

This document includes two AI prompts that help you prepare a complete and structured request.

Prompt #1

I am preparing a request for Industrial Design Services by the EnCata team and want to make sure my input contains enough information to start design work without unnecessary iterations or unrealistic assumptions.

Here is my current input:

"<<<INSERT YOUR INPUT HERE>>>"

At EnCata, an Industrial Design request should clarify the following areas:

1. Product purpose and design goal

- What the product is
- What problem it solves
- What stage the product is currently at
- What you want industrial design to improve or create
- Whether the task is a new design, redesign, or refinement of an existing concept

2. Target users

- Who will use the product
- Who buys or specifies it, if different from the end user
- Relevant user characteristics, limitations, or expectations
- Whether accessibility or special ergonomic requirements matter

3. Use scenarios

- Where and how the product will be used
- What users need to see, touch, hold, load, adjust, clean, open, replace, or service
- How often and for how long the product is used
- Whether the product is handheld, wearable, stationary, portable, or installed

4. Existing product architecture

- What batteries, sensors, displays, cameras, optics, motors, tanks, connectors, or other components must fit inside
- Which components are already fixed and which may still change
- Approximate component dimensions and locations, if known
- Required wiring, airflow, structural, or service-access zones

5. Size and physical constraints

- Approximate product dimensions
- Weight limits, if relevant
- Space constraints
- Existing mounting points or interfaces
- Whether the design must fit around an existing PCB, assembly, enclosure, or mechanism

6. User interaction and ergonomics

- How users hold, carry, wear, operate, view, adjust, open, clean, or maintain the product
- Required controls, buttons, displays, indicators, handles, grips, or access points
- Important viewing angles, reach zones, or touchpoints
- Known ergonomic problems in the current design, if any

7. Visual direction and product identity

- Desired visual character or brand impression

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- Existing brand guidelines
- Reference products or visual examples
- Competitors or product analogs that should be considered
- Designs or visual approaches that should be avoided

8. CMF requirements

- Preferred colors, materials, finishes, and textures, if known
- Required tactile qualities
- Materials that are preferred or prohibited
- Cleaning, wear, scratch, UV, chemical, or environmental considerations that may affect material and finish selection

9. Manufacturing requirements

- Expected production process, if known
- Target production volume
- Known supplier or factory constraints
- Tooling limitations
- Assembly requirements
- Whether the design should support future scaling to higher-volume production

10. Cost targets

- Target product price, if known
- Target manufacturing cost or BOM constraints
- Whether tooling cost is a major concern
- Whether cost reduction is a key design objective

11. Existing materials

- Sketches
- Moodboards
- CAD files
- Engineering drawings
- Component lists
- Prototypes
- Photos
- Brand guidelines
- Supplier feedback
- Previous design concepts
- DFM reports or manufacturing constraints

12. Validation expectations

- What must be validated before the design is approved
- Whether physical mockups or prototypes are required
- Whether ergonomics, scale, grip, access, interfaces, assembly, or CMF need physical validation
- What would make the selected design direction successful

13. Deliverables and next step

- What output is needed from EnCata
- Whether you need concept sketches, renderings, CAD, CMF specification, prototype feedback, or design-intent documentation
- What will happen after industrial design: investment presentation, mechanical engineering, prototyping, DFM, or production preparation

14. Timeline and project context

- Desired deadline
- Whether there is a fixed launch, exhibition, investor, prototype, or production milestone
- Whether only one design stage is required or a complete industrial design scope
- Any existing dependencies that may affect the schedule

Your task:

- Identify missing, unclear, or weakly defined areas in my input
- Structure your answer by the categories above
- For each gap, briefly explain why it matters for industrial design
- Do not create a design concept yet
- Do not invent dimensions, materials, manufacturing methods, user requirements, or visual preferences that I have not provided
- Do not rewrite my request. Focus only on identifying gaps

Important instructions for your response:

- Use clear and practical language
- Keep clarification questions short and easy to answer
- Avoid unexplained industrial design or engineering terminology
- If technical wording is necessary, briefly explain it in simple terms
- Focus on helping a non-design or non-engineering person understand what information EnCata needs

Prompt #2

I am continuing preparation of my Industrial Design Services request based on your previous analysis.

