Using Technology
To Enhance
Delivery of Services

Participant’s Manual

Prepared for
nebhands a faith-based and community initiative

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Written by
Ingrid Kirst
Lincoln Action Program
210 O Street
Lincoln, NE 68502
Phone: 402-471-4515
Fax: 402-471-4844
www.lincoln-action.org
Overview

The workshop curriculum has been created specifically for grassroots faith-based and community organizations that are providing services with limited resources such as full-time staff, technology, and/or funding. The workshop is designed to give you:

- A working knowledge of technology terminology as it relates to service delivery
- An understanding of data management and collection
- An understanding of how you can use the Internet to help you
- An understanding of what a technology plan is, and the basic process of creating and using one
- A set of resources to give you a direction for further research and learning.
- A working outline to take back to your organization to apply to real world programs.

These topics are beyond the scope of this curriculum:

- How to use any specific software programs.
- A completed technology plan.
I. Why is technology important?

Computers can automate boring tasks, such as sorting information. Of course, someone has to give the computer the information, but once that is done, you can do many tasks quickly and accurately.

What if you had been asked to alphabetize a list of names, and when you were finished alphabetizing by last name, you were told they had to be by first name? The computer wouldn’t care if it had to do it again, but you would!

Technology has become essential to providing human services. Funders expect it to be used. Of course, focusing too much on technology will neglect the people receiving the services. Technology needs to be used to enhance services, not replace them.

The level of technology needed varies greatly from organization to organization. Today we will be talking about the basics that will make your work easier. As you learn more, you will be able to increase your technology usage.

Here are some examples of areas in which technology improves the delivery of services.¹

a) Track essential data accurately, easier, faster and more consistently
   • Computers can count and tally information much quicker and more accurately than a person
   • Data could be information such as financial, client demographics, or volunteer hours
b) Creating reports quicker; new reporting needs can be quickly answered
c) Outreach to clients, volunteers, donors and the community
d) Assessing needs of clients and programs²


² nebhands
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e) Staff knowledge; through access to and research on the World Wide Web, by subscribing to appropriate mailing lists, etc.

f) Collaborations: via email, websites, fax machines, conference calling, video conferencing, intra-office networks that allow file/calendar/print sharing, wide area networks, etc.³

However, you must always keep in mind that the technology is not the end goal of your services. Technology is a tool to help you improve your services, provide services more efficiently, and collect data more accurately. It will support the organization’s overall mission and goals, but by itself, technology can’t feed someone or make them self-sufficient. ⁴

Technology can become essential to your work, but then fail at the worst possible moment. For this and other reasons, it is important to consider how your organization would cope when some or all technology components are unavailable. For example, in addition to storing the mailing list in a database, the list would be printed periodically. If you computerize your intake procedure, you would always want to have paper forms available, just in case.


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II. Ways Technology Can Be Used By Service Providers

How can service providers use technology? There are hundreds of different ways that it can make the work easier and better, such as:

A. Data Management

Providing human services requires keeping track of a great deal of data on the participants. Funders expect to see outcomes, and the data needs to be there from the beginning to show improvement.

There are two types of programs for data tracking which will be discussed in more detail:

1) Databases and
2) Spreadsheets

B. Communication

Communication between staff members, clients, and funders is essential, and technology will make it simpler. Although technology can never replace the personal touch of a phone call, being able to use e-mail to communicate quickly to large numbers of people is a huge time and money saver.

Other ways technology improves communication is with sharing files between many staff, such as giving everyone access to the same database.

1) E-mail
2) Mailing lists/Discussion lists
3) Intra-organization networking
C. Internet

The Internet allows for a wealth of information to be shared between human service providers large and small all over the world. You can find information on what has worked and not worked for others and apply it to your own work.

You will also be able to find many funding referrals on-line, as well as resource databases to help clients find the resources they need:

1) Grant research and applications  
2) Finding best practices  
3) On-line resource databases

Taking a look at your current technology usage, and thinking about the future is a good way to start planning your technology. Later worksheets will go more in-depth on this subject, but these questions let you get started.

III. Data Management

A. What data is needed?

Many different kinds of data can be tracked on a computer, allowing you to easily compile information for many purposes.\(^5\) Some examples are:

a. Financial  
b. Participant demographics  
c. Outcome data  
d. Project planning information  
e. Other grant requirements

IV. Data considerations

What data do you need? Do you have requirements from your funder or plans for future funding requests that will require data? Try to make a detailed list of all the potential needs.

How much data will you collect? Will you collect 100 pieces of data about 10 people, or 10 pieces of data about 1000 people? Keeping track of 10 people is much easier than tracking 100, and requires a lot less technology.

What will you do with the data? Do you need to create mailing labels to send out newsletters, or do you need total numbers of participants in a program? Try to think about all the possible types of reports you need to extract from the data.

Try to anticipate future needs. Remember to plan for additional clients, and additional information, so that you don’t constantly need to find another data tracking solution as your program grows.

V. Spreadsheets

Spreadsheets can be used in many ways in any organization. At their simplest, they are a program for working with financial and other numerical data. They might be used to create a proposed program budget, or to track income and expenses.

They can also be used for any type of data that needs sorting or the table format, such as a mailing list, attendance chart, list of donations or a weekly schedule.

