
*The M*anager

Guide to
Computerizing
Your Accounting
System

A supplement to *The Manager*
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Guide to Computerizing Your Accounting System

In This Supplement

<i>Making the Decision to Computerize</i>	4
<i>Preparing to Computerize</i>	7
<i>Implementing Your Computerization Project</i>	10
<i>Forming the Project Team</i>	10
<i>Preparing the Guiding Documents</i>	10
<i>Reviewing the Current System</i>	11
<i>Developing Proposed Modifications</i>	11
<i>Selecting and Purchasing Software</i>	11
<i>Installing Hardware and Software and Entering Preliminary Information</i>	12
<i>Preparing and Training Staff</i>	13
<i>Monitoring and Evaluation</i>	13
<i>Illustrative Timeline</i>	14
<i>Selecting and Purchasing Software</i>	16
<i>Defining Software Needs</i>	16
<i>Understanding Accounting Software Modules</i>	17
<i>Evaluating Software and Vendor Options</i>	21
<i>Making the Software Work for You</i>	25
<i>Selected Resources on the Internet</i>	26

An effective and efficient financial management system relies on the availability of accurate, timely financial data. Usually these data are provided by an organization's accounting system. Due to factors such as expansion, new reporting requirements, the need to work toward sustainability, and the availability of relatively low-cost technology, more and more organizations are putting in place a computerized accounting

system that will provide them with the data they need, when they need it. Planning for and implementing an efficient computerized accounting system can seem daunting for any manager. This Guide is intended to help you consider some of the factors relevant to making the decision to computerize or upgrade your accounting system.

Most organizations move through a progression of accounting systems. They usually begin with a manual (paper) system, then move to a mix of paper and computerized spreadsheet-based tools, and then finally implement a simple computerized system. Often this computerized system will be a mix of several systems or programs that place data in spreadsheets or databases. Improvements in computer hardware and accounting software make it easier than ever to move from a mix of paper and spreadsheet-based tools to a computerized system, or to upgrade an existing system. Lower computer and software costs have also reduced the financial commitment required to make this change.

This guide is written for managers who are considering whether or not to computerize their accounting systems, or are in the process of preparing for or implementing a previous decision to computerize. It may also be useful for managers who are evaluating their programs' needs for computerized accounting systems, making recommendations to their regional or central offices on technology, or implementing new automated systems or accounting upgrade efforts.

The guide provides an overview of all phases of automating or upgrading an accounting system, from making a decision on computerizing, to preparing for computerization, and implementing a computerization

project, and focuses on a key step in the process: selecting and purchasing software. The guide provides lists of questions to help identify the problems in your current system and understand whether or not computerization will solve these problems. It also provides a tool that will help you evaluate software packages and vendors and understand how they might or might not meet your needs.

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Making the Decision to Computerize

The decision to automate your accounting system generally depends on your need to have accurate, consistent, and timely data in a variety of reporting formats. Do you already have a good paper system in place? Are you finding that your accounting staff have to spend much of their time filling out spreadsheets manually? Are you frustrated at not being able to test new cost scenarios using new information? Are donors delaying the release of funds due to delays in submitting your reports? If you answered "yes" to any of these questions, your organization may benefit from computerizing or upgrading its accounting system.

Looking at the Benefits of Computerization

Automating your accounting system can have many tangible and intangible benefits. The following table provides a quick overview of the benefits of a well-functioning computerized accounting system.

Considering Computerization: Needs and Benefits	
Managers' Needs	Benefits of a Computerized System
Managers require timely and accurate information to make decisions	<ul style="list-style-type: none"> • The system automatically verifies account numbers and rejects data that don't comply with prescribed criteria • Missing checks or vouchers are immediately evident • Tedious recording processes are automated • A variety of reports can be quickly generated on demand • Managers can query the system for ad hoc information • Data processing and analysis are faster and more accurate
Managers must identify and solve problems	<ul style="list-style-type: none"> • Allows managers to more easily recognize problems, such as slow collection of accounts receivable, diminishing sales, or cash needs • Eliminates the need for manual investigation of accounts receivable, which can be a tedious and time consuming task, especially when there are changes in staff

Considering Computerization: Needs and Benefits

Managers' Needs	Benefits of a Computerized System
Managers need to look at data from a variety of perspectives in order to make good management decisions	<ul style="list-style-type: none"> • Managers can use the system to look at data in different ways; <i>for example, expenditures can be reported by supplier, by item purchased, by unit, or by time period</i> • The system can generate reports that compare data by period, such as current year to prior year, and provide trend information, such as growth or downturns • Improved reporting capabilities allow managers to monitor expenditures against line-item budgets, track account balances, and predict future cash flow needs • A single, computerized system can provide data needed by both financial and programmatic managers • Monetary and stock controls are more easily implemented • Organizations with offices or service delivery sites in several locations can manage their finances in a more coordinated and consistent manner and share information among their cost centers
Managers must fulfill different reporting requirements and provide financial information in formats requested by their governing bodies, funding sources, or senior managers	<ul style="list-style-type: none"> • Reporting formats can be changed at the push of a button or the click of a mouse • Once accurate data are in the system, most reports can be printed on demand • Staff can make on-line queries of the data as needed and fulfill management requests for reports quickly and easily • Managers can more easily satisfy statutory and donor reporting requirements with reports such as profit and loss, balance sheet, trial balance, and customized donor reporting • Reporting requirements are satisfied more quickly, with less effort • Auditors have better access to required transaction trails, such as a check number, amount, payee, and date. This helps to reduce the time needed to provide this type of information and documentation during an audit
Managers must be more cost effective, that is, they must do more with less	<ul style="list-style-type: none"> • Allows an organization to handle a greater volume of work or satisfy complex reporting needs with fewer staff • Uses the features and functionality of Windows-based technology, which allows a variety of software to be compatible and used for various applications • Increases data storage capacity, allowing managers to enhance existing systems or satisfy new business or management needs in a cost-effective manner

Before making a decision about computerizing, you must have a solid and effective accounting system in place. Computerizing a weak system will not suddenly improve it. The previous box presented

some of the “right” reasons to computerize your accounting system. The following box provides a few of the “wrong” reasons.

