)

### Converging with criteria · ESTABLISHED

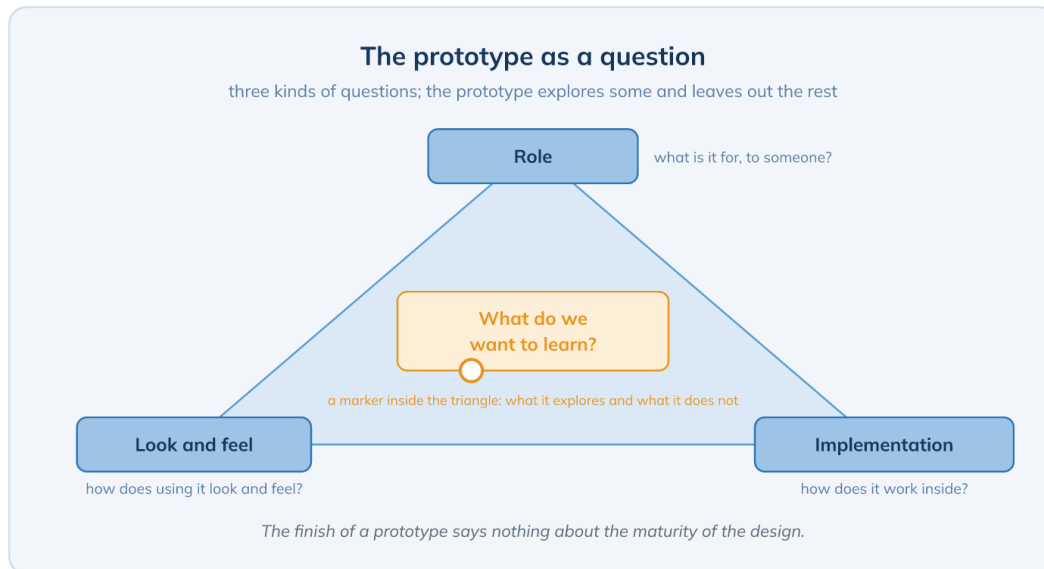
Converging starts with clustering, so that variants of the same idea do not split the votes, and continues with explicit criteria before voting (novelty, usefulness, and feasibility; importance and difficulty; desirable, viable, and feasible) and with an identified decider who may follow the vote or not. Dot voting has known biases (persuasion, split vote, bandwagon, hierarchy) and simple mitigations, such as voting in silence and from lowest to highest rank. Two or three different ideas are taken to prototype, and not the only one the majority accepts, because groups are poor judges of their own ideas and convergence ends in prototype and test, not in the vote.

**Why it is here now.** The mature frameworks (d.school, Design Sprint, LUMA, Gamestorming) complement the vote with criteria and with the deliberate preservation of several ideas to keep the innovation potential; NN/g keeps the list of dot-voting biases up to date. Group decision-making in general is covered in Agile Inception.

**Where to look.** [NN/g — Dot voting](#) · [Gamestorming — How-Now-Wow matrix](#) · [Gamestorming — NUF test](#) · [d.school — Design Thinking Bootleg \(brainstorm selection\)](#) · [Skill Arena — Agile Inception](#)

## Block E — Prototyping to think and to learn

*A prototype is a question made tangible; its fidelity is set by the question, and its finish says nothing about the maturity of the design.*



### What a prototype is and the prototype as a question · ESTABLISHED

A prototype is any representation of a design idea, in any medium, made to answer a question; a sketch, by contrast, suggests and explores without committing. It is built to think, to learn, and to communicate, and also to empathize and to decide. Before building, what one wants to learn is fixed, and the three kinds of questions (role in the user's life, look and feel, implementation) say what the prototype explores and what it leaves out. Fidelity has dimensions (breadth, functionality, interaction, finish) and is raised only in the one the question needs; resolution, fidelity, and maturity are different things, and the more finished a prototype looks the less the feedback is heard.

**Why it is here now.** Houde and Hill's model (1997) remains the reference for deciding what to prototype, and the experimental evidence shows that low and high fidelity detect the same usability problems, while early high fidelity reduces the willingness to change. The nature of the prototype versus the product and the ladder of evidence are taken as known from Product Owner training.