Spreadsheet programs can sort data quickly, such as list of last names. They can also easily add up a column of numbers or perform many other mathematical calculations. Of course, they require some time at the beginning to enter the data and set up
the formulas, but once it is there, you will save a lot of time in the long run.

Some examples of spreadsheet programs include: Microsoft Excel, Corel QuattroPro, and Open Office Calc.

VI. Sample Spreadsheet

This is a good example of a simple spreadsheet for a household budget. The person can enter the month names, categories, and amounts per category, and then the program figures out the totals and difference amounts. Averages would also be easy to calculate. You can see how this could easily translate into an organization or project budget.

Spreadsheets are easy to use for “what if?” scenarios. Once you’ve set up the basic layout of your worksheet, you can easily change numbers to try out different possibilities, and the computer will change the totals and averages quickly and accurately. For instance, if you get an extra $500 in funding, you can easily see where you need to put that money.

Spreadsheet programs will also make charts for you quickly, which give a visual representation of the data.

VII. Databases

A database is the next step beyond spreadsheets. It allows for a lot more data manipulation, such as searching, or omitting certain data. The most important feature is the ability to have relationships among various tables of data, meaning data doesn’t have to be repeated multiple times because relationships can be created between existing data.

For instance, a list of names and addresses can be stored in one location, and the related list of services can be stored in another.
Each list of data can easily be expanded without worrying about duplicating or space issues.

Once the data has been entered it is easy to answer a wide range of questions about the data without manual recounting each time. For instance, you could know: “How many people who live in the city of Lincoln have received food boxes more than once this year?” or “What are the names of the people who have increased their income by 20% or more in the past 12 months?”

If office computers are networked, more than one person can use a database at the same time, which isn’t possible with a spreadsheet or even paper files.

Many different database programs exist. Microsoft Access is part of the professional version of Microsoft Office; so it might be a place to start if you already have it. FileMaker Pro is another often-used database program to consider.

If you would like to use a database, and don’t currently have any database software, ebase is a good product to try first. It was developed specifically for the non-profit community and is a free product available on the Internet. It allows you to track client information in many ways and has many reports already set up to use.  

VIII. Database Examples

To help you better understand what a database is, and what it can do, here are two common examples.

A. Library catalog – Every time you look up a book at the library, you are using a database. The database contains information about each book in the library, including the title, author, publication date, publisher and subject. This makes it easy to perform searches such as these:

6 The ebase software is available at http://www.ebase.org

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a. Enter in search terms such as author name or book title
b. See list of potential matches with detailed information
c. See similar listings to a particular book

B. Local human service providers – A database of agencies in the community that provide various services can be extremely useful as clients are looking for help with various needs that your organization doesn’t provide. A caseworker could quickly bring up a list of food resources by city, complete with income guidelines and hours of operation.

IX. Designing a database

Designing a database from scratch will involve many different aspects of the organization. You will want to interview staff in all related areas to see what their needs are. Be sure to include front line staff as well as those making reports because each will have a different need. Also look at existing forms and current data collected and any systems that are already in place.

Decide how much data you will track, and what type of database you will create based on the data you have gathered. Will it track donors, clients, volunteers, or be an information and referral database?

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X. Sample Database

A. This example of a database gives an idea of the types of data that can be stored in a relational database. This is a database to track a food box distribution and referral program.

This database has three different tables with demographics, referrals, and food box distribution.

XI. Database report example

From this database, we can make some reports. This one is a detailed report on a particular participant, showing their activity in the program.
Group Activity: Designing a database

Use the worksheet to begin creating your database.

What data does your organization need currently?

<table>
<thead>
<tr>
<th>Data needed</th>
<th>Examples of this data</th>
<th>How data is collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program start date</td>
<td>04/23/04</td>
<td>Intake form</td>
</tr>
<tr>
<td>Last Name</td>
<td>Smith</td>
<td>Intake form</td>
</tr>
<tr>
<td>First Name</td>
<td>John</td>
<td>Intake form</td>
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<tr>
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</tbody>
</table>

What are some examples reports that could be generated from this data? (I.e. mailing labels, clients by service received, etc.)
XII. Uses of the Internet

Having access to the Internet lets you explore a wealth of information for service delivery and funding.

A. Research

Searching for funding and information is one option. You can use all of these different options to find grants.

a. Search engines (Google, Yahoo, etc.) Type in “technology grant” or “faith-based funding” and you’ll see many links to information you can use.

b. Foundation Center (fdncenter.org) – Comprehensive directory of grants.

c. NTEN.org and TechSoup.Org are great sites for finding technology information for non-profits.

d. And many more…there is no one way to search the Internet for information.

XIII. Uses of the Internet: Grant Applications and Reporting

Many organizations are asking for on-line applications and reporting. You need to be comfortable with the Internet to compete with others. You can also use the Internet to communicate with your funders, which often results in faster replies.
XIV. Uses of the Internet: Accessing on-line databases of community resources for client referrals

Many communities have databases on the Internet to help you find resources for clients. One example is the WorkResources.Org website that gives people in Lincoln and Lancaster counties help in finding the resources that they need to get and keep a job. You can also use the Internet to find a wealth of articles that may help clients. As we discussed in the database section, you may need to create your own database for information and referral if the one you need doesn’t exist yet.

