



Voice of the Customer in a Widget-Free World

Using word formulas to uncover, translate and deliver what customers want

By Robin Lawton

It can be hard to believe that simply misunderstanding what customers want could be cause for so much grief. Consider just the producer side of the equation for a moment. The third largest U.S. phone company lost about 6 million unhappy customers in 2009. One company lost 40% of its stock value and over \$12.6 billion in five years¹. Another lost more than one multi-billion dollar contract to rivals. A city government agency² incurred hundreds of thousands of dollars in unnecessary costs in a single year. The magnitude of the opportunity is eye-popping, cutting across every industry. This is not news to customers.

Misunderstanding customers is not a sign of stupidity. But habitual misunderstanding is a preventable disease, whose symptoms may be hidden. Effective remedies are not so easy to find. As the "silent scream of the customer" (SSOC) becomes more audible, many correction efforts get adopted. They can include beefed up marketing campaigns, adding more resources to "customer care", conducting more surveys and training lots of employees in statistical methods with Greek names. Results can be elusive.

Language is inherently ambiguous. The challenge in capturing the voice of the customer (VOC) is to eliminate confusion about who the customers really are and understand what they want so we can predictably create satisfaction and excitement. The author describes a refreshingly simple way to redefine work and use simple "word formulas" to eliminate ambiguity with math-like precision. Relevance is universal.

Reducing dissatisfaction does not cause satisfaction. The absence of death or illness does not mean patients are in good health. The good health of your enterprise can be dramatically enhanced by unambiguously understanding what customers want. But methods for capturing the voice of the customer (VOC) can feel like learning a foreign language.

My purpose here is to outline the understandable, practical steps you can take to proactively understand what customers want, even beyond what they may have told you. The objective is to enable you to actually give it to them by

design in the shortest time, at least cost and at most benefit for you. Users of Lean, Six Sigma, ISO-9000, Baldrige, satisfaction surveys, HCAHPS criteria and other approaches should find that the methods described here significantly strengthen what they are already doing.

¹ Ford Motor Company, 2001-2006. Management reported the loss of \$12.6 billion for 2006 alone.

² Louisville Metropolitan Sewer District saved over \$117,000 in the first quarter after learning the VOC.



Pain need not be the motivator for improvement. When an already well-performing medium-sized financial organization suddenly achieves new revenue growth of \$8 million within 90 days of asking its customers new questions, it is tempting to dismiss such results as just chance, magic or some kind of Ponzi scheme. But a highly regulated government agency with a captive customer base applied the same VOC methodology and jumped from 25th to #1 in performance, received a deluge of customer kudos and saved over \$20 million in two years. A renowned hospital's cardiothoracic department discovered that addressing the most important three patient priorities lead to a 50% cycle time reduction for post-operative care. Maybe this isn't just at fluke.

Over 85% of us in North America do not personally manufacture widgets. We are immersed in knowledge and service work. There is broad demand today for a simple way to know (1) who "the customer" really includes, (2) what questions to ask to uncover unstated priority wants, (3) how to prioritize and understand their answers and (4) how to define, deliver and measure success with knowledge work. The VOC concepts used today can be traced to Yoji Akao's work with Toyota in the 1960's. His 1978 book on the Quality Function Deployment (QFD) methodology³ introduced a valuable, but highly complex system. It is far beyond what most of us mere mortals outside of manufacturing need. This article describes a simple (but not simplistic) approach for the rest of us, practical for non-technical people at any level of an organization.

The challenge

How to uncover, translate, measure and deliver what customers want is a challenge linguistics can solve⁴. Language is inherently ambiguous. Ambiguity is the enemy to defeat when seeking understanding. You'd never tolerate multiple answers to the math problem, $7+5=X$. We've all had years of math training, so any answer other than 12 would be cause for immediate corrective action. To understand and apply the voice of the customer, we need to have a way to consistently reach the same level of unambiguous answer for each of the Four Key Questions shown in **Figure 2**. But first, let's illustrate the nature of the problem.

³ Despite QFD's thoroughness, there are two critical omissions: (a) how to determine who the customer is and (b) how to define and separate customer-desired outcomes from product functions and features.

⁴ The importance of language is often dismissed as "just semantics". Unfortunately, the exchange of one word for another is usually not a minor matter. Poor word choice is a known cause of marital disharmony. One reason attorneys are paid so much is that they must take great care to use precisely the correct language to avoid unintended ambiguity. Semantics involves the meaning of words. Linguistics addresses the structure of language. Attention to both remains a largely untouched challenge but is necessary to understand the voice of the customer.



If you asked any ten managers in your enterprise who “the customer” refers to, there is a strong probability you’ll get multiple answers. They can’t all be right. We usually do not respond with the same corrective vigor as a mathematical error would elicit. We tacitly accept those different answers as equally correct.⁵ If we only knew what the criteria for “correct” was, we could take constructive action to improve customer focus.

Customers and management of most enterprises (within industry, government, healthcare, education, etc.) will say that “good service” is a high priority. If this is true for your enterprise, ask those same ten managers and their employees two questions:

1. Is “service” something you believe is of strategic importance for you to provide?
2. What is a one-word definition for service?

The good news is you will likely find consensus on the importance of service. The bad news is that there may be very different definitions for what service means. Do we accept those different answers as equally correct? Yes, but we shouldn’t. Does it matter? Yes, if we actually want to achieve improvement in satisfaction, let alone loyalty⁶.

Figure 1 gives an abbreviated list of the most common definitions offered for service⁷. How can we possibly design for satisfaction or measure our success regarding things we can’t define? Reminds me of the old saying about how you know when something is of good quality, “I’ll know it when I see it.” Unless we have an organized way to uncover the VOC, the new saying is “I’ll know it when I hear it”.

