Introducing New Technology Successfully into an Agency and Why Your Organization Needs a Technology Plan

Change is stressful. Good or bad, it adds tension to any office. Throw the word "computer" or "upgrade" or "Internet" into this equation, and stress can skyrocket.

Introducing or adding computers to your agency, or upgrading software or hardware your agency uses, will change the way you access and manage information -- for the better, you hope. But without realistic expectations and a thoughtful strategy, a new system can create as many problems as it is supposed to solve.

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Your Agency Needs a Technology Plan

No matter what an agency's mission is, no matter what size an agency's staff or budget, no matter who an agency serves -- your agency needs a technology plan. Just as you should do a critical analysis and form a strategic plan for your fundraising plans, your staffing needs and your program activities, you need to evaluate your technology needs and create strategies to meet those needs. How your organization will access and use technology will effect just about every function of your agency, in fact.

If you choose not to create a technology plan, you will find yourself in a constant state of reactive crisis management.

So there!

One of my favorite nonprofit technology experts is Phil Ferrante-Roseberry, executive director of CompuMentor http://www.compumentor.org, a San Francisco-based technology assistance group. At the Philanthropy News Network's "Nonprofits and Technology" conference in Seattle in January 1999,
Phil told attendees that technology plans are more than just hardware and software wish lists. They can help nonprofits:

- become more effective in daily operations
- budget and spend money more effectively
- boost fundraising efforts
- buffer groups from the effects of staff turnover

Ferrante-Roseberry cites a 70/30 rule for technology funding used by many large companies and organizations: For every $1 budgeted for technology, 30 cents would be used for hardware and software purchases, with the remaining 70 cents used for training and support.

**Reasons to Computerize or Upgrade a System**

Augustine "Tino" Paz, Network Development Specialist at Orlando's Community Services Network, made this insightful observation on CUSSNET (Computer Use in Social Services Network Internet discussion group):

"Too often, if even unconsciously, we take a 'magic wand' approach to software: it's a matter of finding the right one to do our work for us, and not necessarily to help us do our work...

"Human services are in the information processing business whether they use software or not. Any effort to 'automate' that aspect of the business without first understanding what Kate referred to as 'How information flows through out and is used in the agency, issues of power and control that sort of stuff,' will inevitably make things more difficult when it comes to implementation any software application.

"One of the challenges, in my opinion, involves managing the conflict between what is perceived as a slow, time- and resource-consuming planned developmental approach to organizational change (especially when we assume that we already know what's "wrong" with the organization) and the feeling that we must act with haste to fully benefit from the rapidly changing information technologies tools."

David Arons of Tufts University added during this discussion:

"Perhaps for human service organizations the challenge is also identifying technologies that both increase efficiencies within the organization, i.e., reduce staff training time, provide more timely and updated information about public benefits, and can be made accessible to the organization's clients. Basically multi-use technologies to help the organization better serve their clients and lower their overhead might give some organizations greater resolve to make a capital investment in emerging technology.

The first step in introducing a computer technology or upgrading/changing a computer system in your agency is exploring the "whys." In the excellent *Guide to Automating I & R Systems: Automating Information and Referral Systems for the Non-Profit Community* (published by CompuMentor, BUT NO LONGER AVAILABLE), several reasons to automate are cited:

- "Large amounts of information can be saved using less physical space." In the case of an upgrade of an existing computerized system, larger amounts of information can be saved.
- "You can create multiple access points for your information so that you can find resources by
using many different search methods." In the case of an upgrade of an existing computerized system, even more search and reporting methods are made available.

- Searching, sorting and reorganizing information can occur much faster, and more sophisticated search capabilities are made possible than with manually maintained information.

- Some statistics can be collected automatically. For instance, with a computerized database, searching to see how many of your clients are from various zip codes is made as easy as pushing a few buttons.

- "Information is more transportable and more easily shared with other staff members or agencies."

- "Information is easier to duplicate and to protect from fire, theft or other loss." That is, if you do regular backups of data and store these backups in safe places.

Clinton Jones of South Africa cited this formula on the CUSSNET group for introducing or changing technology during a discussion on "Planned Change vs. Rapid Development"

- Identify Formal Defined Process Structures
- Identify Formal Undefined Process Structures
- Identify Informal Defined Process Structures
- Identify Informal Undefined Process Structures
- Identify Value Adding Tasks that can be Automated
- Identify Value Adding Tasks that should be automated
- Identify Value adding tasks that cannot be automated
- Identify Non-Value Adding Tasks that can be automated
- Identify Non-Value Adding Tasks that should be automated
- Identify Non-Value adding tasks that cannot be automated
- Identify Political and Social Agendae

Included in his post was an example of this formula in action.