XV. Communication

A. E-mail allows quick, easy, low-cost communication with co-workers, donors, funders, and community. For instance, you can send one e-mail to 50 people telling them about an upcoming event. No need to find a volunteer to stuff envelopes. Obviously, the level of e-mail you can use will vary depending on your audience, but using it whenever possible will lessen your workload significantly. It’s also an easy way to share information among co-workers.

B. E-mail based mailing lists allow communication and information sharing with others. It’s a great way to find out about upcoming funding opportunities, learn about great new ideas, and share your own expertise.

C. In-house networking for sharing files -- Having all of the computers in the office connected to each other allows all of the computers to share files, such as a database. If a database is only available on one computer, it makes it a chore for each person to get access to that machine to enter data. Setting up a computer network also allows users to share the Internet connection.
XVI. Multilingual Projects

A. Computers allow communication in many different languages, but it isn’t as simple yet as pushing a button and having your words translated into whatever language you need.

B. However, you can now type in many different languages.

C. You must keep in mind that translators (of written materials) must be culturally sensitive, as well as linguistically competent. A Spanish speaker from Spain may not understand issues faced by a Spanish speaker from Mexico.

D. Web sites are starting to offer a variety of languages. For instance, the Social Security Administration provides basic information in many languages.

XVII. Additional possibilities with technology

There are many other ways you can use technology as your services expand and grow. Here are some other common uses for you to think about:

a. Word processing – Word processing is simply using a program such as Microsoft Word or WordPerfect to enter, edit and format text.

b. Tracking appointments – Many different calendar programs allow you to track appointments.

c. Desktop Publishing – Desktop publishing is producing professional-looking documents such as newsletters, business cards, flyers and calendars on a desktop computer.
Microsoft Publisher is one example program, although a word processor can perform the same function with a little extra effort.

d. Financial software – A spreadsheet program will help you get started in tracking financial information, but you may need to use a more powerful program later on. There are numerous programs available. One of the most commonly used by nonprofits is Intuit’s QuickBooks. QuickBooks lets you print checks, generate bills, and create customized invoices, in addition to tracking ledger information.

e. Creating a web site – As your services grow, you may wish to create a web site to promote your services to potential clientele and funders.

f. Open source software – Not all software has to cost a lot of money. There are many software programs that are freely available and are of a high quality. OpenOffice is a word processor and spreadsheet program that is very comparable to Microsoft Word and Excel. Ebase is a freely available database for non-profits.

XIX. Other Issues for Technology Use

As you begin to implement usage of technology, here are some other things you will need to keep in mind:

A. Technology support staff/volunteers

With any technology usage, keep in mind how you will fix problems.
If your hard drive dies, whom will you call?
Will you train a staff member to help with small computer problems, and find a consultant (paid or un-paid) to do the rest?
B. Training

The Internet will also provide you with a wide variety of options for training staff on technology. There are a variety of strategies that can be used. Start with surveying your staff. What do they already know, and what are they interested in learning? Do they know enough about spreadsheets to help other staff one-on-one, or to lead a class?

At the same time, find out how the staff would prefer to learn the material, and try to offer that type of training. Perhaps some staff would prefer to learn from a book, while others would prefer a classroom setting. Once some staff are comfortable, they may be able to mentor others, as long as it doesn’t become a huge part of their day.

i. Mentoring—Have one more knowledgeable staff member help others learn.

ii. Trainers—Bring in an outside trainer, or send staff off-site for training

iii. On-line—There are a lot of training materials on-line that let staff learn at their own pace

iv. CD-ROMs—Reasonably priced CD-ROM tutorials can be also purchased. The tutorials walk the user through a particular software program by showing them how to do various tasks and then letting them do those tasks.

v. Books—Many computer books are available on a wide range of topics, and are good to have as references.

C. Recovery/Backups

Once technology becomes a part of your work, you need to have a plan in place to protect the important data. It is easy to delete a file, and hard drives don’t last forever. Always keep important data in two places, such as on a hard drive and on a floppy disk or CD-ROM. Print the data
occasionally as well, so that it could be quickly re-entered if necessary. Having a system in place will mean you won’t lose large amounts of time to technology failures.

D. Security

All computer systems need some basic security procedures in place. Initially some anti-virus software is essential that will protect against viruses from the Internet, disks or e-mail. If the computers are connected through a high-speed Internet connection, use something called a “firewall” to protect them.
Technology Planning

Here is an example of an organization needing a technology plan:

A women’s shelter had five staff, and three working computers. They had two other old computers and one working printer. The only connection to the Internet shared the phone line with the fax machine, impeding the usefulness of both. The computers had been purchased or donated over the years, and now the organization wanted to network the computers together and connect to the Internet. They were also pressured by the need to be compatible with a new citywide database system.

The shelter got help writing a successful grant application to get technology assistance, and was ready to upgrade their system, but didn’t know where to start. They needed a technology plan.

a. What is a technology plan?

A technology plan looks at all aspects of technology and their use or potential use in an organization. It creates a roadmap for future technology purchases based on:

- The needs and wants of the organization and staff
- The overall goals and mission
- Projected funding
- Technical knowledge of staff

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Why create a technology plan?

