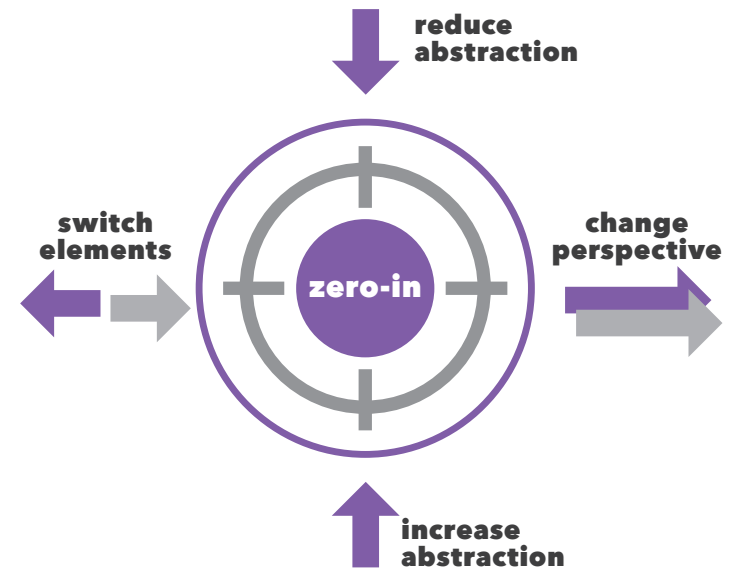




The *Invisible Solutions* Lenses Cheat Sheet

When questions are overly broad, use the **Reduce Abstraction** lenses. When they are overly specific, use the **Increase Abstraction** lenses. The **Switch Elements** lenses are useful when there are multiple parameters associated with a problem. The **Zero-In** and **Change Perspective** lenses should always be considered.



Reduce Abstraction

- 1. Leverage:** What is the one factor that will have the greatest impact? What gives us the greatest leverage in solving this challenge?
- 2. Deconstruct:** What are the parts or components of this? What are the steps of the process? What are the different segments?
- 3. Reduce:** How might lowering our goals and expectations give us a better result or create new opportunities for growth? How can simplification increase usability and accessibility?
- 4. Eliminate:** How can this be eliminated? Instead of adding features, what features can you remove?
- 5. Hyponym:** Is there a more specific instance of a word that can replace the one originally chosen?

Increase Abstraction

- 6. Analogy:** What is this like? Who else has solved a problem like this?
- 7. Result:** What does this make possible? What is the desired outcome?
- 8. Concern Reframe:** How can we take a progress-blocking statement and convert it into a question that starts with "How can we...?"
- 9. Stretch:** Are our challenge criteria stretched enough? Are we shooting for a high enough goal?
- 10. Hypernym:** How can we replace a word in the challenge statement with a less specific instance of the one originally chosen?

Change Perspective

- 11. Resequence:** How can we delay a decision until later in the process when we have more or better information? How can we make a decision earlier in the process, before we have all the necessary information? How can we perform multiple tasks in parallel?
- 12. Reassign:** Who else could perform this task? How can we genericize the question so that it does not imply anyone in particular? How else might this task be accomplished (e.g. via automation)?
- 13. Access:** How can we change ownership words to “access” words, such as rent, subscribe, lease, or use?
- 14. Emotion:** How can we shift from corrective words such as “improve,” “fix,” or “reduce,” to a more aspirational goal? How can we reframe the challenge in a way that stimulates solvers from an emotional perspective?
- 15. Substitute:** How can we swap out one or more words in the problem statement for different terms?

Switch Elements

- 16. Flip:** How can we turn the problem upside down by improving a different factor?
- 17. Conflicts:** How can we design the challenge to allow for and embrace conflicting attributes?
- 18. Performance Paradox:** What can we focus on other than the outcome?
- 19. Pain vs Gain:** What is the pain we need to solve? What might be lost if we don’t solve this problem?
- 20. Bad Idea:** How can we turn a bad idea into a good one? What will give you what you don’t want—and then do the opposite?

Zero-In

- 21. Real Problem:** Do we really know the underlying problem we want to solve? Are we solving the root cause of the problem?
- 22. Real Business:** What business are we really in? Who are our real competitors? What new technology can make us irrelevant?
- 23. Insights:** What data would help reframe the question or provide insights into better solutions?
- 24. Variations:** If your question implies that all customers/situations are treated the same, ask, “How can we address exceptions or rare cases in different ways?”
- 25. Observation:** Instead of asking our customers what they want, how can we observe them?

The 25 Lenses are from the book *Invisible Solutions* by Stephen M. Shapiro.



You can learn more about the book at:
www.InvisibleSolutionsBook.com.

You can download your own copy of this cheat sheet at:
www.InvisibleSolutionsResources.com.

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