

## Chapter 7

# Management Political Information System (HPIS)

- 7.1- Prologue**
- 7.2- List of Functions of Management Political Information System (MPIS)**
- 7.3- Basic Definition of MPIS**
- 7.4- Management Political-Enterprise Information System**
- 7.5- Political-Information system**
- 7.6- Political Information Management**
  - 7.6-1. The Time Dimension
  - 7.6-2. The Content Dimension
  - 7.6-3. The Form Dimension
- 7.7- Political-Information System for Management Decision Making**
  - 7.7-1. Real-Time System
  - 7.7-2. Information Reporting System
  - 7.7-3. Transaction Processing System (TPS)
  - 7.7-4. Decision support Systems (DSS)
  - 7.7-5. Executive Information Systems (PEIS)
  - 7.7-6. Political-End user and user Interface
  - 7.7-7. Political-Office Automation System
  - 7.7-8. Political-Information Enterprise
- 7.9- MPIS Interfaces with other CIPSE Stations**
  - 7.9-1. MPIS/PISE (Political-information engineering)
  - 7.9-2. MPIS/PEDBMS (Political Enterprise Database Management system)
  - 7.9-3. MPIS/PEPMS (Political Enterprise Project Management System)
  - 7.9-4. MPIS/PECMS (Political Enterprise Communication Management System)
  - 7.9-5. MPIS/PEOMS (Political Enterprise Organization Management System)
  - 7.9-6. MPIS/PIS (Intelligent PISM)
  - 7.9-7. MPIS/PES (Expert MPIS; Integration Expert Systems into the MIS Environment)
  - 7.9-8. MPIS/PESM (Management Software of Political Information System)
  - 7.9-9. MPIS/PEHM (Management Hardware of PIS)
- 7.10- CIPSE-MPIS Project**

## 7- Management Political Information System (MPIS)

**7.1- Prologue** - The simplest method for the transformation is that of data processing, or DP. Typically, the data processing approach is used to transform a set of raw data into the following information:

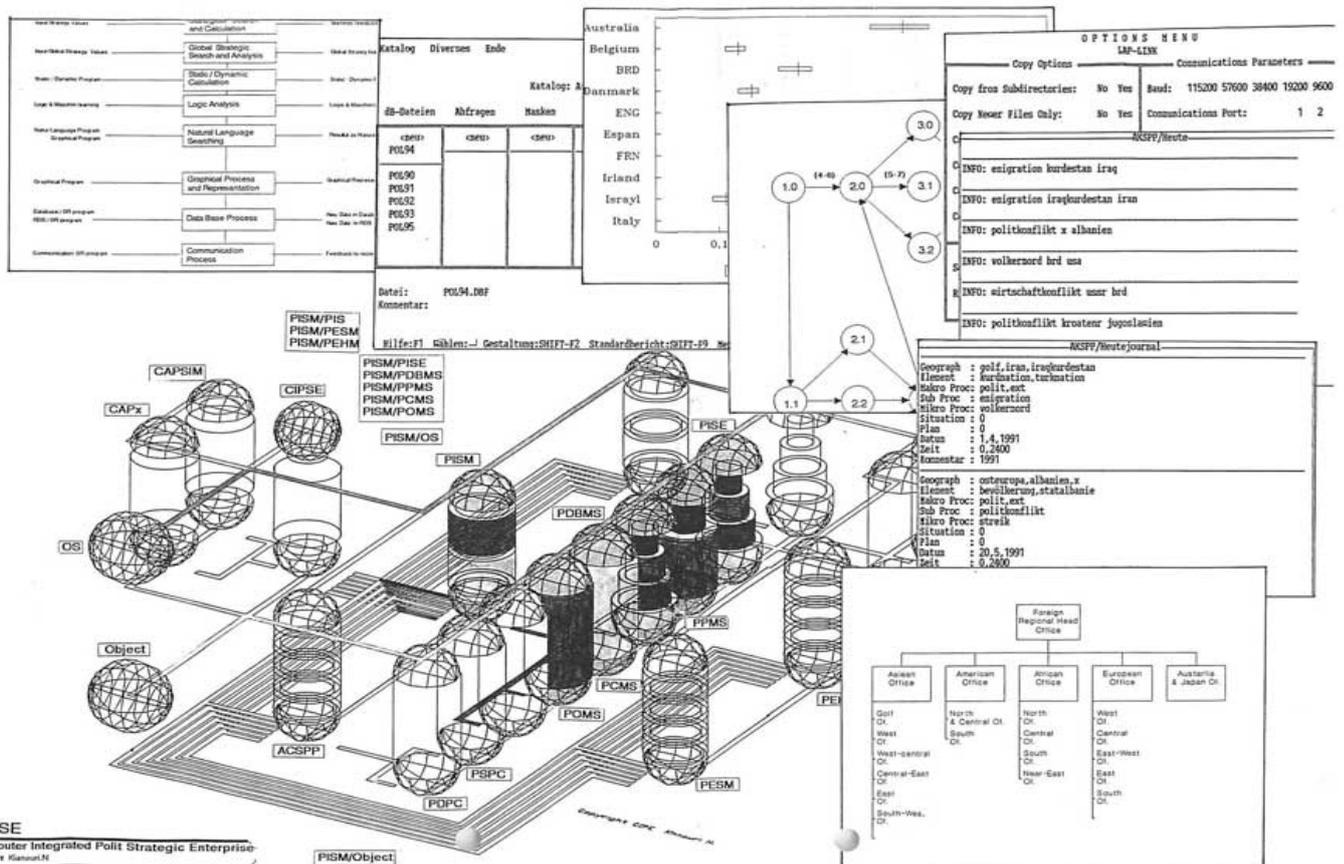
- Statistic (e.g., numbers representation the mean, median, mode, and variance of the data)
- Pictorial representations (e.g., histogram, pie charts, bar charts)

The next level of sophistication in the processing of data into information is called **management information system**, or MIS. Political Information Management is often defined as the process of planning, organizing, and controlling a polit-activity. It actually fits the activities of all types of Political-personnel. Everyone has the need to plan, organize, and control his or her polit-work life.

