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This study was conducted to develop a model to assess the office automation needs of a Army Hospital. Based on a literature review and interviews with industry experts, a model was developed to assess office automation needs. The model was applied against the needs of the Clinical Support Division. The author identified a need for a strategic plan for Office Automation prior to analysis of a specific service for automation. He recommended establishment of a Hospital Automation Advisory Council to centralize establish policy recommendations for Office Automation.

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AN OFFICE AUTOMATION NEEDS ASSESSMENT MODEL

By

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Graduate Research Project
Submitted to the Faculty of
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CHAPTER I

INTRODUCTION

Office Automation

A current definition of the word "office" is as difficult to pin down as is the meaning of the word "system." The components of an office can be as simple as a pencil, a pad of paper, and a dedicated drawer in a desk. At the other end of the scale, a modern office can be a massive collection of typewriters, word processors, dictating equipment, microfilm stores, filing cabinets, facsimile devices, optical character readers, automatic typesetting equipment, labelers, binding equipment, folders, copiers, duplicators, postal machines, and quite possibly even a computer or two. Many of these components are gradually being shaped by internal communications networks into progressively more cohesive equipment combinations. The evolving shape of these combinations is the automated office.[1]

The term "office automation" has been used intermittently for almost 30 years. In the late 1950's, it was applied to the automation of bookkeeping functions with the use of electronic data processing equipment. This use persisted into the early 1960's, when the phrase "management information systems" took over. Then, in the late 1970's, office automation was reborn as the "office of the future." Fundamentally, the objective has

always been the same as that of most automation efforts--an increase in the productivity and effectiveness of the organization.[2]

Office automation is the incorporation of appropriate technology to help people manage information. Its key concept is that office work is not as a child sees it, a disorganized assemblage of unrelated tasks, but rather is a system of interacting components that purposefully cooperate to accomplish a business function. An automated office information system, which can consist of many office automation technologies (see Appendix A), has the potential of substantially improving the realization of this function through the mechanization of office tasks and decision-making processes, as well as through management and control of the procedure as a whole. However, these improvements will only be achieved if the basic business purpose of the office is kept foremost and a systematic approach to supporting this purpose is employed.[3]

It is easy, and all too common, to confuse the performance of a particular set of office tasks with the underlying office function, and to conclude that "automating" the former will yield improvements in the latter. The result of an office automation effort based on a mistaken identification of the business goals of an office with its information handling activities may result, instead, in a decrease in office productivity. For example, it is a common phenomenon to observe that after the installation of a costly word processor, the reduction in

secretarial staff on which the cost justification for the equipment had been based is never realized. This is not to suggest that word processing cannot have a positive impact on office operations. It is the perspective that is the key, the way in which the equipment is viewed and utilized. A word processor, or any other device, is by itself neither a panacea nor a disaster; it is only a tool whose impact depends entirely on how it is used. Any individual electronic device has the potential for improving or disrupting office operations. If its use is planned in a way that takes the entire office context into account and is based on an appropriate perspective of the task for which the tool is being used, then its impact can be enormously beneficial. If, on the other hand, the task and its tool are viewed in isolation from the operation of the office as a whole, then any number of undesirable outcomes are likely.[4]

Hospital Automation Efforts

Most hospital office automation efforts have evolved in a piecemeal fashion rather than resulting from a carefully controlled planning process. The result has been a series of problems and inefficiencies in the information processes of hospitals. The same data are captured repetitively in different areas of the hospital; files are duplicated needlessly; information is not always available when needed, often resulting in staff and patient inconveniences; and numerous other gaps and inefficiencies are commonplace. This is exactly what happened at

Midland Hospital Center, Midland, Michigan, says Richard Reynolds, Vice-President for Financial Affairs "We realized we had lost control over our automated information systems acquisition when we began to get requests for a computer from virtually every department in the hospital."[5]

Midland Hospital regained control by putting a freeze on all computer requisitions for about one year, during which time the institution, with the full support of its board of directors, did what every institution that depends on effective information processing should do: it developed an information systems plan with both short-term and long-term objectives.[6]

Hospitals planning to survive in today's increasingly competitive healthcare environment are allocating larger amounts of their capital and operating resources to computerized decision-support systems and transactional data processing. Intuitive hospital managers realize that in order to make decisions and implement them effectively in day-to-day operations, their data processing systems must work together.[7]

According to a study conducted by Shared Data Research, Hudson, Ohio, virtually all hospitals increased their data processing budgets between 1981 and 1984. Hospitals with 50-200 beds had a 52 percent average increase in their data processing budget, which equated to approximately 4 percent of their operating budget. These increases in data processing expenditures are symptomatic of the importance of accurate and timely information. Not only does this information support the

hospital's day-to-day operations, but it also provides the basis for the organization's strategic management system. Yet, although automated information systems have had a positive impact on operations, most systems have provided only short-term returns on investment. The economics of computing have turned around--total costs for such an application are now rising. The costs of computing itself have, of course, dropped steadily since business use began some thirty years ago, driven down primarily by the dramatic improvements in the price/performance ratio of processors and memory. However, changes in technology are not nearly enough to offset the rising cost of the people necessary to support it all.[8]

Office Automation in U.S. Army Hospitals

U.S. Army Medical Treatment Facilities (MTFs) share a common failure with many of their civilian counterparts, which is a failure to properly plan for the acquisition of automated office technologies. Extensive documentation requirements for automation requests, funding limitations, budgetary restrictions and limitations on the procurement of hospital information systems imposed by the Tri-Service Medical Information Systems Program (TRIMIS), have resulted with many MTFs implementing automated office applications in a piecemeal fashion as easier than developing any overall institutional automation plan with associated approvals and funding.

Tripler Army Medical Center (TAMC), Honolulu, Hawaii, began experiencing difficulties with its office automation efforts in 1981, as the result of the increasing demands placed on its Burroughs mainframe computer. At this time TAMC approved the purchase of 25 microcomputers in order to fulfill the perceived demand, without regard for an office automation needs analysis or an overall MTF automation strategy. What resulted was user dissatisfaction because the hardware and available software were not capable of supporting desired applications after the purchases had been made. Consequently, 75 percent of the systems became office decorations, not useful office tools.

In October 1984, Walson Army Community Hospital, Fort Dix, New Jersey, purchased 15 NCR microcomputers with money unexpectedly made available at the end of FY '84. NCR presented a seminar on microcomputer networking and available NCR software in November 1984 to Walson's administrative staff. As the seminar progressed it became obvious that NCR could not develop applications that would satisfy the office automation needs of Walson. Walson had failed to assess their automation needs and to develop an automation planning strategy prior to the procurement of the NCR equipment, and had committed an error common to the TAMC and Midland hospitals. The lesson learned from the seminar was that information needs assessment is a mandatory first step in the development of automated office applications.

Requirements and procedures for office automation procurement in the U.S. Army, including Army hospitals, are

outlined in Army Regulation (AR) 18-1. This regulation states that office automation development will be in response to specific mission needs, and will be controlled using logical plans and recognizable milestones.[9]

AR 18-1 is scheduled to be superseded by AR 25-5 sometime in 1985. The draft of AR 25-5 assigns responsibilities, and prescribes policies and procedures for Information Management. An Army Information Architecture (which describes Army information in terms of what it is, where it is and who controls it) will guide the planning, control and management of all Army information. Information requirements will be identified through a formal information study such as an Information Systems Planning (ISP) study, which the U.S. Army Surgeon General's Office has completed and Health Services Command, San Antonio, Texas, is developing. An Information Management Plan (IMP) will be the means through which the information initiatives that satisfy information requirements and support the information architecture are identified and approved.[10]

As hospital operations grow more complex and as office automation technology becomes increasingly sophisticated, the requirement for information systems planning and the development of an Information Management Plan are paramount, as is recognized by the U.S. Army's draft proposal of AR 25-5. Hospitals can no longer afford the luxury of a laissez-faire, evolutionary approach to the use of information. Hospital administrators must

take responsibility for a careful, orderly process of planning to insure that hospital information requirements are satisfied.[11]

Conditions Prompting the Study

This study was undertaken at the suggestion of the Deputy Commmander for Administration (DCA), DeWitt Army Community Hospital, Fort Belvoir, Virginia. The DCA is aware of the automation failures of other military and civilian hospitals, and he has recognized the signs of a loss of office automation control at DeWitt, which include a growing volume of requests for office automation, inactivity of DeWitt's Automation Advisory Council, and the lack of a Hospital Information Management Plan.

DeWitt's initial Office Automation Needs Assessment activities must include the assessment of the hospital's information needs and the development of an Information Management Plan. A more exhaustive study of office automation needs assessment is therefore required as a necessary component of DeWitt's automation strategy.

Statement Of Research

To develop a model to assess the office automation needs of a small to medium size Army Community Hospital with specific application to the Clinical Support Division (CSD).

Objectives

This research study will develop an automation needs assessment model, which will be applied to the Clinical Support Division at DeWitt Army Community Hospital. Therefore, the objectives of this study are to:

1. Conduct a comprehensive review of the literature to enhance the researcher's knowledge base and to provide a plan for conducting the study.

2. Conduct interviews with local computer firms to develop a working knowledge of the availability of automation systems and commercial assessment models.

3. Develop an office automation needs assessment model, with hospital-wide applicability, that will provide sound input for the development of automated office applications.

4. Apply the model in the CSD to assess its office automation needs.

Criteria

1. The needs assessment model will identify those office functions/activities that can benefit from automation, and provide sufficient information for an Automation Management Officer (AMO) to develop an automated application or to recommend the retention of a manual system.

2. The completeness of the model will be based on a consensus of four military automation experts (a consensus representing at least three out of the four of the following experts)

that the model can indeed identify office automation needs. The four military automation experts are: LTC Charles P. Hernandez, Director Division of Biometrics, Walter Reed Institute of Research; LTC Roger L. Brown, U.S. Army TRIMIS Project Manager; LTC Larry G. Bosetti, Chief, Automation Management Directorate, Walter Reed Army Medical Center; and CPT Frank Horna, Information Systems Officer, Army Medical Department Personnel Activity (AMEDDPERSA), Data Center.

Assumptions

For the purpose of this study, the following assumption was made: The draft of AR 25-5 will be approved and adopted in 1985, with the requirements for each hospital to conduct an Information Systems Plan (ISP) and to develop an Information Management Plan (IMP) in its quest for information management.

Limitations

1. The development of the model will address administrative applications, not clinical uses.

2. To develop an office automation needs assessment model applicable to all Army hospitals is an effort beyond the scope of this graduate research project. Therefore, this research effort is limited to DeWitt Army Community Hospital, (DACH) with specific application to the Clinical Support Division (CSD).

3. The test of this model will be limited to an assessment of the need to automate office functions, and will not address the development of specific automated office applications.

Methodology

The objectives of this research will be carried out in a four-phase methodology. Phase One, the Preliminary Phase, will involve an extensive review of literature pertaining to automation needs assessment and planning, and interviews with four local computer firms representing the office automation industry (NCR, IBM, Wang, and NBI). The interview's specific purpose will be to determine the approaches that these firms advocate their customers take in assessing office automation needs, which will be used as background for the development of the proposed office automation needs assessment model.

Phase Two, the Design Phase, will entail the development of an office automation needs assessment model based on the information obtained in Phase One. The office automation needs assessment methodologies advocated by the computer firms interviewed in Phase One, and in the literature reviewed, will form the foundation of the proposed model's design. Functional development of the model will be accomplished under the guidance of the four military automation experts listed in objective number three. The expertise and experiences of these four automation specialists will assist the researcher in determining the strengths and military successes of those automation needs

assessment models discovered in phase one. The completeness and practicality of the proposed model will be based on a consensus of three out of the four automation specialists, which will be obtained by a questionnaire, that the model can actually assess the office automation needs of DACH.

The Application Phase, Phase Three, will entail a systematic analysis of the functions, activities and problems of the Clinical Support Division, utilizing the proposed automation needs assessment model.

Phase Four, the Recommendations Phase, will focus upon making specific recommendations for hospital-wide application of the proposed office automation needs assessment model.

CHAPTER II

CONSIDERATIONS FOR THE DEVELOPMENT OF AN OFFICE AUTOMATION NEEDS ASSESSMENT MODEL

Planning

Hospital management can take specific steps to establish proven office systems by building on the experiences that data processing has gained over the years in installing complex systems. In examining information systems literature to determine what various organizations do in getting started with various automated office systems, the successful projects have a number of simple common themes. The first step is often the hardest: developing a plan for the functions the organization wants to introduce each year over the next four or five years. This list becomes the blueprint or master plan to guide all subsequent tactical issues involving functions, hardware and software selection, and the identification of when such applications will be used and by whom.[12]

From the point of view of organizing the planning project, the success stories invariably involve top-down leadership in which upper management defines how many office people they intend to have over time, where, and in what departments. This process is frequently followed up by having divisional or agency task forces define more specifically who gets what office systems over a specific timeframe. What emerges out of a task force should be a hospital-wide architecture as well as standards by which new

systems are installed. This process guarantees commonality of systems across the entire hospital, economies of scale in the acquisition of services, software, hardware, and control over functions, costs, and justifications.[13]

Out of such a blueprint comes a specific tactical plan that deals with pilot programs for installation of phased-in functions (such as word processing followed by electronic mail) selectively targeted throughout the hospital over time. Lessons learned in these earlier experiences are reviewed with upper management before exporting functions and services to other parts of the organization. Management's biggest exposure is in selecting the right people to start the process, the most receptive pilot departments or offices, and selling the applications to potential users. Solving these three problems dramatically drops the risk of failure.[14]

Who Should Plan?

When planning for hospital office automation systems a basic decision must be made, "Who should plan for the implementation of a hospital office automation system, in-house personnel or outside consultants?" When deciding to use hospital staff for office automation planning, hospital management must ask and be comfortable with the answers to questions such as: Does the hospital have qualified analysts? Does management know enough about the office automation market to direct their effort? Are there sufficient hospital resources available for the proposed

scope of the planning effort? If the answers to these questions are positive--you have the staff, the time, and the expertise--by all means do it yourself.[15]

There are many reasons to perform the study internally. Developing a plan without internal staff support is impossible. The reasons are obvious: the project is longterm; it crosses a number of departmental lines; many personalities are involved; someone must hold it together; someone must know the players; and employees must "buy in" at an early stage. The more that future users participate, the more they will feel that the system is theirs. Hospital managers must also consider staff longevity and continuity. If the hospital can draw upon systems and functional area talent, it can expect a reasonably low turnover, and if it has faith in the talent and knowledge of its people, then using a hospital project team will keep the entire facility supportive.[16]

Of further advantage to in-house personnel is their first-hand knowledge of the needs of the hospital. The challenge here, however, is to limit the scope of planning to issues that are practical and possible. Management must know enough about their systems staff and office automation to make an early "buy or build" decision. It is quite clear that a decision to limit the scope of an office automation project to off-the-shelf systems requires that project analysts channel user expectations. Needs must be defined with the framework of what is available rather than what is technologically possible. With time and staff available, and

with upper management support (Commander, Deputy Commander for Administrative Services, Deputy Commander for Clinical Services, and the Chief Nurse), the hospital can certainly benefit with in-house office automation planning.[17]

To aid in making the decision as to "who should plan for office automated systems," a checklist of attributes should be evaluated, including: experience, expertise, availability of resources, credibility, and objectivity. In-house resources are certainly experienced with regard to the existing military hospital systems, but it is doubtful that they have the equivalent experience of that of a consultant in the methodology of planning.[18]

Expertise, while somewhat synonymous with experience, differs with respect to breadth of knowledge in numerous areas. In evaluating in-house vs. outside resources, the Hospital Commander should look for planners who are not only knowledgeable in operations of specific departments, but who also understand the potential impact of office automation within each department.[19]

The activities involved in office automation planning will require the availability and involvement of many hours of administrative and departmental resources for data collection, interviews, meetings, etc. If the Hospital Commander selects the in house approach using management engineering personnel, one of two facts seems intuitively clear; either existing responsibilities will suffer because fewer hours will be available for

routine operations, or the department is currently overstaffed for its present operations.[20]

Credibility is an issue in perception and is difficult to either explain or defend. Whether deserved or not, administration and staff, when faced with the decision to purchase a half a million dollar office automation system, sometimes feel more comfortable if the recommendations come from a consulting firm rather than an employee. Objectivity, like credibility, may also be an issue of perception. Because employees have relationships with other employees, a decision may appear to favor a friend, or conversely the project director may be overly-cautious so as not to appear influenced by friendships. Whichever is the case, the hospital risks inappropriate decisions that it cannot afford.[21]

Armed with these insights and the checklist of required attributes, the Hospital Commander and Deputy Commander for Administrative Services (DCA) can adequately evaluate the ability of in-house resources to meet the goals of the project, and therefore determine if enhancing these resources with outside consultants is desirable.[22]

If the Commander of a small to medium size Army Community Hospital (ACH), such as DeWitt, has established office automation as priority, there are resources, though not entirely adequate, to plan for the acquisition of automated office systems. DeWitt, as other ACH's, does have a Management Analyst, and other hospital administrators, that are familiar with conducting analyses of hospital functions. However, the knowledge,

experience, and expertise these analysts possess is insufficient to develop an office automation planning effort. Additionally, the turnover of key military hospital automation planners could jeoprodize the hospital's office automation planning effort, and developed office systems, before they are implemented.

Army Community Hospitals should use in-house resources to plan for the acquisition of office automation for the many advantages cited earlier, but they must enhance these resources with outside consultants. Outside consultants add credibility and some objectivity to the facility's planning effort, and can provide training to in-house resources in order to expand their knowledge and experience in office automation planning. Staff augmentation and planning continuity can as well be provided by outside consultants to partially offset the problems created by hospital staff turnover. ACH Commanders must develop a working balance of in-house personnel with outside consultants, such as Installation Automation Management Officers and automation industry planning consultants, to properly plan for the implementation of hospital automated office systems.

Approaches to Office Automation Needs Assessment

Three computer firms (WANG, NCR, and NBI), representing the office automation (OA) industry, advocate that their OA customers conduct a systematic analysis of their organization's information needs prior to the development of any automated applications. Neither WANG, NCR or NBI have developed an OA needs assessment

methodology for their customers, but instead suggest the use of any proven methodology. Information systems planning literature is replete with automation needs assessment methodologies. Each of these methodologies bears a striking resemblance to IBM's Business Systems Planning Methodology (BSP) and IBM's Office Systems Planning (OSP) Guide. The advantages to IBM's BSP and OSP Guide are that they are systematic, comprehensive, well documented, adaptable, and have proven successful in many industries. IBM's Information Systems Management Institute has developed and conducts programs on BSP, which have been attended and recommended by the U.S. Army Chief of Staff as a form of Information Systems Planning (ISP). Many other data processing methodologies are offered throughout the year in many different states.

