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**THE P/C/I MODEL  
FOR ASSESSING ORGANIZATIONAL VIABILITY**

**VOLUME II**

**DEVELOPMENT OF THE MODEL**

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**Practical Concepts Incorporated**

## PREFACE

This final report is submitted to the Agency for International Development by PCI (Practical Concepts Incorporated), in accordance with the requirements of Contract Number AID/CM-otr-C-73-200, Work Order #2. PCI here presents, in three volumes, the results, methodology, findings, recommendations and guidelines resulting from that contract -- to develop practical techniques for assessing viability of health and family planning organizations.

The first volume of the report summarizes the study and presents PCI's recommendations to the Agency.

This, the second volume of the report, submitted under separate cover, describes some of the study methods and concepts.

The third and final volume of this report contains an "implementation package" to help AID managers assess the viability of organizations they have helped create.

PCI's principal investigators for this work were Leon J. Rosenberg, Roger Popper, and Molly Hageboeck.

Individuals whose constructive criticism and advice greatly improved this manuscript include in addition to PCI staff, our colleagues at AID -- especially Messrs. Herbert Turner and Philip Sperling.

Our thanks also to Louie Stancari and Dianne Sachs, who edited and produced this series of reports.

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## CHAPTER I

### OBJECTIVES, SCOPE AND METHODOLOGY OF THE STUDY

#### A. STUDY OBJECTIVES

##### 1. General

Under contract to the Agency for International Development, PCI (Practical Concepts Incorporated) developed a model for assessing organizational viability. The model provides techniques for measuring characteristics of organizations so that their survival and continued ability to produce can be predicted.

The creation of viable organizations is an issue of great importance to the foreign assistance community. Some argue that the best way to leverage our development resources is to spawn organizations that will continue activities of value. About 75 percent of all U.S. development assistance projects have "institution building" components, and every project is to some extent dependent on the capability of LDC institutions.

This report describes PCI's work to develop practical measurement tools to supplement the strategy of institution building, or to help assess the viability of cooperating LDC institutions.

##### 2. Objectives of the Study

The object of this study was to improve the basis for evaluating institution building projects sponsored by the Agency for International

**Development.** It was expected that the improvements in evaluation methodology required to assess "organizationality" could be derived from a basic evaluation model, providing indicators of organizationality and practical measurement techniques, which would be developed through the present study.

At the outset it was assumed that the basic evaluation model could be constructed based on the conceptual work already undertaken by and for AID in the field of organization building. In fact, one of the immediate causes for the initiation of the study was the need within USAID missions to make judgements concerning the strength and capability of organizations which had been created using, in part, AID's conceptual approach to institution building.

In its original statement of the scope of work AID identified two major outputs required from this study:

- Indicators, measurement approaches, and key characteristics for evaluating health and family planning organizations;
- Practical guidance for evaluators of health and family planning organizations with emphasis on usable indicators and measurement approaches.

It is important to note that emphasis was placed on the development of indicators and measurement techniques, assuming the conceptual framework of the AID institution building approach provided an adequate basis for reviewing the issue of organizationality. In fact, as the study report will indicate, the AID institution building concepts do provide a guide for developing a viable organization; however, taken alone, they do not give adequate guidance for an evaluation of whether a viable organization has been created.

In carrying out this study, PCI made a careful review of what value could be extracted from the AID institution building concepts and other organizational assessment approaches. Where concepts were useful they were incorporated. Where the conceptual framework was inadequate PCI "filled in" conceptual gaps in the institution building and assessment literature.

### 3. Specific Study Outputs

In conducting the present study, PCI followed the specific series of output oriented steps defined by AID, reviewing at each step the degree to which the concepts available were adequate to complete the step, and stopping as needed to develop appropriate new concepts. The specific steps defined by AID as required to produce the contract outputs included:

- (1) Specify key characteristics for evaluating development organizations;
- (2) Develop a "basic model" for assessing organizationalilty;
- (3) Develop a "prototype" of the model;
- (4) Develop case studies testing the measurement approaches of the model;
- (5) Prepare a practical manual for the evaluation of organizational development projects,
- (6) Prepare a final report summarizing the study.

## B. STUDY SCOPE

### 1. The Area of Inquiry

One of the first tasks of the study was to properly limit the scope of the inquiry. The questions raised about organizations in the AID scope of work indicated a clear interest in a specific family of organizational characteristics: that set which indicates that the organization has either reached the point of "take-off" for self-sufficiency, or has reached a level of viability such that it can undertake additional tasks. In defining this family of characteristics we referred first to the definition of an institution and to the definition of viability:

INSTITUTION: A significant practice, relationship or organization in a society or culture; an established organization or corporation.

VIABLE: Capable of living, capable of growing or developing; capable of working, functioning or developing adequately; capable of existence and development as an independent unit, as when a colony becomes a state.

The definition for viability gives meaning to the term established organization in the definition of an institution: i.e., AN INSTITUTION OR ORGANIZATION CAPABLE OF EXISTENCE AND DEVELOPMENT AS AN INDEPENDENT UNIT.

This definition then appeared to satisfy the general thrust of the questions raised by AID concerning organizations, the point of self-sufficiency, and the ability of organizations to expand the scope of their activities.

Thus PCI's first step, bearing in mind AID's perspective, was to define the characteristics that made an organization viable, and then define ways of measuring organizational viability.

## 2. Organizational Viability Assessment and the Context of AID Evaluations

The AID project evaluation system, which is based in the Logical Framework approach to project design and evaluation, is used to assess organizational development projects throughout the Agency. In beginning an effort to define an evaluation regime for organizationality, or organizational viability, we felt it prudent to review the context of evaluation in AID and identify how and where the issue of organizational viability might naturally fit within the existing framework.

A cursory review of institution building project logical framework matrices indicated that organizational development projects were normally framed such that the organization was the project purpose, and the EOPS measures used were generally concerned with the effectiveness and efficiency of the organization in carrying out a given set of tasks. Table I-1 displays this general form. (Viability has been inserted in parentheses where it should logically appear.)

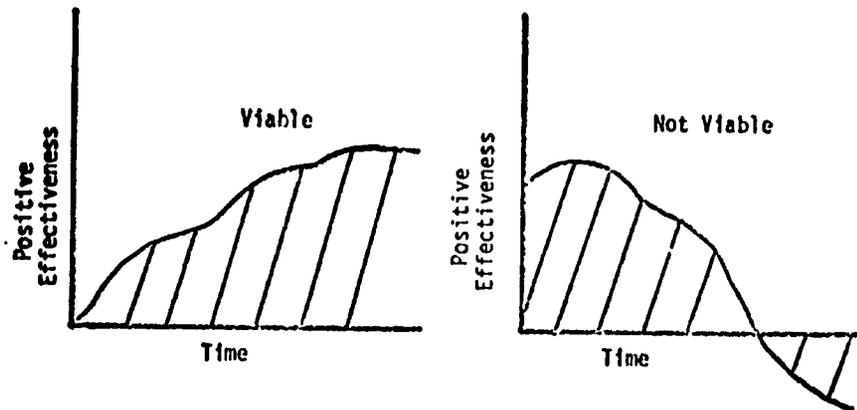
In measuring effectiveness (the actual production or power to produce an effect) and efficiency (productivity without waste) we are properly measuring end states which tell us that Organization X is fulfilling its mission. Viability is a similar type of measure, it belongs at the purpose level, but it goes beyond an assessment of effectiveness and efficiency in the near term, to deal more directly with the organization's ability to continue to produce without waste in new situations -- that is to develop as a functioning unit.

