8226 / DESIGN METHODS

Design Methods

Student workbook

Trace a design decision from one speculative object through field research, concept development and a tested proposal.

SHARED WORKSHOP

03

LATER ARRIVALS

THE CLASSROOM PROVOCATION

Three people joined after you. What can you still not tell about your own turn?

Read the original, then design your own rule

Tarati, a speculative telephone from NONOBJECT, is the source case for W01. The workshop ticket, the questions and the filled pages in this workbook are teaching examples. Treat classroom quotes, observations and counts as illustrative material.

Lukić & Katz · NONOBJECT (MIT Press, 2010)

Name / team _____ Project _____

Twelve working sheets

Read the filled example and use its companion page for your own project. Reprint a sheet for a second trial or a different stakeholder. Keep original field notes and earlier versions alongside the final entries.

Sheet	Method and session	Example / blank
W01	Break an ordinary rule	03 / 04
W02	Frame, impact and audience	05 / 06
W03	Collect first-hand evidence	07 / 08
W04	From stories to an opportunity	09 / 10
W05	Generate and choose a concept	11 / 12
W06	Map the journey and stage it	13 / 14
W07	Prototype the uncertain detail	15 / 16
W08	Inspect, then observe	17 / 18
W09	Iterate and define success	19 / 20
W10	Plan delivery and pitch	21 / 22
W11	Run a live rehearsal	23 / 24
W12	Retest, exhibit and reflect	25 / 26

Document the use of AI

Identify the tool and date. Keep the exact prompt, original outputs and your rejection or revision. Credit the author of each source image. Label a shared class run as shared. Keep volunteers' names and identifying field notes out of prompts.

Original IDEO.org guide The Field Guide to Human-Centered Design · English PDF

W01 / CLASSROOM EXAMPLE

Break an ordinary rule

Discover a design question by changing the relationship between a person and an object.

Watch Tarati and sketch the gesture from memory. Identify the normal expectation that the concept disturbs. Choose an everyday object of your own. Generate three variants with AI. Keep the situation, scale and actor constant; change a single rule per variant. Keep a rejected image.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Historical object Name the object and source. Describe what is visible, what you infer and an unanswered question.	Tarati, NONOBJECT project video. A finger approaches the openings. What feedback would tell a first-time visitor that an input was registered?
Original brief and prompt Log the tool/model as displayed, date, full prompt, settings or seed if available, and file IDs. Include what you held constant.	Base: “Design a palm-sized ticket for a workshop queue. Show one visitor holding it at the entrance. Render an ordinary, reusable object in a single clear view.” Record the actual tool name, date and image files at generation time.
Three changed rules For A, B and C enter the exact prompt change, result ID and what people could or could not tell from the image.	A shows only arrivals behind the holder. B reveals its number only to a neighbour. C displays a count only after a visitor gives up their place. Each changes one information rule.
Selection and limits Annotate your chosen and rejected outputs. Which relationship deserves research? Which detail did the image invent?	Choose A: a growing count looks like progress while saying nothing about a turn. Reject C because exchanging places changes the entire service. The rendered display offers no evidence about real visitors.

KEEP FOR YOUR PROCESS PORTFOLIO

A three-variant contact sheet, a complete prompt record, one rejected result and a question for fieldwork.

Source reading · Lukić & Katz · NONOBJECT (MIT Press)

Original materials

Case and film Lukić & Katz · NONOBJECT Tarati · original film

W01 / YOUR PROJECT

Break an ordinary rule

Date / version _____ Project / participant code _____

Historical object / Name the object and source. Describe what is visible, what you infer and an unanswered question.

Original brief and prompt / Log the tool/model as displayed, date, full prompt, settings or seed if available, and file IDs. Include what you held constant.

Three changed rules / For A, B and C enter the exact prompt change, result ID and what people could or could not tell from the image.

Selection and limits / Annotate your chosen and rejected outputs. Which relationship deserves research? Which detail did the image invent?

Sketch, sequence or source reference

W02 / CLASSROOM EXAMPLE

Frame, impact and audience

Turn the speculative object into an open design challenge.