Given the requirements of the U.S. Army's proposed regulation on Information Management, AR 25-5, and the documented successes of the BSP and the OSP Guide by such organizations as the American Medical Association, Southwestern Life Insurance Company and the Associated Grocers of Colorado, Inc., IBM's Business Systems Planning Methodology and Office Systems Planning Guide will figure prominently in this researcher's design of an office automation needs assessment model.

CHAPTER III

PROPOSED OFFICE AUTOMATION NEEDS ASSESSMENT MODEL DESIGN

The design structure of this proposed Office Automation (O/A) Needs Assessment Model will consist of five essential components: Executive Chartering, Automation Advisory Council Guidance, Automation Management Support, Information Systems Planning, and Office Systems Analysis (see Figure 1). The product of this model will be an identification of the office automation needs based upon a hospital O/A Strategy with O/A Objectives and Policies, and an O/A Information Architecture. This product will enable an Automation Management Officer, together with functional office managers, to develop automated office systems or recommend the retention of manual office systems. Additionally, this model will provide the foundation for the development of a Hospital Information Management Plan and an O/A Implementation Strategy.

Executive Chartering

Senior civilian and military hospital executives (Commander, Deputy Commander for Clinical Services, Deputy Commander for Administration, and Chief Nurse) have confidence neither in their ability nor in that of automation managers to manage information resources, which is based on an analysis of 50 large and advanced business computer users in the United States, Canada,

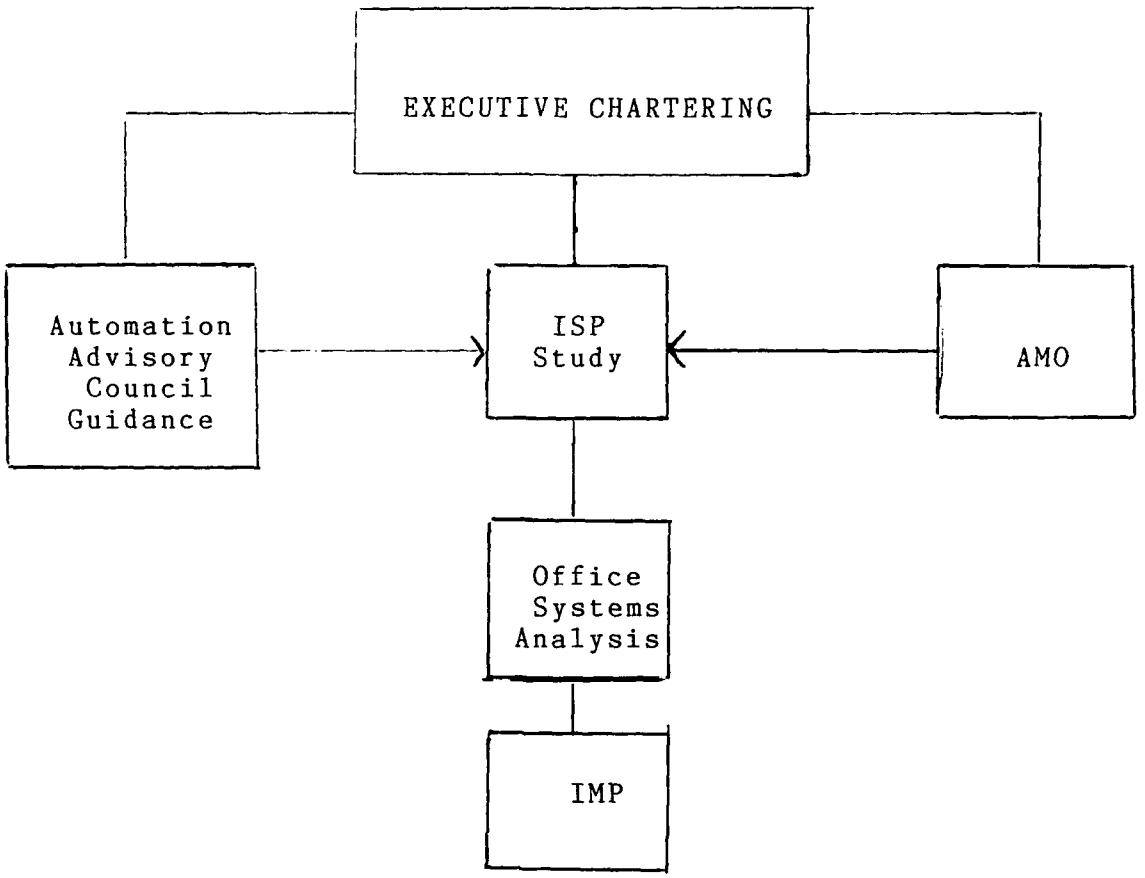


Figure 1

Proposed Office Automation Needs Assessment Model

Europe and the Pacific Basin by Brandt Allen, Professor at the Colgate Darden Graduate School of Business Administration, University of Virginia. The crisis in automated systems starts at the top. Of all the important functions of a hospital, automated information management is the one area in which senior management most often lacks experience and understanding. There are several explanations for this. The computer function entails new technology and in many hospitals this has always been treated as a specialized area in which top-level participation was minimal.[23] Even today, in most military hospitals, an assignment in information systems is not on the career path of DCA's. As a consequence, we find senior hospital executives managing information resources either defensively (minimizing automation budgets and risks, going too slowly, failing to be innovative, using strict procurement controls), or by remote control (lots of consultants, heavy turnover of senior automation management, frequent changes of direction), always looking for some bit of "magic" to make all their hospital management problems go away.[24]

Executive Chartering of a thoughtful, comprehensive strategic plan will guide the implementation of automated office information systems that not only address today's office automation issues but also incorporates the power and flexibility to respond to tomorrow's changes. Senior hospital executives cannot all have backgrounds in automation management, but they must manage automation utilizing sound management practices: get educated, get involved, oversee planning and challenge automation

managers. Hospital executives must also be committed to spending more time addressing four important strategic issues:

1. **Development of the hospital's long-range strategic plan.** Strategic planning begins with an external and internal analysis, which leads to the identification and analysis of critical strategic issues. The external, internal and issues analyses provide background and information for the re-shaping of an institution's mission. The development of goals and objectives set institution-wide strategies and link organizational activities to strategies. For office automation this involves bringing together organizational objectives, user needs, technological trends together in the form of an IMP.

2. **Definition of how office automation can facilitate meeting hospital objectives.** At this point senior hospital executives will be identifying, on a broad scale, how an office automation system or information system may contribute to the hospital's immediate and long-range plans.

3. **Hospital organization and deployment of office automation resources.** Senior hospital executives must decide on an O/A strategy, whether office systems will be networked to accomodate current and future organizational needs, or if a "stand alone" systems approach, modular design approach, or a disributed processing approach will be used to deploy office automation resources.

4. **Establishment of an organizational structure for office automation/information systems planning.** Several

committees and groups may be involved at various times in the hospital's office automation/information systems planning process to accomplish the first three strategic issues. Additionally, these committees and groups should be formed to address the following areas in the automation planning process:

a. Policy issues and approval authority.

b. Project management (In-house vs outside consultants).

c. User Involvement (How and when the user must be involved in order to insure their support in the planning and implementation processes).

d. Technical and administrative analyses (Whether hospital resources are sufficient or must assistance from outside sources be obtained).

If ever there was a time for senior hospital executives to be closely involved in office automation and information management, this is it. Yet too often such managers are found to be preoccupied in computer steering committees, approving new projects, allocating scarce budget dollars to competing departments, reviewing the status of development projects, selecting vendors, approving software packages, and the like. No doubt these activities are important and need to be decided with care, but they are largely operational or tactical and are not the strategic issues management must first address.[26]

Automation Advisory Council Guidance

A necessary demonstration of Executive Chartering, and the second component of this office automation needs assessment model, is the chartering and support by the Hospital Commander of a Hospital Automation Advisory Council. Traditionally, this council has consisted of far too many members, which has created confusion and delays in the development and implementation of automated systems. The Automation Advisory Council should consist of no more than five senior hospital staff members (Deputy Commander for Clinical Services, Chief Nurse, Comptroller, Chief of Logistics and the Automation Management Officer) and chaired by the Deputy Commander for Administrative Services.

The council should provide guidance, leadership and input during systems planning and development and review over automated operations when systems are finally in place. When fulfilling this function effectively the council will:

1. Provide a centralized control area for recommending to the Hospital Commander policy and systems related decisions with representation for potential user departments;

2. Provide an effective link between hospital management and the office automation/information systems effort; and

3. Provide recommendations to the Hospital Commander for the assignment and training of personnel from user departments to office automation/information systems projects, as a means of achieving needed management and user involvement in office

automation efforts. The product of each project Task Force will provide the input for the council's recommendations to the commander for O/A Strategies, Policies, Objectives, and an O/A Information Architecture.[27]

A Project Task Force should be composed of representatives of executive management and major functional areas in the hospital, who can bring to bear a high level of experience and objectivity in developing hospital automation systems. They should include representatives from administration, nursing, medical staff, automation management, ancilliary departments and any other parties that are required to represent office automation systems users. These Task Forces must have clear terms of reference and authority for making decisions and setting priorities.[28]

Automation Management Support

The overwhelming growth of office automation and personal computing in hospitals has created problems and situations that need to be managed, but the control mechanisms that are established must not stifle automation freedom within the hospital. Businesses have learned that user participation in equipment planning and acquisition, system development and operation, education, and problem solving should be promoted. But automation management professionals must assume the responsibility of assisting users as they seek to identify their

information needs.

Most small to medium sized Army Community Hospitals, such as DeWitt, do not have an Automation Management Officer, nor the staff expertise, to entirely plan and implement automated office systems. DeWitt must seek automation management support from outside consultants, such as the installation Automation Management Officer (AMO) on Fort Belvoir; the AMO at Walter Reed Army Medical Center (who has regional responsibility for DeWitt); and the Automation Management Office at Health Services Command (HSC) in San Antonio, Texas. It is these two latter AMO's who must assist automation users, such as DeWitt, to satisfy their automation management needs through the establishment of authorizations or contract dollars for AMO positions.

The proliferation of U.S. Army Medical Department automated information systems, now being developed by TRIMIS, are going to require dedicated support at each hospital. Automation Management Support will become increasingly important for the hospital's receipt and support of these automated systems and to plan, develop and implement automated office applications that can be integrated with these TRIMIS systems. Hospital Quality Assurance (QA) Programs will rely heavily on TRIMIS systems for information. HSC has acknowledged the significance of QA with additional authorizations, as must HSC acknowledge Hospital Automation Management Support if Hospital QA Programs are to be successful.

The AMO should be a general consultant for the hospital who will work with those in need of automation to assess their automation needs, create applications, train, and encourage hospital personnel in the resolution of their automation problems. The AMO would additionally function as a liason with outside AMO's, who would provide consultant services in advanced automated systems design and information engineering. An ACH's success in the development of an Information Management Plan (IMP), and the conduct of on-going organizational automation analysis, will depend on the establishment and support given by an Automation Management Officer.

Information Systems Planning

The Automation Advisory Council's first act must be to recommend to the Hospital Commander the establishment of a Task Force numbering between two to five members, which will develop a Hospital Information Management Plan (IMP), as well as monitor the on-going evolution of such a plan. The Task Force's first step toward the development of an Information Management Plan is to carry out a study of the specific types of information required by hospital personnel to operate, care for the patient, and manage their individual functions (Information Systems Planning). This step is extremely important in the planning effort, because the subsequent specifications of automated office system projects will be based on the defined hospital information needs along with the information needs of related systems (O/A

Information Systems Architecture), such as the Uniform Chart of Accounts (UCA) and TRIMIS.[30]

For a Task Force to fulfill its role in the ISP study effort it should:

1. Document the hospital's objectives and translate these into long-range systems objectives and policies;

2. Define the information needs of the various functional areas of the hospital;

3. Determine how, if at all, these information needs are currently being met;

4. Document the proposed systems projects for management evaluation and approval; and

5. Develop a formal Information Management Plan.[31]

Business Systems Planning (BSP), which the U.S. Army has renamed Information Systems Planning (ISP), is a structural approach developed by IBM to assist a business in establishing an information systems plan to satisfy its near- and long-term information needs. It calls for the formation of a task force whose mission is identifying business needs through interviews with executives and managers and also by studying the organization's environment and history. This is followed by a definition of what data processing is required in order to support the mission of the hospital. It begins with the top of the organization and works all the way down through the various levels of hospital management and across all functional parts (departments, divisions, services, etc.). The result is a battle

plan for the next several years. It is comprehensive, covers all major parts of the hospital, and is disciplined and adaptable.[32]

BSP is based on a conviction that the success of any hospital-wide information system depends on:

1. Obtaining executive committment and involvement;

2. Understanding the hospital from the viewpoint of general management.

3. Setting information system objectives that support the objectives of the hospital itself, which explains BSP's "top-down" approach (that is, working from the overall to the detailed level) to business analysis as well as its emphasis on both executive interviews and the establishment of system priorities. BSP can be thought of as a way to translate hospital strategy into information systems strategy (see Figure 2);

4. Adopting a top-down approach to studying the hospital and a "bottom-up" approach to implementation (see Figure 3);

5. Creating a plan that is evolutionary, that is, one that builds from existing systems modularly to an integrated information architecture, which depicts the inter-relationships within a group of information systems areas and shows how the associated data will be managed; and

6. Putting in place those information management functions required to adequately manage the information systems resources.[33]

The BSP study itself consists of thirteen major activities (see Figure 4), two of these--gaining executive commitment and