TABLE I-1

LOGICAL FRAMEWORK FOR PROJECT: Organization X	
NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS
<p><u>GOAL:</u> States organization impact on development problems</p>	
<p><u>PURPOSE:</u> (Viable) Organization</p>	<p>End of Project Status (EOPS)</p> <p><u>Effectiveness Measures:</u></p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol> <p><u>Efficiency Measures:</u></p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol> <p><u>Viability measures:</u> the ability to continue and be effective</p>
<p><u>OUTPUTS:</u> States the conditions required to create or build the organization</p>	
<p><u>INPUTS:</u> Defines the resources and activities needed to create each output</p>	

We are always primarily concerned with effectiveness and efficiency in an institution building project: is it fulfilling its mission? However, there is an equally valid concern with viability: will the organization persevere? It should be noted that although measures for these two dimensions -- (1) effectiveness/efficiency indicators, and (2) viability indicators -- may be different in kind, viability connotes effective operations, whereas an organization can be effective and not viable. Viability, then, assesses "integrated effectiveness" -- the total effect over the life of an organization. (See Figure I-2.)

**FIGURE I-2:** PCI's assessment approach attempts to directly predict the total area under the "effectiveness curve", so we can optimize investment in terms of net benefit.



PCI made one limitation of the study's area of inquiry. PCI recognized that AID as a grantor or donor is not always interested in establishing organizations per se, but is frequently concerned with the establishment of organizational units within organizations (e.g., an economic policy unit within a Ministry of Finance). Thus, for purposes of the study, PCI further refined its definition of the inquiry to deal with "organizational viability" -- hopefully this would allow the development of measures which could be used either to assess an institution as a whole, or of a component thereof.

C. STUDY METHODOLOGY

1. The Study Approach

The methodology for this study involved three separate but interdependent approaches:

- (1) Review of existing literature on institution building and assessment;
- (2) Interaction with individuals/groups who are currently using/developing modifications of the early organization building concepts;
- (3) A "fresh" look at the problem of measuring organizationality -- unconstrained by past efforts in the area.

During the first stages of the contract these three approaches were begun simultaneously, e.g., we began to develop a fresh approach to viewing organizational viability independent of, and somewhat prior to a review of the literature on institution building. The results of each approach were brought back to a central forum for review and comment. This central forum was in practice, a series of "monthly" meetings involving PCI, AID/PPC, AID/TAB, MUCIA, University of Wisconsin, and University of Illinois.\*

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\* AID/PPC: Herbert Turner, Cal Cowles, Walter Furst  
AID/TAB: Abraham Hirsch  
MUCIA: William Siffin, Susan Leone, Dr. Kissel  
University of Wisconsin: Ned Wallace  
University of Illinois: Herbert Walberg  
PCI: Leon Rosenberg, Lawrence Posner, Molly Hageboeck, Jane Hersee,  
Roger Coates, Ivan Mendelsohn

The concept of the central forum, or monthly meeting was utilized until it became apparent that this group was not providing either clear feedback (objective and unbiased by the points of view which individuals brought into the meeting) or coherent direction to the study team.

During the second stage of the contract the PCI study team tended to work more "in house" and directly with its AID project monitors. This procedure led to a full review of what had been accomplished with the three pronged approach, a decision by PCI to actively pursue the lines developed by the third of these approaches -- the "fresh look" at measuring organizational viability -- and finally to a clearer agreement between PCI and AID on the direction the study was to take during its later phases. Under this later arrangement, PCI's "basic model" of organizational viability and its evaluation, was fleshed out and tested against data on real organizations.

## 2. The Scope Level of Effort

Six (6) projects were assessed using data available through AID and other sources. In each of these assessments what we came to call the "P/C/I" Model\* of organizational viability was tested.

In addition to these "on paper" tests of the P/C/I Model, PCI undertook oral reviews of the concepts with a variety of AID personnel during the latter stages of the study.

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\* This model was developed in good part under PCI, rather than (AID) government sponsorship.



## CHAPTER II

### THE UTILITY OF EXISTING CONCEPTS FOR ASSESSING ORGANIZATIONALITY

This section of the report summarizes PCI's assessment of the institution building literature, and its utility for measuring organizational viability\*. In its review of the literature PCI concentrated on the fundamental concepts which had been developed rather than the modifications made in these concepts. If the concepts of institution building were relevant at a general level, PCI was prepared to pursue their application in specific circumstances. Our conclusion was that prior work on "institution building" had focused on defining and assessing the independent variables, or outputs. PCI's focus was necessarily on the dependent variable, viability itself. Hence, we were forced to break some new ground.

#### 1. Summary

PCI's review of the institution building literature, the state-of-the-art being the Esman approach to institution building, concluded that:

- (1) The Esman concepts were useful for defining OUTPUT level requirements in an institution building project;
- (2) Esman and his followers had not made clear the way in which progress against each of Esman's output level concepts was to be measured or monitored in a given project;
- (3) The Esman literature had addressed purpose level indicators of success for an institution at a conceptual level. However, these ideas were not fully defined.

PCI's review indicated that while the Esman approach did provide a useful beginning point for output level evaluation of organizational development projects, it did not adequately address the issue of viability. The institution building literature, although useful in designing projects and/or identifying a problem during the first phases of an organization's development,

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\* PCI in general, uses the term "organizations" where Esman and other theorists uses "institutions" because (1) institution is a special case of a more general form -- organization, and (2) the institution terminology appears to exclude, unnecessarily, cases which may be of great interest to AID, e.g., the Planning Department within a Ministry, etc.

does not assist us in predicting organizational survival and the continued ability of an organization to produce. As a result of the literature review, and our findings concerning the concepts developed by the institution building theorists, PCI concluded that AID's interests would be best served by further specification of a new model PCI had begun to develop, rather than a reorganization and refinement of the partially developed concepts found in the course of the literature review. Specification of this new model is the subject of Chapter III of this report.

## 2. The Esman Concepts and Their Place in an Evaluation of an Institution

The formative literature on institution building is codified in the work of Milton Esman. The Esman model -- portions of which have been refined and experimentally applied\* -- begins with a framework or perspective on the building of an institution. Esman himself defines institution building as:

"...the planning, structuring and guidance of new or reconstructed organization..." \*\*

Esman and his followers have addressed themselves, primarily, to the process of putting in place the conditions required to "create" an institution. Esman's model of the institution building universe defines a series of "conditions precedent" for an institution and, in addition, places the institution, in its environmental context:

"In the guiding concepts there are two groups of variables or factors that are considered important to understanding and guiding institution building activity. These are the "institution variables", which are essentially concerned with the organization itself, and the "linkage variables", which are mainly concerned with external relations. The institution-building universe can be simply depicted as follows": \*\*

\* Institution Building: A Source Book, Melvin G. Blase, 1973.

\*\* Milton J. Esman, "Institution Building As A Guide to Action", in Institution Building and Technical Assistance: Conference Proceedings. Washington, D.C.: Committee on Institutional Cooperation and AID

<u>Organizational Variables</u>	<u>Linkage Variables</u>
Leadership Doctrine Programs Resources Internal Structure	Enabling Linkages Functional Linkages Normative Linkages Diffuse Linkages

Esman's "institution variables" are his set of conditions precedent for an institution. The transactions carried out through the "linkage variables" described by Esman are processes in which the institution participates. These process variables differ from the "institution variables" or factors required to create or reconstitute an institution. The concern of the Esman literature was the development of institutions, and for that purpose Esman characterized both certain results expected from institution building efforts (i.e., the existence of his institution variables) and the processes in which the institution participates (transactions through linkages). Esman's work stressed institution building. The question of whether viable institutions had been created by the building process was given only cursory treatment by Esman. The preliminary ideas he reported were never refined, or presented in terms which allowed a practical test of their utility.

(a) Esman Concepts and AID's Project Evaluation System

The set of "institution variables" developed by Esman are necessary conditions for the development of a viable organization. Using AID's logical framework system these "institution variables" represent a list of the outputs required in an institution building project (see Table II-1).

