

Before using the SEED tool, it is essential to define both the **core function** of your material or application and the **scope of the lifecycle stages** to be included. This short scoping exercise helps ensure that your sustainability assessment is meaningful and reflects the expected impacts of your innovation.

Step 1: Define the Core Function (1 minute)

Begin by clearly articulating what the material or application is intended to do. This will guide the selection of a functional unit that reflects its purpose.

Instruction:

Write a one-sentence description answering the following:

“The main function of this material or application is to...”

Example:

"The main function of the self-healing tire is to enable 100,000 km of safe vehicle travel with reduced maintenance."

Step 2: Identify Relevant Lifecycle Stages (1.5 minutes)

Next, consider the full lifecycle of the material or product and indicate where significant changes—compared to current alternatives—are expected. These are the stages you will include in the SEED scoring process.

Instruction:

Review the following stages and identify which ones are expected to be meaningfully influenced by your innovation:

- Raw Material Extraction and Processing
- Manufacturing
- Transportation
- Installation and Operation
- End-of-Life and Recycling

Example (self-healing tire):

Changes are expected in Raw Material Extraction (due to new polymer use), Installation and Operation (longer lifespan), and End-of-Life and Recycling (potential reuse of rubber).

Step 3: Choose a Suitable Functional Unit (2 minutes)

The functional unit serves as the reference for all sustainability scoring. It should reflect the **performance over time or use**, rather than just the physical unit.

Guidelines for selecting a functional unit:

Avoid using a single unit (e.g. “one tire”) unless it reflects the complete service delivered.

Prefer units that combine quantity and function over time or use (e.g. “a tire enabling 100,000 km of travel”).

Consider how sustainability advantages emerge: are they only visible at scale or after prolonged use?

Example (self-healing tire):

"A tire that enables 100,000 km of driving with reduced material replacement and maintenance."

This captures durability and enables the inclusion of impacts like reduced raw material use and extended lifetime performance.

Output: Scope Definition Summary

By the end of this exercise, you should be able to clearly define:

Functional Unit: A quantitative reference that captures the full function of the material or product.

Lifecycle Stages to Include: The stages where changes are expected and that will be included in the scoring process.

With this information, you are now ready to proceed with Step 2 of the SEED tool.