

The 10 Rules of eSupport

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Introduction

In the first wave of Internet e-commerce, a number of brick-and-mortar companies were “Amazoned” by nimble, “dot com” upstarts. How are they responding? By creating breakaway business strategies that utilize the Internet to build better customer relationships, and more effective one-to-one marketing platforms.

One of these strategies is to transition the technical support function to become a more strategic point for customer relationship management and, in the process, turn it from a cost center into a revenue producer. This represents a major shift in thinking from the traditional role of the sales department as the customer’s primary point of contact, and the department most responsible for managing and maintaining customer relationships.

The shift to doing business over the Web is making the post-purchase customer experience more important than ever. Technical Support professionals, who have long been the primary post-purchase customer interfaces, are becoming increasingly strategic in nature. This is because they bear a growing responsibility for ensuring long-term satisfaction and ongoing revenue flow from the customer base.

Support professionals are also in a position to learn and record unprecedented levels of detailed information about customers; specifically, how they view and use the organization’s products and services. This, in turn, allows the organization to tailor customized services and products to individual customer needs, and presents support professionals with a wide array of sales opportunities.

eSupport is an integral part of this strategy, in that it allows companies of all sizes to provide extremely fast, consistently effective technical support experiences to their customers. Support becomes a positive process, instead of the long-standing and commonly held perception of contacting technical support as something to avoid whenever possible. Most importantly, eSupport allows support professionals to utilize these improved service levels and positive customer interactions as valuable opportunities to enhance relationships and, ultimately, to make cross-sell and up-sell recommendations.

IDC projects that the eSupport market will grow at an annual rate of 49 percent, to an estimated \$14.23 billion on the year 2003.

Traditional technical support

The current strategies of providing technical support are expensive, inefficient, and ineffective. Users are forced to search through hundreds of pages of help text to find a solution. When they make a call to a technical support organization, it is typically a very inefficient process of user identification, entitlement, investigation, diagnosis, issue tracking, trouble ticket documentation, and escalation.

Also, because systems are so complex, gathering and analyzing information requires a large number of manual operations, including extensive question-and-answer sessions and analyst data entry. Worse, telephone-based support rarely resolves technical support issues in a timely manner.

Diagnosis is often inaccurate, ineffective, and arbitrary and often leads to escalation, down-time, and even re-imaging. Support analysts are forced to make desk-side visits to fix problems, which is very expensive, or to spend inordinate amounts of time on the phone trying to resolve problems. Email-based support has also been ineffective, since users usually need instant support for problems when they occur.

Additionally, technical support problems are growing in volume and complexity. For end-user technical support, the majority of problems today are software and network-related, and fall into three categories:

- *Break-Fix* – these are problems resulting from software (both OS functions and applications) crashes or failure to operate properly. These problems are the most expensive to resolve, as they require a great deal of system diagnosis and investigation, usually generate require escalation to Level 2 support analysts, and result in expensive desk visits.
- *System Change* – these are problems where the user requires a system change. Examples include installing new software and changing printer and email settings or resetting passwords. These are also complicated to diagnose and lead to expensive resolution.
- *“How-To” Questions* – these are user requests for outside assistance in accomplishing tasks. They are resolved by self-help and Level 1 support analyst assistance.

What is eSupport?

eSupport solutions use the Internet to deliver technical support to any client, anywhere, at any time.

eSupport offers the potential to enable all support providers – IT as well as vendors of hardware, software and network services – to dramatically reduce their help desk burdens while increasing service levels.

eSupport solutions enable machines to self-heal, end-users to utilize technology to fix problems through real-time, personalized self-service, and help desks to provide remote service through effective diagnosis and repair.

This capability is so important, technology analysts at The Hurwitz Group believe companies that don't put an effective eSupport solution into place during the next two years will face a significant disadvantage in the market.

eSupport automates the support process, whether it be for an internal help desk or external call center. It provides an end-to-end support solution by integrating all elements involved in support, including user identification, entitlement checking, problem identification, problem management, and problem resolution. It also speeds problem resolution by eliminating existing support inefficiencies in data gathering, analysis, communications, information sharing, and processes.

The 10 Rules of eSupport

Because eSupport is an emerging category, definitions of what makes up a complete solution vary widely. However, there are a number of critical requirements that make up a comprehensive eSupport infrastructure. These should be treated as checklist requirements when evaluating a potential eSupport product, service, or vendor.

