

State of Ohio  
State Forms Management  
**Forms Management**  
**Paper No. 1**

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**Forms Analysis Series:**  
**Life Cycle of a Form**

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This paper has been presented at the Annual Symposium on Information Resources Management sponsored by the Business Forms Management Association and at the Plain Language Conference sponsored by the Plain Language Institute of British Columbia.

Ohio Department of Administrative Services  
General Services Division, Office of State Printing

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**State Forms Management**

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# Life Cycle of a Form

## Introduction

A form begins with a need for information and progresses through a series of phases to its final disposition. Unlike biological life, a form is procedurally based and can therefore have its life cycle planned, directed, and altered. The ability to plan, direct, and alter will allow the analyst to develop forms, which provide accurate and dependable information. These will be forms that we can rely on as a sound basis for forming policy and making decisions.

The information presented in this paper is a model - a means of tracking a form through the information system. The life cycle concept is easier and more thorough to construct and understand than most flow charts. This concept may be used to review the effectiveness of an existing form or can be used to create new forms. It was developed to assure that all is right before a new form is installed into a system.

An untrained forms creator tends to see only their own needs; they sometime do not consider the effect that the form will have on others. Sir Isaac Newton wrote that for every action there is an equal and opposite reaction. The principle is essentially the same in forms processing. Each time a bit of information is added to a form, someone must collect, process, transmit or store that information. When any of these actions are taken, there is an associated cost for personnel or equipment (or both).

In forms analysis it is important to understand that there is a vast difference between **cost** and **price**. John P. Schied, CFC, forms consultant and author, defines **cost** as *“the total expenditure for labor, supplies and machines necessary to achieve a given objective.* **Price**, Schied continues, *is the amount of money paid for goods and services.”* Mr. Schied relates this to forms analysis by saying that *“the price of a form would be only one element in the total cost of a form. Savings are the result of cost reductions and cost avoidances.”*

In 1955, the Hoover Commission (the Task Force on Paperwork Management) reported that for every dollar (price) spent to purchase a form, twenty dollars (cost) would be expended to use the form. The National Business Forms Association (NBFA) reevaluated the study in 1985 and found the ratio stood at as much as 1 to 35 on an average. Other recent studies reveal a higher ratio as much as 1 to 40 on an average. This cost increase is caused by increases in the amount and variety of information required in business and government today.

Figure 1 on the next page lists the Total Forms Cost. When these costs are analyzed it reveals that approximately 75 percent of the total cost of forms is in the **use** of the form. Most managers will be surprised to find that 15 percent of their time is spent on problems related to forms and the **price** paid for forms is only five percent of the total **cost**.; [according to studies conducted by the Business Forms Management Association (BFMA) and other independent business organizations].

The analytical method is presented in this paper will help you to increase hard dollar savings by reducing print price and increase soft dollar savings by increasing worker productivity.

Figure 1

## Total Forms Cost

### I. PRICE OF FORMS

- Printer's price (including paper)
- Transportation
- Sales tax (if applicable)

### II. COSTS TO USE THE FORM

#### A. Developing the Form

1. Author's time
2. Designer's time
3. Systems analyst's time
4. Forms management unit time
5. Preparing the specifications
6. Cost of any necessary coordination on a new or revised form
7. Cost of writing a related job outline or procedure

#### B. Procuring the Form

1. Preparing the requisition
2. Sending specifications
3. Placing the order
4. Receiving the form
5. Checking the quality

#### C. Paying for the Form

1. Processing the purchase order and receiving report
2. Approving invoice
3. Issuing check
4. Posting accounting books
5. Reconciling checks

#### D. Distribution Costs

1. Shelf Storage
2. Bulk storage
3. Inventory recording
4. Withdrawal time
5. Delivery or shipment
6. Studies to establish correct print quality (keeping up with variations and changes)
7. Cost of mailing or transporting forms within the organization

#### E. Using the Form

1. Writing data on the form (manually or by machine)
2. Proofing the form if manual fill in
3. Verifying the writing for correctness before input to machine
4. Keying data from forms
5. Posting information to the form at a later date
6. Posting information from the form to another form or record later
7. Cost to train new employees to use the form
8. Cost to mail the form
9. Cost to receive the form through the mail

#### F. Costs to Store the Form

1. Time to file the form
2. Cost of retrieving the forms from the files
3. Cost of file equipment to store the form
4. Cost of setting up a retention and destruction schedule on the form
5. Cost of moving the form into an inactive category (or microfilming the form)
6. Cost of destroying the form

#### G. Other, More Indirect Costs

1. Cost of related supplies (carbon paper, typewriter ribbon, erasers, pencils, and book slips)
2. Cost of supervision, direct and indirect
3. Depreciation of office machines, files, and furniture
4. Space cost allocations
  - (a) Rent
  - (b) Light, power, and heat
  - (c) Employee taxes
  - (d) Employee compensation insurance
  - (e) Employee accident and life insurance
  - (f) Contribution to pensions

## The Life Cycle

This is a logical chronology of the information system, which a form will pass through. It allows you to separate the actions and reactions, which occur so that they may be examined in relation to the whole system and in relation to the various other parts of the system. This is of course the essence of any analysis.