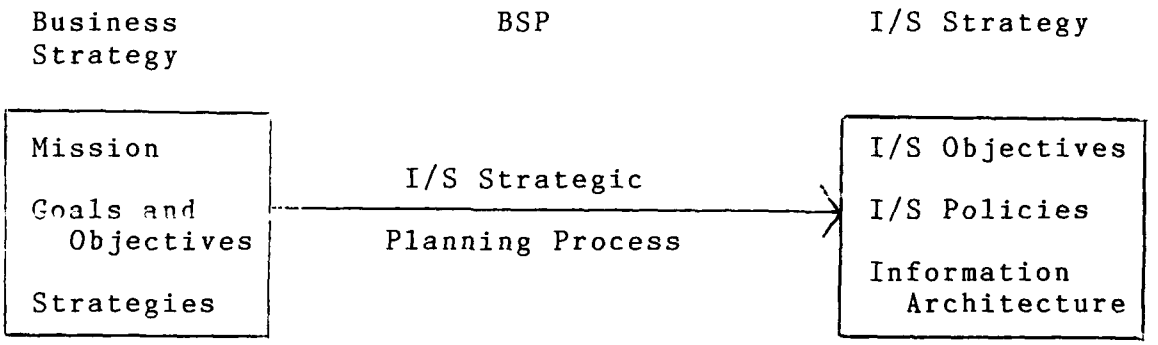


Figure 2

Translation of Business Strategy to I/S Strategy

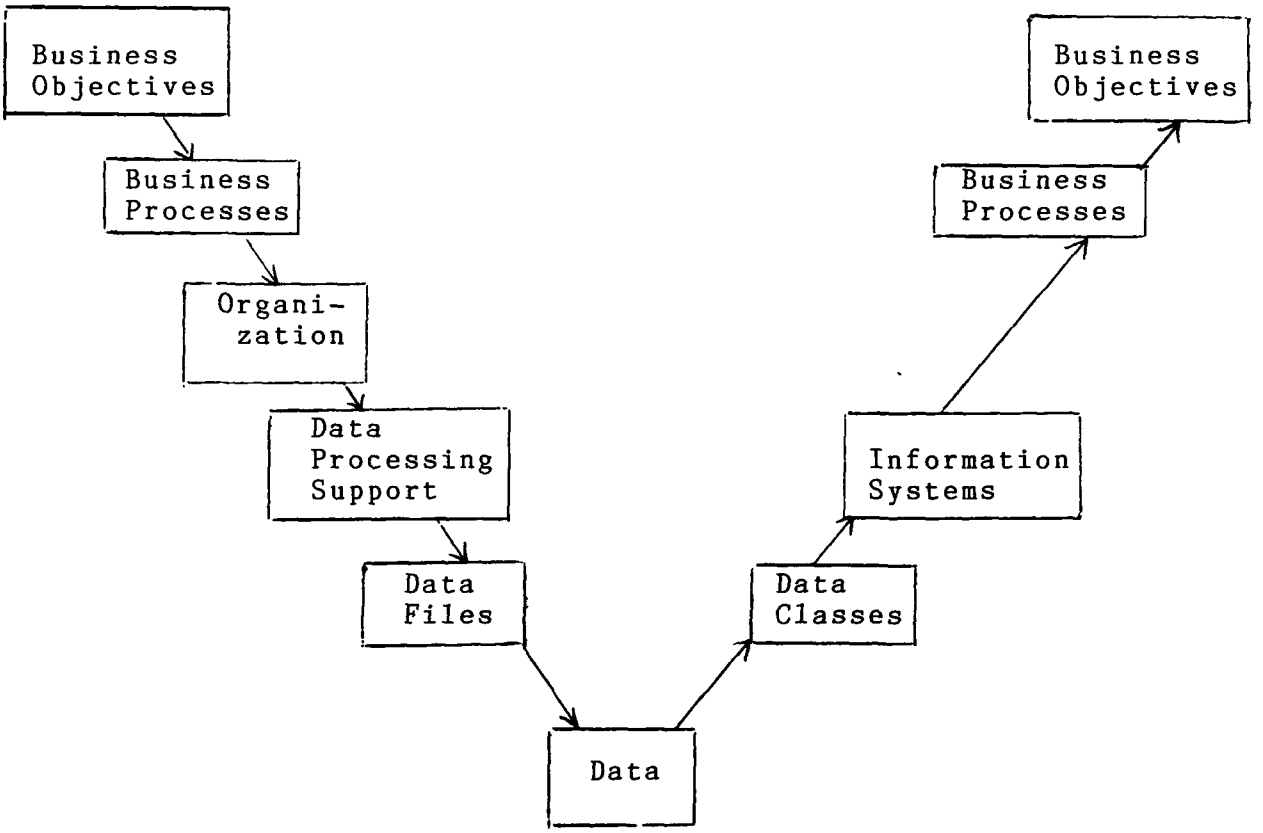


Figure 3

Top-down Analysis with Bottom-up Implementation

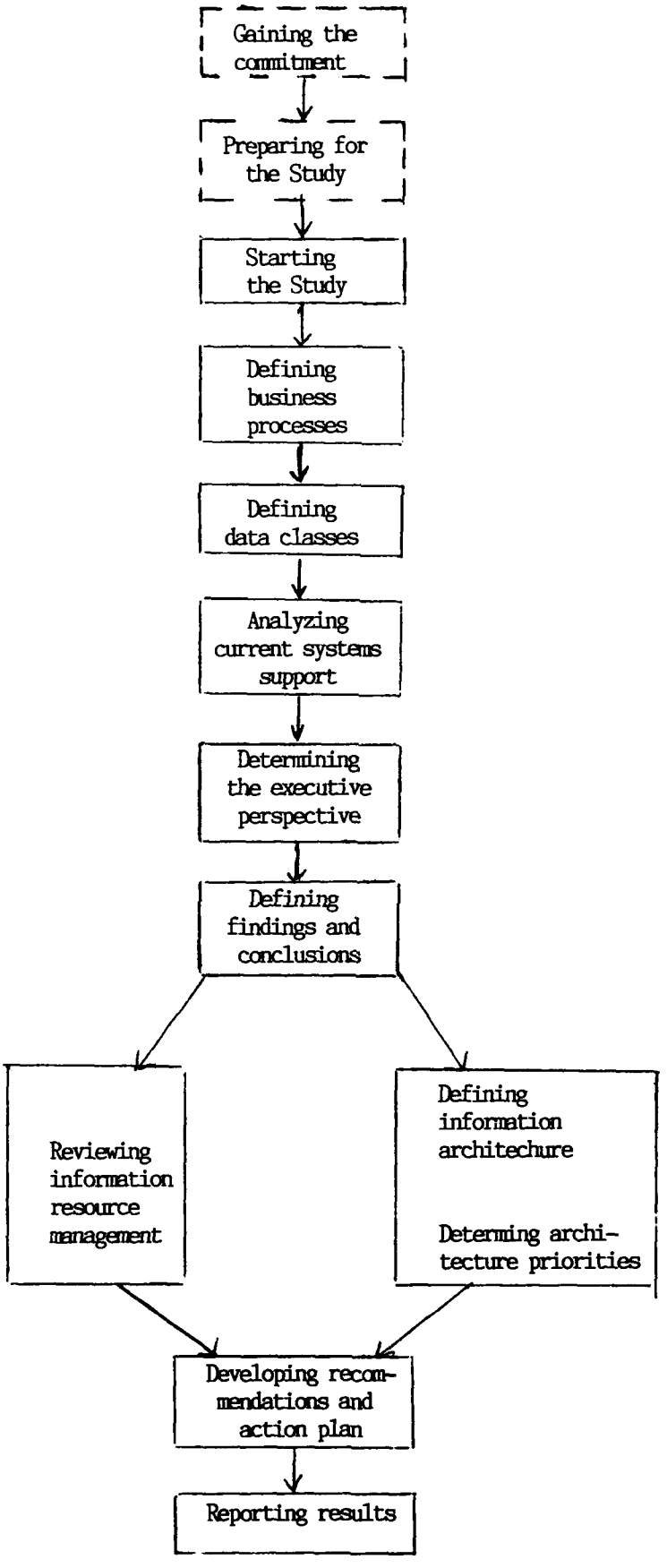


Figure 4

ISP Process

preparing for the study--are actually preliminary to the study proper. The various activities may be carried out to different degrees, but none may be omitted. A BSP study should not begin unless a top executive sponsor and certain other executives are committed to being involved in it. The study must reflect their view of the hospital, and the study's success depends on their providing the team with an understanding of the hospital and with its information requirements. It is at this preliminary stage that agreement should be reached on both the scope and objectives of the study as well as on its expected deliverables, since approval of the recommendations made at the end of the study will commit the hospital for several years to a certain direction in the use of its data processing resources.[34]

Immediately after executive commitment is made, a Study Team leader must be selected. This individual should be an executive who will work full time in the (typically) six to eight-week study and direct the activities of the (again, typically) four to seven member team task force. The leader will also see that the team's contact with other executives is on the proper level and that input from those executives is interpreted correctly. The executive sponsor should send a letter to all participating executives, setting the tone and signifying commitment to the study.[35]

Study preparation involves proper education and orientation for participating executives and the study team members so the best possible input will come from the executives and the

best possible use will be made of it by the team. To facilitate this education and orientation, the hospital should plan for the study team to attend an IBM BSP course or arrange for this training to be conducted by their regional MEDCEN's automation management staff. By the end of this preparation stage, the team should have produced a study book containing:

1. A study work plan;

2. A schedule of interviews;

3. A schedule for reviews with the executive sponsor at certain milestones;

4. An outline for the final study report; and

5. Hospital and information systems data analyzed, charted, and ready for the study kickoff.[36]

A more detailed description of the BSP methodology is contained in a BSP Executive Overview (see Appendix B).

Office Systems Analysis

Now that Executive Chartering, Automation Advisory Council Guidance, Automation Management Support and a completed ISP Study are in place, departmental office automation needs can be assessed so as to assure a hospitalwide integrated Office Automation Strategy. Upon completion of the Office Systems Analysis, sufficient information will be available for the ISP Task Force to develop an overall Hospital IMP and Office Automation Implementation Strategy.

Most productivity problems in offices today can be traced to problems of availability, timeliness, or accuracy of information. Mounting demands on office workers, coupled with the impact of inflation, make it imperative that organizations address the information processing needs of all office workers. The productivity problems of executives, managers, and professionals are especially crucial. The cost of employing these particular office workers is usually more than double all other office costs combined, including secetaries, clerks, support staff and office space. In order to maximize the productivity of all hospital office workers, each department, division, service, and clinic must have a plan for conducting a comprehensive office systems analysis.[37]

The Office Systems Study Methodology presented herein is characterized by a set of procedures for collecting and analyzing office productivity data, and was developed by the IBM Corporation. Like Information Systems Planning (ISP), this office systems methodology advocates a "top-down" approach to office systems planning that incorporates the perspectives of top executives, functional management, and end users.

Office systems can benefit an organization only if they address real hospital office and employee needs. To obtain a definition of these needs requires a Study Team of two to three individuals to examine the hospital's ISP results, departmental functions and employee activities. The resulting definition of the current environment serves three purposes:

1. It serves as the basis for designing automated enhancements and procedural modifications to the existing processes as well as in identifying organizational changes of potential benefit;

2. It is used when assessing the cost justification of the automated office system; and,

3. It is used in examining the post-implementation audit results of those automated office systems in place.[38]

This office systems analysis methodology will entail two primary activities:

1. Organizing to Plan; and

2. Defining the Current Environment.

Organizing to Plan

Planning for office systems requires a significant investment of time, effort, and support from key people in the hospital. In order to insure a good return on this investment, the Hospital's Automation Advisory Council must assist ISP Task Force in organizing this Office Systems Study effort. Recommended activities are:

1. **Documenting the objectives of the office systems study.** A clear, exact, written statement of objectives is absolutely essential to the success of the study effort. In establishing objectives for the office systems study, consideration should include overall business goals of the hospital, budgetary objectives of the hospital, and known problems in the current office environment.

2. Documenting the Scope of the Study. A determination must be made whether the study will initially cover all hospital offices, or a specific department's offices.

3. Identifying Study Resources. The most critical resources are the Project Manager (someone who is on the ISP Task Force or intimately familar with the findings of the ISP Study) and the Study Team (members from the department/office being studied). The team should number between two and three members with a study effort of no longer than three weeks, depending on the scope of the study. A Planning Resource Worksheet (see Appendix C) is available to record the resources and services required to support the study.

4. Orienting the Study Team. The speed with which the Study Team becomes productive will depend on how well individual Study Team members understand what is expected of them and are motivated to achieve results. One way of fostering both understanding and motivation is to conduct an orientation meeting.

5. Assigning Responsibilities and Establishing a Schedule. At the first meeting with the Study Team, the Office Systems Project Manager should assign responsibilities and establish a schedule. The Study Team should review all the study activities to be completed and agree on target completion dates for each major task.

6. Announcing an Office Systems Study to the Hospital/Department. News of a study effort, especially if it involves a large part of an organization, travels fast. Misconceptions and wrong impressions can be formed unless a clear and positive announcement is made. A clear official announcement, signed by the sponsoring executive, increases the likelihood of the success of an office systems study.[39]

Defining the Current Environment

A comprehensive definition of a hospital's office automation needs requires organization-wide perspectives, functional management perspectives, and the perspectives of individual hospital employees. To obtain this comprehensive definition of needs requires three recommended activities:

1. Examine Hospital Goals. Study Team members will be able to make better planning decisions if they have a clear understanding of the goals of the hospital and how office systems can help achieve those goals. The Study Team's knowledge of hospital goals can be enhanced by examining the hospital's ISP Study results.

2. Examine Departmental Business Functions. An important part of the definition of the current office environment within the scope of the office systems study includes:

   a. Documentation of hospital functions and the characteristic functions of each department.

b. The problems that impede the smooth operation of departments in carrying out their function.

c. What departments need to carry out their functions more effectively.

A major source of information about hospital functions, problems, and needs are the managers of each functional unit or Department within the scope of the study effort. Much of this information will have been obtained by the ISP Task Force in their interviews, which will greatly facilitate the completion of this necessary portion of the Office Systems Analysis. A two-step procedure is recommended for gathering the necessary information from managers.

* Ask managers to identify current functions and problems on a Hospital Business Function Worksheet like the one contained in Appendix D. Before distributing it to managers, the Study Team should prepare an explanatory Distribution Form (DF) to accompany each Worksheet.

* Conduct group meetings with managers to synthesize this documentation and generate a list of departmental needs. This group meeting should be scheduled as soon as possible after managers have completed a Hospital Business Function Worksheet.

3. **Examine Employee Activities.** Next the Study Team should examine the hospital's current office environment from the perspective of individual employees. The Team will want to identify how office workers currently spend their time, problems faced in

carrying out these activities, and what office workers need in order to perform these activities more efficiently.

a. Gather Background Information. In order to organize and prepare for this examination of employee activity, the Team should:

1) Categorize office workers according to significant differences in compensation and responsibilities.

2) Identify the number of office workers in each functional unit or department within the scope of the study effort.

3) Document salary information for each employee category.

This information will be used to compute potential benefits during office automation design and implementation phases. Employee information gathered from the functional unit or departments should be transferred to a Personnel Data Sheet such as the one contained in Appendix E.

b. Methods for Examining Employee Activities. Several tools are available for gathering information about employee activities. Interviews, questionnaires, diaries and activity logs are but a few. The IBM Corporation and a number of their customers, as well as Booz, and Allen and Hamiliton, Inc., have utilized such tools for many years with results that are highly consistent with a Typical Employee Activity Profile (see Appendix F). A recommended approach for completing an examination of employee activities is:

1) Examine and adjust the Typical Employee Activity Profile (see Appendix F) to fit the departments or functional unit within the scope of the hospital's study and adjust percentages as necessary.

2) Review the results of any previous studies conducted in the hospital centering on word processing, information systems, office automation, office productivity and communications.

3) Interview selected employees to identify:

a) The problems and characteristics of their jobs.

b) Their perceptions and attitudes about the current office situation and possible future situations.

The Study Team should consider the following guidelines in deciding how to use interviews in the examination of employee activities:

* A good rule of thumb is interviewing 10% of the employees in a department or functional unit.

* Interviewing key people and key jobs in the department or functional unit.

* Allow approximately one hour per interview.

* At least two Study Team members should conduct the interview (see Appendix G for a sample interview format).

Questionnaires, diaries and activity logs are extremely expensive and time consuming and should be used when the recommended approach for examining employee activities is not

acceptable. An Employee Information Tracking Form (see Appendix H) should be used to schedule and track the gathering of information from individual employees by the Study Team.[40]

By examining office business functions, employee activities, and documenting the obstacles to efficiency and effectiveness that office principles and employees have identified, together with the ISP results and input from the Automation Advisory Council, the Department studied and the Hospital AMO should be able to identify what system is needed to make the department or functional unit more productive, be it an automated system or improvement on an already existing manual system.

CHAPTER IV

CLINICAL SUPPORT DIVISION OFFICE SYSTEMS ANALYSIS

Background

DeWitt Army Community Hospital's (DACH) senior excutives (Commander, Deputy Commander for Clinical Services, Deputy Commander for Administrative Services, and the Chief Department of Nursing) have chartered DACH's Automation Advisory Council to develop a thoughtful and comprehensive strategic plan prior to the implementation of any additional office automation. DeWitt's long-range planning process began with an Organizational Effectiveness (OE) Transition to Command Seminar in October 1984, which outlined the hospital's significant mission impediments and identified many potential solutions. This OE seminar has provided new issues for the reshaping of DeWitt's Planning Committee and its long-range plan. At this point DeWitt revived its Automation Advisory Council to identify how automation could assist in meeting the goals and objectives of DACH, and to prioritize the development of automated office applications.

DACH's senior executives and the Automation Advisory Council, hereafter referred to as DeWitt's Administration, have decided that office automation is the hospital's automation priority. Office automation was chosen as the priority because of the limited DACH funds available for automation, pending

receipt of TRIMIS systems, and the growing demands for automated office systems at DeWitt.

DeWitt's Administration has recognized the need for both staff automation expertise and central O/A planning, and is pursuing the establishment of a position for a full-time automation manager (AMO). The AMO will assist hospital department, division, and service chiefs with O/A requirements analysis, the development of O/A applications, and the integration of hospital O/A systems with TRIMIS information systems.

Information Systems Planning is advocated by DeWitt's Administration as a necessary ingredient in DeWitt's automation planning strategy, but a decision has not been made on whether an in-house IBM trained BSP team or staff assistance and training by the Walter Reed Army Medical Center's Automation Management Office is the best/desirable approach. What is certain is that an ISP study is a necessary element in determining what areas require an Office Systems Analysis and with what other functional areas will an Office System be required to communicate and share information.

All elements of this Office Needs Assessment Model should be in place prior to conducting an Office Systems Analysis within the CSD, to include a completed ISP study, which did not occur at DeWitt. All elements of this Office Automation Needs Assessment Model are necessary for the establishment of an O/A Strategy Framework for DeWitt's IMP. This framework provides an AMO with a comprehensive plan, list of priorities and a defined O/A

Architecture to guide O/A activities.

Clinical Support Division Office Systems Analysis Report

I. Executive Summary.

A. DeWitt Army Community Hospital's (DACH) Goals and Objectives.

DACH's mission is to provide health services to authorized personnel in the geographical area surrounding Fort Belvoir as prescribed in Health Services Command (HSC) Regulation 40-21. The Medical Department Activity's (MEDDAC) goals in order to accomplish its mission are stated in the MEDDAC Creed (see Appendix I). The immediate objectives of DACH involve addressing six significant problems that hinder the accomplishment of the MEDDAC Creed (see Appendix I).

B. Scope of the Office Systems Analysis.

This Office Systems Analysis will cover only the CSD, DACH, and its specific functional units:

1. Office of the Chief, CSD.
2. Chief Ambulatory Care.
3. Central Appointments System.
4. Patient Representative Office.
5. Quality Assurance and Risk Management.

C. Objectives of the Office Systems Analysis.

1. Reduce the amount of time spent on clerical functions by executives and managers.

2. Reduce the time required to transfer information via distribution channels among CSD elements.

3. Improve upon the processing times of Emergency Room Civilian Contract Physician payment vouchers.

4. Reduce the time required to prepare monthly Emergency Room, Physician on Duty, Alternate Physician on Duty, and Combined Call Rosters by one week.

5. Improve the documentation of patient appointment data and response times to patients calling into the Central Appointments System.

6. Structure departmental/clinic budget information into a usable format to reduce budgetary over-obligations.

7. Improve documentation and retrieval of Quality Assurance and Utilization Review Committee activities.

D. Planning Resources (see Appendix I).

An orientation meeting was conducted on May 17, 1985 to familiarize the planning team, Chief, CSD, and key CSD managers, with the objectives, scope and duration of the Office Systems Analysis effort. Additionally, the role and assigned responsibilities of the planning team and the expected results of the study effort were thoroughly discussed, and a study schedule was established. In order to preclude any misconceptions and wrong impressions, an announcement of the Office Systems Analysis study (see Appendix I) was provided to each member of the CSD staff.

II. Current Environment.

A. Functions Performed by CSD (see Appendix I).

1. Administrative consultant to the clinical departments and inpatient clinical activities.

2. Management of the Quality Assurance and Risk Management Programs.

3. Responding to patient and hospital staff complaints (PRO).

4. Schedule ER Contract Physicians.

5. Schedule and maintain Physician on Duty, Alternate Physician on Duty and Combined Physician Call Rosters.

6. Monitor Travel Budget.

7. Publication of patient education materials.

8. Monitor workload data collection system.

9. Managing Central Appointments System.

10. Review and analysis of clinic work methods and operational procedures.

11. Recorder for numerous hospital committees.

B. Current Problems Inhibiting the Accomplishment of CSD Functions (see Appendix I).

1. Lack of adequate budget information in a usable format.

2. An unclear definition of CSD's role/mission at DACH.

3. Poor attitude about administration at DACH.

4. Late receipt of appointment information from DACH clinics.

5. Inadequate availability of patient appointments given to the Central Appointments System (CAS) by DACH clinics.

6. Manual CAS system which slows response to incoming patient calls.

7. Poor communications between DACH departments, divisions, services, and clinics.

8. Manual storage and retrieval of information.

9. Too much time spent on clerical functions by executives and managers.

10. Inadequate CSD staffing to provide administrative support to clinical departments and activities.

11. Extremely poor reproduction capabilities at DACH and on Fort Belvoir.

12. Inadequate tracking and unavailability of medical records.

C. Information Processing Needs.

1. Improved communications within DACH.

2. Automated budget data.

3. Automated CAS documentation.

4. Improved phone support.

5. Improved filing and retrieval of large amounts of information.

6. Wordprocessing.

7. Improved reproduction capability.

III. Conclusions.

A complete assessment of the office automation needs of the Clinical Support Division (CSD) was not possible, due to the fact that not all of the elements of the proposed Office Automation Needs Assessment Model were in place. All four of the automation specialists evaluating this model agreed that the analysis of the CSD could assist an AMO in solving some of the immediate problems facing CSD, but sufficient information was not provided to develop automated office applications or recommend the retention of, and/or improvement on a manual information system.

The first problem is the absence of an O/A Strategy which establishes the framework for hospital automated office applications. Without this framework, the AMO does not have a comprehensive plan, a list of priorities, or a defined O/A Architecture to guide the hospital's O/A activities. The result will be a series of efforts to solve immediate problems using a variety of vendor's equipment, and with little or no thought to integrate data (because of the hurry to move on to the next problem).[41]

The second problem is the absence of information systems analysis, developed from the ISP process, which defines the common O/A functions, data and interfaces. Information systems problems must be separated from the management and physical plant problems, analyzed to determine what the problems and solutions are, and the data attributes documented. The analysis of these documents will lead to an understanding of the O/A functional

process and a determination of what alternatives are available to resolve the problem. The O/A Strategy comes into play at this point by bonding and guiding the alternatives available. For example, is the solution to improve the manual process by systematizing the procedures, applying a stand-alone microcomputer with a set of utility programs which fit the O/A architecture, or applying a shared data concept so that multiple people can share the same data?[42]

The Office Systems Analysis of CSD is only one element in a series of necessary elements required to adequately assess the office automation needs in an Army Community Hospital, such as DeWitt, and to produce a Hospital IMP.