Disadvantages and Risks

Any kind of change or upgrade can at first seem more work than it's worth. That in itself can make introducing computers or upgrading technology seem not worth the effort. Also, there's

- the Learning Curve - staff will have to spend extra time learning the new system, and the initial perception may be that the system has made things worse, not better.

- the Costs - it may save money in the long run, but initially, it's going to be a big expense.

- the Vulnerability - the agency will be at the mercy of system failures.

- the Access - anyone who wants information must have a computer.

- the Political Risk - a person will be associated with the success or the failure of this system.
Staff Buy-In

Staff and volunteers may tell you they have been doing just fine without computers or the Internet (and maybe they have!), so why computerize systems and data? They may tell you that whatever version of software they use meets their needs and it took an enormous time to learn and upgrading will cause more trouble than it's worth. Or, they may have unrealistic ideas about the technology -- that computers, a new software package or the Internet will instantly and effortlessly raise more money for the agency, or improve staff and board communications, for instance.

Many agencies invest considerable resources in computer hardware, software and staff training for computerized systems that then end up being under-utilized and failing to live up to their vast potential, because the staff had unrealistic expectations for the technology, or they never bought in to the idea of the technology in the first place.

The key to worker acceptance seems to hinge on the following factors:

1. User-friendliness of the new system.
2. Clearly identifying the benefits of the new system to those who will use it.
3. Training and hands-on practice with the specific application.
4. Clear commitment by management to support staff during their learning curve.
5. Clear and communicated commitment by management to support the introduction of the new system.
6. Timely hardware/application support.
7. Clear expectations by management that staff are expected to use the new system.

Most who have commented on this subject via various Internet discussion groups feel that forcing technology on someone outright doesn't work. It's not efficient, creates even greater tension around the use of the technology, and takes even longer for the system to work. Instead, the successful integration of a new technology into an agency requires good and ongoing communication, long-term commitment by the entire staff, monitoring, support, intervention and patience.

One person on CUSSNET (Computer Use in Social Services Network Internet discussion group) noted that, at the time of his post (July 1997), California was installing a state-wide information system called Child Welfare Services/Case Management System (CMS/CWS). The system is comprehensive and covers everything from caseload listings, client history, placement and payment processes, contact narratives, management of court documents, service plans, state-wide search capability, etc. His story on the introduction of this system offers many lessons for anyone introducing a new technology, no matter what system it is computerizing:

"Our implementation team had concerns relative to the impact of bringing our entire county up on the system all at once. Initially there was some talk both at the line & management level about the "...state forcing this down our throats..." There are 58 counties in California and all of them with one exception are coming online at once rather than phasing in specific programs. New social work graduates expect to find computers in the workplace. Many of our veteran staff have their own PC's at home or have purchased notebooks for use at work; this group was also very receptive to automation. Although CWS/CMS will bring a major impact to how we process and store client data (which has resulted in a high level of anticipatory anxiety) we have found that the majority of our staff are looking forward to using this new tool.

"We have decided to purchase laptop PC's for our staff in lieu of desktops to enhance worker mobility - this was a major concern expressed by line-staff. CWS/CMS also has remote dial-up capability - a worker will be able to do state-wide searches from schools, police departments, or
from home - compose and submit court reports, service plans, detention reports from remote
locations to their supervisor for review and approval. Mobility supports autonomy. Information
supports risk assessments.

"One anecdote - we called a meeting of line supervisors to demonstrate the functionality of the
court module - staff literally stood up and cheered when they realized how this tool would save
them time.

"We had line supervisors do a simple inventory of staff skill and have tentatively identified
several 'soft spots' (staff who may need a higher level of support) - we plan on shifting a portion
of our support resource to these areas during the initial phase of roll-out hoping to facilitate early
success experiences.

"Anecdotal accounts from other counties (about 25) which have already come on-line reflect
that there is an initial period of frustration and loss of productivity, this seems to last about 90
days -as one moves through the learning curve, the tool comes to be perceived as an integral
part of the process. A representative from one county (which has been up for a year) stated,
'...we don't know how we did our work without it...'

"A major benefit of this system is the development of a state-wide database which will support
an unlimited array of ad hoc reports - trend analysis, outcome studies, etc. Clearly, this will add
precision in evaluating the needs of our clients and assessing the effectiveness of our
interventions."

Another participant on CUSSNET had this real-life example to offer, which also offers good advice
regarding the introduction of any new technology:

"During the past 5 years I have been using a PC in the work place and developing different
programs some people seem to have a resistant to technology. What I have found is that if you
can get one person using a program and it really helps them do a better job, others will get
interested. Many organization just force technology on people and I think it causes a backlash. I
think it is like everything else most people sometimes are just resistant to change.

