The IT Organization of the Future

 A U.S. Bureau of Labor Statistics report from November, 1999 predicting employment growth through 2008 confirms what the media has also been trumpeting for the past couple of years: IT is hot. The Computer and Data Processing Services industry is at the top of the list for growth, predicted to increase from 1,599,000 jobs in 1998 to 3,472,000 jobs in 2008, a growth rate of almost 117%. Of the 10 fastest growing occupations, the top five spots are occupied by computer-related occupations-- Computer Engineers, Computer Support Specialists, Systems Analysts, Database Administrators and Desktop Publishing Specialists, in that order. The job of systems analyst is predicted to be the job with the largest job growth, from 617,000 in 1998 to 1,194,000 in 2008, a growth rate of 94%.

Yet with all this positive news, it seems that year after year the top issue haunting most Chief Information Officers is not one of what technology infrastructure to select, whether to outsource or how to sustain manageable growth, but personnel. Everything to do with personnel--hiring, keeping employees happy and productive, fostering employee learning, and preventing attrition--weighs heavily upon the minds of IT organization leaders.

Indeed, the most important trends that are shaping the IT organization of the today and tomorrow are: **recruiting, the virtual office,** and **application outsourcing**.

RECRUITING

The dot-com crisis would seem at first glance to be a boon to other IT organizations. A Computerworld article dated January 8, 2001 cites 22,267 jobs being eliminated from dot-com firms between December 1999 and October 2000. In December alone, Internet firms announced 10,459 job cuts, an increase of almost 20% over November, according to Computerworld.

One would think that these newly unemployed, highly trained workers would be a godsend to other understaffed IT organizations. Yet another Computerworld article dated January 8, 2001 finds former dot-com employees struggling to find new jobs despite January being a strong hiring month. The article cites tightening of IT purse strings in more established companies and lack of experience in many former dot-com employees as being a culprit for the slow start.

Yet while the market remains strong for IT recruiting, CIOs need to pay more attention to specifically two areas: **minority recruiting (particularly women)** and **behavioral screening.**

While IT organizations have addressed many issues regarding the hiring of minorities, even to the point of expanding overseas to find qualified personnel, one of the largest labor resources domestically remains for the most part untapped: women.

The **Center for Women and Information Technology at the University of Maryland** cites a U.S. Office of Technology Policy report with some unsettling news:

Women--who comprise 51 percent of the population and earn more than half of all bachelor-level degrees awarded--earn about one-quarter of the bachelor-level computer and information science degrees awarded by U.S. academic institutions. More disturbing is the trend line: the share of all computer science degree awarded to women in the United States has fallen steadily from a peak of 35.8 percent in 1984 to only 27.5 percent in 1994--the lowest level since 1979.

 A Computerworld article of January 8, 2001 cites a study which interviewed 500 girls and 150 boys ages 15 to 18 about careers and success. Overwhelmingly, girls felt the most important factor in career success was being personally happy and fulfilled, and shunned corporate IT as a career choice by equating it to the comic strip Dilbert, which often depicts unhappy, money-grubbing employees. This is all despite having equivalent computer literacy and training with their male counterparts of the same age.

There are no easy answers to the question of increased female workforce in IT. Many companies try to leverage the traditional IT workplace benefits of flexible work times and leave to attract more women workers, as well as increase employee recognition programs (which incidentally benefit the whole organization, not just women). However, recruiting of women remains an issue that CIOs should ponder in the years ahead.

At the other end of the recruiting spectrum is the process that IT organizations use to evaluate prospective employees and screen out undesirable candidates. While many organizations have relied upon skills-based assessments as their primary filter for applicants, many also consider **behavioral screening** as important for job applicants. This could constitute anything as simple as checking references to something as complex as a teamwork exercise.

The benefits of behavioral screening are twofold: to identify any behavioral issues that could affect performance, such as inability to communicate or work in a team environment, and to identify any behavioral issues that could lead to a potentially dangerous employee. Matthew McDermott and the tragedy of the Edgewater Technologies shooting on December 26, 2000 is a public relations nightmare that all CIOs would like to avoid.

