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THE TWENTIETH SYMPOSIUM ON
QUALITY FUNCTION DEPLOYMENT

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Predicting Future Health Insurance Scenarios using Quality Function Deployment (QFD) and Analytic Hierarchy Process (AHP)

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Summary

Blue Cross Blue Shield of Florida (BCBSF) wants to anticipate how the next president's administration and congress might set new healthcare policy in order to begin planning for and implementing new processes for our members, providers, and business decision makers. We have used a combination of quality function deployment (QFD), the analytic hierarchy process (AHP), and other forecasting tools to look at possible 2008 election and policy outcomes and what new opportunities they will create to service both our traditional members as well as the uninsured in our state. BCBSF has been using QFD and AHP since 2004 to better understand the voice of our members, physician providers in our network, and business decision makers of Florida companies that offer health plans to their employees and their families. Our successful implementation of these tools has led our Integrated Market Intelligence group to apply them to forecasting future market scenarios based on different outcomes to the 2008 presidential, congressional, and Florida state elections. We will use these scenarios to map and prioritize different market segments, formulate key customer needs into value propositions, determine strengths and weaknesses in our current competencies and capabilities, and then initiate service quality projects to begin improving those areas where our customers will need us most.

Key Words

QFD, AHP, Healthcare Insurance, Strategy
Methodology

Election years breed uncertainty especially when the incumbent president and vice president are not seeking office. The 2008 U.S. elections have additional healthcare related urgencies due to the impending retirement of the Baby Boom generation (those born between 1946 and 1964) facing age related health issues. While forecasting the election outcomes is beyond the scope of this paper, it may be possible to identify possible directions a health insurance company such as Blue Cross Blue Shield of Florida might consider in response to the various campaign platforms. Several quality methodologies used to design successful products will be employed.

Quality Function Deployment

Traditional approaches to assuring quality often focus on solving problems within the work process, whether it is manufacturing, service, or software. However, consistency and an absence of problems are often insufficient to create lasting value for the customer, especially when customers are more demanding. With traditional quality approaches, the best you can get is nothing wrong – but is this good enough? In addition to eliminating negative quality, we must also maximize positive quality end-to-end throughout the organization. This creates value which leads to customer satisfaction.

Quality Function Deployment is a comprehensive quality system aimed specifically at satisfying the customer. It concentrates on maximizing customer satisfaction (positive quality) by seeking out both spoken and unspoken needs, translating these into actions and designs, and communicating these throughout the organization end-to-end (Figure 1). Further, QFD allows customers to prioritize their requirements, benchmark us against our competitors, and then direct us to optimize those aspects of our product, process, and organization that will bring the greatest competitive advantage. Most projects cannot afford to apply limited financial, time and human resources to low priority issues.

Figure 1. QFD Aligns Development Efforts to Assure Value to Customer

With budgets, time, and personnel always limited, QFD helps organization get their biggest bang for the buck by enabling a data driven approach to allocating constrained resources. Priorities can be derived using psychologically friendly judgments that can be
transformed, based on sound mathematical principles, into proportioned weights they can be used to calculate money, man-hours, and staff.

**Analytic Hierarchy Process**

Prioritization in multi-criteria decision making was advanced by the research of Dr. Thomas Saaty in the 1970s at the U.S. Department of Defense and later at the Wharton School of Business at the University of Pennsylvania. Saaty found that decision makers facing a multitude of elements in a complex situation innately organized them into groups sharing common properties, and then organized those groups into higher level groups, and so on until a top element or goal was identified. This is called a hierarchy and when making informed judgments to estimate importance, preference, or likelihood, both tangible and intangible factors may be included and measured. The Analytic Hierarchy Process (AHP) was created to manage this process in a manner that captures the intuitive understanding of the participants and also yields mathematically stable results expressed in a numerical, ratio scale. A numerical, ratio scale is preferred for the following reasons.

1) Numerical priorities can be applied to later analyses to derive downstream priorities.
2) Ratio scale priorities show precisely how much more important one issue is than another. Ordinal scales only indicate rank order, but not the magnitude of importance.
3) Numerical scales can be tested for judgment inconsistency, sensitivity, and other useful properties.

AHP has been successfully applied in many government and industry decisions to clarify fuzzy and often emotional goals, and build consensus on the best ways to address them.