⁵ Some organizations (and industries) use a single catch-all label in referring to customers. In healthcare it may be patients; in government it may be taxpayers; in education it is students; in insurance it is policyholders; in industry, it may be buyers who are considered the customer. These labels have the appeal of simplicity. They aren’t necessarily wrong at the enterprise level. The problem is that this simplicity breaks down under specific application. The majority of employees in an organization may rarely or never have contact with a customer external to the enterprise. But they still have customers for their work, even if they don’t make widgets. The methodology described here applies equally to everyone and eliminates ambiguity.

⁶ We will avoid the discussion of loyalty in this article except to note that this is a result some commercial enterprises pursue. It is easy to become cynical about the entire rationale for “loyalty programs”, which are decidedly of interest to producers but of limited value to customers. We have never found customers clamoring to become more loyal, though they do seek greater satisfaction. Strategies to improve loyalty may have nothing to do with improving customer satisfaction. They can have much more to do with keeping customers captive, either through enticement, rewards, coercion or constraint of choice. We will argue that understanding and uniquely satisfying customers is a sufficiently challenging pursuit for those wanting their customer to be, and remain, raving fans.

⁷ See how to solve problems with “service” in chapter 1, *Creating a Customer-Centered Culture: Leadership in Quality, Innovation and Speed*, R. Lawton and at www.imtc3.com.



Figure 1: WHAT SERVICE CAN MEAN

Accommodating	Cooperation	Fulfill	Provide
Anticipate	Correct	Giving	Quality
Appropriate	Customer	Happiness	Repair
Assistance	Delight	Help	Responsiveness
Attend	Deliver	Helpful	Results
Attentive	Effort	Helping	Satisfaction
Available	Empathetic	Listening	Satisfy
Care	Excellence	Meaningful	Success
Cater	Excite	Partnering	Supply
Collaborate	Experience	Personalized	Support
Communication	Fix	Please	Understanding

The ad hoc approach to uncovering customer priorities is, sadly, very common. In fact, when we've asked leadership of commercial enterprises what defined methodology is used to determine customer wants, there are several common responses:

- ***“Our Sales organization is responsible for that. They are in constant contact with customers”***. This doesn't answer the question. It is true that good sales people can tell you a lot about what current customers want. They may also insist that satisfying customers relies on establishing good relationships. That certainly has merit in principle. But it may take years to create those relationships and insights, using an ad hoc approach. However, a well-articulated, consistently applied method that even a brand new sales person can use would be of great value. The Boeing example below offers an illustration of the potential problem.
- ***“The Marketing department conducts focus groups and market research”***. It turns out focus groups rarely use a defined methodology that is consistently applied. And they often omit the most important questions, whose answers would reveal priorities customers have but are unlikely to volunteer. Marketing folks are not dummies. They are adept at identifying statistical patterns in mountains of data that can be useful for product and service improvement and development. But the question on the table concerns the methodology used to uncover priorities. Remember that customer preferences were studied extensively before the Ford Edsel was introduced. Ditto for ***ASQ Healthcare Update, published in collaboration with the ASQ Healthcare Division***

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New Coke. Both were market failures. All the statistical research in the world is no substitute for having a means for reliably uncovering what customer really want and will pay to get.

- **“We conduct regular surveys that tell us how satisfied our customers are”.** Surveys are notorious for asking things that producers care about but miss customer outcomes and other priorities customers most want satisfied⁸. It is well-known that the top priority of business travelers staying overnight in a hotel is “a good night’s sleep”. Good luck finding any questions about sleep on the hotel survey.
- **“Our sales figures tell us what customers like”.** The assumption here is that customers buy what they like. If you see your hospital emergency room overflowing with patients, would it be reasonable to conclude that they like being there? Perhaps they can’t get access to healthcare any other way. Think about this situation as a customer. When you bought that new PC, you may not have been overjoyed with Windows Vista. But that may have been your only choice. Sales numbers don’t necessarily tell us what customers want or like.
- **“Our contracts (and service agreements) define what customers want.”** Is it possible to deliver exactly what a contract specifies, yet produce results that do not result in customer satisfaction? You bet. See the Boeing story below.

These are just a few examples of what we can call **vital lies**. Vital lies⁹ are excuses, denials or unsupported assumptions about what is true. Whether actually stated openly or simply acted on as if they are true, vital lies permit us to comfortably continue doing what we’ve been doing.

Kick the habit

The first step with any significant change starts with the willing admission that change is needed. Whether we’re going to begin a Twelve Step Program or get on The Biggest Loser reality TV weight loss program, we have to admit we’ve got room for significant improvement.

⁸ See “Are Your Surveys Only Suitable for Wrapping Fish?” , K. Miller & R. Lawton, at <http://www.imtc3.com/library/articles.cfm> .

⁹ For a list of common vital lies, please see <http://www.imtc3.com/library/vitalLies.cfm>. The term was originally coined by Henrik Ibsen in his play, “Wild Duck”.



Next is to have the expectation that a “cure” of some sort is possible and within our control.

Once we’ve reached this state of readiness, here are the next steps:

1. Just say “no”. In our case, this means having zero tolerance for accepting multiple answers to the questions we’ve just asked above about who the customer is and what service means. Of course, to do this, we’ve got to know what the right answers are.
2. Challenge the vital lies. Your mantra can be, “show me the data.”
3. Refuse to accept ad hoc, undefined and inconsistently applied approaches to uncovering current and emerging customer priorities. If it’s as complicated as trying to understand why a derivative investment vehicle works, you should probably be skeptical of the purveyor. Even brain surgeons can describe how a delicate operation will be performed, what the steps are, where the risks are and what outcomes to expect.
4. Seek a VOC methodology which has the rigor of math, produces unambiguous answers and is easy for any employee to use in their normal daily work, even when their customers don’t buy something from them.
5. Embrace the remedy and apply it long enough to see meaningful, self-sustaining and quantifiable results. Without visible results proven to flow from the method used, you would have to conclude the method is not up to the task.

