

ATTACHMENT A

**Organization Study
of
Arroyo Seco/Rose Bowl Department**

May 1991

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Purpose of the Study

To provide the General Manager of the Arroyo Seco/Rose Bowl Department with an analysis of organizational options to provide effective management of current operations and to prepare for increasing demand for services -- including construction of new facilities and managing major events such as the Super Bowl and (potentially) World Cup.

The consulting team was asked to:

1. Review stated structure and working structure of current organization.
2. Review stated and actual tasks and levels of work in existing structure.
3. Propose options to restructure the organization to match the levels of work required to operate the Department effectively.
 As City Department
 As Not-for-Profit Enterprise
4. Provide a series of transitional steps to restructure the organization without impairing day-to-day operations.
5. Make recommendations regarding structure to meet both short-term and long-term goals.
6. Provide a rationale for the required personnel expenditures.

Criteria:

1. City charter, city ordinances, state law.
2. Not-for-profit enterprise.
3. Essential business functions.
4. Capabilities of manager (Greg).
5. Profitability/cost expenditures.
6. Short-term goals.
7. Long-term goals.

Methodology:

Develop Department Mission Statement (purpose + essential tasks).
Interview Department employees to learn about the work of each role, the managerial and other relationships which are required to carry out the work of that role as described by the role incumbent and the manager.
Review Department work processes and systems.
Develop organizational models to accomplish mission of Department.
Prepare role descriptions (in outline) for key positions.

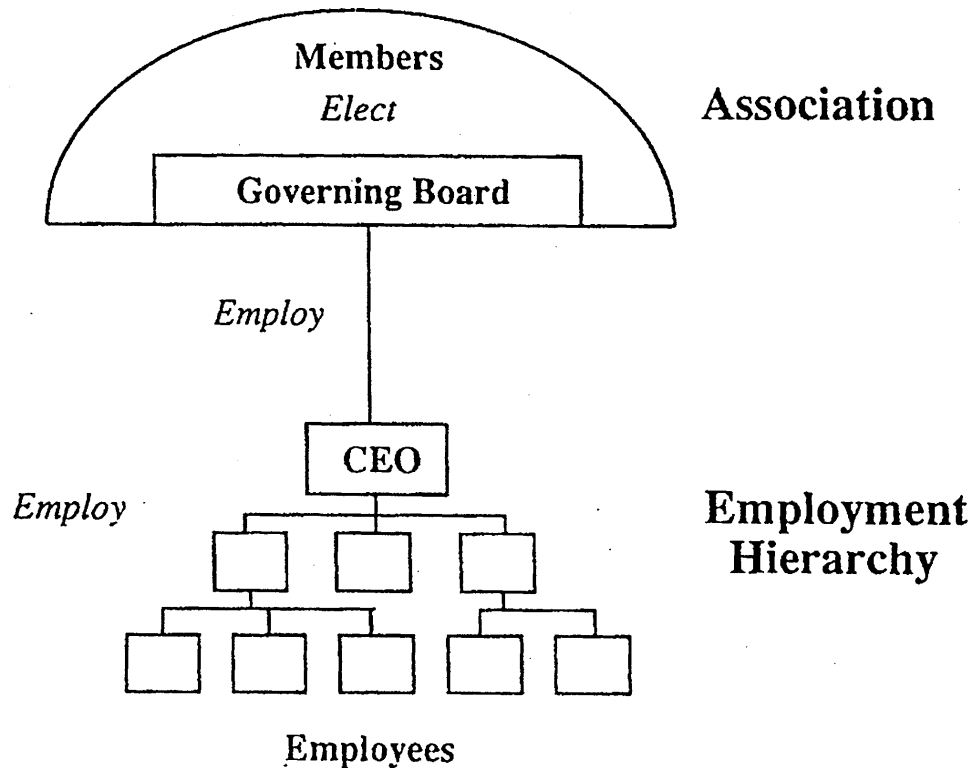
Note: The consultants focus is on the work of the roles, not the capabilities of individuals to fill those roles. The consultants have not (and will not) comment on who might fill what roles as that is a decision for the manager.

Key Concepts

Association: a group of individuals who have come together and formed themselves into an institution with explicit rules and regulations governing membership. (Jaques, 1976:48) A corporation is an association of citizens, a city is an association of citizens, a union an association of workers. The City of Pasadena is an association.

Governing Board: persons elected by members of the Association to act on behalf of the members. Governing boards may hire an executive to carry out work to accomplish the purpose of the association. A City Council is a governing board; a corporation is usually represented by a Board of Directors.

Employment Hierarchy: the people employed by the association to carry out its work and their arrangement of roles, their relationships, authorities, accountabilities designed to accomplish the purpose of the association. A City Department is part of an employment hierarchy.



Essential Business Functions: There are five essential functions which all organizations must carry out if they are to survive and thrive over time. Three are focused on customers/clients. Two are inwardly focused on the employment hierarchy.

Focus on Customer

Production Produce a product/service to meet customer needs

Sales: Identify customers and their needs
Inform customers about products/services and their characteristics/qualities
Discover customer needs for which business does not have products
Negotiate agreements to meet customer needs

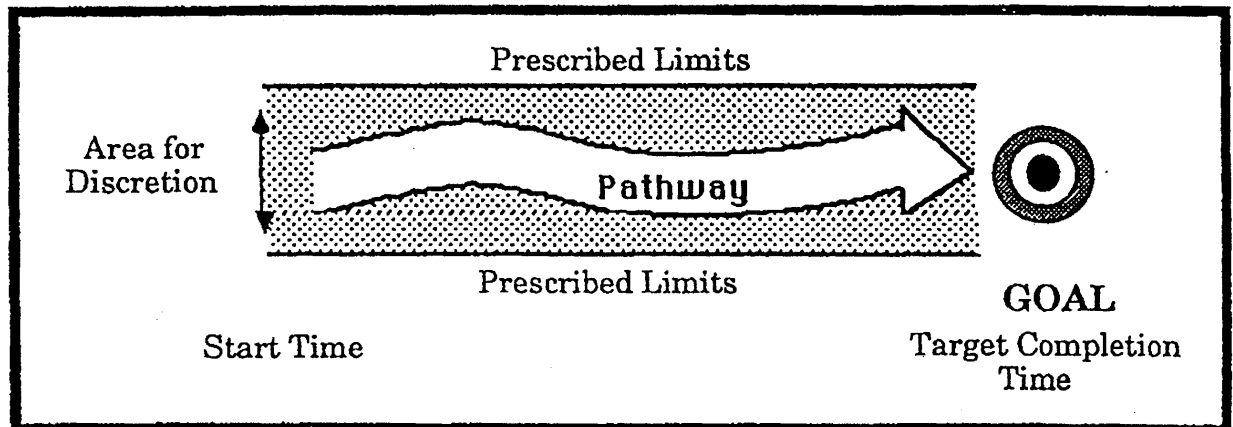
Product Development:
Research, test, evaluate for purchase, create, adapt new products/services to meet customer needs

Focus on the Business

Sustaining: Maintain the productive capacity of business
Maintain corporate resources
Keep the business up and running
Assure continuity of business

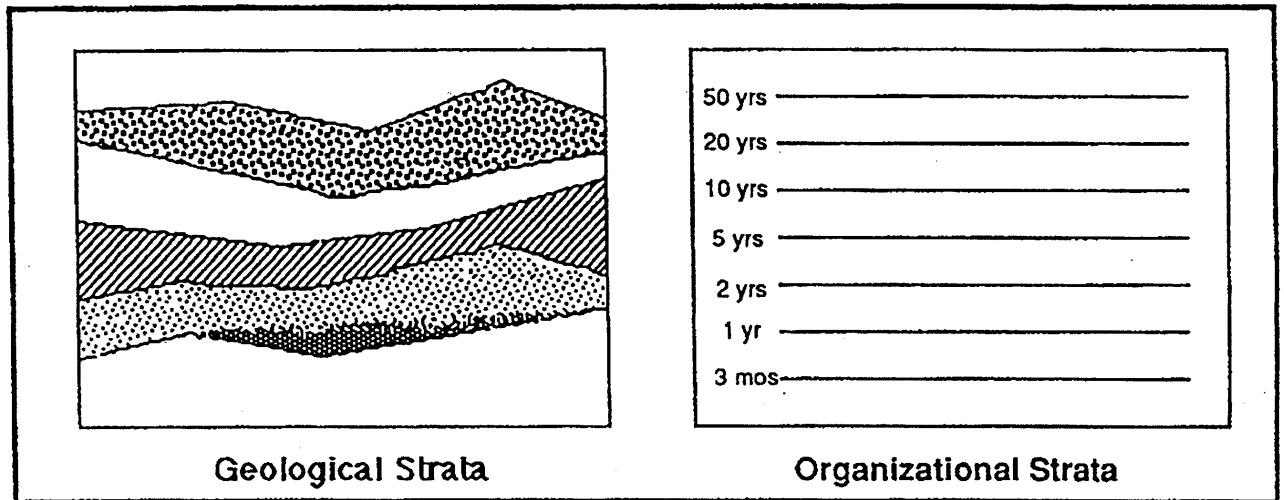
Improving: Improve the productive capacity of business
Identify, evaluate, implement better ways of doing and supporting the business
Improve work flows and processes, technical processes, organizational systems

Work: The exercise of discretion -- making decisions and acting on them -- within policy limits to achieve a purpose.