These "10 Rules" of eSupport are broken down into three categories: automated development of support solutions, automated support delivery, and complete support infrastructure. A successful eSupport solution:

1. **Minimizes the development of support content**
2. **Solves any problem**
3. **Enables a support community**
4. **Automates all eSupport tasks**
5. **Supports transactions**
6. **Can be personalized**
7. **Is built from ground up to operate on the Internet.**
8. **Provides a high level of security**
9. **Is scalable and robust**
10. **Is extensible**

Automated Development of Support Solutions

Much attention has been paid to solutions that automate support activities, yet little attention has been paid to the development effort that is required to make them effective. An eSupport solution starts by automating the development of the solution itself, which reduces the cost of creating support solutions. No manual processes should be required in order to create and maintain the automated solution—this manual set-up approach contains hidden costs that many organizations are not aware of. Among other problems,

solutions that require manual development of support solutions simply won't scale. A fully automated eSupport solution contains the following attributes:

1. **It minimizes the development of support content.** No lengthy development cycles are required to create and implement an eSupport system, and there must be no significant, ongoing maintenance cycles. Because system configurations are constantly changing, only an automated support solution can effectively keep up with their dynamic nature. Another consideration is the one-of-a-kind nature of each user's system, and the eSupport solution's ability to automatically support this uniqueness.

In order to minimize development of support content, an eSupport solution must:

- Self-learn and self-configure. By self-learning, the system must generate its own support "content" by being able to automatically crawl users' systems to determine the exact fingerprint of each and every system it supports. This real-time monitoring of each and every system ensures that support actions taken on a user's behalf are based on the uniqueness of the system currently being supported.
 - Minimize scripting. The Achilles Heel of traditional support systems is that they require significant amounts of scripting and knowledge development. All solutions should be flexible to allow scripting on an exception basis only, and not rely on scripting for the majority of support content development. Relying on scripting as the main means of creating support solutions will result in significant costs in maintaining the scripts.
2. **It solves any problem.** The solution needs to provide a broad framework to solve any type of problem, for any user, for all hardware configurations, and all software configurations. Specifically, the system must address:
 - All problem types. Including break/fix, how-to, acceptable change, password reset, move/add/change, hardware configuration, software configuration, etc. Support organizations deal with a variety of problems, and a comprehensive eSupport solution must be capable of dealing with the complete range. Some problems, like break/fix, are very difficult and time-consuming to diagnose and fix. In order for support analysts to realize cost and time savings, an eSupport solution has to be especially effective in dealing with this class of problems, including problems that cannot be anticipated.
 - All software. The solution must support all software implicitly and without "scripting" style content creation. Software types include operating systems and applications (home grown or off the shelf), PC-based or server software, three-tier applications, Web applications, and thin or fat client applications. Moreover, this software is changing all the time, due to customization and configuration to better match changing business needs. Software change is also caused by

upgrades, patches, and new versions. An ideal eSupport solution must be able to handle the widest variety of software, as well as the dynamic nature of change.

- All systems. As companies start to use a variety of devices to provide mission-critical applications, the eSupport solution should be capable of supporting all kinds of devices and systems, including PC's, notebooks, servers, and computing appliances such as PDAs, cell phones, and pagers.

3. **It enables a support community.** This support community must be automatic and integrated into a support development environment. Inherent in the development of a community are:

- An open market. The eSupport solution must allow any support provider to provide support to any user. Expensive support infrastructure will no longer be a barrier to entry. Further, users and support providers must be able to find each other dynamically, even when there is no pre-existing relationship. When the inefficiencies associated with connecting end users to the appropriate support resource are eliminated, everyone involved in providing support and receiving support benefits. End users benefit by being able to receive high quality support from any support vendor of their choice, and service providers benefit by new access to previously unreachable markets.
- Community attributes. The ability to create support groups dynamically must be built in as a core part of the foundation. With these community attributes a user, for example, could create a support group that provides support specifically to a group of friends or family.

