

SO YOU THINK YOU NEED YOUR OWN BUSINESS COMPUTER

**The Manager's Guide to Selecting,
Installing, and Using the
Right Small Computer System**

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PREFACE

By now you've heard all the *horror stories about the computer*. A small business buys a brand new computer system and the computer ends up running the company or, worse, the computer manages to foul things up so badly that the company is driven out of business. But despite the mismatches that have arisen, it's obvious that the benefits of computerization can be great if the right system is selected and if it is *managed* and used properly. *So You Think You Need Your Own Business Computer* is designed to help you avoid mistakes and make the right decisions when it comes to computerization.

So You Think You Need Your Own Business Computer is written for the business person, by a business person, to help the business person. It's not written to make you an expert in the technical workings of the computer. It's written from the viewpoint of the manager who wants to make sure that the decisions made about the computer are the right ones. Some of the benefits you'll receive from the book are:

Guidelines on deciding *whether* your business really needs a computer.

Methods for establishing a baseline for your current operation so that areas in need of computerization are identified.

How to perform a cost/benefit analysis for acquiring a computer.

Tools for monitoring the installation to ensure the benefits are achieved at the estimated cost, and if not, how to remedy the situation to improve cost effectiveness.

Questions to ask vendors so that you are in control.

Throughout the book you'll find numerous worksheets and checklists to help you analyze your business and organize your ideas and concerns. Careful planning and the cooperative efforts of both management and employees are necessary to make the computer installation a success. *So You Think You Need Your Own Business Computer* is your own personal consultant to success with your computer.

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WILLIAM E. PERRY

CONTENTS

Figures, xi
Worksheets, xiii

1. ESTABLISHING A BASELINE	1
The Computer Challenge, 1	
Need for a Baseline, 3	
Establishing a Computer Baseline, 4	
Developing a Baseline, 5	
So Now You Have a Computer Baseline, 15	
2. DO I NEED A COMPUTER?	16
What a Computer Does Well, 17	
What a Computer Does Poorly, 18	
Benefits of Using a Computer in Your Business, 19	
Documenting Business Applications, 21	
Cost/Benefit Analysis Calculation, 25	
Should I Get a Computer?, 27	
3. RISKS IN ACQUIRING A COMPUTER	30
Causes of New and Increased Computer Risks, 30	
Identifying Computer Risks, 32	
Acquisition Risks, 33	
Implementation Risks, 36	
Operations Risks, 39	
Risk Checklist, 42	
4. COMPUTER ACQUISITION PROCESS	46
Acquisition Process, 46	
The Computer Acquisition Process, 47	

What Is an RPQ?, 48	
Determining Vendors to Include in the Bidding Process, 52	
Contractual Considerations, 53	
Product Contractual Considerations, 54	
Contractual Obligations Considerations, 55	
Performance Contractual Considerations, 56	
Contractual Qualifications, 57	
Contractual Checklist, 59	
Picking a Winner, 59	
5. SELECTING COMPUTER SOFTWARE	67
What Is Software?, 67	
Buy or Build Software?, 69	
Cost of Software, 70	
Sources of Software, 70	
How Do I Find the Software I Need?, 71	
Selection Considerations, 72	
Software Selection Process, 74	
Software Selection Checklist, 76	
6. SELECTING COMPUTER HARDWARE	79
On-Line Versus Batch Processing, 79	
The Computer Box Concept, 80	
Computer Hardware Components, 82	
Options in Acquiring Hardware, 84	
Hardware Selection Considerations, 84	
Hardware Selection Process, 86	
Hardware Selection Checklist, 89	
7. INSTALLING THE COMPUTER—ORGANIZATION AND TRAINING	92
The Computer Causes Change, 92	
Management's Involvement with the Computer, 93	
Organizing for the Computer, 96	
Organizational Plan of Action, 98	
Acquiring Data Processing Personnel, 98	
Training Employees in EDP, 101	
Computer Awareness Training, 102	
Computer Training Plan of Action, 102	
8. INSTALLING THE COMPUTER—VENDOR ASSISTANCE	105
What Vendor Services to Expect, 105	
Identifying Which Vendor to Ask (for Help), 110	
When and What to Ask For, 112	
What If the Vendor Won't Help?, 118	