“Wrong” Reasons to Computerize Your Accounting System

- “Everyone’s going computer...it’s the thing to do.”
- “Our accounts are in such a mess...we should computerize them and get organized.”
- “We’ve just had some computers donated to us...we should use them.”
- “The Finance Office is inefficient...they’re spending too much time doing the accounts.”
- “I’ve seen new software in a magazine...it’s the latest thing and just what we need!”

Reviewing the Limits and Pitfalls

Although there are many benefits to computerizing an accounting system, you should consider carefully what a computerized system can do for you and how it might help you process data for making decisions. Consider the following:

- **A computerized system needs accurate and current data.** Just because your system is computerized does not mean that it is current or error-free. You should update and check your data on a regular basis.
- **Computers cannot solve your accounting system problems.** By itself, a computerized system cannot balance your books, improve your organization’s structure, increase your cost-efficiency, or improve management. It will not solve such problems as unskilled or unmotivated staff, poor managerial skills, inappropriate operating policies, or unfavorable external conditions. Computerizing will not improve a problematic accounting system, but it can improve a well-functioning system.
- **Computerizing your accounting system may require new skills in your organization.** You may need to hire new staff or train existing staff. You may need to reorganize your accounting department, let some people go, or hire new managers. Staff may resist these changes. You will need to spend time and resources orienting them to the need for and benefits of the new system in order to avoid implementation delays or failures.
- **Computerization involves risks.** Your staff should watch for viruses and other threats to data integrity. Confidentiality of sensitive information may be an issue, and access to some information may have to be limited to specific individuals only. Data-entry mistakes could result in inaccurate calculations and an inaccurate representation of your organization’s financial picture. Being aware of these types of risks will help you minimize them.
- **Computerization may have hidden costs.** These costs include the expense of purchasing peripheral equipment (zip drives, additional printers) and needed supplies (toner, paper). Future costs include upgrading your system, seeking technical support, and storing data.
- **Computerizing your entire system all at once may be inefficient.** Attempting to automate everything at one time may result in a system that is cumbersome, unreliable, inefficient, and demoralizing to your staff. A phased approach may work better.

Taking time and care to consider these issues is an important part of making a decision about computerizing your accounting system for the first time or upgrading your current system. Once you have made the decision to computerize or upgrade, you can prepare for the process. Careful preparation can significantly reduce your need for outside technical assistance and the overall cost of computerization. It will also increase your ability to handle some groundwork internally and help you limit vendor or contractor intervention to times when it is critical.

Preparing to Computerize

In preparing for computerization, you should ask questions about your organizational capacity, existing systems, human resources, physical space, financial resources, and information needs. All too often, a discussion of computerizing an accounting system is limited to selecting the software. This narrow view does not take into account the many other factors

that can make computerization succeed or fail in meeting organizational needs. In particular, you will want to assess your management and accounting needs for a computerized system, and your organization's readiness to computerize.

The following box provides a brief list of questions you should begin with in order to prepare for computerizing.

Key Questions to Ask When Preparing to Computerize

- What existing business or management problems could computerization solve or minimize?
- What types of information does the organization need from the computerized accounting system in order to answer business or management questions and make management decisions?
- Who will be receiving this information and will they benefit from its increased availability and timeliness? What types of management decisions will they be able to make with this information?
- Is funding available for computerization? Does your budget have limits? Are donor-imposed requirements a barrier to computerization? Is more timely and accessible information worth the cost of purchasing, installing, and maintaining a computerized system?
- What is the current information technology capacity of your organization, and can it support computerization?

Assessing Management and Accounting Needs

In preparing to computerize, you should consider your organization's management needs and what it wants from its accounting system. Work with other managers in your organization to answer these questions, perhaps in a brainstorming session or by interviewing them individually or in a group. Many organizations find it beneficial to engage a consultant to work with a group of managers to determine organizational needs. A consultant may be able to help identify the true causes of management problems, including those that will not be resolved by computerizing the accounting system.

When assessing your needs, it is especially important to involve managers and staff from

throughout the organization. This will help you get important input from your internal clients, which includes all the potential users of the computerized system. Taking time at this stage to involve a range of users and determine what they want and need from the system will build interest and commitment in the computerization project. You may also want to seek the opinions of major donors, government agencies, external auditors, clients, and suppliers on how computerization might meet their needs.

The box that follows provides sample questions for assessing your computerization needs. These questions are illustrative, and the answers will be different for every organization.

Sample Questions for Assessing Computerization Needs

How will computerization contribute to achieving organizational goals?

How complex is the organization? Complexity relates to the size of the budget, the volume of monthly transactions, and the numbers of staff, donors, monetary currencies used, service delivery sites, fiscal years, and users of the accounting information.

What do you want your accounting system to do?

- Support day-to-day administrative tasks such as registering patients and printing invoices
- Record and report accounting data
- Record treatments provided free of charge
- Manage commodities, medicines, and other supplies

What do you want to know from your accounting system, and who will be using this information?

- What kind of information do you need?
- What reports will be produced?
- Who will be looking at them?
- How often are the reports required?
- What decisions will they help to make?

What are managers *not* getting from the current system, such as speedy access to accurate, useful management information?

What are your greatest concerns? What is the largest waste of time in your current accounting system?

Does the organization have a chart of accounts adequate to meet the above complexity? Would expanding or revising the chart of accounts improve the quality of reports or financial information?

What impact do you want computerization to have? Do you want it to reduce your analysis time, increase the speed of entering and processing data, increase accuracy, improve controls, show trends, or improve the management of purchases and payments? Is the likely impact worth the cost of implementing the new system?

Which inputs go into the system?

- What data should be entered into the computerized system in detail?
- What data should be entered in summary form only?
- What data should remain in a manual system and not be entered into the computerized system?
- Should some parts of the computerized system, such as payroll, be contracted out to a third party?
- Will all offices and clinics of the organization be computerized? Will they be networked?

Should the accounting system be integrated with other systems, such as payroll and inventory of supplies? Is this necessary? If so, how will the systems be linked?

Could minor, inexpensive upgrades to the current system solve your management needs?

Have other possible solutions (e.g., training staff, hiring staff with different skills, modifying operating procedures) to your management needs been explored?

Have all the current and future needs been identified? (This is a critical point; many organizations invest in a system that they rapidly outgrow!)