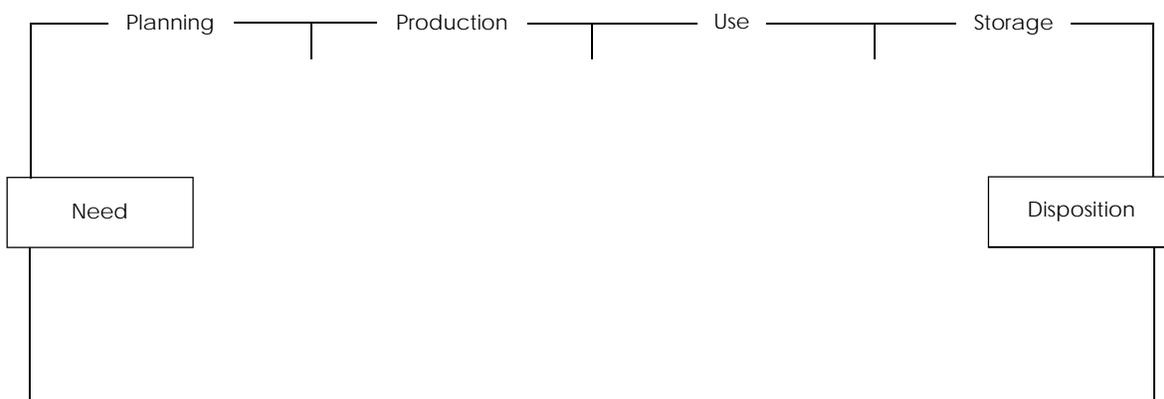
In this analysis we will follow a form from the original need for particular information (birth) through the final disposition of the record (death).

Figure 2



In this life cycle there are four separate phases: **planning, production, use, and storage.**

Figure 3



### **Planning**

In this model the planning phase should not be viewed as a start point. It is a collection point. Here is where the analytical information is gathered from the other phases and is held for comparison. In the planning phase, the design is developed and specifications are written from the collected information.

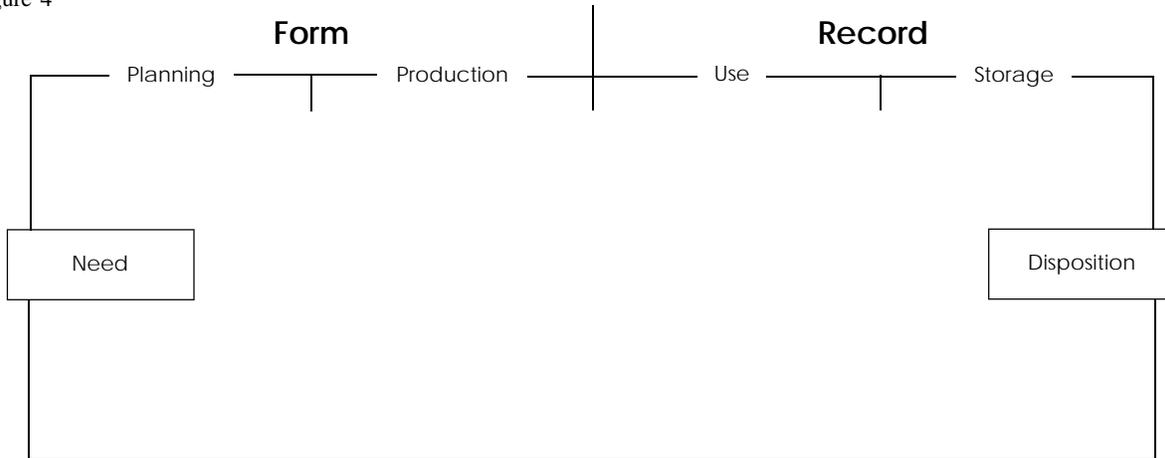
### **Production**

The production phase is more than just a manufacture or program development process. In this phase the analyst will determine which process can best meet the system's and the individual's information requirements.

## Use

This is the most active phase. Here the form is first introduced into the information system, it is the first time various people act upon or react to the form's information. As information is captured, processed, transmitted and stored the form becomes a record.

Figure 4



## Storage

The storage phase should be primarily under the direction of the records officer. The analyst will act upon the needs of records management to fulfill their mission.

