

A Demand-Based View of Support

From the Funnel to the Cloud

VERSION 1.5

A HOLISTIC VIEW OF PROVIDING AN OUTSTANDING
CUSTOMER EXPERIENCE

BY

THE CONSORTIUM FOR SERVICE INNOVATION

INTERPRETED AND EDITED BY

ANN M. MARCUS

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EXECUTIVE SUMMARY

In the Midst of a Transformation

As web based self-help and the online communities become more effective the majority of the customer support experience is no longer an interaction with our support people.

Assertions about the landscape:

- Customer loyalty and relationship is the differentiator
- The customer's support experience is a primary driver in customer loyalty
- Two support models are at play; *direct* and *indirect*.
 - *Direct* is person to person or the assisted model (support center, on-site). We know a lot about managing the direct model
 - *Indirect* is web-based self help, online forums/communities or integrated into the product through help functions or instrumentation and automation – we are just learning about how to influence the *indirect* model
- For many companies in the high tech sector, the vast majority (90% or more) of the customer's support experience is through the indirect model – very little of the customer demand comes through the support center.
- As the indirect model handles an ever increasing number of the known problems the direct model (the support center) has to get better at handling new problems.

Characteristics of the Transformation

- **Tangible to Intangible Assets:** For most companies the source of value has shifted from tangible assets (physical products) to intangible assets: services, information, relationships and loyalty.
- **Our Business Structures and Practices are Obsolete:** Our traditional hierarchical structures and command-and-control practices have evolved over

Old Model	New Model
Cost-based Transactions	Value-based Interactions
Directive Management	Leadership through Alignment to Purpose
Hierarchical Structure	Network Structure
Processes are Linear and Escalation based (<i>Streaming</i>)	Processes are Non-linear and Collaboration based (<i>swarming</i>)
Compartmentalization limits opportunity to contribute	Opportunity to contribute is based on full range of capabilities
Impermeable boundaries Limit Learning and Innovation	Openness, Visibility, Reputation and Flow Enables Persistent Learning and Innovation
Focus on customer and Employee Satisfaction	Focus on Customer and Employee Loyalty
The Illusion of Control	The Power of Relationships

Successful organizations are shifting from transaction and cost-based models to a value-creation model. And within these organizations the role of support is shifting from delivering answers to facilitating relevant connections and interactions that creates a continuous flow of value.

A Shift in Personal Values?

The industrial age was driven by materialistic values; we all wanted a lot of stuff. Our sense of self and self-worth came from having nice cars and big houses. There are some strong indications that our values as individuals, and therefore as a society, are shifting to a more holistic or ecological model. As Shoshana Zuboff discusses in her book, *The Support Economy: Why Corporations Are Failing Individuals and the Next Episode of Capitalism*, we are seeking to be known and valued as individuals. Our sense of self and self-worth

includes our knowledge and our relationships. It is our reputation as “knowledgeable” (particularly in areas that we care about) and our contribution to and influence on others that is valued. The new support model is fundamentally about people and relationships enabled through technology.

The world is experiencing significant change in the way people communicate with one another and the way business is being conducted. With this whirlwind of change, new challenges and opportunities arise quickly as must the approaches to address them. As service and support professionals, we are charged with satisfying a rigorous set of demands against a shifting backdrop. More than ever before, we face;

- Increasing complexity with open source, grid computing and web 2.0
- Tremendous diversity in levels of customer sophistication and therefore diversity in offerings; software as a service, on demand computing
- Extremely tight budgets and decreasing margins
- Cultural challenges in delivering global support through a global workforce

The Leadership Challenge

- How do we understand and improve the customer experience in the *indirect* support model?
- What are the structures and processes that will enable us to rapidly create or deploy capability to handle new, complex problems?
- What are the economic implications of these dynamics?
- What are the measurements and indicators of health and value of the support organization in an *indirect* support model?

It is our observation that knowledge is the key enabler to dealing with these challenges. We need organizational values and processes that promote persistent learning and innovation

as a byproduct of interactions. In this persistent learning environment, we see four (4) key knowledge assets:

1. Known Problems/Solutions (often referred to as the knowledgebase)
2. People Profiles Detailing Who Knows What (identity and reputation)
3. Customer-Environment Information (system configurations, products)
4. Customer Profiles (business goals)

These assets provide the basis for addressing and solving the complex technological, organizational and commercial challenges we face today. Within this framework, we can identify patterns and opportunities out of the chaos that expansive communication, information sharing, global business, compliance regulations, politics and the economy are injecting into our work environment. Out of this chaos can come the ability to focus on and address the constantly changing needs of customers.

“If information is to function as a source of organizational vitality, we must abandon our dark cloaks of control and trust in its need for free movement, even in our own organizations. Information is necessary for new order, an order we do not impose, but order nonetheless. All of life uses information in this way...” – Margaret Wheatley, *Leadership and the New Science*

As Margaret Wheatley suggests, our inclination in the face of chaos is often to invoke more stringent controls. This approach, however, would not produce the desired results: Better communication internally and with customers, systems that work more efficiently, relationships with people and resources that yield a greater flow of knowledge and reinforced customer loyalty. We are much more likely to achieve those results over the long haul by completely rethinking our current control structures, recasting the hierarchy into a affiliation-network orientation and allowing a more natural human order to prevail. We must find a delicate balance that allows us to combine human and technological ingenuity in visionary new ways that temper costs while still providing exceptional service and value to the organization and our customers. We must take advantage of the power of information

management combined with the synergies of networking to build mutually beneficial relationships that create value for each entity in that network: customers, employees, alliance partners and other stakeholders.

To the credit of the keen minds and dedication of the members of the Consortium for Service Innovation, there is movement underway. The Consortium's member organizations have undertaken the daunting, yet important task of transforming their organizations. They are, through varying approaches, involved in creating a major shift to truly realign with the requirements of a new age in business—to bring the new Adaptive Organization, A.K.A. Betty, to life.

Our latest thinking can be best illustrated in the dynamic model we refer to as *The Funnel to The Cloud*. This model brings clarity to the evolution of support: Where we have come from, where we are today and where we are going. It enables us to consider the implications and possibilities for the future; both of which are profound!

THE FUNNEL AND THE CLOUD: AN INTRO

Since we initially documented the concepts of the Adaptive Organization Model (which we had lovingly referred to as *Betty*, but which will abbreviate to AO here) several years ago, the concepts and thinking have evolved. Through our research, discussions and trial and error—we seem to learn the most from *mistakes*—we have developed a way to describe the AO model and the dramatic transformation it represents for support organizations and the companies in which they operate.

The story describes the evolution of the support center and an increasing awareness of the changing nature of customer demand for support. The two key enabling characteristics, or foundations, for this transformation are *connectedness* via the Internet and *the flow of knowledge*.

The story, which we tell in terms of *The Funnel* and *The Cloud* and their changing relationship, includes references to objects, systems, actors and general rules for engagement that give us a useful way to look at the growing complexities of interaction, work, technology, globalization, individuals, the economy and how the role of support is changing.

Organizations—faced simultaneously with economic pressures to cut costs and countervailing competitive pressures to continue to provide an extraordinary customer experience through support—are realizing they must make significant shifts in their structure to accommodate the new environment. But *how to shift* is the tricky part. The challenge lies in determining how to continue to provide customers with high-quality support on scores of new and existing products in various operating environments, across networks, and in conjunction with other technologies. Adding to the pressure are diminishing budgets, tougher competition, and internal demands not only to retain customers by supporting them through multiple channels, but also to “up-sell” them new products and services as part of the effort to “manage” our customer relationships.