CHAPTER V

RECOMMENDATIONS

The development of automated office systems in U.S. Army Community Hospitals is a complex task involving major capital expenditures and significant manpower commitments if these systems are to function properly. The development of an overall Hospital Office Automation Needs Assessment Model is an essential step in the process (see figure five). To exclude this essential planning activity would be analogous to beginning a major hospital construction project without functional specifications for the new building.[43]

Based upon the results of this study, and a consensus of the four automation specialists questioned, the following recommendations are made:

1. The first, and most important, recommendation is that Executive Chartering and involvement in the development of a well thought out strategic plan for Office Automation be obtained before any other element of Office Needs Assessment is addressed. If this element is not properly placed, all other elements of this Office Needs Assessment Model will not be successfully implemented.

2. The second recommendation, and the second step in this Office Automation Needs Assessment Model, is the requirement for the guidance and leadership provided by a Hospital Automation

Advisory Council. It is this Council that will provide a centralized means for recommending Office Automation Strategy, Policies and Objectives to the Hospital Commander. Additionally, the Council will provide an effective link between hospital management and the hospital's office automation efforts.

3. Automation Management Support must next be obtained in the person of a Hospital Automation Management Officer (AMO). The establishment of a full-time Hospital AMO is critically important if the required Office Automation Planning functions are to be performed effectively. The proliferation of TRIMIS systems, and related Office Automation Systems, are going to required dedicated Automation Management Support at each hospital.

4. A necessary outgrowth of the Executive Chartering of a Hospital Automation Advisory Council and a AMO is the completion of an Information Systems Planning Study. This study will define an Office Automation (O/A) architecture which will guide all subsequent hospital O/A activities.

5. Now that these four elements of the Office Automation Needs Assessment Model are in place, departmental office automation needs can be assessed utilizing the Office Systems Analysis Methodology. Upon the completion of this Office Systems Analysis, sufficient information will be made available for an AMO, together with functional managers, to developed automated office applications that will fit into a Hospital O/A architecture. Additionally, the ISP Task Force will have

sufficient information and input to develop a Hospital Information Management Plan (IMP).

Implementation of the above recommendations could greatly improve a hospital's ability to assess the need, plan for and develop automated office applications. Office Automation Needs can not be assessed in a vacumm, as was attempted in the analysis of the Clinical Support Division, but can only be accomplished when a strategic planning framework (This Office Automation Needs Assessment Model) is in place.

Figure 5

Step I.	Executive Chartering of a Strategic Plan for O/A.
Step II.	Hospital Automation Advisory Council guidance, leadership and input during O/A systems planning and development.
Step III.	Establishment of a Hospital Automation Management Officer.
Step IV.	ISP definition of an O/A Architecture.
Step V.	Office Systems Analysis of Departmental O/A Needs.
Step VI.	The product of Steps I through V will provide an AMO and a functional manager with sufficient information to develop automated office applications, which will in turn provide input for the development of the hospital's IMP.

Figure 5

O/A Needs Assessment Model Summary

APPENDIX A

OFFICE AUTOMATION TECHNOLOGIES

OFFICE AUTOMATION TECHNOLOGIES

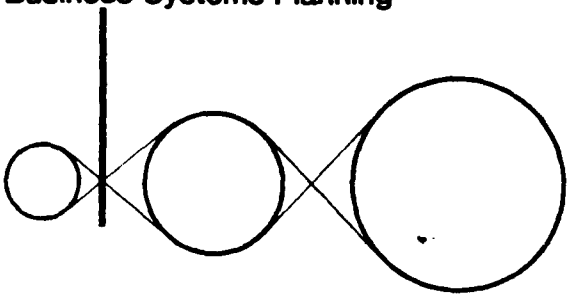
* AUTOMATIC DATA PROCESSING
  - Main Frames
  - Micro Computers
  - Mini Computers
* WORD PROCESSING
  - Standalone Systems
  - Shared/Cluster Systems
* DICTATION
* OPTICAL CHARACTER RECOGNITION
* ELECTRONIC PHOTO TYPESETTING
* ELECTRONIC (INTELLIGENT) COPIERS
* ELECTRONIC MAIL/MESSAGE/CLAENDER
* MICROGRAPHICS
  - Computer Output Microform
  - Source Document Microfilm/Microfiche
  - Computer Assisted Retrieval
* FACSIMILE
* COMMUNICATIONS
  - Video Teleconferencing
  - PBX Private Branch Exchange
* FUTURE OFFICE AUTOMATION
  - Voice Recognition/Voice Input
  - Robotics

APPENDIX B

BSP EXECUTIVE OVERVIEW

Business Systems Planning Executive Overview

Business Systems Planning



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Until recently, the typical approach to the development of data processing applications has been to undertake each one by itself. With each one performing effectively for its specific purpose, not enough thought has been given to the potential value that lies in sharing information across application boundaries or supplying it to management for purposes of improved control. The result often has been redundancy of data, excessive use of data processing resources, and insufficient return on the data processing investment as certain business information needs have gone unfulfilled.

Today, however, more and more business executives are recognizing data as a resource, like money, materials, facilities, and personnel. They are seeing more and more clearly the need for an Information Systems (I/S) plan that makes this resource available not just to a given functional area but to the entire organization. They see, under such a plan, how one functional area can benefit from another, and how executive management can benefit from them all by gaining an organization-wide view that can be an asset in making cross-function decisions and running the business more effectively.

BSP Objectives

Business Systems Planning (BSP) is a structured approach developed by IBM to assist a business in establishing an I/S plan to satisfy its near- and long-term information needs. It can be applied equally well to both the public and private sector, since their requirements for developing information systems are similar. (The term *business* is used throughout this overview; it indicates the business of running an organization, regardless of its size or purpose and whether public or private.)

BSP is based on a conviction that the success of any business-wide information system depends on:

- Obtaining executive commitment and involvement
- Setting I/S objectives that support those of the business itself
- Understanding the business from the viewpoint of general management
- Adopting a top-down approach to studying the business (that is, working from the overall to the detail level) and a bottom-up approach to implementation
- Creating a plan that is *evolutionary*, that is, one that builds from existing systems modularly to an integrated architecture
- Putting in place those information management functions required to adequately manage the information systems resources

The foremost objective of BSP is to provide a plan that supports both the short- and long-term information needs of the business and is integral with the business plan. In addition, BSP is aimed at providing for:

- Impartial establishment of I/S priorities by management
- Development of long-life systems based on business processes not usually affected by organizational changes
- A way of managing the data processing resources so as to support the business goals most efficiently and effectively
- Increased confidence that high-return, major information systems will be produced
- Improved relationships between the information systems department and the users, through systems that are responsive to user requirements and priorities
- Increased awareness of data as a resource to be planned and controlled in order to be used effectively by everyone

Potential Benefits

Application of the BSP methodology has helped many IBM customers formulate their own information systems plans and their own control mechanisms and to improve their use of information and data processing resources. It offers executive management a number of potential benefits:

- An evaluation of the effectiveness of current information systems
- A defined, logical approach to aid in solving management control problems from a business perspective
- An assessment of future information systems needs based on business-related impacts and priorities
- A planned approach that can allow an early return on information systems investment
- Information systems that are relatively independent of organization structure
- Confidence that information systems direction and adequate management attention exist to implement the proposed systems

Since BSP is successful to the degree that it meets an organization's need for significantly improved computer-based information systems, it follows that the BSP study must be concerned with the basic objectives of such systems.

Support Business Goals and Objectives

This I/S objective explains BSP's "top-down" approach to business analysis as well as its emphasis on both executive interviews and the establishment of system priorities. BSP can be thought of, in fact, as a way to translate business strategy into I/S strategy (see Figure 1).*

* King, W. R., "Strategic Planning for MIS", *MIS Quarterly*, March 1978

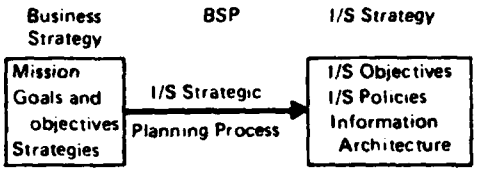


Figure 1. Translation of business strategy to I/S strategy

Address Needs of All Management Levels

The primary emphasis in I/S should be on providing measurements of the current or actual condition for management decision making. Most business decisions can be associated with either *planning* (establishing various missions, objectives, policies) or *control* (guiding an activity toward an objective). It is generally accepted that each management level is involved in three distinct types of planning and control:

- *Strategic planning,* concerned with establishing objectives, deciding on resources to attain them, and setting policies to govern the acquisition, use, and disposition of the resources
- *Management control,* concerned with assuring managers that resources are being obtained and used properly to accomplish objectives
- *Operational control,* concerned with carrying out specific tasks effectively and efficiently

Figure 2 shows some characteristics of these areas.

This framework applies to any industry, function, or management level.

Decision Characteristic	Planning and Control Level		
	Strategic Planning	Management Control	Operational Control
Management involvement	General management Functional management	General management Functional management Operational management	Functional management Operational management
Time horizon	Long range (1–10+ years)	Year-to-year Monthly	Day-to-day Weekly
Degree of structure	Unstructured and irregular; each problem different	More structured, cyclic, largely repeating	Highly structured, repetitious
Data requirements	Summaries, estimates, difficult to pre-define, much external to business	Summaries, definable, need for unanticipated forms, largely internal	Detail, operational, definable, internally generated
Resource management	Establishment of policies pertaining to the resource	Allocation of the resource	Efficient use of the resource

Figure 2. Characteristics of planning and control levels

In connection with this, resource management represents a major vehicle for I/S definition. Each resource, including the product, is managed through decisions made by the three types of planning and control. Resource management has the desired characteristic of cutting across organizational boundaries - vertically across management lines and horizontally across functional lines. Thus a framework based on resources as well as planning and control can be established, and an I/S architecture can be applied within this framework.

Provide Data Consistency

Problems in the area of data consistency come about in most organizations because of variations in the *form, definition,* and *timeliness* of data. The *form* may be uncaptured raw data, mechanized data files, detailed or summarized data processing reports, business documents, or knowledge in someone's head. The *definition* of any given item of data can have as many variations as it has users. The *timeliness* of data also varies with the way it is captured, processed, delivered, and used.

All these variations are part and parcel of the classical one-by-one development of data processing applications. To turn the situation around, it is necessary to adopt a different approach to data management, an approach based on data as a *resource.* The resource should be managed so as to be potentially available to and shared by the total business unit on a consistent basis. The data management function would include formulating policies and procedures for consistent definition, sourcing, technical implementation, use, and security.

Be Able to Survive Change

Data processing systems and applications that exist to serve the information needs of a specific organizational entity or to produce reports for one particular manager are in danger of becoming obsolete at a moment's notice. This can be expensive. Change is inevitable in any dynamic enterprise, but its costly impact on systems can be minimized through an information system that can anticipate and live through organizational and management changes.

For this reason, information systems should be built to support the non-transient elements of the business – elements that are basic and will not change appreciably unless the basic fibre of the business itself does so. BSP refers to these elements as *business processes,* and defines this term as *groups of logically related decisions and activities required to manage the resources of the business.* A logical set of these processes can be defined for any type of business and will undergo minimal change as long as the product or service area of the business remains basically the same.

Defining the organization's business processes is one of the most important parts of the BSP methodology, and the method for doing so is tied directly to basing the I/S framework on resources and planning and control. With this in mind it is convenient to define an organization's business processes in association with each of its defined resources.

Each resource of a business can be thought of as having a "life cycle" made up of several stages. (A product life cycle, for example, has four stages: requirements, acquisition, stewardship, and retirement.) Business processes can be identified to describe the major activities performed and decisions made by the business in the course of managing the resource throughout its life cycle.

This approach results in identifying processes that encompass strategic planning, management control, and operational control. For example, the decision to pursue a particular product area would be strategic planning; the planning and control decisions relative to product volumes or advertising expenditures would be management control; and the decisions in the areas of engineering control, manufacturing efficiency, etc., would be operational control. By using this approach for all the resources it is possible

to define all the business processes that take place within any organizational segment.

Implement Strategy by Subsystem within Total Information Architecture

To avoid problems of data inconsistency, non- integrated systems design, expensive resystematizing, priority difficulties, etc., the BSP philosophy (see Figure 3) stresses (1) top-down I/S planning to identify long-range I/S objectives, and (2) bottom-up implementation of systems over a period of time, consistent with the organization's business priorities, available funds, and other shorter-term considerations.

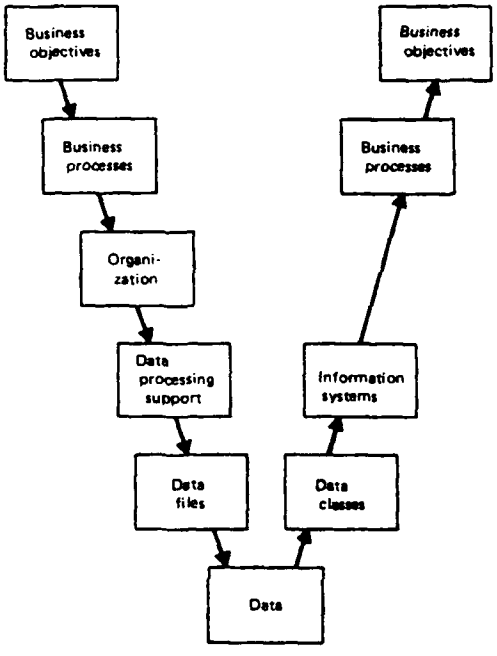


Figure 3. Top-down analysis with bottom-up implementation

The BSP methodology is in harmony with this philosophy, as it involves four broad activities (see Figure 4):

- *Documenting the business objectives*, in order to get executive agreement on where the business is headed, so that I/S strategy can be supportive.
- *Defining the business processes*, in order to establish the prime long-term basis for I/S support in the business.
- *Defining the business process support data*, in order to produce a definition of all the data to be managed as a resource throughout the business unit.
- *Defining the information architecture*, in order to show the interrelationships within a group of I/S areas and to show the associated data to be managed. It is from this information architecture that individual modules can be identified, prioritized, and built as scheduled by the I/S plan.

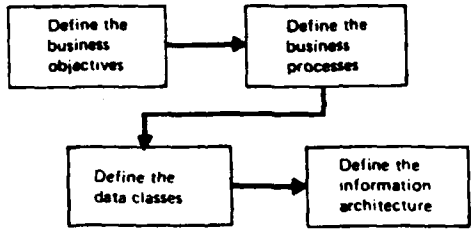


Figure 4. General I/S planning approach

Not only does the methodology consist of many more detailed activities than indicated above, but it is also flexible. That is, the steps and techniques can be adapted to specific situations. In any case, the methodology is aimed at fulfilling the I/S objectives, and these objectives must be regarded as unalterable.

A major juncture exists between the identification of overall business requirements and the six project phases for I/S implementation (see Figure 5). Requirements are identified for a total business unit and then separated into projects that are undertaken and implemented over time. In addition to information systems projects, there is also a continuing set of projects covering information architecture and information systems management (ISM).

In the past, and in many businesses today, projects are defined to address a functional area of the business without regard to the total requirements of the business unit. BSP can provide overall direction for the total business before projects are undertaken and therefore avoid fractionalization of data and inconsistencies of systems.

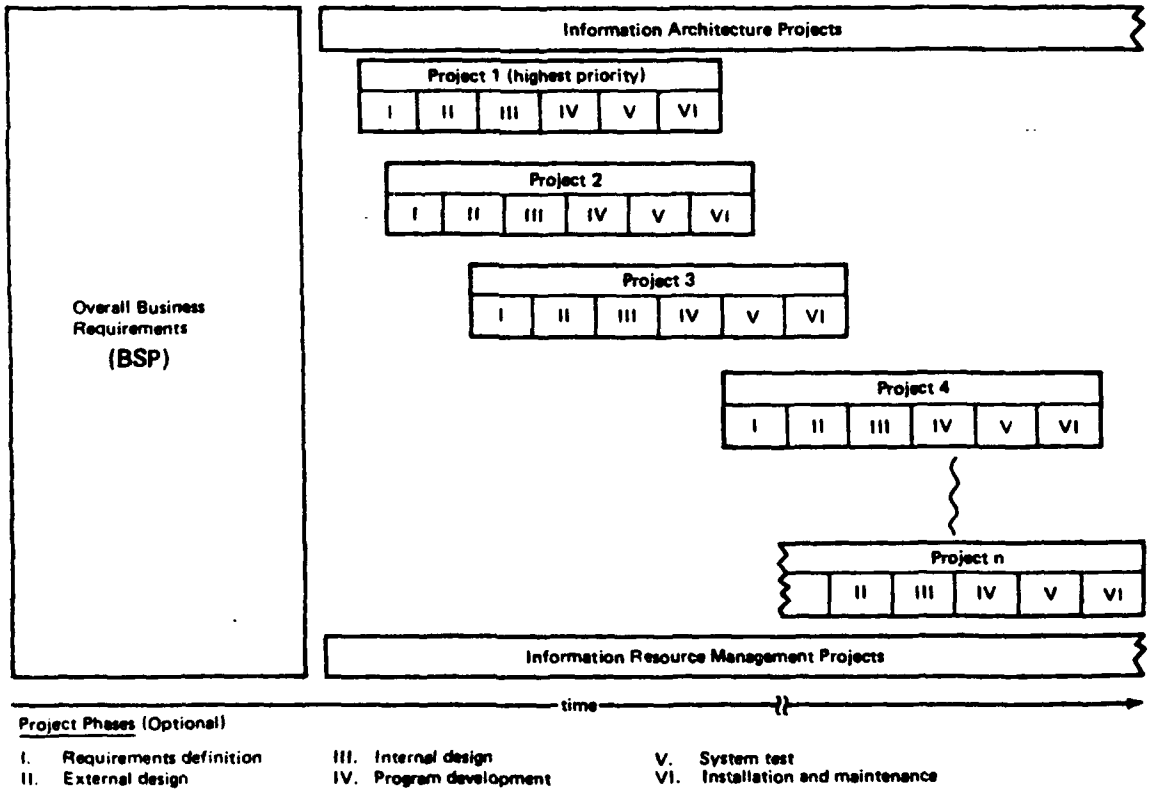


Figure 5. Relationship of BSP to I/S projects

While a BSP study may be said to consist of 13 major activities (see Figure 6), two of these – gaining executive commitment and preparing for the study – are actually preliminary to the study proper. The various activities can be carried out to different degrees, but none can be omitted.

Gaining Executive Commitment

A BSP study should not begin unless a top executive sponsor and certain other executives are committed to being involved in it. The study must reflect their view of the business, and the study's success depends on their providing the team with an understanding of the business and with the information requirements. Most of the input will come directly or indirectly from these executives.