The VOC remedy we describe here is a core part of the customer-centered culture (C3) methodology. The C3¹⁰ principles and methods ought to be considered as essential as the math training we’ve all had. Few of us have had any linguistics training, though we may be accomplished poets or writers. Such skills can enable us to use a single word or phrase to invoke the beauty of multiple meanings. Likewise, humor (and/or embarrassment) springs from the understanding that a statement or single word, used in a specific way, may have radically different meanings. A simple example:

For sale: an antique desk suitable for lady with thick legs and large drawers.

Failure to launch

¹⁰ See *Creating a Customer-Centered Culture: Leadership in Quality, Innovation and Speed*, R. Lawton
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In the competitive world of business and the resource-constrained environment of government, healthcare and non-profits, there is nothing funny about the multiple meanings embedded in what customers tell us they want. It is equally dangerous to assume a silent voice is equivalent to no preference. Here is a simple example of how serious this can be:

“Pentagon sources [report] Lockheed Martin beat out Boeing for the largest defense contract in U.S. history worth at least \$400 billion. Compare the two designs for the Joint Strike Fighter, and you’ll see the obvious: Boeing’s looks like ‘a flying frog with its mouth wide open,’ says a Pentagon source. ‘The Lockheed design wins hands down,’ says a senior Air Force general. Boeing officials say looks aren’t part of the design. ‘We design our planes to go to war, not to the senior prom,’ scoffs a Boeing spokesman. Boeing has already cut 30,000 jobs...It will now likely exit the fighter-jet business.”
(Stanley Holmes, “Boeing Gets Beat”, Business Week, October 29, 2001)

Boeing has people with great talent, contributing to an enterprise founded in 1916. When “officials” of a company with this stature and capability can act so tone-deaf to customers, you know the rest of us mere mortals could be at risk. This brief quote reveals only the tip of the miscommunication iceberg, which includes the following important points:

1. Who really is the customer?¹¹
2. Was the voice of the customer, “looks good”, likely to have been included in the Request for Proposal (RFP) or the Design Specification issued to Boeing by the Pentagon?¹²
3. How effective was it to argue with the customer about the relevance of attractiveness?¹³
4. What question(s) should Boeing have asked, regardless of the requirements volunteered by the customer?¹⁴
5. Who is responsible for identifying that good looks are important?¹⁵

¹¹ There are at least two customers referenced in the quote, with the possibility of others off-stage, creating some confusion about which customer(s) to satisfy. Is it the military brass, contracting officer, fighter pilot or “other”?

¹² The customer(s) may have wanted a characteristic that was never explicitly stated. Some at Boeing could easily conclude it wasn’t fair to base the contract award at least in part on an unstated priority. On the other hand, some of the customers clearly thought it unnecessary to have to spell out what they thought was an obvious expectation.

¹³ The producer’s spokesperson is not only deaf to the VOC but is actively rejecting its validity. This producer-centered behavior is rarely sustainable but does have an avid following.

¹⁴ The word formula that applies here is, “A satisfying jet fighter is one which is.....” See word formula #3. Answers likely to be heard include “good looking, attractive, maneuverable, fast...”, etc.



6. How could the subjective VOC “looks good” be translated into objective design criteria?¹⁶
7. Could this scenario be relevant for your own organization?

The method, rules and formulas

Our mission here is to provide a few word formulas and linguistic rules that will enable you to use language with as much rigor as you do math. And do so with greater simplicity. We will use the context of four (4) main questions, shown in **Figure 2**. You will find this works equally well in business-to-business, customer-to-business, industry, healthcare, government and every other environment where one party is seeking to satisfy another. You can even try this at home.

Figure 2: FOUR KEY QUESTIONS			
1	2	3	4
What is the product? →	Who are the customers? →	What do they really want? →	How can we improve?
DEFINE	DIFFERENTIATE	REVEAL	TRANSLATE
All Work As: <ul style="list-style-type: none"> Deliverables Plural with an 's' Countable Specific 	Roles: <ul style="list-style-type: none"> End-users Brokers Fixers 	Expectations Regarding: <ul style="list-style-type: none"> Outcomes (desired & undesired) Product (functions & features) Process (product acquisition) 	Subjective perceptions into objective performance measures, then: <ul style="list-style-type: none"> Apply the C3 Roadmap Align new practices with strategic and operational priorities

¹⁵ The producer's tendency is to assume that a customer will voluntarily state what their priorities are. This case illustrates how faulty that assumption can be. The best policy is based on the adage; every gun is loaded until you check (for safety). Similarly, the producer's job is to always assume the VOC priorities are unknown until verified.

¹⁶ There are a minimum of three word formulas useful to achieve this translation. See Chapter 4, *Creating a Customer-Centered Culture: Leadership in Quality, Innovation and Speed*, R. Lawton.



The purpose of this article is to give you a clear roadmap to answering questions 1-3 and capturing the voice of the customer. Question 4 is the subject of a separate article. The ultimate reason to understand the voice of the customer is to prepare ourselves to answer question #4. But that goal is dependent on first determining the answer to question #3, what customers want. We would have to know who the customers are, answering question #2, first. But we can't meaningfully determine who customers include without knowing specifically what they are customers for. Correctly answering question #1 makes everything else possible; failure to do so leads to chaos and confusion.

Our word formulas and linguistic rules will help to dramatically reduce ambiguity related to the first three questions in **Figure 2**. Let me first attempt to prevent possible confusion. We're going to show the relationship between four Questions, four Rules and eight Formulas. Notice that **Figure 3** organizes four Rules and eight Formulas to enable you to answer an expanded version of the four questions in **Figure 2**. All four Rules applied to questions 1 & 2 are ones we can answer by ourselves, without necessarily having any dialogue with customers. But the first four Formulas (related to question 3 in **Figure 3**) must be asked of the correct customers. Their answers are the heart of the VOC inquiry. It is important that the rules and formulas are used in the sequence shown. See **Figure 3**.