TABLE II-1

ESMAN'S INSTITUTION VARIABLES ON A LOGICAL FRAMEWORK  
(SHOWING ONLY THE NARRATIVE SUMMARY AND  
OBJECTIVELY VERIFIABLE INDICATORS)

Narrative Summary	Objectively Verifiable Indicators
<p>GOAL:</p> <p>(Specific effect on target group)</p>	
<p>PURPOSE:</p> <p><u>Viable</u> (specifies type of organization for: specific <u>function</u> and/or <u>target group</u> as needed)</p>	<p>(Indicators of the <u>Organizational Viability</u> are required)</p>
<p>OUTPUTS:</p> <ul style="list-style-type: none"> <li>- Doctrine</li> <li>- Leadership</li> <li>- Programs</li> <li>- Internal Structure</li> </ul>	<p>(Progress must be measured in the creation of outputs)</p>
<p>INPUTS:</p> <ul style="list-style-type: none"> <li>- Resources</li> </ul>	

Esman's Institution Valuables

Applying the logical framework approach to institution building concepts reinforces recognition of the fact that while outputs are produced and measured, the measurement of output production cannot prove achievement of purpose. Thus, for example, doctrine which is a necessary Esman-type output cannot also be an indicator that purpose was achieved. A different set of measures are required (see Table II-2).

TABLE II-2  
OUTPUTS CANNOT BE USED TO MEASURE  
PURPOSE LEVEL ACHIEVEMENT

Narrative Summary	Objectively Verifiable Indicators
PURPOSE: Viable Institution	
OUTPUTS: 1. Doctrine	

(b) Esman's Independent Measures of Organizational Viability

The indicators of the viability of an organization, as we have noted, must be different in kind than the OUTPUTS required to create the organization. Although Esman's work, and that of his followers, has been primarily devoted to institution building -- and hence the production of OUTPUTS, Esman did not totally overlook the idea of viability measurement. Though treated only in outline form, Esman suggested several

Independent indicators which he considered appropriate for measurement at the "purpose" level, i.e., as indicators of viability. Table II-3 displays the five viability measures identified by Esman.

TABLE II-3  
INDEPENDENT MEASURES OF VIABILITY SUGGESTED  
BY INSTITUTION BUILDING LITERATURE

Narrative Summary	Objectively Verifiable Indicators
GOAL:	
PURPOSE:  Viable Organization	<ol style="list-style-type: none"> <li>1. Technical Capacity</li> <li>2. Normative Commitment</li> <li>3. Innovative Thrust</li> <li>4. Environmental Image</li> <li>5. Spread Effect</li> </ol>
OUTPUTS: <ul style="list-style-type: none"> <li>- Doctrine</li> <li>- Leadership</li> <li>- Programs</li> <li>- Internal Structure</li> </ul>	
INPUTS:  Resources	

Esman's definitions of each of these indicators are presented below. In describing them, Esman alludes to the type of conditions referred to in the logical framework system as end-of-project status indicators:

"What are the end-states of the institution building process -- the directions toward which ventures should be moving. These must be specific for each activity but in general they should meet the following criteria:"

- (1) Technical capacity, the ability to deliver technical services which are innovations to the society at an increasing level of competence, whether they be teaching agricultural sciences, enforcing income taxes or providing family planning services.
- (2) Normative commitment, the extent to which the innovative ideas, relationships and practices for which the organization stands have been internalized by its staff -- for example the merit system for personnel selection or participative roles for students.
- (3) Innovative thrust, the ability of the institution to continue to innovate so that the new technologies and behavior patterns which it introduced may not be frozen in their original form, but the institution can continually learn and adapt to new technological and political opportunities.
- (4) Environmental image, the extent to which the institution is valued or favorably regarded in the society. This can be demonstrated by its ability a) to acquire resources without paying a high price in its change objectives, b) to operate in ways that deviate from traditional patterns, c) to defend itself against attack and criticism, d) to influence decisions in its functional area, and e) to enlarge and expand its sphere of action.
- (5) Spread effect, whether the innovative technologies, norms or behavior patterns for which the institution stands have been taken up and integrated into the on-going activities of other organizations.

(c) The P/C/I Model and the Esman Purpose Level Indicators

PCI's P/C/I Model defines three essential characteristics of an organization:

- Purchasables
- Connotation
- Image

To what degree does this model subsume the purpose level indicators identified by Esman?

First, let us note that the P/C/I Model defines the essential elements of an organization in a manner which has allowed us to develop practical measures for assessing organizational viability.

Second, the P/C/I Model, as will be shown in the following paragraphs, subsumes the key ideas identified by Esman.

Technical Capacity and the P/C/I Model

Esman defined technical capacity as organizational ability to deliver services at an increasing level of competence.

This concept of technical capacity contained two dimensions:

- ability to provide services;
- increasing competence.

Within our P/C/I Model the first of these dimensions is treated in "converted" form. The ability to provide services is determined by the actual response of clients to those goods and services. If "technical capacity" is such that client needs are met, then that

capacity is contextually adequate. If client needs are better met as the organization ages, then competence is increasing. Both of these factors are discoverable as increases in, and trends for, external Connotation and Image\*

#### Normative Commitment and the P/C/I Model

Esman defined normative commitment as the extent to which ideas, relationships and practices for which the organization stands have been internalized by the staff.

Normative commitment is divided, in the P/C/I Model, between Internal Image, and Internal Connotation. Our reasons for making that division are discussed fully in Volume III of this report.

#### Innovative Thrust and the P/C/I Model

Innovative thrust was defined by Esman as the ability of the organization to continue to learn and adapt.

The ability of an organization to learn and adapt covered in "Innovative Thrust" is not treated directly in P/C/I. However, the ability to effectively serve diverse populations, or provide a diversity of service, is both a result of "innovative thrust" and a natural fall-out from the Image and Connotation measurements. An organization that does only what it is "pre-programmed" to do will not be expanding its client base (Image consensus spreads beyond clients), nor be associated with diverse programs (Image includes diverse programs), nor will it be valued by a diversity of target groups (Connotation high for target and non-target populations).

\* The P/C/I Model does not consider "technical capacity" to be adequate if clients and sponsors don't think it is. From our point of view, this is an asset of the model-- moving us away from the endless rounds of peer reviews and controversies. Our model does not consider operations successful unless the patient lives or his family would use the same medical staff for the same illness.

### Environmental Image and the P/C/I Model

Environmental Image was defined as the extent to which the organization is valued or favorably regarded in the society.

Environmental Image, as defined by Esman, thus addresses two P/C/I indicators -- (External) Image and (External) Connotation. Esman's use of the term "image" corresponds more directly with External Connotation. Esman does not seem to deal with what is called, in P/C/I terms, External Image. We feel that our distinction between "image" and connotation provides much greater diagnostic power.

### Spread Effect

Spread Effect was defined as whether the technologies, norms and patterns which the organization stands for have been adopted by other organizations.

Spread effect is dealt with as the increase in Image over non-target populations, complements, etc. The P/C/I Model thus addresses the earliest stage of innovation "spread" -- the knowledge of the innovation (image). The model also addresses the intermediate stage of "spread" effect -- attitude regarding the innovation (connotation).



## CHAPTER III

### THE P/C/I MODEL FOR ASSESSING ORGANIZATIONAL VIABILITY

#### 1. The Essential Characteristics of an Organization

The natural scientist quests after the essential or inherent properties of matter. Thus, in dealing with inertial/spatial problems, the inherent properties of matter are mass (inherent inertia), velocity (relative speed and direction of motion), and position. The first of these qualities is perceived as more an "inherent property" than are the latter two. The first two in combination, as Newton foresaw and quantum mechanics insists, are still more absolute, particularly with reference to the third -- positional -- characteristic, which are of course entirely relative. Nonetheless, the extent of our knowledge of matter can be expressed in those three parameters.

It is our desire to perform an analogous service for the organizational theorist by identifying the essential or defining characteristics of "organizations". We recognize the possibility that any definition may be incomplete -- one dimension of a multi-dimensional problem (just as our previous definition of matter was concerned with inertial/spatial characteristics and ignored, for example, electromagnetics). Hence, the final test of our essential characteristics will be empirical -- we will subsequently try to use these definitions in defining and assessing viability.

We approach the issue of viability via a two-step process:

1. Identifying the essential elements of an organization -- the fundamental characteristics that "define" an organization;
2. Defining viability as a homeostatic relationship between the organization and its environment such that this store of the above noted essential or elemental substances are conserved or replenished.

