

# Maximizing Return on Communications Infrastructure Investments through Managed Services



A Frost & Sullivan White Paper

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## **EXECUTIVE SUMMARY**

Today, smart businesses recognize the value of advanced communications for developing a sustainable competitive advantage. Forward-thinking organizations are leveraging advanced technologies such as IP telephony, unified communications (UC) and virtualization to differentiate themselves; reliable and flexible communications solutions enhance employee productivity, improve customer satisfaction, and drive revenue growth. But as converged, next-generation technologies penetrate the enterprise, proper IP infrastructure management becomes increasingly critical to success.

Rapid technology evolution and shortened product life cycles are leading to increasingly complex enterprise communications architectures, which pose significant challenges to IT management. In addition, thanks to an increase in mergers and acquisitions, and the growing number of virtual workers, IT staff frequently need to integrate diverse, multi-vendor systems and synchronize technology upgrades across disparate, geographically dispersed user groups. Finally, as companies invest in and integrate best-of-breed point solutions from multiple vendors, they further increase the complexity of their infrastructure.

As a result of these trends, businesses are forced to continuously invest in IT management resources and expertise. Failure to do so can lead to major inefficiencies, a reduction in business flexibility and even a declining competitive advantage. Organizations experiencing staff shortages or lacking sufficient technology expertise typically take a reactive approach to infrastructure management, leading to downtime and an inability to leverage their information systems and communications for a competitive edge to their organization.

The recent recession has also prompted businesses to pursue a new approach to their IT and communications investments. Resource constraints require greater flexibility, risk mitigation, economies of scale, a larger focus on core competencies, and future-proofing infrastructure investments. Some businesses have come to recognize that out-tasking tasks that aren't central to their business can help them become more agile, scale more easily, transfer risk, and improve the efficiency and productivity of their employees, whilst reacting more proactively to external environmental changes.

Managed services can empower the enterprise to more effectively leverage IT investments for a competitive advantage. A trusted partner with superior voice and data expertise can become a powerful extension to internal IT staff, saving money and ensuring more efficient and effective infrastructure operation and management.

## **INVESTING IN ADVANCED IT AND COMMUNICATIONS TECHNOLOGIES: BENEFITS AND CHALLENGES**

Information systems and communications technologies have become a key source of competitive advantage for many organizations. Advanced technologies are driving business-process acceleration and empowering users, partners and customers to be more productive and effective, enabling a positive change in relationship marketing approaches to both internal and external markets. It is therefore critical for businesses to continuously update

their IT and communications infrastructure, as both the technologies and the business environment evolve.

### **Data Networks – Cornerstone of the Converged Communications Infrastructure**

One of the most powerful trends in business communications today is the convergence of voice, data and video applications over IP networks, which has in turn made data networks one of the most valuable enterprise assets. VoIP and IP telephony can deliver significant cost savings and productivity benefits. Converged enterprise communications help reduce network management and on-net calling costs, and potentially access and long-distance costs with the help of SIP trunking. IP telephony also enables the more cost-effective deployment of advanced communications applications, including presence, unified messaging, unified communications, mobility and conferencing. The value proposition of IP telephony is evidenced by its widespread adoption: about 30 percent of worldwide businesses had deployed IP telephony platforms and endpoints by the end of 2009, and IP networks have become the cornerstone of business communications.

As a result, data networking equipment and management are increasingly considered strategic investments, requiring a thorough assessment of business objectives and resource capabilities. IP-based, real-time communications are placing new demands on the data networking infrastructure, making its design, implementation and ongoing management more challenging. These new applications require high availability, scalability and superior QoS mechanisms to ensure voice and video quality, as well as critical business application support (such as “Just in Time” applications for manufacturing organizations). Frequently, an IP telephony implementation also requires a LAN re-design and/or upgrade, as well as a considerable investment in proactive network monitoring and management resources.

