A Revised Road Map for Desktop Support: Where Are We Now?

A Report from the HDI Desktop Support Advisory Board

Two years ago, in "The Future of Desktop Support: A Road Map," the HDI Desktop Support Advisory Board recognized that the actual need for repair is no longer the primary purpose of desktop support. It's true that repair is and will continue to be a basic task within desktop support, but the focus of desktop support has increasingly shifted to partnering with business departments on broader initiatives. This is a natural partnership because departments are already used to working closely with their desktop support teams, and desktop support staff are in an ideal position to engage more in consultation and analysis with end users to make recommendations for solutions that can have a positive effect.

People may have an outdated impression of what desktop support encompasses. In the past, desktop support technicians were viewed as "break/fix" technicians or staff used solely for simple deskside visits, such as software installations. With the advent of remote support technologies and self-help, deskside visits for easy issues have become less frequent and are often handled by the service desk.

Today, the value in desktop support is the intimate knowledge of how technology is used at the ground level. Desktop support staff are uniquely valuable in their roles because they're in touch with the clients on a daily basis, giving them a unique technical perspective and the ability to act as client translators.

Just as each industry has nuances, each business unit with an industry has unique needs and operations. In addition to learning what the business does, desktop support staff see the interactions between each department. By understanding the business drivers of each department, desktop support is a linchpin enabling IT to delivering the right technology. In fact, one could argue that employees drawn to careers in desktop support have the personality and skill sets necessary to multitask, relate to clients, and enjoy the role of translator. This transition has evolved somewhat naturally within the industry, owing to where desktop support teams sit in an organization.

With proper reporting and communication channels, desktop support not only serves as a consultant to business units but also acts as a consultant to application development. These positions help guide development units in user interface, business unit needs, and the impact of past implementations. Technicians frequently translate between what upper management envisions, what end users actually do, and what developers need to know. For example, if clients are struggling with pop-ups across browsers, they may just say they can't see the window. Up will just say "I do not see the window." Upper management will state, "streamline this process so more transactions can be done per day." Desktop support can step in to point out how windows are being hidden so developers can adjust their code.

Desktop support technicians are now expected to act as project managers, process analysts, security specialists, business relationship managers, client leads, and subject matter experts. Regardless of the framework or methodology an organization follows (ITIL, COBIT, etc.), the consistent trend is that today's desktop support teams have greater and more wide-ranging responsibilities than ever before.

Selling the Importance of Desktop Support

According to the 2015 Desktop Support Practices & Salary Report, some common names for the desktop support function include *IT service desk*, *technical support*, *desktop services*, *field support*, and *PC support.* This range of names seems to indicate that the desktop support industry is trying to differentiate its type of support provided from that provided by the service desk or other support teams. It also indicates that desktop support varies based on industry, scope of support, size of the organization, or services provided.

With the variety of team names comes a variety of job titles, too. Some of these are a result of rules or guidance from HR, while other times it's the result of leadership trying to raise awareness about the

increased scope of support desktop support teams now provide. Throughout this paper, we reference various titles from the industry to give you an idea of the different terms that are currently used to refer to desktop support technicians. *Analyst*, *technician*, *support professional*: All refer to the same role, that of an IT professional working on a desktop support team.

First and foremost, desktop support professionals typically have excellent troubleshooting skills. They're knowledgeable about a variety of technologies and how technologies work together, and while they may not be experts in a specific application or technology, they often have a broad sense of how things work and the social network to know who to contact when they need assistance.

This broad-based knowledge can be even more important in businesses that use proprietary, in-house applications. The desktop support team likely has a much better understanding of how these applications are used and the challenges faced by business users than any other support team, because they deal directly with customers and their issues on a daily basis. This deeper expertise in the integration of end user technologies and services can be leveraged at many different levels, beyond direct client support, and desktop support management should take every opportunity to advocate and market these skills to anyone who has influence over the support organization.

The most important target for advocacy efforts should be the IT organization's senior leadership team. Because desktop support technicians often have a broad range of knowledge about many different types of technology, they're poised to take on greater responsibilities in enterprise-focused roles. For example, cloud services, in the form of a virtual desktop infrastructure (VDI) or software-as-a-service (SaaS), might open doors for desktop support staff because they know how applications function, how they integrate, and how the organization uses them. This knowledge can also help position technicians to take on leadership roles both inside and outside of IT.