Task: A specific assignment with a statement of boundary conditions -- output in terms of quality and quantity, available resources, time to completion -- for the performance of work.

Work Stratum: A broad band of work within which the complexity of the tasks is all of a similar type. Work strata form the basis for an effective employment hierarchy. The comparison to geological strata illustrates the pattern found in employment hierarchies



The Logic of Stratification:

- 1) Work is the exercise of discretion.
- 2) To exercise discretion is to make choices (to act based on thinking).
- 3) People think differently.
- 4) There is a pattern to the differences in the ways human beings think.
- 5) If one wishes to get work accomplished (as required in a business), it makes sense to structure the business in a way which is in accord with the thinking patterns of the human beings who are asked to do the work.

Levels of Complexity of Work:

- I "Hands on" Uses known methods and procedures to carry out concrete tasks one at a time. Continues along a known pathway until an obstacle is perceived, then uses practical judgment to overcome it. Has continuous physical contact with equipment and people. Follows rules and procedures.
- II "Case work" Diagnoses the situation. Every case is unique. While on the pathway, accumulates and analyzes data for significance in order to anticipate problems. Discovers the best practice. Requires knowledge of the overall system. Applies existing systems. Manages "hands on" work.
- III "Constructs a system" Discerns trends from flow of significant, real events and constructs systems to deal with them. Predicts future trends; selects appropriate plan. Alters systems to deal with changing trends. Implements the best operating methods for the situation.
- IV "Parallel processing" Controls the interactions of two or more Stratum III related systems. Balances and adjusts resources among them. Links systems; judges appropriateness of systems; develop and implement alternatives to way things are done now in light of the economic result to be achieved. Understands rules and structural principles. Transforms Stratum V mission statement into operational tasks for III.
- V Shapes the organization in its environment. Controls the whole system using theories not principles. Interacts with the environment to modify systems so the organization progresses as a unit. Generates resources. Allocates resources to keep a balance among essential business functions so that the organization prospers in its environment.

Managerial Authorities -- VARI:

- Veto selection
- Assign tasks
- Recognize and differentially reward work performance
- Initiate removal from role

Arroyo Seco Department

Situation Today:

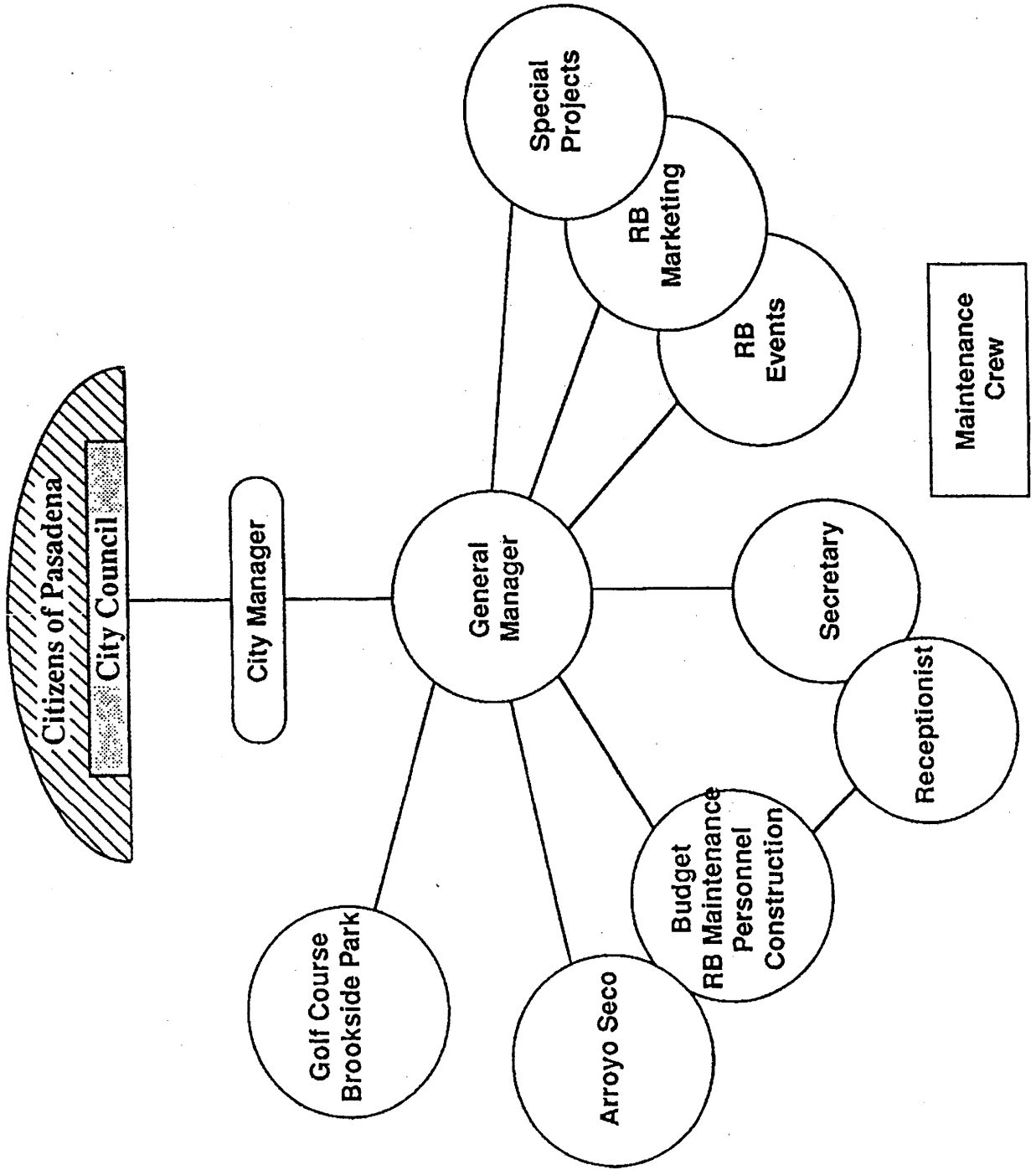
Positives

- 1) Major and minor events are taking place.
- 2) Super Bowl was awarded by NFL.
- 3) Golf Course runs and makes money
- 4) Immediate community relatively happy (limitation on events, no luxury boxes to change Rose Bowl visually)
- 5) Tournament of Roses satisfied
- 6) UCLA satisfied
- 7) Able to mount presentations to major sports entities, e.g., World Cup, NFL.
- 8) Lower Arroyo being sustained with some improvement in facilities

