



## Defining the Real Problem is 90% of the Solution

### *4 Steps - Get the Formula Down Cold*

By Jean Van Rensselar

Albert Einstein said that if he had one hour to save the world, he would spend 55 minutes defining the problem and only five minutes finding the solution. In fact, zeroing in on the right problem is so important that you could say a perfectly defined problem is not even a problem anymore.

Consider this: A large municipal library had signs posted in its parking lot that said the lot was for library patrons only. Often, downtown shoppers ignored the signs – especially on weekends and in the summertime – and parked there anyway. The result was that library patrons often couldn't find a place to park.

The library board considered a number of options and finally decided to pay someone to police the lot – imposing stiff penalties for violators. This helped, but it didn't solve the problem. The problem wasn't shoppers parking in the library lot; the problem was the lack of parking downtown. Once the city built a parking garage, the problem was solved.

Here's the deal:

- The apparent problem is almost never the real problem.
- If you dig deeper, you'll get to the real problem.
- Once you discover the real problem, you're very close to solving it.

Defining a problem involves more than just identifying a problem or choosing between alternatives. You can break it down into four steps:

1. Identify the apparent problem
2. Identify apparent facts and assumptions
3. Rethink and revise apparent facts and assumptions
4. Identify the actual problem

## 1. Identify the Apparent Problem

Recognizing that a problem exists is the first step. In fact, you need to ask yourself if you really have a problem. Writing down the apparent problem forces you to think about it in concrete terms. Often people keep the problem in their heads as a vague idea for so long that they forget what they are actually trying to solve. To maximize brainpower:

- State the problem in the positive. Experts say that negative sentences are more difficult to process and less motivating.
- Format the problem as a question – this makes your brain think of it as less of a problem and more of a challenge - our brains love challenges.

Don't worry about perfection – think of it as taking modeling clay (the problem) out of a can (your brain).

Write down the apparent problem.

## 2. Identify Apparent Facts and Assumptions

Here you're deconstructing the problem. If you've ever enjoyed taking apart mechanical objects to see how they work, this will be fun. Along the way, you'll find that some of the facts and assumptions will be components of other problems your company faces as well.

### Apparent Facts

Because – theoretically – they are not debatable, facts include such things as statistics, product specifications, and details about events that occurred in the past. Look at fact gathering as a discovery process. Be open to what you might find and don't assume you know the answer. These questions will get you started:

- Did something similar happen before?
- What was the result?
- Was it resolved – if so, how?
- Is industry data available?
- Can I create the facts that I need?

You can create facts through research – broadly surveying your customers, interviewing individual customers in-depth, conducting meetings with front-line employees, etc. If you stay focused on the facts that relate to your problem, you'll find that relevant facts will lead to other relevant facts until you reach a clear end.

List the apparent facts.

### Identifying Assumptions

Look for assumptions in the problem's categories and main concepts, then:

1. Look for major gaps in your problem's argument. Identify what's missing and ask why.
2. Play devil's advocate. Think about your problem's argument from the opposite point of view. Identify what's missing and ask why.

## Assumptions

One difference between facts and assumptions is objective proof. Another is that facts are fairly easy to recognize while assumptions are often buried. Remember to focus only on assumptions that relate to your problem. Keep a notebook with you and write down assumptions as you think of them. The info in the box will get you started.

List the assumptions.

## 3. Rethink and Revise Facts and Assumptions

Try to be open to the idea that assumptions may be more valid than facts. Review each fact with the following in mind:

- The source
- The approximate date it became a fact
- Current issues that may invalidate the fact

For example, if one of your facts is, *The number one concern of our high-end customers is saving time.*

- The source: a survey of 72 of your customers – 45 of which said they have disposable income
- The approximate date it became a fact: the survey was conducted in 2003.
- Current factors that may invalidate that fact: a slower economic climate, the aging of your client base, etc.

Think of ways your assumptions could be wrong. Ask yourself and others whether these assumptions fit the realities you experience. You'll find that many of the assumptions are the result of conditioning - *that's the way we've always done it* - so fundamental that no one ever challenges them.