Business units are already accustomed to working closely with their desktop support teams. They know these units well and are likely comfortable working with them. The industry appears to be using this relationship by incorporating IT liaison or business relationship management (BRM) roles in the desktop support professional's responsibilities. Liaisons who are familiar with both business and IT processes, and have established relationships on both sides, can have a very positive overall impact.

For IT support managers, the next level of advocacy is with peers in the IT organization. Leverage networking skills and make sure peers, leaders, and technical partners know that desktop support offers a great pool of talent for a variety of support operations. As noted above, emerging technologies are creating plenty of opportunities to leverage the knowledge analysts and technicians have gained over the years.

Finally, continue to advocate for changes to job descriptions, position announcements, and position titles issued by HR. For example, phrases like "Performs needs assessment, reviews products, and advises on procurement"and "Identifies and documents end-user business requirements, performs initial analysis, researches and proposes computing solutions for implementation" should be added to job descriptions for desktop support technicians. Changes like these, and others, should be formalized by HR.

Preparing the Staff

It's important that staffs are aware of—and ready for—changes in the technology landscape. The desktop support role continues to expand, and with change comes challenge. Position your teams for success by helping them understand their strengths and weaknesses, and encouraging them to obtain additional training, develop new skills, and pursue other areas of technology or even business expertise that play to

their strengths. Likewise, it's important to keep teams in the loop on organizational changes so that they will be in a better position to offer guidance on technical solutions, which could, in turn, create additional opportunities.

If someone is ready to take on additional responsibilities, one way to help them expand their role is by delegating important work. There are two benefits to delegating work: it gives the team member valuable experience, and it frees up the manager to focus on strategic responsibilities and prepare for the future. In addition, delegation sends a valuable message that team members can be trusted to get the job done with minimal oversight. To be successful, team members need:

- Training beyond technical skills, including training on brands and services
- Education on the workflow between departments, including inputs, outputs, and technical dependencies
- Ability to broker solutions internally and externally, based on an analysis and understanding of the needs of the organization
- Tighter integration and relationships with security, project management, and business analysis (e.g., many solutions may be in the cloud, which changes the traditional flow between teams)

There's value in going beyond simple management and becoming leaders in an organization. This means being an advocate for change and creating one's own destiny. It requires a lot of time and effort, but the end result is that everyone understands their own value and the value of their manager(s) and their team. Work hard to break down barriers and make others see the value the team offers both in IT and the organization.

The Evolution of Technology

The evolution of technology has had a stunning and direct impact on desktop support professionals, prompting changes in many facets of the job. The technology supported by desktop support has changed and will continue to change. By being ready and willing to adapt to changes, the desktop support industry can likely make some accurate predictions for what is coming in the near future.

Desktop support's primary goal should be to support business units and individuals by providing and supporting technology that enables them to achieve their business goals. However, changes to technologies and methods have necessitated a change in support tactics. As an industry, changing the perception, among customers and leadership alike, of what desktop support actually does is imperative.

The idea that the function of desktop support is to work on hardware is passé, but that perception persists. Depending on the industry and organization, the service provided by desktop personnel is continually evolving. In the past, the typical desktop support technician spent much of their day just working on PCs and laptops. But, as management discovered the value of having IT people in the field, their roles have grown to include asset management, asset deployment, server support, network configuration, VoIP, VDI support, mobility management, A/V support, printer support, and many others.

Virtual environments

There are several ways to look at virtual environments, including SaaS, desktop-as-a-service (DaaS), virtual desktop infrastructure (VDI), and network devices. What these technologies all have in common is that they use centralized servers to provide access to applications or even entire workstations. The client machines aren't full-blown PCs because most or all of the actual computing takes place on the server.

Virtual desktops have several advantages, including:

- Extending the life of older equipment
- Being able to use simple, low-cost appliances
- More efficiently managing software updates and patches, as they're handled at the server level
- Increasing the security of applications and data by centralizing them in the data center

One of the disadvantages is that virtual environments require very robust infrastructures. The more virtual desktops, the more server power and network bandwidth are required to maintain an adequate response rate. There's often little in the way of cost savings from a hardware perspective because of the infrastructure upgrades required to leverage the technology. The savings usually come from other areas, such as security or maintenance.