**Where to look.** [Houde and Hill — What do prototypes prototype?](#) · [Buxton — Sketching User Experiences](#) · [Brown — Design Thinking \(HBR, 2008\)](#) · [Virzi, Sokolov, and Karis — low- and high-fidelity prototypes](#) · [NN/g — UX prototypes: low fidelity vs. high fidelity](#)

### What gets prototyped and with which techniques · ESTABLISHED

Interfaces and objects are prototyped, but so are services and processes (the desktop walkthrough with figures, the service advertisement), experiences, public and organizational policies that are rehearsed with the people affected before being institutionalized, and business models; the prototype is distinguished from the pilot, which measures the results of a service already specified. The techniques range from paper and the storyboard to bodystorming, the Wizard of Oz, click-through mockups, video, the "dark horse" prototype that reopens the space after converging, and

conversational prototypes of assistants and agents; those that fake a product demand ethical care. Demand-validation techniques are referred to discovery.

**Why it is here now.** Stanford's ME310 course, service design, and public policy labs have documented what is learned with each type of prototype and in what order to build them; the Wizard of Oz, born in 1983, is today the reference technique for prototyping conversational systems before building them.

**Where to look.** [Domingo et al. — Strategic prototyping to learn \(ME310\)](#) · [This Is Service Design Doing — methods](#) · [Nesta — Prototyping public services](#) · [Nielsen — Paper prototyping](#) · [Savoia — Pretotyping](#)

### Testing in Design Thinking mode · ESTABLISHED

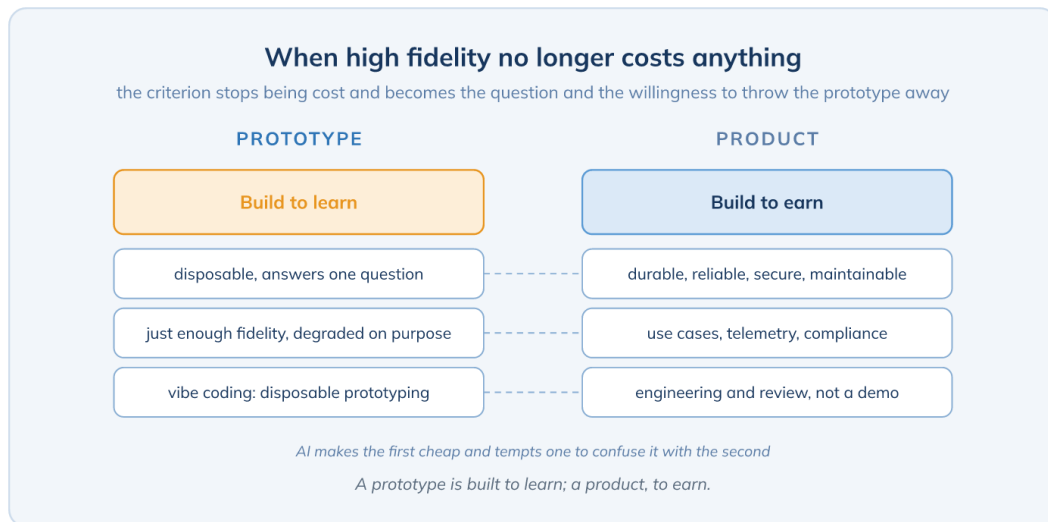
Testing a prototype in design mode means showing before explaining, putting it in the user's hands in their context, observing use and misuse, asking afterwards, and answering with questions. One prototypes as if right and tests as if wrong, and learns about the problem, the user, and the direction, not only about the solution, which distinguishes it from the usability test. The capture formats (feedback grid; I like, I wish, what if; rose, thorn, bud) order what was observed, and a minimum record (question, facts, interpretation, decision, next prototype) supports the three outcomes: iterate, change direction, or abandon without losing what was learned. With AI, synthetic users do not replace testing with people.

**Why it is here now.** Confirmation bias is ubiquitous and in prototyping takes the form of prototyping to prove; the d.school turned it into a rule and dual-track development phrases it as killing unviable ideas early. Three rounds of five users yield more than one of fifteen. The prototype test protocol is taken as known from the Discovery skill.