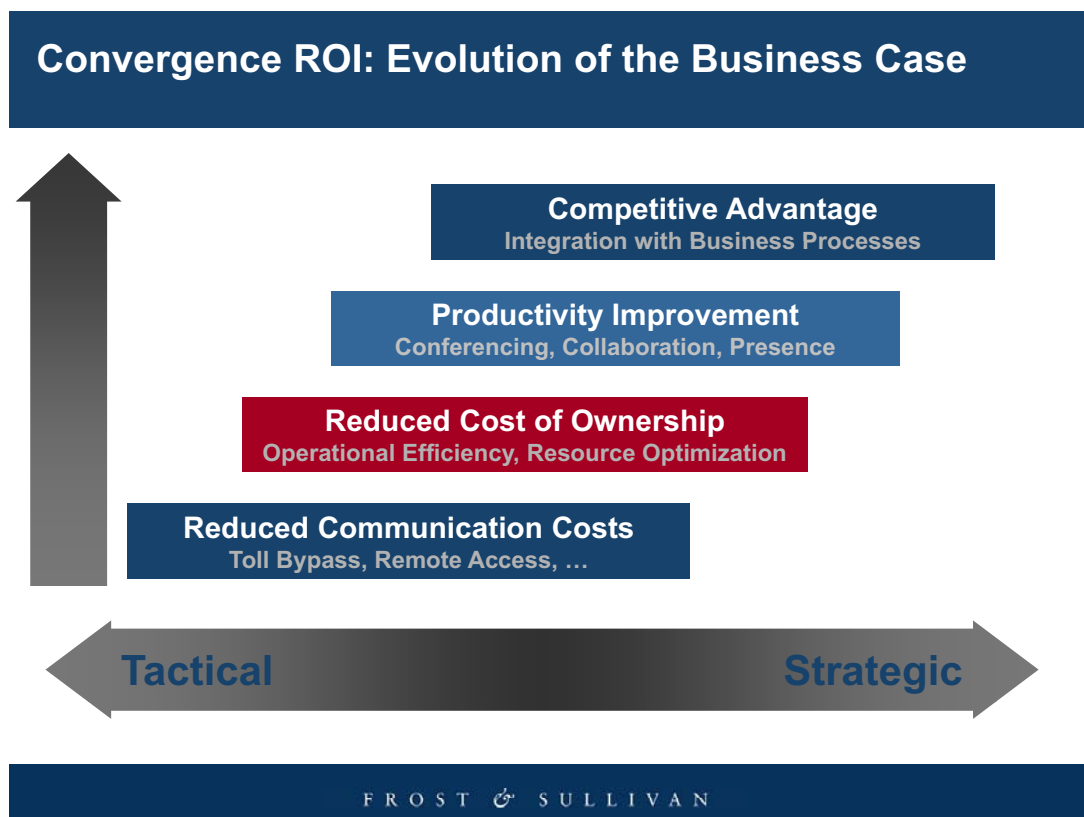
Furthermore, the gradual migration to IP telephony within large organizations creates “islands” of VoIP and TDM technology and results in additional equipment costs, as well as the need to integrate and manage diverse protocols and networks. Similarly, businesses must integrate their IP-enabled premises-based infrastructure with TDM or SIP trunking access networks, which involves the deployment of various border elements, including gateways, IADs and SBCs, and leads to additional network-management issues. In this process, security issues arise requiring businesses to more closely monitor and manage both perimeter devices and content integrity, and adding yet another layer of complexity to network management.

The growing penetration of wireless technologies, such as wireless LAN (WLAN) and voice over WLAN (VoWLAN), is also adding to the chaos. Properly architecting the data network to support new wireless traffic and applications, and managing QoS for wireless voice, requires new skills—skills which many enterprise IT departments simply don’t have. Fixed-mobile convergence (FMC) promises to further complicate enterprise data networking implementation and management.

Besides the incremental costs related to network convergence, businesses face additional challenges related to IT staffing and expertise. Since most organizations have traditionally managed their voice and data networks separately, the respective telecom and IT management teams have little cross-functional experience. The two silos are gradually merging, and the pool of converged communications expertise is expanding. But at present, most businesses will need to outsource these capabilities, either as a temporary solution until they ramp up internal skill sets, or as a cost-effective, long-term infrastructure-management strategy.

As the IT department takes over the responsibility for managing the IP voice infrastructure, the needs and support requirements of users and the organization increase exponentially in frequency and complexity.

