

Listen to Your Customers; But Don't Believe Everything They Tell You

As quality professionals, we believe that quality is about meeting or exceeding customer needs.

And if we want to know what our customers need, what better way to find out than to ask them, right?

Reality is more complicated. It turns out that while many times this true, in other cases what customers tell us about their needs is incomplete, or worse, flat out wrong.

I started to understand this in the mid 1980's when I was working as a Systems Engineer in a company division that designed and built manufacturing automation systems for other divisions.

As a Systems Engineer, one of my tasks was to go to the target location and interview customers (we called them "users") to find out what they needed the systems to do. We would typically spend several weeks interviewing various people, asking them what they needed the system to do, and meticulously documenting what they told us. Then we wrote a "functional specification" which we reviewed with the customers in detail, clarifying and clearing up misunderstandings and confusion, going through multiple drafts before the customers signed off on the final specification.

But almost invariably, when we delivered the systems we wound up making last minute changes because the systems did not do what was actually required.

Over the intervening years, in other roles, I have experienced other situations in which customers were asked, directly or indirectly, what they needed, with similar results.

Today I hope to show you some of the reasons this occurs, and how to protect yourself from these kinds of consequences.

I believe customers are unable or unwilling to articulate their real needs for primarily three reasons:

- They think they know what they need, but they actually do not.
- They are unaware of their needs.
- They believe it will reflect negatively on them if they express their true desires.

Let's explore these ideas in turn.

Customers think they know what they need, but do not.

Identifying customer needs is in some ways similar to a visit to the doctor. The patient is experiencing some sort of symptom, indicative of an underlying problem. I understand that in medicine, this is referred to as the “chief complaint” or “presenting problem”. This is what the patient tells the doctor is wrong.

We need to understand that there are three key elements in this interaction:

The symptom

The diagnosis; the doctor’s conclusion about the underlying disease or condition responsible for the symptom

The prescription; the doctor’s recommended approach to treating or managing the condition

From a quality perspective, what the customer needs is the prescription. But it is the physician’s responsibility to reach a diagnosis and offer a prescription.

But in the practice of quality, like in the practice of medicine, sometimes the patient self-diagnoses or self-prescribes. If this occurs, then sometimes the treatment is inappropriate.

For example, a patient may be experiencing a fever. They can go to the doctor and say “I have a fever.” But they could also self-diagnose and say “I have the flu.” Or they could go even further and self-prescribe, saying “I need a prescription for Tamiflu.” They might even be right.

But patients aren’t doctors. So their diagnoses and prescriptions will frequently be wrong. A fever may be indicative of the flu, but it may also indicate a cold or even a bacterial infection. The doctor’s prescription would be different in each case. Similarly, the patient’s diagnosis might be correct, but the prescription wrong. They might request an antibiotic for flu, or Tamiflu for a common cold.

So when your customer offers a diagnosis, or a prescription, it is important to backtrack to the symptoms, and if necessary, to do the tests to identify the underlying condition. Then the onus is on the supplier to provide the expertise to identify a prescription that is appropriate to the condition.

But the specification said...

There is another common situation in which the customer may unwittingly provide misinformation about their needs.

As a supplier, you receive a request for proposal from a customer for a new item. The request is accompanied by a detailed specification. You provide a price, and get the order.

But when you ship the first lot of product, it's a disaster. The customer makes a complaint, followed by a claim. But your investigation shows that the product met the specification you were given. What happened?

When this occurs, it is frequently the case that the customer is trying to develop a second supplier for an item they have been purchasing for some time. Usually, one of two things has occurred.

The customer developed the specification for the item. The specification was inadequate, but the incumbent supplier has learned by trial and error to make a product that works in the application. They may have done so through tightened tolerances, unspecified operations, premium raw materials, etc. They may or may not have notified the customer, but the specification was not updated.