Work through the original sequence: Frame Your Design Challenge, Align on Your Impact Goals (Impact Ladder), then Define Your Audience (Ecosystem Mapping). Add secondary research and a small project plan.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
1 · Frame Your Design Challenge Write the underlying problem, context, constraints and two substantially different possible responses.	How might first-time workshop visitors tell whether they have been seen while waiting? A greeting and a paper signal could both answer it.
2 · Align on Your Impact Goals Connect a feasible immediate change to a longer-term effect. Write down what you can actually observe this semester.	First: visitors can locate the check-in point. Later: fewer unnecessary repeat check-ins. Observe the first action, then ask what they thought it achieved.
3 · Define Your Audience Map who experiences the situation, who maintains it and whose perspective is missing. Mark one relationship.	New visitor → helper → technician. The helper covers the queue while fetching tools. Ask both visitor and helper how a handoff works.
Secondary research and project plan Record a named source, one finding, one limitation, and who will collect which evidence by when.	Review the posted arrival instructions; they identify a desk but do not show what happens when it is empty. Compare the instructions with an observed opening shift.

KEEP FOR YOUR PROCESS PORTFOLIO

Opening three worksheets, a source note and a feasible fieldwork plan.

Source reading · IDEO.org · Frame Your Design Challenge

Original IDEO.org materials

Methods Frame Your Design Challenge · Align on Your Impact Goals · Define Your Audience · Secondary Research · Create a Project Plan

Original PDFs Frame Your Design Challenge · Impact Ladder · Ecosystem Mapping

W02 / YOUR PROJECT

Frame, impact and audience

Date / version _____ Project / participant code _____

1 · Frame Your Design Challenge / Write the underlying problem, context, constraints and two substantially different possible responses.

2 · Align on Your Impact Goals / Connect a feasible immediate change to a longer-term effect. Write down what you can actually observe this semester.

3 · Define Your Audience / Map who experiences the situation, who maintains it and whose perspective is missing. Mark one relationship.

Secondary research and project plan / Record a named source, one finding, one limitation, and who will collect which evidence by when.

Sketch, sequence or source reference

W03 / CLASSROOM EXAMPLE

Collect first-hand evidence

Keep an encounter traceable from raw note to a tentative interpretation.

Interview someone about their last visit. Pair this with a guided tour or another justified Inspiration method. Ask permission to take notes and offer to stop. Record participants using anonymous IDs.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Method and rationale Which question justifies the method and whom will you involve?	Use a tour to see where a pause happened. A retrospective interview alone may miss the obstructed sightline.
Interview framework Write three open questions and a non-leading follow-up.	“Take me through the last time you came in.” “What happened next?” “Where were you standing?” Follow-up: “What led you to that impression?”
Record and interpretation Keep event, words, tentative explanation and evidence ID separate.	Illustrative record R1: visitor looks back at the door, then asks the helper. Hypothesis: they were unsure whether to wait. Other possibility: they were looking for someone.
Decide what to collect next Which account is missing? What would cause you to revise this interpretation?	Ask a first-time visitor who stayed at the desk. Look for a second reason for remaining there.

KEEP FOR YOUR PROCESS PORTFOLIO

An interview guide, a field record, one discrepancy and a research decision.

Source reading · IDEO.org · Interview

Original IDEO.org materials

Methods Interview · Guided Tour · Group Interview · Expert Interview · Peers Observing Peers · Analogous Inspiration

Original PDFs Interview Guide · p. 166

W03 / YOUR PROJECT

Collect first-hand evidence

Date / version _____ Project / participant code _____

Method and rationale / Which question justifies the method and whom will you involve?

Interview framework / Write three open questions and a non-leading follow-up.

Record and interpretation / Keep event, words, tentative explanation and evidence ID separate.

Decide what to collect next / Which account is missing? What would cause you to revise this interpretation?

Sketch, sequence or source reference

W04 / CLASSROOM EXAMPLE

From stories to an opportunity

Translate field evidence into a question that admits more than one design.