**Figure 1 – Convergence ROI: Evolution of the Business Case**



**Pursuing Unified Communications for Greater Productivity**

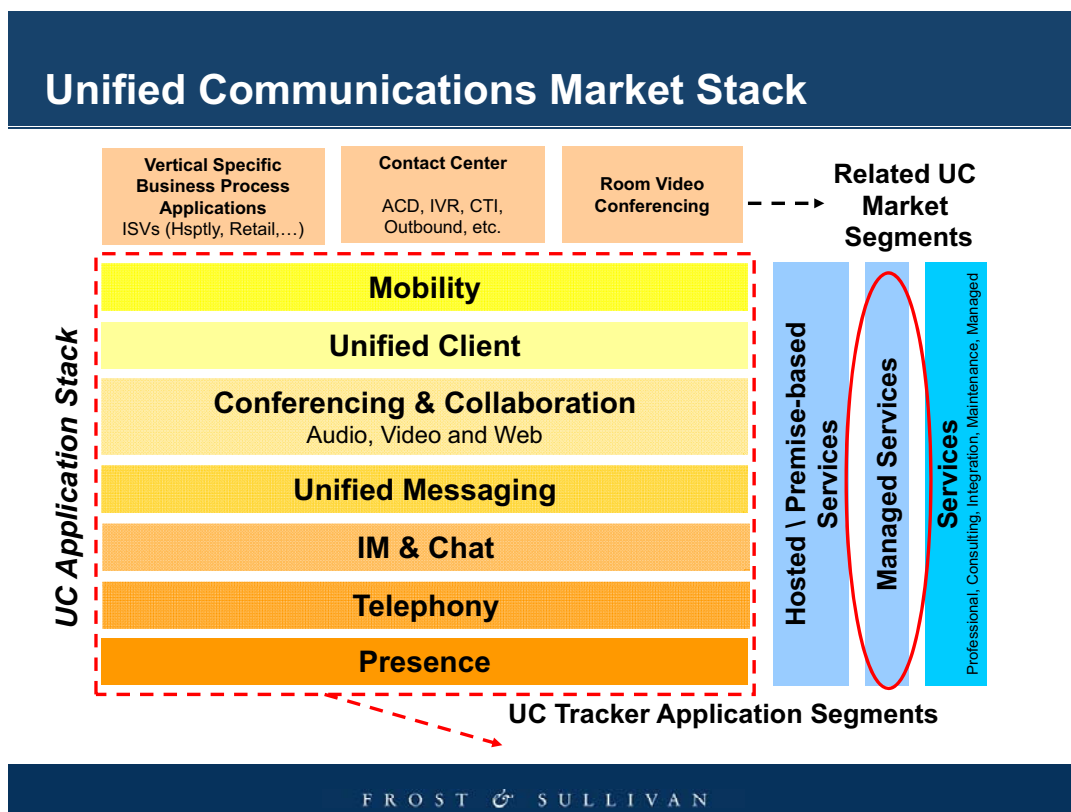
The complexity of communications is increasing even more as businesses seek to integrate various communications applications into UC environments to improve user productivity and team collaboration. Frost & Sullivan defines UC as an integrated set of voice, data and video applications, with shared presence and a unified client. UC is rapidly gaining traction as businesses increasingly deploy advanced applications such as presence, mobility, conferencing and collaboration.

But application integration poses new challenges for IT management. Such complex environments require expertise in diverse, continuously evolving technologies and applications as well as the ability to properly manage the integration itself—skills that are difficult and costly to develop and maintain internally. Additionally, data networks must be properly engineered to support such integrated architectures with a mix of real-time and non-real-time applications.

UC delivers even greater benefits when integrated with business-process applications such as CRM and ERP, in what is commonly referred to as communications-enabled business processes (CEBP). This level of integration requires specific expertise and significant involvement from both IT and communications management staff.

Siloed internal telecom and IT management teams are likely to find it difficult to rapidly and economically acquire UC and CEBP implementation and management skills. They can take a risk and deploy UC or CEBP on their own. They can suspend or postpone their UC implementation, foregoing its benefits until they can develop the necessary expertise. Or they can mitigate the risk and save costs by partly or completely outsourcing their UC or CEBP implementation, integration and management.

Figure 2 - Unified Communications Market Stack



## **Virtualization - Running a Cost-Efficient Data Center**

Virtualization is having a powerful transformational impact on enterprise data centers today. It refers to the process of “decoupling” users and applications from the hardware that performs computational tasks. Platform/ server virtualization has already gained significant traction in the enterprise, as it helps significantly reduce costs by reducing needed servers, space and power, as well as the number of IT staff involved in data-center management. Recently, the need to eliminate incompatibilities among various enterprise applications has spawned application virtualization. Application virtualization (also called application streaming) is used to maximize the number of concurrent users for software licenses rather than maintain a license for individual desktops. In the future, desktop virtualization will also have a significant impact on IT, as remote, central servers deliver all applications, processes and data to a variety of remote desktop clients.