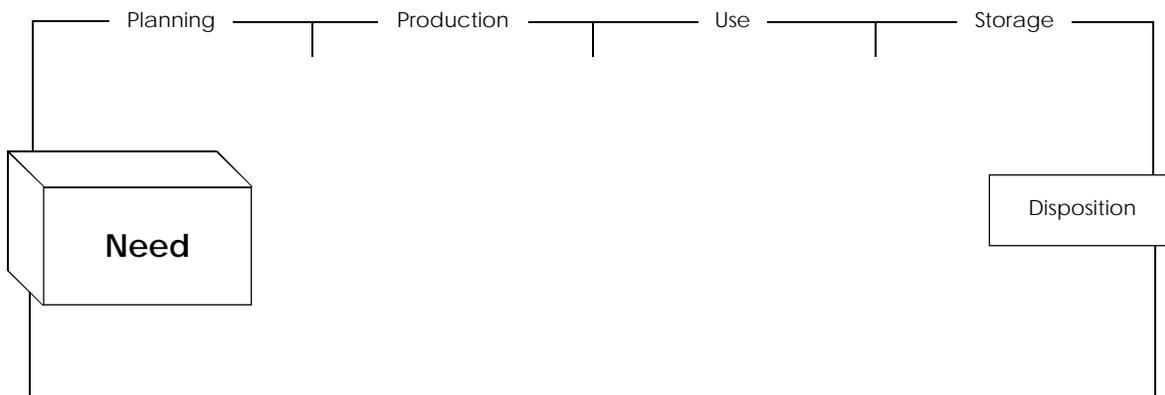
## Challenging the Need

It is important to establish whether the requested information is needed and will it serve a valid purpose within the organization's mission and scope. If the information stands the challenge, you must next determine if the requested vehicle (the form) is necessary.

The analysis need not be particularly intense or involved. Ideally the form's originator will have conducted some initial analysis of their needs and with their assistance the following questions can be answered: Does the information really serve a purpose? What would the consequence be if the information were not collected? Are there existing forms or collection methods which fulfill this purpose? Could another form be changed to accomplish the purpose?

These questions must be determined prior to committing time and resource to further analyses.

Figure 5



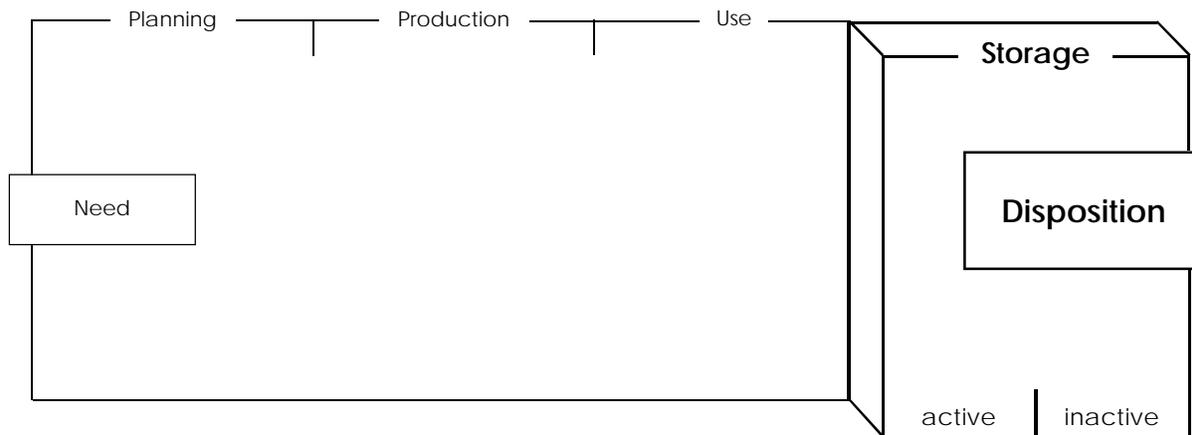
## The Next Step

Most analysis starts at the beginning and flows through to the end of the system or procedure. However, in this process it is best to begin at the last phase of the cycle (the storage phase) and work forward. The reason for this “backing into it” approach is that the success (or lack of success) of a form is measured by what happens after it is introduced into the information system. We will start with the storage phase.

## Storage Phase

The majority of considerations in the storage phase (active files management, inactive storage, and disposition) **are physical**. They deal with many of the same conditions throughout the three sections of this phase.

Figure 6



## Disposition

Final disposition of the form (now a record) will normally take one of two directions, they are: (1) Destruction, and (2) Change of custodianship.

If the record is to be destroyed it is important to know organizational policy concerning destruction. As an example, if organizational policy states paper records should be recycled at destruction, consideration will have to be given to the construction of the form. Also, the requirements of local recyclers will have to be met. Certain papers cannot be recycled or are very difficult to recycle. You will then have to suggest construction that will allow for recycling when possible. Additionally, electronic files cannot always be erased completely from a hard drive, the organization may have to shred the hard drive.

Change of custodianship can be a method of disposition. Many organizations identify certain records as archival. This requires that the record will be kept permanently, usually for historical purpose. Only certain types of paper will last permanently. If the paper record is archival an acceptable stock must be selected. If electronic files are archival the analyst and MIS must be concerned with the means to read older versions. Proper deposition of electronic forms may call for a joint effort among the forms analyst, records, and MIS. Once again it's a case of knowing the local customs.