The key is actually getting outside the box - not just clinging for dear life to the lid. There are a number of great brainstorming techniques. Revise only the invalid facts and assumptions.

## 4. Identify the Actual Problem

Use the information you've just gathered (valid facts and assumptions) and revise the problem. Keep the final problem statement simple. Now that you've done all this work, solving the actual problem will be a walk in the park.

## An Example

Consider the following situation - presented here in brief:

Your customers have been complaining that your online parts catalog is too difficult to use. Basically, it takes too long to find the parts they need, they often order the wrong parts, and sometimes they can't find their equipment in the catalog.

## The Apparent Problem

Since it takes too long for customers to find parts; they often order the wrong parts; and sometimes they can't find their equipment in the catalog - How can we change the layout of the online and print parts catalogs so that they are easier for people to use - while at the same time including more equipment?

## The Apparent Facts

- In the last 45 days, since you've been asking customer service to track the number of complaints, there have been 27 complaints about the online catalog.
- This number represents 0.09 percent of the people who have visited the catalog site in that period.
- The catalog has not been completely reformatted in 4 years.
- The font size and schematics have not changed in the last 4 years.
- The online catalog's font color was changed 9 months ago.
- The online and print catalogs have the same type sizes, the same schematics, and the same pieces of equipment, but not the same font color.
- No one has complained about the print catalog.

## Assumptions

- The people making complaints represent a cross section of customers.
- The type for the part labels is too small.
- The schematics are unclear.
- There aren't enough pieces of equipment in the catalog.

## Summary of Revised Facts and Assumptions

- There have actually been fewer complaints, but the percentage of complaints is higher.
- Sections of the catalog *have* been reformatted over the last 4 years – in fact, more than 80 percent of the content is new.
- Most of the people making complaints represent a specific demographic – welders.
- Since no one is complaining about the print catalog type size and the type is the same size as it is in the online catalog, the part label type size isn't the problem.
- Since no one is complaining about the print catalog schematics, which are identical to the online catalog, the clarity of the schematics isn't the problem.
- There are actually more pieces of equipment in the online catalog than there were last year, before people started complaining – lack of equipment in the catalog may not be the problem.

One original fact has glaringly stood up to scrutiny – namely that the online catalog font color was changed 9 months ago. It turns out, this was about the time customers started complaining. But most people haven't complained and welders make up a disproportionate amount.

## Actual Problem

*Although the font, size, and schematics do not need to be changed, and no more equipment needs to be added; the new type and graphics color might be a contributing factor for a specific demographic. How can we make accommodations without a complete online and print catalog redesign?*

## The Solution

After more research, it turned out that nearly all of people complaining had significant vision issues. Many were welders - who represent a large part of the customer base and are prone to color-related vision problems. While the complaints included the inability to find parts in the online catalog, after a little probing, it turned out that the copy and schematics were so hard to read that the searchers simply gave up.

Your company solved the problem by changing the font and schematic color from burgundy to black and increasing the power of the zoom tool.

- The cost of changing the font and schematic color and modifying the zoom tool - \$1,725
- The proposed cost of redesigning the online and print catalogs (and still not solving the problem) – upwards of \$85,000

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This example points to a key problem-solving issue. Often the people complaining about a problem aren't complaining about the actual problem – either because they don't know what it is or because they don't want to admit it for some reason. In this case, it never occurred to the complainers that the font color was the problem because they never knew - or forgot - that the font color used to be black. In addition, they didn't want to admit they had vision problems, so they complained about the lack of equipment in the catalog instead of not being able to find it.

Accurately defining the problem saves frustration, money, and customer goodwill. But it also saves time. And for companies that want to stay on the cutting edge by bringing solutions to market as quickly as possible, time is the most precious commodity of all.

A wise person (advertising exec Paul Arden) said, "If you can't solve a problem, it's because you're playing by the rules."

### About the Author

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