Alternatively, the customer may have developed their product or process around a product already offered by their incumbent supplier. They subsequently developed a "specification" for the item around a commercial data sheet provided by the supplier. Such data sheets are frequently much less detailed than the internal specifications used in production of the item.

This is fairly common practice for polymers and elastomers. Data sheets provide general ranges for a limited number of material characteristics. One such metric is melt index. The application may require that a number of other characteristics be controlled, such as molecular weight distribution, glass transition temperature, creep/stress relaxation, etc.

How can one protect oneself from this situation?

Be alert for specifications that seem too "loose". They may be.

Ask for samples, of either acceptable parts or finished items. (Being aware that this may not be possible because of contracts prohibiting disclosure or reverse engineering of the incumbent supplier's products.)

Ask if you are replacing an incumbent supplier. Discuss the specification with the customer in this context.

Make small trial batches for evaluation before shipping commercially.

Customers are unaware of their needs

This topic speaks not so much to what customers tell you that isn't correct, but what they fail to tell you that leads to dissatisfaction or missed opportunities.

Back in my days as a Systems Engineer, I saw this in primarily three ways:

When old problems resurface

This situation occurs when one product is intended to replace another. It seeks to address shortcomings the customer identified with the old one.

Our department designed a new control system for an industrial process, replacing another control system that had been designed a decade earlier. Shortly afterward, the system started experiencing failures that could have had catastrophic results. Fortunately, they were detected in time to avert disaster. Investigation revealed that the old control system had had safeguards built in to prevent this type of failure. But the customers who were interviewed in developing the specification were unaware of the problem because the old system had always prevented it from occurring.

An example of the type of thing we are talking about is if your new car didn't have a low oil pressure warning system. You may never have experienced low oil pressure, so you wouldn't think to list a warning system among your requirements for a car. But if you blew an engine, because your new car lacked the alarm, you would be very dissatisfied. You would probably not put a spare tire on your list of "must haves" for a new car, but if you had a flat and discovered there was no spare, you would be very upset.

The key point here is that any replacement system must have all the functionality of the one it is replacing, even if customers are not aware it is there, or don't think to mention it in interviews.

"When you eliminate your number one problem, you promote number two." (Gerald M. Weinberg, *The Secrets of Consulting*)

Customers tend to be focused on their most pressing current problem. So they will tell you about that. Number two and three may not be mentioned, if they are even aware of them. But when the most pressing problem is eliminated, they suddenly become acutely aware of number two. At best, you missed an opportunity provide greater satisfaction. At worst, you create dissatisfaction with your new product because it makes customers aware of a problem they didn't know they had.

“I didn’t know you could do that!”

This is somewhat related to the diagnosis/prescription problem mentioned earlier. Customers tend to think of solving problems in light of the products and tools available for solving them today. Henry Ford is frequently quoted as having said, “If I had asked my customers what they wanted, they would have told me ‘faster horses’.”

Customers are not typically aware of all the possibilities that technology offers. In the 1980’s, amateur radio operators had developed systems through which they could use hand-held portable radios to connect to a shared wired telephone to place calls while away from home. But the general public had no interest in the technology.

The last thirty years has seen one technical breakthrough after another that has enabled entire new classes of products that people didn’t previously know they needed. Cellular telephones, FAX machines, the Internet, Global Positioning Systems, Facebook, etc.

