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HARDWARE

Technology Implementation: Do You Have the Skills?

From the Trenches

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Technology is getting more complex to select, install and maintain, and the skills required to do so properly are becoming greater. Even very small networks take refined skill to install properly. When your servers, desktop computers or laptops are not set up properly, your productivity is reduced. In many cases, you may not even know that your setup or configuration is wrong. We find users who believe that since the technology has always worked a certain way, that is how it is supposed to work. Let's look at technology deployment and how this changes the skills needed by your organization.

WE SEE THE FOLLOWING SITUATIONS FOR INSTALLING APPLICATIONS ON COMPUTERS:

- 1) Standalone computers,
- 2) Peer to peer networks,
- 3) Traditional networks with one or more servers,
- 4) Networks with most or all servers virtualized,

- 5) Software as a Service (SaaS) or Cloud Computing in use, and
- 6) Hosted applications in a data center, not to mention smartphone support and installation.

The skill set to maintain each of these scenarios varies widely from highly technical to almost completely non-technical. One of the most important decisions you can make this year is how you decide to install your technology. Hosted applications and/or cloud computing have become price competitive with in-house strategies. Simple virtualization of servers is less expensive than installing traditional networks. Complex or high availability virtualization is more expensive than traditional networks because of the cost of the sophisticated Storage Area Network (SAN) technology.

For some organizations, it is less expensive to host a server in a data center than it is to buy the server(s) and SAN technology. Hosting in the cloud takes different IT skills whether you are using in-house IT people or outsourced IT providers. Hosted or cloud computing can result in less total cost of ownership than traditional or virtualized servers in-house in addition to be more readily available from remote locations.

WE SEE TECHNICIANS IN THE FOLLOWING CATEGORIES:

- 1) Incompetent,
- 2) Inept, but believe themselves to be competent,
- 3) Incompetent, and convince others they are competent,
- 4) Competent, and convince others around them they are an expert,
- 5) Competent, and a poor communicator, so they rarely accomplish the right task correctly,
- 6) Competent, but stuck in doing things the way they know how,
- 7) Competent, progressive and communicative...the best of all worlds,
- 8) Uncontrolled...will take unnecessary risks without thinking through the situation.

These descriptions can apply to both in-house IT or outsourced IT people, in addition to being a generic description of many people's performance in their jobs. A workable solution in today's market may be to outsource all of your IT needs to managed IT providers who specialize in maintaining your network. Establishing your needs and explaining your expectations are key to these relationships working properly. Outsourced IT can often be less expensive than maintaining internal IT people. You will typically need at least 25 users before you can justify a single IT person on staff.

Surely not all possibilities of installing applications or the skills of IT personnel have been named above. You can see from each of the lists that there are a number of scenarios that can play out that would wind up producing a bad result for your organization. The more complex your technology, the greater skill set you need to complete your IT work. Unlike accounting skills, it is very hard to judge how competent IT people are at completing the work. Computing installation is part science and part art. There are 10+ right ways to do things, but there are hundreds of wrong ways to implement technology.

Until the arrival of affordable and effective SaaS applications and hosted computing, technology implementations had been getting more and more complex. Web-enabled applications or an outsourced IT vendor who can carry the entire load of implementation can reduce the amount of effort required by your own in-house IT or your own outsourced IT people. The skills needed by IT for implementing technology in this new generation include project management, communication skills, budgeting skills and an understanding of how technologies fit together.

IT teams who have spent years honing their skills for PC repair and server maintenance are beginning to find those skills in less demand. Skills like firewall configuration and communication line configurations, security and directory management, and database and report writing skills are needed by many firms to be competitive and to be strategic. If IT is not strategic, then there is a business case to outsource more IT costs and functions. If IT is strategic, then the projects that have the greatest ROI should be chosen first, and outsourced IT used to implement technologies where your internal IT team is not capable or experienced.

For many of you, your organization is small enough that you are the IT person. You will have the greatest tendency to trade your time for dollars that you

would have spent on a technician. Worse, in complex situations, your setup may never be right. If you are the only IT resource, you should manage primarily from project budgets, and you should do your best to know when to bring in outside expertise. What type of technician would you be from the list above? One thing is for sure, you will be a highly compensated technician, and you're probably better off practicing accounting rather than technology by contracting for IT project implementation and IT managed services.

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