Share an episode in the participant's terms. Use Top Five and Find Themes to compare stories, write an insight, then generate three How Might We questions. Keep an exception visible.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Story and evidence Give the episode an ID. What happened, where, and what detail challenged you?	Teaching example R1: a visitor checks the doorway twice while waiting; R2: another asks a helper and then waits elsewhere.
Top Five and theme List important episodes, group them and keep the odd case visible.	Theme: visitors look for acknowledgement. Exception: a returning visitor recognises a staff member without needing a sign.
Insight and warrant What pattern could explain the evidence? Which part is an inference?	People may need confirmation that someone knows they are waiting. Two examples justify investigating this explanation; they do not establish its frequency.
Reframe and select Write three HMWs. Keep the most useful one and explain the discarded alternatives.	How might a first-time visitor recognise a handoff? This leaves open a spatial cue, a conversation or a physical object.

KEEP FOR YOUR PROCESS PORTFOLIO

Story cards, a named theme, an insight and one HMW question linked to evidence.

Source reading · IDEO.org · Create Insight Statements

Original IDEO.org materials

Methods Share Inspiring Stories · Top Five · Find Themes · Create Insight Statements · How Might We

Original PDFs Insights Checklist · How Might We worksheet · p. 177

W04 / YOUR PROJECT

From stories to an opportunity

Date / version _____ Project / participant code _____

Story and evidence / Give the episode an ID. What happened, where, and what detail challenged you?

Top Five and theme / List important episodes, group them and keep the odd case visible.

Insight and warrant / What pattern could explain the evidence? Which part is an inference?

Reframe and select / Write three HMWs. Keep the most useful one and explain the discarded alternatives.

Sketch, sequence or source reference

W05 / CLASSROOM EXAMPLE

Generate and choose a concept

Produce alternatives that differ in behaviour, then choose on stated grounds.

Brainstorm individually before discussion. Bundle similar ideas, draw three distinct concepts and decide which uncertainty to test first.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Constraint and alternatives What is fixed? Describe three mechanisms, including a social or low-tech alternative.	Same doorway and staffing. A visible desk flag; a visitor-held receipt; a spoken handoff between helpers.
Bundles Name the principle behind each group. What would the visitor do differently?	A flag broadcasts a state. A receipt confirms one person's status. A handoff transfers responsibility.
Decision Choose criteria and compare the alternatives. Show why a losing option was plausible.	Test a handoff and a flag because each can be staged without software. Defer the receipt until a visitor can explain where to retain it.
Additional methods Name an additional Ideation method you selected, why you chose it and an observable result.	Use a role-play to expose what happens when the helper leaves the room. Record which part of the concept now needs a fallback.

KEEP FOR YOUR PROCESS PORTFOLIO

An annotated set of alternatives, choice criteria and a rejected direction.

Source reading · IDEO.org · Bundle Ideas

Original IDEO.org materials

Methods Brainstorm Brainstorm Rules Bundle Ideas Gut Check Mash-Ups

W05 / YOUR PROJECT

Generate and choose a concept

Date / version _____ Project / participant code _____

Constraint and alternatives / What is fixed? Describe three mechanisms, including a social or low-tech alternative.

Bundles / Name the principle behind each group. What would the visitor do differently?

Decision / Choose criteria and compare the alternatives. Show why a losing option was plausible.

Additional methods / Name an additional Ideation method you selected, why you chose it and an observable result.

Sketch, sequence or source reference

W06 / CLASSROOM EXAMPLE

Map the journey and stage it

Find the point where a journey breaks and turn it into an enactable scene.

Work from the Journey Map to Create a Concept, then Storyboard the user journey. Add a Relational Map if a handoff between people needs more detail. Role-play a version with and without a helper.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Journey For each moment name action, actor, evidence and friction.	Approach → stop at desk → wait → hear call. At “wait”, the helper leaves and the visitor has no clear contact.
Concept Write one sentence explaining what changes for whom.	A reusable desk flag tells arrivals who currently holds responsibility for the queue.
Storyboard Draw or reference frames for the trigger, response, handoff and recovery.	A: workshop entry. B: visitor sees flag. C: helper passes flagged board to colleague. D: visitor sees where to ask.
Rehearsal Who played which role? Which frame failed, and what will you change?	The seated visitor could not see the flag over an easel. Move it into the approach sightline for the next prototype.