Kano Model

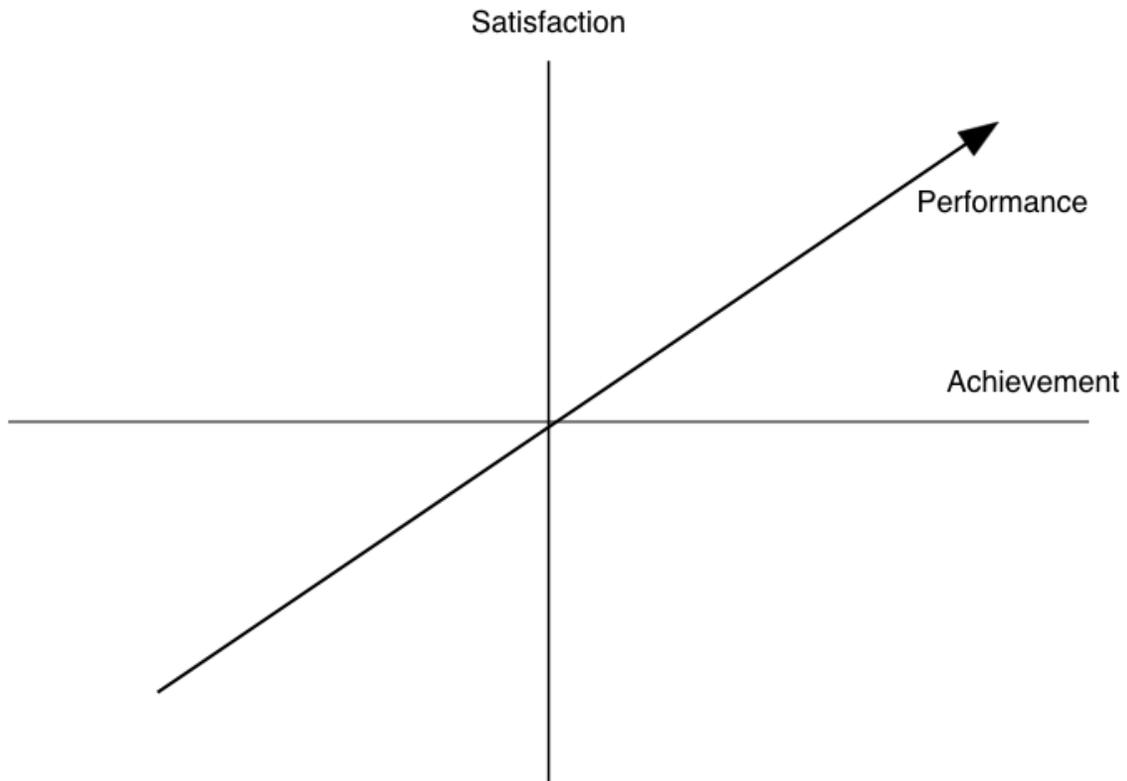
There is actually a theoretical framework developed by Dr. Noriaki Kano in the 1980’s that describes this phenomenon fairly well.

Dr. Kano describes three types of customer needs based on how the degree to which those needs are met impact the customer’s satisfaction with the product. Those are:

- Performance
- Basic
- Delighters

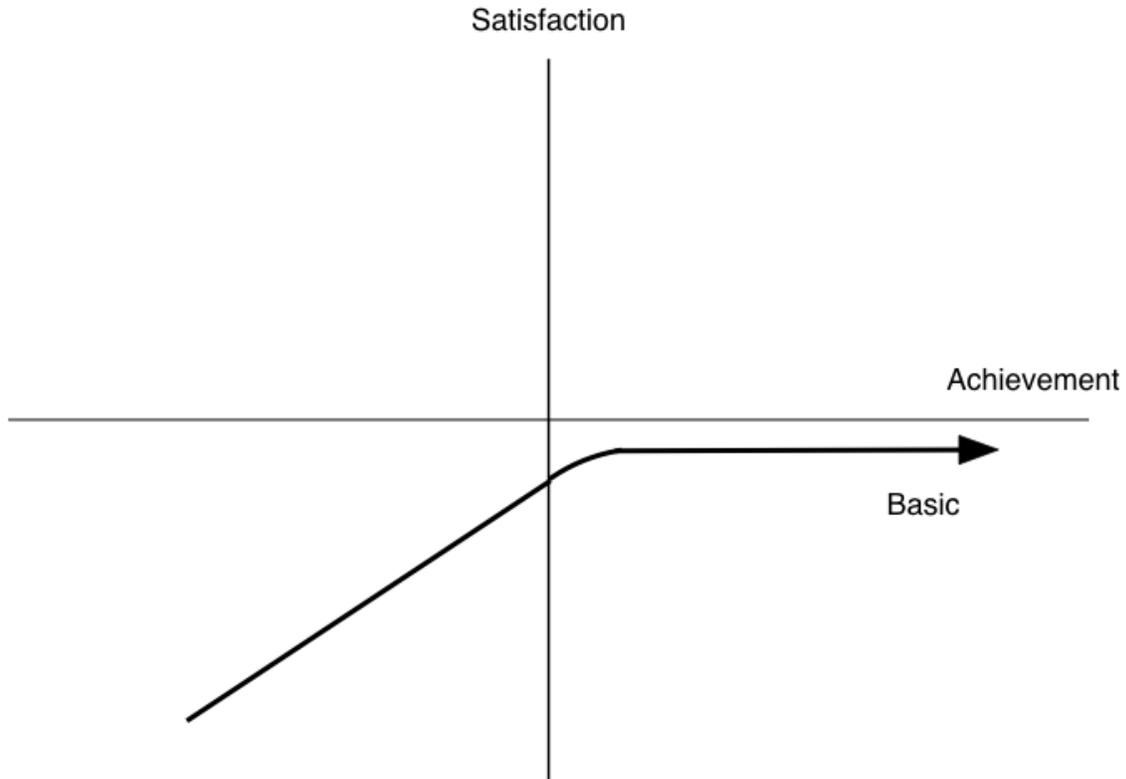
We can think of a two dimensional graph where increasing achievement in meeting a need is shown along the horizontal axis and increasing satisfaction is shown on the vertical axis.

Performance needs are those where a greater degree of meeting the need results in a greater degree of satisfaction, while a lesser degree of meeting the need results in dissatisfaction.



Performance needs are the needs that customers have at top of mind and will usually tell you about if you ask them.

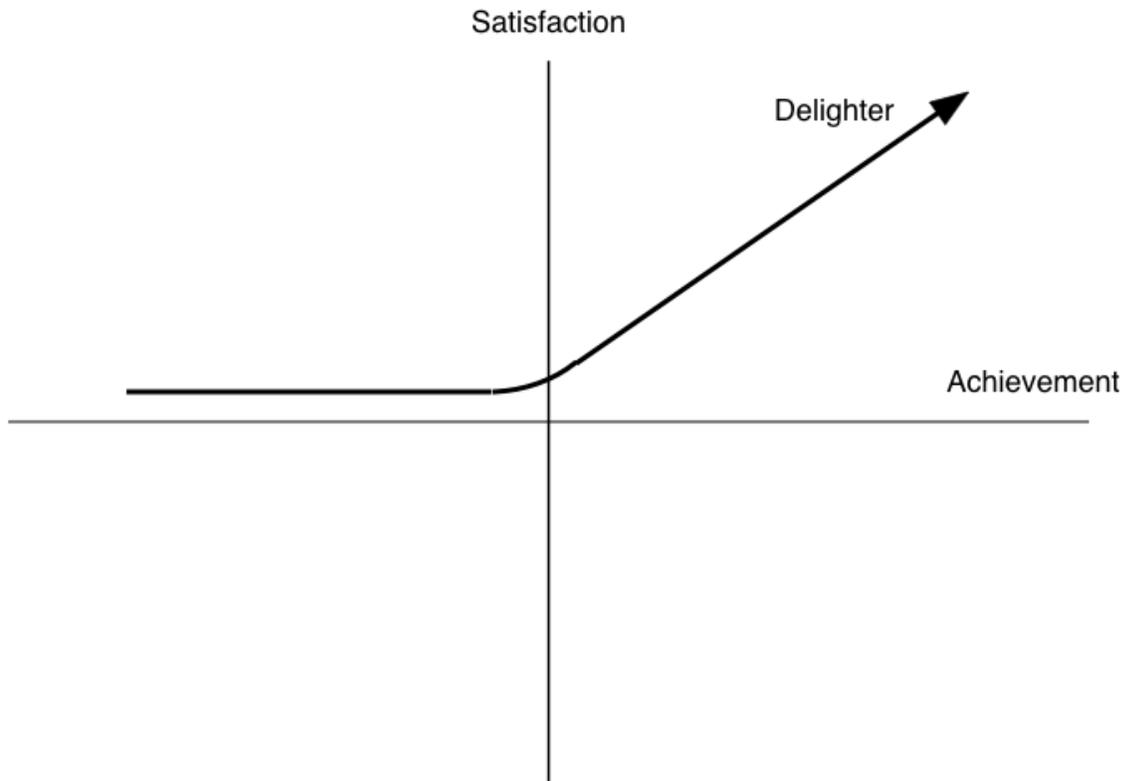
Basic needs are those for which increasing the degree of meeting the need does not result in higher satisfaction, but failure to meet the need results in increasing dissatisfaction.