**Hooking Strategy to Customers using QFD at BCBSF**

Blue Cross Blue Shield of Florida (BCBSF) has been in business since the 1950s. BCBSF is an independent licensee of the Blue Cross and Blue Shield Association. As a licensee, BCBSF is restricted to the geographical boundaries of the state of Florida. BCBSF is the market leader in the state of Florida with 30% of the state’s insured population as customers. This share equates to approximately 4.2 million people.

Our customers fall into many different segments, and we segment them differently depending on the level of depth required in the planning process. One of the challenges BCBSF has had in the past is that leaders want to use different parts of the segment information for their own purposes, and there was no holistic and agreed-upon method for using the information. This fragmented strategy led to many actions taking place, but actions weren’t coordinated, and that caused much confusion and waste in the operation of the business. For example, we’ve had situations where two Vice-Presidents worked on retention strategies for different segments that were important to their goals. However, since the efforts weren’t coordinated, each VP was asking the same areas of the business to expend resources, and the result was duplicative efforts, excess cost, and frustration.

QFD creates a new strategy process. For the first time, we can now:
• Identify and rank likely future scenarios and project shifts in buying populations by scenario
• Prioritize future market segments in each scenario based on growth
• Identify, by customer segment, customer-prioritized needs (“jobs to be done”)
• Rank competencies, both existing and planned, against customers’ needs
• Identify and fill important gaps in our ability to meet customers’ needs.

Our strategy process is a series of progressions that start from the higher echelons of the company and its planning functions and cascades down into the business’ operating plans. (Figure 2.) We will take a look at each phase of the process with the exception of the Operating Budget phase.

![Figure 2. BCBSF Strategic Planning Process](image)

**Analysis for Enterprise Solution**

The majority of this strategy work is performed by the Competitive Intelligence department within Marketing. The deliverables for this phase of the work are to create a Porter 5 Forces Model (Figure 3.), a competitive analysis, and to create draft versions of future markets, growth segments, value proposition competencies, and a road map with metrics. The purpose of this is to give us a single view of the environment, competitors, and the company position.

It’s important to note that the results are still very high-level.

![Figure 3. Michael Porter's 5 Forces Model](image)
The most important deliverable is that the company receives a single view of the world that everyone works from. This helps prevent the leadership from traveling in opposite or conflicting directions.

In the first phase of the Strategic Planning Process, we take a high-level view of the landscape. We need to understand where we currently stand before we take any next steps. We use an Environmental Situation Analysis (ESA) to look outside of the health insurance industry to influencing factors such as new technology, governmental and public policy affairs, social factors such as the increase in the rate of obesity, and economic factors. We couple these facts with information about competitors and produce a 5 Forces model (Porter model) to identify high-level threats and opportunities. The market is divided into eight key trend areas and each is reviewed for changes that may have a significant and enduring impact on BCBSF’s ability to execute its business. Sources of information For example, the 2008 ESA has incorporated “hot topics” such as medical tourism, transparency, retailism, and presenteeism. These topics derive from numerous sources, including the popular press.

Headline articles in the *Wall Street Journal* alerted us on May 30 2007 that the presidential candidates were responding to healthcare concerns of both individuals and businesses. The winner will greatly impact our industry for the next several years. Some candidates are proposing universal health care and others are proposing only moderate “tweaks” to the current system. A universal health care program would mean far-reaching changes for our industry, so we need to be prepared in case it comes to fruition.

The data is then organized into a strategic positioning grid looking at where we sit amongst the competitors in terms of breadth of target (broad industry-wide vs. narrow market segment focus) and product advantage (low cost vs. product uniqueness). (Figure 4.)

<table>
<thead>
<tr>
<th>Target Scope</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Cost</td>
<td>Product Uniqueness</td>
</tr>
<tr>
<td>Broad (Industry Wide)</td>
<td>Cost Leadership Strategy</td>
</tr>
<tr>
<td></td>
<td>Differentiation Strategy</td>
</tr>
<tr>
<td>Narrow (Market Segment)</td>
<td>Focus Strategy (Low Cost)</td>
</tr>
<tr>
<td></td>
<td>Focus Strategy (Differentiation)</td>
</tr>
</tbody>
</table>

**Figure 4. BCBSF Market Position Analysis**

The main point of this exercise was to point out that BCBSF’s current position was in the middle of all of the possible strategies. Being in the middle will lead to each of the competitors being able to chip away at BCBSF by being a stronger player in their defined
roles. United is better able deliver low cost and Aetna is better able to deliver differentiation. Companies without a firm toehold in a position are headed for trouble because they are not able to focus their resources in one place. The group was tasked with deciding which of the boxes BCBSF should move toward.