It is at this preliminary stage that agreement should be reached on the scope and objectives of the study and on its expected deliverables, since approval of the recommendations made at the end of the study will commit the company for several years to a certain direction in the use of its data processing resources.

Immediately after executive commitment is made, a study team leader must be selected. This individual should be an executive who will work full time in the (typically) six- to eight-week study and direct the activities of the (again, typically) four- to seven-member team. The leader will also see that the team's contacts with other executives is on the proper level and that input from those executives is interpreted correctly. The executive sponsor should send a letter to all participating executives, setting the tone and signifying commitment to the study.

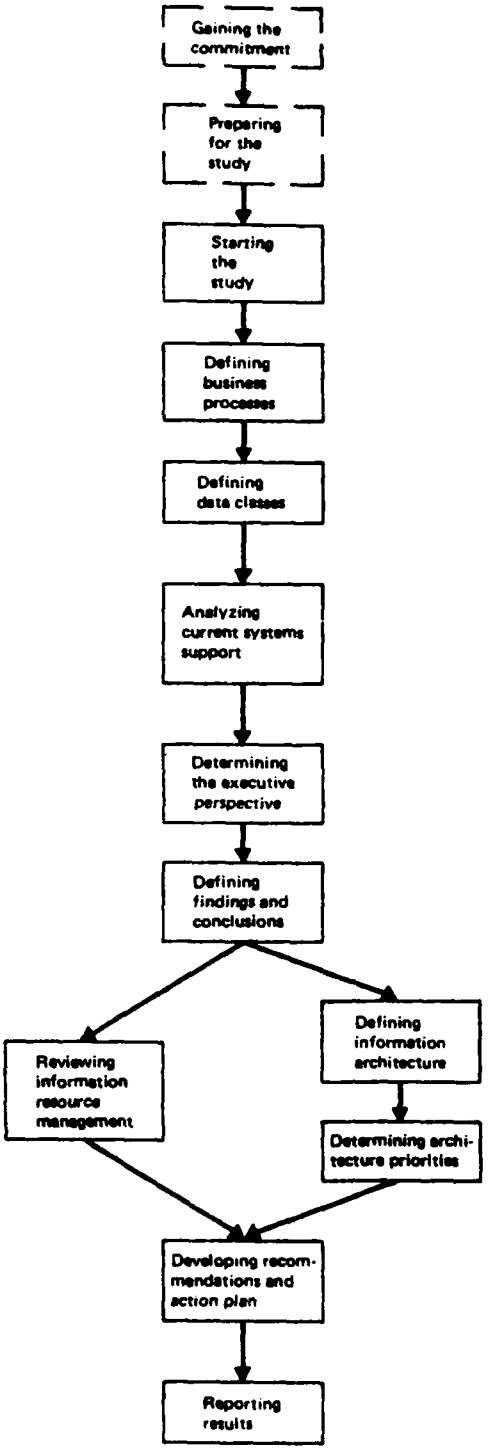


Figure 6. Flow of the BSP study

Preparing for the Study

Study preparation involves proper education and orientation for participating executives and the study team members, so that the best possible input will come from the executives and the best possible use will be made of it by the team.

Persons to be interviewed are decided upon as early as possible, to allow for their orientation and for interview scheduling. At this stage also, information should be gathered on the company and on data processing support.

The team should be allowed exclusive use of an appropriately located control room, where they may work together, put up wall charts, and conduct interviews.

By the end of this stage, the team should have produced a study control book containing:

- A study work plan
- A schedule of interviews
- A schedule for reviews with the executive sponsor at certain checkpoints
- An outline for the final study report
- Business and information systems data – analyzed, charted, and ready for the study kickoff

When study preparation has been completed, everything accomplished during that phase should be reviewed by the executive sponsor.

Starting the Study

This is where the actual BSP study begins and team members start participating full time. Starting the study consists of three presentations:

- The executive sponsor reiterates the objectives, expected outputs, and perspective of the study.
- The team leader goes over the business facts that have been gathered to see that each team member is thoroughly familiar with them. He also addresses certain matters that could not be documented – policies, sensitive issues, changes planned or in progress. Finally, he covers the decision process, how the organization functions, key people, major problems, the user's view of data processing support, and the image of the data processing department.
- The information systems director, or one of his managers, also presents a view of data processing. In addition, this person covers project status and project control, history of the major data processing projects started in the last two years, major current activities, planned changes, and major problems.

Defining Business Processes

No other BSP study activity is more important than accurately defining business processes. These processes form the basis for executive interviews, information architecture, problem analysis, data class identification, and various follow-on activities. Because of this, everyone on the team must have a precise understanding of them. Where such understanding does not already exist, it can be acquired in the course of helping to identify the processes and describing them in writing.

At the end of this step, the team will not only have produced a list of all the processes and a written description of each, but will also have flagged those that are key to the success of the business.

Defining Data Classes

It is at this point that data is grouped into logically related categories – that is, data classes – in order to help the business develop data bases over a period of time with minimal redundancy and in such a way that systems can be added without a major revision to the data bases. Once identified, the data classes are related to (1) business processes, in order to define the information architecture, and (2) the present files, to help in the development of a migration plan.

Analyzing Current Systems Support

This activity is aimed at showing how data processing currently supports the business, so that recommendations for future action can be made. In order to spot redundancies, help clarify responsibility, and further the understanding already gained of business processes, the team analyzes four elements: currently existing organizations, business processes, information systems (applications), and data files. To facilitate analysis, the team develops matrices using combinations of these elements (see Figure 7). Through the various analyses made, the team prepares itself for discussions with executives and derives help in determining requirements for information support.

Determining the Executive Perspective

This activity is an integral part of the top-down approach. Its purpose is to validate the work done by the team, determine the objectives, problems, and information needs and their value, and gain executive rapport and involvement. The executive interviews provide the business understanding necessary for information systems planning.

The major output consists of notes from the interviews, an update of the control room charts, and a new or improved rapport between the executive and the BSP study team.

Defining Findings and Conclusions

This activity involves analyzing the problems that were supplied as input during fact gathering, expanded upon by the team, and added to in the executive interview. This stage also involves relating those problems to the business processes and developing findings and conclusions that set the stage for recommendations.

In addition, problem assessment includes dividing problems into those that have to do with information systems support and those that do not. Those that do not are delineated and turned over to the executive sponsor to follow up on; those that do are further examined in the BSP study and in the follow-on activities.

PROCESS / ORGANIZATION	Sales Operations				Production			
	Territory Management	Selling	Administration	Order Servicing	Scheduling	Capacity Planning	Materials Requirements	Operations
VP Sales	X	X	X	X	X	X		
Order Control Manager	/	/	/	/	/			
Elec. Sales Manager	X	X	X	X	/			
VP Engineering						X		
VP Production					X	X	X	X
Plant Operations Director					X	X		X

Figure 7. Sample organization/process matrix (partial)

Defining Information Architecture

This activity represents a major movement from an examination of the present to a synthesis of the future. It is here that we sketch future information systems and their accompanying data.

Systems may be viewed as the automated portions of processes. Data bases are the computerized part of the total inventory of data in the business. Information architecture (see Figure 8) brings order and structure to the systems and the data they create and use. Once it is structured, it allows for step-by-step development to migrate from the applications of today to the information systems of the future.

Because this task involves drawing a blueprint for the future, it deserves the attention of the whole team.

Determining Architectural Priorities

Since a total information architecture cannot be developed and implemented at one time, the team must set priorities for the development of the systems and data bases. By deciding which of the data bases should be designed and implemented first, the team establishes which subsystems will be defined during the follow-on projects.

To set priorities, the team develops a list of projects from the subsystems of the information architecture, then establishes a set of criteria and rates the prospective projects against them.

Reviewing Information Resource Management (IRM)

The purpose of IRM is to eventually establish a controlled environment in which the information architecture can be developed, implemented, and operated efficiently and effectively. The information systems functions are examined during the BSP study to identify (1) any changes that could be made immediately to enhance success in the follow-on projects, (2) changes that are necessary to properly manage and implement the high-priority information architecture projects, and (3) major activities that will become projects in the follow-on to the BSP study. Fulfillment of this step is vital to the successful support of the business by the data processing function.

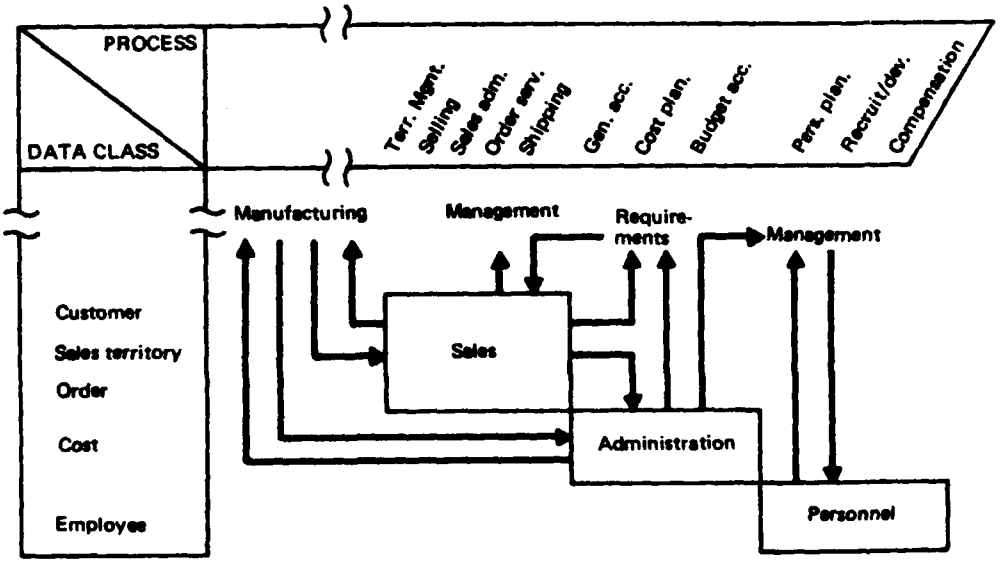


Figure 8. Developing the information architecture

Developing Recommendations and Action Plan

The action plan is designed to help make decisions regarding recommended follow-on projects, each of which will have been defined as a result of the activities in the areas of architectural priorities and IRM recommendations. The action plan brings these two areas together to identify specific resources, schedules, and interactions of the projects.

The action plan also identifies the steps that must be taken before starting each of the follow-on activities. These steps must be examined and sized before start dates can be put on the follow-on projects, so that management can give the direction needed to move immediately into those preparatory activities.

Reporting Results

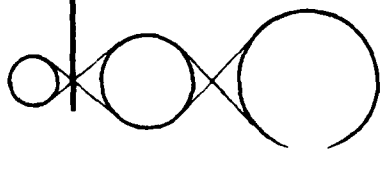
The final results of the BSP study are presented to executive management in two *forms:* a written report and a presentation. The aim of each is to obtain executive management commitment to implementing the recommendations of the study.

The report provides the basis for the executive presentation and the distribution of the final results to those people designated by the sponsor. After the executive presentation, which is normally given by the team leader, all other relevant material that is not a part of the report should be indexed and filed for ready availability in follow-on projects.

The plan that results from a BSP study should not be considered unchangeable; it simply represents the best thinking at a certain point in time. The real value of the BSP approach is that it offers customers the opportunity to (1) create an environment and an initial plan of action that can enable a business to react to future changes in priorities and direction without radical disruptions in systems design, and (2) define an information system function to continue the planning process.

The success of any future information system investment can be predicated upon an organization's ability to develop a comprehensive long-range plan based on its own unique requirements. IBM's Business Systems Planning is an effective method for developing such a plan – one that can provide information in the form needed and is flexible enough to accommodate change.

For further information about Business Systems Planning and its application to your organization's information systems requirements, contact your IBM Data Processing representative.



APPENDIX C

PLANNING RESOURCE WORKSHEET

Planning Resources Worksheet

Section 1. Meeting Room: _____

Location: _____ Contact: _____

Section 2. Planning Team

Name	Title/Department	Location	Phone

Section 3. Secretarial Support

Name	Title/Department	Location	Phone

Section 4. Other Resources/Services

Name	Phone

APPENDIX D

HOSPITAL BUSINESS FUNCTION WORKSHEET

Business Function Worksheet (Side One)

Department: _____ Location: _____ Manager: _____

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

_____

_____

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

_____

_____

_____

_____

_____

_____

_____

_____

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source		C. Form
	Name dept. within company	Name source outside company	(e.g. memo, phone, computer printout)

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination		C. Form
	Name dept. within company	Name destination outside company	(e.g. memo, phone)

Section 5. Problems

List any problems or obstacles to the performance of this function.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

B. What activities would you (or your employees) like to spend more time on?

C. What activities could you delegate to administrative personnel if they had additional time available?

D. What changes would you make to improve the operation of your department?

APPENDIX E

PERSONNEL DATA SHEET

Personnel Data Sheet

Section 1. Department/Functional Unit: _____

Location: _____

Section 2. Employee Categories **Section 3. Employee Cost Information**

A. Job Titles/ Codes Included in Category	B. Categories	C. Number of Employees in Category	A. Average Annual Salary	B. Average Annual Benefits	C. Average Annual Overhead	D. Average Cost per Employee (A + B + C)
	Executives					
	Managers					
	Professionals					
	Secretaries					
	Clerks					

APPENDIX F

TYPICAL EMPLOYEE ACTIVITY PROFILE

Typical Employee Activity Profiles

Percent of Workday Spent in Each Activity

Activities	Executives	Managers	Professionals	Secretaries	Clerks
Creating Documents:					
• Writing (include revising, editing, filling in forms)	10%	17%	18%	4%	15%
• Typing	—	—	—	37	8
• Dictation (to secretary or machine)	6	3	1	6	—
• Proofreading (documents that have been typed)	2	3	3	4	2
Communicating:					
• Reading (exclude proofreading, searching, incoming mail)	9	7	6	2	3
• Telephone (exclude dictation)	14	12	11	11	9
• Meetings (scheduled or unscheduled, at or away from your desk)	21	12	7	—	2
• Conferring with secretary/manager (exclude dictation)	3	2	1	4	—
Analyzing:					
• Examining/calculating	2	6	10	—	12
• Planning/scheduling (your work or others')	5	5	3	3	2
• Using a terminal	—	1	10	1	6
Administering:					
• Mail handling (opening and reading incoming mail; exclude answering)	6	5	3	9	3
• Filing (putting information into files; include your own desk/office files)	1	2	3	5	6
• Copying (include walking to and from, waiting)	—	1	1	6	4
• Retrieving files (taking information from files; include your own desk/office files)	2	3	1	3	2
• Searching for information (files, manuals, books, publications, and people)	3	6	6		10
• Traveling (away from your home location)	13	7	2	—	—
• Collating/sorting	—			2	5
Other	3	7	11	3	11
Total	100%	100%	100%	100%	100%

APPENDIX G

SAMPLE INTERVIEW FORMAT

Office Systems Interview Format

Interviewee: _____
(use identification number if appropriate)

Date: _____ Time: _____

1. Describe your job. _____

2. What information do you need to do your job? _____

3. What obstacles or problems inhibit you in doing your job?

What is needed to eliminate or reduce these problems?

4. What activities would you like to spend more time on? _____

5. What activities could you delegate to administrative personnel if they had additional time available?

6. What changes would you make to improve the operation of your department?

APPENDIX H

EMPLOYEE INFORMATION TRACKING FORM

Employee Information Tracking Form

Section 1. Employee Control Number or Name	Section 2. Questionnaires/Diaries				Section 3. Interviews				
	Sent	Returned	Reviewed	Processed	Date	Time	Interviewers	Completed	Documented

APPENDIX I

CSD OFFICE SYSTEMS ANALYSIS WORKSHEETS

MEDDAC CREED

MEDDAC CREED

FULFILLING	Emphasize the importance of each job in the accomplishment of the overall mission. Strive to provide work that stimulates personal and professional growth.
BALANCED CARE	Identify the needs of the individual, the organization and society. Act on the needs. Provide feedback.
HUMANISTIC	Take the initiative to demonstrate care and understanding in our daily interactions and attitudes. Minimize inconveniences without compromising. Take time to offer information about procedures and policies. Treat others as we would have them treat us. Receive all patient/consumers in a courteous and professional manner, regardless of their need.
SUCCESSFUL	Meet all accreditation standards. Support Fort Belvoir goals and activities. Constantly strive for improvement (make the best better). Maintain strong support for educational programs. Improve both community and staff perceptions of the organizational image. Improve the community awareness of MEDDAC activities and procedures.
HARMONIOUS	Be teamwork oriented in order to work together and accomplish the mission. Be courteous in our dealings with each other. Be flexible in our endeavors to assist the activities to perform their respective missions. Dedicate ourselves to serve each other as well as the patient. Communicate our capabilities and needs to others. Keep each other informed.
PURPOSEFUL	Be aware of what our goals and objectives are in order to maintain a sense of direction. Be dedicated toward accomplishment of our mission through the attainment of our goals. Be concerned that the patient is getting optimal care. Communicate our needs to all involved as these needs lead us to achieve our objectives. Maintain a structured, though adaptable and flexible, organization in order to attain our goals. Be concerned that we are accomplishing our missions.

SIGNIFICANT PROBLEMS

PROBLEM 1

COMMUNICATION

Problems-

1. Post phone system outdated - negatively impacts on Patient Appointments.
2. Phone courtesy is a problem in clinics.
3. Phones not answered between 1200 and 1300 hours.
4. Not enough people to handle patients and answer phones.
5. Beeper system doesn't function in hospital.
6. Pager can't be heard in all areas of hospital.
7. Inefficient distribution system (decentralized).
8. Lots of garbage in distribution - bogs down system - important documents often lost.
9. Relevant information doesn't get to the right people.
10. Clerks, GS-3s, PFC's and 71L's work in message center. Don't know hospital system. They don't know subject matter.
11. No vehicle to get information across to clinical staff (specifically admin info).
12. Shift workers don't get info.
13. Image of Commander's Call is bad - poorly attended.
14. Pertinent information is disregarded.

PROBLEM 2

EMERGENCY TREATMENT ROOM

USED AS WALK-IN CLINIC AFTER DUTY HOURS

Problem -

Emergency Room used as walk-in clinic after duty hours.

Problem Statement -

The overload of patients in the Emergency Room, after duty hours, overloads the entire hospital system, (to include next day referrals to specialty clinics) at a time when we are least prepared to deal with the volume of patients. This leads to long waiting times, increased stress on staff and physicians, compromises the quality of medical care offered, and possibly results in legitimate emergencies getting lost in the shuffle. Patients really needing treatment may leave before treatment can be given, or possibly never come in to the Emergency Room because of the likelihood of a long waiting time. This also results in the decreased morale of the staff, increased patient dissatisfaction and increases the number of complaints, and may compromise physician's and staff's training for the sake of productivity.