**Where to look.** [d.school — Design Thinking Bootleg \(testing with users, feedback capture\)](#) · [LUMA — Rose, thorn, bud](#) · [Nielsen — Why you only need to test with 5 users](#) · [Nickerson — Confirmation bias](#) · [NN/g — Synthetic users](#) · [Skill Arena — Discovery and customer validation](#)

### Prototyping with artificial intelligence · EMERGING

Between 2023 and 2026 the functional prototype went from costing weeks of engineering to being generated from a description in minutes, and whoever prototypes is no longer only design or engineering. When high fidelity costs nothing, the criterion stops being cost and becomes the question and the willingness to throw the prototype away, and sometimes it is worth degrading fidelity on purpose. The line between prototype and product (building to learn versus building to earn, the disposable versus the durable) becomes the central discipline, and "vibe coding" is, by its author's definition, disposable prototyping. The observed risks are anchoring through instant high fidelity, generic and interchangeable patterns, the surface that looks final without logic or usability, complacency with what is generated, and ungoverned parallel systems; a conversational prototype tested with users already carries a duty of transparency.

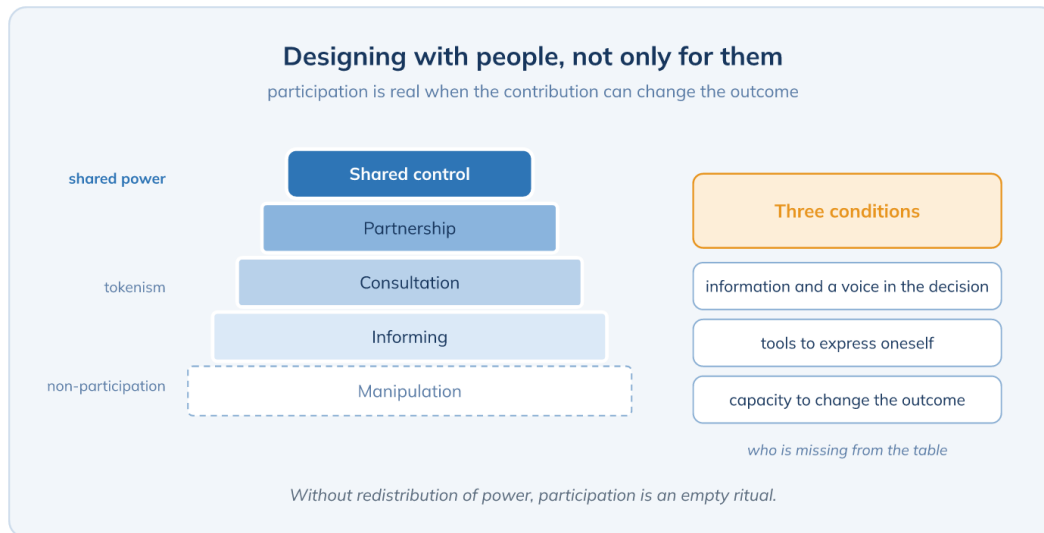


**Why it is here now.** Figma Make has been generally available since July 2025, Cagan warned in November 2025 about confusing prototype and product, NN/g documented the tools' failures in October 2025, and Thoughtworks keeps AI-accelerated shadow IT and complacency with generated code on Hold; the creator of the term "vibe coding" withdrew it in April 2026, leaving it for prototypes and personal tools. All of it is less than two years old.

**Where to look.** [Cagan — Prototypes vs products](#) · [NN/g — AI prototyping in real design contexts](#) · [Thoughtworks — AI-accelerated shadow IT](#) · [Figma — Figma Make general availability](#) · [Willison — Not all AI-assisted programming is vibe coding](#) · [IDEO U — Prototyping with AI](#)

## Block F — Co-creating, facilitating, and communicating design work

*Designing with people requires that their contribution can change the outcome, tools for them to express themselves, and a critique that strengthens the work instead of imposing.*



### Designing with: co-designers and the limits of participation · ESTABLISHED

Participatory design is half a century old and has two genealogies, the Design Research Society conference of 1971 and the Scandinavian trade union projects, and it defines co-creation as collective creativity applied to the whole process with people without design training, who move from subjects to partners who are experts in their own experience. Participation is real when three conditions are met: information and a voice in the decision, tools to express oneself, and the capacity to change the outcome. Without the third there is tokenism, participation-washing, or professional hierarchies that dismiss lived experience as anecdotal; design justice's answer is the designer as facilitator and not as expert, and the practical question is who is missing from the table.

**Why it is here now.** Arnstein's ladder of participation (1969) and recent studies on healthcare co-design show that applying a participatory methodology does not guarantee participation; the 2018 to 2024 critique of Design Thinking (designer's privilege, empathy from the outside) finds its operational answer here.