Organizations have a tendency to start using technology in a haphazard fashion. One computer is bought, another is donated, another component is bought because someone needs a certain functionality, etc.

Eventually, the organization winds up with a mix of software and hardware, and no one with the expertise to keep it all working together. Worse, the lack of planning means the technology is creating more work for staff, with no useful outcomes.

If the solution is to simply buy the best computer the organization can afford, money will be wasted on unneeded functionality. Instead, the organization has to sit down and really look at their entire organizational plan and decide how technology can help them achieve their goals.

Example: The women’s shelter had equipment, and they suspected they didn’t need to buy all new computers, but they really didn’t know. Could they network the computers together or were they too out of date? What hardware did they need to buy? How could they create the best grouping of technology that would mean the least amount of future costs in upgrades and technical support down the road?
How is a technology plan created?

Many guides are available on-line to create a technology plan.

Start with a small committee and review your existing technology. Survey staff to find out their needs, frustrations and hopes for technology. Find out what training staff need. Create a comprehensive picture of the technology status of your organization.

Do as much of your own work as possible before bringing in a costly “expert”.

However, recognize that someone who has a lot of experience will be able to save you money in the long run by implementing cost-effective solutions.

For example, the women’s shelter had already prioritized Internet access, networking, compliance with the citywide database and a backup system as their goals. They had a basic idea of the hardware and software they needed. When an outside consultant came in, they only had to pay that person to help with the technical details, which is a significant cost savings.

It is critical for all new implementations of technology to include everyone in the decision making process. Just dumping a new program on staff without letting them give input will result in frustration and anger.⁹

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Final Steps

The most important sections need in the plan:

Current Technology: A brief description of how technology is currently being used in your organization.
Goals: The goals your plan addresses.
Action Plans with: Costs, Dates, Responsibilities: Outlines of how you intend to accomplish and fund each goal.
Budget: The estimated costs and funding sources for your goals

How is a technology plan implemented?

Once the plan is in place, begin putting its steps into place. As with any plan, make sure it is kept up to date and referred to regularly. There is never an end to updating technology, as the tools and organizational goals will continue to change over time.

Keep your technology consultant up-to-date on your changes so that they will be familiar with your system whenever you need them.

Example: The shelter staff learned from their consultant that their three computers would be adequate for what they needed. Based on the goals they had already established, the consultant gave them a list of suggested equipment and costs. They prioritized the networking and fast Internet connection and set a deadline for that to be implemented. Another non-profit helped them with setting up the network for a reduced fee. The staff knew that they need more computers, so each staff member could have their own, but they felt that it was better to have three well-functioning systems first, and then add to the network later on. They had to trade-off their needs and wants to make best use of their available funding.
XX. Group project: Beginning stages of technology planning

This worksheet is designed to get you thinking about technology, its use in their organization and their future plans. After everything you have learned, it should take you to a higher level of thinking than their first group exercise.

<table>
<thead>
<tr>
<th>Write down your agency’s mission statement (or a short statement of your overall goals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>With that mission in mind answer the following:</td>
</tr>
<tr>
<td>How can technology improve the services we want to provide to our clients?</td>
</tr>
<tr>
<td>What long-term needs are we trying to address through updating technology?</td>
</tr>
<tr>
<td>What skills will our staff need to possess to be successful?</td>
</tr>
<tr>
<td>How do we envision services of the future?</td>
</tr>
</tbody>
</table>
XXI. Review

A. Summary of today’s training

We’ve covered a great deal of information in today’s training. You have learned a lot about each of these topics:

- Data Management
- Communication
- Internet
- Technology Planning

As you can guess, this is only a beginning. Your next step is to begin researching your own use of technology and then planning for the future. A number of articles are included for you to read through, as well as a list of web sites to visit. There is no method that can be applied for every organization. Each of you will be starting at a different place.

XXII. Further learning

See the appendix of the Participant’s Manual
Using Technology to Enhance Delivery of Services

Works Cited


Using Technology to Enhance Delivery of Services

Articles and Worksheets

Technology Organizational Assessment ............... R-1
Information Management.......................................... R-2
Introduction to Databases...................................... R-5
Basic Database Assessment................................... R-7
Why a Technology Plan ......................................... R-8
What’s Involved in Tech Planning? ....................... R-9
Technology Organizational Assessment
http://techsoup.org/howto/worksheetpage.cfm?worksheetid=7

This worksheet is designed to help you start thinking about the overall status of your organization's use of technology. See the more detailed content area worksheets for questions that are specific to local area networks, hardware, word processing software, accounting software, connecting to the Internet, databases, website development, training and technology support staff.

1. What do you see as the most pressing needs for your organization that technology might address?

2. Why/how do you think computers can help?

3. If all computer systems were magically working and adequate tomorrow, what would change in the organization?

4. Who at the agency has been involved in planning for technology staffing, training and purchases?

5. Who at the agency has been involved in day-to-day computer troubleshooting and maintenance tasks?

6. Who will be involved in the implementation of new technology efforts?

7. Are staff members able to use the technology that is crucial to their efficiency and to the tasks they need to accomplish?

8. What type of training have staff members completed in the past? How useful was it?

9. What type of financial resources does your organization have available for technology? Are you prepared to seek additional funding from other sources?