9. INSTALLING THE COMPUTER—PLACING APPLICATIONS ON THE COMPUTER	122
Application Installation Process, 123	
Application Installation Responsibility, 131	
Conversion from a Service Bureau, 131	
Application Installation Checklist, 133	
10. OPERATING THE COMPUTER	137
Developing Computer Operations, 137	
Step 1: Identify Computer Operations Needs, 137	
Step 2: Understand Computer Operation Components (Capabilities), 138	
Step 3: Building a Computer Operations Function, 145	
Where Do Computer Operations Personnel Come From?, 149	
11. CONTROLLING COMPUTER SYSTEMS	150
Types of Applications, 150	
Data Origination Controls, 151	
Data Input Controls, 153	
Data Processing Controls, 156	
Data Output Controls, 159	
Control Self-Assessment Checklists, 162	
12. MEASURING SYSTEMS PERFORMANCE	176
Computer Systems Cost-Effectiveness, 176	
Measuring User Satisfaction, 178	
Measuring Computer Operational Performance, 180	
How to Gather and Present Performance Measurement Data, 187	
How to Correct Computer-Related Problems, 188	
When to Measure Computer Performance, 189	
Is It All Worth It?, 189	
EXECUTIVE DATA PROCESSING GLOSSARY	193
INDEX	199

FIGURES

1. Benefits of Using a Computer	20
2. Do I Need a Computer Decision Table	28
3. Acquisition Risks	34
4. Implementation Risks	37
5. Operations Risks	41
6. Organizational Structure Versus Computer Systems	95
7. Computer Training Plan	103
8. Areas of Vendor Assistance	107
9. When to Ask for Help	113
10. Application Installation Process	124
11. Application Installation Responsibility	132
12. Computer Operations Support Functions	141
13. Building a Computer Operation Group	148

WORKSHEETS

1. Product List	7
2. Product Attributes	9
3. Product Preparation	12
4. Product Summary	14
5. Application Documentation	23
6. Computer Cost/Benefit	25
7. Risk Checklist	43
8. Request for Price Quotation	49
9. System Descriptions	51
10. Hardware/Software Contractual Checklist	60
11. Hardware/Software Selection	65
12. Selecting Hardware and Software	66
13. Software Package Requirements	75
14. Software Selection Checklist	77
15. Hardware Requirements	88
16. Hardware Selection Checklist	90
17. Organizational Plan of Action Checklist	99
18. Training Plan of Action Checklist	104
19. Vendor Call-In List	111
20. Computer Planning Vendor Service Checklist	114
21. Prior to Installation Vendor Assistance Checklist	116
22. During Installation Vendor Assistance Checklist	119
23. After Installation Vendor Assistance Checklist	121
24. User Application Installation Checklist	134
25. Data Processing Application Installation Checklist	136
26. Computer Operations Task Responsibilities Assignment Checklist	139
27. Problem Reporting and Analysis	146
28. Data Origination Controls Self-Assessment Checklist	164
29. Data Input Controls Self-Assessment Checklist	166
30. Data Processing Controls Self-Assessment Checklist	171
31. Data Output Controls Self-Assessment Checklist	174
32. Computer Baseline	179
33. User Satisfaction Questionnaire	181

1 ESTABLISHING A BASELINE

The computer is recognized as an essential part of the future success of most businesses. The question is not, Should you have a computer? but rather, When should you get it? Where should you use it? and How can you make it work effectively?

Business owners are successful when they know their business and know how to generate profits. However, being successful in running a small business—for example, a profitable retail outlet—does not mean that you will be successful in acquiring and operating a computer. The lessons learned in beating your competition may not prepare you for the pitfalls that plague many computer users.

Planning is the key to a successful computer installation. Just as you would not move to a new office without planning, neither should you install a computer without forethought. This book will not make you a computer expert, but it will provide you with the planning tools you need and help you ask the tough questions that need to be answered before you install a computer.