Where can we find a comprehensive roadmap? The Adaptive Organization model provides just that. The AO model represents the future of support organizations and embodies a new set of principles and practices.

The Funnel and the Cloud story describes how the traditional support organization's tiered model—with its static hierarchical structure, linear processes and transaction-based reward system—is being replaced by a more dynamic, interactive model that flattens the organization, shifts the focus of work and extends outside traditional organizational boundaries to engage a broader range of resources and knowledge.

In *Part II: Emerging Practices of the Adaptive Organization (AO)*, the next part of *From The Funnel To The Cloud* coming soon, we will take a more detailed look at several real life cases from Consortium members that are busy introducing various element of the AO Model into their organizations and providing their insights on the effects. *So stay tuned...*

THE FUNNEL

Exceptions Make the Rules

“Exceptions” represent the customer experience and a need for support. We are defining an exception as anything that disrupts the user from getting work done. They are any performance that deviates from what the customer expected or wanted to have happen with the product or service in question. Demand for support has previously been based on the number of incidents or cases handled by the support organization. With the concept of an exception, we are proposing that the customer’s experience is the basis for understanding customer demand. It important to note that that not all exceptions are reported to the support organization.

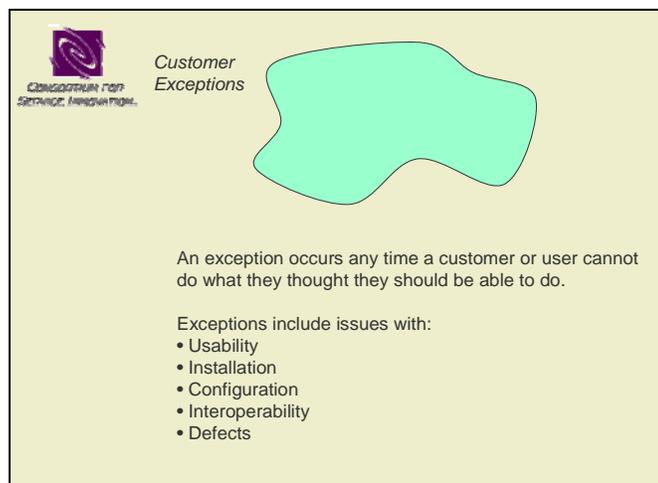


Figure 1

The support center model, which has evolved since the late 70s, was designed to respond to customer demand for support. The goal of the support center is to resolve customer issues as quickly and cost-effectively as possible. The structure of a traditional support center is made up of tiers, or levels and is shaped like a funnel. The largest number of exceptions pours in at the top, where the majority of them are resolved. The trickier exceptions, unsolved at the top level, drop through to the next layer of support, where the funnel narrows with fewer few, but more experienced, staff to address

problems. If still unresolved, the problem drops through to yet another layer where dissection of the issues is carried out by a small, but highly skilled team with access to key organizational resources. They represent the tapered bottom of the funnel.

So, Tier 1 has been the point of entry for all exceptions that customers submit to the support center for resolution. Tier 1 handled incoming incidents, most of which could be solved relatively quickly and with minimal effort. Tier 1 support agents are often generalists who help define the problem and are usually less experienced than Tier 2 or 3 agents. Often the incidents are usage or installation questions or technical issues that were solved previously, so the support agent can refer to training materials or *tech notes* for established fixes or techniques for accomplishing desired tasks. If the issue is not resolved by Tier 1 in a reasonable amount of time (usually 10-20 minutes) it is “escalates” (though downward, in our model) to Tier 2.

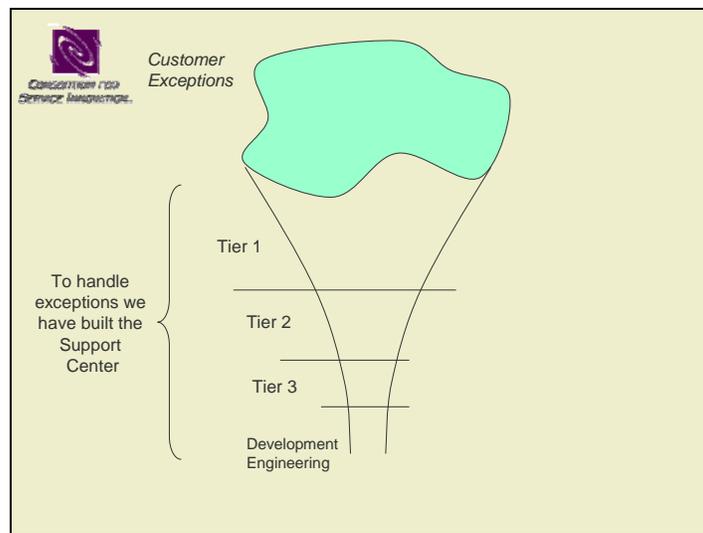


Figure 2

Tier 2 staff typically specialized in specific product areas and had experience, tenure and perhaps even specialized industry knowledge they could draw upon when troubleshooting a problem. If, after spending a number of hours on an incident a resolution could not be found, the incident would then escalate to Tier 3.

The Tier 3 staff was usually highly specialized in certain product or technology areas. The incidents that make it to Tier 3 are the toughest problems to solve, often of a deep

technical nature and likely to be product defects. These issues typically involved more in-depth research and access to source code or other deep-level documentation. Tier 3 staff was highly respected for their experience and knowledge. The goal of Tier 3 was to validate defects and often propose a work-around or fix before the incident was escalated to developers.

As one might imagine, Tier 3 support staff was typically the most highly paid, Tier 1 the lowest and Tier 2 somewhere in the middle. This linear, hierarchical model was effective for a long time as it utilized lower-cost resources to solve the high volume of simple or already-known issues and engaged the higher cost resources for the new and/or more complex issues.

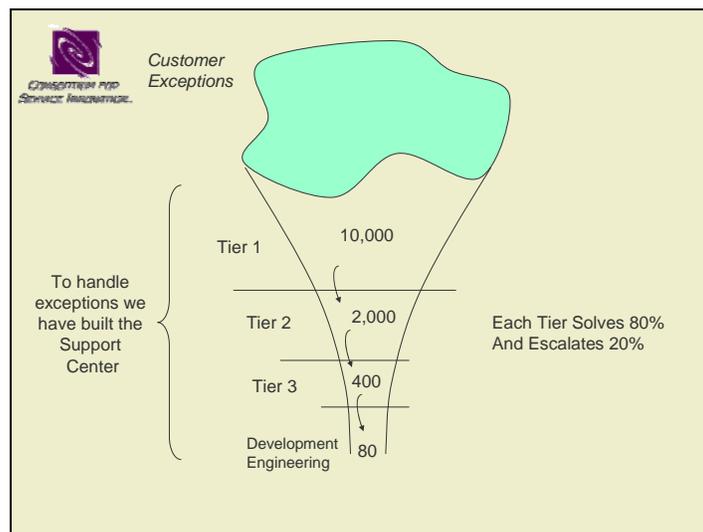


Figure 3

As an example, if we assume that the support center receives 10,000 incidents per month (as in figure 3) and that the typical resolution rate for each Tier is 80%, with 20% escalating to the next level, we can see that the funnel is an effective model for solving incidents with the lowest cost resources. Out of the 10,000 exceptions that customers report, less than 1% of them (80 in this example), reaches the development or engineering departments. These 80 are highly likely to be product defects. We have created an excellent filter, such that only the likely defects reach development, thereby not troubling them with the 9,920 customer exceptions that were not defects (or at least not technical defects).