According to Forrester, interest in VDI appears to have peaked. However, new ways of providing access for mobile workers are continuing to drive virtualization and DaaS. Even in organizations that are not moving fully to VDI, it's commonly used in training rooms or offshore offices where there may be multiple shifts; it's also becoming more common among development teams, as they can have multiple instances running simultaneously. As VDI has gained acceptance in the enterprise, and as organizations have expanded their infrastructures, administration responsibilities have shifted from L3 to desktop support. VDI troubleshooting, in turn, expands desktop support professionals' skillsets and opens up growth opportunities in more analytical positions, as opposed to pure hardware or technical support. (Of course, it's worth noting that the popularity of virtualized applications within the VDI environment can actually have the opposite effect on desktop support responsibilities, as applications, when delivered as a service, may require less support from technicians.)

The expansion of VDI may create a new paradigm for desktop support technicians as the replacement of desktop computers with thin clients draws a dividing line between hardware, analytical, and administrative skillsets.

Mobility

In 2013, mobility—both devices and applications—ranked high on Gartner's list of the "Top 10 Strategic Technology Trends for 2013." Three years later, mobility has penetrated every facet of IT. The latest Gartner report, looking forward to 2016, refers to what it calls "The Device Mesh." This is a holistic view of connectivity, which includes all of the ways that people can interact with technology, from mobility to social networks to business technology. Our world is increasingly connected, and the idea of mobility is no longer a question of what we should do but of what we are doing.

Mobile devices are the gateway into other systems, such as security applications in the business world and home automation in the consumer world. According to the last HDI research on mobile support (November 2013), 15 percent of tickets relate to mobile device support. However, while 43 percent of organizations reported having mobile device support policies that were "well defined," 43 percent were still in the

process of developing these policies, and 41 percent reported that they were struggling to keep up. Many organizations are still working on ways to make the mobile experience equal to or better than the standard computing experience for their customers and end users. Likewise, customers are still looking for ways to use mobile devices to work more efficiently.

In addition to being a tool for users, mobile devices are increasingly common tools for support professionals. According to HDI's research, 64 percent of support organizations are using mobile devices to provide support. In organizations using mobile devices, 68 percent of staff are able to access monitoring alerts, 59 percent provide remote support through remote control and screen sharing, 53 percent manage tickets through mobile devices, and 52 percent access the knowledge base.

Mobile users report increasing degrees of satisfaction using mobile devices in conjunction with—or instead of—traditional desktop computers. The decrease in cost of mobile devices, coupled with the increase in power, will continue to drive this trend.

Application mobility will continue to be a challenge, given the range of form factors, but security is a rising concern (for many reasons, not the least of which is that organizations can receive very public, very negative press when data breaches occur). Consumers obviously find it very appealing to use free online applications or purchase inexpensive ones to use on their mobile device, but when employees do the same, that can put sensitive organizational information at risk, regardless of whether it resides on the device or in the cloud. For staff that regularly use mobile devices, enhanced training may be necessary to make them aware of security issues.

Mobility creates several issues that IT will have to address. Software licensing is one example: As people use more devices on and off the corporate network, we are beginning to see a shift, especially for cloud service applications, named-user licensing model (versus individual device). Industry requirements are another example. Because of industry regulations or security requirements, some industries have been slower to adopt mobility (if at all). Clearly, mobility is not a "one size fits all" solution.

Consumerization

Consumerization changed the world for many IT organizations. Instead of standardizing support for a few known brands and models, consumerization pulled tablets and smartphones into the mix and pushed web development in the direction of simpler, more familiar interfaces, such as those used by iTunes, Google, or Amazon. Consumerization has made the world easier for customers and harder for IT.

Consumerization also changed customer expectations. Consumers think nothing of purchasing the latest in mobile technology every year, but a business has different needs. It's probably not financially feasible to upgrade all of an organization's mobile technology on an annual basis, except perhaps for those users that are customer-facing and need the cachet of having cutting-edge devices.