The typical MIS concept involves a computer console display at the decision maker's desk. Using this console, the decision maker may ask for information pertaining to what is believed necessary to produce a schedule for the next production period.

Provide polit-information to support management decision making. Major types of polit-management information systems have the following goals:

- Prespecified and preplanned reporting to managers is accomplished by polit-information reporting systems.
- Decision support systems
- Political-critical information for top management is provided by executive information systems.
- Expert advice for operational or managerial decision making is provided by expert systems and other knowledge based information system.
- Direct, hands-on support for both the operational and managerial applications of end users is provided by end user computing systems.
- Operational and managerial applications in support of basic Political-functions are provided by polit-function information systems.
- Competitive polit-solution and services to help achieve strategic objectives are provided by strategic Political information systems.



**FIG.7.1.** IS AN EXAMPLE FOR PISM STATIONS AND ITS INTERFACES WITH CIPSE STATIONS. THE FUNCTIONS OF THIS STATION LIST AS:

- 1- POLITICAL INFORMATION SYSTEM ENGINEERING
- 2 - POLITICAL DATA BASE MANAGEMNT SYSTEM
- 3 - POLITICAL PROJECT MANAGEMENT SYSTEM
- 4 - POLITICAL DATA COMMUNICATION MANAGEMENT SYSTEM
- 5 - POLITICAL ORGANIZATION MANAGEMENT SYSTEM.

## 7.2- List of Functions of Management Political Information System (MPIS):

- Define a Political-management information system, management opportunities and functions, management Political-system as expert system.
- Mapping Political-functions to Political-organisational units.
- Central polit-management, committees.
- Political-management interviews.
- Periodic review.
- The chief information office functions.
- Independent of technology and Political-organizational structure.
- The end user Political-committee.
- Relationship with government, parties, parliament, correspondents and the other national Political-functions.
- Time management.
- Define Political-knowledge administrator.
- Define organization for controlling hardware and relationship between hardware and Political-management system.
- Define the important components of Political-Information System Engineering.
- Define the Basic components of Political-Enterprise Database Management System (PEDBMS).
- Enterprise Communication Management System (PECMS), -Enterprise Project Management System (PEPMS), Enterprise Organization Management System (PEOMS), Political Public Relation Management System (PECMS).

## 7.3- Basic Definition of MPIS:

**Political-Data** A mass of undigested Political-facts. Data are facts or are believed to be or are said to be facts which results from the observation of physical phenomena. Polit-data are objective measurement of the attributes (the characteristics) of entities (such as people, places, things, and events). These measurements are usually represented by symbols such as numbers and words, or by codes composed of a mixture of numerical, alphabetical, and other characters. However, data commonly takes a variety of forms, including numeric data, voice, and images.

**Political-Data Modelling** - A basic premise of our approach to information strategy planning is that data lies at the centre of modern information systems technology.

A second basis premise of our approach to information strategy planning is that the types of data used in an enterprise do not change very much.

**Political-Information** - Political-facts which are digested, analyzed, and summarized so as to be useful to decision makers. Information is data which is used in decision-making an is knowledge derived from data. Polit-information is a relative quantity, relative to the Political-situation, to the time at which a decision is made, and to the decision-maker and the decision-maker's background and history. The terms "information" and "data" are sometimes used synonymously with 'information' supplanting 'data' in contexts where the emphasis is on the broad, grand, or useful aspects; Political-information is a basic resource that individuals and organizations must have to survive and succeed in today's policy.

**Political-Entity** - a Political-entity, as we have stated, is anything about which data can be stored, a Political-solution, a -active character, a -personnel, a part.

**Political-System** - A Political-system is group of Political-components that interact such as political

economic-, Political geographic-, Political foreign system.

**Political-Computer Information System** - Political-computer information systems are political-information systems that include a computer. A computer system consists of people, procedures, data, programs, and computers.

**Political-Dictionary** - Contains names and descriptions of data items / processes, variables, and so on.

**Political-Encyclopaedia** - Contains this dictionary information and a complete, coded representation of plans, models, and designs, with tools for cross-checking, correlation analysis, and validation. The political-encyclopaedia stores the meaning represented in diagrams and enforces consistency within this representation. The encyclopaedia "understands" the design, whereas a simple dictionary does not.

**Political End User** - Anyone who uses an Political-information system or the information it produces. This usually applies to most people in an organization, as distinguished from the smaller number of people who are political-information system specialists, such as systems analysts or professional computer programmers.

**Political-Information Processing** - A term sometimes used in place of 'data processing', particularly as applied to a large interactive system with a database. A term also sometimes applied to those functions of a computer system relating to the storage and internal manipulation of data as contrasted to interfacing or network management. We can define data or information processing as the processing of data to make it more usable and meaningful, thus transforming it into Political-information.

A political-information processing paradigm has dominated much of cognitive psychology. It emphasizes the individual's limited capacity for the intake and storage of information. Within this paradigm attempts are made to determine what happens to information taken in from the senses. Flow diagrams are often used to chart the processing of Political-information, and much of the research effort is directed towards establishing the temporal characteristics of the psychological processes involved.

Political-information systems can play major role in support of the strategic objectives of an organization. This strategic role provides a firm with competitive products and services that give it a strategic advantage over its competitors in the marketplace.