Observations about the Funnel

The tiered support model has been in place for about 30 years and has served a useful purpose. However, the tiered model has some significant disadvantages:

- **An Open Loop:** Most organizations today have a good closed-loop process for product defects uncovered by customers. But these types of defects represent only a tiny fraction of the total customer experience (80 of 10,000 in our example). But, what about the 9,920 exceptions that the people who created the product never hear about? The funnel created an effective filter that buffered the development and product management organizations from the real experience of the customers; *the people who create the environment see less than 1% of the issues experienced by the users in the environment.*
- **An Unhealthy Caste System:** The hierarchical caste system between tiers promotes an us/them attitude, which is not helpful when collaboration is really what is needed to solve complex problems.
- **The Non-Linear Nature of Problem Solving:** The tiered model is serial, or linear, and yet *problem solving is a collaborative, non-linear process*. Because we don't know the outcome until we solve the problem, we don't what knowledge or people will be required to do so; the optimal process and ideal resources are unique to each problem. The tiered model compartmentalizes job responsibilities and limits communications by defining rigid ownership and escalation processes thus handicapping the problem-solving process.

As we continue telling The Funnel and The Cloud story, we will discuss ways to deal with these disadvantages.

Investing in the Small Part

During the tiered support model's first 20 years, we invested in technologies that focused on the administration of incidents (call routing, entitlement, workflow, service level management, escalation rules, ownership and so forth). This investment has done very little to optimize the actual process of problem solving. A recent Service and Support

Professional Association (SSPA) study indicated that the support center spends 30% of its resources on incident management and 70% on problem solving. Over the past decade, we have begun to focus on improving the problem-solving process, largely through an increased reliance on knowledge-management practices. The premise is that in every interaction with a customer there is an opportunity to learn about that customer, what product(s) she is using and her interactions with them, both positive and negative. There is great deal of value in gaining greater knowledge from customers and in sharing it across the organization. By capturing and making such information accessible in a knowledge base, each support agent can benefit from the collective experience of the department and the organization as a whole.

The Knowledge Base: Integral to AO

The use of the electronic, searchable knowledge bases in support has been revolutionary. It allows a support agent to quickly benefit from the collective knowledge of the organization, contribute new information or change or delete obsolete information. The Consortium's Knowledge-Centered Supportsm (KCS) practices evolved out of an awareness of the power and effectiveness of integrating knowledge capture and maintenance into the problem solving process. If properly implemented KCS will not add time the problem handle process. KCS is *not* done *in addition* to solving problems, KCS becomes *the way* to solve problems. A by-product of this integrated approach is the creation and maintenance of *knowledge in the context of the customer*.

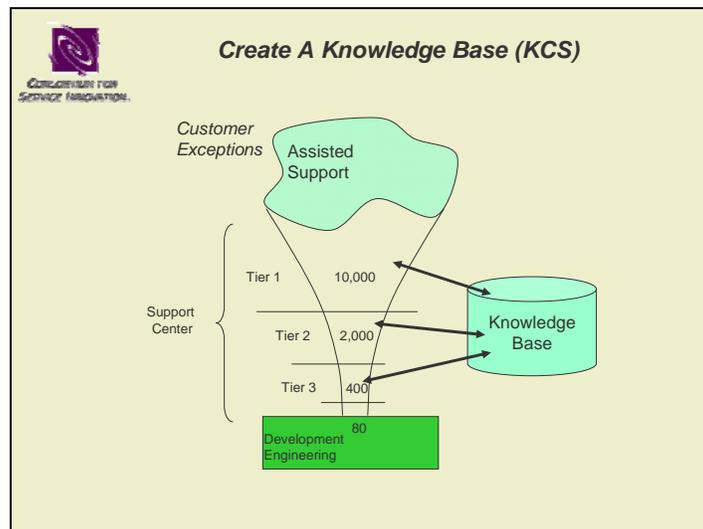


Figure 4

As KCS has shown, simply storing and retrieving answers is not where the real value lies. It is in the ability to capture customer context; the customer view of what is happening in their terms, the relevant environment (systems and products) along with the answers and be able to find them when one goes looking. That is what defines findable, usable, applicable knowledge.

Effective knowledge-management practices are essential for the next part of the story; and KCS, we have found, is the most effective way to capture and maintain knowledge as a by-product of customer problem solving. KCS has evolved to become a rich set of practices that produces dramatic results. (For more information on KCS, visit the Consortium website at www.serviceinnovation.org.)

New Technology, New Realizations

Internal use of a knowledge base was certainly an important development in providing better, faster support at a lower cost. Another significant shift came with the use of the Internet and the ability to provide customers with access to a subset of the knowledge base on a 24/7 basis, with search tools to facilitate their searching for solutions independently. This change not only helped to solve existing customer exceptions, but provided encouragement to seek help for customers who might *not* have sought them previously even via traditional support means. We began to see, as more and more

issues were solved via Internet access to the knowledge base, just how much need there was out there.

Context is also one of the ingredients that transforms information into knowledge. Understanding the context in which a problem arises provides critical filters to help locate the right information and apply it in a useful fashion. Search tools, which once offered only Boolean keyword search, have continued to evolve in a way that now allows them to refine the search results based on the context in which the problem occurs. The addition of natural language processing (NLP) search capabilities, for example, enables searches on concepts—information in context— rather than simply keywords. These search tools “understand” the search phrase as a whole and search the *meaning* of statements about a problem rather than just on the occurrence of the words in the phrase. This type of search produces fewer, more focused results and helps to minimize the frustration of encountering scores of documents with only a passing reference but no actual solution.

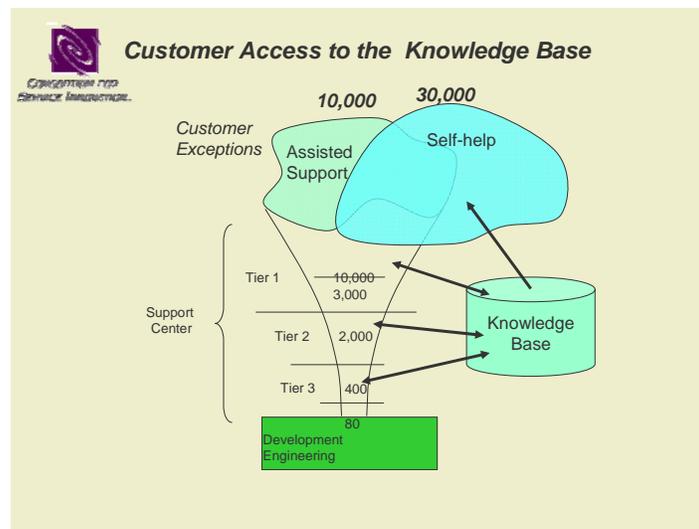


Figure 5

The addition of contextualized content to search technologies has enabled a significant improvement in the customer’s success with Web-based self-help. In fact, the level of customer activity on a website with a good knowledge base and sophisticated search tools is staggering! Some Consortium members have estimated from 3 to 10 times more Web support activity than that via the traditional support funnel. This affords a very different perspective—and attests to a much greater demand level than we imagined—when only assisted support was an option.