10. What are the obstacles to your organization's effective use of technology?

11. What is management's attitude and role in the organization with regards to technology?

12. How would you assess your use of technology compared to agencies with similar missions?
13. Do you need better systems to streamline your operations, increase communication among staff, reach out to clients, cultivate your board, or communicate with your members?

14. What role does the implementation of new technologies play in your strategy for the next five years? Do you need new technology in order to grow? Would new technology allow you to respond to new opportunities?

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Information Management

The cornerstone of nonprofit effectiveness

March 29, 2002

Author: Barbara Chang

http://techsoup.org/howto/articlepage.cfm?ArticleId=369

It happens all the time. Your boss wants information on how many clients with incomes below the poverty line received drug and alcohol counseling last month. Once you look at all of the paper registrations and count the number, she calls and wants to know how many of them live in Brooklyn. So, you go back and count again, knowing all along that there's a better, faster way of doing this by using technology. Or you're writing a grant proposal to the Orange County Foundation and need to know how many residents from Orange County you served. You don't regularly collect that statistic, although the information can be retrieved from that pile of paper by your desk. You decide to dodge the question, offering the total number of clients you serve as a less compelling substitute. It's just easier.

Information -- Collecting Information, Organizing It, Analyzing It, and Reporting It

For a nonprofit, accurate, timely information has become the cornerstone of the business. As more scrutiny is placed on outcomes and financial accountability, staff that make decisions about programs and generate the reports requested by funders are relying heavily upon data being collected at the front lines. Data is also critical to assessing program needs. Is the care received by your clients coordinated properly? Is it followed up in a timely manner? Are you able to identify trends in program delivery so you can make decisions about staffing, program design, and funding needs?

Just a few short years ago, paper forms were the main vehicles used to collect data at a nonprofit. That has changed with the introduction of database programs and applications. In New York City, we at NPWpower NY are working with many of our nonprofit partners in doing database development. Some of them are asking for basic database design using a program like Microsoft Access or Filemaker Pro. Their needs are relatively simple and an application can be designed within a few days. Others are requesting more complex databases that merge several disparate databases and spreadsheets currently being used in their organization.

Databases -- What Are They?

Simply put, a database is a repository for your organization's information -- most of which will have to be accessed and re-sorted for various uses, such as a mailing list or management report. Often, staff starts collecting data with the use of a spreadsheet, but a database is much more sophisticated and can manipulate the data (i.e. sort, aggregate, skip fields, etc) much more skillfully than a spreadsheet.

Databases are quite pervasive. They can be found linked to a Web site that is capturing registered users. A client tracking application for social service organizations is really a sophisticated database. An electronic medical record for a health care facility is also a database. Many would argue that the database is the single most important application of
technology used within a nonprofit today. Think about how data is currently being collected and used in your organization today:

- If you are an advocacy group, your mailing list is a wonderful source of rich data on your core constituents.
- If you are a social services organization, the information you are collecting about your clients on your intake and registration forms is just the beginning of the data you are collecting on services and referrals that you are coordinating.
- If you are an arts organization, the inventory you collect on your collections is data-driven.
- If you are a school, the data you collect on enrollment and test scores is critical to assessing overall performance.

**Spend Time Thinking About Your Needs**

Every nonprofit collects data and in many cases, collects data that if organized, can send powerful messages about the impact the sector is making on communities and peoples’ lives.

**Observations from the field**

At NPower NY we are spending a lot of time working with nonprofits on their database projects. The ability to manipulate data to respond to the ever-changing information needs of staff and funders is usually the driving force behind creating or modifying an organization’s database. If properly implemented, databases can not only have an impact on information management, but also on staff morale and client satisfaction. Below are some lessons we have learned about what organizations should be aware of when considering a database project.

Whether you are designing a database from scratch or purchasing an off-the-shelf database such as a client tracking application, don’t rush the decision. Database programming can be expensive, so the more time you spend thinking about and planning for your information and reporting needs, the clearer you will be when purchasing the product or directing the programmer.

Here are some steps to take in the planning phase:

1. Map out the current data collection process in order to fully visualize what the current practice is within your agency.

   You can’t modify your practices if you don’t know your starting point. Use a giant whiteboard and be as detailed as possible, breaking down the process into bite-sized steps. Once that is done you can more easily add and take steps away.

2. Create a detailed model of your ideal data collection process, incorporating all of what you consider to be your agency’s best practices.

   Once you have mapped out your current practice, map out your ideal model of data collection.
collection using all of the wisdom your staff has from actual experience. It's so important to look at the realities of the situation in order to map out your best practice situation. Think about the process not only from your staff perspective but also from the perspective of the clients from whom you are collecting the information.

3. Identify the specific information the database must manage and the outcomes your agency tracks (or wants to track).

This step is critical. You don't necessarily want to capture all of the information you currently collect, or you might want to collect more or different information. What data is needed by management to make sound decisions about program success or planning for the future? What outcome data is your government funder asking for? What data does your board need to see on a regular basis?

4. Develop the functional requirements of your agency's best practice service delivery model. Functional requirements are simply the things or functions you want a database or software tool to do. How do you want the data manipulated in order to retrieve the information you need? For example, you may want a database to be able to search to see if a client or consumer has received services from your agency before. Or you may want a database to be able to link individuals with other family members so that your agency can get a count of both individuals served and families served. Both of these are examples of functional requirements.