Working with limited resources, IT has been, in many cases, pressured into giving up control and enabling technologies it wouldn't have even considered allowing just a few years ago. Consequently, support organizations have had to broaden their capabilities and deepen their knowledge bases. For example, consumerization, coupled with mobility, has given rise to the concept of walk-in (walk-up) support. Many desktop support organizations are opening the doors to their end users and inviting them into the "back room" as a way of encouraging more face-to-face contact and improving the customer experience. Gartner summed it up like this: "Implement walk-up services to improve the user experience and promote self-sufficiency; do not implement them to reduce costs."

BYOD

Over the past few years, many organizations have adopted bring your own device (BYOD) programs, which give employees permission to purchase and use their own equipment. However, BYOD means different things to different organizations. Some companies provide a list of approved machines and devices, along with a financial stipend; other companies have no real standard. (Higher education environments, in particular, literally support anything that plugs into the network!)

A whopping 89 percent of organizations allow mobile devices to connect to their networks, and more than 50 percent of network devices ship without a wired port. Obviously, BYOD presents some very real pros and cons for desktop support:

- Pros
    - Perceived enhance productivity
    - Greater mobility
    - Greater availability
- Cons
    - Device and network security
    - Manageability
    - Supportability
    - Data ownership
    - Vague expectations
    - IT knowledge and development deficiencies

Paying attention and keeping tabs on what's changing in technology and in your organization is critical. It's important to stay informed on new technologies and support processes, to keep an open mind, and to be willing to change. You need foresight to prepare management and staff for coming changes. For example, it's become clear that desktop support needs to evolve toward a less hardware-centric model. VDI is one technology that can reduce the amount and/or types of physical hardware an organization needs, especially if an organization moves towards using disposable assets, such as network appliances.

Desktop support professionals have a lot to offer their businesses, but they must be willing to adapt their approaches to support in order to maintain a useful relationship with the business. Historically, desktop support technicians have been generalists; to accurately troubleshoot hardware and software issues, they needed to know a little bit about a lot of things. In this new era of technical support, technicians need to become more specialized. The skills developed over years of diagnosing technology failures put desktop support in a unique position. Businesses can leverage this and consider alternative uses for these skills. One way to do so is by using desktop support professionals in an advisory capacity. In all likelihood, the desktop support staff is in the best position to know and understand how the organization is actually using the technology it needs to keep things running. They've worked with the users, built great relationships, and have a good rapport with clients. All of this can help desktop support provide direction and influence when helping the organization understand how it might take best advantage of new technologies and engage the user community, both formally and informally.

Another option is including simple consultations in the desktop support service offering. Many organizations have gone through the expense of introducing video conferences in conference rooms only to find out that users are reluctant to actually use the video conferencing technology because it's too complex. Those users could engage desktop support for assistance, but desktop support could also provide training in the system's easy-to-use self-service capacity. In this way, desktop support can empower end users to overcome any intimidation they may feel when confronted complex technology.

The more desktop support engages in consultation and analysis, the more it will reinforce its position with users. The difference here is largely one of approach, of leveraging years of expertise and trust and applying that to core business problems in a more integrated, focused way. If desktop support has a seat at the table for high-level, complicated business problems and other urgent issues of importance, it will have an opportunity to not only resolve those issues but also build a reservoir of knowledge regarding the challenges that plague their end users and the issues that have the greatest impact. Ultimately, desktop support will be able to make recommendations for solutions that can have a positive effect on the organization.

Cloud technology

Cloud has been a buzzword in the IT world for a while now, but the understanding of cloud technology is still, for lack of a better word, cloudy.

According to the National Institute of Standards and Technology (NIST), there are **four types of cloud**:

- **Private cloud** is a cloud infrastructure operated solely for an organization. It may be managed by either the organization or a third party, and it may exist on- or off-premises.
- **Community cloud** is a cloud infrastructure shared by several organizations in support of a specific community with shared concerns. It may be managed by either the organization or a third party, and it may exist on- or off-premises.
- **Public cloud** is a cloud infrastructure owned by an organization that sells cloud services and made available to the general public or a large industry group.
- **Hybrid cloud** is a cloud infrastructure composed of two or more clouds—private, community, or public—that remain unique entities but are bound together by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load balancing between clouds).