C3 QUESTIONS, RULES & FORMULAS	
QUESTION	HOW TO FIND THE ANSWER
1- What is the product?	WORD RULES
	1. Define all work as products (not service, activities or results) 2. Every product named must be: <ol style="list-style-type: none"> Expressed as something which can be made plural with an "s" A deliverable, something you can give to someone else Packaged in countable units Very specific (avoid naming groups, kinds or types of product) 3. Determine the critical target product(s) you will focus on
2- Who are the customers?	4. Describe customers by their role(s) with a specific product as: <ol style="list-style-type: none"> End-user Broker (for either the end-user or the producer) Fixer
3- What do they really want?¹⁷	WORD FORMULAS TO REVEAL the VOC¹⁸
a. Desired Outcomes	1. A satisfying (insert product name) is one which will result in
b. Undesired Outcomes	2. A satisfying (product name) is one which will not result in
c. Function expectations of the product (these are usually	3. A satisfying (insert product name) is one which is (insert expectation)

¹⁷ The terms needs, wants, expectations and requirements have different meanings that can be critically important. In general, needs and requirements are the most basic (often the minimum acceptable); wants are the most inclusive and optimal desires to be satisfied. The name of the popular TV program, "Who Wants to Be A Millionaire?", could be a desire many people share. Not many would resonate with "Who Needs to Be A Millionaire?". For our purposes here, we will use expectations as a sort of shorthand, as if the different meanings are of no consequence.

¹⁸ The word formulas shown and described here are core to all VOC work, whether pursued through focus groups, interviews, surveys or otherwise. But the unique circumstances of a specific project can require adding a few more word formulas. Please view the word formulas discussed here as essential, but not necessarily sufficient.



d. Feature expectations (these are expressed as	4. A satisfying (insert product name) is one which has (insert expectation)
4- How can we improve?	WORD FORMULAS FOR IMPROVEMENT BY DESIGN
a. The translation of subjective perceptions into objective design criteria for the new or improved product	5. The # of _____ could indicate that the (insert product name) is/is not (insert VOC priority answers to formulas 3 and 4) 6. The % of _____ could indicate that the (insert product name) is/is not (insert VOC priority answers to formulas 3 and 4) 7. The \$ amount of/for/to _____ could indicate that the (insert product name) is/is not (insert VOC priority answer to formula 4)
b. Goal-setting to have the biggest impact on satisfaction and success	8. What is the numerical target to achieve, by when, by whom, for each measure of success?

Figure 3: Questions, Rules & Formulas

QUESTION #1: What is the product?

Rule 1: Define all work as products

If we lived during the Agricultural Age (10,000 BC – 1700 AD), we might have described our work in terms of farming, trapping, fishing, butchering, shipping and so on. These are all activities. If we're a farmer and we want to be clear who our customers are, we'd have to first identify which agricultural products we produce. The customers for milk (cheese makers) may be entirely different than customers for wheat (millers and bakers).

There are a few key points to be clear about:

- Describing what our activity is tells us little or nothing about our customers
- Although we think of and describe our work in terms of activity, our customers may not particularly care about how we do what we do (unless that activity creates an undesired outcome)
- The value of our work as a farmer is entirely determined by the quantity and quality of the products we produce: heads of cabbage, bunches of carrots, bushels of potatoes, dozens of eggs, gallons of milk.



- If we spent an entire year farming but produced no products, the value of all our work could reasonably be said to be zero. At least, from an economic perspective.

The core principle here is that the value of work is always determined by the product produced. Activity that creates no product has little or no value to customers. A trapper with no pelts, a fisherman with no catches, a butcher with no hams and a shipper with no deliveries will not be deemed successful. Nor will they have customers. This suggests another principle¹⁹: customers cannot be identified without first knowing what the product is.

A few product principles

- The value of work is always determined by the product(s) produced, not the activity performed.
- Activity that creates no product has little or no value to customers.
- Our products focus vision outward to customers; process focuses us inward.
- We can only meaningfully identify our customers in terms of their relationship to a specific product.
- A product is the tangible link between a process and some outcome.

Our tendency is to think of our work in terms of an activity, process or the role/position we have in an organization. Activities can include verbs like supervising, engineering, teaching, nursing, inspecting, accounting, designing, marketing, contracting, selling, leading, regulating, servicing, programming, purchasing, training, quality management, etc. Not all activity names end in 'ing', but that is a good tip-off that the thing we are thinking about is an activity, not a product. You'll notice that these activities are often similar to the names of organizational units within the enterprise.

The reason we have to get this product question answered is that we can't identify personally- relevant customers without knowing the product for which they are customers. We have personal pan pizzas, personal computers, personal web pages. Surely, we must have personal customers. We'll pursue this further under Rule 2.

¹⁹ See <http://www.imtc3.com/library/keyConcepts.cfm> for C3 Principles under topics such as product, customers, satisfaction and process.



The Industrial Age, starting with James Watt's invention of the steam engine in 1769, peaked around 1957 in the U.S.²⁰ We are now in the Knowledge Age, arguably kicked off in 1969 with the introduction of the solid state microprocessor by Intel and connection of the first four internet host computers at UCLA (under the ARPANET program). The portion of the U.S. workforce that produces agricultural products is less than 3% today. Less than 12% of us personally make manufactured products. Over 85% of workers in the U.S. and other post-industrial countries do not make products in the sense of manufactured widgets. Perhaps that's why economists have chosen to refer to us as having a post-industrial economy.

QUESTION #1, What is the product?

Rule 2: Define products in your widget-free world

It is easy to identify the kinds of products a manufacturing enterprise creates: cars, computers, phones and so on. While "cars" are definitely what we think of as products, the specificity criteria of Rule 2d in **Figure 3** has to be met. Cars are a class or kind of product. Corvettes are specific cars. Honda doesn't make those cars; they make Civics. When the goal is to reveal the voice of the customer, it matters which vehicle we're going to be talking about. The customer characteristics or demographics for the two vehicles will be different.