## Inactive Storage

In this section records are held awaiting final disposition and are normally kept in a records center. The two dominant considerations for paper records are: (1) the composition of the paper stock, and (2) the size of the record.

Paper stock must be considered in conjunction with the retention schedule (length of time the record will be held). Different papers decompose and yellow at different rates. As the purpose of retention is to have the record available for a certain period, the paper stock must be able to last until disposition is required.

The discipline of records management is exacting. Because of the volume of records retained in a records center, uniformity is important. Odd sizes, particularly oversized forms, tend to throw the warehousing system off and cause a change in that system.

Electronic records require special consideration for inactive storage. A lot of the decision-making is based on who will store the record. One of the requirements for electronic records is environmental conditions. The same environment needed for a "computer room" will be needed for storage of tape, disk, or other media. As with achieving, the ability to read the record in its edition is obvious.

### **Active Files Management**

Active files management is a continuation of the *use* phase. This is the period when the record is most frequently referenced. The analyst will have to know how often each piece will be picked from the file or referenced. This should be broken down into intervals of use. How often will the record be pulled each week, each month, each quarter, each half, and so on. The same properties that keep paper from deteriorating in inactive storage determine its ability to withstand varying amounts of handling.

Next in importance for paper forms is filing media. Each medium generates its own needs. Is the record to be stored in a standard file drawer? If so, what size drawer? Will the record be filed on its left or right side? Where will the identifier information be placed? Will the record be stored in a binder? If so, what kind of holes will be needed? How much margin? Will other items be attached to the document? Where and how will they be attached? Can information be put in the attachment area?

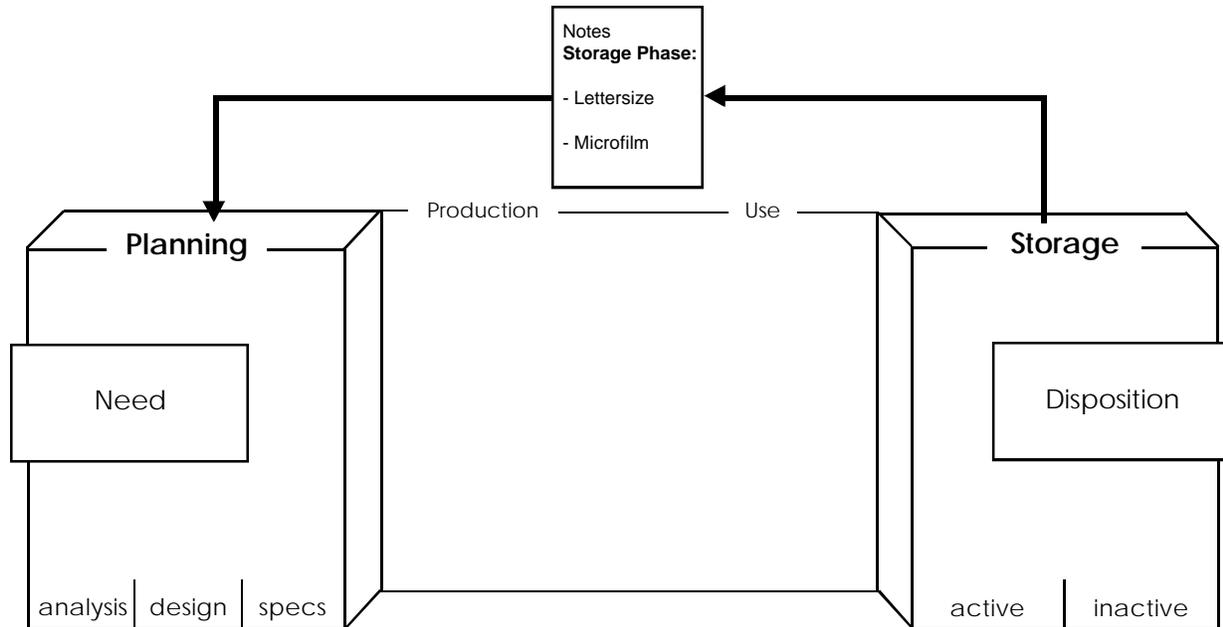
If the form is in electronic format, will every one be able to access the record? Does everyone have compatible: hardware, software, and platform. Will hard copies be required? How much storage is available?

Consider whether the document is microfilmed. Or, will the document be copied? Should your organization need to microfilm, pay particular attention to color and opacity. Certain papers do not have enough reflectively (because of pigment) to produce good microfilm images. And, if a paper allows the light to flash through, and not reflect, again the image may be poor or non-existent. Most office copiers operate on the same basic principles as microfilm and if an agency does not wish copies made of particular records, these limitations can be a benefit.