Virtualization promises compelling cost benefits. But by centralizing architectures, including real-time communications applications, it is changing the way in which technologies are developed, implemented and managed, and therefore requires a dramatic transformation within IT management. Businesses must be prepared to properly evaluate and implement virtualized communications solutions; to do so, internal IT and telecom staff must combine their expertise and coordinate their objectives.

Forward-looking businesses need to align their IP telephony and UC infrastructure plans with a virtualization strategy. However, new, consolidated IT and telecom management structures and cross-functional skill sets require considerable time, effort and resources to develop. Therefore, businesses looking to deploy virtualized communications solutions without delay and unreasonable risks may want to explore opportunities for outsourcing the required expertise to a trusted third party.

## **Rapid Technology Evolution and Shortening Life Cycles: Costs and Risks**

Over the years, the pace of technology evolution has accelerated due to increasing competition and continued innovation. To maintain their competitive edge, businesses must more frequently upgrade or replace routers, switches, applications, endpoints and other infrastructure components. Vendors also are more ready to discontinue support for older technologies, forcing businesses to make new investments in IT and communications infrastructure.

In addition to the actual equipment costs related to more frequent replacements, businesses also incur costs related to implementation and integration services, and staff training and expansion. They may also incur hidden costs related to inadequate support for evolving technologies. Overwhelmed IT management staff may not be able to handle certain peaks in IT activity, such as when multiple infrastructure components need to be replaced or upgraded at the same time. Since beefing up IT management capacity for such peaks is not cost-effective, outsourcing can be a viable alternative.

## **MULTI-VENDOR ARCHITECTURES: FUNCTIONALITY GAINS TRAMPLED BY NETWORK MANAGEMENT INEFFICIENCIES**

Rapid technology advancements, market consolidation, and the proliferation of virtual, geographically dispersed organizations are resulting in diverse, multi-vendor IT and communications architectures that present major challenges to management staff.

Most businesses still have separate telecom and IT departments and, typically, IT and communications technology acquisitions are not synchronized, resulting in the implementation of disparate, non-interoperable solutions. That makes it hard to integrate and run them cost-effectively. Moreover, in certain situations, such as after a merger or rapid expansion, IT managers are forced to make technology choices based on immediate concerns such as site specifics (for example, the age and nature of existing infrastructure, number of employees, and local management capabilities), available budget, or current phase of technology evolution, and are unable to take strategic company objectives into consideration. Multi-vendor environments and the respective vendor relationships are typically managed by separate departments, resulting in higher costs and inefficiencies. Therefore, businesses going through continual mergers and acquisitions can significantly benefit from a comprehensive suite of managed services that spans multiple sites and covers both existing and new, multi-vendor technologies.

Furthermore, as businesses look to gain a competitive advantage through IT and communications technologies, they frequently choose to deploy best-of-breed solutions from multiple vendors. This approach has some obvious advantages, but it is difficult for IT managers to easily and economically integrate such disparate solutions into a comprehensive and converged UC architecture. In such cases, the superior functionality of individual applications may be outweighed by the additional integration and management costs. Outsourcing infrastructure management, partially or completely, can make the process both more predictable and more cost-effective.

## **ECONOMIC PRESSURES DEMAND A NEW APPROACH TO TECHNOLOGY INVESTMENTS**

The recent recession has highlighted the need for a new approach to IT and communications infrastructure investment. Tighter budgets and a general sense of uncertainty forced businesses to suspend or postpone their technology investments, and IT staff reductions have made it difficult for businesses to properly manage their existing infrastructure. New economic realities mandate a greater focus on core competencies, flexibility, risk mitigation, scalability and future-proofing of strategic investments.

Shorter macro-economic cycles and accelerated business processes require that companies seek more flexible alternatives to deploying and managing advanced IT and communications solutions. Similarly, they need to mitigate the risks related to staff shortages and capacity fluctuations that can impact costs and productivity, and future-proof their investments. The ability to economically scale without making large additional investments is key to business success in today's environment. Proper infrastructure management is one way to avoid the

risks of rapid technology obsolescence and ensure that businesses gain maximum advantage from their IT and communications investments. Businesses that focus on their core competencies and outsource other functions, such as IT and communications infrastructure management, are typically more agile and competitive.

## **MANAGED SERVICES: COMPLEMENTING INTERNAL CAPABILITIES TO MAXIMIZE RETURN ON INFRASTRUCTURE INVESTMENTS**

### **The Value Proposition of Managed Services**

As businesses increasingly seek to leverage advanced IT and communications technologies for a competitive advantage, they also acknowledge the key role of IT and telecom management in maximizing the return on their investments. Businesses need to focus on their core business to be more effective; yet they need to make sure the information systems and communications infrastructure can support their strategic objectives.