Assessing the Readiness of Your Organization

If you decide that computerization will indeed meet your organization's management and accounting needs, ask the following questions to help you identify your

readiness to computerize. For each question, the table provides a list of suggested follow-up actions.

Assessing Organizational Readiness to Computerize

Question	Possible Follow-up Actions
Has senior management made a commitment to computerizing the accounting system and ensuring that all key staff are involved in the process?	<ul style="list-style-type: none"> • Hold meetings to brief senior management on plans • Discontinue the project if senior management does not commit
Does the organization have the trained staff required to run the system?	<ul style="list-style-type: none"> • Assess skill needs • Set up a training program in advance of system changes • Recruit staff with needed skills
Are staff prepared to accept the new system?	<ul style="list-style-type: none"> • Brief staff on plans, explaining benefits for both staff and the organization as a whole • Give staff the opportunity to ask questions • As appropriate, reassure staff they will not lose their jobs
Are staff willing to devote time to training, and can this training be incorporated into their work schedules?	<ul style="list-style-type: none"> • Develop a training plan that incorporates training into work schedules • Explain professional development benefits
Is an acceptable and functional manual system already in place?	<ul style="list-style-type: none"> • Identify any weaknesses in the current system and strengthen it • Postpone computerization until acceptable and functional manual system is in place • Assess whether improvements have eliminated the need to computerize
Do managers value and use the information currently produced by the manual system?	<ul style="list-style-type: none"> • Identify decisions that managers can make with the information • Conduct training on the use of information • Brainstorm with managers about the information they need
Do you have a budget for training, maintenance, support, consumables, and upgrades to hardware and software (including the initial cost of hardware)?	<ul style="list-style-type: none"> • Develop a realistic and comprehensive budget for all aspects of computerization and include it in the annual budget
Have you identified local technical support for the system?	<ul style="list-style-type: none"> • Identify and assess local technical support, if available • If local support is not available, determine the procedures and costs involved in securing support and decide whether to proceed
Are other support systems (telephone, Internet, computer network) available, adequate, and practical?	<ul style="list-style-type: none"> • Determine weaknesses in communication and support systems and develop plans to remedy them
Is the power supply reliable?	<ul style="list-style-type: none"> • Ensure that adequate power and backup power are available
Is the physical environment appropriate for the computerized system? Are funds available to make needed improvements?	<ul style="list-style-type: none"> • Identify what is missing, estimate the costs of providing it, and ensure that sufficient funds are budgeted for the improvements

Implementing Your Computerization Project

A computerization project should involve a wide range of staff and affect many different departments and levels in your organization. You will need to form a project team, set your objectives, meet regularly, establish your reporting requirements, conduct an appraisal (including a cost analysis), develop a realistic budget, and develop an achievable time line. Forming a project team with members from all areas of the organization is critical to project success. It acknowledges the impact that the project will have on the entire organization and increases staff commitment to providing accurate data and using the reports that the new system will generate.

The following steps will help you to implement your computerization project:

- Form the project team;
- Prepare the guiding documents;
- Review the current system;
- Develop proposed modifications to the system;
- Select and purchase the software;
- Install the hardware and software, and enter the required preliminary information;
- Prepare and train your staff;
- Monitor and evaluate the project.

The timing of these steps will depend on the size and complexity of your organization. An illustrative time frame is presented in the chart on page 14.

Later sections in this supplement go into more detail on two important aspects of selecting and purchasing the software for your computerization project: defining software needs and evaluating software and vendors, beginning on page 16.

Forming the Project Team

You should select a project manager to oversee the entire process: to coordinate meetings with suppliers, consultants, and staff, and to monitor and update senior management on progress. The project team should include key staff members from the accounting department, as well as program staff and managers from other departments that will use the new system's reports. Be certain to include front line financial staff who will work with the system daily, not just senior managers. If your organization already has a computer department, be sure to include the system administrator. Also include any consultants, volunteers, or others who will be managing or guiding the project. Bringing a team together at the start of the process will ensure that all perspectives are represented.

Preparing the Guiding Documents

Invest time at the beginning of the project to prepare formal documents to guide the computerization process. Having these documents available for the team to use in following the implementation steps will make the process smoother at later stages. Guiding documents should include:

- Statement of need;
- Definition of objectives;
- Framework for review of existing systems;
- Budget;
- Terms of reference for the supplier and consultants, if required;
- Time line, with staff responsible for tasks;
- Monitoring and evaluation plan, including monitoring benchmarks and indicators of success.

Budget. Make sure that the budget is comprehensive and includes resources for training, supplies, and reprinting forms.

Time line. In developing the time line, assign realistic deadlines, paying particular attention to certain tasks that depend on other tasks being completed first. Build in time for testing and modifying the system. Failure to meet unrealistic deadlines can lower staff morale. Whenever possible, avoid undertaking the project at a peak time, such as year-end closing, to lessen the impact of the time needed to transfer data from the manual to the computerized system.

Reviewing the Current System

Before making any decisions on a new system, the project team needs to do a comprehensive review of the organization's current internal procedures and documentation on which a computerized accounting system rests. You should ensure that the manual system's books are in balance and the information is accurate. The team should review:

- Needs of staff and all end-users;
- Procedures at all service and data-entry points;
- Chart of accounts, account classifications, and cost centers;
- Report and budget designs;
- Coding structures for items such as drugs, family planning supplies, and project activities;
- Master files, such as accounts, costs, suppliers, vendors, and patient records;
- Input control checks, such as input forms and verification checks.

Developing Proposed Modifications

Based on the results of the system review, the project team should identify needs that are not being met by the current system and develop proposed modifications that will help the organization meet these needs. It is important to document procedures and requirements before selecting new software. As

previously noted, all staff whose work will be affected by the new system should be involved in formulating the modifications. These staff include front line users such as the accounting staff, as well as program managers who will use financial reports to make programmatic decisions. You may have to go through several iterations before you are satisfied, but this is time well spent. Consider holding a series of half- or full-day meetings in which representatives of all stakeholders review the proposed modifications. For this step, the team should:

- Modify financial procedures and forms, as required;
- Revise the chart of accounts and related coding scheme;
- Design management reports.

Selecting and Purchasing Software

This step involves defining your software needs, evaluating accounting software modules, and evaluating software packages and vendors.