THE VIRTUAL OFFICE

In the increasingly tight battle over IT costs, CIOs face more hard choices than any other department leader within an organization. IT infrastructure ranks as some of the

most expensive costs for a company, from the computers used to do the work to the networking equipment and backup devices that are behind the scenes. And yet all this equipment is seen as vital to the organization's effectiveness--to cut infrastructure investment beyond a certain level invites disaster in terms of worker productivity.

An new approach to cutting IT costs is to transition the cost of IT infrastructure from a centralized campus architecture to a distributed, "virtual office" environment. With employees working from remote sites or home offices, the IT organization can save large sums of money that would otherwise be spent on new phone lines, network cabling and routers, as well as physical plant space.

The proliferation of low-cost high speed networking (Cable, DSL) along with security technologies (Virtual Private Networks) and group collaboration technologies (video conferencing, webcasting, wireless devices) has allowed the modern technology to remain productive outside of the company campus.

The question becomes to what degree the "virtual office" model can be integrated into an IT organization's culture. For some organizations, risk management involves allowing only senior employees with a proven track record of productivity to work in a virtual office environment. Other organizations confine the "virtual office" model to certain job functions (customer service, software development). The "virtual office" model can also lead to interesting integration with a contract worker strategy, which could save even more money in terms of loaded labor costs. In any case, the virtual office promises great savings for an IT organization, and a CIO should carefully consider how best to integrate the concept into their particular organization.

OUTSOURCING

Among all the buzzwords in the IT industry, **outsourcing** holds the most potential for cost savings in the IT organization. While it is well known that the IT organization's core competencies should never be outsourced, non-core competencies--even mission critical ones--are seen as ripe targets for outsourcing to **Application Service Providers,** or **ASPs.**

ASPs initially caught on during the e-commerce boom of the last several years, as many internet businesses realized that **web hosting** was not one of their core compentencies. This gave rise to such companies as Exodus Communications, which handle all of a company's web hosting with little or no content or business process management. **Service Level Agreements** were introduced as a way for ASPs to guarantee an acceptable level of failure in their services.

Today the ASP world grows increasingly more complex. ASPs now offer such services as outsourced HR, CRM, Inventory, etc. New technologies such as XML promise to make ASP integration with internal IT systems seamless, and business models such as ASP B2B exchanges will allow the IT organization to shop for the best and lowest priced solution. As the concept of ASP integration continues to mature,

CIOs can no longer afford to view ASPs as a stopgap solution but as a continuing relationship.

LINKS

[CIO.com - Resources for the CIO](#)

[June 15, 2000 CIO Magazine Article: IS at the Crossroads](#)

[U.S. Bureau of Labor Statistics Employment Projects Report](#)

[January 8, 2001 Computerworld Article: If Girls Don't Get IT, IT Won't Get Girls](#)

[January 8, 2001 Computerworld Article: IT Leaders Must Rise in Face of Tougher Times](#)

[September 6, 2000 Computerworld Article: Oh, will you behave?](#)

[January 8, 2001 Computerworld Article: Former dot-com workers find slow start in new year](#)

[University of Maryland Center for Women and Information Technology](#)

[The ASP Exchange](#)

[Application Rental Guide: An Application Service Providers Directory](#)

[WebHarbor.com: The ASP Industry Portal](#)

RESOURCES

Adamson, Rick. *The New CIO: Keys to Success.* WatchIT, November 1998.

Gay, Charles L. and Wendell O. Jones. *Inside Outsourcing: An Insider's Guide to Managing Strategic Sourcing.* Nicholas Brealey, February 2000.

McInerney, Claire R. *Providing Data, Information and Knowledge to the Virtual Office.* Special Libraries Assn., June 1999.

Nelson, Bob. *1001 Ways to Reward Employees.* Workman Publishing, March 1994.

Shandler, Donald. *Management of the Contingency Workforce: Shaping Strategies for the Twenty First Century.* St. Lucie Press, December 2000.

Williams, Oakie D. *Outsourcing: A CIO's Perspective.* St. Lucie Press, June 1998.

Wrobel Jr., Leo A. *The Virtual Office: Supporting Nomadic Users and Telecommuters.* Artech House, July 1997.