Through common usage and clever marketing, the cloud has come to mean "not hosted on-premises," blurring the lines between it and SaaS. However, regardless of its usage, cloud computing's promise of flexibility, low cost, and boundless storage has changed the game for IT. According to CDW's **State of the Cloud Report**, "non-IT executives are more involved in cloud decisions than in traditional IT decisions." This makes it an appealing choice for executives who feel like IT has left them out of the mix.

The use of cloud technology usually translates to another service to support for the technicians, increasing the complexity of the desktop support environment. Cloud services often shift the management and administrative systems from IT to the end user, who are not all prepared to understand the technical ramifications and choices, often leading to more calls to desktop support.

Shadow IT

The term "shadow IT" has multiple definitions, but generally, it's one of two things: first, the organization's conscious or unconscious decision to circumvent its own support services or desktop support teams by allowing employees to contact internal team members directly for IT support, thus circumventing the service desk model and issue-tracking protocols; second, when a business unit, group of users, or individuals implement a new product or application without IT's knowledge.

Shadow IT has been around for many years. In the past, it was kept in check by organizational restructures to centralize services and contain costs. During that period, budgets were sufficient to provide the services and access to applications that customers demanded, keeping customer satisfaction high. However, slowing economies, sagging profits, and greater IT security requirements have redoubled efforts to reduce budgets and introduced complicated processes to disburse the shrinking IT budget, slowing the delivery of IT services. Nevertheless, many organizations still believe that they have shadow IT under control.

The introduction of the smartphones and tablets opened up new technologies to the masses, bringing robust consumer-focused devices, with their many applications, features, and functions, into the realm previously governed by IT. Those looking for new functionality need look no further than their device's app store. However, though their low (or no) cost is appealing and they provide functionality users feel IT isn't providing, apps can expose the organization to risk and liability. Many users don't know that organizations are bound by those end-user license agreements that often go unread, and they don't know where the organization's data may reside or what might be done with that data.

To combat this, the organization should provide ethics training and implement governance to ensure that everyone knows what's expected of them and how to not expose corporate information to the public world. However, with BYOD programs, no organization has complete control, and risky situations can be difficult for desktop support personnel to manage. The key to the desktop support professional's success is to remain trained on new technologies and processes that are breaking into the workplace, and to continue to build relationships with the people they support. In doing so, desktop support professionals can serve as an early-warning system for IT, bringing attention to issues (and, if need be, involving legal and security teams) before it's too late.

Security

Over the past ten years, information security (IS) has become a leading area of focus for IT organizations and professionals of all stripes. Gartner anticipates the worldwide expenditures on IS-related activities to grow to $76.9 billion by the end of 2015. With mobility becoming more pervasive, mobile devices have become a primary attack vector, which will make mobile security a high priority for users in the coming years.

The desktop support professional plays a critical role in helping organizations maintain data security by taking the following actions to help ensure the security of endpoint devices:

- Instruct users on appropriate security practices (after all, the most vulnerable point in security is the user).
- Secure endpoints through proper configuration, antivirus and malware protection, and regular updates to applications and operating systems.

- Be the first responder for security incidents on endpoints, investigating and determining the scope of the intrusion and remediating threats.
- Identify threats to security in the environment, and either correct it or recommends action to address it.

The days of just knowing to pull the network cable when someone is infected are no longer sufficient. Much more nuance, skill, and knowledge are required to operate effectively against emerging threats. Desktop professionals must stay abreast of current security practices and maintain their training in technology security, working in partnership with other technology professionals and users to protect an organization's sensitive data.

Security and compliance are likely to drive the need for local technical consultation even further. Business units need guidance to prevent them from inadvertently sharing sensitive data or purchasing technology and systems with weak security, or simply to help them understand the compliance laws and regulations the organization is bound to follow. Desktop support technicians that understand both the organization and the technology are needed to fill this gap.

Organizational culture

Corporate culture is **defined** as "the beliefs and behaviors that determine how a company's employees and management interact and handle outside business transactions. Often, corporate culture is implied, not expressly defined, and develops organically over time from the cumulative traits of the people the company hires. A company's culture will be reflected in its dress code, business hours, office setup, employee benefits, turnover, hiring decisions, and treatment of clients, client satisfaction and every other aspect of operations."