The producer's identity is intimately tied to specific products. When people think of "food stamps", they associate that product with a government agency like the Department of Social Services. When you think of a 1040 tax form (a product), you associate it with the Internal Revenue Service.²¹

Apple Computer changed its name in 2007, thirty years after its founding, to liberate its identity from association with just computers. Many people today will think first of iPods, iPhones or iTunes when the name Apple comes up. All of this discussion of product and identity is easily considered just common sense. We wish it were that common. The good news is that there is no conflict here with any of our prior knowledge about products. But stay tuned.

²⁰ We define this peak in terms of the % of the U.S. workforce that was personally engaged in making manufactured products. The manufacturing employee base has been in steady decline ever since.

²¹ Folks at the IRS don't generally consider the 1040 their product. The first thing for a non-widget organization to do is redefine its activity and "service" as definable products. In this illustration, that enabled identification of the end-users of the forms and uncovered what they wanted.



Things become a bit more tricky when we talk about non-widget enterprises such as healthcare organizations, government agencies or educational institutions. Folks working there are likely to refer to their enterprise's work as involving service. Remember **Figure 1**? My research has found that "service" is so ambiguous a term that it has very limited practical value. See **Figure 4** on how to eliminate this problem. We start by applying the product naming rule for all products, starting at the enterprise level.

SAMPLE ENTERPRISES AND THEIR PRODUCTS²²		
Mercy Hospital	County Sewer Department	State University
Doctor appointments*	Help desk answers to leaking pipe trouble calls	Web pages of engineering courses
Physical exams*	Leak diagnoses	Mechanical Drawing 101 Classes*
Blood lab reports	Pipe repairs	Engineering B.S. diplomas
Diagnoses	Locates (the markers indicating the presence of a pipe underground)	Enrollment applications.
Appendectomies*	Maps of underground pipes	Mechanical engineering graduates

Figure 4: Enterprise products

²² Every product has a cost. Not all product costs are captured or known. Only the products with asterisks are connected to a specific bill or charge. Just as Honda bundles hundreds of products together to arrive at the cost and price for a base Civic, non-widget businesses sometimes do the same thing. While we can talk about the cost of a college education in general terms, try buying only the diploma. True, you are going to pay for it over time- about four years- but it is the price of a specific class (made up of credit-hours at a known price) that has practical significance. Government agencies measure very few of their products' unit cost. This is a huge area of opportunity and beyond the scope of this article. Medicare tackled this with some success when mandating that reimbursement would be made according to diagnostic related groups (DRGs).



Now for the really challenging part: look in the mirror and answer the question, “What are my personal products?” Since few of us personally make widgets or manufactured items, we can rule out cars, computers and the like as our personal products. We personally create products such as the following for other people:

KINDS OF PRODUCTS WE PERSONALLY PRODUCE:		
Answers	Diagnoses	Recipes
Blueprints	Greetings	Repairs
Contracts	Invoices	Reports
Courses	Manuals	Schedules
Decisions	Plans	Shipments
Deliveries	Policies	Specifications
Designs	Procedures	Strategies

Figure 5: Personal products

All four parts of word Rule 2 shown under Question #1 in **Figure 3** have to be met. A product is a deliverable we can give to someone else. The name of that product must be very specific and something we can make plural with an ‘s’. The specificity test is not yet met with the products named in **Figure 5**. Blueprints are a kind of product. A fighter jet blueprint is a specific product. If we make a mistake naming the product, it will cause chaos or confusion when we try to identify customers. View such confusion as a sign that we haven’t defined the product clearly enough. Go back and clarify exactly what the product is, removing the cause of confusion. This self-correcting feature of our VOC roadmap is very handy. To avoid corrections, look at how role, activity and product are contrasted in **Figure 6**.



ROLE	ACTIVITY	PRODUCT
Software engineer	Programming	A software application for finding local restaurants on the iPhone (an "app")
Medical lab technician	Drawing blood	Labeled blood specimens
Marketing manager	Market analysis	Market demographics reports
Instructor	Teaching	Project management course
V.P for Quality	Quality planning	Strategic quality improvement plan

Figure 6: Ways of describing what we do

When someone asks us, "What do you do?", we could answer in at least one of these three ways. I could answer that I am an author (role), that I write (activity) or that my products include books, keynote presentations, articles, strategic planning retreats, focus groups, surveys, videos, pod casts, course manuals, innovation workshops and so on. Of the three kinds of answers, only the products suggest customers. Since our goal here is to uncover the voice of the customer, anything we can do to move ourselves quickly through the first two of the Four Key Questions is a plus. We want to be quick, but not hurried.

Question #1: What is the product?

Rule 3: Identify the target product to focus on

We intuitively know that all products are not created equal. Selecting the right product to work on is of critical importance to have most impact with the least effort. This is the "maximum leverage principle", not the low hanging fruit approach. Although we could use about ten (10) criteria to select the critical few products out of a hundred to improve, we'll see a simple example of how this works as we discuss Rule 4.

QUESTION #2: Who are the customers?

Rule 4: Describe customers by their role with a specific product

When a car is the product, it seems straightforward to say the customer is the person who buys it. Not so fast. Which of the following could be considered the customer?

- a. The owner
- b. The driver
- c. The dealer
- d. The bank that issues the car loan



- e. The passenger(s)
- f. The mechanic who keeps it running
- g. All of the above

Things have suddenly become complicated. Let's simplify. There are only three (3) possible roles a person can play with a specific product: end-user, broker and/or fixer²³. The end-users are the individuals who personally use the product. The broker passes the product to those who will use it, representing primarily (1) the producer's interests, (2) the end-users' interests and/or (3) the broker's self-interest. Fixers are those who modify, correct or alter the product for the benefit of end-users. An example at a state tax agency illustrates how these word rules worked.