**Political Information Model** - A Political information system uses the resources of hardware (machines and media), software (programs and procedures), and people (specialists and end users) to perform input, processing, output, storage, and control activities that convert data resources into information solution.

This information system model will help to tie together many of the facts and concepts involved in the study of computer-based information systems. It emphasizes three major concepts:

- Hardware (machines and media), software (programs and procedures), and people (specialists and end users) are the primary resources needed to accomplish information processing activities in information systems.
- Data resources are transformed into a variety of Political information solution by the Political-information processing activities of Political information systems.
- Information processing consists of the basic system activities of input, processing, output, storage, and control.

**7.4- Management Political-Enterprise Information System** - Enterprise management is a technique for the proper and efficient use of people, money, machines, political-facts, and -processes to economically generate services from the program start through the solution phase. Enterprising involves all the processes and procedures designed to transform a set of input elements into a specified element. Major functions include design, solution ability, enterprising planning, solution control, demonstration and testing, enterprising methods development, assembly, installation, checkout, scheduling, and enterprising surveillance.

The basic objectives of enterprising management functions are to:

- Do enterprising planning during the development cycle in acquisition programs,
- Formally document and review pertinent enterprising criteria before the decisions to produce, and
- Properly monitor enterprising considerations after the decision to enter the solution phase is made.

Meeting these objectives requires integrating enterprising throughout the program life cycle, reviewing enterprising throughout the problem life cycle, and reviewing enterprising capability, solution ability and readiness preceding major program decision points.

**7.5- Polit-Information System** - Is a group of Political-components that interact to procedure. An Political-information system can be defined as a collection of people, procedures, and equipment designed, built, operated, and maintained to collect, record, process, store, retrieve, and display polit-information. The term polit-data processing system is frequently used synonymously with information processing system. The difference usually arises from the point of view.

Political-information systems may be classified in different ways for different purposes. One method is by the application area, such as government, parties and polit-organizations. Another classification is by type of service rendered. The following are among the most important classes under this classification:

- Computing service systems that provide a general computing service to a number of Political-users.
- Information storage and retrieval systems designed to store Political data (or documents) and retrieve it in response to queries.
- Command and control systems built to monitor some given situations and provide a signal when predefined conditions occur.
- Transaction processing systems designed to process predefined transactions and produce predefined outputs as well as maintain necessary database.
- Message switching systems that route messages over transmission
- lines from a point of origin to destination.
- Process control systems designed to control Political-real processes by monitoring the conditions and signalling appropriate action to the machines.

The objective of information system design then becomes principally the design of a system which makes available the information needed for making a variety of decisions obtained from among all the data the system has stored. Such a system must capture and store as much as possible of the information which may be needed, and only this information.

An information system should make available most readily the most valuable data. The value of information in some sense is a major criterion. Information is a subset of data or perhaps inferred from Data.

**7.6- Political Information Management** - We had defined Political-information as Political-data that has been transformed into a meaningful and useful from people with political intresse. Put another way, information is data placed in a context to give it value for specific end users. The attributes of information quality make the important value quality for managerial end users.

Polit-information that is outdated, inaccurate, or hard to understand would not be very meaningful, useful, or have much value to managers. It is useful to think of polit-information as having the three dimensions of time, content, and form.

**7.6.1- The Time Dimension** Information is frequently time sensitive. Making good decisions in day-to-day living, working, and managing requires information. This dimension can define as:

- Timeliness; Information should be provided when it is needed
- Currency; Information should be up-to-date when it is provided
- Frequency; Information should be provided as often as needed Time period; Information can be provided about past, present, and future time periods

**7.6.2- The Content Dimension** - The content of information is usually considered its most important dimension. For example, what good is information that is attractive and timely if it is wrong? This category can define as:

- Accuracy; Information should be free from errors.
- Relevance; Information should be related to the information needs of a specific recipient for a specific situation.
- Completeness; All the information that is needed should be provided.
- Conciseness; only the information that is needed should be provided.
- Information can have a broad or narrow scope, or an internal or external focus.
- Performance Information can reveal performance by measuring activities accomplished,

progress made, or resources accumulated.

**7.6.3- The Form Dimension** The form dimension of information emphasizes that information must be attractive and easy to understand and use. Can be defining as:

- Clarity; Information should be provided in a form that is easy to understand
- Detail; Information can be provided in detail or summary form
- Order; Information can be arranged in a predetermined sequence
- Presentation; Information can be presented in narrative, numeric, graphic, or other forms
- Media; information can be provided in the form of printed paper documents I video displays, or other media Political information systems designed to integrate the Political information needs of the entire Political-organization, beginning with the parties, Government, parliament, Political goals set by high-level managers, are called Political Management Systems.

"Polit-Enterprise Management Information System" (MPEIS) is a term that has evolved to identify the professional Political-data processing staff and operations within a political organization. The term originated with the concept that the Political-information processing functions of an organization are designed to provide management with information needed to make decisions. Much of this emphasis terms from the recognition that data is a valuable corporate resource, coupled with the realization that this resource needs to be available when it is needed.

MPEIS operations within a polit centre include the hardware, software, communications support, and people that handle computer based information within an organization. The PMIS department and its activities are usually broken down into the following broad areas:

- Decision Support
- Political-Administration and management support
- Technical research
- Political-Systems and programming
- Computer operations
- Communications
- Political-Office automation
- Political-Information centres
- Support services
- Hardware Management
- Software Management.

**7.7- Political-Information System for Management Decision Making** - An information-system that utilizes decision models, a database, and an interactive analytical modelling process to reach a specific decision by a specific decision maker.

