Executive summary

In formulating a technology plan that can help support and maybe even drive business growth, both organic and incremental, organizations need to look at operational and strategic issues. Operationally, technology implementations must have solid foundations so that when the business goes through growth spurts, that growth in not inhibited by operational constraints imposed by short-sighted technology solutions, says Lance Reese, president of Silver Peak Consulting. Strategically, technology should be part of the conversations taking place in sales and marketing to ensure that ideas and solutions are more comprehensive in nature. “If a leader views technology as an operational means to an end rather than a catalyst for opportunity, there is almost assuredly top line revenue being left on the table,” Reese warns. “Technology is an inseparable aspect of virtually every product for every company.”
Identifying key issues

There are a number of issues a business needs to take into account when developing a technology strategy to support and grow its business. Since these factors are constantly changing, it’s wise to regularly reassess issues and implementations to ensure the strategy is in alignment with business goals, suggests Cindy Bates, vice president of U.S. small and medium business and distribution at Microsoft. Three top-of-mind issues she recommends taking into consideration when developing a technology strategy are:

- **Business objectives and goals.** As part of the business strategy, those developing the IT infrastructure should have insight into what the business is expected to look like in the next five to 10 years. “Without these projections, IT managers can’t appropriately estimate the investment needed to allow flexibility and scalability within the newly established IT infrastructure,” Bates says.

- **Budget.** Knowing how much budget the IT department has available to invest is critical in planning for IT infrastructure development or improvements. A business also needs to take into account the time and resources needed to implement and maintain the IT program and its employee training and growth.

- **Need for mobility.** Bates argues that whether an organization is going to require remote-working capabilities and mobile offerings has become “a question of the past. If management doesn’t anticipate the need for mobility, the business simply won’t compete effectively.” According to the AMI 2010-2011 Worldwide Cloud Service Study, businesses with up to 1,000 employees that have embraced mobility best practices generated 40 percent higher revenue growth over the preceding 12 months than those that did not.

Perhaps the biggest single issue businesses need to confront is simply the degree of importance attached to building a technology infrastructure for growth. “Contrary to popular opinion, the primary issue many businesses face in regards to their technology strategy is not an inability to create one,” says Stanton Jones, an analyst in emerging technology at Information Services Group, “it’s the lack of awareness that one is needed in the first place.” Companies that start with a small server footprint tend to respond to growth by adding more servers and personnel to support them, but with very little thought about how those expensive assets are supporting the top line. “So the key issue is awareness that creating a technology strategy is just as important to a business as creating any other long-term strategic plan within the company, be it supply chain, finance, or customer acquisition and retention,” he says.

Managing the business life cycle issue

It can be argued that this is one area where companies in a relatively early stage of existence enjoy an advantage over those that have been in business for a longer time. Older ongoing enterprises tend to have deeply embedded technology infrastructures that must be taken into account from both an operational and cost perspective, but not necessarily from a strategic planning perspective, Jones points out. “Existing infrastructure creates issues because it is difficult to change,” says Reese. “Technology implementation can be expensive, but not nearly as expensive as fundamental platform changes.” It is critical for companies to get the greatest possible value from their existing IT investments, but existing infrastructure should not overly influence the strategic planning approach, which should focus on the “what,” not the “how,” and existing technology infrastructure is part of the “how,” Jones says.

Younger companies are more likely to have started out with more flexible, less hardware-dependent technology solutions, and they often have a smaller total investment in their current IT platform. They are in a better position to decide where they want to be at various points in the future, and they can design and build a technology infrastructure that can scale to whatever benchmarks they predetermine along that continuum. Companies with significant infrastructure already in place are constrained to some degree by decisions already made, but their strategic approach should be the same, with the exception of migratory paths from existing technologies, Reese suggests. “In the latter case, it is crucial to be willing to drop technology that will not get you where you want to go, even if it is fiscally convenient to keep it.”

Longer-tenured businesses may enjoy one advantage over younger companies when it comes to building a technology infrastructure for growth, in that they often have a dedicated IT manager and/or staff, whereas a newer company may not, Bates notes. However, both types of organizations tend to face financial constraints that demand flexibility in planning
and diligence in managing budgets for IT. “Companies of all sizes must take into consideration the time and due diligence required to properly assess the business requirements and the ways technology can assist in facilitating those needs,” she says.

For all types of businesses, designing, building, and maintaining a technology infrastructure for growth should start with identification of the objective(s) desired, says Chris Gatch, chief technology officer at Cbeyond. Once the opportunity is defined, high-level solutions are generally driven by a stand-alone software system or an integrated combination of systems. Software selection must be followed by an understanding of the solution availability and compliance requirements appropriate for the business. Finally, the combination of software system, security, and availability requirements will dictate infrastructure requirements such as server, storage, database, and monitoring. The process for a longer-established business can be a bit more complex, since integration of existing systems must also be considered. If integration is required, the accompanying workload includes the integration itself, as well as regression testing of existing capability with the newly added solution. The ability of existing staff to support the new or changed solution must also be considered, Gatch advises.