The agency's director and key staff invited a number of citizens to collaborate on creating a new strategic plan. That plan identified the top ten products whose improvement would be essential to becoming more effective in their mission, efficient in their practices and customer-centered in their approach. Citizens said a top priority was to get their tax refund check back within a day or two of submitting their completed tax return. At the time, it took about forty-five (45) days to receive whatever refund was due. Citizens viewed this as an unacceptable delay.

A project team was formed, with the mission to improve refund timeliness and reduce rework. The team identified all the products that might be related to the problem. This started with the recognition that tax returns (1040 or comparable tax forms) were submitted by taxpayers with a high frequency of errors or omissions. The project team was asked at the start of the project to explain the reason for the high error rate. The PG-rated response from some team members was that taxpayers are stupid, careless and don't follow directions. When no evidence, other than anecdotal history, was offered in support of this conclusion, I suggested that we might be dealing with a vital lie. There was also a general consensus that getting refund checks cut within a day or two of receiving returns was an impossibility wrapped in fantasy. The topic of vital lies came up again. Some on the team insisted they knew their business pretty well

²³ In this example, choices a, b and e are end-users; brokers would be c, d and possibly a; fixers are f and possibly b. Choice g is correct but is too inclusive to be of practical use. A single person can have multiple roles with the same product. This means it is critical, when seeking the priorities from such a person, that we understand which role they are speaking from at the moment. In general, the broker's priorities tend to be the voice of the customer we hear most clearly. The result can be that brokers' needs are better met than end-users' priorities. This is not a sustainable condition since the end-users always win in the long run. If we don't know who they are or what they want, the welcome mat is out for competitors. The Boeing example illustrates this.



and no outsider was likely to convince them otherwise. They did agree there should be an objective way to determine the truth. There is. The following process is part of how the truth was determined.

The team identified that the product wanted by taxpayers, and that they were unhappy about, was the refund check. But the timeliness of issuing the check was dependent on a correct tax return.

Some on the team wanted in the worst way to prove the taxpayers were the problem. We continued to guide them into identifying **which product** could be the source of the problem. To do this, it is helpful to see if the product in question (the refund check) is dependent on any other product being right. So we mapped the flow of products, starting with the refund check and working backwards, shown in **Figure 7**. As soon as the flow of products was determined (this was quick and easy, taking about 20 minutes), we could ask the following questions:

1. Which product has the greatest potential, if improved, to have maximum impact on customer satisfaction and enterprise performance? (See Rules 1-4)
2. Who are the end-users (versus brokers & fixers) of the product? (See Rule 4)
3. What are end-users' priorities regarding each product? (See Word Formulas 1-4)
4. How well are their priorities being met? (See Word Formulas 4-7)
5. What numerical improvements should we shoot for? (See Word Formula 8)

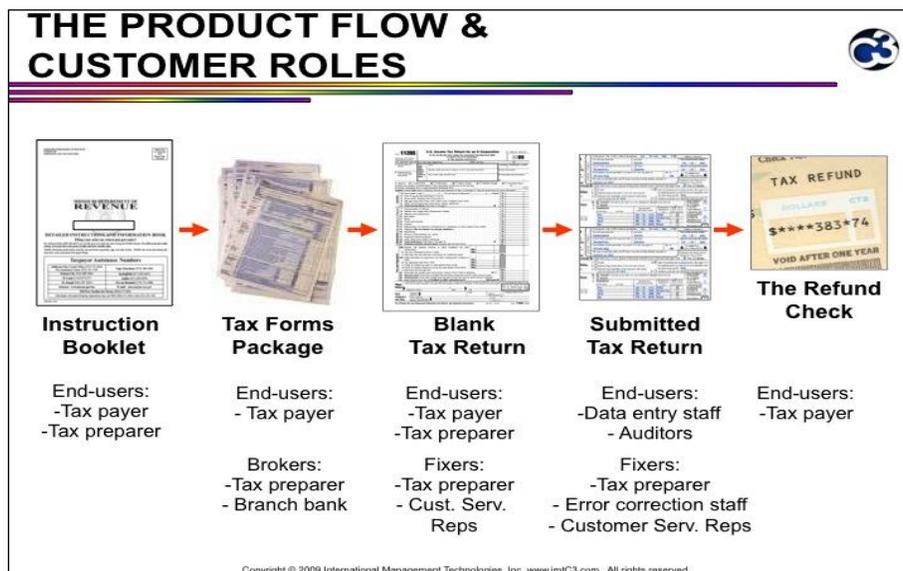


Figure 7: The product flow—one way to select the target product



It is very important to distinguish the blank tax return form from the submitted/completed tax return. These are two different, though related, products. It is easy and natural to confuse related products. Doing so will predictably result in chaos and confusion regarding who the customers are and what they want. Leaders of focus groups (yes, including the professionals) commonly make these errors:

- Invite participants who represent a mix of customers for different but related products
- Invite participants with different, undifferentiated roles related to a specific product
- Ask questions that fail to answer Word Formulas 1-3
- Emphasize questions related to product features (Word Formula 4)

The data coming out of such focus groups can lead to the development of products such as New Coke or the Ford Edsel, which end-users don't want. You have already seen ways to avoid the first two errors. Let's prevent the other two.

Question #3, What are their expectations?

Word Formulas 1-3

The tax agency project team quickly recognized that none of the end-users for any of the products had been asked for their priorities in an organized way. So they proceeded to close the gap.

The end-users of the submitted tax return included data entry staff and auditors. They were invited to a focus group and asked Word Formulas 1-4. They had a high level of frustration with the number of returns that could not be closed out on the first attempt. Their priorities included the desire that "a satisfying return is one which is...":

- Complete
- Accurate
- Supported with the correct supplemental forms
- Legible
- Consistent with other taxpayer records on file

When the submitted return was flawed, fixers included error correction staff, billing staff, auditors and customer service reps. The rework necessary to correct returns was determined to be several millions of dollars per year.