Define software needs. Your software needs depend on such factors as the size of your organization, the number and type of transactions that must be entered (such as the number of currencies you work in and the volume of services you are recording), and your reporting requirements. A good vendor should be able to assist you in defining these needs. A vendor's responsiveness in helping you identify software needs is an important part of the vendor evaluation process. On your own or with a vendor's assistance, do preliminary research on the Internet and in trade journals and other publications. Interview organizations and audit firms that have implemented a computerization project, and ask them for names of possible vendors. When defining your software needs, you should:

- Develop specifications for software and technical support;
- Assess whether you need specialized nonprofit software.

Evaluate accounting software modules.

Accounting software modules follow the modules in a typical accounting system. Low-end software contains all the modules in one package, while mid-to high-end packages sell them separately, and you purchase and install only the ones you need. When evaluating accounting software modules, you should:

- Determine which accounting software modules address your needs best;
- Determine whether you need a low-end or a high-end package.

Review available software and vendors. When you contact vendors, ask them for references and the names of their current clients. Arrange for the vendors to demonstrate software packages. Ask them to demonstrate only between four and six packages in all. Keep in mind, of course, that vendors are likely to have an interest in selling their own products. Do a technical review of the software packages, negotiate terms with the vendor, and purchase the software. When evaluating software and vendors, you should:

- Develop evaluation criteria for the software and vendor;
- Prepare a list of questions to ask the vendor;
- Request quotations from software vendors or consultants;
- Select the best candidates for further review;
- Have vendors demonstrate the software for staff;

- Perform a technical review of the short-listed software, using evaluation criteria;
- Contact the references and current clients of the potential vendors;
- Select software based on evaluation criteria;
- Negotiate terms with the vendor;
- Purchase software.

These three activities are discussed in greater detail in the section “Selecting and Purchasing Software,” which begins on page 11.

Installing Hardware and Software and Entering Preliminary Information

Implementing a computerization project can take place over a span of a year or more from initial installation through phasing out of the manual or old computerized systems. The software vendor may be able to assist in several of the following steps:

- Install hardware and other information technology enhancements, if necessary;
- Install additional software such as network software;
- Install accounting software;
- Input opening balances and other required preliminary information, such as organization, vendor, and customer information;
- Begin running computer system in parallel with existing systems (such as a manual system);
- Correct any problems with software or financial management procedures;
- Reduce use of the manual system;
- Phase out the manual system.

Installing hardware and software requires consistent preparation of human resources, including training existing staff and, possibly, hiring new staff. Do not wait until the software is installed to begin training staff who will be using the software. The phase-out of old systems may go faster if staff build confidence in the new, computerized system before installation is complete. You may want to assess progress and readjust schedules periodically.

Preparing and Training Staff

Often, an organization focuses on the system itself (hardware and software) during computerization and neglects preparing and training the staff who will use the system outputs to make decisions. It is critical that your staff understand the system. Initial and periodic orientations will help them use the system effectively and reduce their anxiety about the changes brought on by the new system. Training can be broadly categorized into the following: general computer training, such as word processing, keyboarding, spreadsheets; specific accounting system training; and management reporting, interpretation, and decision making. For this step, the organization should:

- Provide preliminary training or orientation to software in advance of implementation;
- Hire new staff, such as temporary staff to create databases and input prior transactions;
- Train existing staff;
- Revise job titles, descriptions, and roles and responsibilities, if necessary;

- Train a system administrator on software maintenance, including updates, logging of changes, and backups;
- Train accounting staff on the use of system modules;
- Train management and program staff in interpretation of reports.

Monitoring and Evaluation

Periodically compare project progress with benchmarks established at the start of the project to keep the project team on track and keep staff informed and enthusiastic about the ongoing changes. Periodic meetings will provide an opportunity for staff to raise implementation issues, identify roadblocks and solutions, and reallocate their time and other resources as needed.

Recognize that you may have to modify your time line as conditions change and you learn more about what is going smoothly and what is not. Provide stakeholders with regular updates to avoid unpleasant surprises and help build excitement about achievements and milestones. During a final evaluation, review your original indicators of success to see if they have been achieved, and if they weren't achieved, determine why they weren't and note any changes made to the original design and why.

The following Gantt chart presents an illustrative schedule for computerizing an accounting system. Please note that some steps and tasks may occur concurrently.

Illustrative Timeline for an Accounting Computerization Project

ACTIVITY	Month 1				Month 2			
	1	2	3	4	5	6	7	8
Form the project team								
Nominate members to serve on the project team	X							
Identify project manager	X							
Prepare the guiding documents								
Prepare statement of need		X	X	X				
Define objectives		X	X	X				
Develop framework/plan for review of current system		X	X	X				
Develop budget				X				
Write terms of reference for consultants				X	X			
Develop a time line				X	X			
Design monitoring and evaluation plan				X	X			
Review the current system								
Query staff (including end-users) on their needs					X	X	X	X
Review financial procedures at service and data entry points					X	X	X	X
Review chart of accounts and coding scheme					X	X	X	X
Review report and budget designs					X	X	X	X
Review existing coding structures					X	X	X	X
Review input control checks					X	X	X	X
Develop proposed modifications to the system								
Modify financial procedures and forms, if needed								X
Revise chart of accounts and related coding schemes								X
Design management reports								X
Select and purchase software								
Develop specifications for the software and technical support						X	X	X
Determine the accounting software modules required						X	X	X
Determine whether a low-end or high-end package is needed						X	X	X
Assess need for specialized nonprofit software						X	X	X
Develop evaluation criteria for the software								X
Develop a list of questions for vendors								
Request quotations from software vendors or consultants								
Select best candidates for further review								
Have vendors/consultants demonstrate software for staff								
Perform technical review of short-listed software using evaluation criteria								
Contact references and clients of the potential vendors								
Select software based on evaluation criteria								
Negotiate terms with vendor/consultant								
Purchase software								
Install hardware and software and input information								
Purchase and install new hardware (if necessary)								
Purchase and install additional software (if necessary)								
Install selected accounting software								
Input required information from old system								
Run computerized system in parallel with old system								
Reduce use of manual system								
Phase out use of old system								
Prepare and train staff								
Provide general orientations and briefings on the computerization project	X	X	X	X				X
Identify functions and job skills required by the new system								
Revise job descriptions, roles/responsibilities, and titles (as required)								
Hire new staff (as required)								
Train accounting/finance staff in use of new system and modules								
Train system administrator on software maintenance								
Train management and program staff in interpretation of reports								
Monitor and evaluate								
Compare project progress against benchmarks				X				X
Document roadblocks and identify solutions				X				X
Measure indicators of success to see if they have been achieved								
Identify changes made to the original design and why								

Selecting and Purchasing Software

Selecting and purchasing the software you will use to computerize your accounting system is the single most important decision in the computerization process. You should carefully consider the software's capabilities in relation to your organization's computerization needs. You should evaluate accounting software modules and determine ones you will need to install and use. Evaluating software and vendor options is another important part of this process.