Here is my initial input:

"<<<INSERT INITIAL INPUT HERE>>>"

Here is the additional information I have provided to fill the gaps:

"<<<INSERT ADDITIONAL INFORMATION HERE>>>"

At EnCata, Industrial Design requires clarity in the following areas:

1. Product purpose and design goal
2. Target users
3. Use scenarios
4. Existing product architecture
5. Size and physical constraints
6. User interaction and ergonomics
7. Visual direction and product identity
8. CMF requirements
9. Manufacturing requirements
10. Cost targets
11. Existing materials
12. Validation expectations
13. Deliverables and next step
14. Timeline and project context

Your task:

1. Re-evaluate the combined input (initial + additional information)
2. Identify what is still missing, unclear, or weakly defined
3. Check whether the available information is sufficient to define an Industrial Design scope
4. Based on the available information, compile a structured Industrial Design request for EnCata

If some information is still unavailable:

- Clearly mark it as "Missing information"
- Where a low-risk assumption can reasonably be made, mark it as "Assumption"
- Do not invent exact dimensions, materials, colors, finishes, production methods, costs, or user requirements that the input does not support

If visual direction or manufacturing requirements are not yet defined:

- Describe what is known instead of choosing a solution without sufficient evidence
- Clearly state that these decisions should be explored during the EnCata industrial design process

Structure the final request as follows:

1. Project overview

What the product is, its current development stage, and why industrial design is required.

2. Design goal

What should be created, improved, redesigned, or validated.

3. Target users and use scenarios

Who will use the product, where it will be used, and the main user actions and interactions.

4. Product architecture and constraints

Known internal components, electronics, mechanisms, interfaces, dimensions, fixed elements, and physical limitations.

5. Ergonomics and user interaction

Grip, reach, controls, viewing angles, access, cleaning, maintenance, loading, adjustment, and other relevant interactions.

6. Visual direction

Desired product character, brand requirements, visual references, competitors, analogs, and approaches to avoid.

7. CMF requirements

Known requirements for color, material, finish, texture, tactile qualities, durability, and maintenance.

8. Manufacturing and assembly considerations

Expected manufacturing route, production volume, tooling, assembly, supplier constraints, and scalability requirements.

9. Cost considerations

Target price, production cost, tooling constraints, and other known economic requirements.

10. Existing materials and references

Available sketches, CAD, prototypes, component lists, drawings, brand materials, supplier information, previous concepts, and DFM feedback.

11. Validation requirements

What should be tested or confirmed through mockups, physical prototypes, ergonomic checks, or design reviews before design freeze.

12. Expected deliverables

Depending on the provided scope, these may include:

- Design brief
- Competitor review
- Moodboards
- Concept sketches
- Alternative design directions
- Selected concept
- Product renderings
- Preliminary or refined 3D CAD

- CMF specification
- Prototype feedback
- Design-intent documentation

Only include deliverables that are relevant to the provided project information.

13. Risks and open questions

Known uncertainties, missing inputs, engineering dependencies, manufacturing risks, and decisions that still need to be made.

14. Expected next step

Whether the design will move into mechanical engineering, prototyping, DFM, investor presentation, supplier handoff, or production preparation.

15. Timeline

Desired deadline, relevant milestones, and any known schedule constraints.

Output requirements:

- A structured draft request ready to send to EnCata
- Clearly mark assumptions and missing information
- Keep the response clear and practical
- Do not include explanations outside of the request
- Do not over-specify the design where visual, ergonomic, CMF, or manufacturing decisions should be developed during the project