Throughout this *storage* phase, it is in your best interest to have a good working relationship with the records officer and when dealing with electronic forms, the MIS folks. They should be able to answer the procedural questions you may have.

Once you have all the *storage* considerations listed in your notes, hold them in the *planning* file until you can compare them with *use* and *production* considerations.

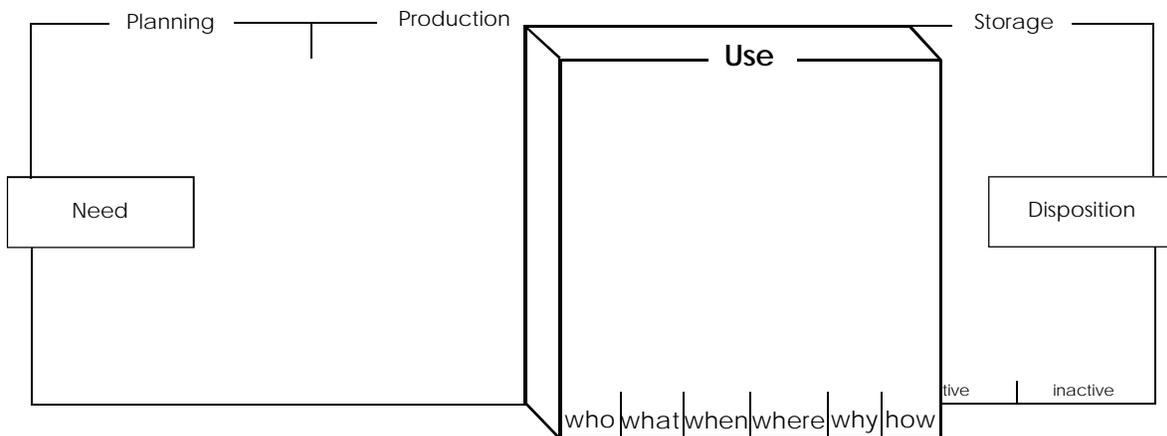
Figure 7



### Use Phase

The use of a form is the most active phase. Here the analyst will examine **who** interacts with the form **what** processes the form will do, **when** or in which sequence all the processes will occur, **where** the processes will happen, **why** the processes are carried out this way, and **how** all this will happen. By the end of analyzing this phase the analyst will know all the ins and outs of the (proposed) system, and all the people and equipment required for an economical, efficient system.

Figure 8



**Who** is a vast section? First, who is responsible for the form? The primary responsibility falls to the department manager. Within the corporate structure managers are responsible for review and control to ensure that forms do not proliferate and contribute to inefficiency. Managers must be aware of problems that the public and staff have when completing and processing required forms. This responsibility extends to the effect forms will have on other offices in the organization.

Next is the originator of the form, who is responsible for development. Their need for information should begin with the questions asked in the beginning of the cycle (Need). It could be policy that the originator establishes: whether the form is necessary; will it fit a present or anticipated procedure, will it improve operations, and will it be economical to use.

Next, it must be establish who will respond to the form. The responder is concerned with whether the form is easy to complete, provides enough space to enter the information, has understandable captions and instructions, and if the requested information is available. They might need hardware and compatible platforms, programs, and versions of software. It is important to know the responder audience so forms may be tailored to meet needs. Additionally, issues of literacy or physical impairment must be considered.

Within organizations there are usually two separate groups who will work with forms. The first are forms processors. After a form has been completed, some action needs to be taken before the information becomes available to the ultimate user(s). These forms processors may be data input operators, clerks, accountants, etc. These processors will be interested in the orderly arrangement of the information, and in uniform and compatible design of related forms. Processing from paper to electronic requires that the screen and the sheet match.

The user needs the information to perform job-specific tasks. The user will need the information provided on a timely basis, and in an efficient and economical manner. Their mission within the organization is dependent on their processing of this information.

Also consider supply and purchase personnel. They must ensure that adequate stock levels are maintained and that paper forms are distributed on time. Finally, consider MIS to assure that design and specifications are proper for the hardware and software to be used.

**What** information will be needed? A form may be beautifully designed, but lack essential information. It is important that you analyze the information need completely. Separate “need to know” information from “nice to know” and “unneeded” information. What are the space needs to be allotted to each information element. Is there a logical format sequence for this information? For further information on this topic see Forms Management Paper # 2, Selecting Information For A Form.

**When** is the information processed? The analyst will need to know the information flow. The analyst will be responsible to arrange a format to meet the flow requirements, such as which (whose) information is processed in which order. Are there user tasks that must be completed prior to passing on the form? This can best be handled by using proper flow-charting techniques.

**Where** will the information be processed? The physical location of processing is often overlooked. Different environments required different entry spacing and type size. In an office the processor does not need as much entry space as a processor standing on a warehouse dock. These individuals in turn do not need as much entry space as a truck driver. Other ergonomic considerations such as lighting and weather are important.