Being careful and methodical at this stage will increase your chances of ending up with a responsive and effective computerized accounting system. Many organizations purchase software that is more powerful and complicated than the organization needs, can handle, or can afford. Keep in mind that it may not be possible for the system to do everything that users request without becoming too complicated, labor intensive, or expensive. Carefully weigh your colleagues' expressed desires against what your organization can realistically implement, easily use, and afford.

Defining Software Needs

Your software needs depend on factors such as the number of monetary currencies your organization must handle and your need for a system that you can customize to suit your needs. Low-end programs are designed for small businesses. They usually have a single user, such as the administrator or the bookkeeper. High-end programs are designed for large businesses with departmental accounting. High-end programs can have multiple users across a large local-area network, or can connect multiple locations in a wide-area network. The number of employees an organization has is not an important consideration when choosing software. The true measure of need is the complexity of the organization's activities, such as the number of transactions handled each month, security needs, the number of currencies handled, and methods of purchasing. Examples of low-end software include Quickbooks, DacEasy, Pegasus, Capital Lite, and Peachtree. Examples of high-end

software include Sun Accounting, Solomon IV, Navision, SCALA, and SAP.

A guiding principle in deciding whether to purchase and install a high-end or a low-end software package is to select the lowest-end package that meets your needs. Avoid using a bigger or more complex system than your needs require. When making your decision, you should consider the:

- Number of transactions or entries that must be recorded;
- Number people who will be entering and using the data;
- Number of currencies;
- Security concerns;
- Methods of purchasing and costs;
- Need for specialized nonprofit software.

Number of transactions. Although modern accounting systems do not typically set limits on the number of transactions allowed, low-end systems will usually slow down when they are handling large volumes of data. They work better when handling only a few hundred transactions a month. (Transactions refer to the number of checks, receipts, charges, and journal entries. You can determine your organization's current number of transactions from the existing manual system.) Take into consideration future increases from expansion or new funding, which could increase your need to track new data. Also consider the complexity of the transactions you are recording. *For example, do you charge one invoice to several projects, donors, or general ledger accounts?* A higher-end system, written for large database platforms such as Oracle, Informix, or SQL Server, can process thousands of transactions a day without slowing down.

Number of currencies. Low-end programs can usually handle only a single currency. Higher-end programs normally allow entries in multiple currencies. They include a currency conversion table that allows updates whenever exchange rates change, and they can convert to a single currency of choice for reporting. Another currency-related feature might be automatic allocations to "Profit (and Loss) due to exchange rate." Some programs that call themselves

multi-currency actually only allow you to maintain a single exchange rate between currencies, which is not very useful for most organizations.

Security. Low-end programs may have a password to restrict access, but will usually allow the user to modify prior data. While this makes such programs useful for organizations that are not concerned with security, it can be a serious drawback for larger organizations with multiple accounting staff. Higher-end programs come with extensive security. The administrator can restrict the tasks that each user can perform. *For example, data-entry clerks and finance assistants may have rights to enter vouchers, but not to add new codes or modify records.* In higher-end systems, entry and posting is normally a two-step process, with controls at each stage. Once posted, transactions cannot be modified, except by making adjustment entries, and the system creates extensive audit trails that show which user made each entry and subsequent modification.

Methods of purchasing and costs. Low-end programs are normally sold as a single product, and you may have to purchase a separate package for each user. High-end programs are normally sold by the module, and the price may vary with the planned number of users. For instance, a five-user package that contains general ledger, accounts payable, and accounts receivable modules might cost four times as much as the same package for one user. A ten-user version of the same package, with modules for multi-currency, stock control, purchasing, and fixed asset register might cost as much as 20 times as much as a low-end single product. Accounting software modules are discussed in more detail in the next section, “Understanding Accounting Software Modules.”

Need for specialized nonprofit software. Some software is written specifically for nonprofit organizations. These packages are usually strong on the side of grant receipts, fund accounting, and donor reporting, and will usually allow many levels of account sub-classification. *For example, nonprofit software can allocate a given check to the account code for vehicles, to the sub-account code for a certain vehicle, to a branch office, and to the donor paying for the vehicles.*

Most software that is readily available is written for commercial businesses, but the better ones can be adapted to the needs of nonprofit, nongovernmental, or health organizations. If your organization has several donor accounts with specific requirements and you must track expenses by funding source or use several currencies, nonprofit software may be appropriate.

Understanding Accounting Software Modules

The modules in accounting software follow the modules in a typical accounting system. The major accounting software modules are the system manager, general ledger, accounts receivable, accounts payable, inventory, payroll, and fixed assets. Most mid- to high-end accounting software has these modules available separately, and you may choose to purchase only those modules that suit your computerization needs. Most low-end accounting software packages contain all the modules you need in one package, and you can choose which modules to install and use in your system.

The modules that you install will depend on such factors as the size and complexity of your organization, your existing financial system, and the expertise of your accounting staff. *For example, many organizations outsource certain accounting functions, such as payroll, to another firm.* If you choose to outsource this function, you may not need a payroll software module. Small organizations that have few transactions to record may choose to enter accounts receivable or accounts payable in manual journals and post only the summarized results to a general ledger module each month. This would require installing the general ledger software module but not the modules for accounts payable or accounts receivable. Your team should consult the accounting staff and auditors and review legal standards when deciding which modules to computerize.

Installing unneeded modules increases the cost and complexity of a computerized finance system. Consider seeking expert advice in identifying your needs for different modules. Be sure to take future growth into consideration, and evaluate whether you can modify a software package by adding additional

modules in the future if the organization expands or you need to revise the system.