KEEP FOR YOUR PROCESS PORTFOLIO

A journey map, concept and 3–6 storyboard frames plus an annotation from the enactment.

Source reading · IDEO.org · Journey Map

Original IDEO.org materials

Methods Journey Map · Create a Concept · Storyboard · Role Play · Create Frameworks

Original PDFs Journey Map guide · pp. 90–91 · Storyboard template · p. 178

W06 / YOUR PROJECT

Map the journey and stage it

Date / version _____ Project / participant code _____

Journey / For each moment name action, actor, evidence and friction.

Concept / Write one sentence explaining what changes for whom.

Storyboard / Draw or reference frames for the trigger, response, handoff and recovery.

Rehearsal / Who played which role? Which frame failed, and what will you change?

Sketch, sequence or source reference

W07 / CLASSROOM EXAMPLE

Prototype the uncertain detail

Choose the cheapest material that can answer one design question.

Use paper or enactment to test one uncertainty at full scale. Analyse the cue with Don Norman. Preserve the earlier state.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Question and fidelity Name the uncertainty; choose what must work and what may be simulated.	Can a visitor distinguish where to wait from where to ask? Hand-lettered signs are sufficient if the position is realistic.
Norman analysis What can someone do? What signifies it? How does the cue map to the intended target, and what feedback follows?	The visitor can approach either desk. The flag marks the active desk; the helper's acknowledgement confirms the handoff.
Versions Describe or reference V1 and V2. Name the single changed variable.	V1 flag sits between desks. V2 flag sits on the active desk. Preserve wording and colour.
Prediction and trial Specify an action, success signal and plausible contrary observation.	Predict the first approach goes to the flagged desk. A visitor who asks at the unflagged desk calls the mapping into question.

KEEP FOR YOUR PROCESS PORTFOLIO

One runnable prototype, an annotated still and a prediction that could be wrong.

Source reading · IDEO.org · Rapid Prototyping

Original IDEO.org materials

Methods Determine What to Prototype · Rapid Prototyping · Build & Run Prototypes

Original PDFs Prototype Mapping · Prototype Report Card

W07 / YOUR PROJECT

Prototype the uncertain detail

Date / version _____ Project / participant code _____

Question and fidelity / Name the uncertainty; choose what must work and what may be simulated.

Norman analysis / What can someone do? What signifies it? How does the cue map to the intended target, and what feedback follows?

Versions / Describe or reference V1 and V2. Name the single changed variable.

Prediction and trial / Specify an action, success signal and plausible contrary observation.

Sketch, sequence or source reference

W08 / CLASSROOM EXAMPLE

Inspect, then observe

Keep heuristic findings separate from behaviours actually observed.

Inspect the design using Nielsen's visibility of system status, user control and freedom, and error prevention. Turn one predicted issue into a neutral test task. Ask a fresh participant to try it.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Inspection Record the heuristic, location, potential problem and a prediction.	Visibility: flag disappears when the host takes a break. Predict a visitor may check in twice.
Task State a goal without naming a control. Describe when you will intervene.	"You arrive while your partner is still fetching materials. Show me how you would join the workshop." Wait for a request or explicit abandonment.
Observation Write actions/words first. Mark assistance or uncertainty.	Illustrative: B reads the flag, waits and asks "Am I on the list?" This reveals a question about acknowledgement; they did not check in twice.
Revision What changed in your design decision? Which alternative explanation remains?	Test explicit acknowledgement before making the flag larger. The visitor may have been unsure about the list itself.

KEEP FOR YOUR PROCESS PORTFOLIO

An inspection note, test task, observation and revised priority.

Source reading · Jakob Nielsen · 10 Usability Heuristics

Original IDEO.org materials

Methods Get Feedback Integrate Feedback and Iterate

W08 / YOUR PROJECT

Inspect, then observe

Date / version _____ Project / participant code _____

Inspection / Record the heuristic, location, potential problem and a prediction.

Task / State a goal without naming a control. Describe when you will intervene.

Observation / Write actions/words first. Mark assistance or uncertainty.

Revision / What changed in your design decision? Which alternative explanation remains?

Sketch, sequence or source reference

W09 / CLASSROOM EXAMPLE

Iterate and define success

Translate a finding into a design change and a testable indicator.