**Why** is the information processed in this manner? As the analyst researches particularly uncontrolled systems they know problems are caused by creating a form and then trying to make a system (or procedure) fit around it. It will often become obvious that the structure of the system is not adequate or worse, nonexistent. Further, know that good forms will do little to help the efforts poured into a cumbersome, inefficient system. The work-flow will probably need to change. The form has to be a part of the business process, not the other way around.

**How** is the information processed? The first set of how questions deal with numbers. How many paper copies are required per set or what is the routing? The records officer is in charge of file planning, and should know who will receive a copy within a particular information system or procedure. Being a copy short will increase not only xerography costs but also the personnel costs to make the copies. Missing a routing can diminish the system. How many forms will be used per year? Annual usage figures will help records, inventory, and data management, by alerting them to future storage needs. The production group needs to know also.

The analyst should verify again how the form ties in with the appropriate procedure and with other forms used within the procedure. Uniformity will greatly aid those who deal with the various forms on a day-to-day basis. If common information is formatted the same, form-to-form, there will be no need to search for it. This, of course, reduces time that reduces costs.

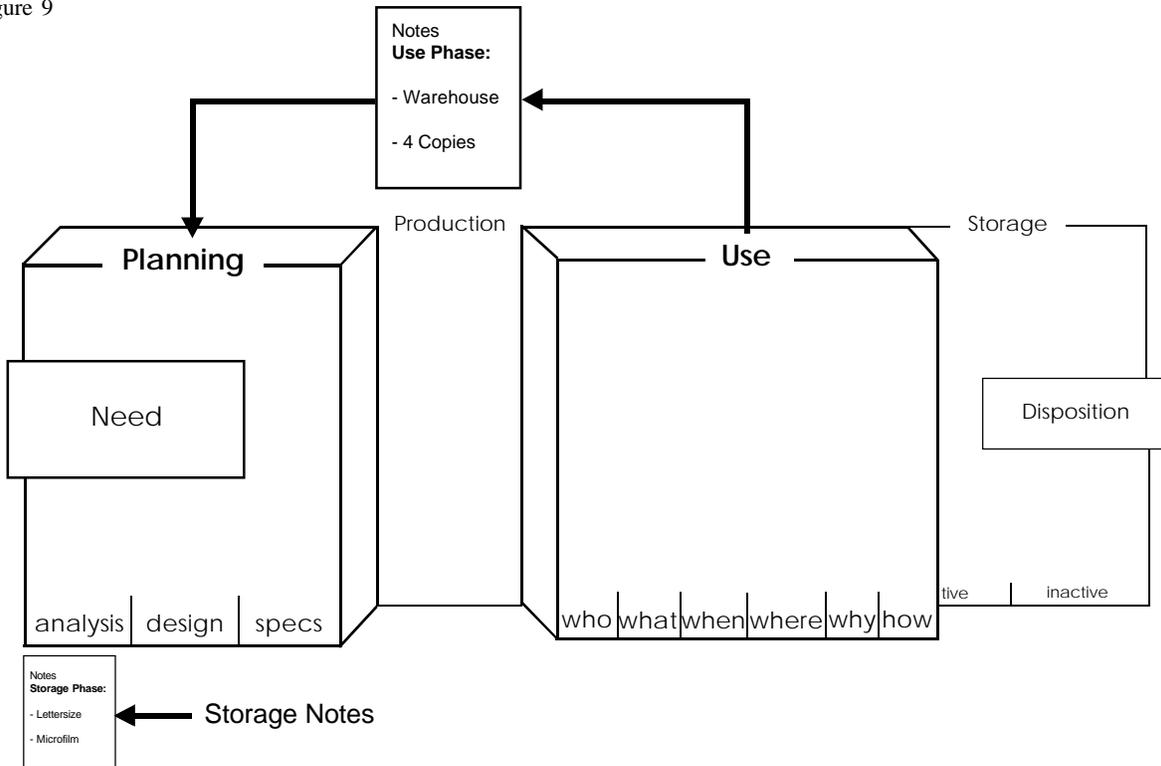
The **How** section also deals with entry and output methods. The layout requirement for hand entry may be different than for mechanical or electronic entry. If the process calls for a printer, will it be an impact or a non-impact printer? Each circumstance will mean a difference in both construction and layout. The analyst has to monitor what ancillary machinery will be used in processing.

Will paper forms be processed by decollators, bursters, or mail insertion machines? Each type of machinery will have different construction requirements. This analysis is not as complicated as it seems. Every piece of equipment manufactured for forms related use will have a section in the equipment manual that deals with forms design and construction specifications.

The last **How** consideration is paper storage and shipping. Many times we can be “penny wise and dollar foolish” in this area. Remember that warehouse space, manual labor, material handling equipment cost, and the primary charge for low weight shipping — such as U.P.S. — is based by the piece. A few dollars more in price for printed material may save many dollars in storage and shipping.