**Where to look.** [Sanders and Stappers — Co-creation and the new landscapes of design](#) · [Arnstein — A ladder of citizen participation](#) · [Sloane et al. — Participation is not a design fix](#) · [Lindblom et al. — participation in a co-design process](#) · [IDEO — Co-creation session](#)

### The design session, in the room and remote · ESTABLISHED

A design session is designed: objective, working question, participants, sequence, materials, and time, and designing it costs twice as much as running it. Its archetypal structure is stable across all the kits: framing, loading the context, diverging, clustering, building, selecting while preserving variety, making tangible, and closing with feedback; what is specific to design versus other workshops is the building phase, the selection that is not reduced to voting, and the ideation levers. Whoever facilitates is rarely neutral about content, and the tension is resolved by separating roles, declaring them, or inverting them. Remotely, video conferencing reduces idea generation but not

selection, so one diverges asynchronously or individually and converges synchronously, with the private mode of the boards as an ally. General workshop facilitation and the rules for remote and hybrid are referred to Agile Inception.

**Why it is here now.** The structure coincides in d.school, IDEO, LUMA, Nesta, and Hyper Island, and the experimental evidence of Brucks and Levav (Nature, 2022) gives the only specific basis for deciding what is done on screen and what off it. Brainstorming is the most frequent session among facilitators (73 % in 2025).

**Where to look.** [Nesta and IDEO — Designing for public services](#) · [Hohmann — Choosing Innovation Games to meet your goals](#) · [SessionLab — Workshop design](#) · [Brucks and Levav — Virtual communication curbs creative idea generation](#) · [Mural — facilitation features](#) · [Skill Arena — Agile Inception](#)

### Critique and feedback on ideas and prototypes · CONSOLIDATING

Critique is a design practice that analyzes whether an idea or a prototype meets its objectives, as opposed to feedback of reaction ("I like it") or of imposition ("do it this way"); it is exercised on artifacts, not on people, is suspended during divergence, and is applied with criteria in convergence. The formats make it practicable: I like, I wish, and what if; the feedback capture grid; rose, thorn, bud; and the periodic reviews with stakeholders and users that IBM calls Playbacks. Safety to create is its condition, and disagreement is sometimes better made visible than resolved.

**Why it is here now.** The absence of peer critique is one of the well-founded criticisms of popular Design Thinking and the reference kits already include the formats, but no generalist program teaches it as a competence. The concept of psychological safety was born in the fifties tied to creativity, which legitimizes treating it here as a condition of divergence and not only of conflict.

**Where to look.** [Connor and Irizarry — Discussing Design](#) · [d.school — Design Thinking Bootleg \(I like, I wish, what if\)](#) · [LUMA — Rose, thorn, bud](#) · [IBM — Enterprise Design Thinking framework \(Playbacks\)](#) · [Skill Arena — Communication and conflict management](#)

### Visual thinking and communicating findings and prototypes · ESTABLISHED

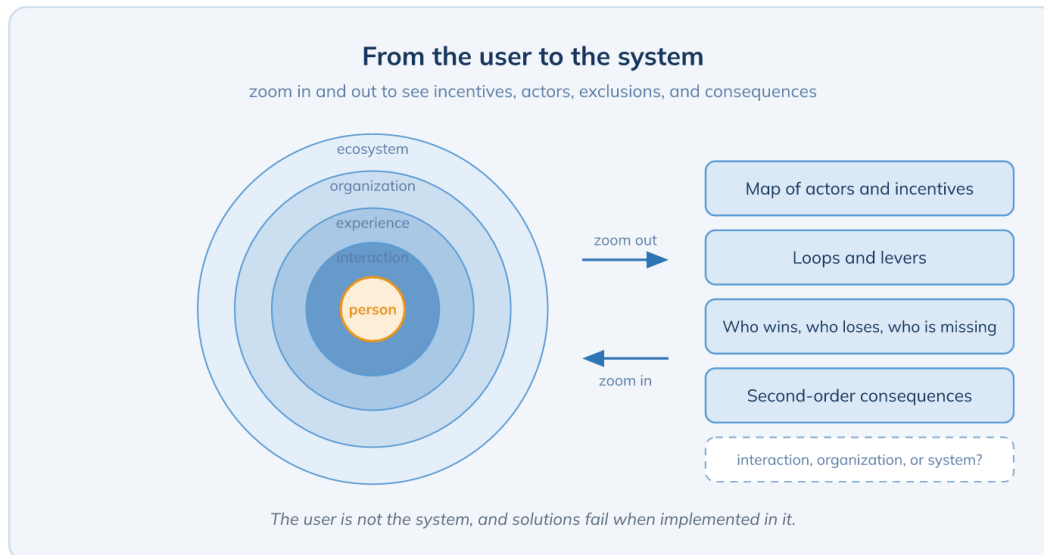
Drawing is thinking in another way because non-verbal codes translate between abstract requirements and concrete objects, because the ambiguity of the sketch invites interpretation and proposal, and because a shared image is the group's explicit memory; there is no need to rely on pop neuroscience to justify it. Sketches, maps, storyboards, and objects give a language to those who have no design language. Communicating deliberately is a design ability: narrating the research with stories and quotes so that it informs and inspires, showing before explaining also to those who decide, adapting the story to the audience without losing the evidence, and using the prototype as an argument while knowing that a brilliant demo can decide on its own.