Once you've completed these steps you will be a lot clearer in directing the search for the right software or in directing the programmer who will design the database.

Realize the Full Implications of the New Database

The process of designing the database was pretty straightforward, although it garnered much debate around data elements and functional requirements. So why is your colleague at reception looking upset and why is there more than the usual banter going on at the water cooler? The reason is that the implications of database implementation can be more widespread than the database design itself. For example, a database implementation can change the way information is collected, possibly automating a paper-based process. This can be an incredibly liberating experience for those who have been buried in paper registrations and forms. A database can truly revolutionize the way an office operates, streamlining intake and creating critical reports with a single keystroke.

But be watchful of potential fallout as a result of automating your data collection process. Perhaps your receptionists are nervous about the stability of their jobs or the lack of training they have on the new technology. Revealing major process flaws can leave your staff -- the original architects of the process -- feeling incompetent or vulnerable. Perhaps you are trying to merge several of the organization's databases into one. Oops: you didn't realize that the organizational culture of not sharing information with each other is the reason why there are separate databases. Resentment and fragile nerves abound.

You'll soon realize that dealing with the technology is the easy part, the hard part is the
human factor. Know what you're getting into ahead of time and try to confront these issues head on. Keeping staff engaged in the process as well as being a part of the solution can help in the implementation phase.

1. Team-based design: We strongly encourage the front-end database planning be done by a team of staff. Make sure your team represents a blend of the visionary and the practical, as well as people who have technical know-how and strong project management skills. What often happens when we make this suggestion is that the program managers or senior management become the team, but we would suggest otherwise. You should select staff from all ranks within the organization, particularly if your database project will impact them directly. We would also suggest that you select unofficial "go-to" staff-- those within the organization that others listen to and respect. Once you convince them that the database is a positive step forward, they are likely to reassure others of the same.

2. Understand the implications and deal with them early on: Answering the likely questions before they come up will save you and your staff a lot of time in lost productivity. Will this affect my job? Will I be trained properly? Will my concerns matter? Don't treat the database project as a highly technical, impersonal piece of technology. An introduction of new technology will always lead to change and change must be managed properly within the organization.

Estimate Timeframe and Costs Accurately

Something funny happens once a nonprofit decides it needs a database -- all of a sudden they can't live another day without it. The database will revolutionize the way information is collected, streamlining the bureaucracy and redundant collection of information, inserting technology where it never existed, saving money at every turn. However, databases are not the miracle cure -- technology in and of itself rarely is. You just read about the importance of taking the time to plan and deal with wider organizational change. These processes can take weeks, months and in some cases over a year.

But you need to be realistic about the savings -- in time and money -- that will be reaped from your database as well.

First, keep in mind that database implementation may require hardware upgrades. Make sure you understand the implications of your database on minimum workstation requirements, networking capabilities, Internet access, and communication tools like email.

Don't forget to invest heavily in training on the new database. Not only training on the technology itself, but also training on the information that will be collected. The last thing you need is garbage data going into the database ruining any hope for accurate reporting on the other end.

Make sure you allow enough money in the budget for upgrades in hardware and software and customized changes to the database. I have never seen a nonprofit that could fully anticipate all their information needs from the onset. Customized reports, new data fields, and new functional requirements will inevitably crop up and you'll need to make sure you can accommodate these changes in your budget.
In closing, databases can be an amazing addition to your organization's operation and can produce the rich reports you could only hope for in the past. But, as with other new technology, be realistic about what you want to achieve in a given timeframe and budget, and you'll be more likely to achieve success. Good luck!

*Barbara Chang is the Executive Director of NPpower New York. NPpower NY’s mission is to help non-profits use technology to better serve their communities. They offer technology consulting, training and support services at reduced rates for its members and serves as a technology resource for all area non-profits. Learn more at [www.npowerny.org](http://www.npowerny.org).*

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Introduction to Databases
http://www.techsoup.org/howto/articlepage.cfm?articleid=356
January 29, 2002
Author: Erik Bansleben and Gary Orthuber

Databases are programs that store information that needs to be accessed and reproduced in many different ways. There are infinite examples: mailing lists which need to be sorted by zip code; lists of clients who are under 18; people who have donated more than $100 dollars in the last two years who live in Oakland and whose children go to public schools; etc.

Although many different programs can store data (word processors or spreadsheets can store lists of names for mailing lists), database programs are unique in that they can search, sort, omit and sum data far easier than other programs.

Do you need a database?

Many organizations need to store data in ways which will be easy to sort and print out. One of the most common types of database is a contact database, which has names and addresses of people who regularly receive mail from you. While most organizations start this list in a word processor or spreadsheet, these lists can quickly grow into large files which become difficult to easily deal with. Nonprofits generally need database software because they almost always have large amounts of data that they need to track. The questions then become:

- What kind of database do you need?
- Do you need more than one, and if so, should they be linked together?
- Should you make your own, or buy one off the shelf?

What kind of database do you need?

There are several kinds of databases, depending on what information you need to track. Some databases do two or more things- like keeping a list of donors as well as a list of newsletter subscribers.