Now two of the phases of the life cycle information have been collected. The information from the Storage Phase and Use Phase can be compared. If all is compatible, continue on with analysis of the Production Phase. If there is a conflict in information or system needs, analyze the conflict and resolve the matter for the *greater good* of the system. This will maintain the efficiency, effectiveness, and economy of the system.

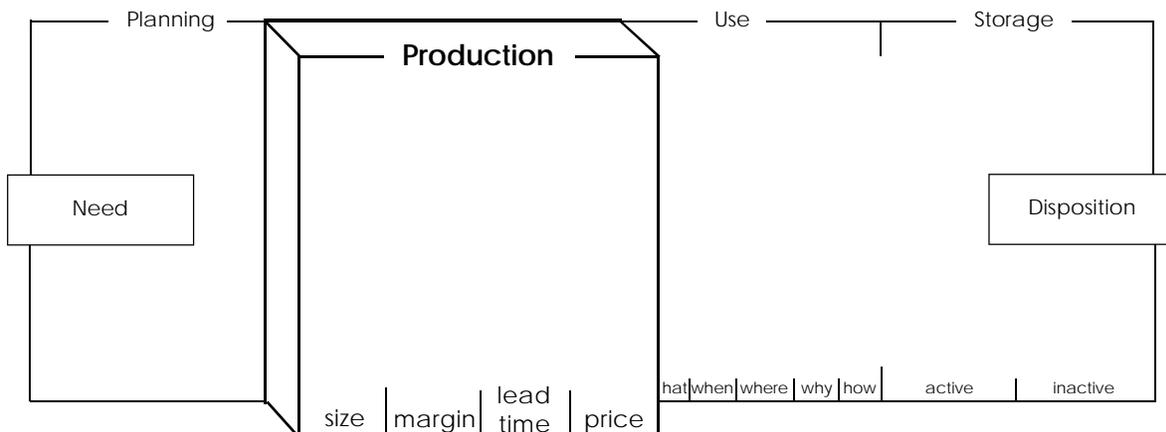
Figure 9



### Production Phase

The primary aspects for paper production are printing and the related processes. Many think of printing as little more than running paper through a press. While it is essentially true, this perception is over simplified. Printing machinery has exacting tolerances. Printing equipment will do only what it can and no more. To a great extent, the same is true for electronic documents. They also will do only what they are programmed to do.

Figure 10



Next, make sure that the form is compatible with industry standards, particularly with the sheet sizes available in your area. The printing industry has selected several sizes as standard. Any deviation from these sizes will be either impossible or very expensive. Consult with local vendors or your State Printing Standards Analyst to verify what sheet sizes are available. The same holds for electronic forms, what is developed on one piece of hardware with a particular version of software may not conveniently fit another screen on a different computer.

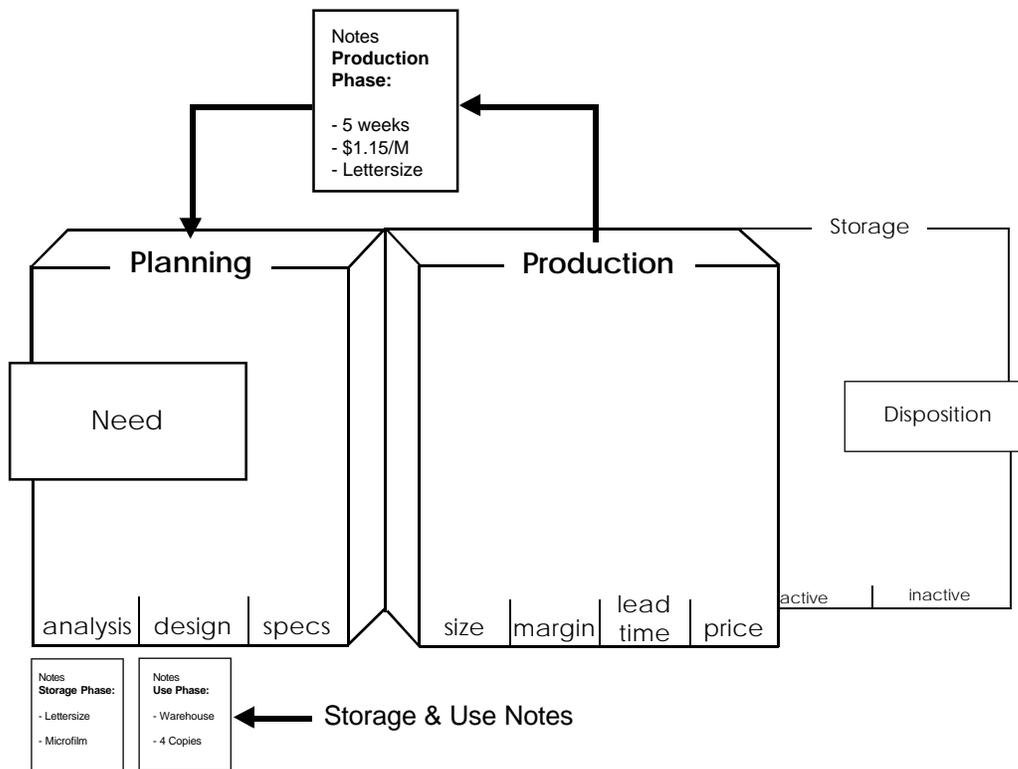
Margin is a clear (non-print) area that outlines a printed sheet. The margin is necessary because of various mechanical processes which occur on the press itself, which will either not allow ink to be laid or will smear ink that has been laid. Margins are also an important consideration when designing e-forms. Remember that different printers have different margin settings. Know the margin requirements for press or printer.