The discussion of Web-based self help begs a few questions, however. And, while these questions could fill an entire white paper on their own, we'll summarize our observations here:

Q: What constitutes a good support website?

- **Context:** The ability to provide content that is filtered by context—environment, critical variables, experience—of the intended audience.
- **Timeliness:** A high percentage of support knowledge be made available to customers within hours of its capture. So, for example, that might look like, 90% of known solutions should be published within three hours or less of their discovery.
- **Choice of Access:** Customers should have multiple ways to access content: Top 10 Frequently Asked Questions (FAQs) by Product Area, Table of Contents Look-up, Search Tool, Bookmarks and others.
- **No Dead Ends:** If a customer does not find helpful information, she should have the option to request assisted support, via *Click to Call*, *Click to Chat*, and *Click to Submit an Incident*. And their website experience—the click stream and search strings—should be captured so that the support agent that connect with can grasp the issues and context and get more quickly engaged in finding a solution.
- **Feedback:** Customers should have a way to provide feedback and get acknowledgement that it was received.

Q: How do we get customers to use the Web?

- **Promotion:** The “Build It and They Will Come” approach might work for baseball diamonds, but it’s insufficient for encouraging customers to visit and continue using a website for support. Organizations must promote the site via a concerted marketing campaign and train support agents to remind callers of the site’s availability as a support option.
- **High-Quality Experience:** Customers must encounter a good website and a satisfactory experience using it to find solutions.
- **Co-browsing:** Consider the creative approach that Cisco used: Customers were exposed to the value of Web support by being invited to accompany the support

analyst to a URL that allowed the customer to see the same information the support analyst was seeing when searching for an answer. Once customers realized they could do that on their own, they quickly adopted a routine of checking website first before calling. In fact, an interesting and unexpected benefit of co-browsing was a 20% improvement in solution time!

Q: How do we measure customer success on the Web?

- **Broad-spectrum Metrics:** No one measurement indicates customer success on the Web. We can evaluate a number of different inputs to determine whether our customers are satisfied with the support they are receiving from the support site:
- **Collected Survey Data:** Query users on their experience on the Web, such as: How often do you find information to address your problem? How often is that information truly applicable to your problem? How often do you place a call or submit a request for assisted support after not finding a solution on the Web?
- **Sign-on or Session-Trend Evaluation:** Capture the rate of unique visitors to the site and determine if it is trending up or down.
- **Incident Timing:** Pinpoint incidents opened during or within 12 hours of the site visit.

The “No More Tiers” Formula

Bryan Lindley is Program/Project Manager for Knowledge Centered Support for the Global Customer Support Center of the NonStop division of Hewlett-Packard. Lindley agrees that “that the ability to move the knowledge base to the Web as a first line support for customers has diverted a lot of the known issues and allowed us to concentrate on solving the new, more serious problems.”

His organization is now able to publish 90% of new knowledge captured from customer interactions in as little as two hours of closing the incident. (HP Nonstop is one of the most mature and successful KCS environments we know of). Customers have remarked on how impressed they are to see their solved issues appear almost immediately in the knowledge base on the Web following an interaction with a support analyst.

What has also changed is the tiered structure of the support center; it no longer exists. The HP Nonstop support organization has moved from a three-tiered support model that escalated problems through the support tiers to now having a single global network-based support team that collaborates on problem solving. The NonStop division—which has moved, largely intact, from Tandem originally, to Digital Equipment Corp. (DEC) to Compaq and finally to Hewlett-Packard, as mergers and acquisitions dictated—now practices a natural form of “swarming.” This has constituted a huge social change for the support analysts. As in most support organizations, the tiered model had created a bit of a caste system. Some of the senior, Tier-3 support analysts—who had been largely insulated from speaking directly with customers for a long time and only solved escalated issues—now have become an integral part of the support team and, from time to time, are the first point of contact for customers calling in. The organization still has generalists and specialists, but unlike in the tiered model, they all have an equal opportunity to create value. The really good generalists have the same opportunity for the same level of compensation as the really good specialists. The realization that solving complex problems often requires an excellent generalist to collaborate with excellent specialists has eliminated the caste system and the disruptive “us/them” attitude.

Lindley notes that the specialists have gained a renewed respect for the generalists and realize they each have unique perspectives and skills. The move from a tiered-escalation model to a network-collaboration model was not easy and took strong leadership and lots of communication, participation and interaction within the team, but, according to Lindley, it’s truly paying off.

The Changing Nature of Work in The Funnel

By making already-discovered problems and their solutions available to customers via the Web on a 24/7 basis, self-help has reduced incoming support calls in some organizations by as much as thirty percent or more. The knowledge base—the repository for the collective experience of the organization—has also become an extremely valuable source for development and engineering to understand the customer experience. Patterns and trends in the knowledge base provide the kind of direct actionable information that product management and product engineering love. Through the knowledge base,

support can provide compelling, input based on documented customer experience. This valuable information can impact product design that in turn can reduce improve customer experience, and reduce exceptions and support demand. In our earlier example, developers might only see 80 out of the total 10,000 incidents—the ones that “fell out” of the bottom of the funnel. They will now have access to patterns and trends that reflect 40,000 or more customer exceptions thus providing a more comprehensive view of the true user experience. Development can create more relevant products by paying attention to how customers are using products, particularly when data indicates that they’re being used in ways for which they were not initially anticipated, creating a new ubiquity.

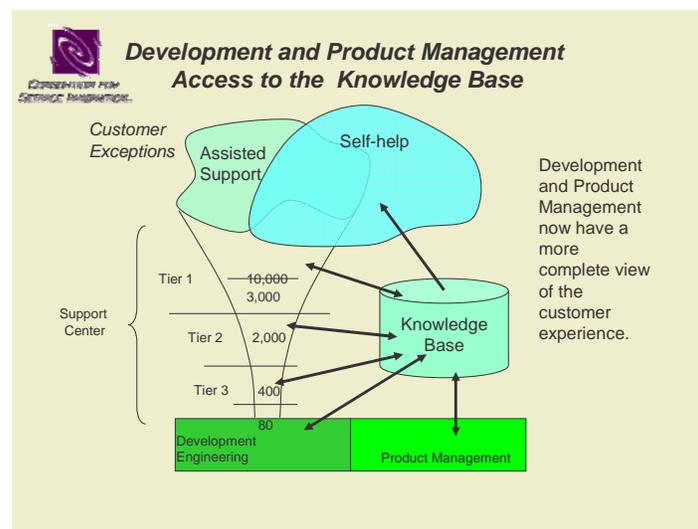


Figure 6

From Streaming to Swarming: *What's the Buzz?*

When the support structure moves from an escalation model, we refer to as “streaming,” to a collaboration model, we call “swarming,” it becomes evident that the tiers have been inhibiting rather than fostering an open flow of communication up and down the organization. Swarming characterizes the reality of effective problem solving, that is, collaboration inside the organization and even with external resources. Like a cloud of excited bees, knowledge flies in all directions, transmitted from one member of the hive to another. It resonates throughout the network and ends up reconfigured in interesting new ways...the stuff that inspires innovation.

In a collaborative network structure, innovation and relationship-development thrive. And with the imperatives to cut costs, this structure will also result in optimal use of resources and a lower cost for solving new and complex problems. As customers' successes via Web-based self-help increase, the nature of the work in the funnel shifts from (mostly) solving known problems to (mostly) solving new problems.