The first part of this chapter deals with the first of the above issues -- identifying the essential or elemental characteristics of an organization -- the things which, given their existence, indicate that there is an organization, and without which there cannot be an organization.

(1) The Essential Elements of an Organization

After a great deal of analytical effort, much of which was undertaken under PCI rather than AID government sponsorship, PCI developed a simple and elegant model of "organizationness" such that an organization can be considered as having only three essential properties:

1. Image: The cognitive dimension of what people think about an organization: knowledge, on the part of those internal as well as external to the organization, as to what the organization is and does, and why it exists;
2. Connotation: The affective dimension of attitudes held about an organization: the assessment of where those internal and external to the organization place the organization's image in their structure of personal beliefs and priorities;
3. Purchasables: Money and the things that have been or can be bought or purchased.

If these are the essentials of an organization, then we should be able to predict survival of an organization in terms of its ability to replenish and store these three types of resources.

An immediate value of these definitions as a working hypothesis is that it points up a possible fallacy in much of our thinking about organizations per se. We typically concern ourselves primarily with the tangibles -- money and the things that money can buy. However, the proposed definitions suggest that money considers only one -- and possibly the least important -- of three dimensions of concern.

All things about an organization that are necessary for evaluating viability are subsumed under one or the other of the above three categories as will be demonstrated later.

The order shown above is in fact a priority order. The "image" of the organization is its first and most essential property. Assuming a positive valuation of that image, purchasables can be obtained for its operations and perpetuation. Purchasables may be a necessary, but are never a sufficient, condition for defining an organization. In the simplest case, an organization can exist in the mind of a single man who, because he values it, will utilize his time (potentially purchasable with money) to make that organization grow and prosper.

We clarify these three dimensions of "organizationness" in the following paragraphs.

## 1. Image

Image is the identification of what the organization is, what it does, and why it does it. It includes two distinct components -- doctrine\*and program.

Doctrine is the general statement of organizational mission -- its ethos, constraints, etc. -- and is basically unchanging over the life of an organization. The biological analogy to doctrine would be genetic coding -- the information that limits, constrains and defines what an organization can do. Doctrine is easily understandable when we speak of the doctrine of the Catholic Church, or even the doctrine of IBM. It is less obvious but by no means less important to understand the doctrine of a local health center or clinic.

In operational terms, doctrine limits what a family planning clinic will do in order to survive when it has been demonstrated that none of the programs that are currently anticipated will in fact result in viability.

We use the term doctrine similar to the way it is used by Dr. Esman et. al. However, in the P/C/I Model, doctrine is a measurable and discrete quantity rather than simply an abstraction. This is consistent with our view of making prior work more practical and operational.

\* We use the term doctrine with special recognition of Anthony Jay's use of the term in his book "Management and Machiaveli".

The second component of image is program -- the things that the organization actually does to sustain itself. Program is changable and can be varied within limits fixed by doctrine. The term program is used compatibly with general use, and with the slightly more specific use of the term by M. Esman\*.

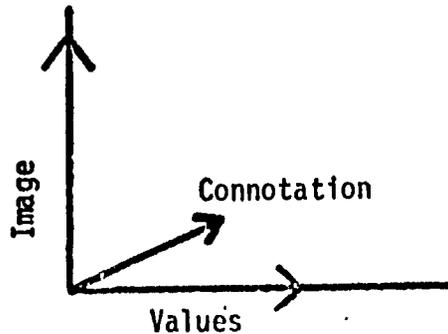
The biological analogy to program is the things that an organism actually does to survive. Within its genetic limits, an animal may develop particular functions to an extraordinary degree -- "specializing" to meet the needs of the environment. Thus, one brother becomes a weight lifter and develops huge muscles, the other highly develops his mental skills and remains a sorry physical specimen, etc. Similarly, one health center may offer only maternal and child-care services, while another may be a "full-service" clinic -- where the doctrines may be similar but the need to relate to the environment makes certain types of adaptation more desirable.

## 2. Connotation

If image is considered a vector showing perceptions or awareness of the organization's program and doctrines, then connotation is a vector showing how the program and doctrine is valued. Internal to the organization, connotation equates quite well with the conventional use of the term morale. However, "connotation" is a more significant concept than morale because (a) of the distinction between the doctrinal and program components of image, and (b) connotation is concerned with views of those external to the organization as well as internal.

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\*Milton J. Esman, "Institution Building as a Guide to Action," in *Institution Building and Technical Assistance: Conference Proceedings*, Washington, D.C.; Committee on Institutional Cooperation and Agency for International Development.



The recognition that connotation must separately consider acceptance of both doctrine and program is of particular importance when assessing long-term productivity of staff. High connotation associated with program is a transient phenomenon. Dedication to and acceptance of doctrine is required if the organization is to be capable of long-term planning and adaptation. One can highly value a program without being committed to the organization's overall doctrinal and ethical structure. However, an organization has high adaptability only if the staff are motivated in terms of long-term doctrinal objectives, or the doctrinal component of image.

External to the organization, connotation is closely related to value, how much one's clientele is willing to pay for the service provided by the organization or, in the event that the doctrinal image is clear to its clientele, how much they would pay to perpetuate that doctrine.

"Program connotation" may be reflected in such objective factors as the distances patients travel to obtain a given treatment. "Doctrinal connotation" might be reflected in such factors as how much the community will pay -- in land, money, etc. -- in order to have a hospital in the village. (This latter question is of particular interest in small-town hospitals in the U.S., where choices are frequently made to create non-economic units "because every town should have a hospital.")

### 3. Purchasables

Purchasables equate to financial and monetary concepts, which need little description here. Note however, that people's time can be bought with money and can be valued or costed, along with such other tangibles as physical plant, drug inventories, etc. However, productivity, or the amount of human energy expended to advance the organization's mission and consistent with the organization's image is a function of connotation and purchasables -- with the former being far the more significant factor.

The term "resources" is frequently used in lieu of our term "purchasables". We cannot use the term "resources", however, because it is fundamental to our P/C/I Model that "Image" and "Connotation" are resources in exactly the same way as are monetary resources -- purchasables.

There is clearly a convertibility in the three elemental dimensions of the PCI Model. Purchasables can be used to create or change image, connotation can and must be converted to purchasables, etc. This convertibility does not imply that these elements are non-orthogonal or statistically dependent.

## (2) Preservation of the Organization's Essential Characteristics

We defined earlier an organization in terms of its elemental and fundamental properties, and viability as the state of being that ensures preservation of those essential properties. An organization that has Purchasables, Connotation and Image (P/C/I) exists. To the extent that we can guarantee continuation of its image, positive connotation, replenishment of its purchasables, we are confident that it will continue to exist, or meet our general definition of viability.

An analogy is to liken the organization to a single-celled animal adrift in a sea of nutrients. Our organization is the single-celled animal. The sea of nutrients is its societal and economic context of the organization. The organism is viable if the nutrients it requires are available from its environment, and it can and does freely exchange used up nutrients for fresh ones -- continuing an indefinite process in which there is a homeostatic relationship between the organism and its environment.

In much the same fashion, an organization must be in a relationship to its environment such that it is continually using its image, its connotation, and purchasables, to create more purchasables, more image and more connotation. To the extent that the sum of the interchanges between the organization and its environment are positive in each of the three dimensions, then it is a strong argument that our organization is viable.

An organization has a great advantage over a biological entity in determination of its viability. An organization can be reduced almost indefinitely in terms of physical facilities and number of individuals involved. It is not essential that it preserve its purchasables or its people in order to be viable -- it is essential only that it preserve

enough image and enough connotation that it can in future replenish its store of purchasables.

The issue then in assessing viability is the extent to which the organization will remain unchanged given the probable future of its environment.

### (3) Approaches to the Measurement of Organizational Viability

The three basic measurement approaches for using the P/C/I Model to assess viability were:

1. The Balance Sheet approach, inventorying the total Image (I), Connotation (C), and Purchasables (P) of the organization;
2. An "Effect/Feedback model", examining the macro-level relationship between the organization and its environment to "integrate the effectiveness function";
3. Examining the individual transactions engaged in by the organization to determine the cumulative gain or loss of P, C, and I.