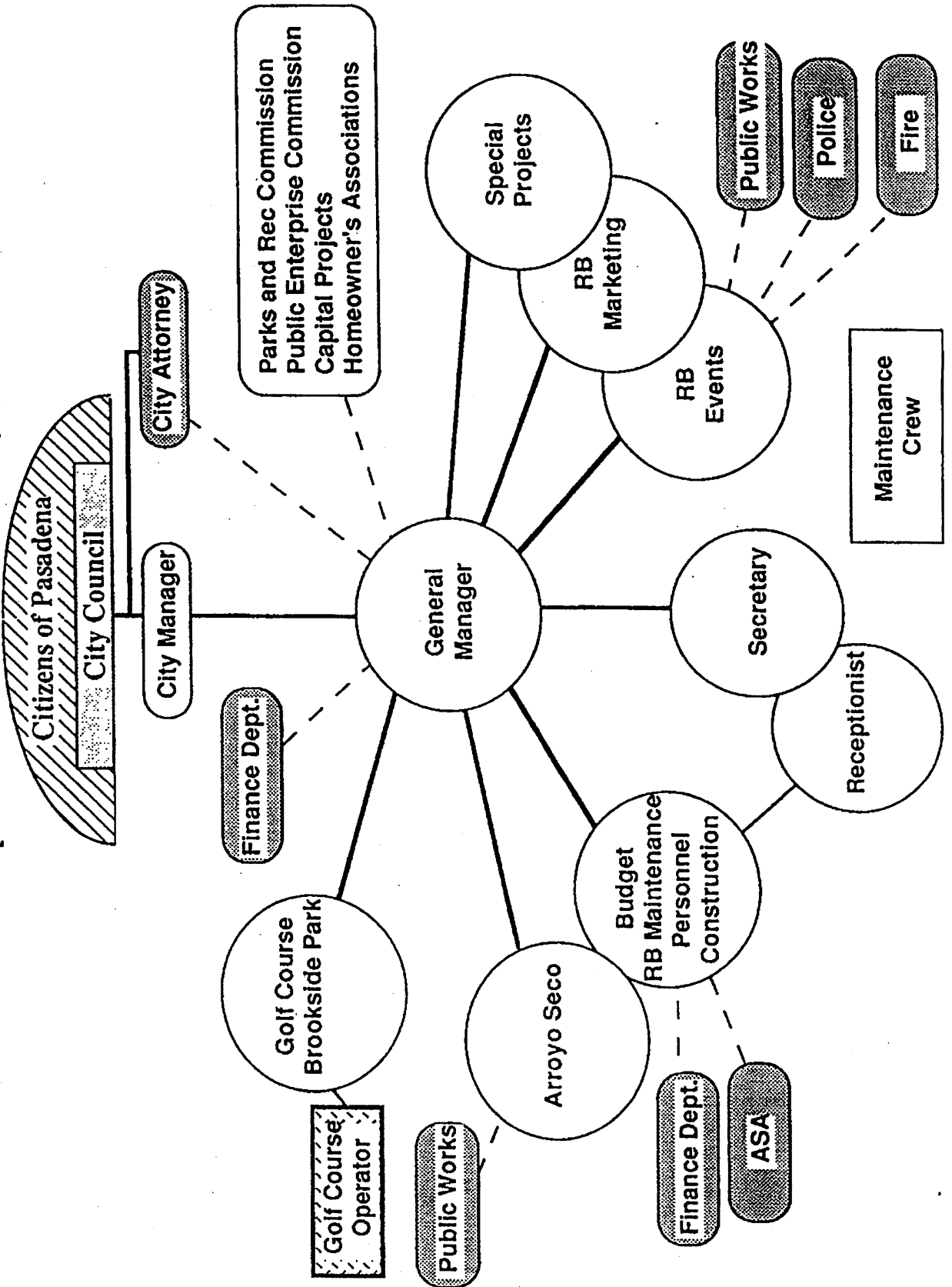
Negatives

- 1) Current performance does not allow for on-going maintenance of the facilities. \$xxmillion in accumulated deferred maintenance on Rose Bowl.
- 2) Inability to undertake major construction efforts.
- 3) The Rose Bowl incurred a deficit in 1990.
- 4) Concern that Department cannot sustain current performance due to organizational inadequacies.
- 5) Day-to-day tasks (returning phone calls, responding to community requests) sometimes fall between the cracks.
- 6) Priorities unclear to employees of Department.
- 7) Firefighting rather than preventing fires.
- 8) Financial outcomes of events not well predicted and not available after the fact in timely manner.
- 9) Right hand doesn't always know what left hand is doing.

Arroyo Seco Department Current Organization -- Employees Only



**Arroyo Seco Department
 Current Organization**
 [with some external relationships]



Issues and Problems

Significant IV work not being done -- no one to translate vision at V into operations at III

Significant III work not being done -- no linkage to V, no direction from IV.

II work is carried out without clear direction

Because there are no roles at IV and at III, the IV and III work which is being done, must be done by the General Manager. This leaves him over-burdened with work which is not appropriate for him to carry out. It is also frustrating to him and to the staff because of the gap between his business concerns and theirs. When the General Manager is not available, many decisions cannot be made and work is delayed.

Tasks (of varying levels of complexity) are being accomplished by the staff -- some well, some poorly -- but always with uncertainty as to just what is expected, what is appropriate.

No clear understanding or agreement regarding the mission of the organization and the essential tasks which must be carried out if the purpose is to be achieved. No clear understanding of priorities.

Essential business functions

- 1) Production -- doing what has been done before
- 2) Sales/marketing -- lacks clear direction and boundaries within which to exercise discretion. Other than Greg, it is not clear who can decide who can use Arroyo facilities, for what purposes, at what rates, etc.
- 3) Product development -- unclear who, if anyone, is accountable for this
- 4) Sustaining -- basic functions, budgeting, record-keeping, board reports, physical plant maintenance being carried out. No one (other than GM) appears to be authorized to provide data to City Manager, other City departments, City Council, City Commissions to keep them apprised of Department operations or to respond to requests.
- 5) Improving -- minimal work being carried out to improve business processes and systems.

Lack of clarity about accountabilities and authorities -- consequences

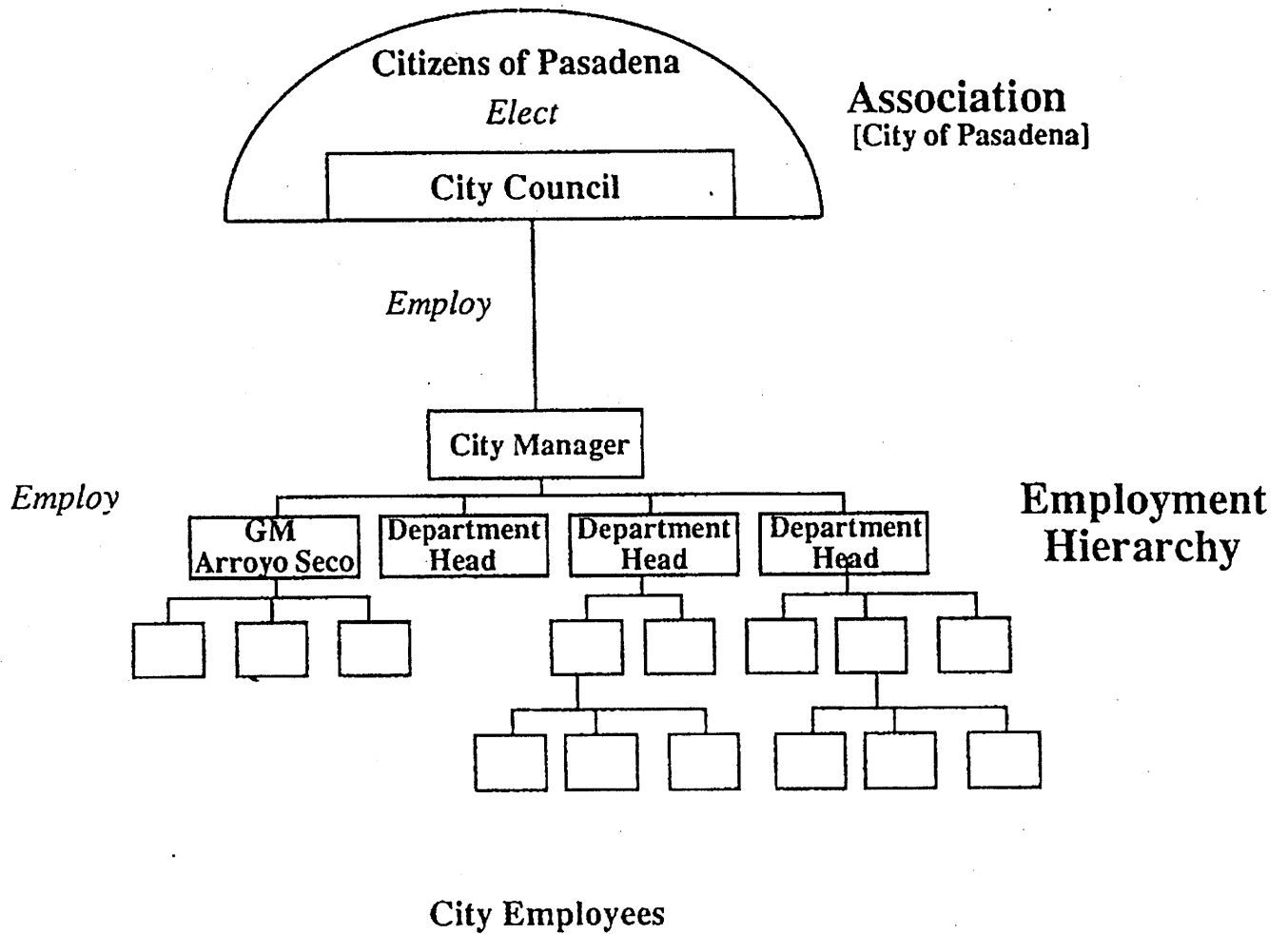
- 1) Confusion and occasionally differences regarding who on the staff is to do what.
 - a) Staff expresses some concern over "turf" -- who is to do what, boundaries between roles, appropriate role relationships
 - b) Scheduling conflicts
 - c) Energy wasted figuring out what to do, convincing others one should do it, discovering after it is done that it is not needed
- 2) All conflicts must be resolved by General Manager since no one else has the authority to do this.
- 3) Most decisions (including minor ones) flow to the General Manager.
 - a) GM over-burdened
 - b) GM becomes a bottleneck
 - c) Employees cannot exercise discretion effectively because they do not know boundaries of their roles, relationships, authorities, accountabilities

Option -- City Department

Improve the Employment Hierarchy

1. Identify the III roles which are required to carry out the work of the Department
2. Define and set up the required roles at III, II and I.
3. Place current staff in roles appropriate to their interests and current capabilities. Clarify roles, relationships, authorities, accountabilities.
4. Fill the III roles with people who are capable of working at this level and give them clear accountabilities, authorities, task assignments.
5. Fill the gap at IV. Employ at least one manager at IV to translate V mission into III operational work and manage the work of the III units.
6. Identify where work is being done elsewhere (City Departments, contractors) which could be done more effectively within the Department or by other contractors.
7. Identify where work being done within the Department might be more effectively done by other City Departments or contractors.