Typically, internal staff are most familiar with company objectives and specific needs, and are, therefore, best positioned to properly evaluate, implement and manage company IT and communications infrastructures. As noted, however, rapid technology evolution, increasingly diverse yet rapidly converging technologies, and new economic realities are significantly impacting infrastructure management requirements. As a result, businesses that wish to maximize the return on their technology investments face two options: continuously invest in hiring and training internal IT and telecom management staff, or bolster in-house resources with out-tasked capabilities.

The first approach can enable businesses to develop and control a growing store of technology expertise. But the strategy is risky and difficult to scale. Due to staff turnover and evolving needs, such businesses can easily find themselves over-staffed (leading to sunk costs and underutilized resources) or under-staffed (leading to ineffective infrastructure management); both can have a negative impact on the bottom line. Furthermore, the strategy can have opportunity costs related to the time it takes for staff to properly implement and manage any new technologies; the limited availability of experts in certain areas (such as unified communications and virtualization) may present an additional challenge.

The second approach, on the other hand, gives businesses an opportunity to economically extend their infrastructure management capabilities by partnering with an expert managed services provider. Businesses are increasingly making that choice today, driven by internal and external factors. A 2009 Frost & Sullivan survey of C-level executives showed that over 50 percent of respondents intended to increase their usage of managed services over the following year.<sup>1</sup>

Managed services providers are typically vendors, service providers, VARs, SIs or professional services firms that specialize in IT and communications infrastructure implementation, integration, monitoring and management. They can take over the

<sup>1</sup> Spending on Communications Technology and Services by Corporations in the Recession, and Beyond, May 2009- a web-based survey, targeting 102 U.S. C-Level executives in organizations with operations in more than 3 locales – within or outside the U.S. – with more than \$100 million in revenues.

responsibility for managing complex and continuously evolving technology environments, providing a number of benefits to the business:

***Diverse and Comprehensive Expertise:*** Through rigorous certifications and extensive experience, managed services providers have typically acquired a broad spectrum of technology expertise. As technologies evolve, managed services providers focus on expanding their skill sets and competencies to remain competitive. They are therefore typically well positioned to manage complex, multi-vendor communications environments. By outsourcing their diverse and comprehensive IT management tasks, businesses can avoid hiring and training additional IT staff.

***Proactive Infrastructure Monitoring and Management:*** Understaffed and overwhelmed IT departments often resort to reactive infrastructure management, addressing issues after they have already caused downtime and inefficiencies. Managed services providers, on the other hand, typically deploy remote monitoring and diagnostics technologies that enable them to detect and prevent potential network failures and resolve issues immediately. With redundant infrastructure and a large technical and customer service staff available around the clock, such partners are better equipped to provide flexible and reliable network management capabilities.

***Predictable Costs and Quality of Service:*** Managed services engagements make network management costs predictable and help businesses avoid unanticipated cash outlays. Furthermore, service-level agreements (SLAs) commit the managed services provider to a certain level of quality of service that may be difficult to achieve using internal resources. Managed services deliver predictable network performance at predictable costs, greatly reducing the risk for the business.

***Economical Scalability:*** With managed services, businesses can scale infrastructure management capabilities more economically, since the service provider's resource pool is larger and more diverse. Managed services partners can leverage their extensive NOC capabilities and experienced staff to economically scale based on customer demand. Thus, in a managed services scenario, adding capacity or new technologies would typically entail predictable incremental increases in monthly charges. With an internally managed network, even minor infrastructure changes might require hiring new staff and a major resource allocation. Managed services help businesses accomplish the following objectives:

- Be more effective through division of labor and sharing of responsibilities with the managed services provider based on core competencies and skills.
- Resolve recruitment, retention and other HR issues arising due to evolving skills needs.
- Benefit from knowledge transfer as they avoid expensive pilots and projects and leverage the managed services provider's expertise and skills based on similar projects implemented for other customers.