As noted in the body of this report, the balance sheet model is recommended for immediate application in terms of its greater practicality and immediate diagnostic value. However, each of these approaches to viability assessments will be briefly described here.

### (4) The Balance Sheet Approach to Assessing Viability

The balance sheet approach to viability assessment examines the net asset value of the organization in terms of the three dimensions Image (I), Connotation (C), and Purchasables (P). An institution is viable if it meets the following two conditions:

1. P, C, and I are at or above certain norms\*;

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\* Tentative norms have been set during experimentation; these should be refined and validated through field test.

2. There is an appropriate gradient for both image and connotation -- at the top of an organization the greatest consensus and the greatest valuation is of the doctrinal rather than the programmatic aspect of image.

(A) P/C/I Model Emphasis

The features of the P/C/I Model are, taken as a whole, not unique -- analysts addressing the same inquiry would, hopefully, have treated the same dimensions of an organization. What is unique in the model is the manner in which the essential characteristics of organizations have been classified, and the measurement regime implied by that classification.

In this section we specify the balance sheet measurement approach associated with the P/C/I Model. The first step in the specification of that approach is the identification of the model's measurement emphasis.

(i) Image

We have defined image as: the cognitive dimension of what people think about an organization: knowledge, on the part of those internal as well as external to the organization, as to what the organization is and does, and why it exists.

In measuring Image in a viability assessment the emphasis is on image consensus: the extent to which the members of an organization similarly perceive themselves, and are perceived, a whole. Image consensus suggests here that a unified image distinguishes between groups of people in general, and those groups we call organizations or institutions.

The emphasis on image consensus means that organizational image is higher when:

- more people believe the same things about an organization;
- the same people believe more things about the organization;
- the same people believe the same things with more certainty.

Conversely, a reduction in certainty, or in the numbers who concur in their assessment of what the organization is and does would constitute a decrease in organizational image.

If there is high image consensus, then the organization will tend to "become" or "live up to" its image. If the organization's image is consistent with our objectives for it, and there is high image consensus, then we have a positive factor for viability. On the other hand, low image consensus, or an undesirable image, argues against viability.

An undesirable image is one that does not include effectiveness or is inconsistent with development goals. Two different examples of undesirable images are:

- (1) A family planning clinic thought of as a place that only the ungodly visit;
- (2) A drug distribution organization that has profit as its only goal.

An organization has a de jure image (and especially doctrine) as expressed in writing or in formal oral statements. There is also a de facto image, that must be discovered through questioning or observation. The differences between the de jure and de facto images can provide us insight into how the organization is adapting to its environment. Given time to make such observations, there would be no better predictor of long-term effectiveness than change in de facto image over time. PCI strongly recommends that approach to the serious student of organizational change, but recognizes that such an approach (which might take 18 months to yield meaningful trends) does not meet AID's need for immediately actionable, "one-shot", evaluation results.

(ii) Connotation

Connotation in the P/C/I Model is defined as: the affective dimension of attitudes held about an organization: placement of the organization's image in the structure of personal beliefs and priorities (for those internal and external to the organization).

In measuring connotation in an organizational viability assessment the emphasis is on assessing morale as potential energy. Are those internal to the organization willing to work hard for the organization -- do they associate achievement of their personal goals with organizational success? Are those external to the organization willing to expend their energy to avail themselves of the organization's services because they value what the organization is and does? In selecting an emphasis on connotation as potential energy for measurement purposes, we expect the connotation of an organization to increase when:

- An organization's image changes to match peoples needs, desires and preferences;
- People's needs, desires and preferences change and match an organization's image.

Thus, changes that reduce connotation, or a lack of change, are signals indicating that connotation is not being replenished in the manner required for viability.

(iii) Purchasables

Purchasables is defined by the model as: money and the things that have been or can be bought or purchased.

In measuring the purchasables dimension of an organization we are concerned, from a viability standpoint, with endurance -- the length of time the organization could exist without new money, income or subsidy, from external sources.

In addition to the specific emphasis identified for each of the P/C/I characteristics, there is one general measurement emphasis common to an assessment of all three characteristics: organizational sensitivity. To be viable an organization must not only have sufficient Purchasables, Connotation and Image, it must also accurately sense them. For example, a health center whose image depends on its giving inoculations, but thinks of inoculations as a sideline, may inadvertently put itself out of business by deemphasizing inoculations. Sensitivity to Purchasables, Connotation and Image are, of course, especially important during times of change.

(B) The Assessment Sequence

A full system for assessing organizational viability using the P/C/I Model is presented in Volume III of this report. In this section we present only a simple overview.

The Assessment Sequence used for evaluating organizational viability, has two primary components: Measurement, and Interpretation.

(i) Measurement

P/C/I measurement activity is divided into three steps:

- Identification -- in Logical Framework terms -- of objectively verifiable indicators and means of verification for each of the P/C/I characteristics;
- Application of P/C/I measurement tools for data collection;
- Summarization of the data in a 9 cell "balance sheet".

(ii) Interpretation

Following preparation of the balance sheet the data on an organization is subjected to a three step interpretation process:

- Analysis of the balance sheet using P/C/I interpretation matrices;
- Preparation of an Organizational Viability Status Report;
- Extrapolation from the Status Report of answers to specific project related questions.

Extrapolation from the Status Report of answers to specific project related questions such as:

1. When a new program is being undertaken, is a new organization capable of assuming additional responsibility?
2. After a period of assistance, what are the areas of weakness requiring special attention?
3. Has the organization reached the point where it can operate effectively without outside help?

To give readers a feel for P/C/I Measurement and Interpretation without going into the details presented in Volume III of this report we present two of the key elements of an organizational viability assessment:

- The P/C/I Balance Sheet (Table III-1)

The basic balance sheet form is a 3 X 3 matrix. The columns in the matrix are the basic characteristics -- Purchasables, Image and Connotation. The matrix rows refer to the data collected on each basic characteristic:

- Internal Data: Data from leaders, members
- External Data: Data from clients, sponsors, suppliers, etc.
- Sensitivity Data: Data from sources inside the organization concerning sources outside the organization.

- The Viability Status Report (Table III-2)

This report is based on the balance sheet for an organization. The report is prepared in a structure format, per Table III-2.

Volume III of this report, "A Guide for Assessing Organizational Viability", provides detailed background concerning the data gathering, measurement and interpretation techniques used to develop these two summary statements of an organization viability position.

TABLE III-1  
P/C/I BALANCE SHEET

	<u>Purchasables</u>	<u>Connotation</u>	<u>Image</u>
INTERNAL	<ul style="list-style-type: none"> <li>- Cash on Hand</li> <li>- Drugs, Plant, Consumables, etc.</li> </ul>	Image value for the organization's members	Amount of consensus among leaders, members, etc. on what the organization is and does, etc.
EXTERNAL	<ul style="list-style-type: none"> <li>- Receivables</li> <li>- Firm Backlog</li> <li>- Monthly Expenses for supplies, rent, other bills</li> </ul>	Value associated with image by those external to the organization	Amounts of consensus among clients, among sponsors, etc. on what the organization is and does.
ORGANIZATION'S SENSITIVITY TO ITS OWN P, C, I	<ul style="list-style-type: none"> <li>- Endurance: The length of time the organization could exist without Purchasables from external sources.</li> </ul>	<ul style="list-style-type: none"> <li>- Do leaders and members feel their efforts are appreciated by clients?</li> <li>- Is their perception accurate?</li> </ul>	<ul style="list-style-type: none"> <li>- Amount of Internal/External agreement on what the organization is and does, etc.</li> <li>- Internal accuracy at predicting what clients, sponsors, etc. think the organization is and does, etc.</li> </ul>

Practical Concepts Incorporated

III-15

It may be possible to disaggregate to "capital" and "operating" purchasables, connotation, and image. Capital P, C, and I are not tied to specific programs the way operating P, C, and I are.

- Capital Image  $\approx$  Doctrine, and Operating Image = Programs.
- Capital Connotation  $\approx$  Value associated with Doctrine and job security ; Operating connotations  $\approx$  Value associated with Programs.