City of Pasadena Arroyo Seco as City Department



Option -- Not-for-Profit Enterprise

Create governance process.

1. Set mission for the Enterprise.
2. Provide rationale for what is included in the mission statement.
Rose Bowl, Golf Course, Aquatics Center, Brookside Park, Lower Arroyo, Upper Arroyo and Devil's Gate?
3. Formulate charter under which the Enterprise will operate -- authorities and accountabilities.
4. Develop model (and its rationale) for Governing Board
5. Produce business plan -- projected revenues and costs
Contractual arrangements with City, if any, regarding provision of services to the Enterprise or by the Enterprise to the City.
6. Provide for transfer of contracts with Tournament of Roses, UCLA and other long-term users of Arroyo facilities.
7. Formulate legislation for City Council Action

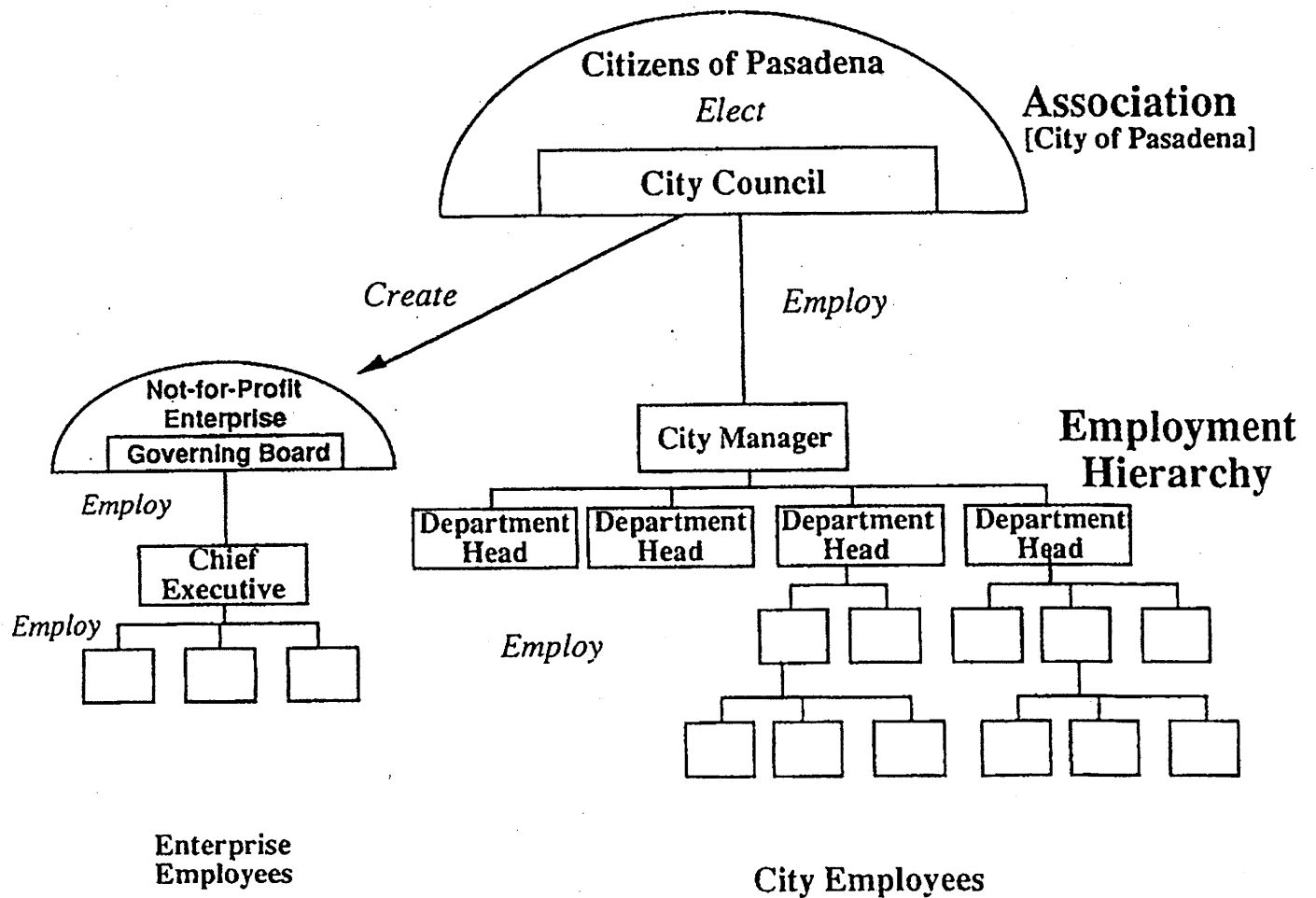
Design the Employment Hierarchy

1. Produce organization plan to carry out mission of the Department. The employment hierarchy would be similar to that of the City Department, but depending upon services to be provided by the City, there might be a need for different roles in the areas of finance, marketing, product development, community relations, construction management.

Develop Political Support

1. City Council, Tournament of Roses, UCLA, City Commissions, Homeowners Associations, environmental groups, funding authorities, etc.)

City of Pasadena Arroyo Seco as Not-for-Profit Public Enterprise



Mission = Purpose + Essential Tasks

Purpose of the Arroyo Seco Department: Why do we exist

To return economic, environmental and civic value to the City of Pasadena

Essential Tasks: What must we do to achieve our purpose

Operate a world class stadium
Provide City facilities in the Arroyo
Maintain and improve ecological resources of Arroyo for present and future generations
Operate professional quality municipal golf course
Develop value-adding services (facilities)

What do we mean by Value?

Generate income to:

- 1) Fund city budget
- 2) Maintain and improve the natural and capital assets of the Arroyo for present and future generations
- 3) Provide facilities for city programs in the Arroyo

Enhance image of City to:

- 4) Generate tourist visits to the City
- 5) Increase civic pride
- 6) Attract business development

To carry out these essential tasks -- the tasks which must be accomplished if the purpose of the department is to be achieved -- requires that they be assigned to an individual (or manager of an organizational unit). Where the volume of work is light, a single individual may be accountable for more than one essential task.

Mission = Purpose + Essential Tasks

Purpose of the Rose Bowl Operating Company: Why do we exist

To return economic and civic value to the City of Pasadena

Essential Tasks: What must we do to achieve our purpose

Operate a world class stadium
Operate professional quality municipal golf course
Develop value-adding services (facilities)
Maintain and ~~rehabilitate~~ Brookside Park for the City

What do we mean by Value?

Generate income to:

- 1) Fund city budget
- 2) Maintain and improve the natural and capital assets of the Arroyo for present and future generations
- 3) Provide facilities for city programs in the Arroyo

Enhance image of City to:

- 4) Generate tourist visits to the City
- 5) Increase civic pride
- 6) Attract business development

To carry out these essential tasks -- the tasks which must be accomplished if the purpose of the company is to be achieved -- requires that they be assigned to an individual (or manager of an organizational unit). Where the volume of work is light, a single individual may be accountable for more than one essential task.

Appendix A Public or Private Enterprise: A Comparison

Businesses, governments, not-for-profit corporations, unions, voluntary associations are often considered to be fundamentally different and to require fundamentally different organizations structures to carry out their work. Clearly there are a number of differences in terms of legal status, purpose and objectives, authorities and accountabilities.

Nonetheless all these types of organizations have a number of things in common including the ways they employ people to carry out their purposes. Elliott Jaques (Jaques, 1976:48) has termed these employing organizations, associations. "An association is a group of individuals who have come together and formed themselves into an institution with explicit rules and regulations governing membership." (Jaques, 1976:48)

In this sense, all the organizations listed above are associations -- of shareholders, citizens, workers, volunteers respectively. Members of associations are, in principle, equals. One share gives one vote, one citizen has one vote, or one union member has one vote. In a corporate association additional shares command additional votes, and in governments, unions and voluntary associations some members through force of character, intellect, financial status or organizing ability may have more influence than other members. Associations operate through consensus, voting, debate and persuasion, and unless the association is very small, members elect a few of their number to be their representatives in a governing body which is authorized to act on behalf of the members. These representatives set overall association policy and, when the work load becomes large enough, take responsibility to hire staff (employees) to carry out this policy. See Figure Page 4.

Employment hierarchies begin, in the simplest case, when a governing board hires a chief executive to work to achieve the association's objectives. This chief executive is (when the workload becomes too large for one person to handle) authorized to hire additional employees within constraints of the association's objectives, budget, personnel and policies as set by the board. The chief executive is held accountable by the board for his/her own work and for the work performance of his/her subordinates. The idea of being held accountable for one's own work and the work performance of others may be used as a basic definition of management. With this definition and the minimal authorities required to make it workable in practice, one may recognize the beginning of a hierarchical employment system, or bureaucracy.