Challenges and obstacles

Beyond the typical obstacles such as budget limitations, technical implementation issues, or compatibility issues that may arise, one of the most significant challenges a business faces when implementing and aligning a technology strategy is appropriately securing the buy-in and support of both the management team and employees (users), says Microsoft’s Bates. If management is not attuned to the current technology infrastructure and how it benefits or hinders the overall organization, it may fall to IT to be the driver of change, serving as the internal sales engine to educate management on IT strategy and the benefits a scalable, flexible solution will bring the business.

“Without the support of the entire management team, employees find themselves with the implied option to not fully participate, and this lack of cooperation will surely impede the intended goals of the new technology strategy,” she warns.

Many of the challenges revolve around money, speed and resources, says Wendy White, vice president of marketing at Tier 1, an enterprise-grade cloud platform provider. Among the most salient ones she frequently encounters are:

- Speed of delivery is tantamount to the success of a project. Nearly every funded IT project is behind schedule from the point of approval to the day of release, she says. While the Standish Group’s oft-cited CHAOS Reports have shown a slight improvement in success rates for IT projects since 2008, the failure rate remains twice as high as the success rate.
- Budget requirements and predictability of costs are either grossly over- or underestimated, based on development, deployment, and maintenance costs.
- Operations and ongoing maintenance is an often overlooked aspect that is vital to an IT project’s success.
- Resource constraints on both people and technology.
- Poor forecasting of cost and technology models.

Solutions worth exploring

Recent developments in the IT industry can address many of the challenges and obstacles related to building a technology infrastructure for growth. Increasingly, these new products, services, and trends are within the reach of almost all businesses, regardless of size. Here are some worth considering:

- **Cloud computing**—IT infrastructure is gradually becoming more and more available as a service (IaaS), thereby allowing businesses to avoid investment in their own hardware, which often entails costly licensing, maintenance, and refresh requirements, says Kevin Dean, chief marketing officer at Interxion, a provider of carrier-neutral, co-location data centers and services. Similarly, software applications are becoming equally available as a service (SaaS), ranging from standard office applications to accounting and CRM applications.

  “As cloud computing becomes an increasingly viable option for technology infrastructure, many midmarket businesses will look to a public cloud provider to transition away from their hardware IT assets,” he says, citing a recent Interxion survey that found 67 percent of medium-sized businesses are prioritizing cloud computing initiatives, with 73 percent already using or planning to use the cloud over the next 24 months.
**Virtualization** — With the advent of virtualization platforms, businesses are able to support greater volumes of workloads while maintaining lower capital expenditures for hardware, says Tier 1’s White, and cloud-based virtualization platforms are playing a key role in helping businesses manage their growth both externally and internally.

“The concept of IT resources managing systems will likely fade into history as businesses look to jettison legacy technology stacks in favor of resource-based models where they consume and pay for what they use and have little exposure to the underlying architectures,” she says. This paradigm shift will change how IT organizations budget expenditures, moving them from a CAPEX-centric model to a primarily OPEX-centric one, White predicts. The result will be a significant boost in cash-flow liquidity that businesses can use to fund other investments — within IT or in other areas.

**Decentralization** — Workers are increasingly dumping desktop PCs in favor of laptops, tablets, and smartphones, often bringing their own devices to work as well as using them for remote access. Gartner predicts that more than half of workers will have abandoned their desktop computers by 2016, a development that may help businesses reduce their IT capital expenditures but will require new models for security, image management, and remote access. Robin Wessel, director of product marketing at Xerox, says it is important for companies to consider the percentage of time their employees spend in the office and the current and projected future habits of their workforce in evaluating how this trend is likely to affect their business.

“CIOs should work with human resources to determine the average age of their current employees and also examine how that is likely to shift in the future,” he says. “In the next 12 to 13 years, we will see a huge shift in employee demographics from Baby Boomers to those in their twenties, and the way workers interact with technology will also change — dramatically — including the infrastructure.”

**Extensive benefits, but some caveats**

Harnessing tools and services such as those described here can provide a wide range of benefits, including:

- Cost savings through reduced capital expenditure requirements.
- Significant reductions in the amount of time required to provision infrastructures.
- Empowerment of departments outside IT to self-provision infrastructure and platform needs.
- Predictable cost forecasting.
- Improved business agility through new computing platforms and enhanced performance capabilities that may not have been available due to limitations of on-premise legacy systems.
- Ability to outsource patching, capacity planning, upgrades, and some other IT functions in a cost-effective way.

The unprecedented flexibility and agility that developments in cloud and virtualization promise are enticing; but Scott R. Cassell, senior director of Ethernet product management at Comcast Business Services, points out that bandwidth is an essential component in businesses’ ability to realize those benefits. “In order to reap the productivity and cost benefits of software developments such as cloud-based services, companies must select a network provider that can accommodate flexible bandwidth options and ensure high-speed, reliable connections,” he says.

Wessel advises that businesses not lose sight of the important role hardware continues to play amidst all the excitement around cloud and virtualization. Simply changing the model from CAPEX to OPEX does not guarantee savings unless the labor component is addressed, he emphasizes. “When an organization adopts devices that can be remotely managed, that’s where big money can be saved, because you are eliminating labor costs to manage them,” he says. “The cloud is sexy, but hardware infrastructure is ripe with real opportunity for cost savings.”