



DEVELOPING YOUR PROBLEM-SOLVING SUPERPOWER

A STARTER PACK

What is a Problem Solving Superpower Starter Pack?



Almost every superhero has some superpower that sets them apart. And, just occasionally, these powers are the kinds of skills or abilities that the rest of us can acquire with enough guidance and practice. **Problem solving** is one of those powers. In this starter pack we share seven of our favourite problem solving tools to help you unlock that superpower.

But this starter pack comes with two warnings. The first is that getting started is harder than you might think. This is because most of us have an exaggerated sense of our ability to understand and solve problems. In reality, we tend to fall back on those techniques that have worked for us in the past, and we rarely see the need to update how we approach problems. In this regard we are often unwittingly stuck inside ideas that we already have. The second warning is that once you do the work and unlock your problem solving superpower, you will find yourself using it to question everything. You have been warned!



We can not solve our problems with the same level of thinking that created them.

- Albert Einstein

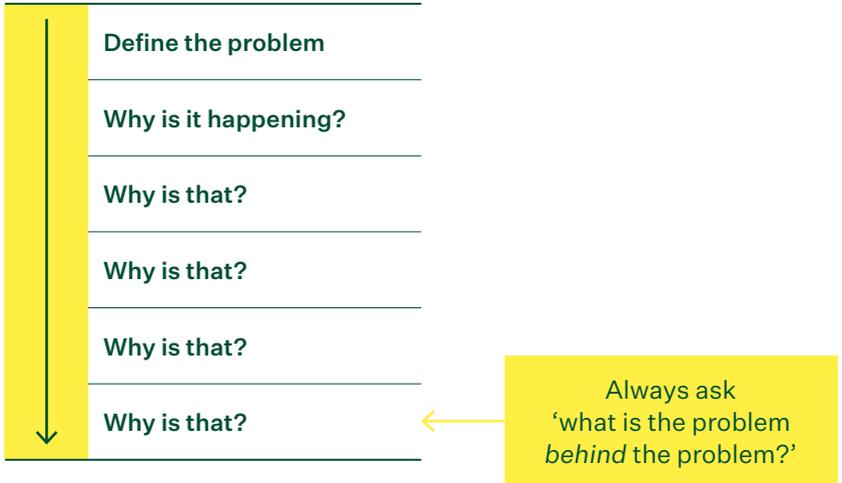
1

Understanding the Problem: The Five Whys



What is the real problem you're trying to solve? Understanding the real problem– the problem behind the problem –will help you identify solutions that work. The 'five whys' approach is a way of making sure you don't get distracted with a quick fix and, instead, understand the root cause of your problem.

And it couldn't be simpler: you start with your immediate problem definition and you ask why. Then you repeat that for each step to identify the problems behind the problem to ensure you tackle the real cause.



If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.

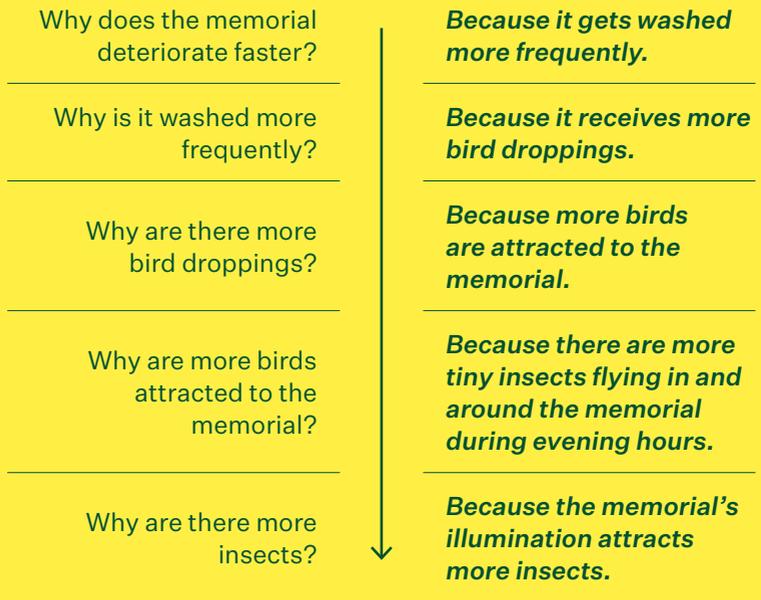
- Albert Einstein

Understanding the Problem:

The Five Whys: Example.



The Lincoln Memorial in DC is deteriorating faster than expected



We started out thinking the solution was to stop washing the memorial so much, and we ended up seeing we really need to **change how we illuminate it at night.**

2



Flip the Problem: Change the Frame

The way we define (or ‘frame’) the problem shapes the kind of solutions we come up with. By changing the frame, we can dramatically change the range of possible solutions.

Try this: **What is the sum of 5 plus 5?**

Now try this: **What two numbers add up to 10?**

The first question has only one answer but the second has many (did you include negative numbers and fractions?).

When thinking about a problem, change the frame. Try asking: How do threats become opportunities? How can our weaknesses become our strengths? How do our flaws become features?



If a problem can't be solved within the frame it was conceived, the solution lies in reframing the problem.

- Brian McGreevy

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Deconstruct the Problem: Ask a Naïve Question



One of the greatest challenges in solving problems is getting beyond deep-seated assumptions about how to define the problem or how to approach a solution.