**7.7.1- Real-Time. System** - One important trend is the implementation of real-time management information systems, sometimes referred to as on-line real-time systems. Typical applications in such an environmental include Political data receivable. All information is on line, that is, all data are sent directly into a time, which means that data are processed and feed back to the appropriate source in sufficient time to change or control the operating environment. Basically, then, any system that processes and stores data or reports them as they are happening is considered an on-line real time system. Political centre personnel will receive a response from the system in time to satisfy their own real-time environmental requirements. The response time ma range from a fraction of a second to minutes, hours, or days, depending on the attendant circumstances.

Typically, in a real-time MIS environment, a number of on-line input/output devices are located throughout the company's operations.

**7.7.2- Information Reporting System** - Information reporting systems were the original type of management information system, and they are still a major category of PMIS. They produce information political solution that support many of the day-to-day decision making needs of management. Reports, display, and responses produced by such systems provide information that managers have specified in advance as adequately meeting their polit-information needs. Such predefined polit-information solutions satisfy the polit-information needs of managers at the operational and tactical levels of the organization who are faced with more structured types of decision situations.

**7.7.3- Transaction Processing System (TPS)** - Support the operational, day-to-day activities of the polit-organization. A few examples are foreign-conflicts, intern-conflicts systems.

The primary objectives in the transaction processing systems are accuracy, rapid response, and

ease of use.

**7.7.4- Decision support Systems (DSS)** - A sophisticated Political information system that uses available data, computer technology, models, and query languages to support the decision-making process. Decision support system, however, focus on providing polit information interactively to support specific types of decision by individual managers. Polit-managers at the tactical and strategic levels of an organization need ad hoc types of polit-information solution to support their planning and control responsibilities. Decision support systems help such managers solve the semi structured and unstructured problems. In contrast, information reporting systems are designed to indirectly support the more structured types of decisions involved in operational and tactical planning and control.

Decision support systems are a major category of Political-management information systems. They are computer-based Political information systems that provide interactive information support to managers during the decision making process. Decision support systems use (1) analytical models, (2) specialized databases, (3) a decision maker's own insights and judgment, and (4) an interactive, computer-based modelling process to support the making of semi structured and unstructured decision by individual managers. Therefore, they are designed to be ad hoc, quick-response systems that are initiated and controlled by managerial end users. Decision support systems are thus able to directly support the specific types of decisions and the personal decision making styles and needs of individual managers.

Note the hardware, software, data, model and people resources needed to provide interactive decision support for Political-managers.

In short definition DSS support managerial decision making in complex situations, by providing both information and tools for analysis. A DSS is typically used by high-level managers for relatively unstructured decisions such as capital expansion, mergers, and new product introductions. A DSS must be easy to use, flexible, and easy to modify. A DSS will normally include following components:

- A terminal (or personal computer) located in a manager's Political office or other convenient location.
- A DBMS for building, accessing, and manipulating local files or databases.
- A powerful, high-level language for retrieving and manipulating Political-data.
- Modelling tools (such as forecasting and simulation) for evaluating various alternative decisions.

**7.7.5- Executive Information systems (PEIS)** - Are systems employed by very Political-senior managers to keep abreast of the Political organization in broad, overview terms. Combine features of polit information reporting systems and polit-decision support systems, but they are tailored to the strategic information needs of top management. Top executives need information to support their strategic planning and control responsibilities. Thus, the goal of executive information systems is to provide top management with immediate and easy access to information about a firm's critical success factors.

**Distributed Information System** - Distributed Management Information System, commonly referred to as distributed data processing (DDP), is an approach to placing low-cost computing power, starting at the various points of data entry, and linking these points, where it is deemed necessary, with a centralized computer via a distributed communications network. In effect, distributed data processing is an approach to placing computing power where it is needed in an organization for efficient and economical data processing operations. Similarly, it is a feasible alternative to centralized data processing due to the declining costs of programmable terminals, microcomputers, minicomputers, and all small computers. Because the focus of current distributed data processing system is placing computer power at the lower levels in an organization, their output generally centres on assisting lower and middle management.

**7.7.6- Political-End User and User Interface** Anyone who uses an information system or the Political-information it produces. This usually applies to most people in a Political-organization, as distinguished from the smaller number of people who are information system specialists, such as a system analysts or professional computer programmers. It's the direct, hands-on use of computers by end use of computers by end users, instead of the indirect use provided by the hardware, software, and professional resources of a Political-organization's information services department. User interface can list as following for project management tools:

**Menus;** a menu is simply a listing of the available options.

**Mouse Device;** A mouse is a remote device that controls the movement of the cursor and permits the selection of certain functions with little strain on the user.

**Help Function;** A help function allows the user to seek clarification of any of the functions of the software.

**Tutorial;** Tutorials offer on-line training for a user. a tutorial is the quickest way to become familiar with the major features of the software.

**Windows and screen Switching;** Well designed user interfaces contain windowing capability that enables users to open multiple work windows at the same time.

**Screen Previewing;** Screen previewing permits the user to get an online preview of what the software output might look like when printed on paper.

**Colour Coding;** Colour coding can be used to call user's attention to key items on the display screen.

**Error Messages;** Error messages are the means through which the software informs the user of the validity of inputs or requested processes.

**Sound Effects;** In addition to colour coding and other visual cues that guide the user through the use of the software, sound effects can be added to further emphasize what the user needs to be aware of.

**Escape Routes;** For these unfortunate cases when a user finds himself or herself in hostile within the software, there should be an escape route.

A manager, or managerial-level professional who personally uses information systems. Also, the manager of a department or other Political-organizational unit that relies on Political-information systems.