It was clear that the first product in the chain, if deficient in any way, could act as a constraint on the accuracy and completeness of the return. This meant the **target product** (the purpose of Rule 3) was the booklet, not the return! Focus groups were conducted with end-users of the instruction booklet. To test the assumption that taxpayers were the problem, we had to make sure the tax booklet met their priorities. **Figure 8** shows some of their priority responses to Word Formulas 1-3.

WORD FORMULAS	A satisfying instruction booklet is one which...		
	1. Results in:	2. Does not result in:	3. Is:
<ul style="list-style-type: none"> • Getting my return done in the shortest possible time • Paying only my fair share • Feeling competent • Maximizing my net income • Easy preparation of my return • Getting my return done right the first time • Staying out of jail 	<ul style="list-style-type: none"> • An audit • Having to call for help • Frustration/tears • Delays in my refund • Wasted effort • Having to pay a tax expert to figure out what I'm supposed to do 	<ul style="list-style-type: none"> • Easy to understand • Logical in sequence • Quick to complete • Written in my everyday language • Brief • Illustrated with graphics, understandable by any taxpayer • Packaged with all necessary forms 	

Figure 8: Responses to word formulas 1-3

Formulas 1 and 2 are intended to uncover the respondent's purpose for using the product. These formulas reveal the ultimate result they want to achieve (or want to avoid). Formula 3 is designed to uncover what we can call product function. Reviewing the responses across all three formulas, you'll notice there are some common themes. The themes that show up as end-user priorities across all sorts of products can be organized into three main affinity groups:

- Ease of use
- Timeliness



- Certainty (such as accurate, reliable, consistent, predictable, safe)

These same themes turn up for brokers and fixers, too. But what makes something “easy to use” for a fixer is often quite different than what an end-user or broker would mean. In the case where these word formulas are used in a focus group, the facilitator has to make sure the responses that participants select as most important get well defined.

An airline asked us to apply this methodology. One of the products studied was “meals”. Among the responses frequent flyer business passengers rated as very important was the answer given to Word Formula 3: A satisfying airline meal is one which is...”just like home”. Many of the focus group participants agreed this was important. The gentleman who offered this response was asked what he meant. He could have said:

- Tasty
- Made with fresh ingredients
- Micro-waved
- Compatible with my diet
- The right temperature
- Familiar

Is that what you might have meant? It turned out he was thinking of “served on round plates”. No one else in the focus group had this on their minds, so the group rearranged their priorities. Had we proceeded without getting clarification, we would have left the session with the wrong priority, with no chance to do anything meaningful with it. You can hear the voice of the customer but still not know what is in the mind of the customer. Two years after this airline had begun to use these methods, they had achieved #1 standing among U.S. airlines on least customer complaints, fewest mishandled bags and best on-time performance.

The point is that these word formulas are powerful tools. But just as a laser scalpel doesn't make you a brain surgeon, these word formulas are most effective in the hands of a practiced, skilled user. Becoming proficient is not difficult. Start by practicing on some products you create for employee end-users within your enterprise. Take the time to explore the themes that emerge. Use word formulas 6-7 to translate subjective perceptions into objective design criteria. When you feel you've got the rhythm of the method, take the plunge with external customers who use enterprise products.



What to expect

The tax refund project team made some quick and important discoveries:

1. Maybe tax payers who submit tax returns aren't stupid after all. They just need instructions that are easy to understand and execute right the first time.
2. The problem was not as it first appeared. Tax return errors were a symptom of the real problem: a set of instructions that were indecipherable by anyone but a professional tax preparer.
3. The issue wasn't just one of satisfaction for tax payers. Employees were also frustrated by all the rework.
4. The cost to hire extra people every tax season and have checkers checking checkers amounted to several million dollars.
5. The innovative new tax booklet proposed and designed by the team was approved by the state legislature on the first pass.
6. The state's Department of Revenue was named by Governing Magazine as #1 of 50 states for speediness and related tax handling. Refunds went from 45 days to 9 days the first year, then to 4 days the second year. All without automation.
7. The department applied for and won Baldrige Award recognition through broad application of what they'd learned. This was the state's first public agency to achieve such award.
8. The Governor lauded the department for saving over \$20 million while finding new ways to satisfy citizens and advance the Governor's strategic objectives. Change really is possible!

A credit union made member satisfaction improvement a priority in its strategic plan. But there was no explicit method for improving satisfaction, nor were there measures connecting satisfaction to appropriate objective measures of success. Enlightened senior management decided they wanted their entire management team to understand and deploy this methodology. They selected the critical few products to work on first. During training, they created specific action plans so all member-facing staff would immediately begin implementing the Word



Formulas. This was done in every transaction with members using, or qualified to use, one of the target products. Results within the first 90 days included:

- The dollar value of member loans through the credit union, compared with those with other institutions, increased. Since interest rates for members were lower than for loans from other sources, this resulted in significant savings for members.
- New loans closed per week more than doubled, increasing from 300 to 700.
- Loan utilization increased from 50% to 75% (approved loans that got used).
- Credit union monthly revenue rose by over \$8 million.

A company making a commodity roofing product wanted to differentiate its products, expand market share and improve profitability. The Marketing department had lots of dialogue with retailers (brokers) of the roofing product but little with installers and homeowners (the end-users). After conducting several focus groups using the Word Formulas approach with end-user installers, several discoveries became inescapable:

- The package used for the roofing material was a major source of product failure, dissatisfaction and excessive cost due to weather degradation and spoilage.
- The kind of packaging used was an “industry standard” design that was not user friendly.
- Even without changing the roofing product itself, changing the package enabled improved product performance at the job site.
- A new package design easily enabled product differentiation, improved ease of handling, was cheaper than the conventional approach and reduced packaging waste at the job site.