As shown in the figure on page 4, employment hierarchies are both secondary and dependent institutions. They are secondary in that they cannot be formed in their own right; there must first be an employing body (association) which decides to establish an employment hierarchy and employ people to do work in it. They are dependent in that their continuity depends upon the continued existence of the employing body. "Their function is to get work done on behalf of the employing body" (Jaques, 1976:49).

There is a fundamental difference between associations and their employment hierarchies. To be an elected representative of an association is profoundly different from being an employee of that association. Even where terms like "leader" or "accountability" are applied to both roles, the ideas and the lived reality behind these terms are critically different.

While associations and their methods of governance are distinctively different, the structures of the employment hierarchies, when organized effectively, have a common pattern. All have a purpose (more or less agreed depending upon the association) they wish to achieve; all are concerned to hold their employees accountable for achieving the purpose of the organization; all must deal with differing levels of complexity when working to achieve their purpose. Specific roles may be required (or not required) depending upon the work of the organization, but all must carry out the essential business functions if they are to survive and thrive over time.

Appendix B Work and Levels of Complexity

When building employment hierarchies, whether public or private, it is essential to understand human work. Even the term work can be confusing as illustrated by Jaques.

It was hard *work* doing the *work* I had to do in my *work* at *work* today. (Jaques, 1976)

It was a lot of effort doing the tasks I had to do in my role at [my] place of employment today.

The many everyday meanings of the term "work" illustrate the difficulty in creating clear concepts to analyze and manage business organizations. When key concepts can be clearly defined, however, business analysis, communication and action become far more effective and efficient. Managers have clarified their thinking by making the following distinctions.

Task: An activity with a statement of boundary conditions for the performance of work.

Role: A position in an organization which has specified relationships, authorities and accountabilities.

Organization Structure: The arrangement of roles, their relationships, authorities, accountabilities designed to accomplish the purposes of the organization.

Work: The exercise of discretion -- making decisions and acting on them -- within prescribed limits in order to achieve a goal.

This definition of work has two distinct elements -- the prescribed limits and the exercise of discretion.

Prescribed limits are the real rules which set the boundaries of a task. These are the limits within which discretion must be exercised. These limits are nested one within the other as shown in Figure 1-1 opposite.

Prescribed Limits:

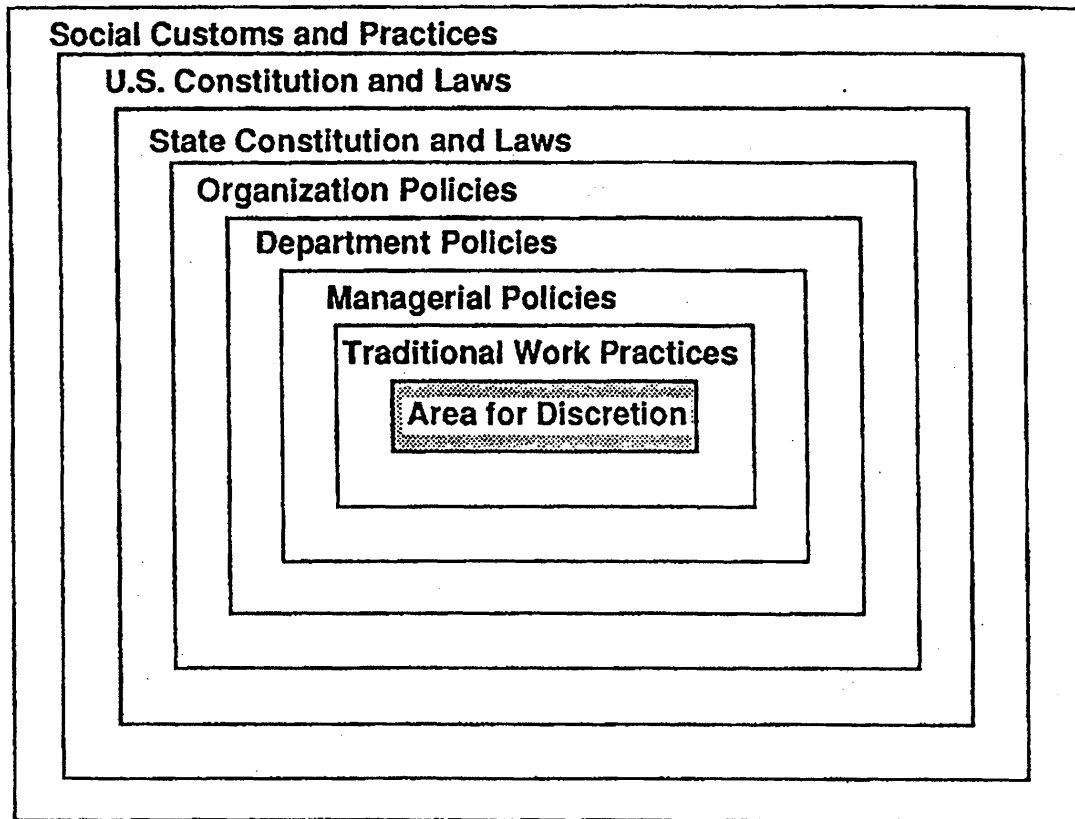


Figure 1-1

1) **Social Customs and Practices**

These often exist below the level of consciousness, and are accepted as the way we do things in our society.

2) **Law -- Constitutional, Federal, State, Local**

These are promulgated by legislatures and administrative agencies of government and operationalized by court precedent.

3) **Organization Policies**

Set by corporation or governmental charter and its managers.

4) **Department Policies**

Set by the *Department Manager* and other managers in the Department

5) **Managerial Policies**

Set by a manager for his or her subordinates.

6) Traditional Work Practices

The way we do things in this organization or in this industry or union.

7) Specified dimensions of the task

Set by the manager making the task assignment.

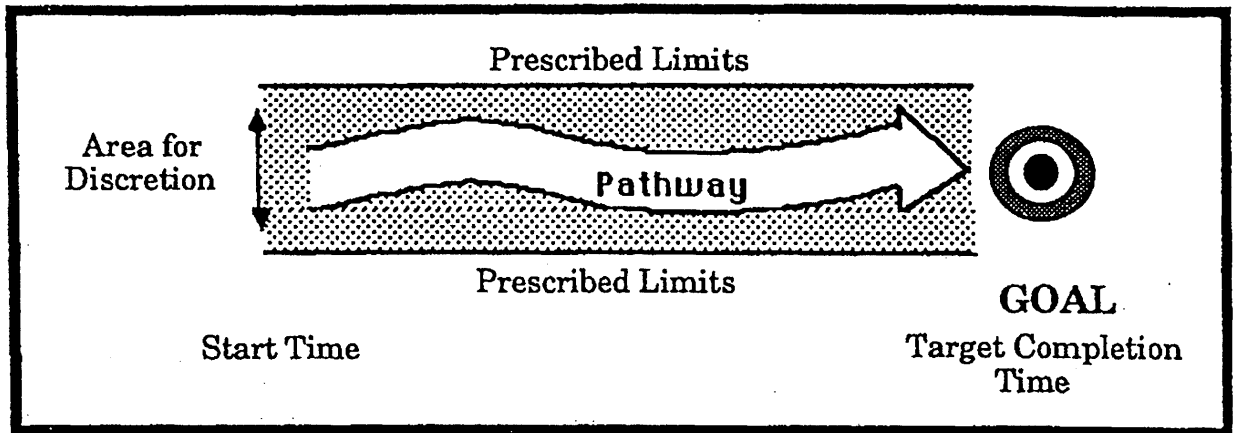
From the perspective of the person doing the work, the prescribed limits allow him to assess and control his contribution to the process by reference to objective, outside standards laid down in regulations and procedures which require knowledge and competence. This is in contrast to the exercise of discretion where such external standards are not available.

Exercise of discretion is related to the idea of effort -- not physical effort but intellectual effort. The effort inherent in making decisions and exercising judgment in order to complete a task. All work in organizations done by humans requires individual choices. Making these choices is the core of the psychological experience of doing work. By using the term *exercise* of discretion, those judgments which are thought through but not acted on are excluded. "The exercise of discretion involves mulling over a number of courses of possible action, reaching into the self to choose those (or the one) which will realise the purpose in hand and acting on that choice." (Gillian Stamp, 1988) The exercise of discretion requires one to think and to act, to create a pathway which will achieve the goal.

Stamp suggests that from a psychological point of view, the essential difference between the prescribed limits and the exercise of discretion lies in their points of reference during the actual process of doing the work. In contrast to the prescribed limits where there are objective standards external to the individual doing the work, in the case of discretion, possibilities, choices and decisions must be continually weighed against each other as the task is actually being carried out. Appraisal and control of discretion can be achieved only by reference to intuitively sensed standards within the self. Therefore considerable uncertainty about possibilities generated and choices made must be tolerated until the task is complete.