Here's a brief overview of some of the more common databases nonprofits and schools use:

Contact/Client Management Database: Schools and nonprofits will want to track address and contact information about clients, students or even volunteers. This type of database will also have information regarding a person’s academic or care history or events for which a particular person has volunteered.

Information and Referral ("I & R"): Some organizations keep track of a number of services which are available either to the community in general, or to a particular population. These organizations would like to be able to call up this information quickly and refer people to the services. They might also like to track which groups get referred to more often than others.

Donations /Fund Tracking ("Donorbases"): Organizations often need to track donations from the community and foundations, and they often have to split single donations into different funding streams, according to the way the donor wants his/her money funneled.
This kind of tracking can get extremely complicated.

Do you need more than one database, and if so, should they be linked together?

As mentioned above, some databases do more than one thing. If you have several components to your database - like parents, volunteers and donors - and you not only need to track each type separately, but also track regular mailings sent to all groups, it will help if all this information can be accessed from the same database.

Should you make your own, or buy one off the shelf?

If you want to start a database, you need to buy database software. The main software packages like Microsoft Access and Filemaker Pro are easy to learn and come with templates that you might already be able to use - like mailing lists and membership info. Lotus Approach is a simple and easy-to-use program, if you only need to keep track of contact information. However, sometimes these templates will not be good enough to meet your needs. In these cases, you will want to customize your own template.

What's Next?

At this stage, you can either decide to make your own database template, or look for other "off-the-shelf" programs that have been designed specifically for nonprofits. There are conflicting views on which is better: if you make your own, you might end up spending a lot of time and money, but you will (hopefully) have a system which does everything you need. If you get a pre-designed database, (i.e. not a template that comes with Access, but a full-fledged program designed specifically for that purpose- like Raiser's Edge or Exceed) you might end up with extras you don't use, and you might need to invest in some more time to adjust the program to fit your needs. Often, the deciding factor here is how much you can afford to have a customized solution.

Summary:

Almost every organization keeps and tracks data, and the best way to keep this data is with a database program. However, the more information you would like to keep track of, and the more complicated the reports you would like to make, the more complex your database will need to be. There are several different options here: you can use a template that comes with the more common software packages; you can have someone design a database from scratch, or you can get one designed specifically for your purpose, but not necessarily one that meets all your needs.

1.

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Basic Database Assessment

http://techsoup.org/howto/worksheetpage.cfm?worksheetid=42

Use these questions to help you think through your accounting database needs.

If you do not have a database:

1. How do you currently store data such as contact information or information about clients and projects?
2. Is your method of keeping data efficient? Is it easy to share data among different staff members?
3. What is your budget for a new database?
4. What type of data do you want to store in the database?
5. What tasks will you use the database for? For example, do you want to retrieve information, sort data or print reports?
6. Do you currently have database software such as Access or Filemaker?
7. Do you want several staff to be able to access the database? Do you have a network to support this?
8. Do you know of a consultant you trust who could build a database for you? Do you have someone on staff that could do it?

If you have an existing database:

1. What kind(s) of database software does your organization use?
2. Is your current database system adequate? Does it do what your organization needs it to do easily?
3. Would your database system be adequate with a 25% increase in volume?
4. Do you have more than one database? If so, are they on different computers? Can more than one person use the same database?
5. What does your organization use the database(s) for? (Specific info on clients, donors, merging letters, labels, reports)
6. How many people on staff with a computer use the database?
7. How many people should be using it?
8. Is everyone using the database able to do all the things they need to do on it? Do they need help from a system manager?
9. Do staff members need more training than they're getting in using the database?
10. Do your computers run the database software adequately?
11. Does your organization need to upgrade to a newer version of your current program or even a different program? If so, what program do you need?
12. How many computers do you estimate will not be able to run the new software?
Why a Technology Plan?
http://techsoup.org/howto/articlepage.cfm?ArticleId=97

May 04, 2000

Author: Anna Mills

Source: TechSoup

A technology plan can sound like another piece of bureaucracy. Don't be fooled! There is no substitute for thinking through what you need and how you will meet those needs. Technology planning is the process that will help you save money on technology, buy what you need and use technology as a tool to accomplish your organization's mission.

Technology planning is the magic ingredient that will help you to:

- **Obtain funding.** Funders will be much more likely to give money for technology if you can show them a technology plan.
- **Use technology effectively to further your mission.** The technology planning process can expand your horizons and help you see new ways in which technology can further your mission.
- **Buy the right equipment.** Purchasing hardware, software and networking equipment can be overwhelming. If you don't plan, it's easy to end up with something that is way too complicated or doesn't do what you need it to. There's no substitute for thinking through your goals and researching possible solutions.
- **Save money.** You probably do not need the fanciest system on the market. Planning allows you to figure out how to spend less and still meet your needs.
- **Avoid crises.** Bad technology decisions can leave you suffering for years. A faulty system can send your stress level through the roof and make you lose crucial data and capabilities.
- **Use staff time more effectively.** How many hours of staff time have you lost to those niggling technical problems? A technology plan will help you streamline staff use of technology, and put systems in place that will make technology a useful tool for staff, not a stumbling block.
- **Protect yourself from staff turnover.** If the person who knows your technology leaves, what will you do? A technology plan can save you by providing documentation of existing systems as well as future plans.