**7.7.7- Political-Office Automation System** - Another major role of Political operations information systems is the transformation of traditional manual office methods and paper communications media. Political office automation systems (POAS) collect, process, store, and transmit Political data and -information in the form of electronic office communication. These automated systems rely on text processing, telecommunications, and other information systems technologies.

Political-office automation applications have transformed office desks into electronic workstations, thus dramatically improving end user solution ability.

Office automation applications also enhance the abilities of end users to communicate with their colleagues within their work groups and Political-organizations. This typically involves applications such as word processing, electronic mail, desktop.

Office automation (OA) is changing the equipment and work habits of today's end users. Of course, none of us would like to work in an office where all information processing activities are done manually. Office machines such as electric typewriters, copying machines, and dictation machines have made office work easier and more productive. But the mechanized office is giving way to the automated office. Investment in computer-based workstations and other automated equipment is transforming traditional manual office methods and paper communications media. This transformation has resulted in the development of automated systems that rely on text processing, data processing, telecommunications, and other information systems technologies.

In short definition Political-office automation system are computer based information systems that collect, process, store, and transmit electronic messages, documents, and other forms of communications among Political-individuals, -work group, and -organizations. such systems can increase the solution of managerial end users and other professional and staff personal by significantly the time and effort needed to produce, access, and receive Political communications. The component of Political-office automation can list as:

- Word Processing,
- Desktop Publishing,

- Image Processing,
- Electronic Document Management,
- Interactive Video,
- Electronic Communications Systems (Electronic Mail, Voice Mail, Facsimile, Electronic meeting System, Teleconferencing, Telecommunicating).

**7.7.8- Political-Information Enterprise** - A facility where computing resources are made available to various user groups. An information centre is an organizational subunit that provides hardware, software, and people support to end users in an organization. It typically has been part of an Political-organization's information services department, but it can also be found in individual end user department. Most Political-information centres provide the following:

- Hardware support is provided for end-user who need it through the use of microcomputers, intelligent terminals, advanced graphic terminals, high-speed printers, plotters, and so on.
- Software support is provided by offering the temporary use of advanced software packages such as application development systems, nonprocedural languages, database management systems, and a variety of application software packages.
- People support is provided by a staff of end user consul tans-systems analysts and programmers who are trained to educate and help users apply their own hardware and software resources to improve the efficiency and effectiveness of their work activities.

Political-information Enterprise provides a variety of services developing on the type and size of the organization, and the age and mission of each centre. Most of the services provided can be categorized as dealing with end user education and training, assistance with applications development, hardware/software sharing and evaluation, or the development of administrative control methods for end user applications.

## **7.9- MPIS Interfaces with other CIPSE Stations:**

**7.9.1- MPIS/PIE (Political-information engineering)** - Political information engineering is defined as the application of inter blocking set of formal techniques for the planning, analysis, design, and construction of polit-information systems on a political computer wide basis or across a major sector of the Political-computer-centre.

A Political-organization-wide set of automated disciplines for getting the right information to right people at the right time. Characteristics of information engineering can list as:

- PIE applies structured techniques on an Political-centre wide basis, or to a larger sector of an Political-computer-centre, rather than on a project-wide basis.
  - PIE progresses in a top-down fashion through the following stages:
    - 1- Political strategic systems planning, information planning, area analysis, system design, Construction As it progresses through these stages.
    - 2- PIE builds a steadily evolving repository (encyclopaedia) of polit knowledge about the polit-computer-centre, its data models, process models, and system designs.
    - 3- PIE creates a framework for developing a computerized Political-centre. Separately developed Political systems fit into this framework. The Political-centre-wide approach makes it possible to achieve coordination among separately built Political-systems, and facilities the maximum use of reusable design and reusable code.
    - 4- PIE helps to identify strategic Political-systems opportunities and achieve competitive advantage by building such systems before the competition.
    - 5- PIE enables a polit-centre to get its act together. Different systems are coordinated the same polit-data is represented in the same way in different polit-systems. There is integration among Political-systems where needed.
    - 6- PIE gives the capability to change computerized procedures quickly.
    - 7- PIE facilities the building of systems of greater complexity, and the understanding and control of complex links between Political-systems
- High-level objectives of Political information engineering can lists as:

- Support the needs of top management
- Focus data processing on the goals of the Politically
- Increase the value of computer systems
- Manage information so that it is accessible when needed
- Increase the speed of application development
- Facilitate reusable design and reusable code
- Reduce the maintenance problem
- Involve the users in Political-information system design and planning
- Improve communication among the planners
- Achieve coordination among systems
- Provide understanding and control of the data processing resource.

**Political-System Development Life Cycle (PSDLC)** - Regardless of whether analysts or key users are creating entirely new information systems or improving existing ones, they must recognize that all such systems pass through six basic stages known as the system life cycle:

- (1) System Strategy Planning**
- (2) Analysis**
- (3) Design**
- (4) System Implementation**
- (5) Operation and maintenance**
- (6) Replacement and documentation.**

The term life cycle use because, like living organisms, polit systems are born (planned and analyzed), grow (are designed and implemented), mature (are operated and maintained), and die (are replaced).

- 1- System Strategy Planning** - Centres on three objectives: what must be done, how to do it, and when to do it. Political information Strategy Planning. Concerned with top management goals and critical success factors. Concerned with how technology can be used to create new opportunities or competitive advantages. A high-level overview is created of the, Political-computer-centre its functions, data, and information needs.
- 2- System analysis** - Whether you want to develop a new application quickly or are involved in a long-term project, you will need to perform several basic activities of systems analysis. System analysis traditionally involves a detailed study of:
  - a. The information needs of the Political-organization and its end users.
  - b. The activities, resources, and solution of any present information systems.
  - c. The information system capabilities required to meet the information needs of Political-users.