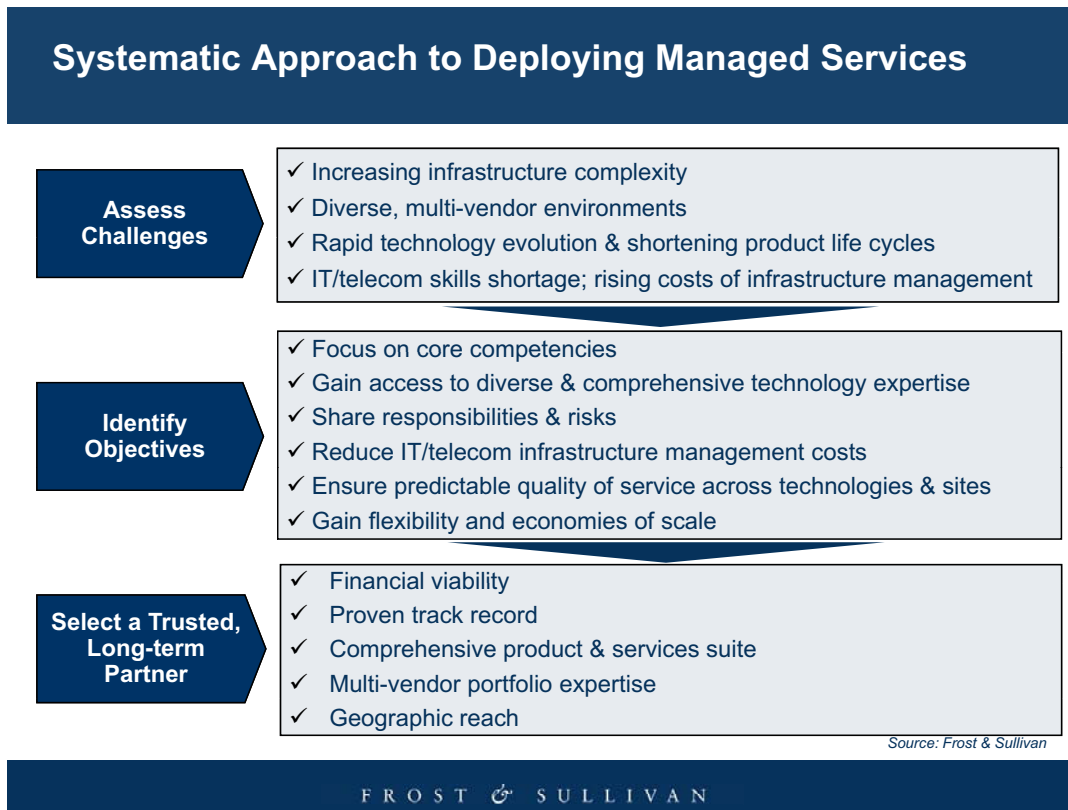
**More Convenient and Effective Partner Management:** Additional benefits of consolidated infrastructure management include a single point of contact and a single bill and a single SLA which make the process more convenient, predictable and manageable. Entire technology procurement departments, originally set up to handle disparate vendor relationships, can be re-assigned to other initiatives as a single services provider takes over the management of the entire multi-vendor architecture.

### **Selecting a Managed Services Partner**

Businesses need to apply a systematic, structured approach to evaluating their infrastructure management needs. The first step is to assess existing challenges related to technologies and resources. Next, they should identify potential objectives to be addressed through the deployment of managed services. Finally, they need to thoroughly evaluate competing managed services providers through a competitive bid process.

Managed services providers can deliver their customers a major competitive advantage. Therefore, businesses should select their managed services partner carefully, taking several factors into consideration. Businesses should look for a provider with extensive IP data networking and real-time communications skills and expertise with products from a variety of vendors. Selecting a managed services provider with a comprehensive product and services portfolio, including solutions that businesses may eventually need or migrate to, can help future-proof existing investments and extend the longevity of the partnership. Larger businesses may also wish to partner with a provider with broad geographic coverage so they can consolidate infrastructure management across dispersed locations with uniform SLAs. And the financial viability of the provider is important to guarantee continuity as infrastructure requirements evolve over time. Therefore, due diligence on the managed services provider including its implementation history and track record is key to making the right choice.

Figure 3 - Systematic Approach to Deploying Managed Services



## CONCLUSION

Managed services have proven their value to businesses that have chosen to outsource infrastructure management to an experienced partner. Today, rapidly evolving technologies, diverse, multi-vendor IT and communications environments, and new macro-economic conditions are greatly enhancing the value of managed services as they help businesses tap into a more extensive pool of expertise, alleviate the hassle and cost of continuously expanding internal IT resources, and focus on core competencies. Through proactive network monitoring and management and the ability to scale more economically, managed services providers grant flexibility and a competitive advantage to business customers looking to maximize their investment in IT and communications infrastructure.

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