THE COMPUTER CHALLENGE

Hundreds of thousands of small businesses are installing computers. Some owners are wildly enthusiastic about the benefits obtained and tell everyone how great it is to have a computer. Other businesses are unplugging their computers, reverting to manual record keeping, and condemning computers every chance they get. Still others are struggling, and these fence-sitters have yet to be heard from. No matter what you want to hear about a computer, you can hear it. Vendors may parade successful computer users to your door, and at your business luncheons you may hear the other side of the story.

A challenge many businesses face is that they know they need a computer but aren't sure they want the problems that go with acquiring and installing one. They know that many people have difficulty using computers effectively, and they ask, "If the system I have now works, why should I spend my resources for something that might not work as well?"

If you are looking for a process that will enable you to install a computer, without much effort, stop reading now and stick with your manual systems. If there were an easy solution, every small business would have a computer. Cost is no longer an obstacle; a business can acquire a computer for under \$5,000, so the problem obviously lies elsewhere.

The question you must answer is, Is my business willing to spend the time and effort required for installation? If you, the owner, and your clerical people are not willing to expend that time and effort, forget the computer for the time being and retain your current system. However, the failure to install one will probably make you less competitive in the years to come—that is also a challenge faced by the small business person.

Is the Computer Too Complex for My Business?

You use a television set and a microwave oven in your home, probably without knowing how either works. You drive an automobile but may feel helpless when the engine fails to start. You fly in a jet aircraft without fully understanding how 250,000 pounds get off the ground. Why should you expect to understand the workings of a computer before you use one? Many people are hesitant to confront a computer because of the technological myths promulgated by the technicians. We are mystified when the computer can send a rocket to the moon. We are discouraged when a sales clerk tells us that something can't be done because the computer won't allow it. We are often in awe of the high salaries paid to the computer priests and priestesses.

Computer myths are like the shell game. If you take the time to watch the movement of the shells carefully, you will know where the pea can be found, but the casual observer is mystified by the quick movement of the shells and misses how the game works. We should neither overestimate nor underestimate the power of the computer. However, people who know little about the computer may overestimate its capabilities, and those who understand its weaknesses may underestimate it. Let's look at what a computer can do.

Basically, the computer can perform only three functions. It can move data in and out of memory; it can perform computations with data, such as adding numbers together; and it can compare two values to determine which is higher or lower. This comparison capability can be used, for example, to put names in sequence in a telephone directory.

We will explore the functioning of the computer throughout the book in an effort to demystify its capabilities. Once the general concept of its workings is understood, the complexity issue will disappear. Just as it is not necessary to know how a car works in order to drive it, so it is not necessary to know how a computer works in order to use it effectively in your business.

Will the Computer Be a Profitable Employee for My Business?

You probably have never thought of a computer as another employee, but you should. The considerations involved in hiring an employee apply to computers also. Let's examine a few.

You must define the job you expect your computer to perform.

You must hire a computer with the appropriate skills for the job you wish to assign it.

You must determine the level of performance expected from the computer
You must determine the amount you can pay for a computer to produce the desired level of performance.

The computer will be a profitable employee if you do your homework before acquiring it. However, there are differences between an employee and a computer that make computer planning even more essential than that required for an employee. First, you may not be able to fire the computer with two weeks' notice. Second, the computer requires significantly more detailed instructions than the average employee. Third, you will become much more dependent upon your computer than you will on most other employees. If one of your key employees is sick or on vacation you can keep your business going, but the loss of your computer may shut down your operation. With proper planning, the computer may be your most profitable employee. Benefits include significantly reduced inventory, improved collections, more timely information for management decisions, and a reduction in the number of employees required to perform administrative tasks.

How Do You Make a Computer Work?

The three computer capabilities—movement of data, computation, and comparison—can be structured into an infinite variety of programs enabling most administrative tasks to be performed by a single computer. (A computer program is a group of instructions that explain how to perform a task, for example, preparing the weekly payroll.)

The tasks, or programs, that a computer performs are changed in a manner similar to putting a new tape into a cassette player. Each time the program is changed, the computer plays a new song: Although it is extremely complex to compose and record a song, it is not complex to learn how to change the audio cassettes in a cassette player. If you want to write your own music, that is, create your own programs, installing a computer is more complex than if you are happy with prerecorded cassettes, that is, store-bought programs. Later chapters in this book will explain the alternatives.