Normally, making this type of decision is very difficult for a large group of leaders because of many factors such as:
- Territorial issues
- Fossilized beliefs
- Dominating personalities in the room, etc.

We use AHP to break through many of these issues. The participants were grouped into eight teams, and each team had to decide which position the company should take. Figure 5 is a screen shot from an AHP software program, Expert Choice®. Participants are asked to vote the strength of their opinion on the strategic pairs in the market position analysis. There was a marked difference of opinion. The AHP software allows participants to see each team’s position and have a hearty debate on the best response. Teams are allowed to change their minds, especially if one team makes a compelling argument.

![Figure 5. Expert Choice® Software to Apply AHP to Difficult Decisions](image-url)
AHP does not require consensus; dissonant votes can be averaged. It also yields priorities in accurate ratio scale (percentages), as shown in Figure 6. In this case, two of the scenarios were deemed superior, but the difference between the top two positions was small. The results came as a shock to the executive leaders as they thought everyone knew that Strategy B was the strategy of the company. One result of the exercise was that there was reinvigorated communication to the rest of the company that BCBSF is focused on executing on Strategy B. Without the exercise, BCBSF would have continued to move in separate directions.

![Figure 6. Ratio Scale Priorities Accurately Reflect Group Decisions](image)

**Strategic Direction**

Once the ESA is developed, subject matter experts brainstorm possible scenarios that will occur in the next five years. In other words, we ask them, “Considering all of the facts that have been presented, what is the most likely environmental situation our industry will find itself in five years from now?” The point of the exercise is to rank alternative future scenarios based on most likely outcomes.

- a. Provide several different scenarios so that we can have a robust discussion to ensure the leadership is aware of potential opportunities and threats to our current business model
- b. Gain alignment of the most likely scenarios
c. Plan for success based on the most likely scenarios.
Deliverables of the strategic direction include strategic conclusions, strategic imperatives, a company profile, and final versions of our analysis of future markets, growth segments, value proposition competencies, and the road map with metrics. This leads to agreement on our mission, corporate operating model, brand strategy and positioning, and top priorities for growth.

In this 2008 planning session, nine most likely scenarios emerged. They are:
  a. Status Quo
  b. Individual Guarantee
  c. Employer Mandate
  d. Individual Guarantee and Employer Mandates
  e. Medicaid Expansion
  f. Comprehensive Reform
Some of the ideas are variations of other ideas, but the variations are significant because we’re assessing the likelihood of government intervention. Since the level of government intervention will be heavily influenced by the next US President, and since that person is unknown at this point, we need to plan for varying degrees of intervention.

For example, the Status Quo projection for 2012 assumes that we have no changes in the current level of government intervention, and that our market share in each of the segments remains relatively the same as the segment market shares in 2007. The only changes are:
  • Florida’s population grows from 18 million people to 20.7 million people
  • The uninsured population percentage continues to increase
  • Medicaid percentage continues to decrease

Each of the scenarios was then reviewed and its likelihood to occur assessed using Analytic Hierarchy Processing (AHP). We like AHP for several reasons.
  1. It gives everyone an equal voice. The loudest and longest doesn’t always prevail.
  2. It’s easy for people to make judgments when comparing only two things. It is much harder for people to make accurate judgments when comparing nine things at a time.
  3. Creates great discussion because a person can see who differs with his/her point of view and find out the reasons.
  4. There is finality to AHP that you don’t achieve with other methodologies. Once the results are in, people will nod their heads in agreement, and we move on.