“Unfortunately, many enterprises are still in operation with a large hierarchical management body. Under this old-fashioned management model, information is not transmitted smoothly. Also, with a strict hierarchical system, the originality of the youth is severely suppressed. – Qiu Baoxing, Mayor of Hangzhou, China

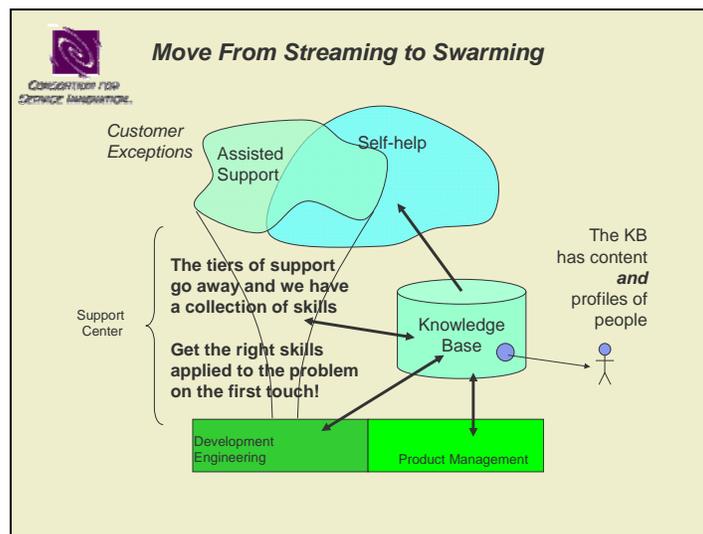


Figure 7

Problem solving is a creative and collaborative activity. In the classic support model, information *streamed* through the support organization, eddied at various points where it was needed to solve certain problems and, if possible, captured into the knowledge base for sharing. By removing constricting tiers that forced the direction of information one way, the new open arena allows for *swarming*. With generalists and experts working together

to form ad hoc groups, they can more quickly solve the tougher, more complex problems that now make up the majority of the issues that come into the support center.

Our support people have been collaborating to solve problems *in spite* of the organizational boundaries and linear escalation processes that have been in place. This is most evident, perhaps, in the rapid adoption of Instant Messaging (IM) tools in support. These tools allow analysts to circumvent traditional hierarchies and directly access the individuals from whom they need assistance, provided, of course these experts have made themselves available via IM.

What if we could quickly gather all the appropriate and relevant people and materials “together” to collaborate on a problem?

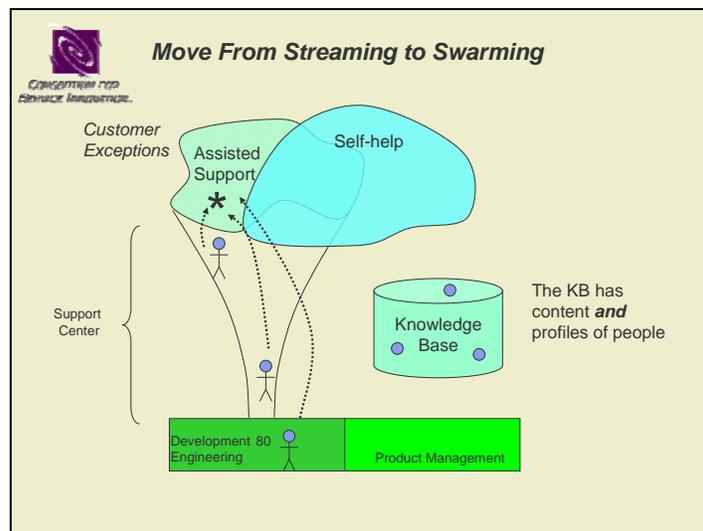


Figure 8

When swarming is optimized, it should be much easier to access experts and content to help solve problems. Previously the hierarchical nature of the organization kept people compartmentalized and unable to fully leverage the experience and talents of their colleagues, peers and customers.

It's Not Just *What* You Know...

As the old adage goes: It's not *what* you know, it's *who* you know. In the Adaptive Organization, it's both. It's no longer just content that we capture into the knowledge base and reference frequently, but the potential connections with people that can further our efforts. Ideally, we would be able to quickly find what we collectively know, a collective view of who knows what and even a mapping of who knows who if a resource is outside the organization. As the work in the support center shifts from "mostly known" to "mostly new" issues, we need to find ways to improve or optimize our ability to solve new issues. In order to do so, we must have the ability to find the right people.

Some organizations' knowledge bases are beginning to include profiles of people—internal and external. The skills-based routing systems being used today are not yet very sophisticated. We do see a requirement for very rich profiles to be programmatically developed and maintained as a by-product of the interactions and experience of the analyst and the user in the support network. However, most of what is in place today is manual. Individuals within organizations build their own profiles of expertise. This has a number of limitations, but this approach is beginning to provide us with a better understanding of the technology required to automate the creation and maintenance of the profiles.

The addition of these profiles adds new relevance to the value we place on information and its application. The interim relationship nodes allow knowledge providers and knowledge seekers to find each other more efficiently. Instead of casting inquiries via distribution lists or broadcast emails, one can narrow the search to the core group of individuals potentially able to field the question. Fewer people are interrupted and better answers are forthcoming more quickly.

So, in addition to technical content, a truly rich knowledge base also holds profiles of people—those in the organization's network and perhaps beyond the organizations confines—along with an indication of areas of expertise and reputation. Many organizations do have some form of skills-based routing, but with limited success due to the quick rate at which learning happens. What we envision in the Adaptive Organization

requires that we move well beyond today's limited skills-based routing capabilities to a dynamic, extended swarming model.

THE REIGNING CLOUD

Acknowledging the User Community

The next step in our model is to add the user community into the mix. Currently, in on online user forums, users are asking and answering question for each other. This cloud of activity and demand now represents the following:

- Users who request assisted support (This is the demand we have been satisfying in the support center for years.)
- Users who access Web-based self-help (which, it turns out, is a much larger demand than that which we saw come into the support center previous to the Web's existence.)
- And, the interaction of users in the community and/or in online forums.

Extending the support network to those outside the support organization—through user forums, special interest groups and other such communities—not only provides a rich resource for input, it also allows the organization to build relationships, develop dialog, exploit capacity and resources and augment the research efforts beyond what many organizations' internal budgets might allow. Communities congregate and strengthen their bonds via online forums, across instant messaging, in e-rooms, via blogs, wikis, podcasts and other electronic and face-to-face collaborative interactions.

Observing the interaction between your customers and tapping into these extended networks reveals valuable information about how customers are using your products, what they're troubled by, as well as the best use cases of the products in a real productivity context. It also unveils more information about the nature and volume of user demand. The emphasis on understanding the customer experience will drive us to look outside the old structures and to connect in new and meaningful ways with the customer as individuals. Online communities are personal and have a sense of humor, two thing businesses need to learn to embrace.

“The open society, the unrestricted access to knowledge, the unplanned and uninhibited association of men for its furtherance—these are what may make a vast, complex, ever-growing, ever-changing, evermore specialized and expert technological world, nevertheless a world of human community.” – J. Robert Oppenheimer, 1954

In the early 90s, Novell took advantage of then-new online forums to learn more about their customers and their use of its products. They also found it a great way to forge more personal relationships with key customers, or power users. Kim Groneman, Senior Manage/Program Manager (and self-proclaimed Grasshopper Herder) of Novell Technical Service, started out working in support when he joined Novell 14 years ago and soon after began working with Novell’s online community forums on CompuServe.