The computer payoff will be largely determined by the adequacy of your planning. It has been estimated that eighty percent of all computer problems are directly attributable to poor planning. The more problems encountered, the less likely it is that the computer will pay its own way. A business computer is like a concert orchestra. If all of the musicians are in harmony the orchestra sounds beautiful, but if a single musician is out of tune the concert may be ruined. Assuring that your system is in harmony is dependent upon how well you plan the selection of your computer.

NEED FOR A BASELINE

A baseline defines the administrative resources and processes used by a business at a given time. Baseline information includes:

- Number of employees
- Identification of systems

System products created, for example, invoices

Amount of resources allocated to the development of each system product

The system advantages and disadvantages associated with each product

The establishment of the baseline serves two purposes. It becomes the basis for determining which systems can benefit most from automation, and it can be used to measure the success of automation. Without a baseline, progress or lack of progress is difficult to determine.

Financial statements use the baseline concept extensively. Normally, the last period or similar period a year earlier is used as a baseline. For example, you would look at sales for December of this year and compare them to last year's December sales. The previous December becomes the baseline upon which you can make an assessment of the success of this year's December sales. The financial baseline is used for the same two purposes as the computer baseline. It can be used to determine where the business stands today and as a basis for determining the success of any new plans, promotions, or other efforts. When we establish a household budget, our baseline is our current expenditures. Without knowing these, we cannot establish a meaningful budget which, when prepared, will become a new baseline.

The baseline for installing a computer is the people and products produced by the organization's system. Until the computer baseline information has been identified, a prudent decision cannot be made on whether a computer is needed and, if so, for what purposes. Never assume that your business is comparable to other businesses. What may be good for other businesses may not be good for you. Once you have established your computer baseline, most of the questions you have about using a computer will be resolved.

ESTABLISHING A COMPUTER BASELINE

The computer baseline identifies an organization's systems and the products produced by those systems. Most businesses do not have a readily available baseline and must make the effort to establish one. This effort is an integral part of the procedure needed to use the computer effectively. This section explains how to establish a baseline. At the conclusion of this exercise, you will know:

The business systems used to process data

The work products produced by those systems

The cost to produce those work products

The problems and strengths of those work products

The baseline study provides you the information that you need to:

Determine whether you need a computer

Determine the size of the computer

Determine which systems should be automated and in which sequence

Determine whether you can purchase the programs needed for your processing or whether your business must create the programs needed to satisfy your requirements

What Are Systems?

A system is an organized collection of people, machines, and methods needed to accomplish a set of specific objectives. A system is designed by people to satisfy the needs of people. The key concept of a system is that it is a predetermined method for accomplishing tasks.

The systems that need to be considered are the administrative and production paperwork systems in your business. Examples of systems you should include in your computer baseline are:

Payroll

Billing

Accounts receivable/cash receipts

Purchasing

Accounts payable/cash disbursements

Inventory control

Sales reports

Taxes (federal withholding, social security, sales, etc.)

General ledger and preparation of financial statements

What Are System Products?

Products are the deliverables produced by the system. The production of these is normally the purpose for establishing the system. Most will be hard-copy documents. The more common product deliverables in a small business include:

Invoices

Checks (both payroll and payables)

Receivables (cash and checks)

Orders

Financial statements (all types)

Standard letters/completed forms

Sales summaries

Inventory/services analysis

Tax forms

The term "product" is used to indicate that resources are required to produce the necessary deliverables. The time and effort to produce those products can frequently be shifted from people to machines. Therefore, it is essential that all of the products be defined in order to determine how the computer can be used effectively in your organization.

DEVELOPING A BASELINE

The development of a baseline need not be a time-consuming project if properly organized. Executing the following six steps will produce a computer baseline.

- Step 1:** Identify your major business area.
- Step 2:** Identify your administrative and productive paperwork products.
- Step 3:** Identify the problems and strengths of each product.
- Step 4:** Identify the resources required to produce each product.
- Step 5:** Calculate the cost of producing each product.
- Step 6:** Rank the products by cost (to prepare) within each business area.