In general, a viable organization has operating and capital P, C, and I in balanced amounts.

TABLE III-2

ORGANIZATIONALITY STATUS REPORT

1. Capacity for subsistence without money from external sources.
2. Linkage Strength: Prospects for future funding, etc.
3. Current position in the client environment. (How would the organization be faring if the clients were the sponsors?)
4. Over the short-term, is #3 on the up swing or down swing?
5. Long-term viability.
6. Areas where the institution can be trusted with new responsibilities.
7. Areas of opportunity.
8. Problem areas.



**CHAPTER IV**  
**RESPONSES TO AID QUERIES**

Based on oral presentations, and reviews of draft documents, AID personnel asked a number of questions that we (PCI) felt were of sufficient general interest to warrant publication. Hence, in this section of the report we respond to queries raised in a memo of November 4, 1974, from Mr. William Wren of AID/PPC.

Q. Is willingness to change jobs a useful indicator of internal connotation in LDCs?

A. Willingness to change jobs suggests a discovery process that can work in western societies. Our LDC discovery process in no way depends on willingness to change jobs.

The Model has no difficulty in dealing with situations where allegiance to the job per se is not the overriding issue. In fact the model was developed with that recognition strongly in mind. The analogy in western society is where individuals have a high degree of allegiance to their job because it provides them security and income, etc., but have very low connotation regarding the organization's doctrine and program.

Our discovery procedures identify the amount of human energy that the individual employee actually puts into performing his job as well as his subjective evaluation of program and doctrine. The case where there is strong loyalty to an individual but no real affiliation to the organization's objectives is uncovered by PCI's weighting of respondents, assigning higher value to substantive motivation (and particularly doctrinal motivation) for top management than for workers.

Q. 1a) What happens in those societies in which an entire group moves from institution to institution when their protector changes jobs?

A. Assuming that your organization is viable if the group does not leave, and not viable if that group does leave, then viability is a function of the probability of the "protector" actually remaining with the organization. This is in turn a function of the commitment to doctrine, a key aspect of PCI's analysis. It is in these cases -- probably more typical in Western corporations, particularly in the U.S., than in other areas of the world -- that it is particularly important that image be well defined. If image is well defined and embedded extensively in the remaining staff or even embedded extensively in the external societal context of the organization, then that is a factor favoring viability. If the entire top management of IBM walked out of IBM then it is still probable that the IBM image would remain constant. The lower levels of the organization and indeed the clients of the organization would tend to force IBM to live up to their reputation. This was indeed the case with National Cash Register (NCR) which was in many ways the predecessor of the IBM image. (The P/C/I Model was developed to deal with LDC circumstances; this seems to be one of those cases where U.S. experience provides the extreme rather than the moderate case.)

The key question the Model addresses as does no other, is the extent to which image will affect the process by which new organizational members are selected, and continue to condition those new organizational members once they come on board.

The P/C/I Model is well suited also to identifying this kind of situation. The commitment to individuals (or to program) rather than to doctrine will be discovered, allowing one to analyze the implications of that fact.

In some cases, such as a certain rural Health Center, dramatic changes in top management "protectors" can enhance rather than reduce potential viability, because the doctrinal commitment (to rural health) was greater outside the organization than inside.

Thus, when Ministry of Health "protectors" were moved to another job, the cabinet-level staff -- who were committed to preventive medicine -- were free to select staff and shape the organization based on similar commitments.

Q. 1b) How about situations in which the possibilities of exacting bribes are more important than the salary attached to a position?

A. This situation is not much different from that of a U.S. bureaucrat who attaches much more importance to job security and power than he does to salary per se. One way of analyzing this is to recognize the distinction between illiquid and liquid connotation. Illiquid connotation is specifically that portion of internal connotation that depends upon house-keeping as opposed to doctrinal or a programmatic consideration.

Within the Ministry of Health we frequently find such imbalances where job security is more important than "image". Change of staff is then a step toward viability.

An organization that is out of balance with regard to housekeeping -- having a relative excess of illiquid connotation -- is not viable. Its organizational energies will not be mustered to meet organizational objectives. The discovery procedure is sharply focused on exactly this situation.

Q. 1c) How Would This Work in a Society Where One Doesn't Normally Leave an Institution After Joining It (e.g. Japan)?

A. This case is one we have assumed for our Model as a discovery procedure. We do not expect there to be much job mobility. Greater job mobility -- more people leaving and entering the organization -- is generally an asset. It allows the organization to get rid of individuals who don't have high connotation for its image -- they don't share its doctrine or program --

and select individuals based upon commitment to doctrine and program. Our discovery procedure, by focusing on questions such as "What should one do" and "What does one do" in given situations, and "What do other people do" in similar situations, factors out this issue. Our discovery procedure does not require or even suggest actual job mobility.

Q. 1d) The institutions we deal with are normally units within larger institutions -- a faculty within a university or a department within a university. How would the model react to what might be perfectly normal transfer from one unit to another within the larger organization?

A. The ability of the smaller unit to be viable depends upon its ability to particularize itself in contrast to the larger unit. To the extent that such normal transfers occur, they should greatly illuminate the issue of internal connotation. The Model works best in this situation because there are characteristics of job mobility that are common to a free market sort of situation -- not the situation we assumed. The discovery procedure then could be greatly simplified -- by talking about the desirability or appropriateness of a transfer from a smaller to a larger unit. However, this is not a general case and it would be dangerous to presume too far in this dimension in an LDC situation.

Q. 1e) The model appears to assume that the current staff is the best the institution could have. Frequently the departure of an individual or a group is the best thing that could happen to an institution.

A. We have miscommunicated our Model if this is its appearance. A healthy organization should be discarding individuals who do not value its image and should be replacing them with people who do. A very much preferred discovery procedure in fact is simply to interview those who leave the organization, those who stay with the organization and those who join the organization. We could call this the "LJR approach" for Leavers, Joiners, and Remainers. However, recognizing that staff turnover in most LDC situations is not high enough to provide a valid data base, we have not recommended this approach.

We expect that in some cases organizations will suffer from having to retain staff who do not value the organization's image. This is very much a contra-indication for viability and the P/C/I Model directly addresses this issue. We would identify how, who and why such individuals pose problems. (Refer to page IV-2.)

- Q. It is stated in the report that a zero-sum "purchasable" transaction can result in a measure of synergy because it reinforces image and connotation. It is not clear how this can happen. If I go into a supermarket to buy a 39¢ can of beans and in fact I buy a 39¢ can of beans has either my image of the supermarket or the value of that can of beans changed?
- A. The concept we are dealing with here is similar to the concept of reinforcement used by behaviorists. Image "content" does not change in such a transaction, but the image becomes more firmly embedded in the minds of the individuals. You may know from reading in a newspaper that a supermarket sells beans. Thus the image you have of supermarkets includes beans on your very first visit to it. However, it may well take dozens of visits to the supermarket before you are completely confident that that supermarket "always has beans". After a time when you've had enough experience with the supermarket "always" having beans, it may take dozens of contrary experiences before the concept of beans is deleted from your image of supermarkets. This is thus a conditioning process in which the interactions between the client and the organization provides stimuli that condition both client and organization member to develop appropriate expectations.

The issue is subtler but similar with connotation. Here although a can of beans is still worth 39¢ the value of the product has not changed. However, a successful transaction increases ones confidence both in the established price and the real value to the individual of that product. Each time you eat beans and get more than 39¢ worth of nutrition and pleasure from those beans, your evaluation of the product is confirmed. Economic

theory even tells us that in fact value is increased. Consumers will and do pay additional money for reliability of product quality -- "brand-name identification", etc. To the extent that this is the case, then a successful valid transaction has in fact increased connotation, not just reinforced it.

It should also be noted that this discussion of the synergy in capitalizing connotation and image is not crucial to the model. We are paving the way for a rigorous balance sheet treatment in which we describe both illiquid and liquid states of all resources and the ways in which one resource (e.g., purchasables) may be credited and another debited (e.g., image).