Automated Support Delivery

Once the eSupport system is developed, it must automate the delivery of support itself, including all types of support and support transactions, as well as personalization of the delivery. A comprehensive eSupport solution:

4. Automates all eSupport tasks, including:

- Proactive support. This is defined as preventing problems from occurring in the first place, by utilizing self-repairing technology to identify and repair problems on a system before they impact an end user. This is accomplished in two ways. First, by self-healing software on a user's system that detects and fixes problems even before the user notices them. Second, mass diagnosis and repair that allows support professionals to probe a number of systems simultaneously for specific problems and fix them.
- Active self-service capabilities that rapidly solve user problems and questions, and support a user's request without the involvement of a support professional or a network connection.
- In-context, assisted service by support professionals. Users receive help from support analysts who have powerful tools that allow them to remotely diagnose and fix problems on the user's system. The support analyst should have the ability to view the user's system and run commands on it remotely, so that the user is not burdened with running diagnostic commands and relaying information to the support analyst. The support analyst should also have the ability to change the configuration of several systems simultaneously, in order to fix problems proactively in a large environment.
- Solve any problem, including how-to, break/fix, acceptable change, and system configuration questions for all hardware and software.
- Automate diagnosis. The solution should be able to perform root cause analysis on the user's question and automatically collect all data to accurately diagnose the problem. Moreover, diagnosis incorporates the unique configuration of the affected system.

5. Supports Transactions. eSupport must be delivered to users on a per-transaction basis; that is, each step of the support process must be treated as a unique and distinct event. Key attributes of support transactions include:

- Entitlement and process flow for the transaction. The system must ensure that the end user is entitled to receive support by automatically collecting entitlement information and integrating that confirmation into the problem management or call tracking system.

- Asynchronous and synchronous communication must be enabled between end users and support professionals. The system should enable users to receive support in real time when they aren't able to diagnose and fix the problem themselves. When they attempt to connect to live support they should be connected to an on-line support analyst in real time, and the context of their problem should be automatically relayed to the support operator. The user should also have an option of conducting the support transaction when they are off-line.
 - Transactional integrity must be ensured. A support transaction must be completed in whole or not done at all—in other words, a user must not have a “partial fix” done to their system that may ultimately leave the system in an unstable state. Because of this requirement, and because several system events can occur during a support transaction, it is critical that a rollback feature is available. Critical to transactional integrity is the ability to “undo” a fix and return a user to their previous state to ensure the eSupport system can never make a user's situation worse off than before they initiated the support process. Since a change introduced to the user's system can never be guaranteed to not affect other parts of the system adversely, it is very critical that eSupport solutions have the ability to undo a change. This also gives the user a greater degree of control over the whole support process.
 - Queuing. Because transactions can span multiple support personnel, the eSupport solution must provide the ability to queue support requests into the appropriate support professional. Support analysts should be automatically notified when users are queued up and waiting for support, and should be able to view the amount of time each user has waited in the queue. The support analyst should also be able to view the queue, pick any user, and communicate estimated wait time to the users remaining in the queue.
6. **Can be Personalized.** The delivery of support must be personalized for each and every system or end user supported. This includes:
- Discovery and display. A support system, such as a support portal, must be configured so that each user's system attributes are automatically captured, providing the support organization or end user with a personalized view of the content that takes into account the user's unique software, hardware, and personalized data information. This helps users find solutions to their problems much faster.
 - Problem resolution must be granular enough to take into account the very detailed uniqueness of any end user's system. For example, details of a user's unique configuration settings for an Internet browser should be factored into the equation while diagnosing browser problems. Very often this is the most important data that the user cares about when an application crashes and needs to be restored.

Complete Support Infrastructure

The foundation of an eSupport solution is critical to guarantee that the system is capable of effectively delivering support, and to ensure the system can grow to meet changing requirements over time. A complete eSupport infrastructure:

7. **Is Built from the Ground Up to Operate on the Internet.** This includes:
 - Internet standards. The architecture must be able to scale with the growing capacity of the Internet, and be based on industry standards such as SSL, HTTP, LDAP, XML, and HTML.
 - Dynamic discovery of systems. The most often overlooked component of Internet support is being able to discover systems dynamically and connect them to each other. Very often companies use unresolvable IP addresses for a number of systems, an environment that makes it very difficult for any user to be connected to any support analyst over the Internet, since some of the systems can't be discovered dynamically. In order to overcome this barrier, an eSupport solution needs an effective system identification mechanism.