Visit [http://www.techsoup.org/](http://www.techsoup.org/) for technology information, access to donated and discounted products, and support from nonprofit experts and your peers.

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Effective technology planning is an involved process. It takes a commitment of time and resources from senior managers and other staff. In order to make good decisions, an organization also needs to understand key aspects of technology.

But through technology planning, organizations can make significant gains. Sound technology management leads to greater productivity, increased staff morale, and improved service to clients through having machines that work, networks that give access to information, and applications that are appropriate for an organization’s mission.

Information can transform organizations by giving them the tools to understand the environment they’re working in, to measure the effectiveness of their actions, and to counter opposing information from other groups and policy makers. Technology is uniquely positioned to harness the power of information.

Technology planning is a process. TechSoup has broken it down into seven phases.

1. **Establish leadership and support.** Setting up a technology team and ensuring management and staff buy-in will allow you to get started with the whole organization behind you. See the article "Establish Leadership and Support" in either the Management or Staff version for more information.

2. **Assess your resources.** The first step in planning is to assess your existing technology. What do you have in place? How well is it working? See the article "Assess Resources" for more information.

3. **Define your needs.** Why do you need technology? What will new technology help you do that you can’t do already? Defining your needs will enable you to choose the most efficient solutions. See the article "Define Your Needs" for more information.

4. **Explore solutions.** The next step is to research existing technology options and decide on ones that meet your needs at a minimum cost. See the article "Explore Solutions" for more information.

5. **Write the plan.** Your written plan should document your resources, needs and solutions, as well as your budget. See the article "Write the Plan" for more information.

6. **Get funding.** You can now use your technology plan as key element in seeking technology funding. See the Funding section for more information.

7. **Implement the plan.** Setting a timeline, assigning responsibilities and evaluating your progress will make your plan a reality. See the article "Implementing Your Technology Plan" for more information.
If this seems like a lot to handle, remember that most nonprofits will want to seek help with one or more aspects of the technology planning process. See the article "Do I Need Help?" to think through whether you have the expertise to do the plan on your own. See the article "Getting Help with Your Technology Plan" for information on how to find a technical assistance provider, consultant or volunteer to help you.

Don't despair! Help is available. Technology planning is no simple matter, but it is a rich, powerful process. In the long term, it can reduce your headaches tenfold, and lead you to use technology to further your mission in ways you never dreamed of.

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Resources

In addition to the Works Cited and Appendix, here are good web sites and a book to review.

www.techsoup.org
The Technology Place for Non-Profits
A great site with tons of resources including articles, discussion groups, free and discounted software, and planning worksheets. (See the appendix for example articles.)

http://www.progressivetech.org/Resources/
Progressive Technology Project -- Strengthening community organizing with effective technology

www.nten.org Nonprofit Technology Enterprise Network

http://www.lincproject.org/toolkit/materials/database.asp
LINC ORGANIZERS' ONLINE TOOLKIT -- Database Resources

http://www.unitedwaycc.org/teamtech/tpgintro.htm
Introduction to Technology Planning – a comprehensive guide

http://www.techatlas.org
TechAtlas helps non-profits map out a customized technology plan that includes guides to successful implementation, step by step.

http://www.coyotecomunications.com/
Tip sheets on databases and other software


Local Resource Directories:
http://nebhands.nebraska.edu
The NEBHANDS website

http://ci.lincoln.ne.us/city/health/educat/iris.htm
The IRIS website, where you can search for local human service agency information

http://www.workresources.org
Helps residents of southeast Nebraska find the resources they need to prepare for employment and keep a job.
Software:

http://www.OpenOffice.org
A free open-source word processing, spreadsheet and presentation software program, which is a good alternative to Microsoft Office. You can save files in Microsoft Word, Excel or PowerPoint format.

www.ebase.com -- ebase 2.0 is powerful and affordable database software created for non-profits. You may use the ebase software and manuals free of charge, however fees are charged to access online support resources.

http://organizenow.net/odb/odb.php
Organizers' Database is a free, user-friendly database application tailored to meet the needs of membership organizations and grassroots campaigns. It is designed to be extremely easy to set up, and configure. It was developed by a nonprofit organization that focuses on assisting grassroots groups.

nebhands
a faith-based and community initiative
Worksheet: Beginning stages of technology planning

Write down your agency's mission statement [or a short statement of your overall goals]

With that mission in mind answer the following:

1. How can technology improve the services we want to provide to our clients?

2. What long-term needs are we trying to address through updating technology?

3. What skills will our staff need to possess to be successful?

4. How do we envision services of the future?
Worksheet: Designing a database

What data does your organization need currently?

<table>
<thead>
<tr>
<th>Data needed</th>
<th>Examples of this data</th>
<th>How data is collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program start date</td>
<td>04/23/04</td>
<td>Intake form</td>
</tr>
<tr>
<td>Last Name</td>
<td>Smith</td>
<td>Intake form</td>
</tr>
<tr>
<td>First Name</td>
<td>John</td>
<td>Intake form</td>
</tr>
</tbody>
</table>

What are some examples reports that could be generated from this data? (I.e. mailing labels, clients by service received, etc.)