Recommendations -

1. Consider the possibility of contracting out ER services.
2. Assign ER physician/manager who is responsible for improving triage, improving patient flow and training staff and residents.
3. Improve access to regular clinic system by improving Patient Appointments.
4. Establish priority for funding the remodeling of Emergency Room.
5. Reallocate both non-physician and physician resources to the ER.
6. Remove the requirement that all patients be seen by a physician in the ER.
7. Ask for definition of the catchment are by the Regional Commander.

PROBLEM 3

ADMIN SUPPORT TO CLINIC AREAS

Problem -

1. Lack of a coordinated administrative support to the ambulatory and clinical areas creates a barrier to quality medical care.

    - o clinics may be taking on too much responsibility for duties the orderly room and Personnel should do.
    - o too many distribution systems.

2. Medical records not being properly done.

    - o lab and x-ray reports not getting back to the record and to the physician.
    - o records left in clinics.
    - o improper ID of lab/x-ray reports by physician/clinics.
    - o someone should bird dog record flow and maintenance (quality assurance).

Examples -

Poor communications flow, timeliness of information, improper chart maintenance.

PROBLEM 4

IMPROVE PUBLIC IMAGE

Problems -

1. Negative comments from customers. System fails to meet expectations of patients.

    - o long wait for everything (elective surgery, appointments, etc.).
    - o lost medical records.
    - o unavailability of certain services (inpatient psychiatry, routine animal care, etc.).
    - o difficult access to Patient Appointment System.
    - o poor phone system.

2. Negative accentuated.

    - o ten attaboys wiped out out by 1 aw-- sh--.
    - o no publication of attaboys (good press).

3. Poor physical plant.

    - o telephones - can't return patient calls.
    - o poor parking in immedicate area.
    - o wrong phone listings for DeWitt staff or the system.
    - o poor patient exam areas.
    - o inadequate waiting area.

4. Patient Appointments.

    - o phone system poor (on hold, busy, etc.).
    - o can't get appointments (not enough of them or please call back later).

5. Poor customer relations.

    - o Not enough people for interfacing with patients in OR.
    - o unfriendly/unhelpful responses by information/receptionist personnel.
    - o ancillary staff needs to be more discrete when not working.

PROBLEM 5

INTERDISCIPLINARY CONFLICT

Probelms - (Group 2)

1. Pressure to perform.
2. Uneven distribution of influence e.g., Chief of Nursing sits on Executive Committee.
3. Nursing Service controls OR budget.
4. Breakdown in authority, respect for physicians -e.g., physicians don't receive information from nurses, they are bypassed.
5. Don't have control over people who work for you - they're controlled by the Department of Nursing. Nursing pulls people and don't notify physicians.
6. Poor communication/coordination.
7. Conflicting priorities - lack understanding on other functions/activities priorities.

Problems - (Group 3)

1. We lose sight of the large picture.
2. Priorities and territorialism.
3. Conflict between services.
4. Too much supervision in one department - too many chains.
5. "That's not my job."

Recommendations -

1. If there are interdisciplinary conflicts, they can be solved by strong leadership.
2. Empathy - see the other persons point of view.
3. Resolution should be attempted at the lowest level.

PROBLEM 6

DUAL STANDARDS (OFFICER/ENLISTED)

Problems - (Group 2)

1. PT - minimal attendance by officers, even though it was mandatory.
2. Weight Control - emphasis on weight control for enlisted, not officers.
3. Training - e.g. "firing" - time and dollars to train enlisted.
4. Discipline - no visibility relative to punishment for officers who do not meet standards.

Recommendations - (Group 2)

1. Set $ limits on TDY for enlisted - set aside a fund.
2. More emphasis on local training for enlisted.
3. Explain changes in physical fitness regulations to everyone.
4. More involvement by physicians during inspections.
5. Joint seminars for enlisted by area military commands.

Problems - (Group 3)

1. There is a dual standard fo enforcement between EM and officers in terms of training, appearance, weight control, duty and discipline.
2. Military standards, AR 670-1, are not being enforced equitably throughout DeWitt Army Community Hospital.

Recommendations - (Group 3)

1. Department Chiefs should remind their people of Standards. Every senior officer should remind junior officer; set examples.
2. Distribution of TDY funds for officers and enlisted.

OFFICE SYSTEMS ANALYSIS ANNOUNCEMENT

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
	OFFICE SYSTEMS ANALYSIS STUDY

TO	FROM	DATE	CMT 1
All CSD Employees	CPT O'Keiff C, CSD	17 May 1985	

1. DeWitt Army Community Hospital has begun a major effort to define requirements, develop an overall plan, and recommend implementation steps in the area of office systems. We will be using a proven planning methodology provided by the IBM Corporation. The Clinical Support Division will be the specific area of focus of the study effort. Special emphasis will be placed on the potential for increased productivity of managerial and professional personnel.

2. The purpose of this memo is to indicate my endorsement and support of this office systems study effort and to urge you to cooperate with requests for office productvity gains within our division. A thorough understanding of how we are organized and specifically how we accomplish our jobs is necessary for success in this study.

3. In the next few weeks, members of the Office Systems Study Team will be contacting many people throughout the organization and scheduliing interview sessions. Some of you may be asked to complete a questionnaire about your activities. We would appreciate complete, honest answers, all of which will be confidential. Please give the Team members your complete cooperation and take advantage of this opportunity to obtain an improved working environment.

JAMES O'KEIFF
CPT(P), MSC
C, CSD

PLANNING RESOURCES

Planning Resources Worksheet

Section 1. Meeting Room: Headquarters Conferance Room

Location: DeWitt Army Community Hosp **Contact:** Ms. Barbara Darden

Section 2. Planning Team

Name	Title/Department	Location	Phone
MAJ Alfred Santos	Admin. Resident	DeWitt HQ	6641255
CPT Brenda Chewning-Clark	CSD Project Officer	CSD	6643443

Section 3. Secretarial Support

Name	Title/Department	Location	Phone
SP5 Roberts	Adjutant's Office	DeWitt HQ	6641255

Section 4. Other Resources/Services

Name	Phone
LTC Larry Bosetti, WRAMC AMO	5763350
LTC Charles P. Hernandez, WRAIR AMO	5763151
LTC Roger L. Brown, TRIMIS	5762121
CPT Frank A. Horna, AMEDDPERSA AMO	6935390

Personnel Data Sheet

Section 1. Department/Functional Unit: Clinical Support Division

Location: _____

Section 2. Employee Categories **Section 3. Employee Cost Information**

A. Job Titles/ Codes Included in Category	B. Categories	C. Number of Employees in Category	A. Average Annual Salary	B. Average Annual Benefits	C. Average Annual Overhead	D. Average Cost per Employee (A + B + C)
C, CSD	Executives	1	$36,000	-	-	-
C, Amb Care Br QA/RM PRO C, CAS	Managers	4	$20,000	-	-	-
	Professionals					
CSD Amb Care Br PRO	Secretaries	3	$13,500	-	-	-
CAS	Clerks	6	$12,000	-	-	-

Employee Information Sources Worksheet

Section 1. Employees **Section 2. Information Sources** Clinical Support Division

A. Department	B. Employee Categories	Recommended			D. Questionnaire (By Managers)	E. Questionnaire (By Employees)	F. Diary
		A. Typical Profile	B. Previous Study	C. Interview			
Office of the Chief CSD	Chief	x		x			
	Secretary	x		x			
Quality Assurance and Risk MGT	Manager	x		x			
Ambulat Care Branch	Chief	x		x			
	Secretary	x		x			
Central Appts System	Manager	x		x			
	Clerk	x		x			
Patient Rep. Office	Manager	x		x			
	Secretary	x		x			

CSD FUNCTIONS

Office of the Chief

Business Function Worksheet (Side One)

Department: CSD Location: Office of Chief Manager: CPT O'Kiefe

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Administrative Support to the Clinical Departments and Outpatient Clinical activities.

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

QA/RM program management: Budget-programing and execution; Responding to patient and staff complaints; Scheduling civilian contract physicians; Managing the Central Appointments System; Monitoring workload gathering procedures; Acting as an administrative consultant to the clinical departments and services; Monitoring the TDY budget.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source		C. Form
	Name dept. within company	Name source outside company	(e.g. memo, phone, computer printout)
QA/RM	All Depts		Occurance Minutes, Screening
Budget	Comptroller		Memo
Pt Complaints		Patients	Letters/Calls
Contract M.D.s		HSC	Letters/Messages
Central Appts System	All Clinics		Schedules
Workload	PAD		Report

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination		C. Form
	Name dept. within company	Name destination outside company	(e.g. memo, phone)
QA/RM Reports	QA Committee	HSC, OTSG	Letter
Budget-Request for Funds, COB. Mid Year	Comptroller		Reports
Patient Complaints		Patient	Letters
Contract M.D.s Summary	Comptroller		Reports
Central Appts System- Monthly Workload	DACH HQ		Report
Workload	UR Committee		Report

Section 5. Problems

List any problems or obstacles to the performance of this function.

All information is based on manual calculations from data manually stored. This problem prevades the entire hospital. If the data is stored by a computer it is not retrieveable in a useful format.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

N/A

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

Workload by clinic work center, supply expenses, productive hours by category of personnel, i.e. clerical, nursing, physician, etc.
Information on clinical administrative procedures and problems.
Current and accurate information from hospital adminstrative elements on the status of clinical requests for administrative and logistical support.

B. What activities would you (or your employees) like to spend more time on?

Planning, problem solving and direct support to the outpatient clinics.

C. What activities could you delegate to administrative personnel if they had additional time available?

Mail handling, phone calls, copying, searching for information.

D. What changes would you make to improve the operation of your department?

Relocate the Office of the Chief, CSD to a less heavily trafficed area.
To redefine the role of the Clinical Support Division (CSD) at DeWitt.

Typical Employee Activity Profiles

Office of the Chief, CSD

Percent of Workday Spent in Each Activity

Activities	Executives	Managers	Professionals	Secretaries	Clerks
Creating Documents:					
• Writing (include revising, editing, filling in forms)	16			4	
• Typing	—	—	—	41	
• Dictation (to secretary or machine)	0			0	—
• Proofreading (documents that have been typed)	2			0	
Communicating:					
• Reading (exclude proofreading, searching, incoming mail)	9			4	
• Telephone (exclude dictation)	20			15	
• Meetings (scheduled or unscheduled, at or away from your desk)	15			—	
• Conferring with secretary/manager (exclude dictation)	3			4	—
Analyzing:					
• Evaluating/calculating	2			—	
• Planning/scheduling (your work or others')	5			3	
• Using a terminal	—			1	
Administering:					
• Mail handling (opening and reading incoming mail; exclude answering)	6			9	
• Filing (putting information into files; include your own desk/office files)	1			5	
• Copying (include walking to and from, waiting)	—			6	
• Retrieving files (taking information from files; include your own desk/office files)	8			3	
• Searching for information (files, manuals, books, publications, and people)	10			—	
• Traveling (away from your home location)	0			—	—
• Collating/sorting	—	—	—		
Other	3			3	
Total	100%	100%	100%	100%	100%

Ambulatory Care Branch

Business Function Worksheet (Side One)

Department: CSD - ACSB Location: Rm. B-115 Manager: CPT Nakazawa

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Manage the hospital budget for the Clinical Services work center areas.

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

Receive Cost runs
Identify the amount obligated by each cost center
Compare the amount obligated to the amount allocated.
Provide managerial assistance to those areas that overspend or significantly underspend.
Also assist with mid-year review and other budget projects.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source		C. Form
	Name dept. within company	Name source outside company	(e.g. memo, phone, computer printout)
Cost Runs	Comptroller		Computer printout
Fiscal Allocations	Comptroller		Memo
Document Register	Cost Centers		Document Book

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination		C. Form
	Name dept. within company	Name destination outside company	(e.g. memo, phone)
Cost Center Allocation	CSD/ACSB		Memo
Total Obligation for period & FY	CSD/ACSB		Computer Printout
DF requesting additional funds	CSD/ACS P		Memo

Section 5. Problems

List any problems or obstacles to the performance of this function.

A major problem is that the Clinical Services area receives to little allocation from the Comptroller. Late receipt of the cost runs. Too much time spent on retrieval of cost runs information.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

Cost Centers obligating lose to their allotments but not overspending.

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

Each budget center manager must inform me of their status with respect to time and money. It is paramount that each cost center manager is properly informed and adequately trained with those budgeting skills necessary to carry out the basic functions as cost center manager.

B. What activities would you (or your employees) like to spend more time on?

Computer equipment
Going to the respective cost centers to train and keep those managers abreast of the latest budgeting changes and status.

C. What activities could you delegate to administrative personnel if they had additional time available?

When adequately trained, administrative personnel could take the tasks of training cost center managers.

D. What changes would you make to improve the operation of your department?

Automation of budget and Patient Appointment areas would make ACSB and CSD budget efficient.

Business Function Worksheet (Side One)

Department: CSD - ACSB Location: Rm. B-115 Manager: CPT Nakazawa

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Provide management input on Outpatient Workload.

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

Determine total workload for each clinic.
Determine total workload (Outpatient)
Assimilate workload of each DEPARTMENT.
Provide input as to dangers of too little or too much workload.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source		C. Form
	Name dept. within company	Name source outside company	(e.g. memo, phone, computer printout)
Composite Workload Data	PAD		Memo

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination		C. Form
	Name dept. within company	Name destination outside company	(e.g. memo, phone)
Department Workload Data	CSD		Computer graph & Data

Section 5. Problems

List any problems or obstacles to the performance of this function.

The Hewlett Packard Computer is too time consuming and difficult to learn.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

N/A

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

N

B. What activities would you (or your employees) like to spend more time on?

Determining accurate retrieval of workload data.

C. What activities could you delegate to administrative personnel if they had additional time available?

The production of graphs and data;

D. What changes would you make to improve the operation of your department?

Centralized computer system with terminals.

Business Function Worksheet (Side One)

Department: CSD - ACSB Location: Rm. B-115 Manager: CPT Nakazawa

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Provide management support to the outpatient clinics.

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

Manage and operate the Preperation for Overseas Replacement Program.

Manage and coordinate the School Physicals Program.

Manage and coordinate the Pre-Marital Bloodwork Program.

Coordinate and develop the Blood Donor Program.

Manage, coordinate, and develop the Patient Awareness Program.

Provide administrative support to Plans, Operations and Training Division for emergency Preparedness.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source		C. Form
	Name dept. within company	Name source outside company	(e.g. memo, phone, computer printout)
Form 4036-R;Immunization R.C.C. Med.Rec.	ACSB	Unit	form; record
VA state form; Immunization T.C.D.	ACSB	Mil. Dep.	form; record
Individual State forms; bloodwrok	ACSB/LAB	Mil. AD/Dep.	form; lab slip
Minimum/Maximum #donors	CSD/ACSB	WRAMC	DF; Memo
Lecture materials/ tapes, program mats.	ACSB	HSC	Memo; tapes
Emergency Preparedness Plan	CSD/ACSB PO&T	DA/HSC	Document

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination		C. Form
	Name dept. within company	Name destination outside company	(e.g. memo, phone)
Determine if service member is qualified.	ACSB	CPC	Form
Determine if dependant is physically fit.	ACSB	VA Schools	Form
Determine qualifications of SM.	ACSB/LAB	State in Question	Form
Number of blood donors.	ACSB	WRAMC	Memo
Patient Awareness Information	ACSB	N.A.	Lectures
CSD Preparedness Plan	CSD	N.A.	Document

Section 5. Problems

List any problems or obstacles to the performance of this function.

Lack of Manpower to accomplish all the tasks in an exceptional manner.
Due to the loss of a CSD Officer's slot, CSD is truly over tasked at this time.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

Blood donors - percent of 50 total.
School physicals - percent of 250 total.

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

OIC at this time.

B. What activities would you (or your employees) like to spend more time on?

The Patient Awareness Program.

C. What activities could you delegate to administrative personnel if they had additional time available?

All of the mentioned activities!

D. What changes would you make to improve the operation of your department?

Increase personnel strength.
Decrease less inpatient tasks (additional duties).

Typical Employee Activity Profiles

Ambulatory Care Branch

Percent of Workday Spent in Each Activity

Activities	Executives	Managers	Professionals	Secretaries	Clerks
Creating Documents:					
• Writing (include revising, editing, filling in forms)		17		4	
• Typing	—	—	—	37	
• Dictation (to secretary or machine)		0		0	—
• Proofreading (documents that have been typed)		6		4	
Communicating:					
• Reading (exclude proofreading, searching, incoming mail)		7		2	
• Telephone (exclude dictation)		5		11	
• Meetings (scheduled or unscheduled, at or away from your desk)		12		— 1	
• Conferring with secretary/manager (exclude dictation)		2		4	—
Analyzing:					
• Evaluating/calculating		12		— 5	
• Planning/scheduling (your work or others')		6		3	
• Using a terminal	—	1		0	
Administering:					
• Mail handling (opening and reading incoming mail; exclude answering)		5		9	
• Filing (putting information into files; include your own desk/office files)		2		5	
• Copying (include walking to and from, waiting)	—	1		6	
• Retrieving files (taking information from files; include your own desk/office files)		4		3	
• Searching for information (files, manuals, books, publications, and people)		6		— 1	
• Traveling (away from your home location)		7		—	—
• Collating/sorting	—	—	—	2	
Other		7		3	
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Office Systems Interview Format

Interviewee: Ms. Carole Hawk, Ambulatory Care Branch
(use identification number if appropriate)

Date: 28 May 1985 Time: 1511

1. Describe your job. Management of the POR Program and the Marital Blood Test Program. Controls mail, orders supplies, maintains manpower reports and time cards. Recorder for the Community Health Education Committee. Typing support and budget cost run analyst for the hospital clinics.

2. What information do you need to do your job? Medical records, supply requisitions, hours worked by employees, DA Form 4036-R (POR Medical/Dental worksheet)

3. What obstacles or problems inhibit you in doing your job?

Not getting the medical records from the outlying clinics.

What is needed to eliminate or reduce these problems?

Improve clinic response to records requests.

4. What activities would you like to spend more time on? Budget preparation and cost runs, and support to the clinics.

5. What activities could you delegate to administrative personnel if they had additional time available?

Completing DA Form 4036-R.

6. What changes would you make to improve the operation of your department?

Insure consistant fill of the NCOIC's position for the Ambulatory Care Branch.

Quality Assurance/Risk Management

Business Function Worksheet (Side One)

Department: QA/RM Location: CSD Manager: Jackie Mummert

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Administrative management of the hospital's Quality Assurance Program and Risk Management Program.