**Why it is here now.** "Be visual" has always been a rule of IDEO and of the Design Council, and communication has become advanced content at IDEO U, a competence of IBM's Practitioner, and a role of its own in the Systemic Design Framework, because the most repeated criticism of Design Thinking is that its findings do not reach those who decide.

**Where to look.** [Cross — Designerly ways of knowing](#) · [Buxton — Sketching User Experiences](#) · [Sibbet — Visual Meetings](#) · [IDEO U — Storytelling for influence](#) · [Scrum Manager BoK — Journey map](#)

## Block G — From the user to the system

*The user is not the system: solutions fail in implementation, in incentives, and in who is left out, and judgment is needed to know when to widen the focus.*



### The limits of the user-centered approach and the actor map · CONSOLIDATING

Designing for the individual user leaves out the other stakeholders, the externalities, and the incentives, and the typical failure of solutions is not one of understanding but of implementation in systems with many actors and unequal power. From human-centered design one moves to humanity-centered and planet-centered design as an extension, not a replacement: zooming in and out (person, interaction, experience, organization, ecosystem) and mapping actors and incentives is the bridging technique that all the programs share.

**Why it is here now.** Norman, the Design Council, and the d.school have made this extension their own between 2021 and 2025 (principles of humanity-centered design, Systemic Design Framework, embedded ethics), and IDEO itself wrote in 2010 that systemic problems need systemic solutions; mainstream Design Thinking training, however, barely goes beyond the stakeholder map.

**Where to look.** [Norman — Moving from humans to humanity](#) · [Norman and Stappers — DesignX](#) · [Brown and Wyatt — Design Thinking for social innovation \(SSIR\)](#) · [Design Council — Systemic Design Framework](#) · [Scrum Manager BoK — Perspective pause](#)

### Minimal systems thinking, impacts, exclusions, and consequences · CONSOLIDATING

A product team needs a minimum of systems thinking, not a discipline: actors, relationships, flows, feedback loops, the leverage points (and why intuition pushes in the wrong direction), and two or three recognizable archetypes, such as fixes that fail or the tragedy of the commons. On top of it one asks who benefits, who may be harmed, who is left out, and what second- and third-order consequences have not been looked at, with a lightweight consequence-exploration practice born for agile teams and with harms modeling. Deceptive patterns and their regulation come in here, inclusion as a lens (mismatch, spectrum of people, solve for one and extend to many) with its legal context, and sustainability as indirect costs and long-term effects.

**Why it is here now.** The tools exist and are open and mature (Consequence Scanning from 2019, Harms Modeling, Artefact's cards), the legal context is recent (Digital Services Act of 2022, WCAG 2.2 of 2023, European accessibility act applicable since June 2025), and the reference institutions have brought ethics and the planet into their curricula; in Design Thinking training they still come in as a mindset and not as a block. Inclusion and accessibility are consensus; the rest is institutional trend.