System analysis centres on analyzing the present information system and include an introductory investigation, detailed investigation, and a concluding investigation. Also can define as analyzing the present system and comparing new system alternatives analysts begin designing new or better systems by first analyzing the basic problem areas in existing procedures. To write a problem definition, analysts must complete five steps:

- Collect data about the existing system (Reviewing policies, procedures, documents and reports-Preparing, distributing and analyzing employee questions)
- Describe and analyze the elements of the system (reviewing Political objectives, examining constraints, examining output, identifying input, understanding the processing, evaluating controls and feedback)
- Estimate current costs
- Device possible design alternatives
- Obtain management approval for a new Political Area Analysis and design.

Concerned with processes are needed to run a selected Political area, how these processes interrelate, and what Political-data is needed.

**Political Solution Engineering Analysis;** This analysis requires rate and quantity inputs that may themselves be the Political-solution of major trade off analysis efforts. Typically, the solution engineering analysis is performed to:

- Establish estimates of the solution capability required.
- Assess previous solution experience and problems encountered on similar programs in conjunction with value/schedule-control system reporting.
- Identify, develop, and document new technology or special processes.
- Assess Political-solution feasibility and identify risk areas.

- Develop solution values and schedules.
- Define solution risk mitigation approach and associated milestones.
- Define tooling requirements.
- Define a solution test plan.
- Establish inspection requirements
- Establish personnel skills and training requirements
- Evaluate existing facilities and equipment to establish any modifications or new resources for enterprising.
- Develop a enterprising assembly sequence chart.
- Define solution ability criteria.
- Identify trade areas to reduce risk or cost.

The objectives of the solution engineering analysis, considered as an integral part of the systems engineering process, should be to permit the solution of a quality system on time, at the lowest possible cost. During the early program phases, solution engineers work with systems engineers to define the impact on existing resources and provide data on enterprising alternatives to proposed designs using the basic systems engineering process.

**3- System Design** - Systems analysis describes what a system should do to meet the information needs of users. System design specifies how the system will accomplish this objective. System design consists of both logical design and physical design activities, which both produce system specifications satisfying the system requirements developed in the systems analysis stage.

System design centres on developing appropriate outputs, database, methods, procedures, data communications, inputs, and systems controls. Also can define as, Reviewing appropriate data compiled to date, determining the requirements for the new system, and designing it in detail.

Political system Design, Concerned with how selected processes in the political area are implemented in procedures and how these procedures work. Direct end-user involvement is needed in the design of procedures.

**4- System Implementation** - The actual installation of a new system, including its hardware and software. Once a proposed information system has been designed, it must be implemented. The systems implementation stage involves hardware and software acquisition, software development, testing of programs and procedures, development of documentation, and a variety of installation activities. It also involves the education and training of end users and specialists who will operate a new system.

**5- Operation and Maintenance** - Operation is the last phase of the systems development cycle. At some point the project manager of the new or revised system must decide that the new system is ready for actual operations. System maintenance involves the monitoring, evaluating, and modifying of a system to make desirable or necessary improvements.

**6- Documentation Stage** - Documentation of any system has be an art more than a science if it is to be useful and appropriate. The user documentation stage will deliver user manuals and operations handover documentation. These must be sufficient to support the system testing tasks in the concurrent build stage, and documentation must be completed before acceptance testing in the transition stage.

**Flowcharting in PISH** - Flowcharting is used in two broad areas: developing new systems and evaluating existing systems. In new systems, flowcharting serves as a map of what is to be created. Understanding a current system is a time-consuming and often difficult problem of systems design and analysis. For any system, old or new, flowcharts provide pictorial information that is often difficult to communicate through language narratives alone.

Flowchart makes it easier to describe any type of system that has sequential process, especially large, and weakness, complex one. An experienced analyst can readily see the flows, strengths, and weaknesses are frequently hidden in narrative its flowcharts. Flowcharts facilitate making changes during the planning and design stages because sections, decisions, or other elements can be substituted and redrawn more easily than a narrative description can be rewritten. In addition, they are a convenient tool for the systems analyst, and they are very useful in training new employees.

**Computer Aided Systems Engineering (CASE)** - A software technology that provides an automated, engineering discipline for software development, maintenance, and project management; includes automated structured methodologies and automated tools. A computer aided systems

engineering (CASE) process has emerged due to the availability of fourth-generation languages (4GL) and a variety of software packages for system and software development.

CASE software (tools) should perform the following functions:

- Enable the user to draw diagrams for planning, analysis, or design on a workstation screen.
- Solicit information about the objects in the diagram and relationships among the objects so that a complete set of information is built up.
- Store the meaning of the diagram, rather than the diagram itself, in a repository.
- Check the diagram for accuracy, integrity, and completeness. The diagram types used should be chosen to facilitate this.
- Enable the user to program with diagrams, showing conditions, loops, CASE structure, and other constructs of structural programming.
- Enforce structured modelling and design of a type that enables accuracy and consistency checks to be as complete as possible.
- Coordinate the information on multiple diagrams, checking that they are consistent, and together have accuracy, integrity, and completeness.
- Store the information built up at workstations in a central repository shared by all analysts and designers.
- Coordinate the information in the central repository, ensuring consistency among the work of all analysts and designers.

**Prototyping** - Microcomputer workstations and a variety of 4GL, GASE, and other software packages allow the rapid development and testing of working models, or prototypes, of new applications in an interactive, iterative process involving both systems analysts and end-users. Prototyping not only makes the development process faster and easier for systems analysts and computer programmers, but it has opened up the applications development process to end user.