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

Assist in the development and operation of Department/Serivce QA Committees, as well as patient care assessment/utilization review. Develop audit criteria. Review Department/Service QA activity reports, prepare agendas, record, report to the MEDDAC QA Committee. Maintain unusual occurance log; occurrence screening checklists and data. Prepare reorts on provider profiles. Investigate, identify potentially compensible events. Maintain litigation/potential litigation files.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source		C. Form
	Name dept. within company	Name source outside company	(e.g. memo, phone, computer printout)
QA/patient care assessment reports	All Depts/SVCS		Memo, Minutes
Occurence Screening Checklist	All Nursing Units		Form
DA 4106(Report of unusual Occurence)	Pt. Care Areas		Form
Litigation Reports-Data base	Post JAG HSC JAG		Memo, phone
Potentially Compensable events	All Care Areas		Memo, form, phone

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination		C. Form
	Name dept. within company	Name destination outside company	(e.g. memo, phone)
Minutes--Dept/Svc Activity Reports	All QA offices		Memo
Physician Profile Report	Cred. Comm.	HSC, OTSG	Letter
Mortality Data Report	Cred. Comm.	HSC, OTSG	Letter
Potentially Compensable Events Report		JAG	Memo

Section 5. Problems

List any problems or obstacles to the performance of this function.

Compilation of information from checklists of occurrences and reports of unusual incidents, as well as problems to be retrieved in a format readily accessible to analysis at a later date.

Response to short fuse suspenses from higher headquarters dealing with manpower surveys, initiation of new QA programs etc.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

N/A

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

Electronic data storage and retrieval to assist in problem, incident and occurence tracking.

B. What activities would you (or your employees) like to spend more time on?

Development of hospitalwide patient care assessment toward a functional QA program. Analysis of incidents and occurrences in order to insure corrective action is taken. Development of effective systems for identifying, investigating and analyzing potentially copensable events and litigation cases.

C. What activities could you delegate to administrative personnel if they had additional time available?

Collecting, extracting and maintaining data from incident reports. Preparation of reports, maintenance of files, recording and transcribing committee minutes.

D. What changes would you make to improve the operation of your department?

Move to an office with less open surroundings.

Typical Employee Activity Profiles

QA/RM

Percent of Workday Spent in Each Activity

Activities	Executives	Managers	Professionals	Secretaries	Clerks
Creating Documents:					
• Writing (include revising, editing, filling in forms)		20			
• Typing	—	—	—		
• Dictation (to secretary or machine)		0			—
• Proofreading (documents that have been typed)		3			
Communicating:					
• Reading (exclude proofreading, searching, incoming mail)		10			
• Telephone (exclude dictation)		9			
• Meetings (scheduled or unscheduled, at or away from your desk)		12		—	
• Conferring with secretary/manager (exclude dictation)		2			—
Analyzing:					
• Evaluating/calculating		6		—	
• Planning/scheduling (your work or others')		5			
• Using a terminal	—	1			
Administering:					
• Mail handling (opening and reading incoming mail; exclude answering)		5			
• Filing (putting information into files; include your own desk/office files)		2			
• Copying (include walking to and from, waiting)	—	1			
• Retrieving files (taking information from files; include your own desk/office files)		4			
• Searching for information (files, manuals, books, publications, and people)		6		—	
• Traveling (away from your home location)		7		—	—
• Collating/sorting	—	—	—		
Other		7			
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Central Appointments System

Business Function Worksheet (Side One)

Department: PAS Location: _____ Manager: Jis Hammett

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Patient Appointments

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

Appointment clerks answer the telephones and ascertains nature of illness for triaging to the proper clinic. Appointments clerk determines whether the patient is new to the clinic and has a consult, or if patient has been seen for the same condition within the last year. If the patient is new the clerk must check for the first available new slot with any docter within that clinic. If the patient is a return, the appointment clerk must query patient to find out what doctor was seen and what time frame patient is to return to the clinic. Using this information the appointment clerk then checks the doctors schedule for a return appointment.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source: Name dept. within company	B. Source: Name source outside company	C. Form (e.g. memo, phone, computer printout)
Check doctors schedule for new patient slots available	CAS		Memo
Check doctors schedule for return slots within time frame requested by the doctor	CAS		Memo

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination: Name dept. within company	B. Destination: Name destination outside company	C. Form (e.g. memo, phone)
Doctors name	All OP Clinics/OP Records		Memo / Phone
Clinic	OP Records		Memo
Date of appointment	All OP Clinics/OP Records		Memo / Phone
Time of appointment	All OP Clinics/OP Records		Memo / Phone
Patients name	OP Records/OP Clinics		Memo
Sponsors social security number	OP Clinics/OP Records		Memo
Patient daytime telephone number	OP Clinics/OP Records		Memo

Section 5. Problems

List any problems or obstacles to the performance of this function.

Doctors appointment sheets are kept in a revolving bin and only one clerk at a time can use this piece of equipment. Other clerks must keep their patients on hold until the bin is free.

Return patients fail to remember doctor originally seen.

Patients call PAS prior to appointment because they failed to remember the Doctors name, appointment day, time etc,.

We could solve some of these problems if we had sequencers with tape recorders, more telephone lines and more appointments.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

N/A

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

Lead medical clerk assigns work to all PAS Clerks and insures that all patients are treated in a courtious and professional manner, assigns PAS Clerks to specific clinics, takes care of the training needs of the clerks and resolves all disputes involving PAS and clinics, doctors or patients.

B. What activities would you (or your employees) like to spend more time on?

The clerks need more time to spend working on their schedules for the doctors, to visit clinic regularly to observe the reactions of the patients and their reactions to the clinics

C. What activities could you delegate to administrative personnel if they had additional time available?

None - the work is equally delegated in PAS

However, if we were automated the clerk typist could take over the no show list of patients and the weekly waiting time for patients appointments.

D. What changes would you make to improve the operation of your department?

I would like to see patient appointments automated with a common data base in all clinics.

Business Function Worksheet (Side One)

Department: PAS Location: _____ Manager: _____

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Coordinate and obtain available appointments from clinics

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

PAS receives all master schedules from the department chief at least five days prior to the opening date. PAS goes over the master schedules with the chief and has all changes approved prior to opening. PAS makes sure that all doctors in the department is in complete compliance with the schedule.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source: Name dept. within company	B. Source: Name source outside company	C. Form (e.g. memo, phone, computer printout)
Hours and days of clinic operations for appointments	Clinic		Memo
Time intervals for scheduling patient to each doctor	Clinic		Memo
Roster of Physicians assigned	Clinic		Memo
Limitations of any physicians availability for scheduling patients	Clinic		Memo

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination: Name dept. within company	B. Destination: Name destination outside company	C. Form (e.g. memo, phone)
Appointment clerk writes doctors name on appointment sheet and lists time and date the doctor is available for patient appointments	PAS		Memo

Section 5. Problems

List any problems or obstacles to the performance of this function.

Doctors schedules are seldom turned into PAS on time. The schedules do not always reflect the doctors leave and TDY. Therefore the clerks in PAS spends 20 - 30% of their time cancelling and rescheduling patients.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

N/A

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

Same as on Patient Appointment Sheet

B. What activities would you (or your employees) like to spend more time on?

C. What activities could you delegate to administrative personnel if they had additional time available?

D. What changes would you make to improve the operation of your department?

Business Function Worksheet (Side One)

Department: PAS Location: _____ Manager: _____

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

Daily Workload Data

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

The senior medical clerk records the number of calls answered, number of appointments made, number of unfilled patient demands, number of cancellations by clinic and patients. Insures appointment cards are being transcribed properly by samplying cards from each clerk and also records the number of appointments for doctors of each clinic.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source: Name dept. within company	B. Source: Name source outside company	C. Form (e.g. memo, phone, computer printout)
Senior medical clerk takes the total patients recorded, number of open appointments, number of cancellations by patients only, number of hours each Family Practice doctor and each clinic as a whole sees patients.	PAS		Memo

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination: Name dept. within company	B. Destination: Name destination outside company	C. Form (e.g. memo, phone)
The report contains the number of appointments, number of cancellations and number of " no show " patients for the month.	Col. Korte		Memo
	Col Ossario		"
	Col Hoover		"
	Maj. Santos		"
	Cpt. Nakazawa		"

Office Systems Interview Format

Interviewee: Ms. Brenda Bartlow, Central Appointments System.
(use identification number if appropriate)

Date: 30 May 1985 Time: 0945

1. Describe your job. Prepare the master clinic appointment schedule and then schedule all call-in patients. Work around a rotating appointments bin. Also handle physician and patient appointment cancelations.

2. What information do you need to do your job? ~~Available appointments, TDY and Leave~~ inforamtion. Patient information for the appointment schedule. Knowledge of hospital operations to respond to caller information.

3. What obstacles or problems inhibit you in doing your job?	What is needed to eliminate or reduce these problems?
Not enough appointments	Automated appointments bin.
Calling back patients and physicians	Rotary phone system.
Angry patients.	Better reponse from clinics and under-
The mechanical appoitments bin.	~~standing from the physicians.~~
	~~Improved psot phone system.~~

4. What activities would you like to spend more time on? Communicating with the clinics. Calling back patients.

5. What activities could you delegate to administrative personnel if they had additional time available?

N/A

6. What changes would you make to improve the operation of your department?
Automate the Central Appointments System.

Typical Employee Activity Profiles

Central Appointments System

Percent of Workday Spent in Each Activity

Activities	Executives	Managers	Professionals	Secretaries	Clerks
Creating Documents:					
• Writing (include revising, editing, filling in forms)		42			20
• Typing	—	—	—		10
• Dictation (to secretary or machine)		0			—
• Proofreading (documents that have been typed)		3			3
Communicating:					
• Reading (exclude proofreading, searching, incoming mail)		9			3
• Telephone (exclude dictation)		20			40
• Meetings (scheduled or unscheduled, at or away from your desk)		2		—	0
• Conferring with secretary/manager (exclude dictation)		12			—
Analyzing:					
• Evaluating/calculating		1		—	0
• Planning/scheduling (your work or others')		5			20
• Using a terminal	—	0			0
Administering:					
• Mail handling (opening and reading incoming mail; exclude answering)		0			0
• Filing (putting information into files; include your own desk/office files)		1			0
• Copying (include walking to and from, waiting)	—	0			0
• Retrieving files (taking information from files; include your own desk/office files)		4			0
• Searching for information (files, manuals, books, publications, and people)		0		—	2
• Traveling (away from your home location)		0		—	—
• Collating/sorting	—	—	—		2
Other		0			0
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Patient Representative Office

Business Function Worksheet (Side One)

Department: Patient Representative Location: Pharmacy Lobby Manager: Pam Duncan

Section 1. Major Business Function

Describe the major function carried out by your department. Use additional sheets if more than one major function is performed.

1. Complaint Investigation 2. Compliment processing
3. Information/Directions 4. Patient handouts

Section 2. Steps Performed

Describe briefly the major steps performed by members of your department to carry out this function.

1. Patient interviews, data gathering, investigation with staff, follow up with patient, statistical entry, file.
2. Statistical entry,acknowledgement letter, copies to Dept. Chief, post on bulletin board, file.
3. Gather and update information, compile in Directory format, supply to patients.
4. Gather information, publish, distribute, update.

Section 3. Information Required

Describe the information required to perform the steps listed in Section 2.

A. Information Required	B. Source: Name dept. within company	B. Source: Name source outside company	C. Form (e.g. memo, phone, computer printout)
Investigation and interviewing technique	Via telephone or in person	Patient,CO's DAIG, Congressionals,families	PRO Encounter Forms (313/342)
Knowledge of Hospital organization, policies and procedures	Dept Chief, SOP's		DF's,Questionnaires phone
PRO Office Procedures	SOP's		
Composition skills,grammar,spelling,etc.		Effective Writing Courses (Ed. Center)	DF's,letterhead,
Army Functional Filing System,typing skills			supplies,work requests,dictionary, correspondence manuals, workshops training sessions.

Section 4. Information Produced

Describe the information produced and distributed by your department.

A. Information Produced	B. Destination: Name dept. within company	B. Destination: Name destination outside company	C. Form (e.g. memo, phone)
Completed PRO encounter Forms 313/342	~~Command Group~~	~~Patients~~	~~Forms 313/342~~
Monthly reports	Dept. Chief	Referring	DF
QA Studies	QA Committee	Agencies	Form
~~Patient Guide~~		(Pentagon/Navy Yard/Quantico)	Handbook
Communicators			~~Single page~~ handouts
Welcome Packets			Multiple handouts
Patient Responses to complaints, ~~compliments, etc.~~			Letters, Phone
Acknowledgement letters			

Section 5. Problems

List any problems or obstacles to the performance of this function.

Re:Section I (#1) Suspenses not met, paperwork lost, staff attitudes, incomplete data from patients and staff, INSUFFICIENT TIME FOR PATIENT FOLLOW UP!! Others manage my time.

(#3) Not being notified of changes

(#4) Not being notified of clinic changes and delay at publications/Print Plant so that printed material is obsolete before distributed.

Section 6. Measures of Efficiency

Describe any specific measures of efficiency in your department, such as revenue per sales representative or policies per underwriter, and give current values.

The only measures are # of complaints and # of compliments plus the response time and patient satisfaction.

Section 7. Manager's Needs

A. Describe the information you need to carry out personnel administration and other managerial duties.

Personnel administration does not require a lot of time in this office (DF's. AR's and Fort Belvoir publications that pertain to leave, local travel, etc. are helpful.) Information about Clinic policies and procedures, etc. helps us perform our information/directions and complaint investigation responsibilities. Award information, community resources available to military families, etc.

B. What activities would you (or your employees) like to spend more time on?

Patient/community education
Overall problem review instead of "fire extinguishing".

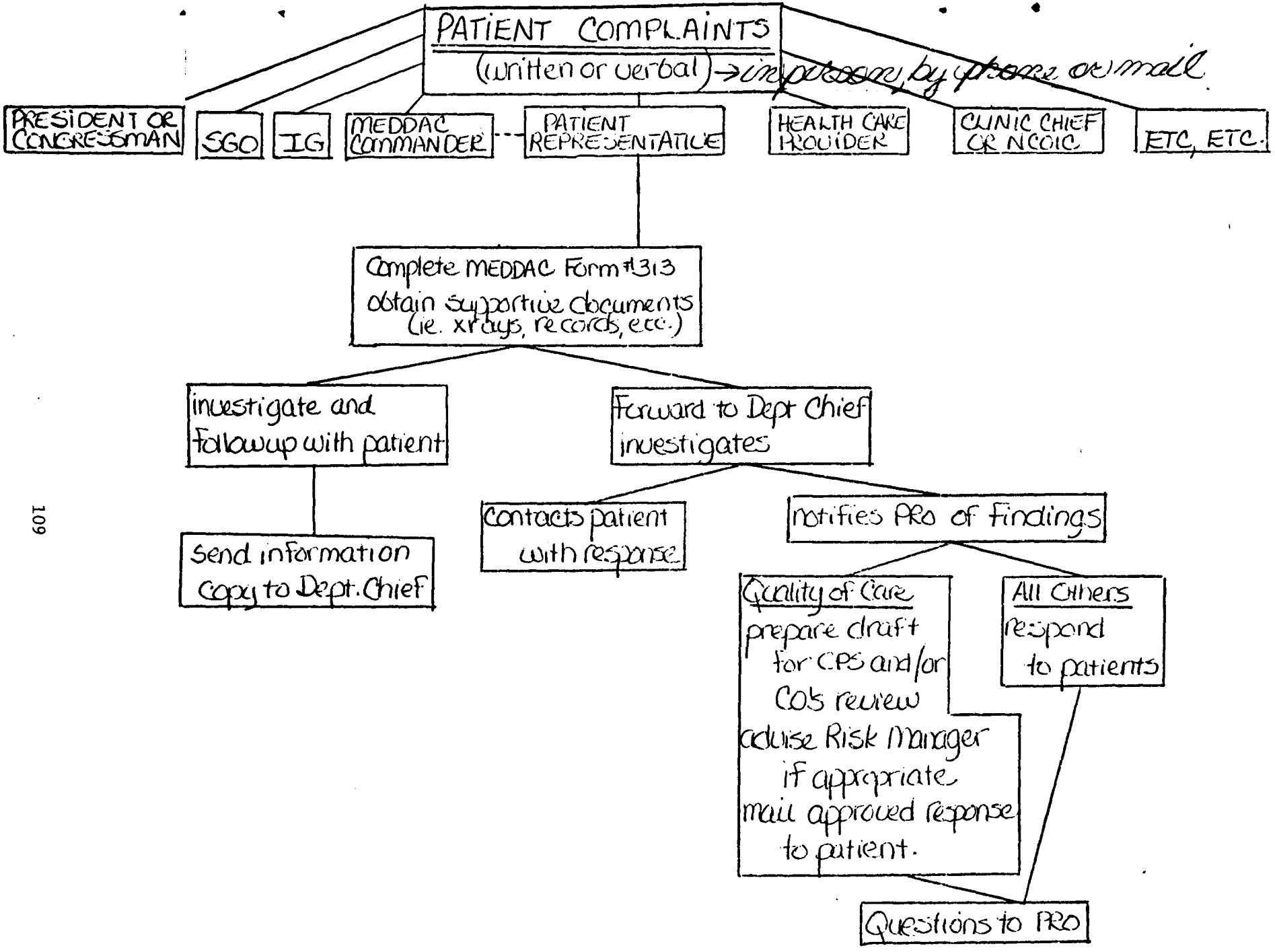
C. What activities could you delegate to administrative personnel if they had additional time available?

I think that everything that can be delegated is since there are only 2 of us!!!

D. What changes would you make to improve the operation of your department?

Patient Representative Assistant to relieve workload and offer continuity and perhaps extend coverage to inpatients, Emergency Room, etc.

Have copying capabilities for complaints, compliments, etc.


PATIENT COMPLAINTS
(written or verbal) → in person, by phone or mail
PRESIDENT OR CONGRESSMAN
SGO
IG
MEDDAC COMMANDER
PATIENT REPRESENTATIVE
HEALTH CARE PROVIDER
CLINIC CHIEF OR NCOIC
ETC, ETC.
Complete MEDDAC Form #313
obtain supportive documents (ie. xrays, records, etc.)
investigate and followup with patient
Forward to Dept Chief investigates
Send information copy to Dept. Chief
Contacts patient with response
notifies PRO of Findings
Quality of Care
prepare draft for CPS and/or COS review
advise Risk Manager if appropriate
mail approved response to patient.
All Others
respond to patients
Questions to PRO

Typical Employee Activity Profiles

Patient Representative Office

Percent of Workday Spent in Each Activity

Activities	Executives	Managers	Professionals	Secretaries	Clerks
Creating Documents:					
• Writing (include revising, editing, filling in forms)		30		2	
• Typing	—	—	—	20	
• Dictation (to secretary or machine)		0		0	—
• Proofreading (documents that have been typed)		2		2	
Communicating:					
• Reading (exclude proofreading, searching, incoming mail)		5		5	
• Telephone (exclude dictation)		30		30	
• Meetings (scheduled or unscheduled, at or away from your desk)		1		—	
• Conferring with secretary/manager (exclude dictation)		6		6	—
Analyzing:					
• Evaluating/calculating		5		~~5~~	
• Planning/scheduling (your work or others')		5		1	
• Using a terminal	—			0	
Administering:					
• Mail handling (opening and reading incoming mail; exclude answering)		2		10	
• Filing (putting information into files; include your own desk/office files)		1		5	
• Copying (include walking to and from, waiting)	—			5	
• Retrieving files (taking information from files; include your own desk/office files)		1		2	
• Searching for information (files, manuals, books, publications, and people)		5		~~2~~	
• Traveling (away from your home location)		1		—	—
• Collating/sorting	—	—	—	2	
Other		5		3	
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Office Systems Interview Format

Interviewee: Mrs. Irene McCormick, Patient Representative Office Secretary
(use identification number if appropriate)

Date: 28 May 85 Time: 0928

1. Describe your job. Responding to patient inquiries by phone and in person. Typing reports, reponses to patient complaints. Searching for medical records and information to answere patient inquiries.