The best part of using the AHP is that the group that performs the exercise will have agreement on the results. Also, since AHP creates a ratio scale, it is sound to make mathematical comparisons between the scenarios. For example, you can say accurately that “the group believes” Scenario H (if it scores 40%) is four times more likely to occur than Scenario I (if it scores 10%).
Marketing Strategy

We use historical curves to predict the population in each segment based on the scenarios. For example, a scenario that includes universal health coverage would have a significant impact on the number of uninsured Floridians. Besides uninsured, the historical curves predict group enrollment and Medicaid and Medicare enrollment numbers. The colors in Figure 7 represent different levels of targeting. For example, dark green may full investment effort and light green may represent 75% investment effort. The Status Quo column represents current investment effort and Scenarios X, Y, and Z are different scenarios. The different colors represent the shift in investment effort related to the shift in population numbers. We are not attempting to select only one scenario. In fact, we look across the scenarios for similar colors. We can hedge our bets on the future by selecting multiple scenarios that have a similar investment direction.

<table>
<thead>
<tr>
<th>As of End of 2012</th>
<th>A - Status Quo</th>
<th>Scenario X</th>
<th>% Change</th>
<th>Scenario Y</th>
<th>% Change</th>
<th>Scenario Z</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninsured</td>
<td>5,310,000</td>
<td>3,418,000</td>
<td>-36%</td>
<td>3,785,000</td>
<td>-29%</td>
<td>2,010,000</td>
<td>-131%</td>
</tr>
<tr>
<td>Uninsured U65 b250% FPL</td>
<td>4,159,000</td>
<td>2,681,000</td>
<td>-36%</td>
<td>2,961,000</td>
<td>-29%</td>
<td>1,575,000</td>
<td>-131%</td>
</tr>
<tr>
<td>Uninsured U65 a250% FPL</td>
<td>1,151,000</td>
<td>737,000</td>
<td>-36%</td>
<td>824,000</td>
<td>-28%</td>
<td>435,000</td>
<td>-132%</td>
</tr>
<tr>
<td>Individual U65</td>
<td>1,121,000</td>
<td>1,008,000</td>
<td>-10%</td>
<td>871,000</td>
<td>-12%</td>
<td>636,000</td>
<td>-142%</td>
</tr>
<tr>
<td>Seniors</td>
<td>3,770,000</td>
<td>3,770,000</td>
<td></td>
<td>3,770,000</td>
<td></td>
<td>3,770,000</td>
<td></td>
</tr>
<tr>
<td>Traditional Medicare</td>
<td>2,625,000</td>
<td>2,625,000</td>
<td></td>
<td>2,625,000</td>
<td></td>
<td>2,625,000</td>
<td></td>
</tr>
<tr>
<td>Medicare Advantage</td>
<td>617,000</td>
<td>617,000</td>
<td></td>
<td>617,000</td>
<td></td>
<td>617,000</td>
<td></td>
</tr>
<tr>
<td>Not In Medicare</td>
<td>528,000</td>
<td>528,000</td>
<td></td>
<td>528,000</td>
<td></td>
<td>528,000</td>
<td></td>
</tr>
<tr>
<td>Small Group</td>
<td>1,120,000</td>
<td>2,450,000</td>
<td>119%</td>
<td>1,122,000</td>
<td></td>
<td>2,455,000</td>
<td>40%</td>
</tr>
<tr>
<td>Mid-Size Groups</td>
<td>1,220,000</td>
<td>1,739,000</td>
<td>35%</td>
<td>1,291,000</td>
<td></td>
<td>1,742,000</td>
<td>23%</td>
</tr>
<tr>
<td>Mid Group 51-499</td>
<td>1,220,000</td>
<td>1,679,000</td>
<td>37%</td>
<td>1,231,000</td>
<td></td>
<td>1,682,000</td>
<td>24%</td>
</tr>
<tr>
<td>CHIP</td>
<td>80,000</td>
<td>80,000</td>
<td></td>
<td>80,000</td>
<td></td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td>Public Groups 300+</td>
<td>1,468,000</td>
<td>1,493,000</td>
<td>2%</td>
<td>1,470,000</td>
<td></td>
<td>1,494,000</td>
<td>2%</td>
</tr>
<tr>
<td>Large &amp; National Accounts</td>
<td>1,376,000</td>
<td>3,777,000</td>
<td>6%</td>
<td>3,378,000</td>
<td></td>
<td>3,778,000</td>
<td>5%</td>
</tr>
<tr>
<td>Florida HQ Large Groups</td>
<td>1,397,000</td>
<td>1,559,000</td>
<td>14%</td>
<td>1,399,000</td>
<td></td>
<td>1,599,000</td>
<td>11%</td>
</tr>
<tr>
<td>Non-FL HQ Large Groups</td>
<td>1,472,000</td>
<td>1,472,000</td>
<td></td>
<td>1,472,000</td>
<td></td>
<td>1,472,000</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>385,000</td>
<td>385,000</td>
<td></td>
<td>385,000</td>
<td></td>
<td>385,000</td>
<td></td>
</tr>
<tr>
<td>FEP</td>
<td>322,000</td>
<td>322,000</td>
<td></td>
<td>322,000</td>
<td></td>
<td>322,000</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>1,769,000</td>
<td>1,769,000</td>
<td></td>
<td>3,339,000</td>
<td>100%</td>
<td>3,539,000</td>
<td>100%</td>
</tr>
<tr>
<td>Other Government / Military</td>
<td>1,346,000</td>
<td>1,346,000</td>
<td></td>
<td>1,346,000</td>
<td></td>
<td>1,346,000</td>
<td></td>
</tr>
<tr>
<td>Military U65</td>
<td>837,000</td>
<td>837,000</td>
<td></td>
<td>837,000</td>
<td></td>
<td>837,000</td>
<td></td>
</tr>
<tr>
<td>Medicare U65</td>
<td>509,000</td>
<td>509,000</td>
<td></td>
<td>509,000</td>
<td></td>
<td>509,000</td>
<td></td>
</tr>
<tr>
<td>Total Population</td>
<td>20,770,000</td>
<td>20,770,000</td>
<td></td>
<td>20,770,000</td>
<td></td>
<td>20,770,000</td>
<td></td>
</tr>
</tbody>
</table>

