Generate Ideas
| TRIZ Prism Tool

This translational problem-solving method uses known solutions to find new solutions.

WHEN

Use TRIZ Prism early in the program lifecycle;

- When confronting a unique, surprising, confusing, or rare problem.
- When standard solutions to the problem are not effective or well established.
- When the current problem definition does not provide a clear path to the solution.

WHY

This tool uncovers novel solutions to existing problems; cross-pollinates ideas from diverse domains; and enhances understanding of the problem by using analogies and metaphors.

HOW

STEP 1: Define the problem. Frame it as specifically and accurately as possible.

STEP 2: Restate the problem in general terms. Replace specific references with general descriptions. For example, the specific problem might be, "This satellite image file is too large to send to a special operations soldier in Afghanistan using the very limited bandwidth available." In general terms, we might describe it as, "We have a mismatch between file size and bandwidth." In even more general terms, we might describe it as the problem of passing a large object through a small hole.

STEP 3: Identify general solutions to the general problem. This transforms our situation from "How do I solve this challenge?" to "How do people usually solve this type of challenge?" The latter question is usually much easier to answer. By temporarily introducing a little distance from the problem, solutions often become more visible. In our example, large objects can pass through small spaces in several ways—by breaking the large object into smaller pieces, by making the small hole larger, or by finding a different access point.

STEP 4: Reintroduce specific details from our situation, restating the general solution as a specific solution. In our example, we might discover creative ways to divide the large satellite image into smaller image chips that can be delivered faster.

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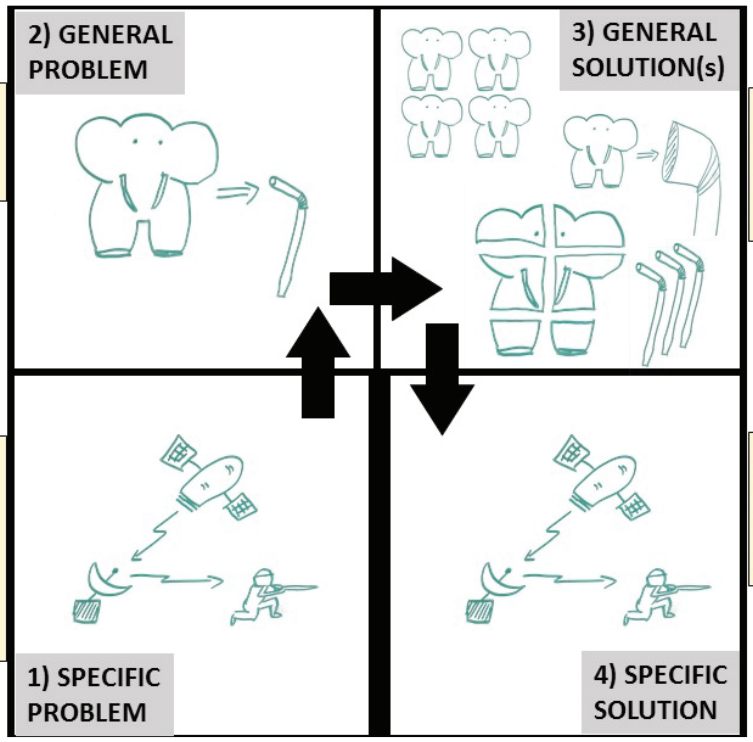
TRIZ Prism Tool | Example



*This **large object** does not fit through this **small aperture.***

*Use **smaller versions** of object.*
*Use **larger apertures.***
***Divide** large object into pieces.*
*Use **multiple apertures.***

*This **satellite image file** is too large to send to a **special operations soldier in Afghanistan** using the very **limited bandwidth** available.*

*Allow soldier to request **small image chips of specific areas** rather than entire satellite image.*

TRIZ Prism Tool | Worksheet

2. General Problem	3. General Solution
START HERE	
1. Specific Problem	4. Specific Solution

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