The table that follows describes the functions that the most commonly used accounting software modules

perform. Be aware that the names of the modules may vary among vendors, or that some related functions may be linked in the same module.

Accounting Software Modules and Their Functions	
Module	Functions
System manager	<ul style="list-style-type: none"> • Controls the computerized accounting system • May define master files, look-up tables, and hardware installed, and department and location descriptions • May control the creation of reports
General ledger (G/L)	<ul style="list-style-type: none"> • Is the core of the computerized accounting system • Receives entries from other modules, such as accounts payable, accounts receivable, and payroll, on a daily, weekly, or monthly basis • Creates key financial documents, including trial balance, balance sheet, and profit and loss statement • Lets users amend information previously posted • Records financial transactions not recorded in other modules • Creates budgets, which allows an organization to track differences between planned and actual business results • Creates detailed audit trails
Chart of accounts (G/L submodule)	<ul style="list-style-type: none"> • Using a series of codes, identifies and describes assets, income, expenses, and equity being tracked by the system • Influences the quality and complexity of the reports generated by the system • Must be able to create account codes of the size needed and handle subcoding at the department, location, project, funding source, or activity level, if required
Balance sheet (G/L submodule)	<ul style="list-style-type: none"> • Reports on the relationship between assets, liabilities, and equity • May be able to create reports on cash flow and budgets • Must be able to create reports that satisfy legal requirements and meet the needs of funding sources and managers
Trial balance (G/L submodule)	<ul style="list-style-type: none"> • Reports the balances of each account, usually on a monthly basis, and provides tests to let users know whether entries are being posted correctly • In traditional double-entry accounting, reflects assets and expenses as positive numbers (debits) and equity, revenue, and liabilities as negative numbers (credits)

Accounting Software Modules and Their Functions

Module	Functions
Accounts receivable (A/R)	<ul style="list-style-type: none"> • Handles the reporting of income owed to an organization from sales on credit, loans, or pledged donations • Often is responsible for billing clients • Often has the ability to recognize deposits to bank accounts • Usually maintains the master files about customers, including names and addresses • May have the capacity to print out a list of all money due, identify the source, and note how long the debt has been outstanding
Point of sale activities (A/R submodule)	<ul style="list-style-type: none"> • May be linked to inventory or A/R • Permits automatic updating of inventory and sales when a sale is made, through the use of computerized cash registers or bar-code readers
Accounts payable (A/P)	<ul style="list-style-type: none"> • Handles the reporting of money due to others (purchases on credit or repayment of debt) • May have the capacity to print computer-generated checks to vendors • Maintains master records, such as vendor contact information • Should be able to record invoices by due dates and recognize special payment conditions, such as a discount for early payment of an invoice • Should permit posting of immediate payments (manual checks) that have not been entered into A/P previously • Allows an organization to recognize expenditures and update budgets at the purchase order stage (encumbering costs) • Recognizes costs when the invoice is posted (not just when the cash is released)
Purchase orders (A/P submodule)	<ul style="list-style-type: none"> • Allows the organization to recognize goods on order, the agreed upon price, and its effect on the budget • Allows the organization to recognize costs when a purchase order is issued and match invoices received to purchase orders • May provide usage rates for supplies and commodities, indicate when goods should be ordered, and set minimum and maximum order amounts • May automatically update inventory files when goods are received
Bank reconciliations (A/P submodule)	<ul style="list-style-type: none"> • Prepares bank reconciliations • Prints a list of the checks written by an organization and recognizes checks that have cleared (Note: less useful when cash or wire transfers are used for most transactions)

Accounting Software Modules and Their Functions

Module	Functions
Inventory	<ul style="list-style-type: none"> • Updates inventory stocks and prices when goods are received • Reduces inventories at the time of sale • May link to the purchase order system to show goods on order • Should permit recording of commodity expiration or discard dates • May allow inventory updates based on physical inventory or when goods are no longer salable, due to damage or expiration • May have the capacity to alert staff when goods need to be reordered, based on usage analysis
Payroll	<ul style="list-style-type: none"> • Tracks information about employees, including wages paid, taxes withheld, benefits provided, and loans due • Manages employee information, such as names and addresses • May have the capacity to print salary checks and maintain year-to-date balances of salary paid, withholding, and benefits • May track holiday, sick leave, and vacation balances • May or may not have the capacity to satisfy legal requirements related to employee compensation, such as income taxes and social benefits • May be better handled through a third-party add-on package, with links to the main software package, or through outsourcing • If outsourcing or using an add-on package, requires establishing clear policies and procedures on how payroll data are entered, so reductions in cash, increases in tax liabilities, and salary expenses are tracked
Fixed assets	<ul style="list-style-type: none"> • Tracks key information, such as cost, date when put in service, title holder, and useful life, of fixed assets (equipment and real property with a useful life of more than one year) • May also track model and serial numbers, location, identification tag number, warranty, service information, and vendor • Should be able to process depreciation costs according to the accounting rules followed by an organization and express the value of assets less the accumulated depreciation

Miscellaneous modules or third-party add-ons.

Many NGOs, clinics, or nonprofit organizations may need to handle special tasks, such as mass mailings to members, fund raising, and grant management. It may be possible to use software that can integrate these activities with the financial system. This type of an add-on can be costly. You may also be able to handle these activities through databases or word processing programs.

Final thoughts on modules.

The names of the individual accounting software modules are not important. Some software may merge the functions of several modules into one. Your primary concern is to ensure that your organization's financial system is handling all its functions. In your evaluation of software modules, you should analyze software functionality, cost, complexity, and speed. This will help you compare the benefits and costs of different software options.

Your goal is to keep your system as simple as possible while meeting your current and potential needs. More complex systems can increase the costs of your hardware and training, and increase the potential for data corruption.

Evaluating Software and Vendor Options

In selecting software for computerizing your accounting system, the team should ask questions about the system's costs and the human and other resources that will be needed to support it. The team should also review available software and vendors.

Asking the Right Questions

There are at least seven questions you and your team should ask in evaluating your software and hardware needs. They are:

- Should we purchase the system or develop it ourselves?
- What are the system's true costs?
- Who will provide the required hardware?
- Who will provide support?
- What human resources do the software and hardware require?
- What other criteria should we consider?