The impact of an organization's culture plays out in everything from decision making to change management. Organizations with very open and relaxed cultures tend to have collaborative decision-making processes that may extend far beyond desktop support; more rigid cultures may follow top-down decision-making processes, in which decisions are made at the C-level and pushed down.

Desktop support technicians should have a solid understanding of where desktop support fits within the organization and how the organization's culture may affect a team. All technicians should be knowledgeable on the vision, mission, and strategy of the organization and the departments they support They should also be educated about the department. It's important to understand the department's priorities, as they set the high-level direction for the organization. Being knowledgeable about the department enables technicians to speak confidently to colleagues about subjects such as hierarchy, the impact of one's own team, and how their role ultimately can affect the organization's success or failure.

Technicians who understand their role as a part of the whole can understand how they can add value in a meaningful way, steering clear of areas and activities that have little perceived value. Network across the organization. Build relationships that are engaging and beneficial for all parties. Identify key stakeholders and engage them in meaningful ways. These efforts not only enable technicians to become familiar with diverse perspectives, they also make it easier to complete projects or make difficult decisions.

For technicians, a complete understanding of the organization's culture provides a concrete sense of the constraints and boundaries under which they must operate; for managers, a complete understanding of the organization's culture and the department's subculture will help them identify areas where cultural change may be required within the team.

Resources

Each technician and manager is responsible for his or her own career and success, but the organization should take a vested interest in professional development. Some people learn best in a formal setting, so for those individuals, a classroom training approach is ideal (e.g., the HDI Desktop Support Technician and HDI Desktop Support Manager courses, university courses, community college courses). For people who are self-directed learners, many resources are available online at little to no cost: YouTube videos, Wikipedia articles written by practitioners, local libraries for books on technical subjects, MOOCs (massive open online classes), web-based training (Lynda.com), etc. Many professional associations, like HDI, also provide free resources like webinars, white papers, and articles, in addition to local meet-ups.

Conclusion

It's an exciting time to be in the desktop support industry. Whether you're a desktop support technician, team lead, or manager, rapid changes in technology have enabled desktop support to grow and flourish, rather than fade away, as was once predicted. As IT becomes less structured and more diverse, the value of desktop support will continue to increase and it's status as the organization's Swiss Army Knife will become more firmly entrenched.

A REVISED ROAD MAP FOR DESKTOP SUPPORT

About the HDI Desktop Support Advisory Board

The primary mission of the HDI Desktop Support Advisory Board is to provide advice and guidance for the creation of industry standards, best practices, research, and professional development. The twenty-five board members represent organizations from a range of industries, and regardless of how large their organizations are or which support model they employ, each member provides critical insight into the trends and needs of the desktop support community.

The revised road map project was led by Mark Fitzgerald and is the result of the combined efforts of board members from the business impact, technology, and strategy/leadership subcommittees.

STRATEGY/LEADERSHIP

Angee Phong (lead)
Manager, Technology Service Desk
Bristol-Myers Squibb

Prisnel Dominique
Manager of User, AV, and International Support and Operations
Goodwin Procter, LLP

John Kettlewell
Director, Technology Support Services
George Mason University

Brian Rabalais
Director, Local IT Customer Services
Duke Energy

BUSINESS IMPACT

Mark Fitzgerald (lead)
Director, Help Desk of Distinction
Boise State University

Jill Beckman
Assistant Director, Desktop Services
Boston University

Jamie Molina
Director, Information Technology
PNW Boces

TECHNOLOGY

Mike Russell (lead)
Senior Manager, Restaurant Technologies
Jack in the Box

Mike Hanson
Director, Technology Support
UnitedHealth Group, Inc.

Cay Robertson
Manager, Service Desk and Access Administration
Tampa Electric Company

Nenita Rozzi
IT Service Desk Manager
CLEAResult

About HDI

HDI is the professional association and certification body for the technical service and support industry. Facilitating collaboration and networking, HDI hosts acclaimed conferences and events, produces renowned publications and research, and certifies and trains thousands of professionals each year. HDI also connects solution providers with practitioners through industry partnerships and marketing services.

Guided by an international panel of industry experts and practitioners, HDI serves a community of more than 120,000 technical service and support professionals and is the premier resource for best practices and emerging trends.