2. What information do you need to do your job? PRO Information Sheet completed by every clinical department, service, and outpatient clinic on their operations.

3. What obstacles or problems inhibit you in doing your job?

Personnel in hospital clinics do not get information to the PRO to keep patients informed.
Not enough time in the day.
Repetitive typing.

What is needed to eliminate or reduce these problems?

Specific hours set aside to accomplish administrative tasks.
Expanded word processing capabilities.
Increased reproduction support.
Improved responses to PRO inquiries by hospital clinics.

4. What activities would you like to spend more time on?

Putting patient information out in the community.
Patient education.
PRO administrative support requirements.

5. What activities could you delegate to administrative personnel if they had additional time available?

N/A

6. What changes would you make to improve the operation of your department?

Reduce the hours for direct patient contact each day.

PRO INFORMATION SHEET

NAME OF CLINIC/SERVICE: _____

LOCATION: DACH, BLDG #808 _____ FLOOR _____ ROOM #_____

OTHER, BLDG. # _____ STREET _____

TELEPHONE NUMBER: _____ INTERCOM NUMBER _____

CLINIC HOURS: _____

DOES CLINIC CLOSE FOR REGULARLY SCHEDULED INSERVICE TRAINING? YES _____ NO _____

IF YES, LIST DAY(S) AND HOURS _____

AD SICK CALL: YES _____ NO _____

IF YES, LIST DAY(S) AND HOURS: _____

IS A REFERRAL REQUIRED? YES _____ NO _____

CAN ANY ACTIVE DUTY MEMBER BE SEEN? YES _____ NO _____

IF NO, WHO MAY BE SEEN? _____

_____

WALK-IN HOURS: YES _____ NO _____

IF SO, WHEN? _____

AND FOR WHAT? _____

CATEGORIES OF PATIENTS SERVED: AD _____ AD/DEP _____ RET _____ RET/DEP _____

REFERRAL POLICY: IS A REFERRAL REQUIRED? YES _____ NO _____

OTHER MTF REFERRALS? YES _____ NO _____

CIVILIAN REFERRALS? YES _____ NO _____

APPOINTMENT POLICY: CAS _____ OTHER(explain) _____

KEY PATIENT SERVICES AVAILABLE:

APPENDIX J

AMO EVALUATIONS OF PROPOSED MODEL

OFFICE AUTOMATION NEEDS ASSESSMENT MODEL QUESTIONNAIRE

1. Can the proposed Office Automation Needs Assessment model identify the office information needs of a small to medium U.S. Army Community Hospital?

The proposed model defines a methodology for conducting an information needs assessment and developing a strategic information plan for an organization and a supporting needs assessment and plan for an office or organizational sub-unit. The model is general and has applicability to medical as well as non-medical organizations.

2. Does the Office Automation Needs Assessment model provide an Automation Management Officer with sufficient information to develop automated office applications or recommend the retention of, and/or improvement on, a manual office informaiton system?

Yes, if the model is followed. For the implementation to be successful, the executive commitment identified as a necessary component to successful planning, must be continued during the implementation and evaluation phases of the plan.

3. Can this Office Automation Needs Assessment model be feasibly implemented by a small to medium U.S. Army Community Hospital?

Yes.

4. Are the office automation needs of the Clinical Support Division, DeWitt Army Community Hospital, sufficiently identified by this proposed Office Automation Needs Assessment model?

As stated in Part III, conclusions, of the CSD Office Systems Analysis Report, a complete assessment of the office automation needs of the CSD was not possible. The reason is that the needs assessment model was not fully applied at DACH, in that the hospital Information Systems Plan was not developed first. This is a shortcoming in the application of the model at DACH and does not detract from the general applicability or completeness of the model itself.

Charles P. Hernandez
LTC, MSC
Director, Division
of Biometrics
Walter Reed Army Institute
of Research

OFFICE AUTOMATION NEEDS ASSESSMENT MODEL QUESTIONNAIRE

1. Can the proposed Office Automation Needs Assessment model identify the office information needs of a small to medium U.S. Army Community Hospital?

No, unless the global objective of the model is to produce an Office Automation (O/A) Strategy. The subordinate objectives should be the definitions of O/A Objectives, O/A Policies and an O/A Information Architecture. The O/A Strategy establishes the framework for the hospital to develop plans, designate priorities and allocate scarce resources.

2. Does the Office Automation Needs Assessment model provide an Automation Management Officer with sufficient information to develop automated office applications or recommend the retention of, and/or improvement on, a manual office informaiton system?

It has not in the analysis of the CSD. The first problem is the absence of an O/A Strategy which establishes the framework. Without the framework, the AMO does not have a comprehensive plan, a list of priorities, or a defined O/A architecture to guide the O/A activities. The result will be a series of efforts to solve immediate problems. The second problem is the absence of an information systems analysis, developed from the ISP process, whcih defines the common O/A functions, data and interfaces.

3. Can this Office Automation Needs Assessment model be feasibly implemented by a small to medium U.S. Army Community Hospital?

The fesibility of this model must be questioned because of the resources necessary to conduct an ISP Study and the lack of personnel resources in HSC to establish AMO positions at each hospital in the command.

4. Are the office automation needs of the Clinical Support Division, DeWitt Army Community Hospital, sufficiently identified by this proposed Office Automation Needs Assessment model?

No. Information system problems have not been clearly identified, sufficient data have not been collected, data attribute analyses have not been performed and alternative solutions have not been documented. In addition, O/A objectives, policies and an information architecture have not been defined to establish an O/A framework for the hospital.

Roger L. Brown
LTC, MSC
U.S. Army TRIMIS
Project Manager

OFFICE AUTOMATION NEEDS ASSESSMENT MODEL QUESTIONNAIRE

1. Can the proposed Office Automation Needs Assessment model identify the office information needs of a small to medium U.S. Army Community Hospital?

Yes, providing the commitment is there from the Command element and other Department Chiefs. A plan must exist to automate all hospital offices, not just a few clinics or departments. Hospitals must also be careful not to limit needs assessment to just wordprocessing.

2. Does the Office Automation Needs Assessment model provide an Automation Management Officer with sufficient information to develop automated office applications or recommend the retention of, and/or improvement on, a manual office information system?

Yes, providing the Hospital Command is committed to having or providing an authorization for an AMO. As you have stated, maybe an outside consultant will be most beneficial in assisting a hospital AMO develop automated office applications.

3. Can this Office Automation Needs Assessment Model be fesiably implemented by a small to medium US Army Community Hospital?

The model can be fesiably implemented, providing budgetary resources are available to train personnel on or off site. A Team can be assembled of top executives to implement the model, and many results can be achieved in the first year.

4. Are the office automation needs of the Clinical Support Division, DeWitt Army Community Hospital, sufficiently identified by this proposed Office Automation Needs Assessment model?

Basic office automation needs, such as wordprocessing, are identified, but where is the hospital's Office Automation Strategy? Not all elements of your model have been applied in this study of CSD. Consequently, sufficient identification of all of CSD's Office Automation Needs have not yet been met.

Larry G. Bosetti
LTC, MSC
Chief, Automation Management Directorate
WRAMC

OFFICE AUTOMATION NEEDS ASSESSMENT MODEL QUESTIONNAIRE

1. Can the proposed Office Automation Needs Assessment model identify the office information needs of a small to medium U.S. Army Community Hospital?

Yes, if the Hospital adhears to a strict ISP process, with senior management involvement to develop a well thought out IMP. TRIMIS and other externally directed systems must be factored into the model so a resulting architecture builds around them. The ISP Task Force must be under the leadership of the Deputy Commander for Administration.

2. Does the Office Automation Needs Assessment model provide an Automation Management Officer with sufficient information to develop automated office applications or recommend the retention of, and/or improvement on, a manual office information system?

It provides an AMO with a very good start. The AMO must take an active role in any automation planning process to assist users with guidance on how automation can support them. This model must necessarily rely on user documentation of their manual functions, so that an AMO can quickly and comprehensively analyze each task.

3. Can this Office Automation Needs Assessment model be feasibly by a small to medium U.S. Army Community Hospital?

A key portion of this model is Automation Management Support. Outside AMO support will likely be limited, therefore, the hospital will have to establish an AMO position. The feasibility of this model hinges on the establishment of an AMO.

4. Are the office automation needs of the Clinical Support Division, DeWitt Army Community Hospital, sufficiently identified by this proposed Office Automation Needs Assessment model?

The study of CSD should have ended with an organizational and functional systems flow diagram of all information into, out and processed by all elements of CSD based on a completed ISP study. Office automation needs are sufficiently identified to warrant acquisition of ADP/Wordprocessing Support, but because this study was done prior to the Hospital's completion of an ISP, it must be questioned whether it fits the overall Hospital Information Architecture.

Frank A. Horna
CPT, MSC
Information Systems Officer
AMEDDPERSA

FOOTNOTES

Footnotes

[1] Datapro Research Corporation, Automated Office Solutions, (Delran, NJ: McGraw-Hill, 1982), A 20-110-101.

[2] Ibid.

[3] Ibid.

[4] James W. Cortada, Strategic Data Processing, (Englewood Cliffs, NJ: Prentice Hall, Inc., 1984), pp. 111-112.

[5] Kernaghan, Salvinija G., "With Info Systems, More May Be Less If Needs Aren't Planned", Trustee, November 1982, pp. 17-18.

[6] Ibid.

[7] C.L. Parker, "Historical Changes in Hospital Computer Use", Hospitals, January 16, 1985, pp. 115-116.

[8] Ibid.

[9] U.S., Department of the Army, Army Automation Management, Army Regulation 18-1, (Washington, DC: Department of the Army, 15 September 1980), p. 2-1.

[10] U.S., Department of the Army, Information Management, Draft Army Regulation AR 25-5, (Washington, DC: Department of the Army, 14 December 1984), pp. 6-7.

[11] Charles J. Austin, Information Systems for Hospital Administration, (Ann Arbor, MI: Health Administration Press, 1982), p. 41.

[12] Stephen L. Priest, Managing Hospital Information Systems, (Rockville, MD: Aspen Publications, 1982), pp. 136-138.

[13] Ibid.

14 Ibid.

15 Howard S. Rowland and Beatrice L. Rowland. Hospital Administration Handbook, (Rockville, MD: Aspen Publications, 1984), pp. 410-411.

16 Ibid.

17 Ibid.

18 Chester A. Koda and Leo DiGiulio, "Who Should Plan for Information of Hospital Information System." Healthcare Strategic Management, July 1984, pp. 28-31.

19 Ibid.

20 Ibid.

21 Ibid.

22 Ibid.

23 Brandt Allen, "An Unmanaged Computer System Can Stop You Dead," Harvard Business Review, November-December 1982, pp. 77-87.

24 Ibid.

25 American Hospital Association, Hospital Computer Systems Planning, (Chicago, IL: AHA, 1980), pp. 9-11.

26 Brandt Allen, et al., p. 182.

27 Rowland and Rowland, et al., p. 412.

28 James W. Cortada, Strategic Data Processing, (Englewood Cliffs, NJ: Prentice-Hall Inc., 1984), p. 119.

29Austin, et al., p. 43.

30 Vito G. Petruzzali, "The Info Center - A Powerful Tool for Modern times," Data Management, February 1984, pp. 20-21.

31 Rowland and Rowland, et al., p. 413.

32 International Business Machines, Business Systems Planning, (White Plains, NY: IBM Corporation, Marketing Publications Dept., 1984).

33 Ibid.

34 Ibid.

35 Ibid.

36 Ibid.

37 US Department of Commerce, Guidance On Requirements Analysis for Office Automation, (National Bureau of Standards, Publication 500-72, Washington, DC: NBS, December 1, 1980;), p. 31.

38 Ibid.

39 International Business Machines, Office Systems Planning, (White Plains, NY: IBM Corporation, Marketing Publications Dept., 1981).

40 Ibid.

41 Interview with LTC Roger L. Brown, US Army TRIMIS Project Manager, Office of the US Army Surgeon General, Washington D.C., March 14, 1985.

42 Ibid.

43 Austin, et al., p. 42.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

Government Documents and Publications

US Department of the Army. Army Automation Management. Army Regulation AR 18-1. Washington, DC: Department of the Army, 15 September 1980.

US Department of the Army. Information Management. Draft Army Regulation AR 25-5. Washington, DC: Department of the Army, 14 December 1984.

US Department of the Army. Organization and Functions. US Army Medical Department Activity Memorandum 10-1. Fort Belvoir, VA, 1 May 1983.

US Department of Commerce. Guidance on Requirements Analysis for Office Automation Systems. National Bureau of Standards Publication 500-72. Washington, DC: NBS, December 1, 1980.

Books

American Hospital Association. Hospital Computer Systems Planning. Chicago, IL: American Hospital Assocition, 1980.

Austin, Charles J. Information Systems for Hospital Administration. Ann Arbor, MI: Health Care Administration Press, 1972.

Cortada, James W. Strategic Data Processing. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1984.

Datapro Research Corporation. Automated Office Solution. Delran, NJ: McGraw-Hill, Inc., 1980.

International Business Machines. Office Systems Planning. White Plains, NY: IBM Corporation, Marketing Publications Department, 1984.

International Business Machines. Business Systems Planning. White Plains, NY: IBM Corporation, Marketing Publications Department, 1984.

Kindred, Alton R. Data Systems and Management. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1972.

Martin, E. W. Jr. and Perkins, William C. Computers and Information Systems. Homewood, IL: Richard D. Irwin, Inc., and the Dorsey Press, 1973.

Martin, James. An Information Manefesto. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1984.

Priest, Stephen L. Managing Hospital Information Systems. Rockville, MD: Aspen Publications, 1982.

Rowland, Howard S. and Rowland, Beatrice L. Hospital Administration Handbook. Rockville, MD: Aspen Publications, 1984.

Periodicals

Allen, Brandt. "An Unmanaged Computer System Can Stop You Dead." Harvard Business Review, November-December 1982, pp 77-87.

Alleyne, J. "A Computer Primer: Systems Planning." Dimensions, April 1982, pp 38-39.

Alleyne, J. "A Computer Primer: Systems Requirements." Dimensions, May 1982, pp 46.

Flanagan, James B., Peterson, Richard C., and Turnamer, Jaimee. "Information Planning For the 1980's and 1990's." Healthcare Strategic Management, July 1984, pp 28-30.

Guimaraes, Tor. "The Evolution of the Information Center." Datamation, July 15, 1984, pp 126-130.

Kanter, Michael. "Use Critical Success Factor Approach." Healthcare Financial Management, February 1983, pp 43-44.

Kennedy, O. George, PhD. "Computers in Hospitals: Can They Pay Their Way." Trustee, December 1981, pp 17-18.

Kennedy, O. George, PhD. "Smooth Implementation Depends on Planning Input From System's Users." Modern Healthcare, May 1980, pp 93-94.

Kernaghan, Salvinija G. "With Info Systems, More May Be Less if Needs Aren't Planned." Trustee, November 1982, pp 17-21.

Koda, Chester A. Sr. and DiGiulio, Leo. "Who Should Plan for Implementation of a Hospital Information System." Healthcare Strategic Management, July 1984, pp 28-31.

Levin, David P. "Needs Assessment in Data Communications Networking." Journal of Information Systems Management, Summer 1984, pp 56-65.

Mills, Cheser R. "Strategic Planning Generates Potent Power for Info Centers." Data Management, February 1984, pp 23-25.

Minch, David A. "Information Systems: Audit is First Stop In Planning." Hospitals, May 1, 1982, pp 85-88.

Musket, Mike. "Application Systems Planning." Journal of Information Systems Management, Winter 1985, pp 50-56.

Nolan, Richard. "Managing the Crises in Data Processing." Harvard Business Review, March-April 1979, pp 115-126.

Packer, C.L. "Historical Changes in Hospital Computer Use." Hospitals, January 16, 1985, pp 115-118.

Petruzzelli, Vito G. "The Info Center - A Powerful Tool for Modern times." Data Management, February 1984, pp 20-21.

Salpietro, Wayne D. "Implementing Office Automation in the Healthcare Profession." Computers in Healthcare, May 1984, pp 28-32.

Schmitz, Homer H. "Information Systems: Hospital Information Systems - Know What You're Looking For." Hospitals, April 1, 1982, pp 93-97.

Simpson, Ned J. "Brave New Tools: Microcomputers Play a Growing Role in Hospitalwide Information Systems." Hospitals, July 16, 1983, pp 68-75.

Smith, Robert J. "Know Thyself: "The Starting Place For Systems Planning." Computers in Healthcare, April 1984, pp 65-66.

Proceedings - Published

IBM Information Systems Management Institute. Business Systems Planning Methodology Course 1091. Washington, DC: March 26-29, 1985.

Unpublished Material

Bender, Ernest G. Account Manager, NCR Corporation, Rockville, MD. Interview, November 4, 1984.

Bosetti, Larry G., LTC. Chief, Automation Management Directorate, Walter Reed Army Medical Center, Washington, DC. Interview, December 6, 1984.

Brown, Roger L., LTC. US Army TRIMIS Project Manager, Office of the US Army Surgeon General, Washington, DC. Interview, March 14, 1985.

Chetti, Lynn. Account Manager, IBM Corporation, Alexandria, VA. Interview, February 20, 1985. Hasson, Patsy. Account Manager, NBI Corporation. San Antonio, TX. Interview, July 18, 1984.

Hernandez, Charles P., LTC. Director, Division of Biometrics, Walter Reed Army Institute of Research, Washington, DC. Interview, March 17, 1985.

Horna, Frank, CPT (P). Chief, Information Systems Office, AMEDDPERSA, Washington, DC. Interview, December 6, 1984.

Williams, Paul. Account Manager, Wang Corporation, San Antonio, TX. Interview, July 20, 1984.