Customers will frequently not tell you about basic needs because they are used to having these needs met automatically. These features are standard for every current product in the category.

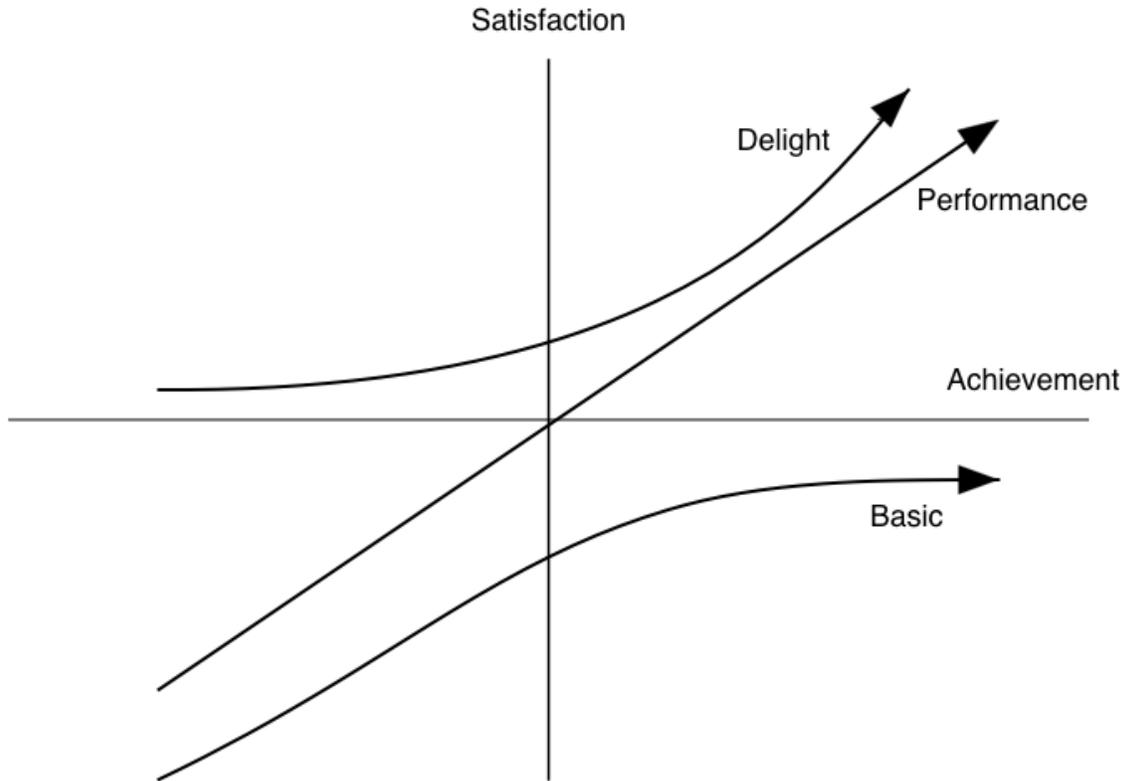
A simple example might be the spare tire of a car. A customer might not think to mention it, but imagine their disappointment on discovering there isn't one.