Business Strategy

We use the targeted segments in two ways at BCBSF – build capabilities and to drive the functional business plans. We have an annual budget to build capabilities, so we look at the most important needs of the targeted segments and determine the amount of benefit that each capability delivers with respect to those needs. We then use AHP to determine the weight of the needs and we also use AHP to assess the amount of benefit each capability delivers to those needs. These exercises are done in a cross-functional group setting with robust debate and, at the end of the exercise, agreement and alignment on the decisions.
At BCBSF, we used to say that a project got prioritized based on the “volume of the advocacy” of the project’s champion. We can now say that the decisions are reached in a collaborative manner where everyone’s voice is heard, and people have an equal say in the results. The group makes judgments of each capability against the needs of the segment. While this is essentially a QFD exercise, the AHP software Expert Choice® makes it easy to see the results of the judgments including where each capability won or lost. (Figure 8.) The results are mathematically sound, so an idea with 60% value is twice as important with a capability with 30% value. In a final step, you can create an efficient frontier of capability value and investment by plotting the value of each capability against the amount of investment required.

![Figure 8. Expert Choice® Software can be Used to Create QFD Matrices](image)

We can graphically show the results which is especially helpful when explaining the results to business partners. (Figure 9.) Each section on the bar chart represents the amount of value contributed by the capability toward the customer needs; the more value, the longer the bar. We have used this exercise several times at BCBSF to help groups prioritize their initiatives. The exercise is not meant to be purely prescriptive. Rather, it is a helpful tool to help groups prioritize the initiatives so they can gain the most value with the least amount of effort.
Figure 9. Alternative Scenarios Prioritized by Contribution to Customer Needs

Business Plans

Once a segment is targeted, we use our custom tailored Blitz QFD® process to work through the process of meeting the corporate goals. (Figure 10.) We have been using Blitz QFD® at BCBSF for four years, and we have found it to be a process that consistently produces high-quality results in a rational, and predictable manner.

The biggest advantage of using the QFD process doesn’t have anything to do with traditional QFD. The biggest advantage is that we now have a process at BCBSF for making strategy, product and targeting decisions based on a rational set of rules and guidelines. Prior to using QFD, projects were prioritized based on the “volume of the advocacy” without regard to costs, revenues, brand implications, etc. QFD gives BCBSF a repeatable process to make those important decisions.

