PROBLEM SOLVING

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> *Problems are only opportunities in work clothes.*

Henry J. Kaiser

Industrialist and builder

The Map

Prevailing Scenarios

Most people are smart enough to solve problems effectively

Most people know how

However, most people don't do it right

Clip

They don't define the problem and thus jump to conclusions

They go to the other extreme and analyse it to death without trying out anything

Rely too much on themselves when multiple people usually have better chance of solving the problem

Unskilled

Not a disciplined problem solver; may be stuck in the past, to what worked before

Comes back many times to rework the problem a second time

May be *fire-ready-aim* type

May get impatient and jump to conclusion too soon

May not stop to define and analyse the problem; doesn't look under rocks

May have a set bag of tricks and pull unfit solutions from it

May miss the complexity of the issue and force-fit it to what most comfortable with

Unlikely to come up with the 2nd and better solution

Unlikely to ask penetrating questions

Skilled

Uses rigorous logic and methods to solve difficult problems with effective solutions

Probes all fruitful sources for answers

Can see hidden problems

Excellent at honest analysis

Looks beyond the obvious and doesn't stop at the first answers

Overused skill

May tend toward analysis paralysis

May wait too long to come to conclusion

May not set analysis priorities

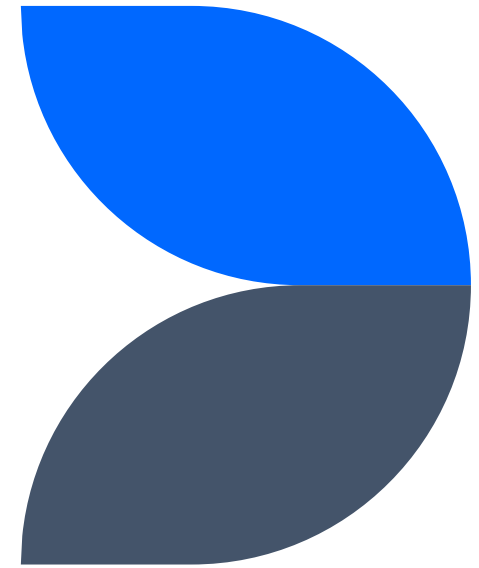May get hung up in the process and miss the big picture

May make things overly complex

May do too much of the analysis personally

Some Causes

- Disorganised

- Get emotional

- Impatient

- Jump to conclusions

- Perfectionist and need for too much data

- Rely too much on historical solutions

Some Remedies

1. Where to Start?

❑ **Define the Problem**

- Stop and first define what the problem is and isn't

- Figure out what causes it

- Keep asking why and see how many causes will emerge

- Create organising buckets to see more connections

- Look for patterns in data; don't just collect information

❖ **Allot at least 50% of the time to defining the problem**

2. Result Driven?

❑ **Show some patience**

- Style that chills sound problem solving the most is result-driven, time-short and impatient person

- Studies have shown that on average, solution somewhere between the 2nd and 3rd one generated is the best

- Discipline self to pause for enough time to define the problem better and always think of three solutions before picking one

❖ **Slow down**

3.   Already made up your Mind?

❑ **Steer clear of biases**

- Some people have solutions in search of problems!

- They pre-judge what the problem is without stopping to consider the nuances of this specific problem

- Do you state as facts things that are really assumptions or opinions?

- Do you generalise from a single example?

❖ **Even if your solution fits, are you right about the problem?**

4. Always using same solution?

❑ **Get out of your comfort zone**

- Many busy people rely too much on solutions from their own history

- They see sameness in problems that isn't there

- Beware of "*I have always*...." or "*Usually, I....*"

❖ **Always pause and ask: Is this really like the problem I have solved in the past?**

5.   Too Self-reliant?

❑ **Ask others for input**

- Many don't delegate, listen or ask others for input

- Even if you think you have the solution, ask others for input to make sure

- Set up a competition between two teams, both acting as your advisers

- Call a problem solving meeting and give the group 2hours to come up with something that will at least be tried

❖ **Many try to do too much themselves**

6. Perfectionist?

❑ **Balance perfection with action**

- Perfectionism is tough to let go of because most people see it as a positive trait

- Crippling need to make fault free decision, avoid risk and criticism

- Decrease need for data and to be right all the time slightly weekly until a reasonable balance between thinking it through and taking action is reached

❖ **Beware of analysis paralysis**

7. Overwhelmed?

❑ **Break it down**

- Sometimes the key to bigger problem solving is to make them into a series of smaller problems

- Get instant feedback, course correct, get a little more data, move forward a little more until bigger problem is under control

❖ **Be an incrementalist**

8. Need a new approach?

❑ **Learn more problem-solving skills**

- Ask more questions
- To get fresh ideas, don't speedboat
- Complex problems are hard to visualise
- Use of pictorial chart technique called Storyboard
- Use of fishbone diagram
- What's the worst case scenario?
- What are your undiscussable? Bubble them to the surface

❖ **There are different ways to think through and solve problems**

9. Avoiding risks?

❑ **Take calculated risks**

• Develop a philosophical stance towards mistakes and failures in problem solving

• Most innovations fail; Most proposals fail; Most change efforts fail; Initial solutions to complex problems do not work

• Best tack when a solution doesn't work is to say "*What can we learn from this*?" and move on

❖ **The more tries, the more feedback, and the more chances to find the best answer**

10. Disorganised?

❑ **Get organised!**

- Involves going through checklists, looking under rocks, and probing all fruitful sources for answers

- If disorganised, you need to set priorities

- Focus on the mission-critical few

❖ **Don't get diverted by trivia**

Problem Solving

Involves using rigorous logic and disciplined methods

> *Problems are to the mind what exercise is to the muscles, they toughen and make strong.*

Norman Vincent Peale

Preacher and Author

Thank you!

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