“We started a forum on CompuServe to interact with Novell customers and answer questions. It was very popular. After a while, however, customers wanted to their own space so they could talk amongst themselves. They created their own forums, which we no longer sponsored, but we did drop in to find out what they were talking about.”

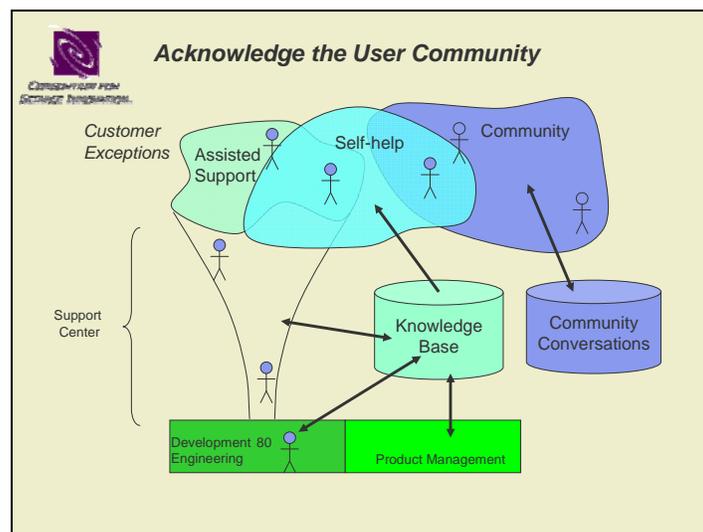


Figure 9

What he learned, he says, is that because the people that were participating in these independent forums had various backgrounds with many other products—often beyond the scope of Novell’s own support staff’s experience—forum visitors reported that they often got better answers from people who were “in the trenches” than they could get from Novell support. Eventually, the computing environment and the products got more complex and varied and more forums developed. Groneman discovered that a number of these “entrenched” experts were providing a great deal of help consistently and Novell’s SysOp program was born. There are now scores of volunteer experts who routinely provide assistance to other customers across hundreds of user forums. They do it, they say, for a chance to get a behind-the-scenes look into new technology, access to developers, and the good feeling it gives them to help out. What they also get is Novell’s sincere gratitude.

Integrating the User Community

As we understand more about The Cloud, we realize that we have not been fully aware of the real demand for support (or perhaps just “in denial” about it). It appears that as online resources and cyber-mingling between customers continues to evolve, more demand for support becomes visible.

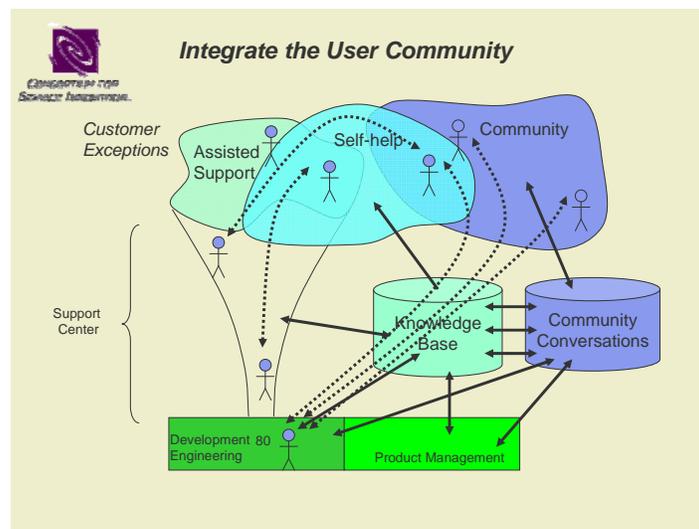


Figure 10

As Kim Groneman explains, “Once Novell saw the value of integrating with its customers, they had a ‘duh’ moment and ran with it.” The program has proven to be so successful in handling a large percentage of demand effectively that it has performed well in excess of expectations.

Currently a core of 45 SysOps monitor thousands of interactions in hundreds of forums about Novell products. Rules of conduct have been developed by the communities themselves and if any undesirable behavior emerges, usually called “flaming” in the community it’s weeded out by the forum members themselves.

SysOps are rewarded with special insider information, access to developers and beta technology; they even have the opportunity to attend annual technology retreats that include trips or cruises.

“On this year’s trip to Bermuda, 20 of the 30 invited SysOps came along; that might seem costly but when you think about it, if the entire year’s program costs us \$50K, that’s a fraction of what it would have cost to hire the number of people it would have taken to provide the quantity and quality of support our SysOps provide.”

And while a trip sounds like plenty of incentive to participate, Groneman finds that the SysOps don’t actually *need* much incentive. They do it largely for the *ego food*, being recognized as experts by their peers. Since these volunteers eat, sleep and breathe the technology, they also do it in their spare time because they find it fun. They get special access to valuable contacts and software and the latest insider technical information. Plus, they *really* enjoy being helpful.

While companies like Novell, HP, Microsoft and National Instruments are taking a nurturing attitude toward user communities, other companies have not. Those still harboring the illusion that they can maintain control over their customers have tried to manage or censor content. But it’s been shown that a vendor who attempts to exercise control or censorship over its user community will lose the right to be part of the community and, consequently, we lose access to the important stories they have to tell. Customers will leave and create their own online space for conversations with their peers.

Doc Searls, co-author of the *Cluetrain Manifesto* asserts, “Markets are conversations,” and conversations are interactive. They require sharing, listening, learning, and reflecting. If our customers are having open, honest conversations about our products, don’t we want to encourage and be a part of that?

Nurturing, rather than controlling, the conversation allows us to hear the good stuff, which, ironically, may not always be positive. In fact, the *really* good stuff is likely to be the stuff we don’t want to hear, but should. Participating in the community allows us to learn what customer *really* think about our products and determine who the power players are in these communities. Company image, or brand, is now largely defined by the customer experience and listening to the conversations between customers helps to gauge the effectiveness of the company’s efforts to promote, and then live up to, our image. We may find that there is a sharp contrast between the marketing message—traditionally a happy message about how the company would *like* to be seen by its customers—and what the forum discussions indicate about customers are *actually* experiencing the company. While painful to hear, this is highly valuable information.

The Relevance of What We Deliver

When we first looked at the traditional funnel, we saw that 80 issues out of 10,000, or less than 1% of customer experiences, made it through the funnel to the developers. If we move out of the funnel and into the cloud, we can envision a more complete view of the customer experience. By paying attention to that experience it is possible to craft products that better serve our customers’ needs. Additionally, by participating in the community, we will learn who the key users and influencers are in those communities and will be able to engage them in discussions leading to the design and development of new and better products. This approach has the potential to dramatically increase the relevance of what we do.

Success for the support organization could certainly be seen as reducing the demand for support. However, success also comes in the form of improving the relevance of the work our companies do, which, in a rapidly changing marketplace, is critical. Support

increasingly plays a role in facilitating the creation of content and in strengthening relationships that contribute to the relevance of our products and services.

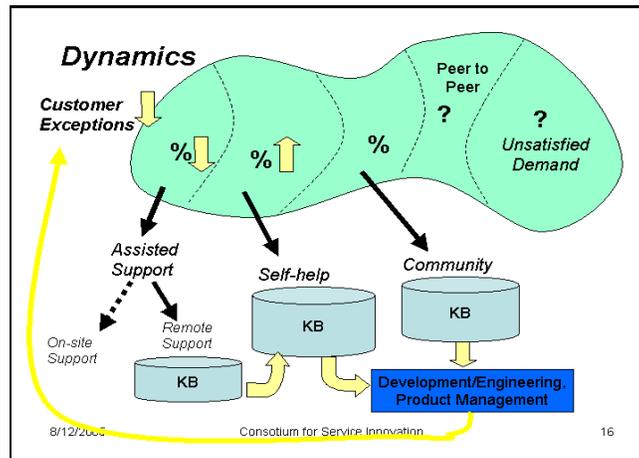


Figure 11

Operational Metrics: Everything's Going the Wrong Way!