Figure 10. Custom Tailored Blitz QFD® for BCBSF

A key function of a successful QFD project is to have a team that represents all areas of the companies. We involve downstream partners like Customer Service and IT, early in the process to help shape the ideas and avoid any major problems that would be missed
by a team made up of a single business function like Marketing. We involve the upstream partners, like Primary Research, throughout the process until the Launch phase to ensure that the maximum amount of customer value is retained in the project. On this project, these functions were included:

- Innovation
- Product Service Development
- Product Launch
- Product Management
- Brand Market Communication
- Relationship Marketing
- Market Segment Teams
- Cultural Competency and Diversity
- Service
- EPMI
- Delivery
- Sales
- Primary Research
- Competitive Analysis
- Finance
- Finance
- Actuarial
- Legal

Once we have the segments, we go through a series of exercises to arrive at the most important goals. Even the best leaders will fall into the trap of trying to solve all of the problems, such as acquisition, retention, brand recognition, customer satisfaction, revenue growth, etc. We use challenge statements and AHP, if necessary, to arrive at the most important 1-3 goals of the project. They are defined including metrics, time to achieve, judge, etc. as shown in Table 1.

### Table 1. Key Project Goals

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Become the preferred plan in Florida as measured by satisfaction, retention, and acquisition.</td>
<td>Competitive Member Satisfaction survey.</td>
<td>Trixie</td>
<td>Simple and easy for customers to interact</td>
<td></td>
</tr>
<tr>
<td>Health Product Tenure is 3 times in a row</td>
<td># times selected in a row.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preference share % change over competition of zero or negative. (Maintain or gain share)</td>
<td>Brand attribute tracking survey.</td>
<td>every two years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-6% growth</td>
<td>year over year increase in targeted segment</td>
<td>annual</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Even within a segment, there are sub-segments, and those sub-segments may have different needs. Even if the sub-segments have the same needs, the QFD team needs to have a firm understanding of where to find its customer and how the customer interacts with BCBSF. We can narrow the field of possible customers to understand the critical customers by asking a series of questions related to segment size, growth potential, frequency of product use, etc. These questions help to crystallize the face of the customer in the minds of the QFD team. These are shown in the Customer Segment table in Table 2.

Table 2. Customer Segment Table Identifies Sub-Segments by Various Attributes of Use

<table>
<thead>
<tr>
<th>Project Goals</th>
<th>Who uses service?</th>
<th>Who doesn’t use service?</th>
<th>What is their financial status?</th>
<th>Current plan?</th>
<th>What is service used for?</th>
<th>When is service used?</th>
<th>Where is service used?</th>
<th>Why is service used?</th>
<th>How is service used?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Become the preferred plan in fields as measured by Health Product Tenant in 3 times in a row</td>
<td>Boomers</td>
<td>Avoid healthcare</td>
<td>Early retirees</td>
<td>$500 deductible</td>
<td>Maintain health</td>
<td>Daily</td>
<td>At work (individual or group admin)</td>
<td>Financial protection</td>
<td>Phone</td>
</tr>
<tr>
<td>Preference share % change over competition of zero or negative. (Maintain or gain share)</td>
<td>Well educated about services</td>
<td>Working class</td>
<td>MDDP</td>
<td>Shelter money</td>
<td>Before I choose a provider</td>
<td>Online</td>
<td>Peace of mind</td>
<td>web</td>
<td></td>
</tr>
<tr>
<td>6-6% growth</td>
<td>Parents of older children</td>
<td>Frustrated</td>
<td>Rx</td>
<td>When I feel something isn’t right</td>
<td>Home</td>
<td>Use my money most efficiently</td>
<td>U.S. Mail</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Once we know the customer sub-segment, we seek to understand their most important needs and design solutions to meet the needs. In QFD, customer needs are defined as customer outcomes or goals independent of the solution. They are gathered from interviews with customers in various healthcare venues, not just in scripted focus groups. Needs are then organized by the customers into an Affinity diagram and Hierarchy diagram (Figure 11.)
Once key customer needs are determined, BCBSF uses a Stage-Gate® process to ensure ideas are sound before a major investment. Prior to going to a Solution Build phase, we create a marketing plan based on the 4 Ps (Product, Price, Promotion, and Place), ROI and membership estimates, as well as a sound basis of the customer value. (Figure 12.) The individual information components of the Market Solution Plan are provided by the members of the cross-functional team. By involving functions that are normally “downstream” from Marketing, such as Finance, Actuarial, IT, and Legal, we are able to shape and deliver a more successful solution to the Conceptual Design phase (2.0). Involving these groups means that the Innovation phase (1.0) takes a bit longer, but we work through the Conceptual Design phase and the Product Development Phase (3.0) in a more efficient manner.
The QFD process links into the Business Planning process to deliver at the designated release dates. (Table 3.) We begin by defining a “challenge” 18 months from delivery. A challenge is a problem to solve or an opportunity to seize. The Leadership team must prioritize the challenges and the Market Solutions Plan team begins its QFD process (1.1) by defining the segments, finding and prioritizing the needs, brainstorming solutions, etc. Once a subset of solutions is defined, we move to phases 1.2 and 1.3 to add the facts to the possible solutions. Once we have a sustainable idea, we move to Conceptual Design and Product Development.