Should we purchase the system or develop it ourselves? The main consideration in selecting software is whether to purchase customized software or a commercial software package. Commercial software may meet your needs and be more cost-effective than custom-designed software. Commercial software from reputable developers usually comes with a warranty, regular upgrades and enhancements, available support, and training. Previously, the flexibility of custom software was a good selling point. But the newer commercial software packages are flexible enough to meet the needs of most organizations. If you have any truly unique requirements, such as specific donor or government reporting requirements, you can probably meet them by using a third-party add-on or by interfacing with database, spreadsheet, or word-processing programs already in use.

What are the system's true costs? Some costs are obvious; others are not. Obvious costs include purchase price, installation, and training. Hidden costs include licenses, maintenance, customizing, new input documentation, costs of future upgrades, and consumables. Make sure that the suppliers give you the full cost picture, and be sure to add in your training and organizational costs. Contact the vendor's current or recent clients and compare their actual experiences with vendor estimates.

Do we have the required hardware? Your computer hardware must be capable of running the selected software, both now and in the future. Consider any future plans that your organization may have to network offices or clinics. When looking at your hardware requirements, consider the following components:

- Computer system (CPU, monitor, keyboard, mouse);
- Backup devices (zip drive, tape drive);
- Uninterrupted power supply and power stabilization;
- Printers that will support the paper sizes for spreadsheets, other accounting reports, and computerized checks (if required), and will perform with adequate speed and print quality.

Don't limit your software selection to a package that will run on the computer hardware currently available in your organization. Your needs may be greater than your current hardware can handle. *For example, the software that will meet your needs may require greater memory or a different operating system than your hardware has now.* Be prepared to consider purchasing new computers to run the new software, if necessary.

Who will provide support? What happens when you have technical problems with the software or hardware? Support strategies for hardware and software include having support skills in-house, participating in a user group, paying for assistance on a per-call basis, and signing a maintenance contract. Investigate the available options and evaluate their relative benefits. The level and quality of support may vary by vendor.

Currently, many software vendors provide telephone or Internet support. Do you have the necessary infrastructure in your area to access this type of support? If you need more intensive support from a vendor or consultant, be sure to include this in your computerization project budget. Providing staff with adequate access to support during project start up will save money in the long term and reduce the cost of correcting errors later.

What human resources do the software and hardware require? Organizations tend to underestimate the human resource requirements of upgrading an accounting system. Older staff, while trained and experienced in the principles of accounting, may not have experience with computerized accounting systems. Training needs will depend on the staff available and their level of experience. In some cases, you may have to hire additional staff with the necessary skills. This may require that you reorganize your accounting department or re-assign staff. In making your software decision, you should consider whether your organization is willing to make these types of changes or not.

What other criteria should we consider? Other features, some of which are commonly overlooked, are more subjective. Ideally, software should be user-friendly. New Windows-based software has enhanced the ability of new users to quickly master new programs. Features such as look-up tables, on-line help messages, and easy-to-navigate menus all enhance software user-friendliness. Another major selection criterion is the vendor. You will likely establish a long-term relationship with a vendor firm. The vendor's ability to provide full service installation, implementation support, training, and system upgrades adds significant value to your software selection. Other vendor considerations include reputation, responsiveness, and capacity to provide technical support. You should take as much care in selecting the vendor as you do in selecting the software itself.

Reviewing Available Software and Vendors

Once the team has defined the requirements of the computerized system, it should review the ability of different software packages to meet the system's needs. Make sure to identify which needs are critical. Any software that does not meet these critical needs should not be considered further.

The vendor is an important part of this evaluation process. When contacting vendors, be prepared to tell them your system's critical software requirements. This will help vendors make an appropriate software suggestion or choose not to participate in the project.

Below is a sample tool for you to use in analyzing software choices and comparing products. This tool will help you determine whether a software package meets your system's minimum, or essential, requirements. It will also help you to determine which packages satisfy the greatest number of needed capabilities and to compare their costs and benefits. Please note that you should use one form for each software package that you evaluate.

The form has six columns. In the "Minimum Requirements" column, the team should note any capabilities that the software and/or vendor must have. Making these requirements clear will help vendors understand which capabilities are negotiable or not. The "System Capabilities" column provides a comprehensive list of different software and vendor capabilities. The four columns on the right identify the "Availability" of these different capabilities. They may be available through one of four options:

- As part of the software's base package;
- As an add-on software module from the same vendor;
- As a third-party add-on, provided by another software vendor and used in conjunction with the primary vendor's software;
- By modifying the software programming code, which customizes the software to your specifications.

Min Req	System Capabilities
Reporting	
	30. Able to see reports on screen?
	31. Able to print reports to export file?
	32. Able to see line item detail?
	33. Useful standard reports?
	34. User customizable reports (e.g., change reporting dates, report breaks, columns)?
	35. User-programmable reports?
	36. Able to provide reports based on certain variables or criteria (e.g., seminar cost in a certain area, total costs of Clinic A only)?
	37. Graphical depiction of certain reports, such as bar graphs or pie charts?
	38. Able to customize printed reports (e.g., statements and invoices)?
Security	
	39. Password protection for general system access?
	40. Password restriction for specific system functions?
	41. Does it create an audit trail?
Training	
	42. Sufficient training included with the system?
	43. Additional cost of training to completion of installation?
	44. Training customized for implementation at the organization?
	45. Training for management in interpretation of reports?
Support	
	46. Supplied documentation sufficient and understandable?
	47. Immediate telephone support available?
	48. Immediate on-site support available?
	49. Support available via the Internet?

Making the Software Work for You

Once you have analyzed your current and future computerization needs, you may be able to more precisely identify the benefits you seek and how implementing a computerization project can help you achieve them. Treating computerization as a project by forming a project team, doing a comprehensive assessment, identifying your objectives and activities, setting realistic deadlines, producing regular reports, developing a complete budget, and establishing sensible indicators of achievement, will enable you to more easily achieve your desired results.