"We were able to take a Tracking System for social service activities and implement this in one
unit. It spread from unit to unit after we saw its benefits. Now counties all over the State are
using it in one fashion or another to suit their needs. This was done without forcing the
technology on anyone. It is a much slower process, but seems to be more acceptable to staff."

Another real-life example, this time from a reader on CYBERVPM (a discussion group for volunteer
managers):

"It was a definite plus that our technical staff are wonderful people and very well liked and
respected. When they come to us with yet another new program or upgrade or whatever,
people are generally trusting that it isn't frivolous, and that we will get good training and support.
Our upper management is generally very supportive, and each employee has a training budget
we can use to get additional help.

"Speaking specifically of our (Client Services) dept. - it was also helpful to have one staff
member who really loves computers - yet still understands the office and how work is really
done around here. (OK, I admit, this person is me!) I am able to advocate for our department's
needs, understanding the tasks that need accomplished and the general level of computer-
savvy of the staff - BUT - I can also 'speak computer-ese' - so the tech guys find me easy to
deal with! A big plus is how excited I get about new applications, etc. - that is usually infectious
and pretty soon everyone wants to 'know how to do that!' We've almost become competitive -
each trying to learn a 'new trick' to teach the others!

One lesson we have learned to our advantage: having a "linestaff" person who is computer-
savvy is really great. Many times staff feel uncomfortable asking a tech staff to help them with
the "little things" - especially when they need someone "right now!" I try to be available to
answer questions, reboot machines, get the printer working again, etc. It took some time for my
manager to be comfortable with my spending time on this, but in the end she understood that it
was helping all our department work better - it is now an acknowledged part of what I do!

"It may be interesting to note that my department manager has been the last one to come
onboard. Although she has had a computer on her desk from the beginning, she is just now
beginning to really use it. For a long time, you knew not to send her an e-mail - she never
learned to open up her Mailbox! I am always glad when she asks me to help her do things,
because for a long time she would just give up in frustration and use the 'ol typewriter! This
budget cycle, I think she is pretty much being forced to learn Excel in order to submit her
department's budget -- and I think that's a good thing! But I think this is one example of linestaff
making the change-over BEFORE management, and in our case it worked just fine!"

Still another CYBERVPM participant said:

"The main problem for us introducing technology was finding employees that could use it, and
finding the time and energy to train those who couldn't. I've also struggled with fixing problems
created by those who think they know what they are doing. Overall though, I think that
technology has made my job as a volunteer coordinator 10 times easier. I wouldn't be able to do
it without my volunteer management software, the databases, etc.

Also see Being Fluent with Information Technology, an excellent document that will help you measure
your success in getting your nonprofit staff up-to-speed regarding using technology.

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Time for a Technology Moratorium?

This was a post to UP FOR GRABS, and it provoked a lot of discussion and disagreement. I agreed
with it -- because, often, nonprofit and public sector agencies, particularly schools, will receive
"upgrades" in the form of donated hardware and software, and the organization does not have the
infrastructure, expertise or resources to utilize this donation. It ends up not working, or, at least, not
meeting expectations of the donor, and the organization gets "blamed." Or, the school pours money
and resources into equipment, but not into training and support and infrastructure -- and the results
are the same:

Last November....for the first time....I recommended that a school district with whom I work,
simply put a freeze on technology purchases (we called it a moratorium). NO purchases could
be made without a top level review to see if specific criteria were met. Those criteria included
sufficient electricity, standards alignment, networking capabilities, installation support, initial and
ongoing instructional support, professional development.....and, of course, a proven
instructional need.

It may be time for us to review the pace of technology implementation, and focus more on the
results and total costs of doing so. Instead of being so "fair" in distributing technology on an
"equal" basis, perhaps schools should be buying technology only where it can have the most
positive impact on student learning objectives. By focusing dollars, we just might make sense!

Also check out *How Far Have We Come?*, an essay I wrote for *Nonprofit Online News* about the change in nonprofit attitudes and use of technology from 1995 through the start of 1999, and what the next steps should be in getting nonprofits to integrate technology use into their mission-based activities.

**Other Resources**

**Two Excellent Case Studies**

*In Effective Tech Use by Nonprofits*

"*Designing for Change: The Texas Commission on the Arts Creates A Village in Cyberspace*”

a case study by the NEA, looks at how a state arts agency used communications technology to streamline processes and increase productivity.

"*How We’re Using Information Technology to Further Our Mission*”

written by the CEO of the National Association on Drug Abuse Prevention (NADAP), briefly describes how NADAP is using their Web site, e-mail lists, and video teleconferencing.