### Table 3. Market Solutions Plan Aligned with Release Schedule

<table>
<thead>
<tr>
<th>1.0 Innovation</th>
<th>2.0 Conceptual Design</th>
<th>3.0 Development</th>
<th>4.0 Products in Market</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Idea Generation</strong></td>
<td><strong>1.2 Idea Development</strong></td>
<td><strong>1.3 Idea Evaluation</strong></td>
<td><strong>2.0 Product/Service in Concept</strong></td>
</tr>
<tr>
<td><strong>2.0 Product/Service in Development</strong></td>
<td><strong>3.0 Products/Services in Development</strong></td>
<td><strong>4.0 Products/Services in Market</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### 2009 Release Schedule

- **Rel 1**
  - **Begin Date:** Jul 01, 2007
  - **End Date:** Aug 31, 2007
  - **Days to Move Forward:**
    - **Day 0:** Solution Brainstorming
    - **Day 1:** Market Research (validate / gain input on solutions)
- **Rel 2**
  - **Begin Date:** Jan 01, 2008
  - **End Date:** Feb 28, 2008
  - **Days to Move Forward:**
    - **Day 0:** Solution Brainstorming
    - **Day 1:** Market Research (validate / gain input on solutions)

#### 2010 Release Schedule

- **Rel 1**
  - **Begin Date:** Jul 01, 2008
  - **End Date:** Aug 31, 2008
  - **Days to Move Forward:**
    - **Day 0:** Solution Brainstorming
    - **Day 1:** Market Research (validate / gain input on solutions)
- **Rel 2**
  - **Begin Date:** Jun 01, 2009
  - **End Date:** Feb 28, 2009
  - **Days to Move Forward:**
    - **Day 0:** Solution Brainstorming
    - **Day 1:** Market Research (validate / gain input on solutions)

#### 2011 Release Schedule

- **Rel 1**
  - **Begin Date:** Jul 01, 2010
  - **End Date:** Aug 31, 2010
  - **Days to Move Forward:**
    - **Day 0:** Solution Brainstorming
    - **Day 1:** Market Research (validate / gain input on solutions)
- **Rel 2**
  - **Begin Date:** Jan 01, 2011
  - **End Date:** Feb 28, 2011
  - **Days to Move Forward:**
    - **Day 0:** Solution Brainstorming
    - **Day 1:** Market Research (validate / gain input on solutions)

#### Duration

- **2 months**
- **4 months**
- **3 months**
- **9 months**

#### Total: 18 Months
QFD will be used to develop the concepts into marketable products and assure that the customer needs are fulfilled in a quality way.

**Conclusion**

The political arena is fraught with uncertainty in this election season. The shifting winds of global competitiveness and the pending retirement of baby boomers present challenges to the health insurance industry that will become election fodder. BCBSF needs to monitor these trends and quickly formulate responses to the most likely scenarios. By having the structured approach presented here, including both market research and quality methods, it is hoped that we will be able to develop the best solutions for the citizens of Florida.

It is not critical to settle on one view of the future that everyone has to agree with. In fact, you can “hedge your bets” by looking at common features among the top contending predictions and building capabilities and strategies that work for all of the common features.

By using QFD to surface the predictions and using AHP to discuss and decide on the future events, you can achieve agreement and alignment among the leadership.

**About the Authors**

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