Compare two versions, choose an indicator and plan a small rehearsal. Distinguish a short class trial from a longer service pilot.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
What changed Which observation motivated the revision? What stays constant?	Add an acknowledgement step while keeping the arrival route unchanged.
Indicator Define a unit, denominator, collection point and limitation.	Count unprompted first approaches to the duty desk / arrivals observed; annotate interruptions. This measures route finding only.
Trial limits Describe location, recruitment, roles and limits of the trial.	Rehearse at a marked-out desk with classmates before a real opening. This does not establish effectiveness across a semester.
Decision threshold What result means revise, repeat or stop?	Stop a trial if people believe the prototype records a real booking. Clarify the context and repeat the task.

KEEP FOR YOUR PROCESS PORTFOLIO

Version comparison, indicator, baseline, stopping rule and follow-up plan.

Source reading · IDEO.org · Define Your Indicators

Original IDEO.org materials

Methods Integrate Feedback and Iterate · Define Your Indicators · Pilot

Original PDFs Indicators Mad Libs

W09 / YOUR PROJECT

Iterate and define success

Date / version _____ Project / participant code _____

What changed / Which observation motivated the revision? What stays constant?

Indicator / Define a unit, denominator, collection point and limitation.

Trial limits / Describe location, recruitment, roles and limits of the trial.

Decision threshold / What result means revise, repeat or stop?

Sketch, sequence or source reference

W10 / CLASSROOM EXAMPLE

Plan delivery and pitch

Explain the design, its evidence and the work somebody must own.

Make a Roadmap, identify resources and staffing, define success and create a pitch. Revisit the Design Council's two diamonds and show a point where you returned to an earlier question.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Roadmap and owner List three steps in dependency order, with a responsible person and decision gate.	Technician approves trial position → helper rehearses handoffs → lecturer reviews anonymised observations.
Resources and staffing Name equipment, time, roles and what happens when someone is absent.	Two flags, tape, one greeting helper, one observer. A named shift substitute resets the flag.
Success and revision Which result would warrant running a pilot? Where did you reopen a design question?	Reopen Develop when the high-mounted cue is missed. Plan a longer trial only after the flag can be used across shifts.
Pitch Write the opening scene, decision, evidence, limitation and ask.	Lead with the visitor waiting beside the wrong desk. Show the moved flag, describe the trial, then ask for one supported shift to test the handoff.

KEEP FOR YOUR PROCESS PORTFOLIO

A single-page implementation plan and a short pitch backed by prototype evidence.

Source reading · IDEO.org · Create a Pitch

Original IDEO.org materials

Methods Roadmap for Success · Capabilities Quicksheet · Staff Your Project · Define Your Indicators · Create a Pitch

Original PDFs Resource Assessment Matrix · pp. 182–183 · Indicators Mad Libs · Create a Pitch worksheet · p. 185

W10 / YOUR PROJECT

Plan delivery and pitch

Date / version _____ Project / participant code _____

Roadmap and owner / List three steps in dependency order, with a responsible person and decision gate.

Resources and staffing / Name equipment, time, roles and what happens when someone is absent.

Success and revision / Which result would warrant running a pilot? Where did you reopen a design question?

Pitch / Write the opening scene, decision, evidence, limitation and ask.

Sketch, sequence or source reference

W11 / CLASSROOM EXAMPLE

Run a live rehearsal

Observe what changes when an intervention meets the place and people it is for.

Install or stage the intervention, assign host/participant/observer roles, run short trials, reset predictably and keep a contemporaneous record.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Set-up and roles Sketch the starting position, record version, identify who resets it and how trials end.	Mark the doorway and assistant's desk. Reset the flag and seating before each arrival.
Trial record For each attempt note version, task, participant code, first action, outcome and assistance.	Illustrative T1 / V1 / A: reached the wrong desk, asked for help. Record precise position before adjusting anything.
Revision Write one change, its rationale and the uncertainty it introduces.	Move the flag onto the desk edge. From behind, the sign might now be invisible.
Next trial Which participant or route would be most revealing next?	Ask a new visitor to approach from the opposite corridor with the same goal.