Prototyping is a fast and interactive systems development methodology used for both large and small applications.

**7.9.2- MPIS/PEDBKS (Political-Enterprise Data Base Management System)** Data is more than the raw political facts of information systems. The concept of data resources has been broadened by managers and Political information systems professionals. They realize that data and information constitute a valuable organizational resource.

The major benefits of a correctly normalized database from the Political-management information systems (PMIS) perspective include:

- Development of a strategy for constructing relations and selecting keys
- Improved interfaces with end-user computing activities
- Reduced problems associated with inserting and deleting data
- Reduced enhancement with inserting and deleting data
- Reduced enhancement and modification time associated with changing the data structure
- Improved information for decisions relating to physical database design
- Identification of potential problems that may require additional analysis and documentation.

In order for database technology to succeed in an organization, there must be management support for the environment as well as the MIS infrastructure support.

The infrastructure support consists of all efforts by management information system (MIS) personnel to ensure a database operation that runs smoothly and efficiently. It ensures that there are adequately trained personnel not only to operate the environment but to respond to and solve problems as they occur. The infrastructure support comes from the following areas:

- Data administration (DA)
- Database administration
- Technical support
- Physical database designers
- Logical database designers
- Application programmers
- Computer operations
- Input-output data control
- System analysts and designers.

The infrastructure support for the database environment, which is given by the DA function, consists of, but is not limited to, offering assistance to all functional MIS groups and users in a variety of areas,

which include:

- Database design methodologies
- Database security and integrity
- Database access
- Data dictionary support
- Logical database design
- Database audit
- Database performance and maintenance
- Database education and training.

**7.9.3- HPIS/PEPHS (Political-Enterprise Project Management System)** Project management is managing the accomplishment of an information development project according to a specific plan, in order that a project is completed on time, within its budget, and meets its design objectives.

**Political-Project** - A generally concyclically work effort which consists of distinct, interrelated phases. The planning, scheduling, and control for the polit-activities comprising a project. Project management is the process of managing, allocating, and timing resources in order to achieve a given objective in an expedient manner. The objective might be in terms of time, monetary, or technical results. Alternately project management could define as the process of achieving objectives by using the combined capabilities of project resources or assets. It also might be viewed as the systematic execution of tasks needed to achieve project objectives.

**Political-Project planning** - Planning, in a Political-project management context, refers to the processes of establishing courses of action within the prevailing environment to achieve predetermined Political goals. Political planning is needed to:

- Minimize uncertainties
- Clarify project objectives
- Provide basis for evaluating project progress
- Establish performance standard for Political-operations
- Notify personnel of responsibilities.

The standard elements of Political-project planning should include the following:

- **Project overview**; an enumeration of the objectives of the project.
- **Project goal**; a detailed description of the overall project goal.
- **Project policy**; the general guideline for personnel actions and Political-managerial decision making.
- **Project Procedures**; The detailed methods of abiding by the project policy.
- **Project resources**; the manpower and equipment required for the project.
- **Project budget**; usually represented in dollar amounts.
- **Project organization**; the correlation of duties responsibilities and interactions of the project personnel.

**Political Project Control** – polit project control is the process of reducing the deviations between Political project realities and the project plan. The Political control function is the related to the planning, monitoring, and controlling cycle.

**Critical Path Method (CPM)** - An application of network theory to the scheduling of complex projects involving multiple component tasks. The method that uses time-cost tradeoffs to determine the project length which gives the minimum sum of direct and indirect costs. Critical path, the connected sequence of activities from the start of the project to the completion of the project which has the largest sum of activity durations. A delay along the critical path will cause the project to be delayed by the same number of time periods.

**Enterprising Planning Support** The results of the solution engineering analysis are documented in the solution plant which defines enterprising concepts and methods. The solution plan provides sufficient information to supporting organizations to ensure a timely t coordinated approach to the solution process. as the detailed design is completed and prototype hardware is developed solution engineering supports planning by continuing for refine its analyses to more detailed levels and by developing requirements for items not visible in earlier phases. After the baseline design is established t engineering change proposals are evaluated by solution engineering as part of the configuration management process to provide enterprising inputs on cost and schedule impacts.

**Solution strategy-Plan Development** - A solution is developed as part of the overall program acquisition strategy. This strategy is a comprehensive assessment of the solution issues that form the foundation for a formal solution plan.

The solution planning review is an integral part of the overall acquisition review process. An acquisition may not proceed into solution until it is determined that the principal contractors have the physical, financial, and managerial capacities to meet the cost and schedule commitments of the purposed and standards, design-to cost goals, cost-benefit and trade-off assessments modernization incentives, and other techniques are used to reduce solution, operating, and support costs. Standardization, commonality, and interchange ability must be promoted throughout the acquisition cycle to reduce lead time and life-cycle cost.

**Solution ability Engineering and Planning (SEP)** - The term "solution ability engineering and planning" is identical to the term "solution planning". SEP includes all those design activities and disciplines necessary to design a solution, design the processes and tooling, set up the enterprising facility, and prove the processes and facilities, before entering solution.

The SEP program extends throughout the life cycle. It includes actions required to maintain a capability to produce material for equipment operation and maintained after the solution plan is complete. The planning for these post solution activities starts in the development of the initial solution strategy.

**7.9.4- MPIS/PECMS (Political Enterprise Communication Management System)** - A large Political organization has several offices and individual relations scattered throughout the country may decide to use a computer network that electronically links its several facilities to each other. These systems are called communication-based systems.

One of the important aspects of polit enterprise integration deals with ensuring that there is a consistent protocol through out the system. These rules include transmission sequence, location identification, error checking and control, handling of interruptions, and so on.