**Where to look.** [Meadows — Leverage points: places to intervene in a system](#) · [Systemic Design Toolkit — Methodology](#) · [Doteveryone — Consequence scanning](#) · [Microsoft — Harms modeling](#) · [Brignull — Deceptive patterns](#) · [Microsoft — Inclusive design](#) · [W3C — What's new in WCAG 2.2](#)

### **When to widen the focus and recognize the limits** · CONSOLIDATING

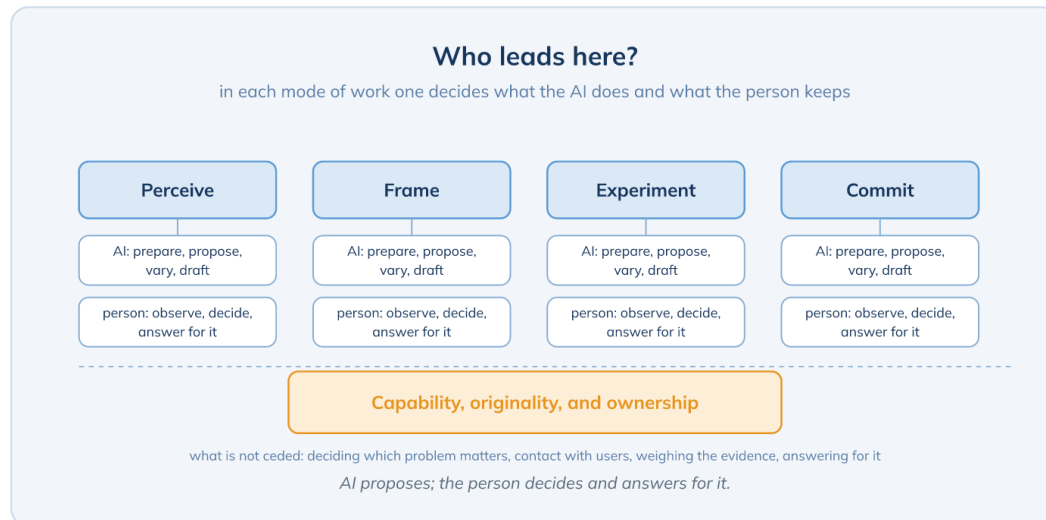
Not every problem calls for Design Thinking, and the field itself offers no criterion for knowing when to widen the focus. Distinguishing interaction, organizational, and systemic problems, and reading them with a complexity framework (complicated, complex, chaotic), tells where Design Thinking pays off, where it is superfluous, and where it arrives too late; in organizational matters and in public policy the lever is not in the interaction. The institutions themselves have declared their limits, and the frontier currents (design justice, more-than-human design) mark where the conversation is moving without yet being assessable content.

**Why it is here now.** Norman and Stappers placed the limit at implementation in 2015, Ackermann documented in 2023 the mismatch between the short cycles of design and the long ones of public policy, and the responses of IDEO and the d.school exist (separate systems courses, longer engagements, second-order consequences). Cynefin, which the agile audience already knows, provides the operational criterion that Design Thinking lacks.

**Where to look.** [Snowden and Boone — A leader's framework for decision making \(Cynefin\)](#) · [Norman and Stappers — DesignX](#) · [Ackermann — Design thinking was supposed to fix the world](#) · [IDEO U — Human-centered systems thinking](#)

## Block H — Designing your own design process, also with artificial intelligence

*The ability that gives meaning to everything before it: choosing and combining practices according to uncertainty, maturing in the craft, and deciding in each mode who leads, the person or the AI.*



### There is no universal sequence: choosing and combining practices · ESTABLISHED

Design is not a process; it is a discipline that underpins the process each team gives itself; LUMA's method recipes, Hohmann's choice of game by objective, and IBM's non-linear loop are its precedents. One starts where the uncertainty is and asks what needs to be understood, observed, synthesized, imagined, decided, made tangible, or learned in order to choose the practice that answers; observation, synthesis, reframing, ideation, prototyping, feedback, and co-creation are combined according to the problem and not according to the method, and one decides when to close an activity and why, marking what can be dropped when designing the sequence.

**Why it is here now.** It is the thesis of the skill and it coincides with the reading its institutions make today: the d.school Bootleg presents itself as a deck that can be started from any card and LUMA explicitly sells combining methods according to the challenge. The criterion for when to close an activity has no canonical formulation and is presented as a Scrum Manager criterion.

