

Five Kinds of Gaps and What to Do about Them

Fred Nickols

A generally accepted notion in the world of work is that a problem exists when there is a gap between *what is* and *what should be*, and what to do about it is not clear. A less widely known view is that a gap can come about in five different ways, and how it comes about has a lot to say about figuring out how to close it.

In this brief paper, I'll take a look at those five gaps and the three ways of figuring out what to do about each of them. First, the five gaps (see Figure 1).

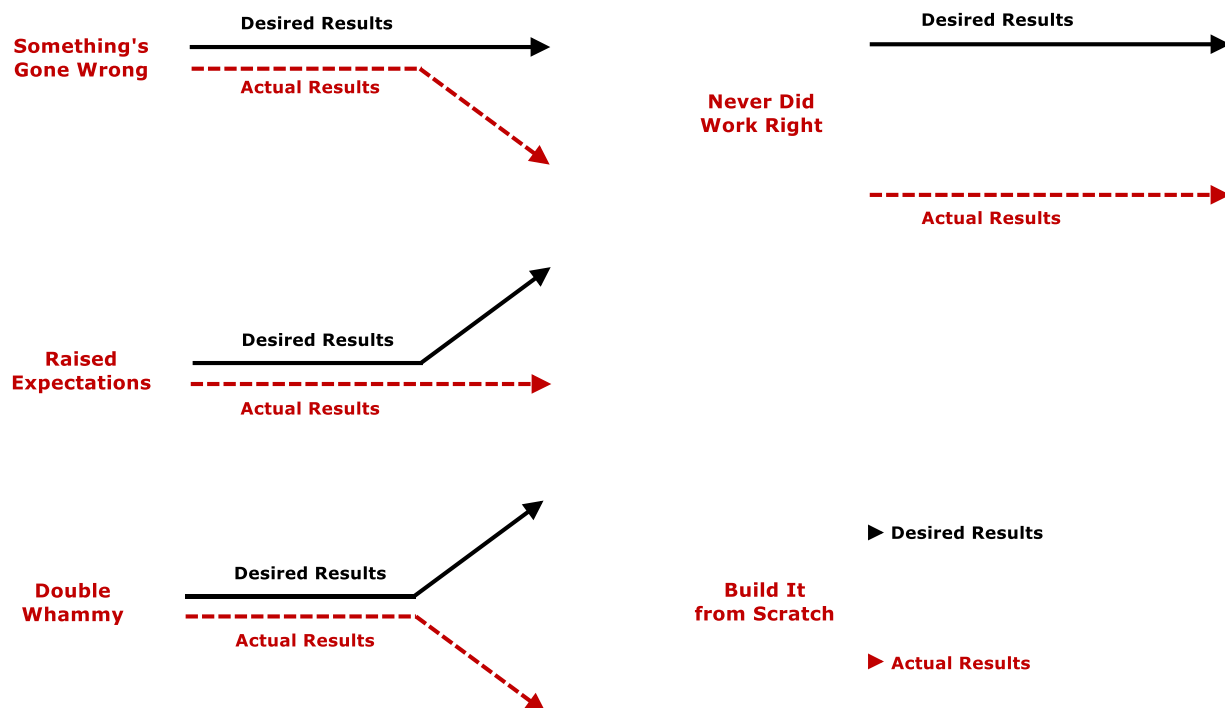


Figure 1 – Five Sources of Gaps

1. **Something's Gone Wrong.** In this case, things are going along just fine and then there is a sudden deterioration in results. The obvious thing to do is find the cause and fix it. This calls for a troubleshooting approach, one known to generations and legions of technicians as "fault isolation" or "troubleshooting."

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2. **Raised Expectations.** Here, there is no deterioration in results; instead, the bar is raised. New and higher expectations create the gap. There is no cause to find and fix. Some kind of change to existing systems and arrangements is required.
3. **Double Whammy.** A sudden deterioration in results is coupled with raised expectations. It might be the case that finding and fixing the cause will take care of part of the problem but to completely close the gap will require other measures as well.
4. **Never Did Work Right.** In this case the gap has always existed. The desired results were never achieved. Some practitioners will set off in search of “root causes” for this failure to perform. Other will conclude that an entirely new system is required to close the gap.
5. **Build It from Scratch.** The gap is brand-new, the result of setting expectations for the very first time. There is no system to achieve them and there is no system to troubleshoot, no fault to find. This is a basic engineering problem; the required system must be built for the first time.

The five gaps just outlined suggest three basic problem-solving approaches, which I will sum up as *Repair*, *Improve*, and *Engineer*. Each is briefly described in Figure 2 below.

Three Problem Solving Approaches			
Approach	Repair	Improve	Engineer
Objective	Put things back the way they were	Improve upon existing arrangements	Create new, far superior arrangements
Starting Point	Presenting symptoms	Existing systems and arrangements	Required results
Focal Point	Causes and corrective measures	Constraints, restraints and modifications	Required structure (e.g., processes)
Core Process	Troubleshooting	Analysis	Design
Time Orientation	The Past (restoring what was)	The Present (improving on what is)	The Future (creating what should be)
Politics	Blame	Change	Innovation

Figure 2 – Three Problem Solving Approaches

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As Figure 2 makes clear, an accomplished problem solver has to be a master of three basic and very different approaches to solving problems encountered in the workplace. It also makes clear that a search for the “cause” of a problem isn’t always a relevant undertaking and in at least three out of the five cases, is completely irrelevant. Lastly, it can be the case that the search for cause is indeed relevant but, once found, it can’t be fixed, so other measures are called for.

The bottom line here is that you need to take the concept of “cause” with a grain of salt and, in addition to solid troubleshooting skills, you also need the skills and abilities need to refine and improve existing systems and arrangements, as well as design or engineer them from scratch.

Further Reading about Solution Engineering

You can access the papers listed below by clicking on the title.

1. [Choosing the Right Problem-Solving Approach](#)
2. [Forget about Causes, Focus on Solutions](#)
3. [Investigation and Intervention: The Two Phases of Solution Engineering](#)
4. [Reengineering the Problem-Solving Process](#)
5. [Solution Engineering: An Introduction](#)
6. [Solution Engineering in Action: A Really Good Example](#)
7. [Ten Tips for Beefing Up Your Problem-Solving Toolbox](#)
8. [Three Cases of Figuring Out What to Do](#)
9. [What’s Your Intervention Logic? – The Links to the Bottom Line](#)

More Information

You can contact me, Fred Nickols, by e-mail at fred@nickols.us and visit my articles web site at www.nickols.us. There, you will find much more information about problem solving and Solution Engineering.