As we move through the phases of transformation in the Adaptive Organization model, it is interesting to consider the implications for support center metrics. Initially, traditional operational metrics will show pretty dramatic improvement as a knowledge practice is implemented. Time to resolve issues will decrease, costs per incident will decrease, time to get new users up to speed will decrease, and first-call resolutions will increase. As the knowledge practice matures and there is sufficient contextualized content in the knowledge base, increasing numbers of customers can access that knowledge via Web-based self-help. Sound great so far!

Now things get interesting. As we noted earlier, as customer success on the Web increases, it changes the nature of the work in the funnel. Because customers are finding the solved problems they need on the Web, the issues for which they request assisted support tend to be new issues. This forces the nature of work to change from the "mostly known" to the "mostly new," which in turn means that the metrics of resolution time, cost per incident, and first-call resolution will suddenly be moving in the wrong direction. As we

transition to a Web-based self-help model, we have to rethink the operation metrics; in this respect, it's helpful to think about support from a demand-based point of view.

A Change in Perspective: A Demand-Based View of Support

The Cloud represents the customer demand for support based on the exceptions they've encountered. There are five (5) loosely defined categories of exceptions (though there is some overlap):

1. **Assisted Support:** The customer wants to talk to the vendor and is willing to put up with the hassles of requesting assistance; this could be handled by a remote support center or onsite services
2. **Self-help:** The customer is willing to research a solution to their issue; this includes use of the product's built-in help facility, physical documentation, or online support resources including the knowledge base, FAQs, diagnostic guides and other tools.
3. **Online Community:** The customer would like to talk to other users about his issue; this includes user groups, online interactive user forums, email, and instant messenger.
4. **Peer-to-Peer:** Customers seek answers from peers in the break room or "over the cubical wall;" these are currently uncaptured conversations in the work environment.
5. **Unsatisfied:** The user gives up, finds another way to get the desired task accomplished or, in the worst case scenario, abandons the application and selects another vendor's product.

The work we have done so far on the demand-based view of support has focused on the first three categories of support: Assisted, Self-help and Communities. This is not to say that Peer-to-Peer or the Unsatisfied categories are not important to understand, but the first three seem to represent the arenas with the largest impact or the greatest value to the user in that they are investing time in seeking an answer. Also, the level of ambiguity (or difficulty in measurement) increases as we move down the list. Assisted support can

be measured with reasonable precision, based on the number of incidents opened. Through the activity in Self-help and Communities-based support scenarios, we can approximate demand. Peer-to-Peer support and Unsatisfied demand are more difficult to gauge. By recognizing these elements, we have to acknowledge that demand for support is huge—much larger than we ever realized from the view within the funnel.

We had the opportunity to assess the support demand within two of our member companies, each with a large and varied install base. We relied upon an estimation of the first three categories of demand only, in both cases approximating less than 2% of the total demand that actually came into the funnel!

This raises some interesting questions:

- Just how big is the demand for support?
- How do we optimally satisfy that demand?
- How much do we really know about the whole customer experience?
- What is the opportunity to improve the relevance of our products and services, improve the customer experience and reduce the demand for support?

A demand-based view of support is a different way to think about the customer experience. It shifts our focus from the speed and accuracy of response to the contribution to reducing demand. Or, in economic terms, it moves us from a cost-based view to a value-creation-based view. This creates an expanded role for the support organization, an opportunity to enter into a new set of relationships that will *require* us to transform the structure and metrics of our organizations.

“Inquiry and change are not separate; they are simultaneous. The moment we ask a question, we begin to create change.” – David Cooperrider,
Appreciative Inquiry

Power Shift

With the emergence of a highly connected user community, the power shifts from the vendor to the customer. The new, sophisticated customer now has the control. Customers are demanding more information in a timely fashion; they want to know what we know as soon as we know it. This is forcing vendors to be more transparent and accountable. Customers are themselves becoming the source for a good deal of knowledge, largely by necessity. With the growing complexity of the technology—multi-vendor environments, open source products and, the dynamics of grid computing—customers are gaining experience that support agents are likely not to have and are contributing to the challenge support faces to stay on the cutting edge. Fortunately, customers are also increasingly willing to share their experiences and solutions with others and with the vendor organizations themselves.

The power shift for the support organization lies in moving from a static, hierarchical, linear model—with its inherently limited capability—to a dynamic, knowledge-enabled network that does not suffer from the same capacity limitations.

Blurring the Roles

In the course of daily life, our roles shift from provider to consumer. As support professionals, we must reckon with a certain tension between these roles. When we buy something and it doesn't work, we expect top-quality support. As a provider we may feel the desire to provide that level of service to our customers but we're also constrained by system guidelines, bandwidth limitations and cost controls to provide less than that. How can we better integrate these perspectives into a workable unified vision and responsibility, and what structures must be in place in the organization, in our technologies, in our communities and in our own minds to make that new perspective a reality?

By expanding our view and our dialog outward into the cloud, we find that the boundaries between our various roles start to blur. The extent to which they blur depends on the contractual situation under which we work and the nature of the interactions we have

internally and in our personal lives. The goals of each department—sales, development, operations, finance, and support—are all knitted around corporate objectives, but each department interprets how goals ought to be met and what is required to do so.

Sometimes it even turns adversarial between departments with disparate visions of how to reach the objectives. Add outsourcing and global operations and the mandate to work across distributed geographies, time zones, cultures and dialects of English and you have a complicated work environment. Yet, we still strive to project a common face to our customers, offer high-quality products and services and provide support as seamlessly as possible. In the role of the customer, however, we have often experienced much less.

New technologies are driving requirements for solutions that are nearly obsolete by the time they're developed. Other technologies are also changing the way customers—the way we all—communicate. Technology users—our main customer-focus and increasingly how we can define *all* customers—are highly sophisticated consumers. And when they encounter problems they can't solve, it's likely the solutions may be of benefit to other users as well. The Internet has created a level of democratization in how information can be shared and with whom. Control and protocol are beginning to take a back seat to direct access and exchange, based on the need for timely responsiveness. Global organizations, virtual offices, pervasive communication media add to the imperative for a more comprehensive set of principles for collaboration and a dynamic model for engagement that allow more flexibility, access to knowledge and localized decision-making authority.

The tools are available; synchronous and asynchronous collaboration technologies including forums, instant messaging, Web conferencing, team rooms, blogs, wikis, natural language processing, VoIP, wireless, XML and many, many others. They drive up the stakes for information sharing, timeliness and innovation. In the current high-tech market, we cannot survive by simply being players; we must be masters of its game.

There is a clear need in the new business climate to optimize efficiency with still igniting innovation. Limited budgets can lead to internal competition; we must find work-arounds that facilitate interactivity and collaboration intelligently so as not to perpetuate

interruptions, delay decisions and continue problem escalations. Though counterintuitive in a competitive environment, we must seek to establish close relationships with our competitors without the fear of exposure keeping us isolated in order to further the industry as a whole. Additionally, we must find ways to create resource elasticity for a more flexible workforce structure, while still getting important work done.