It is this uncertainty in the exercise of discretion which gives the feeling of weight of responsibility. When the manager sets a time when the task is expected to be complete, she sets a limit on the period of time during which discretion must be exercised and uncertainty tolerated. This objective limit allows for measurement of the exercise of discretion as will be discussed later.

The full definition of employment work can be illustrated as shown below. The pathway is the task methodology which the person must create by exercising discretion in order to achieve the goal. Such methodologies, or pathways, can be thought of as the intellectual constructs used by people to define their world in time and space, to interpret their situation (or problem), and to devise a solution. As will be shown further on, the complexity of the pathway required to achieve a particular goal will vary significantly as do the abilities of a human beings to create such pathways.



Employment Work
Figure 1-2

If we accept the definition work is the exercise of discretion -- making decisions and acting on them, then it is obvious that work involves thinking. This leads to a logic which can be the basis for structuring organizations to achieve maximum effectiveness.

This has evolved into a theory of Stratified Systems which applies to all employment hierarchies. The logic is as follows:

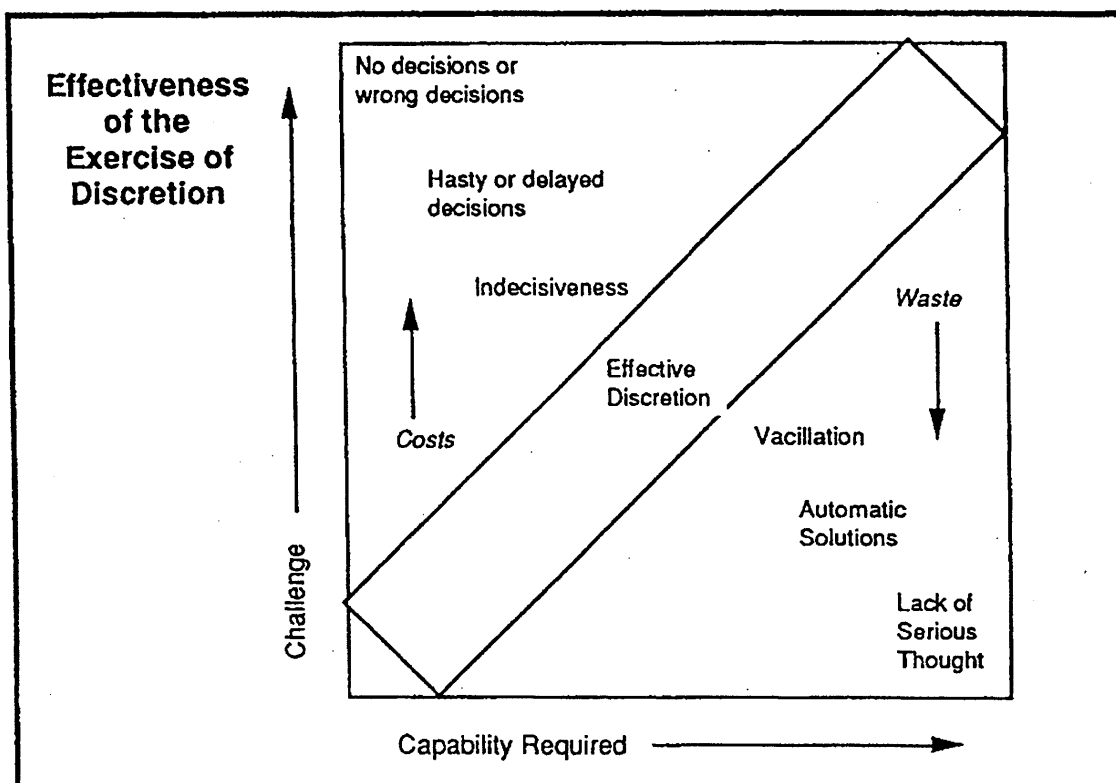
THE LOGIC OF STRATIFICATION

- 1) Work is the exercise of discretion.
- 2) To exercise discretion is to make choices (to act based on thinking).
- 3) People think differently.
- 4) There is a pattern to the differences in the ways human beings think.
- 5) If one wishes to get work accomplished (as required in a business), it makes sense to structure the business in a way which is in accord with the thinking patterns of the human beings who are asked to do the work.

The pattern in the differences in the ways human beings think can be expressed in terms of the complexity of the situations people perceive and the problems they are able to solve given appropriate knowledge, experience and skills.

LEVELS OF WORK AND TASK COMPLEXITY

All tasks present a challenge. Depending upon the capability of an individual to meet the challenge, a given task may provide a challenge which is too great, too small, or just right. As shown below, there is a need to balance challenge and capability if tasks are to be completed successfully.



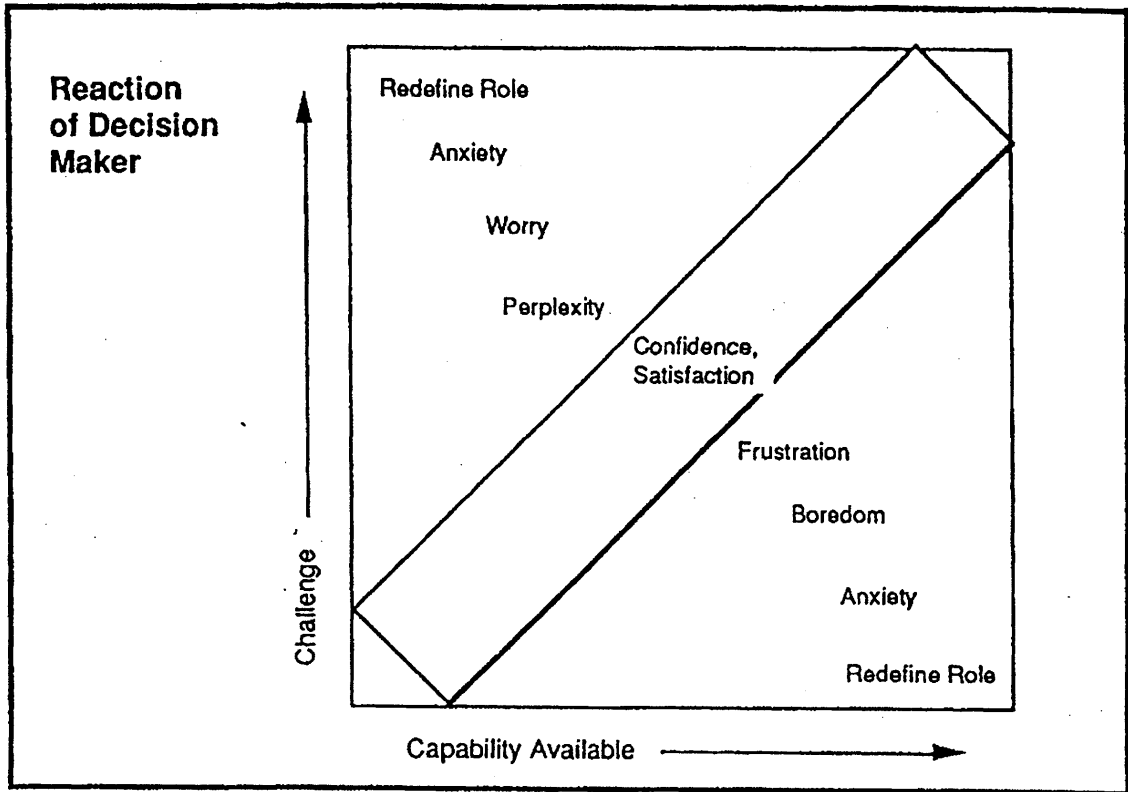
Adapted from Csikszentmihalyi, M. *Optimal Experience*.
Cambridge University Press, 1988 by G. Stamp, 1988a

Figure 3-1

Where challenge and capability are well matched, the exercise of discretion is likely to be effective. Where challenge exceeds capability, key tasks will not get done. Symptoms include indecisiveness, delay in making a decision followed by hasty decisions, no decisions or wrong decisions. Where capability exceeds challenge, the person may vacillate, being uninterested in choosing among equally boring choices, revert to automatic solutions, or refuse to give serious thought to the discretion being exercised.

From the perspective of the individual, the match of challenge and capability allows the person to feel confident and competent; they have a sense of being "on top of the job." Too much challenge leads to perplexity, worry and anxiety. If the challenge is completely beyond the person, she may redefine the role to match her own capability. In this situation, another role may be created in order to fill in the gap which is created when the more challenging work is not being accomplished. [One of the ways excess layering comes into existence and seems to be required.]

Too little challenge leads to frustration, boredom and anxiety. Again, tasks may be redefined by the task doer to create more challenge. In some cases this is appreciated and rewarded. In other cases the individual appears to be intruding on the work of his manager, leading to difficulties and even termination in the role.



Adapted from Csikszentmihalyi, M. Optimal Experience,
Cambridge University Press, 1988 by G. Stamp, 1988a

Figure 3-2

INDIVIDUAL CAPABILITY AND LEVELS OF WORK

To effectively match individuals to the challenges which are likely to be presented by their roles requires the consideration of several factors. Jaques (1989) begins his discussion of these factors in terms of the cognitive processes used by the individual. [The last two definitions are adaptations based on Jaques work, but modified based on our experience.]

