

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

Prompt #1

I am preparing a request for Hardware Product Discovery by the EnCata team and want to make sure my input contains enough information to turn the initial idea into a clear product direction and define what should be validated next.

Here is my current input:

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

At EnCata, a Hardware Product Discovery request should clarify the following areas:

1. Business problem and product goal

- What problem the product is intended to solve
- Why this problem matters
- What value the product should create for the user or business
- Why the product is being considered now
- What would make the project commercially or strategically successful

2. Target users and stakeholders

- Who will use the product
- Who will buy, specify, approve, maintain, or operate it
- Whether different user groups have different needs
- Relevant user limitations, habits, or expectations
- Who ultimately decides whether the product is successful

3. User scenarios

- Where and how the product will be used
- What the user needs to do before, during, and after use
- How often the product will be used
- Whether it is stationary, portable, handheld, wearable, installed, or mobile
- What happens when something goes wrong or the normal scenario is interrupted

4. Core product functions

- What the product absolutely must do
- Which functions are optional or desirable
- Which functions create the main user value
- Which functions may be removed or simplified if they add too much cost or complexity
- Whether any feature priorities have already been defined

5. Measurable product expectations

- Target dimensions or size limits, if known
- Expected runtime or battery life
- Required speed, accuracy, force, capacity, range, noise level, response time, or other measurable parameters
- Which requirements are fixed
- Which requirements are still expressed only in general terms such as "compact", "fast", "quiet", "accurate", or "easy to use"

6. Operating environment

- Whether the product will be used indoors, outdoors, in a factory, laboratory, vehicle, home, field, or another environment
- Temperature conditions

- Dust, moisture, water, vibration, impact, sunlight, chemicals, or cleaning requirements
- Transportation or storage conditions
- Any unusual environmental or physical constraints

7. Physical product constraints

- Approximate size and form-factor expectations
- Installation or mounting constraints
- Weight restrictions
- Existing enclosure, PCB, mechanism, or hardware that the new concept must work around

8. Existing technical assumptions

- Technologies already being considered
- Components already selected or preferred
- Existing architecture ideas
- Decisions that have already been made
- Assumptions that have not yet been validated
- Technical directions that should not be used

9. Product references and benchmarking

- Competing products
- Similar products or technical analogs
- Products whose functions, size, price, materials, or architecture are relevant
- What you like or dislike about the existing alternatives
- Whether there are specific competitors EnCata should benchmark

10. Business constraints

- Target selling price, if known
- Target manufacturing cost, if known
- Expected production volume
- Important launch or development deadlines
- Budget limitations
- Markets or regions where the product is expected to be sold

11. Standards and regulatory context

- Known safety, industry, environmental, wireless, medical, or other standards
- Target countries or markets
- Certifications that may be required
- Customer-specific or industry-specific requirements
- Whether regulatory requirements are still unknown

12. Intellectual property considerations

- Whether patents or protected technologies are already known in this area
- Whether the concept is based on an existing proprietary solution
- Whether any technical directions should be checked for potential IP risk
- Whether freedom to develop a distinctive technical approach is important

13. Existing materials

- Product description
- Sketches
- AI-generated concepts or renders
- Reference images
- Research
- Competitor materials

14. Main uncertainties

- What is currently unclear about the product
- Which assumptions worry you most

- Which requirements may make the product too expensive or complex
- Which decisions you expect Discovery to help you make

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 Hardware Product Discovery
- Separate critical gaps from information that can reasonably be clarified later
- Identify vague requirements that should be converted into measurable targets
- Point out visible functions that appear to require supporting systems not yet described
- Flag assumptions that may significantly affect cost, complexity, product size, development time, or technical feasibility
- Do not perform a Feasibility Study
- Do not claim that the product is technically feasible or infeasible
- Do not invent technical requirements, components, standards, costs, or performance targets that I have not provided
- Do not rewrite my request. Focus only on identifying gaps and questions

Important instructions for your response:

- Use clear and practical language
- Keep clarification questions short and easy to answer
- Avoid unexplained engineering terminology
- If technical wording is necessary, briefly explain it in simple terms
- Focus on helping a non-engineering person understand what information is needed before the product moves into technical validation

Prompt #2

I am continuing preparation of my Hardware Product Discovery 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>>>"

Use the same Hardware Product Discovery categories from the previous analysis:

1. Business problem and product goal
2. Target users and stakeholders
3. User scenarios
4. Core product functions
5. Measurable product expectations
6. Operating environment
7. Physical product constraints
8. Existing technical assumptions
9. Product references and benchmarking
10. Business constraints
11. Standards and regulatory context
12. Intellectual property considerations
13. Existing materials
14. Main uncertainties

Your task:

- Re-evaluate the combined input
- Check whether the previously identified critical gaps have been resolved
- Identify any information that is still missing, unclear, or contradictory

- Keep assumptions separate from confirmed requirements
- Do not invent missing technical, business, regulatory, or performance information

If critical information is still missing:

- List only the remaining critical gaps
- Briefly explain why each one matters
- Ask concise clarification questions
- Do not generate the final request yet

If the information is sufficient:

- Compile a structured Hardware Product Discovery request for EnCata
- Use the available information only
- Mark unresolved points as "To be clarified during Discovery"
- Mark unvalidated technical ideas as "Assumption"
- Preserve vague requirements that still need quantification instead of inventing numerical targets

Structure the final request as follows:

1. Project overview
2. Business problem and product goal
3. Target users and user scenarios
4. Core product functions and priorities
5. Measurable product expectations
6. Operating environment and physical constraints
7. Existing technical assumptions
8. Product references and benchmarking scope
9. Business constraints
10. Standards and regulatory context
11. Intellectual property considerations
12. Existing materials
13. Main uncertainties and open questions
14. Expected Discovery outcome

For the Expected Discovery outcome, summarize:

- What should become clearly defined during Discovery
- Which assumptions still require validation
- Which requirements need to be quantified
- Which questions should move to Feasibility Study, Proof of Concept, or Prototype development

Important instructions:

- Do not perform a Feasibility Study
- Do not claim that the product is technically feasible or infeasible
- Do not turn assumptions into confirmed requirements
- Do not select technical solutions that should still be explored during Discovery
- Keep the response clear, concise, and practical
- Do not include explanations outside of the requested output