The work now consists of a great many intangibles: quality, contribution, dedication, knowledge and loyalty. While difficult to measure, they are the bonds that hold the business network together and provide real value to the market and to individuals in the network.

Right-Minding vs. Right-Sizing

Down-sizing, or *right-sizing* as it is now euphemized, is a frequent response to addressing cost-reduction mandates. But right-sizing often misses the mark in terms of long-term effectiveness. Being “right-sized” is not as important as being “right-minded.” We must revisit the human systems and the social and mental models on which we’ve based our operations and structures and make the right changes there. Change management is about recognizing where change is most needed, but also where what’s working should be left alone. It’s about repurposing rather than simply reducing valuable resources, especially the human kind. The long-term benefits of this shift are loyalty, stability and reputation and they have value within the organization, the marketplace and the boardroom.

It is time to review our basic philosophies and operating principles and recognize the potential that lies within each of our employees. If we regard each entity as a *business unit of one*, and provide appropriate supports for them as systems-within-systems, we create mutually beneficial relationships that act as power cells within our organization and in conjunction with our customer and partner communities. We can then refocus and recharge the resources we already have against a refreshed set of values and adopt operational principles that reflect the new business landscape.

A right-minded organization is one in which a knowledge-centered network of people and content transcends traditional organizational boundaries with value placed on interconnectedness. Knowledge is the by-product of our interactions and inspiration

comes when an individual aligns himself with a set of shared values and a sense of purpose. Organizations must reward this integrated independence if we are to inspire innovation, not only with respect to product development, but in all our processes and value propositions as well.

Our organizations' structures and practices must engage employees, partners and customers in more holistic ways—they must build solid long-term relationships—and in doing so offer the potential for unprecedented capability and capacity. We must first get a better grasp on the magnitude of customer demand and assess our current capacity to fulfill it. We may find that the more we engage with the cloud, the larger it grows...or the greater grows the demand. While that seems a daunting prospect, it generally reflects greater customer involvement and expanding market position. The Adaptive Organization Model, then, can be seen as a blueprint for transforming demand into an asset.

To better understand the new marketplace, we have begun to seed the customer cloud to inspire a downpour of innovative ideas, reliable solutions and extended relationships. From the streams of new energy, we can reinvigorate our organizations, inspire new product designs, develop new ways of communicating value, realize new efficiencies and empower a greater sense of honor in support's critical role as the province of networked knowledge agents.

SUMMARY AND CLOSING THOUGHTS

For business leaders struggling to keep their organizations lean, innovative, and competitive, they are sure to find today's business landscape to be marked by tremendous uncertainty. The economic world is growing more and more unpredictable and chaotic. The chaos is based largely on a fundamental and lasting shift in how wealth is created: Wealth used to be associated with tangible and scarce resources such as land, labor, energy and capital. Now it develops from the best use (and reuse) of intangibles—particularly, information and knowledge. The new Adaptive Organization model focuses on the critical entities, processes and rules for engagement that allow an organization to organically adapt to these changing patterns.

An understanding of the complex adaptive systems will give business leaders what is missing from much of management practice today—a broader perspective on their world. In a global information economy, organizations must struggle to codify knowledge so that it is searchable, accessible and exchangeable at electronic speed. Where we once judged our success on the efficiency of production of high volumes of tangible goods for customers whose needs we could predict, we must now focus on creating responsive systems and responsible relationships that allow us to economically address customer needs as they change.

For support organizations that face front-line exposure to customers, as well as internal organizational constraints, the pressure is magnified. Organizational leaders must envision new types of relationships, determine with whom to create and maintain them and assess the risk of doing so, or not. Then they must be willing to support the individuals in their employ to develop and nurture new relationships, as well as recognize them for the value and importance they bring in the form of their own relationship networks.

The need for clear foresight and intelligent, inclusive leadership is stronger than ever. Our organizations are on the cutting edge—philosophically, operationally, systemically,

technologically strategically—which is what makes it possible to reach out, capture, and interpret clues about emerging customer wants and needs. We must remain structured for flexibility, open to innovation, empowering of our employees and remain customer focused in order to succeed. In an increasingly unpredictable world, leaders must not only personally understand the competitive environment in which their organizations operate, but also help the people in their organizations to understand it as well

As we've attempted to illustrate, this period of rapid change is manifested in the way people communicate with one another and the way business is being conducted. As we move into the seventh decade of computing, we are just now beginning to recognize which aspects of our work can be automated and which still require the human touch.

In reviewing the shift from The Funnel to The Cloud, let us summarize our key observations:

Ten (10) Key Observations from The-Funnel-to-The-Cloud Model

1. Effective knowledge management practices are the point of entry into a new way of thinking about and managing support.
2. Knowledge management practices quickly create increased support capacity.
3. Knowledge, positioned in the context of customers and made available via Web-based self-help, will satisfy more demand than we ever saw in the funnel (support center).
4. Customer success on the Web will change the nature of the work coming into the funnel from “mostly known” to “mostly new” issues, rendering the traditional tiered support model ineffective.
5. A collaboration model based on a network structure that values shared knowledge and maintains rich profiles of people and content, is the new support model. The network includes employees, partners and customers (the cloud).
6. Online user forums provide an opportunity to understand more about customer needs and identify and recognize the power users (valued players in the cloud).
7. Patterns and trends that emerge from the interactions (support center, web and user forums) are valuable to development in improving products and services.
8. The value that support creates can not be measured in support; it is realized by customers and in product management and development teams.
9. A large majority of the customer experience happens on the web and with other customers (forums) not with the support center - it is an “indirect support model”
10. A new leadership model and new metrics are required to nurture and assess the health of the network and the total customer experience. We can not live in the funnel (support center) we have to get our heads into the cloud (the customer experience)!

Our latest thinking on the need for an Adaptive Organization model and the challenge in transforming an organization in that direction is a work in progress. As we observe the movement from The Funnel to The Cloud in our organizations, we will likely see scaled versions of those changes mirrored in the systems that affect us as individuals and also affect our communities, our countries and the world as a whole.

What's Next

The Adaptive Organization is a frontier; the Consortium is the base camp from which its members depart on fascinating explorations and report back on their findings. The power of the Consortium's collective experience is having the benefit of each other's learning; this accelerates the evolution of the Adaptive Organization model and helps avoid wasted time pursuing dead ends that others have explored and rejected. We know that some of what we have proposed here is wrong; and don't have quite enough operational experience yet to know which parts of the model will need to be tuned or redefined. The dialogue is interesting and we hope you will continue to engage with us as we mold and our molded by the concentric, dynamic, interactive models we observe and define.

Please stay tuned for the second part of *From the Funnel to the Cloud*, entitled *The Emerging Practices of The Adaptive Organization* coming soon. In this next part, we will take a closer look at the rules for engagement, the underlying principals and practices of transformation, tools for gauging relevance and some results of applying the theoretical underpinnings of the Adaptive Organization model to support operations in real-world environments.

Join Us!

If you would like to be part of the experiment, we are always looking for good thinkers and brave scouts willing to explore uncharted territory. We invite you to join us! Membership information is available at www.serviceinnovation.org.

In closing, we quote Peter Senge from his book, *The Dance of Change*:

"Laying at the root of the profound inventions ahead, I believe, will be a slow, gradual process of *rediscovering* how the natural world, the living world, operates and *reorienting* our institutions to embody this knowledge."