If you want a computerization project to yield expected benefits, you should:

- **Be realistic about what you want the system to do.** Don't over-engineer the system. A system that has a combination of manual and computerized modules may meet your needs better than a completely computerized system. Similarly, it may be easier to keep some computerized accounting modules separate, rather than creating an automated system that is seamlessly connected. Divide tasks between computers and humans according to what each does best.
- **Make sure that your basic financial system is in order before you computerize.** Automating a bad financial management system provides few benefits and many

frustrations. Pay attention to the supporting documentation and procedures to ensure that the raw data entered into your accounting system are of high quality.

- **Input only the information you need.** If branches and clinics are keeping their own records, consider inputting only summary-level information at the central level. Requiring staff to collect and input data that you will not use is a waste of time and money and can lower staff morale.
- **Focus on what you want to get from your accounting system.** Use the information and make sure that managers get feedback reports. This sends the message that you are serious about the computerized system and committed to good management. When staff know that someone will look at the information they are generating, they will put more effort into ensuring that the information is correct and timely.
- **At every step and decision point, think about the human resources—the people—who are going to use the system.** Involving all staff in the computerization process and providing training as needed will help ensure a motivated workforce and an efficiently functioning system. Involve all concerned parties—not just the accountants—in the process. Make financial management everyone's interest and responsibility.

Selected Resources on the Internet

The following is a list of Web sites that financial managers may find interesting or useful as they consider computerizing their financial management systems. Some of the sites focus on marketing the owners' own products and services, although these may also be useful for understanding what software and vendor capabilities are available and for comparing the features that different packages provide. Inclusion in this list does not constitute an endorsement of the site's contents.

<http://erc.msh.org/>

The Manager's Electronic Resource Center of Management Sciences for Health contains financial management information and tools under "The Health Manager's Toolkit" and the section titled "Managing Your Organization's Finances."

<http://www.sbt.com/offers/199/index.html>

SBT Accounting Systems has a free booklet entitled "How to Choose Accounting Software."

<http://www.tatebramald.co.uk/web/sds/index.htm>

The Tate Bramald Ltd. Web site contains the full text of a guide to selecting and implementing accounting software, entitled "Seven Deadly Sins: A Guide to Selecting and Implementing Accountancy Systems." You may also order a free hard copy.

<http://www.tatebramald.co.uk/web/shs/index.htm>

The Tate Bramald Ltd. Web site also contains the full text of a guide to the software selection process, entitled "The Seven Heavenly Steps." You may also order a free hard copy.

<http://www.zdnet.com/pcmag/issues/1609/pcmg0xxx.htm>

PC Magazine's May 6, 1997 issue has a matrix that summarizes the features of 10 low-end accounting software programs designed for small businesses. The list also includes links to *PC Magazine* reviews of the products.

<http://www.zdnet.com/products/stories/reviews/0,4161,278567,00.html>

PC Magazine's Feb. 23, 1998 issue has an article titled "Set Your Records Straight: Eight Accounting Packages Help Small Businesses Keep Track of Their Cash Flow," with reviews of eight small business accounting packages.

<http://www.zdnet.com/products/softwareuser/>

ZDNet's "Software Product Guide" has a search feature and contains reviews and articles about many types of software packages. "Financial" is just one of the many software guide links.

http://www.acctg2000.com/sw_acc_publ.htm

The Web site Accounting 2000.com: An Accounting Info Source has a fairly comprehensive list of software publishers and product names, along with some contact information.

<http://nonprofitfinancial.org>

The Nonprofit Financial Center provides nonprofit organizations with a variety of services and products. They sell the *1999 Software Selection Handbook*, which evaluates 26 commercially available specialized fund accounting software programs.

<http://www.businessfinancemag.com/accountinglibrary/offer.html>

Business Finance Magazine publishes several resources designed to help managers select accounting software, including "How to Select Accounting Software," "The Accounting Software Sourcebook: An Essential Reference on How and What Accounting Software to Buy," and "The Accounting Library." They are available through the magazine's Web site.

<http://www.softresources.com/page9.html>

SoftResources LLC offers a free book “Choosing the Right Software Vendor.” The Web site also provides a list of related sites for software selection.

<http://www.accountingsoftwarenews.com/>

Accounting Software News is dedicated to providing information to help managers select the right accounting software package. Its Web site contains articles, news, and links to software developers’ sites.

<http://www.cfonet.com/html/acctgswbg99.html>

The *CFO Magazine* Web site contains full text for the “CFO Accounting Software Buyer’s Guide 2000.” The guide, updated annually, has reviews of mid-range accounting software systems.

<http://www.2020software.com/acct.htm>

2020 Software.com has a matrix with comparisons of some accounting software by price, language, database, and use.

<http://www.accountingsource.com/index.html>

AccountingSource.com offers an “accounting software evaluator” service that presents solutions based on your accounting system requirements. The site has downloadable demos, free demo CDs, and an on-line software store.

<http://www.ctsguides.com/>

CTS publishes many different guides to choosing software. Titles include *Guide to Selecting Software for Nonprofits and Trade Associations* and *Guide to Accounting Software for Microcomputers & Requirements*. They can be ordered through the Web site.

<http://rutgers.edu/accounting>

The Rutgers University Web site, “Rutgers Accounting Web,” or RAW, has a link to “Accounting Resources on the Internet.” The software section of the resources list has links to different accounting software Web sites.

<http://www.computercpa.com/asw.html>

The home page of Cohen Computer Consulting calls itself the Accountant’s Home Page. It contains a list of accounting software developer sites, organized by level (low-end through high-end), and provides links to accounting software newsletters and magazines.

<http://www.blackbaud.com/products/default.asp>

Blackbaud, Inc. designs software accounting products for nonprofit organizations. Its Web site has summaries of its products, downloadable demonstrations, and a downloadable guide to selecting software.

<http://www.teamtci.com/systems.htm>

The Web site of Thorson Computers, Inc. has summaries of six accounting software products: SBT, Skyline, TIW Workshop, Fixed Assets, F9 Financial, and Solomon.

<http://www.accountinglibrary.com/>

The Accounting Library site presents, for sale, a software program for computer-based needs analysis. The program is designed to help organizations to define their accounting software requirements, compare their needs against software products, and rank products according to how closely they match organization’s requirements.

http://www.choosesmart.com/home/words_of_wisdom.html

The Web site of Expert Buying Systems, Inc. has a section with software and technology articles about software selection, technology choices, implementation issues, and other related topics.



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