Cognitive Processes: The mental processes by which a person takes information; picks it over; plays with it; analyzes it; puts it together; reorganizes it; judges and reasons with it; makes conclusions, plans and decisions; and takes action. (Jaques, 1989:33)

The scale of these processes -- a person's cognitive power -- determines a person's potential work capacity.

Cognitive power: The maximum scale and complexity of the world which an individual is able to pattern and construe, including the amount and complexity of information which must be processed in doing so. (Jaques, 1989:33)

Actual work capacity: The scale and complexity of work which an individual can generate today in a specific work role, with a given technology, and for which the individual has acquired the specific values, knowledge, skills, experience and characteristic conduct which are required by the particular role. (Jaques, 1989:33)

Current potential work capacity: The highest scale and complexity of work which an individual could generate today given the necessary values, knowledge, skills, experience, characteristic conduct and opportunity:

Future potential work capacity: The highest scale and complexity of work which an individual could generate when he or she is fully matured, given the necessary values, knowledge, skills, experience, characteristic conduct and opportunity.

In order to accomplish a particular task, an individual must have:

- Knowledge
- Experience
- Skill
- Appropriate characteristic conduct
- Appropriate cognitive power (type of problem solving methodology)
- Opportunity

When selecting people to carry out particular tasks, managers are aware of the need for appropriate knowledge, experience, skill and the requirement that people behave in ways which are acceptable in the organization and role where they will work. If an individual has some, but not all of the necessary characteristics required, deficiencies in knowledge and skills can be corrected through education, training or additional experience.

The element which is not well-understood is the person's cognitive power, or problem-solving methodology. Cognitive power is Jaques' term for a person's ability to handle complexity. Complexity is a characteristic of the exercise of discretion in the creation of a pathway to reach a goal. To generate a pathway to achieve a goal requires an individual to create an intellectual construct which defines the world in time and space, interprets the situation or problem, and then devises a solution to the problem.

Although each pathway to a goal is, in reality, unique, there are common patterns which sort the pathways into discrete groups, or levels of work.

Levels of Work: The qualitative differences in complexity of work. The varying complexity of pathways which must be created to achieve a goal.

The levels of work are discrete because problem-solving methodologies are, of necessity, discrete. Just as the tasks presented by the world vary in their complexity, the levels of work also vary and form a hierarchical progression. As one moves up the hierarchy, the pathways needed to accomplish a task must be constructed in relatively less certain conditions. In general, as one moves from one level of work to the next, complexity increases in that:

- There are more variables to take into account.
- More of the variables are intangible.
- There is an increasing interaction of variables.
- Results are further into the future
- The link between cause and effect is not easy to discern.

People have the potential to develop and grow in their capacity to handle complexity throughout their lifetimes. As their cognitive power matures they can carry accountability for different levels of work assuming they acquire appropriate values, knowledge, experience, skills and characteristic conduct. Unlike knowledge or experience which can be enhanced through training and opportunity, there are no known ways for enhancing a person's cognitive power. It appears to develop through a process of maturation which cannot be speeded up or delayed by human intervention.

Summary Descriptions of Levels of Work

- I Continuous activity towards one concrete goal, carried out one task at a time. Works through continuous and direct action using known methods and procedures to achieve a task output. Uses direct physical feedback as the task is performed. Discretion is exercised in the sensitive use of "touch and feel" adjustments to changing or unexpected conditions
- II Diagnostic accumulation of information from a sequence of concrete events making up a task so that the information can be accumulated and organized into a recognized pattern to achieve objectives. Requires the ability to reflect on direct action and explain how this has affected the chosen methodology. Can create a pathway to achieve an objective even if the objective cannot be fully specified in advance.
- III Constructs predictive hypotheses (if-then chains, "If this, then that; if that, then the other, etc.") and projects trends. Using a series of if-then statements, conceptualizes alternative pathways to achieve an objective and selects the one judged to be most effective -- the one which best links current activity with future requirements. Solves problems by choosing alternative branches from among current pathways. Improves and refines the given.
- IV Uses theory to understand the abstract linkages between several pathways of Level III complexity and therefore mesh the Level III activities so they work in concert and achieve the greatest overall effectiveness. Constructs predictive hypotheses with "and" linkages (if this and that, then the other). Concerned to develop alternatives to the way things are done now and bring them to fruition.
- V Combines Level IV entities into a unit (whole P&L business or grand theory) in a way which allows it to be managed as a self-sustaining entity. Guides the entity through the conflicts between the entity and its environment modifying the entity to have it prosper in its environment.
- VI Interprets, interacts with, and modifies the political, economic, social, technical and intellectual variables in the environment to stabilize it for the whole Level V (whole business) entities. This requires international networks and an understanding of trends beyond the business world. Interprets the changes in the environment for the business entity leadership. Shapes business entities from the outside.
- VII Comprehends fundamental forces driving changes in the environment (national and international). Develops predictive hypotheses on the basis of that understanding to position the corporation to take account of the fundamental forces. This involves the creation of new Level V business entities and the winding down of existing Level V business entities.

REQUISITE ORGANIZATION

To organize a business requires an understanding of what it is to do -- its goals. It also requires an understanding of human nature since it is human beings who will take action to achieve those goals. Jaques suggests that we should be seeking to design requisite organizations. By requisite he means required by the nature of things or by one's purposes. A requisite organization works in harmony with human nature while at the same time achieving its purposes.

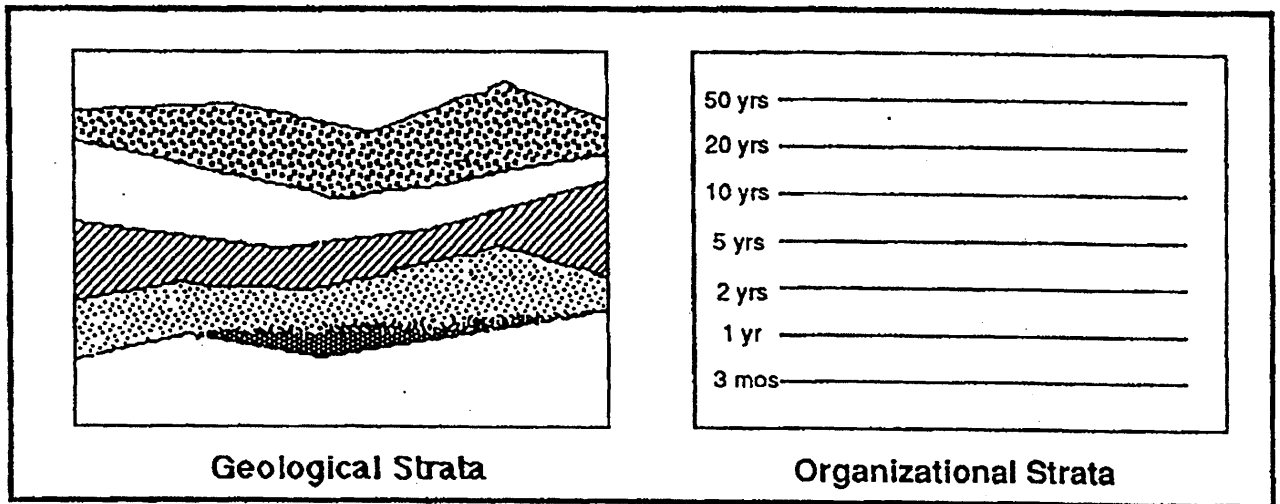
A requisite organization must be based on the shared human values of dignity, trust, honesty, courage, fairness, and love. It must be structured to make full use each level of human capability available to it, and if it is a business, it must carry out all the essential business functions.

Businesses exist to provide goods and services and they do this by employing people to do work. The work which is required by any given business depends upon the complexity of tasks which must be accomplished if the business is to survive and thrive in its environment. Some businesses, for example a shoeshine stand, may require only relatively simple tasks be performed in order to thrive; while other businesses, such as large corporations, require that tasks be carried out at many different levels of complexity.

Given the multi-modal distribution of human problem-solving capability, it makes sense to organize a business in a way which matches the qualitative differences in the ways people approach work. In an organization which is designed to match the patterns of human thinking and to do the work demanded by its environment, there is one organizational level (work stratum) which corresponds to each level of work found in the human population.

Work Stratum: A broad band of work within which the complexity of the tasks is all of a similar type.

Each work stratum reflects the qualitatively different problem-solving methodologies found in the human population. Each work stratum requires the creation of pathways of differing complexity. As one moves up the organizational hierarchy, the complexity of these pathways increases. The complexity of the work required of the chief executive of the organization sets the top stratum of the organization.



THE STRATIFICATION OF WORK

Stratified Systems Theory takes its name from the discovery of work strata in employment organizations. When drawn, these strata are similar in appearance to geological strata. The geological strata are more irregular due to earthquakes and other upheavals in the earth's crust, but the concept is analogous.