**TechSoup**

Offers free technology assessment worksheets. Click on "tools", then "worksheets". Worksheets include:

- Accounting Software Assessment
- Database Assessment
- Hardware Assessment
- Internet Connectivity Assessment
- Local Area Network (LAN) Assessment
- New Website Development Worksheet
- Technology Organizational Assessment
- Technology Support Staff Assessment
- Training Assessment Worksheet
- Word Processing Software Assessment

These resources can help your staff with computer and Internet hardware and software issues:

- **Free Help With Databases & Software**
  Before you introduce a new software package, check over this list and see what free help is available for the staff.

- **Choosing Specialized Software**
  Label-making software, volunteer management software, project management software, presentation software, artwork software, client-management software, fund raising software, etc. -- the "Buy v. Build" database debate, what to look for in a particular software package, links to indices of software and software-advice for not-for-profit and public sector agencies, etc.
• Customer Database Principles

• Customer Database Regular Maintenance

• How Not-for-Profit and Public Sector Agencies Are REALLY Use Online Technologies
  Every not-for-profit or public sector organization has two primary resources: people and their ideas. What the Internet offers is an easy, immediate, extremely efficient way to connect with people and ideas. However, visions of becoming a super-efficient organization, reaching lots of new donors and clients, raising enormous amounts of new money and effortlessly administering an agency will not come to pass with an Internet account. Here’s real-life examples of what agencies are using the Internet for, and links to other resources offering even more advice and examples.

• Assessing Technological Capacity  
  http://www.tech-library.org/technology/Assessing/assess.html  
  Articles and tips to access an agency’s technological capabilities.

• Implementing Technology  
  http://www.tech-library.org/technology/Implement/implement.html  
  A series of helpful articles by various authors

• There are several outstanding publications on public use of technology from the U.S. Commerce Department’s National Telecommunications and Information Administration, which serves as the principal advisor to the President, Vice President and Secretary of Commerce on domestic and international communications and information issues (unless the Contract On America does away with this office).

• http://www.uta.edu/cussn/cussn.html  
  The CUSSN (Computer Use in Social Services Network) Web site offers a library of and information on shareware, freeware and demos of software for those who work in fields relating to cognitive therapy, clinical/therapeutic (provides or assists in treatment/intervention), health, welfare/child protection, aging, developmental disabilities, education/training, data analysis, and various other social services-related fields. The site also provides information about resources and conferences related to human services and IT (information technology), Computers in Human Services (CUSSN Journal information), course/training outlines/materials for human services & IT submitted by instructors, and how to join the CUSSN list.
For ANYONE, regardless of your actual job title, that helps fellow staff members, family, friends, etc. with computer issues. The FAQ is posted regularly, and includes an excellent list of websites that can help you troubleshoot various computer/software-related problems. If you get an error message when you click on this or any newsgroup link, your Internet provider does not subscribe to that newsgroup; or, you cannot access newsgroups via your Internet browser; you can try accessing it through remarq or DejaNews.

Developing an Internet Strategy for Your Nonprofit
http://www.ncexchange.org/toolbox/planning/
A presentation by Terry Grunwald and Peter Tavernise

Arts Wire Training and resources on technology planning
http://www.artswire.org/spiderschool/workshops/agendaplanning.html

California Technology Assistance Project's Guide to Technology Planning
http://rims.k12.ca.us/ctap/planning.html

Technology Planning: It's More Than Computers!
By Larry S. Anderson, National Center for Technology Planning. This is a PDF File.

South Central Regional Technology in Education Consortium's Guide to Technology Planning
http://projects.scrtec.org/%7Ettechplan/techplanguide.html

Links that provide different models to consider for technology planning and coordination
http://www.ecis.org/it/Planning.htm
By the European Council of International Schools

The NONPROFIT / soc.org.nonprofit FAQ
http://www.nonprofits.org/npofaq/index.html
(FAQ=Frequently Asked Questions & their answers)
Excellent information from not-for-profit professionals all over the U.S.

Selecting Software for Your Nonprofit
A resource by Blackbaud, a software company that develops products for nonprofit
organizations. This guide covers needs analysis, budgeting, conversion considerations and getting buy-in from your board to approve the purchase of software.

Information about CUSSNET and CYBERVPM, as well as other Internet discussion groups relating to nonprofits and technology, are listed here on this web site.

All Coyote Communications Tip Sheets are works-in-progress. If you would like to add something to this tip sheet, please e-mail me with your suggestion; if your contribution is used, you will be credited. Please include your name, e-mail address, Web address (if applicable), the name of the company you represent (if any), and any other information you’d like to share.

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