One way to overcome this is by asking naïve (or dumb) questions. Try to identify what everyone else is taking for granted and start asking them why. Ask them at the beginning of the problem solving journey and then often as you move along it.

It sometimes helps to pretend you are new to the industry, the problem, or the situation.

For extra mastery, think about the assumptions everyone around you is making about why people (such as your customers, your stakeholders, or your staff) are thinking, feeling, or acting the way they do.

Some good places to start include:

- What is our customer actually buying from us?
- Why do they buy from us? Why do they come back?
- How do we know we're doing the right thing?
- Do we really look different from our competitors?

REMEMBER:
THE SMARTEST PEOPLE ASK THE SIMPLEST QUESTIONS



Don't be afraid to ask the 'dumb' question, everyone else will be relieved you had the guts to ask!

- Sheryl Sandberg

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Check Your Assumptions: What Don't You Know?



One of the problems with being human is that we all tend to think that we're smarter than we really are. This delusion helped keep us alive and allowed humans to evolve from the Rift Valley into Silicon Valley. But it also means your brain is wired to look for confirmation of your beliefs and find ways to dismiss anything that contradicts what you already believe. Which means whenever you're trying to solve a problem you need to think hard about what you don't know.

	KNOWNNS	UNKNOWNNS
KNOWNNS	Known Knowns Things we are aware of and understand	Known Unknowns Things we are aware of but don't understand
UNKNOWNNS	Unknown Knowns Things we understand but are not aware of	Unknown Unknowns Things we are neither aware of nor understand

Try to remember Christopher Hitchens's dictum that "what can be asserted without evidence can be dismissed without evidence". Or, without evidence, we're just trading opinions. By being clear about what you do and don't know, you'll be better equipped to identify the assumptions that are masquerading as conclusions.



Tell me what you know and tell me what you don't know. Only then tell me what you think.

- Colin Powell

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The Permission to be Creative: **What Would Steve Jobs Do?**



One of the challenges with problem solving is that organisations tend to think about it as a serious endeavour. But when we reframe problem solving as a creative act, many other approaches appear. For instance, back in the 1980s Edward de Bono pioneered the idea of ‘Six Thinking Hats’ to bring different personae into problem solving. A similar, but more enjoyable technique, is to ask what famous business people, or politicians, or characters from your favourite books would do. Try asking:

- **What would Steve Jobs do?**
- **What would Winston Churchill do?**
- **What would Michelle Obama do?**
- **What would Jimmy Buffet do?**

This approach is one way to give you permission to be creative and to offer ideas that you might otherwise feel uncomfortable putting forward.

And before you reject this idea as flippant and trivial, have a look at the next page:



It's more fun to be a pirate than to join the Navy.

- Steve Jobs

6

Never Waste an Idea: **Yes, Yes, and Yes.**



The sixth tool is for when you are generating solutions to your problems.

It borrows an idea from improv comedy and simply involves saying “yes, and...” when someone suggests a way forward.

This idea works because we’re all prone to closing ideas too soon (see the seventh and last tool) and we’re too quick to judge an idea’s merits. The “yes, and...” approach means affirming and building on what is offered. It reminds us that every idea has the potential to take us somewhere else.

The other thing “yes, and...” will do is show you how often your immediate response to suggestions is either “no” or “but”. As Scott McDowell noted, using “yes, and...” will help put a little distance between your brain and your ego. And that little distance might just be enough for a really good idea to sneak through.



Mā pango, mā whero ka oti te mahi.

– Maori proverb

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Slow Down



The last of the tools in our Problem Solving Superpower Starter Pack is the instruction to slow down. Your first idea or argument is rarely your best but in your rush for certainty you might stop looking for better ideas. This tool takes its inspiration from skydiving, where the mantra is “slow is smooth, and smooth is fast”. It also reminds us that things that come to you easily need careful scrutiny.

Daniel Markovitz calls this ‘The Conclusion Trap’ , precisely because our rush to conclusions traps us into poorer decisions. One easy way to use this tool is not to reject your first conclusion but merely ‘park’ it and then spend your energy thinking about better responses.



For fast acting relief, try slowing down.

- Lily Tomlin



Remember:
if you can change
minds, you can
change **anything**

As its name suggests, this Problem Solving Superpower Starter Pack is about helping you find ways to develop your problem solving skills. It starts from the assumption that every product, service, method, and aspect of your job can be done differently and better if you take the time to think how. Remember, if you can change minds, you can change anything.

And especially when it's your own.

About Research First

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- “ 10 out of 10 – Research First give me consistently high-quality service and outputs, and they reliably deliver by due dates.
- “ Research First understood our brief, was efficient in their turnaround and provided a report that was easy to digest.
- “ We were just totally impressed with the service, advice and report we received. From initial meeting to final product.
- “ Professional, engaging and enthusiastic- presented the information very well, and had some really good questions and insights for us to think about.
- “ To the best of my knowledge, this is the first time that we have really got the views of the silent majority down on paper.
- “ Anybody can do research, but few can interpret data and present it in a format that is relevant to me... (Research First) does that.

“

THE IMPORTANT THING IS NOT TO STOP QUESTIONING

- Albert Einstein

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Marketing Association

www.marketing.org.nz

69 St Georges Bay Rd
Parnell, Auckland 1052

Phone: +64 9 361 7760



RESEARCH FIRST

www.researchfirst.co.nz

Christchurch. Wellington. Wanaka.

Head Office – 23 Carlyle Street,
Sydenham, Christchurch 8140

Phone: 0800 101 275