The pattern of time boundaries shown on the chart of organizational strata was discovered by talking to workers about their jobs and their work. Jaques discovered that for a role incumbent, there is a direct relationship between the time-span of the role and the felt weight of responsibility associated with that role. The longer the time-span, the longer the time an individual must exercise discretion (carry uncertainty), and the greater the felt weight of responsibility.

At certain critical points, the work required to achieve future goals changes qualitatively as indicated by the levels of work. Workers recognize these changes, and research has shown the critical change points can be identified in terms of time. The time-span boundary of each work stratum is shown on the chart -- three months, one year, two years, five years, ten years, twenty years, fifty years.

Although anyone can think about long term goals and express concerns about the future of the business, this is not the same as taking action and carrying accountability for tasks at a particular level of work. Within a given work stratum, an individual will have time-spans no longer than the upper boundary. Everyone has tasks which have shorter time limits than the lower boundary of the work stratum.

TWO WAYS OF JUDGING THE LEVEL OF WORK IN A ROLE

- Time-span
- Complexity (pathway analysis)

Time-span is more objective than analysis of complexity, but there may be pitfalls if time-span is used without understanding. When considering where to position a role in the organization, however, there appears to be a consistency between both time-span and complexity.

If one is actively engaged in an eighteen month task in a business organization, it is highly improbable that this can be done effectively without using a pathway of at least Stratum III complexity. A task which takes 18 months to complete and for which one is accountable will require an analysis of trends and forecasting of possibilities in order to generate alternative ways of achieving the given purpose. One of those alternatives will have to be selected and acted upon, although the individual may have to come back and select an alternative pathway if the first selection does not work out as projected.

The difficulty with time-span is that its relationship to work and work complexity is indirect. What time-span measures directly is the length of time which a manager is prepared to allow a subordinate to exercise the subordinate's discretion. We are all familiar with poor managers who disallow any task with a time-span exceeding a week. They have very unhappy people working for them, and turnover among their subordinates is extremely high. If you were to measure the time-spans of the roles, you would get very strange results which would not appear to support the findings of Stratified Systems Theory. You might even be tempted to say such findings are rubbish.

If, however, you do a time-span analysis of a large number of organizations, talking to a large number of managers and subordinates, you will get a statistical distribution of time-spans which is multi-modal as reported by Jaques. Only with a large enough sample will you be able to discover the pattern of different problem-solving methodologies which are multi-modally distributed in the human population. The pattern is sometimes difficult to discern because of the level of "noise" found in most organizations.

It is this problem-solving methodology of the individual which determines how he delegates problems from manager to subordinate. If the methodology of a manager does not match the requirements of the role, he will create patterns of delegation and time-spans which violate the underlying pattern of human nature creating difficulties for himself, his subordinates and the organization. This may be one reason for the proliferation of articles on "the art of delegation," which are rather like fad diets. They may help for a little while, but they don't solve the underlying problem.

The findings of researchers in Stratified Systems Theory appear to be correct; the mistake is to accept categoric statements about the relationship between time span and work without understanding that what was found is a pattern embedded in a set of information which has a greater or lesser noise level behind it. Without such understanding, too many people have regarded time-span as only slightly removed from voodoo.

This is unfortunate since the multi-modal distribution makes manifest something fundamental about the human condition, that is, the methodologies we develop for the solution of problems. Organizations need to be designed with a structure of roles,

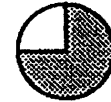
relationships and authorities which is consonant with the natural ordering of problem-solving methodologies in the human population. By following this natural order, one works with human nature rather than fighting it.

Time-span is not voodoo. The hypothesis of a multi-modal distribution of human problem-solving methodologies is both logical and testable. When organizations are well designed, their pattern matches the multi-modal pattern found by Jaques -- a pattern he called a depth structure.

Most of us are aware of this pattern, but only as a vague shadow, more sensed than understood. Like a slim body covered with layers of fat, the depth structure is often buried in excessive layers of management. It is widely recognized that organizations must reduce excess layers; only stratified theory suggests how many layers are excess and which ones are essential.

Appendix C Model Role Descriptions

Manager Operations



There are several elements of work which are unique to Stratum IV roles. The primary task is to take the mission statement from V and translate into operational tasks for III. At IV a manager is expected to develop and implement alternatives to the way things are done now in light of the economic result to be achieved. Improving the given is not enough, the Stratum IV manager must consider what is against that which might be.

The balancing and sacrificing of resources is also unique to Stratum IV roles. A manager at IV must keep inter-related parts of the organization in balance with each other and overall Departmental goals. This may mean taking away resources from a Unit which is getting too far ahead of other Units and adding resources to a Unit which is lagging. Stratum IV is also the first level of work where resources must be deliberately sacrificed in order to meet higher level priorities.

Principal Function

Your principal function is to lead the people and organize the resources of the operational units of the Arroyo Seco Department which operates the Rose Bowl, Brookside Golf Course, the Lower Arroyo and Brookside Park and to create conditions and systems within which your subordinates and your entire organization can be successful in improving the long-term productivity of the Arroyo Seco Department.

Task-Types

Exercise the VARI authorities.

Set the business direction for your Units based on Mission of Department set by the Department General Manager.

Allocate work and resources among your Stratum III units in order to meet your priority objectives (this may mean deliberately sacrificing some part of the organization in order to ensure overall success in meeting the most important Department priorities).

Ensure the work of your Stratum III subordinates is kept in balance in order to meet your overall goals in light of Departmental objectives.

Schedule and monitor the activities of your subordinate stratum III organizations.

Ensure the overall schedule of Department facilities meets the objectives set by the Department General Manager.

Oversee budget preparation for the Department.

Present reports and other information to the City Manager and City Council as required by the General Manager

Manage or assign management tasks to others to ensure all events run efficiently and effectively -- meeting the needs of the event organizers and the community.

Negotiate and set agreements for services required from other City Departments.

Communicate to your subordinates the limits regarding Department operations -- what can and cannot be done in given circumstances. Where limits are required and have not been set by statute or your General Manager, set and communicate them to your subordinates.

Approve the conceptualization and implementation plans for systems being developed to improve the work of the Arroyo Seco Department.

Maintain the technical competence of your organization.

Assign tasks to your Support Services Manager to develop measures of productivity and quality for the Department and to develop measures for tracking progress toward Departmental goals.

Develop (or assign the development of) new methodologies for event management and other business processes in order to improve the productivity of the Arroyo Seco Department.

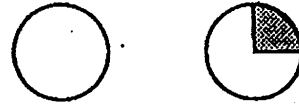
Decide on the training needed by members of your Division in order that optimum output at minimal cost may be achieved. Ensure that training is carried out.

Decide on the desirability of developing one new technique, system or product as against another, in light of the economic results which will be achieved.

Advise the Department General Manager on the optimum standards of quality, availability, service that are attainable with a given level of resources.

Chief Construction Manager

Stratum IV



Principal Function

Your principal function is to manage major construction projects and provide expert advice to the General Manager of the Arroyo Seco Department on construction of facilities under the care, custody and control of the Department.

Task Types

Negotiate and monitor contracts with construction contractors.

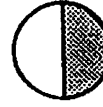
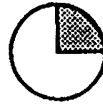
Act as the owner's representative for construction work.

Maintain an awareness of the stadium and sports facility business and the factors which affect it.

Maintain an awareness of the use of construction technology as used in major stadium development.

Develop executive information systems for monitoring construction.

Manager -- Rose Bowl, Arroyo Seco, Golf Course



Principal Function

Your principal function is to lead the people and schedule the resources of the _____ and to establish conditions and systems within which your subordinates and your entire organization can be successful in improving the long-term productivity of the Arroyo Seco Department by providing [insert functions of the organization].

Task Types

Exercise the VARI Authorities.

Conceptualize new products/services to meet client needs and set requirements for implementation by your subordinates.

Prepare feasibility study regarding new service development.

Prepare a business case for a new event.

Know and understand the linkages within the business processes for which you are accountable in order to develop alternative methods for their modification and enhancement.

Identify and solve problems during events within your area of accountability.

Solve problems brought to you by your subordinates.

Review changes in the operation of your organization
Analyze growth trends and try to foresee difficulties
Develop alternative solutions and plans to deal with growth and potential bottlenecks.
Estimate future resource consumption.
Ensure problems are resolved in with client organizations.

Provide technical expertise to your subordinates (or ensure such expertise is made available to them).

Develop knowledge of what your clients are doing and where they are going. Know their business objectives.

Develop a network within your client organization. Know who makes decisions, who influences decisions within the client organization

Improve existing systems, methods, procedures.

Answer client questions by finding underlying problems which explain surface symptoms.

Inform your subordinates of Departmental priorities.

Avoid technological obsolescence. Evaluate new products to improve existing operations

Assess the career potential of your Stratum I subordinates to ensure they are moved into Stratum II roles when they are ready.