The third type of needs is called delighters. If these needs are not met, there is no dissatisfaction, however when the needs begin to be met, increasing satisfaction results. These needs are typically things that the customer was not aware of needing, or even aware of the possibility they could be met.



Marketers refer to these problems that customers are unaware of as “latent needs”. Customers don’t tell you about them because they aren’t consciously aware of them.

Combining the three diagrams, we have what is called the “Kano Model” of customer needs.



When we ask customers what their needs are, they will typically tell us about their performance needs, but not about the basic needs or delighters. We have to make special efforts to discover those needs.

For basic needs, we can examine the products customers are currently using to determine what features those products offer. A new product in any category will have to provide the minimum level of function provided by competing products.

Discovering delighters is particularly challenging. But there are workable techniques. These require us to focus not on what customers say they need, but on understanding what underlying problems the customers are trying to solve. This may involve interviewing customers to ask them directly about their lives. But it may also involve studying societal trends to understand the kinds of changes people are being subjected to.

Marketing researchers have also adopted techniques from anthropologists. Ethnography is a branch of anthropology that studies how people live their daily lives. Market researchers ask people to log their activities, or arrange to visit with people in their homes to observe them as they go about daily tasks. Some firms have even arranged to set up video cameras in private homes so they can observe people less obtrusively.

They believe it will reflect negatively on them...

This final category of things customers may not tell you about is a little bit touchy.

Human beings generally want to be favorably viewed by others, especially their peers. Therefore, they are reluctant to tell someone things that they think will reflect badly on them.

Social scientists who do survey research have a term “social desirability bias”. This refers to the tendency to answer survey questions in a manner that will be viewed favorably by others. People tend to over-report socially desirable behaviors and under-report socially undesirable behaviors.

While this tendency is particularly acute when dealing with sensitive topics like alcohol or drug use, sexual behavior, or criminal activity, it can also show itself in more mundane situations. People may inflate their interest in environmental or cultural activities and downplay their interest in income or status.

Again, there are techniques that can be used to minimize the impact of this problem.

Offer anonymity or confidentiality. People will be more forthcoming if they believe the responses will not be connected to them personally. Administer the survey or questionnaire by computer rather than an interviewer.

Use indirect questioning: Ask the respondent to answer from the perspective of another person or group. “What do you think the average person would do?”

Word questions as neutrally as possible. For example, speak of “fuel economy” rather than “carbon emissions”.

Market researchers use a metric called “derived importance” to assess where people’s stated preferences differ from their actual preferences. They identify the product characteristics they believe may be important to the customer. Then they ask a group of questions:

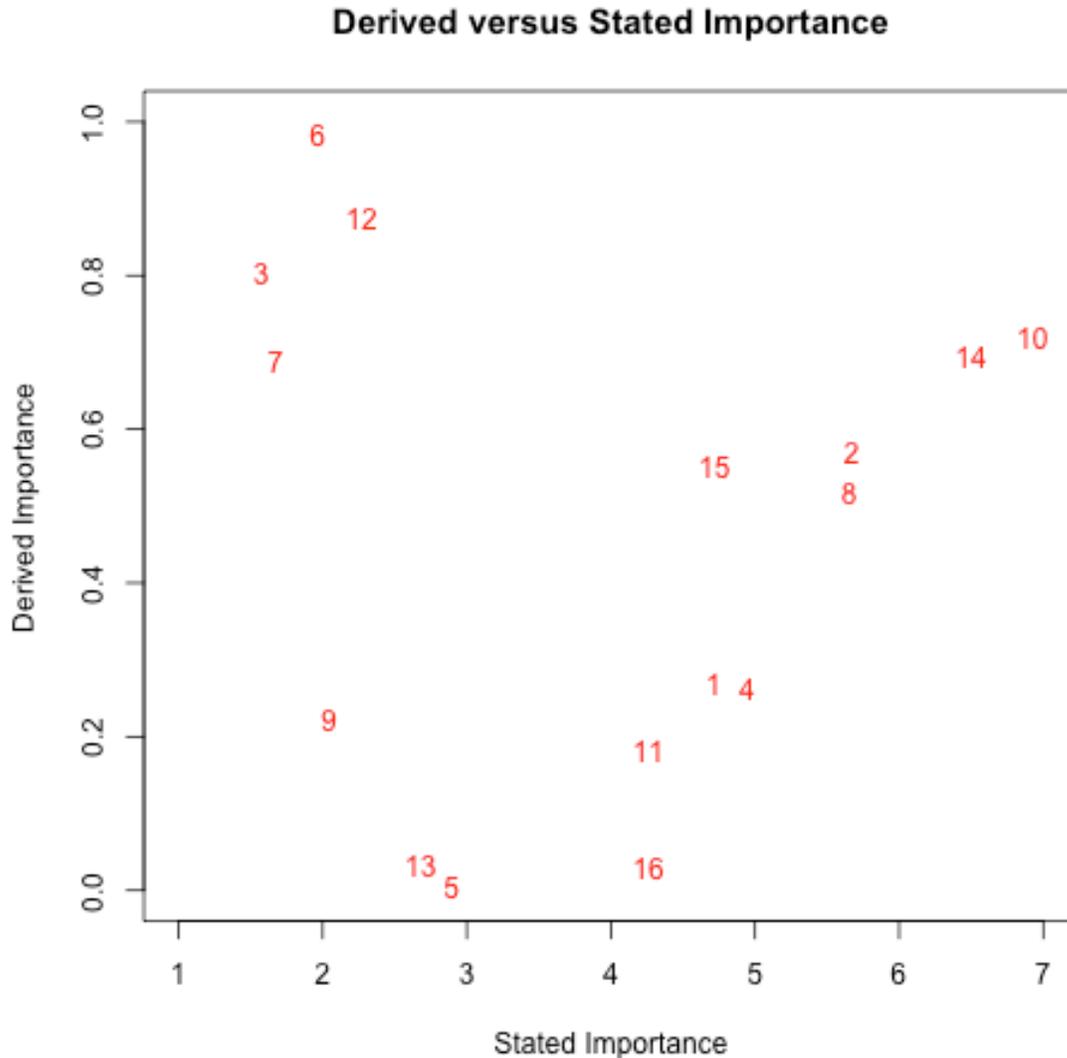
Overall, how satisfied are you with this product?

How important to you are each of the following characteristics?

How well does this product perform on each of these characteristics?

The responses to the “How important” question yields the “stated importance” value for each characteristic.

The “derived importance” is calculated by computing the correlation between responses to the performance question and the responses to the overall satisfaction question. The result is a graph like this:



This hypothetical chart gives us several insights:

Items 10 and 14 have high stated importance, and relatively high derived importance. They are very important.

Items 6, 12, 3 and 7 have low stated importance, but high derived importance. These are also important and represent opportunities.

Items 9, 13, and 5 are low on both stated and derived importance. If there is a need to take shortcuts or economize, these could possibly be compromised without negative consequences.

In Summary

Customers are unable or unwilling to articulate their real needs for primarily three reasons:

- They think they know what they need, but they actually do not.
- They are unaware of their needs.
- They believe it will reflect negatively on them if they express their true desires.

Countermeasures include:

- Try to identify the underlying customer problem, particularly when they offer a diagnosis or prescription. Bring expertise in diagnosis and prescription.
- Ask questions about customer generated specifications, particularly if you suspect you are a second supplier. Get samples. Make samples.
- Find out what they currently do. Include all the “basic” requirements being met by what they are currently using.
- Look for opportunities for delight: higher level underlying problem, ethnography.
- Take steps to avoid social desirability bias.