

# LONG-TERM TECHNOLOGY STRATEGIES AND THE BOTTOM LINE

By Joe Greer and Chad Vukich

Casinos are going through a major technology transition. How well do you understand the following? Virtualization, server utilization, network consolidation, unified communications, high-speed gaming, digital signage, disaster recovery, VOIP, cloud computing, LAN, WAN, SAN, fiber channel, iSCSI, and the list continues. Are these terms being thrown at you by your IT department? Do you understand how they would impact your bottom line in either a positive or negative way? If you have no clue what you've just read, you are not alone. Very few people outside of the IT department know how these technology terms and acronyms can directly affect long-term business strategies—and impact the bottom line.

In many cases, we see casinos looking at a technology upgrade as a one-time, short-term fix to solve a specific problem. This tactic is not a long-term strategy and often leads to technology being replaced, upgraded or, worse yet, abandoned prior to getting the expected return on investment. Examples of this would be replacing hardware platforms such as servers, storage and even networking infrastructure because it was not planned to handle near-term future enhancements like server-based gaming, video to slots, marketing direct to individual players or slot banks.

The three main goals of this article are to:

1. Provide information about areas where casinos could transition IT strategy from a short-term project based approach to a long-term business strategy that positively affects the bottom line;
2. Provide an example of what a long-term IT strategy could be for your casino;
3. Make IT more understandable from a business perspective.

The right technology can raise productivity, reduce risk, increase agility and sustain growth. Specifically, how does technology affect the bottom line in your casino? Let's start with a self evaluation. Does your property currently have a three- to five-year technology strategy? A great way to approach any technology decision is to first understand the process you are currently using to come to those decisions. Here is a list of questions that you may want to use as a starting point for evaluation:

- How does your casino currently work toward developing an IT strategy that impacts the business' bottom line?

- How often does your management team meet with your IT staff to review casino business strategies/goals across multiple areas?
- Does your IT team work regularly with other groups—accounting, marketing, slots or hospitality?
- Who do you choose to partner with for IT resources? Are they specialized in gaming?
- How do you currently budget to improve your technology? Do you budget for IT staffing and training?
- When reviewing a new technology for the casino, do you consider if it will build toward an overall five-year strategy, or is it a point product to address a single, current problem/opportunity?

In today's casino industry, there have been major technology shifts that significantly impact gaming. For instance, doing more with less is a common theme. The most common example of this is that your IT team is likely being tasked to do a great deal more than they were five years ago with the same amount of, or fewer, people. How much time does your IT staff have available after necessary tasks are completed? Are they helping casino marketing efforts by taking full advantage of opportunities in social media outlets such as Facebook or LinkedIn? Do you feel like you are reactive or proactive in your marketing efforts?

The questions above are some basic examples of where technology and business processes may not be aligned for a long-term technology plan. The key takeaway is to find ways that ensure all business units are enabled to effectively leverage the same technology resources for multiple areas.

## How to Leverage Data Center Technology

The base value of technology in any business environment comes from the value of information. Knowledge is power, and a smart business identifies customer behavior, allowing a business to encourage the behavior they want. A casino's IT network is similar to the business' nerve system, transporting data about everything the network touches to a central data storage center—the brain. Once the information is gathered and stored, the business has the opportunity to extract value from it. Much like in the day-to-day world, the vast amount of information is of no value unless we recognize the right tools to extract relevant data and figure out how to use it. Any business has two very unique resources—their people and their information. We do our best to help businesses

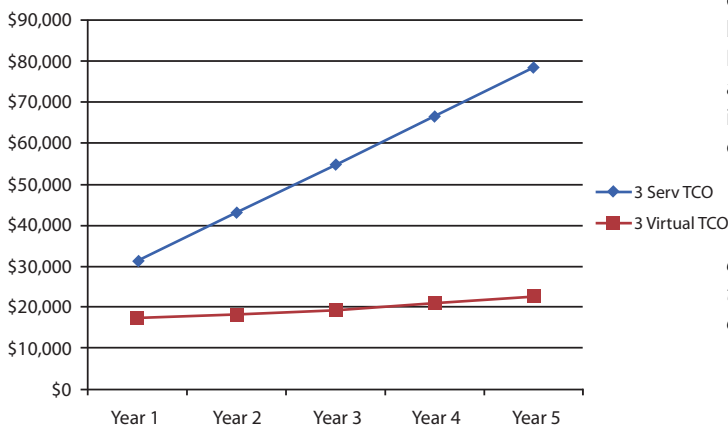
make the best use of these unique resources. The next few sections of this article describe some of the current available technologies casinos are moving toward so that they may have building blocks to achieve using their resources most effectively.

### Consolidating Server Infrastructure

Often a casino has needs for an outside partner to “scope out” what needs to be added to the data center so a new solution can be supported. The process is generally being driven by a particular group within the casino requesting a particular software application. For instance, maybe the guest services team or restaurant is requesting point of sale (POS) systems, the accounting team is interested in a new module for slot accounting practices, the administrative staff wants an upgrade to e-mail software or the IT team is requesting new security software.

Regardless of the requested solution (application), it will generally need a server to reside on. Many casinos simply purchase a new server when a new application is needed. However, separate servers are generally not necessary. Many casinos have been able to find value in server virtualization. Virtualization is a way of supporting multiple applications on a single server with the correct software. Many standard casino gaming applications are now supported to run on a virtual server or servers, and offer a great cost-saving opportunity.

Figure 1



The estimated total cumulative cost of ownership for three physical servers versus three virtual servers that reside on one physical server. Data sourced from [www.vmware.com/files/pdf/tco\\_roi\\_methodology.pdf](http://www.vmware.com/files/pdf/tco_roi_methodology.pdf).

For most organizations, data center servers are underutilized and more expensive than anticipated initially to run or manage. Examining the initial acquisition cost of a typical server, it is estimated to be a list price of \$6,500, while the operating cost is more than \$3,927 per year, including \$975 in additional annual maintenance and support contract costs, \$671 in annual server provisioning labor costs, \$3,773 in annual server administration labor costs, \$650 in power and cooling costs per year, and \$718 in annual amortized data center build out and space costs. Over a three-year period, the ongoing operating costs are a 3-1 ratio over the initial acquisition costs, according to these conservative calculations.

Often we see that short-term planning has caused casinos to acquire multiple servers that support one single application. Beyond the basic value of reduced total cost of ownership, the virtualization of servers actually allows applications to work better when the total infrastructure is designed for multiple physical servers, hosting virtual servers, to share resources.

### Going Green

Going green is a large conversation topic. Many of us have felt the impact of increased energy prices not only in our business, but also in our personal lives. A huge opportunity for savings from server virtualization is described in Figure 1—\$650 in power and cooling costs per year. These dollar amounts consistently increase every year. Thus, virtualization not only helps reduce necessary hardware and increase efficiency for IT practices, but it is also good for the environment. You may be aware of some federal mandates and even government subsidy programs that assist in the acquisition of much more energy efficient hardware.

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### Final Thoughts

Casinos often experience the cost of technology without having the opportunity to identify the return. One thing you may count on is that casino technology will continue a march ahead toward accommodating better player experience. The investment in technology will not go away. However, if casino management develops strategies to identify current and future needs for multiple groups, they will be able to make a better investment for the long term—particularly if they acquire tools that are capable of performing, or scaling performance, to meet future demands.

*Authors' Note: Your staff is ready and people are working together well and keeping patrons happy. How well have your team prepared your technology to support your busiest Friday night? Look for the next article in our Bottom Line series, "Is your Network Ready for Friday Night?"*



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