At the completion of these six steps, you will know the approximate cost and effort expended by your business to process information. In most small businesses it should not take more than three workdays to produce this information. Without it, however, you may spend hundreds of workdays needlessly on developing, implementing, and operating ineffective computer systems.

Step 1: *Identify business area*

Most businesses can be divided into areas in which paperwork processing occurs, for example, payroll. It is important to identify business areas because most computer systems are designed to process information by business area. The business area should be listed on Worksheet 1 (Product List) with sufficient space allotted to name all of the products included within that business area. Common business areas include marketing, accounting, payroll, purchasing, production/inventory, and distribution. (**NOTE:** You should use your own area/department names.) The individual responsible for each business area should be identified.

Step 2: *Identify products*

All the major paperwork products should be identified within each business area. These products will become the deliverables produced by computer systems. In evaluating predeveloped systems or in designing special-purpose systems it is necessary to know these products. Examples of the products in the payroll business area include:

Payroll checks

Payroll register (showing calculation of gross and net pay)

Annual payroll tax withholding statements (W-2 forms)

Payroll tax forms

Payroll distribution if budgeting or cost accounting is used

The name of the products should be listed on Worksheet 1 within the appropriate business area and should be numbered so that it will not be necessary to write out the full product name on other worksheets. An easy numbering system would identify each business area with a letter and then number the products within that area sequentially. For example, the payroll check might be the first product in the payroll business area and be numbered "P one." Worksheet 1 should also include a brief description of the product. This is not necessary for the baseline, but it may be helpful in a further definition of the system products.

Worksheet 1 Product List

BUSINESS AREA	#	PRODUCT NAME	INDIVIDUAL RESPONSIBLE	DESCRIPTION OF PRODUCT

Step 3: Identify product attributes

Most small businesses learn to live with their existing paperwork products. For example, if sales are recorded using a preprinted sales reconciliation worksheet, people accept that as the right way to perform that task. Following are some of the reasons why people do not challenge the current methods of work.

It has always been done that way; why should it be changed?

They can't think of a better way to do it.

They don't have the time and resources to change it.

They don't care how it is done.

For this step, it is necessary to step back from the work product and study its good and bad points. This is helpful in establishing a baseline because it will provide a basis for measuring improvements; it will also aid in selecting or designing systems. Worksheet 2 provides an easy method of recording the product attributes (i.e., product problems and product strengths).

The more common product problems and strengths are outlined on Worksheet 2 to facilitate recording the product attributes. Each paperwork product should be listed on Worksheet 2 and then the problems and strengths associated with that product should be identified. This worksheet should be completed for each business area by the individual responsible. The most common paperwork product problems are as follows:

Clerical errors: The product is plagued by errors made by clerical personnel such as misspelling, mathematical errors, recording the wrong information, transcribing mistakes, etc.

Lost/mislaid documents: Paperwork relating to the product cannot be located during preparation of the product. For example, orders received become mislaid and thus the product cannot be shipped.

Late: Due to workload and other factors, the product is not available when needed.

Difficult to prepare: Preparing the product is time-consuming because of its complex requirements. For example, a clerical person may have to study the federal requirements for preparing tax returns before actually preparing the return.

Difficult to retrieve: The paperwork products once prepared and stored are difficult to retrieve quickly. For example, a customer may call inquiring about an order, but the clerk cannot respond immediately and must call the customer back and then begin a search for the document.

Inadequate information: Decisions need to be made without the benefit of information which could be accumulated if time were available. For example, it would be valuable to know whether orders for a product are increasing or decreasing before that product is reordered.

Other: Problems not included in the above category but considered important should be individually specified.

The most common strengths of paperwork products produced manually are as follows:

Worksheet 2 Product Attributes

#	PRODUCT	PRODUCT PROBLEMS						PRODUCT STRENGTHS				EVALUATION		
		CLERICAL ERRORS	LOST/MISLAID DOCUMENTS	LATE	DIFFICULT TO PREPARE	DIFFICULT TO RETRIEVE	INADEQUATE INFORMATION	OTHER—SPECIFY	INCORPORATES JUDGMENT	DONE WITH CUSTOMER	INDIVIDUALLY STRUCTURED		ORAL	AUTOMATIC