A renowned healthcare clinic in the Midwest experienced erosion and increased competition among its radiology customers. In this case, the customers of interest were referring physicians who requested certain kinds of images to be taken and interpreted to either assist in diagnosis, develop a treatment plan or to evaluate the effectiveness of therapeutic intervention. The orders received by the clinic would specify the kind of image (e.g., MRI), the target of the image (e.g., a section of vertebrae) and other details. Orders were submitted by



physicians in a pretty free-form, unstructured manner as each referring physician saw fit. Each order was really requesting two products:

1. The image(s) to be created by the radiology technician.
2. The interpretive report to be created by the radiologist.

Clinic personnel had observed an undesired number of requests for repeated images recently provided. This rework was accompanied by physician complaints, extra cost, reduced capacity and lowered productivity for clinic staff. There was a clear sense that something unknown was causing this significant quality problem and leading to dissatisfaction and loss of competitiveness.

Clinic management was very interested in understanding how better insights from this word formula approach to the voice of the customer might help solve the problem. But there was general consensus that referring physicians would never take time away from seeing patients to participate in a focus group. Previous attempts to use surveys to shed light on the problem were dismal failures.

Staff was assured focus groups were not essential, but getting answers to the word formulas was. We first looked at a sample of orders to determine which of Word Formulas 1-4 were already being answered in the normal way orders were submitted. As staff began comparing the order information, two observations were quickly made: (a) descriptions of the features of images wanted (word formula 4) were frequently provided but (b) rarely did the order describe the purpose or outcome sought from the requested images (word formulas 1-2).

Previous reviews of re-orders had turned up no obvious patterns pointing to causes. Armed with the new word formula tools and insights regarding typical order content, staff looked again to see if the absence of a purpose/outcome could have resulted in (a) failure to provide images (even if not specifically requested) that would have helped achieve the intended purpose, (b) taking images unnecessarily or (c) failure to pursue interpretations of or report on findings that could have improved the intended outcome. The evidence suggested correlation.

It was decided that, for at least a couple weeks, every order that had no accompanying information that answered word Formula 1 would result in a call to the referring physician for clarification. Physicians getting those calls were surprised and impressed with the obvious care clinic staff was taking to totally understand and satisfy them. Clarified orders resulted in no rework. Wishing to sustain this magical experience of perfection and satisfaction, a few small



changes were made to the information required in every radiology order and communicated with every current and new referring physician. Competitiveness, satisfaction and reputation rose to the level clinic staff could sustain and celebrate.

The VOC & Excellence Connection

The voice of the customer is just one important part of the pursuit of excellence for any enterprise. If one could describe excellence in terms of just a finite number of dimensions, it might look like the graphic below:

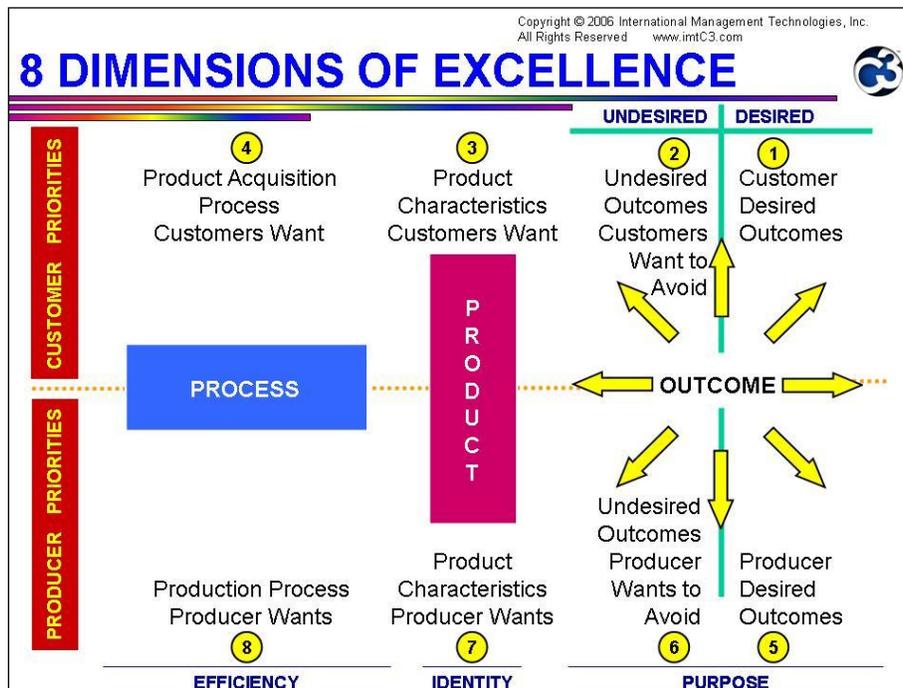


Figure 9: The 8 Dimensions of Excellence²⁴

Most change initiatives (business process improvement, lean, six sigma, ISO 9000, HCAHPs, etc.) put special emphasis on improving Dimension 8: production process priorities the producer has. In fact, the producer-centered enterprise may verbalize its desire to put

²⁴ See the article, "8 Dimensions of Excellence", Quality Progress, April, 2006, available at <http://www.imtC3.com/library/articles.cfm>.



customers first but actually puts the vast majority of its energy into managing Dimensions 4-8, below the dotted line.

What we see in Dimensions 1-4 are four distinct potential voices that could be heard from a single end-user of a specific product. If a given product of study had just one end-user, one broker and one fixer, there would be twelve (12) voices to be heard. Capturing the voice of the customer, then, is a bit more involved than one might initially believe. Now you've got a roadmap. Word Formulas 1-3 described in this article are the focus of Dimensions 1-3 above. My hope is that this will start you on a path of discovery that enables you to satisfy your customers in ways they never thought possible.

Please contact the author directly to comment or get answers to your questions. Or contact his office regarding keynotes, workshops, project management or support tools related to this topic.
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Additional Resources:

Lawton, Robin L., [Creating a Customer-Centered Culture: Leadership in Quality, Innovation, and Speed](#), Quality Press, 1993.

[8 Dimensions of Excellence](#), article.

[5 Whys for Desired Outcomes](#), tool.

[Product Definition & Selection](#), tool.

[Customer Roles](#), tool.

[Index of Tools and Suites](#)

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