**Where to look.** [LUMA — Recipes: the power of combining design methods](#) · [LUMA — the 36 methods](#) · [Hohmann — Choosing Innovation Games to meet your goals](#) · [IBM — Enterprise Design Thinking \(the Loop\)](#) · [d.school — Design Thinking Bootleg](#)

### Design abilities and professional maturity · CONSOLIDATING

The d.school's eight abilities (navigate ambiguity, learn from others and from contexts, synthesize information, experiment rapidly, move between concrete and abstract, build with intention, communicate deliberately, and design your design work) describe what is learned better than any sequence of phases; navigating ambiguity cuts across them and has two independent components, comfort and strategies. Design expertise progresses through levels that coexist in the same project, and a skill reasonably takes one from the novice who follows rules to the competent practitioner

who chooses a plan and reflects: from executing techniques to selecting them, from following a process to designing it, from producing artifacts to generating learning.

**Why it is here now.** The abilities framework has been official at the d.school since 2016 and remains active in 2026 with a published measurement instrument, and research on design expertise has backed it since 2004; mainstream training, however, still certifies the execution of the phases. The expert level, which only practice gives, is not promised.

**Where to look.** [Carter — Let's stop talking about THE design process \(d.school\)](#) · [d.school — Navigating ambiguity, the super ability](#) · [d.school — measuring the ability to navigate ambiguity \(2026\)](#) · [Dorst and Reymen — Levels of expertise in design education](#) · [Cross — Designerly ways of knowing](#)

### Artificial intelligence in each mode: who leads here? · EMERGING

Using AI in design work is a process decision, not a list of uses per phase: at each moment (perceiving, framing, experimenting, committing) one decides who leads and what is preserved in three dimensions, human capability, originality, and ownership of the decision, to prevent agency from drifting toward the AI without anyone having decided it. AI codes and proposes clusters, expands variations and combinations, prototypes fast, and prepares and documents sessions; it is not delegated deciding which problem matters, contact with users or with identities different from the team's, weighing the evidence, interpreting the context, closing disagreement, or answering for the decision. The general principle of use, verification, and confidentiality are taken as known.

**Why it is here now.** The HPI published in August 2026 the co-agency framework that names agency drift, IDEO U has taught three design-with-AI courses since 2025 with explicit caveats, and NN/g documents with its own studies what AI speeds up in research and workshops and what it does not; the only experimental evidence on AI as facilitator shows more participation without better decisions. All of it is less than two years old.

**Where to look.** [HPI School of Design Thinking — Co-Agency Design](#) · [IDEO U — IDEO's framework for using AI in research](#) · [NN/g — Accelerating research with AI](#) · [NN/g — Facilitating AI-enhanced workshops](#) · [Alsobay et al. — AI facilitation of groups \(CSCW 2026\)](#) · [Skill Arena — Product Owner 2.0](#) · [Skill Arena — AI applied to agile work](#)

### Risks specific to artificial intelligence in design · EMERGING

AI raises the individual average of ideas and reduces the diversity of the whole, the best documented risk and the most specific to design, and its remedy lies in the order (people first) and in the prompts. Synthetic personas flatten and misrepresent identities, above all minority ones, and presenting synthetic findings as research is research theater. Instant fidelity anchors on the first solution, continued delegation atrophies skills (observing, synthesizing, sketching) as well as judgment, what is generated with AI is not registered as one's own creation without substantial human work, and the conversational prototype tested with people falls under the transparency duty of the European AI Act. It is worth distinguishing which risk has evidence and which is still an indication.

**Why it is here now.** The homogenization studies of 2024 to 2026 are numerous and convergent, those on synthetic personas (2024-2025) measure misrepresentation with thousands of participants, skill loss has its first field data (2025) although outside design, and article 50 of the AI Act has been in

force since August 2026. The general risks (hallucinations, privacy, automation bias) are covered in Product Owner training and in the AI skill.

**Where to look.** [Doshi and Hauser — Generative AI enhances individual creativity but reduces collective diversity](#) · [Anderson, Shah, and Kreminski — Homogenization effects of LLMs on creative ideation](#) · [Kumar et al. — Human creativity in the age of LLMs](#) · [Wang, Morgenstern, and Dickerson — LLMs that replace participants misportray and flatten identity groups](#) · [NN/g — Synthetic users](#) · [European AI Act — article 50](#) · [US Copyright Office — Copyright and Artificial Intelligence, Part 2](#)

## A note on the references

*The links included were available and verified as of the update date. Given the pace of change in this area, some may change; each revision of the map also updates its references.*

---

© 2026 Scrum Manager®. This work is published under a Creative Commons Attribution-NonCommercial 4.0 International licence (CC BY-NC 4.0). Official Scrum Manager trainers and centres are licensed under the terms of CC BY 4.0 for their training activity.