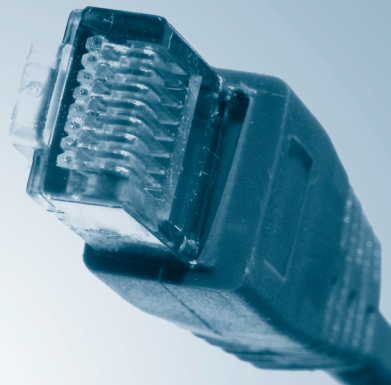


Information Technology Needs for Small EH&S Businesses

Part 1. Infrastructure



Are you thinking of setting up a small environment, health, and safety (EH&S) business? Have you established a small consulting practice? Whether you work from a home office, executive suite, or other office environment, you need to leverage information technology (IT) to stay competitive. But where do you start?

Start with a plan. First, assess your needs vis-à-vis IT infrastructure, systems administration and maintenance, software, and intended use of the Web. Second, set your priorities. Third, develop a realistic schedule and budget. Fourth, identify resources—cash or credit to pay for your new IT infrastructure and someone to install and maintain it.

This month's column covers IT infrastructure, systems administration, and maintenance. The October column will cover software and leveraging the Web.

IT INFRASTRUCTURE

Small business IT infrastructure goes beyond computers and networks. At a minimum, small businesses should plan for communications, computers, network, digital imaging, and camera equipment.

Communications

When selecting a business phone, bear in mind that wireline (landline) phones are typically more reliable and have better quality than wireless (cell) phones. For a home office, obtain a separate business number and separate fax number (unless you have digital subscriber line [DSL] service). Internet phone service typically costs less than landline, but

beware: some Internet phone services can accommodate only one phone line, and during a power outage the phone will not function. To stay connected outside the office, consider a variety of wireless options. Radio pager phones (e.g., Verizon, Nextel) have walkie-talkie features, convenient for team interaction out in the field, while personal digital assistant (PDA) phones (e.g., Treo, Samsung) and communicators (e.g., BlackBerry, Siemens) combine e-mail and voice communications, plus the ability to read calendars, documents, and spreadsheets.

What type of IT do you need as the owner of a small EH&S business, and how do you implement it, remembering that you are an EH&S professional first?

Computers

Most small businesses need at least two computers—a desktop computer/server for accounting, legal documents, project archives, etc., and one or more portable notebook computers. For frequent travel, select a notebook that balances speed, features, and weight. Consider a Windows-based computer if you expect to use much software beyond basic business applications, and purchase at least 512 MB of memory and a 40-GB hard drive. In addition, you may need a wireless network card for normal network connectivity and/or travel.

Network

Your business will need a DSL or cable modem to connect computers to a high-speed Internet service. DSL offers the advantage of simultaneous computer, phone, and fax services on a single phone line, but is slower. Digital cable service is



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KEEP INFRASTRUCTURE AFFORDABLE

- \$ Select hardware that meets your current needs and allows for growth.
- \$ Establish relationships with vendors and ask for discounts. Take advantage of rebates and special offers.
- \$ Try before you buy. Download free trial software at www.microsoft.com/office.
- \$ Consider buying model year-end or factory-refurbished hardware, but make sure that you receive the full factory warranty.
- \$ Choose price-bundled services from a single provider (e.g., wireline, wireless, and high-speed Internet, or comprehensive phone service).

many times faster than DSL, but requires a separate phone line, unless you subscribe to Internet phone service. You will need a network router to connect your computers to the modem. Select an Ethernet (wired) router or a wireless model with at least four ports. You'll be surprised at how quickly you will use all of the ports. Each computer, printer, or other peripheral requires a network card to connect to the router.

If you opt for a wireless network, decide upon one of the

more recent standards (802.11g or n). For all networks, be sure to purchase a separate firewall to protect the system from intrusion by unauthorized parties, if one is not built into the modem.

Digital Imaging and Cameras

Digital imaging refers to printers, fax machines, copiers, and scanners. With unlimited office space, consider separate pieces of equipment. If one breaks, replace only that component. With limited office space, consider an all-in-one machine. For hard copy documents intended for use outside the office, choose a mid-priced laser printer, an inkjet printer with permanent inks, or use a local print/copy service. If you plan to use many photos in your business, consider a dedicated photo printer or use a digital photo printing service.

To document site assessments, inspections, and other EH&S activities, choose a compact, mid-priced digital camera with at least a 3-Megapixel resolution. Buy a spare battery and extra digital media cards for fieldwork. If your computer or printer lacks digital media card slots, you'll need to use a camera docking station, PictBridge cable, or an inexpensive digital media reader.

SYSTEMS ADMINISTRATION AND MAINTENANCE

Once your small business IT infrastructure is in place, you'll need to maintain it. This includes preventive maintenance, repairs, and upgrades to hardware and software. If you lack

SMALL BUSINESS IT RESOURCES**General Resources and Training**

MS Small Business Center	www.microsoft.com/smallbusiness/
HP Small & Medium Business	www.hp.com/sbso/index.html
CNet Help.com	www.help.com
CIO Magazine	www.cio.com

Hardware Reviews

CNet	www.cnet.com
ZDNet	www.zdnet.com
PC World	www.pcworld.com

Technical Terminology

IT Glossary	http://whatis.techtarget.com
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the skills, seek outside help from someone who understands your needs and your systems.

Be sure to back up your work regularly (see “Caution! Data at Risk,” *IT Insight*, *EM* February 2004, p. 10). Select one or more backup devices, such as a stand-alone hard drive, CD/DVD writer, zip drive, or tape drive, depending on the data volume and backup frequency. Alternatively, use an Internet file storage service. Stand-alone hard drives (e.g., Maxtor, Western Digital, Iomega) are relatively inexpensive and come with backup software. Use

password protection if you have a flash drive or other mobile storage device (see “Mobile Data Storage, You *Can* Take It with You,” *IT Insight*, *EM* December 2004, p. 10).

If you don’t know how to use or install your hardware, ask the vendor or manufacturer for help. Many IT vendors offer free technical support for the first year, plus online tutorials or training. More important, incorporate security into your infrastructure design and be sure you know your risk tolerance level. Your small business insurance may cover hardware damage or loss, as well as business interruption due to IT failure.

CLOSING THOUGHTS

IT is an investment. Buy business-grade equipment and avoid the temptation to cut corners. Consider the cost of not having reliable equipment or adequate tools to do your job. If you cannot afford to build the IT infrastructure all at once, prioritize your investments. Remember that the infrastructure should be dynamic, changing with your business needs and with advances in technology. When purchasing your IT equipment, consider the useful life of your hardware, and budget for periodic replacements.

You are an EH&S professional first. If you are not tech-savvy, or simply lack the time to research needs or set up your IT infrastructure, ask other small business owners what has worked best for them. Alternatively, find an advisor that specializes in full-service information systems support for small and medium businesses. **em**