8. **Provides a High Level of Security.** Ensuring secure support transactions over the Internet is not optional with eSupport—it's a must-have item. Secure systems include, at a minimum, the following:
 - Encrypted communication, which guarantees that communication cannot be intercepted by unapproved parties. This will prevent a number of common security breaches and protect end-user's privacy.
 - Secure firewall access. Communication between end users and support professionals cannot compromise corporate security. Support communication must be made through specific known ports approved by Internet standards body. Good eSupport solutions should also be able to work around the different firewall configurations that are often used, which selectively prevent incoming and outgoing traffic.
 - Protection of the user's system and data: Users should have the ability to approve all support transactions being performed on their system by support analysts. Users should be able to review the transaction being performed and either approve it or deny it.

9. **Is Scalable and Robust.** Scalability and robustness are key factors in being able to deliver a solution to tens of thousands or even millions of users over the Internet.
 - Scalability. The system must be minimally intrusive on each system supported. It must minimize size requirements so that the client's resources aren't consumed by the support software running on the user's machine. The architecture must be built to quickly and easily deploy to thousands of

users, and not have size or limit constraints that prevent exponential growth in the number of systems or users supported.

- **Robust.** In order to be robust, the solution requires the system and infrastructure itself be stable and of high quality, with no memory leaks, and optimized to meet the minimalist size requirements for Web distribution and support. The support solution should have minimal system dependencies, so that the solution is operational even when some system components aren't functioning properly. For example, an eSupport solution should eliminate dependencies on additional subsystems such as network connectivity, email, Java virtual machines, the browser, third party DLLs, and database systems, because one of the most common support problems encountered is that users aren't able to connect to the network or the Internet. If the eSupport solution has a dependency on the network, then the user will not be able to receive support. Hence it is very important that eSupport solutions have minimal dependency on system resources like network connectivity and email.

10. **Is Extensible.** The solution must be extensible. Extensibility includes:

- **Integration into the support environment.** The solution must be extensible to allow the deep integration of support products and processes into the eSupport framework, including call tracking, call management, entitlement, knowledge management, knowledge bases, event monitoring, help desk, and call center products.
- **Customization.** Every company has some unique needs because of their unique environment and configuration strategy, and an eSupport solution should enable companies to build automated solutions that solve their unique problems. These automated solutions should be available to users and they should be able to simply click on them to activate the required fix. To that end, at the core foundation level the eSupport solution developer must be able to customize the solution to meet their needs. This includes the ability to change the look and feel of the overall environment, to change branding elements, and to easily integrate custom-developed content.

Conclusion

In order to stay competitive in their market segment, businesses should plan to implement an eSupport solution in the next two years. This strategy will help them to learn more about their customers, create positive support experiences and perceptions, and will allow them to build long-lasting, effective customer relationships. In the process, support analysts—particularly those involved in e-business—will replace the sales department as the new “front line” for customer interactions.

Ultimately, eSupport will create new opportunities for up-selling and cross-selling on the part of support analysts, turning support from a cost center into a revenue generator.

In this light, it is crucial to implement an eSupport solution that closely follows the 10 rules of eSupport, which appear in the checklist below. Good eSupport solutions should automate support development, automate support delivery and should provide a complete support infrastructure. Otherwise, an incomplete, ineffective solution may be implemented, resulting in a major financial investment that ultimately won't deliver a return.

eSupport Solution Criteria: An Evaluation Checklist

Does the solution minimize the development of support content?

- Is it self-learning and self-configuring?
- Does it minimize scripting?

Does the solution solve any problem?

- Does it solve all problem types?
- Does it support all software?
- Does it support all systems?

Does the solution enable a support community?

- Does it enable an open market?
- Does it support community attributes?

Does the solution automate all eSupport tasks? Does it provide:

- Proactive support?
- Active self-service?
- In-context, assisted service by support professionals?
- Solutions for any problem?
- Automated diagnosis?

Is the solution transactional? Does it ensure:

- Entitlement and process flow for the transaction?
- Asynchronous and synchronous communication?
- Transactional integrity?
- Undo of support transactions?
- Queuing?

Does the solution support personalization?

Does it discovery and display a personalized view?

Is the problem resolution granular?

Is the solution built from ground up to work on the Internet?

Is it based on Internet standards?

Can it dynamically discover systems on the Internet?

Does the solution provide a high-level of security?

Does it support encrypted communication?

Does it provide secure firewall access?

Does it protect a user's system and data?

Is it scalable?

Is it robust?

Is the solution extensible?

Does it integrate well into the existing support environment?

Does it allow customization to match your unique needs?