Lead-time may be defined as the length of time it will take for preparation, testing, production, and shipment of an order. Or, comparable requisites for e-forms would be programming, installation of hardware/software, or establishment or testing e-forms and debug of nets. If the item is imperative make sure that there will be enough lead-time. Most people want everything yesterday (tomorrow if you're lucky). Other key people and their schedules may prevent your getting the turnover you desire.

Possibly the most important concern of management will be price. There will be times when the price will outweigh the benefit of the form. There will also be forms that may have an apparent high price, but will be the prime method to accomplish the mission. You may have to justify the expenditure.

The analysis of the production section is completed; it can be compared with the information gathered in the previous phases. Now compare the needs of use and storage with production to verify that all the parts fit together. When there is a conflict, analyze the conflicts and solve toward the *greater good* of the system once again.

Figure 11

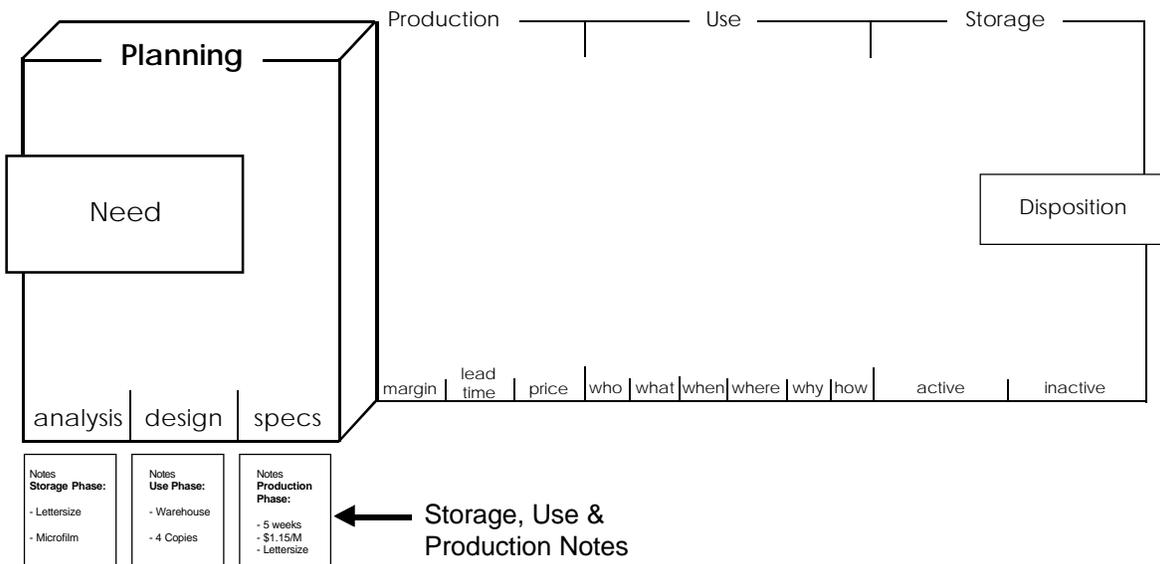


## Planning Phase

Has all the information been gathered? Remember, any and every element you miss will change the performance of the system. Once again evaluate all the information. Verify that each element fits well into the system (the Big Picture). Then compare the elements one to another to avoid any conflict in the system. As usual, conflict must be solved toward the *greater good*.

The last step in the Planning Phase is to convert all analysis into a usable form. The design will be generated as a graphic representation of the analysis, drafted to industry standards. The specification will be a written report of your analysis. This preparation of layout and specifications may seem overly simplified, but if the final analysis has been done thoroughly the layout and specifications will be as easy as transcribing from your notes.

Figure 12



## Conclusion

As stated in the introduction, the information presented in this paper is a model - a means of tracking a form through the information system. It was developed as an analytical process to assure that all aspects of a proposed form is researched and analyzed before a new form is installed into a system or it may be used to review the effectiveness of an existing form. This analysis process allows you to separate the actions and reactions, which occur so that they may be examined in relation to the whole system and in relation to the various other parts of the system. This is of course the essence of any analysis.