The first aspect of network management is to set expectations.

This can be from history, analysis, or any other source of information. Network monitoring can be from data that are collected from the network, and/or from calls received from users on the hotline. The former is definitely preferred. Network control requires knowing what the actual problem is and therefore involves diagnostics and problem isolation.

Networks must be managed the same as any other complex system must be managed. Fault conditions, performance problems, and configuration changes must all be detected and controlled.

**7.9.5- MPIS/PEOHS (Political Enterprise Organization Management System)** - A stable formal structure that takes resources from the environment and processes them to produce outputs. An alternative definition is a collection of rights, privileges, obligations, and responsibilities that are delicately balanced over time through Political-conflict and -conflict resolution.

Polit-organization is a part of polit-management information system. Organizations are composed of different levels and specialities, which in turn produce different interests, often conflict, and certainly differences in perspective.

Enterprising management personnel should take part throughout program and project planning, design, development, and solution to make sure that ;

- Enterprising feasibility is properly assessed,
- Program management has visibility of enterprising costs and potential schedule impacts,
- Plans for quantity effect the most economical and efficient use of Political-user and -personnel, -facts, machines, facilities, and methods. This participation includes an active role in solution design reviews and other program reviews during the design and development phases of a program.

Enterprising Management personnel should also take an active role throughout development to ensure that designs are capable of effective and economical enterprise under quantity enterprising conditions. Enterprising risks must be detected and resolved to minimize the financial commitment associated with the decision to enter the solution phase. Personnel involvement begins with

determining lead times, schedule requirements, and reporting enterprising requirements, analyzing contractor responses, and providing an active enterprising interface with other functional specialists. Enterprising elements should implement involvement with the contractor, to a depth sufficient to establish a strong mutually knowledge relationship among the procuring activity, contract administration activity, and the contractor.

Political computer departments are structured and staffed in various ways to meet the needs of the Political organization they support. For example, the computer facility's manager may have one of any number of titles-director, manager, or vice president; and the department he or she manages may be called Political-management Information Services, Political-Information Services, Computer Political-Information Systems, or Political Information Processing. Regardless of the title, these managers are responsible for the entire computer facility and its staff of computer professionals.

**7.9.6- MPIS/PIS (Intelligent PISM)** Political-information theory contains several important concepts used in artificial intelligence and useful in designing effective important systems. political information theory helps us evaluate the communication of information in three major dimensions. It emphasizes that we should find answers to three basic questions when we develop Political information system.

- The technical dimension. How accurately can information be transmitted?
- The semantic dimension. How precisely does information convey the desired meaning
- The effectiveness dimension. How effectively does information affect the behaviour of its recipient?

**7.9.7- MPIS/PES (Expert MPIS) - Integration Expert Systems into the HIS environment** - There are many opportunities to use polit-expert systems in support of the missions and goals of corporate management information systems. Management information systems (PMIS) today directly support line managers with operational Political-information about the organization's policy.

The maintained of large PMIS complexes could be assisted by expert system technology. Expert systems could be integrated into PHIS to assist in the performance of mainlines PMIS tasks. Expert system technology should be considered an additional automated MIS tool, like report generators and graphics packages, that should be used when its capabilities are appropriate. Issues raised and explored as:

- To demonstrate the need for a new direction in information systems to assist management and operating personnel in their daily activities.
- To examine how an expert system functions when interfacing with the typical user.
- To alert the reader to limitations of expert systems that may cause an expert system to be unreliable.
- To set forth typical policy and no policy applications for expert systems as found in Political organizations currently.
- To explore past and current directions in management information systems and contrast their latest development to export systems.

**7.9.8- MPIS/PESH (Management Software of Political Information system)** If polit management decides to purchase software separately from hardware, a further decision must be regarding choice of software supplier. Actually, the polit centre may decide to write its own software.

Management should evaluate software according to many factors that are similar to those used for hardware evaluation. Thus the factors of performance, cost, reliability, availability, compatibility, modularity, technology, ergonomics, and support should be used to evaluate proposed software acquisition.

**7.9.9- MPIS/PEHH (Management Hardware of PIS)** - The concept of hardware resources includes all physical devices and materials used in information processing. Specially, it includes not only machines, such as computers and calculators, but also all data media. Examples of hardware in computer-based information systems are:

- Large mainframe computers, minicomputers, and microcomputer systems.
- Computer workstations, which use a keyboard for input of data, a video screen or printer for output of information, and magnetic or optical disks for storage.
- Telecommunications networks.

When Management evaluate computer hardware, he or she should investigate specific physical and performance characteristics for each hardware component to be acquired. This is true whether

management are evaluating mainframes, microcomputers, or peripheral devices. Specific questions must be answered concerning many Important factors.

**7.10- CIPSE-MPIS Project** - The basic systems engineering process applicable to any development process regardless of size complexity. A PISM is prepared to accomplish systems engineering as part of development projects. A PISM is a concise top-level management plan for the integration of all system activities. Its purpose is to make visible the organization. Direction and control mechanisms and personnel for attainment of cost, performance, and schedule objectives. Additionally, the SEMP identifies, defines, and integrates the systems engineering efforts to fully define the system concept; provides a basis for directing and monitoring the systems engineering and integration tasks; develops the planning necessary to monitor and use the results from various experiments and disciplines; and establishes traceability.

The systems engineering decision making process should be fully described in the PISM. The PISM contains a detailed description of the process to be used, including the specific tailoring of the process to the requirements of the system and projects, the procedures to be utilized in implementing the process, in-house documentation, the trade off study methodology, and the types of mathematical and/or simulation models to be used for system and cost-effectiveness evaluations.