KEEP FOR YOUR PROCESS PORTFOLIO

Setup diagram, anonymised trial log, before/after record and decision for the retest.

Source reading · IDEO.org · Live Prototyping

Original IDEO.org materials

Methods Live Prototyping Get Feedback Build & Run Prototypes Integrate Feedback and Iterate

Original PDFs Prototype Report Card

W11 / YOUR PROJECT

Run a live rehearsal

Date / version _____ Project / participant code _____

Set-up and roles / Sketch the starting position, record version, identify who resets it and how trials end.

Trial record / For each attempt note version, task, participant code, first action, outcome and assistance.

Revision / Write one change, its rationale and the uncertainty it introduces.

Next trial / Which participant or route would be most revealing next?

Sketch, sequence or source reference

W12 / CLASSROOM EXAMPLE

Retest, exhibit and reflect

Make the progression from speculative idea to evidence and design decisions visible.

Retest one unresolved issue, present the prototype and assemble the process PDF. Include two additional Inspiration methods and two additional Ideation methods with independent rationales, then reflect in five to ten sentences.

FIELD AND PROMPT	ILLUSTRATIVE ENTRY
Compare Use the same task and describe what changed between versions. What could also explain it?	Record whether the new visitor reaches the duty desk. Prior workshop experience may also influence the route.
Evidence index Link challenge, field records, extra methods, insights, map/storyboard, prototype versions and implementation/pitch to pages or asset IDs.	Example chain: R1 → HMW2 → storyboard frame C → V2 → T2 → decision. Add the four self-selected methods with why and outcome.
Authorship and AI Credit original course sources, actual tool/version, prompts and variants; identify edits and real field evidence separately.	The speculative ticket image generated the research question. Field notes and trial records support the design decision.
Reflection Write 5–10 sentences about a change of mind, the evidence behind it, a limitation and what you would do next.	Sentence starters: I initially assumed… An observation challenged that because… The redesign made… I still cannot tell… My next test would…

KEEP FOR YOUR PROCESS PORTFOLIO

One coherent process PDF, demo/pitch and credit record for sources, collaborators and AI.

Source reading · IDEO.org · Keep Iterating

Original IDEO.org materials

Methods Keep Getting Feedback · Keep Iterating · Create a Pitch · Monitor and Evaluate

Original PDFs Create a Pitch worksheet · p. 185 · M&E Framework

W12 / YOUR PROJECT

Retest, exhibit and reflect

Date / version _____ Project / participant code _____

Compare / Use the same task and describe what changed between versions. What could also explain it?

Evidence index / Link challenge, field records, extra methods, insights, map/storyboard, prototype versions and implementation/pitch to pages or asset IDs.

Authorship and AI / Credit original course sources, actual tool/version, prompts and variants; identify edits and real field evidence separately.

Reflection / Write 5–10 sentences about a change of mind, the evidence behind it, a limitation and what you would do next.

Sketch, sequence or source reference

Assemble your process portfolio

Choose material that lets someone trace a decision back to a source or observation. Use the list as a final editorial check for your project.

- [ ] **Case and authorship**
  Cite the original NONOBJECT and distinguish your own object, rule and classroom examples from the source work.
- [ ] **AI record**
  Keep the tool, date, full prompt and at least three generated alternatives. Show the returned outputs, one rejection or revision and which decisions you made yourself.
- [ ] **Field evidence**
  Include your question, consent approach, anonymised notes and a trace from a relevant story to an insight and a How Might We question.
- [ ] **Method choices**
  Name two additional Inspiration methods and two additional Ideation methods beyond the assigned sequence. Explain why you chose each and show what it contributed.
- [ ] **Concept and prototype**
  Show alternatives, the choice you made and the critical handover in a storyboard, role play or working prototype.
- [ ] **Testing and decision**
  Give the task and context, observed behaviour and limits of your evidence. Show what changed between trials.
- [ ] **Implementation and handover**
  Name the next action, staffing or resources, ownership, setup and a practical measure of success.
- [ ] **Sources and access**
  Check titles, references and image credits. Share only material you have permission to include and use participant codes in the process PDF.

One question I would test next