It should also be noted that all transactions consume some connotation, just as all transactions consume purchasables. However, it is clear that transactions can be synergistic with regard to connotation -- with both client and organizational staff members experiencing beneficial change -- increased morale on the part of the organization's member and an increased valuation of the organization's product or services on the part of the client.

The reader will note, by examining PCI's discovery process, that connotation is really a potential function, which in practice maps into conventional concepts of morale and value. Based on that potential function, energy can be used and then regenerated to increase the potential for subsequent transactions.

Thus, a nurse provides high quality care to a client and immediately observes that the client's symptoms are remediated. The client expresses gratitude and also promises to make dietary improvements as recommended. The nurse is gratified. Her connotation is increased. The effects of that increase are entirely subjective. They may be observable in a change in the nurse's demeanor or speech, but that which is carried forward is entirely internal to the nurse herself. However, on her next client interaction -- especially if the circumstances of the interaction are similar to those in the previous case -- the positive attitudes of the nurse will be translated into two factors:

1. Higher expectations regarding the outcome of that transaction;
2. Willingness to spend more energy in trying to achieve that outcome.

Note that the first of the above results is the reinforcement of image which we spoke about before. The second is the translation of the "potential energy" of increased connotation into real energy of the more "energetic" manner in which the nurse fulfills her task. Note also the exponential effect of greater expectations -- based on the evidence that the higher the expectations the better the outcome.

- Q. Isn't it possible that an institution might rate high in terms of institutional viability, but not be considered a success by the donor agency because the work it is doing is not quite what had been contemplated by the foreigners?
- A. Yes. Our discovery procedure is directly aimed at uncovering such issues. If an organization is self-sufficient, but has modified its image to the point where it no longer has important developmental value, the organization is not, from AID's point of view, viable. AID would then be faced with the alternatives of ending its support or changing image. The latter can be an extremely expensive job and in such cases sponsors might be better off starting over again. (Starting over again need not be as traumatic an alternative as it sounds. Staff and facilities can be retained, but the organization transferred, changed in name and objective, etc. Successful "starting over" experiences include the changing of "family planning clinics" to "maternal and child care centers.").
- Q. How does the P/C/I Model fit into our existing design and evaluation systems?
- A. Very well. It provides a relatively low cost way of assessing purpose level achievement of organizational viability.

Q. 4a) Procedures cumbersome?

A. This is a relative question. The procedures are far less cumbersome than, for example, the procedures required for the Esman type analysis. They are also less cumbersome than the Thorsen checklist, but may require more resources to use because they require more objective evidence.

Q. 4b) Too much so for smaller AID?

A. It is our judgment that refined procedures would let USAID staff -- not contractor staff but USAID staff -- perform such assessments in less than one man-month.

Q. 4c) Can it be made simpler and less cumbersome?

A. Yes. We would hope for the opportunity to provide a field test and analysis so that we can in fact simplify it. The more experience there is with the model the simpler the measurements that can be made.

Q. 4d) Implications of RIF?

A. None that we are aware of. However, it should be noted that these assessment techniques are compatible with either heavy USAID presence abroad or reduced USAID presence.

Q. Can a single field test tell us whether model works, or merely whether it can be used?

A. If our model of organizations and our method of assessing viability are both correct then we will be able to make short-term as well as long-term predictions -- to identify what will happen if particular actions are taken, to recommend ways of improving acceptor rates in birth control clinics, etc. Short-term predictions, some of which should be testable within 30 days or so after our assessment, will be used to validate or refute the model.

The field test will tell us whether the model makes valid predictions. Those predictions will be of a number of kinds. The easiest predictions will be those regarding the relative success (efficiency and effectiveness) of alternative programs that PCI analysts did not directly study. A second round of tests will be based upon our ability to make predictions in the extremely short term -- 30, 60 and 90 days. We will certainly be able to validate the model's effectiveness in dealing with realistic USAID problems within a year.

If AID will select projects for our review in which AID actually intends to stop funding the projects, or is willing to stop funding the projects if we make such a recommendation, our "long-term" predictions can be immediately tested and we will predict whether the organization will become self-sufficient given cessation of AID funding. Thus to some extent the ability to test viability predictions is a function of the degrees of freedom AID allows during the course of test.



## CHAPTER V

### SAMPLE UTILIZATION OF THE P/C/I MODEL

#### A. General

To demonstrate application of the P/C/I Model, Figure V-1 simulates the logical framework for a rural hospital. This chart is presented to illustrate use of the P/C/I Model, and is more complicated than that we recommend for immediate AID use. (The simpler framework is explained in Volume III of PCI's report to AID). For simplicity, the logical framework in Figure V-1 does not include targets, means of verifications, etc., for items outside the mainstream of our viability discussion.

As may be noted, our purpose is to establish a viable rural hospital emphasizing preventive medicine. We have included two sets of outputs. First, we have used the Esman concepts as the essential outputs of the projects -- that we recognize as necessary and hopefully sufficient for achieving our purpose. However, such outputs are normally considered outside of AID's manageable interest. Thus, we have "below" those outputs the intermediate outputs that AID can in fact warrant to produce. By implication, the responsibility for the "superior" or "Esman" outputs is that of the LDC.

Note that our end-of-project-status indicators deal largely with image and connotation external to the organization -- directly assessing the response of the environment to the organization. The one purpose-level indicator we use internal to the organization is that of staff connotation. Although it is clearly a function of leadership to have an appropriate program/doctrine gradient, it is reasonable to assume that it is outside the manageable interest of that leadership to ensure that the connotation has a similar gradient. We expect it to be within the manageable interest of leadership to ensure that every individual in the organization is aware

of the organization's ethics, constraints, objectives, etc. On the other hand it is a factor of the social environment as well as working conditions within the organization to determine the degree of real commitment to those objectives. (Our indicator of commitment is connotation.)

It should be noted that this is not the easiest approach to using the model for evaluation. It is however the most illustrative. What we have done here is set up an evaluation model whereby interviews of the key sponsors, coupled with interviews of all key staff in the hospital, plus a survey of a representative sample of villagers in the target area, should enable us to perform a definitive viability evaluation.

We repeat: we include this logical framework because it is the most explanatory. A simpler approach to this evaluation assessment is provided in the guidelines recommended for immediate AID use.

To clarify this model we will briefly discuss Figure B-1, with concentration on the output and purpose columns, ignoring all inputs and those portions of the matrix beyond the interest of the viability assessment.

### GOALS

There are two levels of goal for this project. The higher level goal is actual improvement in the state of health for poor rural populations. The subordinate goal is that locally appropriate preventive health measures are adopted by the rural poor, with our rural hospital being the mechanism for such change. Note that our purpose-level indicators may give us some insight into goal level achievement. If the client image includes preventive programs and the do/should overlap is greater than 0.5 for preventive programs, then the clients value the programs and presumably will adopt them.

FIGURE V-1:

LOGICAL FRAMEWORK  
FOR  
SUMMARIZING PROJECT DESIGN

Est. Project Completion Date \_\_\_\_\_  
Date of this Summary \_\_\_\_\_

Project Title RURAL HOSPITAL

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program Goal: The broader objective to which this project contributes:</p> <p>Improved state of health for poor rural populations</p>	<p>Measures of Goal Achievement</p> <ol style="list-style-type: none"> <li>1. Infant mortality and morbidity</li> <li>2. Do/should overlap increases with # of contacts</li> </ol>		<p>Concerning long term value of program/project</p>
<p>GOAL 2:</p> <p>Locally appropriate preventive health measures adopted by rural poor</p>	<ol style="list-style-type: none"> <li>1. Changes in child feeding</li> <li>2. Client image includes preventive programs</li> <li>3. Do/should overlap &gt; 0.5 for preventive programs</li> </ol>		
<p>Project Purpose</p> <p>Viable, Preventive Medicine Oriented, Rural Hospital</p>	<p>Conditions that will indicate purpose has been achieved. End of project status</p> <ol style="list-style-type: none"> <li>1. Client "connotation"                     <ol style="list-style-type: none"> <li>1.1 Doctrinal connotation increasing for increasing client base</li> <li>1.2 Program connotation increasing for increasing client base</li> <li>1.3 Connotation increases with number of contacts between organization and client</li> </ol> </li> <li>2. Client "Image"                     <ol style="list-style-type: none"> <li>2.1 Image increases with number of contacts</li> <li>2.2 Increase in number of clients served is such that capacity will be reached by January 1976</li> <li>2.3 Image consensus extends to non-clients</li> </ol> </li> <li>3. Staff Connotation                     <ol style="list-style-type: none"> <li>3.1 Top management do/should overlap greater than 0.7 for doctr line</li> <li>3.2 Working levels do/should overlap greater than 0.6 for program or 0.7 for doctrine</li> </ol> </li> <li>4. Purchasables                     <ol style="list-style-type: none"> <li>4.1 Sponsors do/should overlap ≥ 0.6 for doctrine and program</li> <li>4.2 Organization perceived as best alternative for highest valued operations -- by sponsors, clients, and staff</li> <li>4.3 Ministry of Health commitment to next required allocation of funds</li> </ol> </li> </ol>	<p>Client Survey indicates that</p> <ol style="list-style-type: none"> <li>1.1 and 1.2                     <ul style="list-style-type: none"> <li>• Average do/should overlap ≥ 0.5 considering all clients</li> <li>• Do/should overlap &gt; 0.1 for at least 80% of clients</li> <li>• Number of clients served increases per 2.2</li> </ul> </li> <li>1.3 Do/should overlap correlates positively with number of contacts</li> <li>2.1 Image consensus ≥ 10 and correlates with # of contacts</li> <li>2.2 Per hospital records, function describing "intake" projects to capacity</li> <li>2.3 Survey of potential clients target villages shows image consensus above 10</li> <li>3.1 and 3.2 Staff interviews (comprehensive at top level)</li> <li>4. Above surveys, supplemented by interviews of all key sponsors</li> </ol>	<p>Affecting purpose-to-goal link</p> <p>Medical Technology data can be adopted to meet local needs.</p>
<p>Outputs: A/D/LDC</p> <ol style="list-style-type: none"> <li>1. <b>LEADERSHIP</b> Program and doctrine internalized by staff                     <ul style="list-style-type: none"> <li>• Plans on hand, independently generated by local staff, to meet plausible financial urgencies.</li> <li>• Programs realistically adapted without AID assistance</li> </ul> </li> <li>2. <b>DOCTRINE</b> Codified and aimed at preventive health</li> <li>3. <b>PROGRAM</b></li> <li>4. <b>RESOURCES</b> Funds committed less AID contribution more than adequate planned expenditures.</li> </ol>	<p>Magnitude of Outputs necessary and sufficient to achieve purpose</p> <ol style="list-style-type: none"> <li>1. Top staff doctrinal image consensus above 15, working level staff program image above 13                     <ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul> </li> <li>2. De facto doctrine per written records, de jure doctrine as discovered by surveys both acceptable to AID and sponsors</li> <li>3.                     <ul style="list-style-type: none"> <li>• All compatible with doctrine</li> <li>• All provide value in excess of cost</li> <li>• Basic programs include: inoculations against childhood diseases, diet and other preventive counseling to all clients, subsidized medicines for treatment of common diseases.</li> </ul> </li> <li>4. (Cash and firm commitments from non-AID sources) ÷ (monthly operating expenses) ≥ N, where N is number of months until scheduled replenishment</li> </ol>		<p>Affecting output-to-purpose link</p> <p>Concepts of preventive medicine can be made meaningful to villagers.</p>
<p>CONVENTIONAL OUTPUTS</p> <ol style="list-style-type: none"> <li>1. Building constructed</li> <li>2. AOC ensures MD staff on-site</li> <li>3. Three qualified nurses</li> <li>4. Two technicians trained in control and dispensing of prescription drugs</li> <li>5. Security measures taken to protect hospital equipment and drugs</li> <li>6. Drug distribution system</li> </ol> <p>(Based on rural earnings being approximately 40% of those of urban areas)</p> <p>7. Ministry of Health provides on-site supervisory visits at least once per month</p>	<ol style="list-style-type: none"> <li>1. Per drawings</li> <li>2. At least one M.D. on the premises for at least 6 hours per day, or 42 hours per week.</li> <li>3. Trained in preventive medicine as well as in conventional curative approaches are trained, on-site, and working at least 120 hours per week</li> <li>4. Provide service during all hours of hospital operations                     <ul style="list-style-type: none"> <li>• less than 4% loss, all causes</li> <li>• 90% of all drug requests are filled (immediately, all requests are filled within 30 days, and price of drugs to clients is not greater than 40% of unsubsidized private urban dwellers)</li> </ul> </li> <li>7</li> </ol>		<p>LDC administrators committed to these objectives</p>

PURPOSE LEVEL

The key indicators here are the extensiveness of the organization's image and the degree to which that image is consonant with local needs. The first of these we measure by assessing image consensus among both clients and potential clients. (High image consensus among potential clients is a key indicator of impact on the organization's environment.) The second factor, which we have called "external connotation" is measured by assessing "do/should overlap" -- the degree to which clients and potential clients perceive the hospital as actually doing the things they feel a hospital should be doing. (To avoid reactive bias, "should" respondents are not the same individuals as "do" respondents.)

To ensure the continued success of the organization, our concern is that:

- (1) Image and connotation are increasing in magnitude -- more people and/or greater intensity;
- (2) Image and connotation are reinforced by transactions with the organization -- as evidenced by positive correlations between number of transactions (or contacts) and strength of image/connotation.

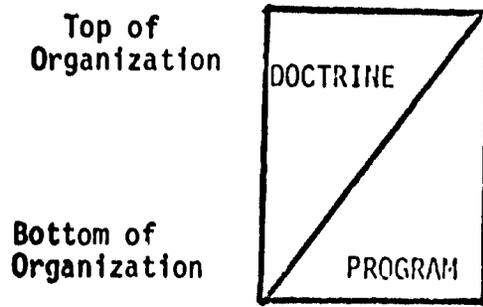
If all of the above factors are operative, then our hospital is in a regenerative feedback mode, with success begetting more success.

"ESMAN" OUTPUTS

The Esmen outputs shown here have been targeted per PCI's work to make these outputs more "operational" to AID users. We have not targeted those where no improvement on AID's "conventional" approaches are recommended. The most illustrative output is leadership. It is assumed to be within "the leaders" manageable interest to keep

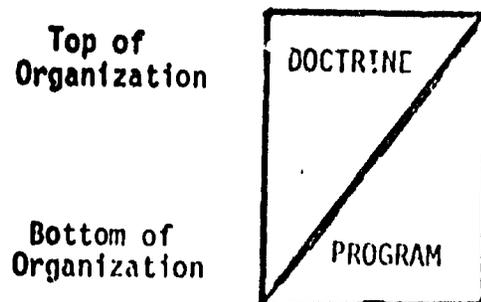
all levels of the organization informed as to what the doctrine and program are, in a manner consistent with the individual functions. Thus, the M.D.s and nurses must be aware of doctrine and alternative programs. Dispensary and outreach staff need to be aware of specific programs (e.g., inoculations, emergency service, etc.). A well-led organization will ensure such awareness. However, few organizations can ensure that staff appropriately value doctrine and program. Thus, internal image consensus is an "output" of good leadership, and we expect the gradient noted earlier:

Internal Image Consensus  
is at the Output level



The demarcation between output and purpose is well illustrated by the fact that the connotation gradient is a purpose-level indicator:

Internal Connotation is beyond most managers' control; hence the desirable gradient of connotation is a purpose-level indicator



The output "Doctrine" is also illustrative of the bridge between the Esman and the PCI models. Our target is that *je jure* doctrine is consistent with AID and sponsor objectives. We are faced with the option of including de facto doctrine as either an output or a purpose-level indicator. We have treated it at the output level because we recognize it as a necessary effect of strong leadership.



## CHAPTER VI

### FINDINGS, CONCLUSIONS AND RECOMMENDATIONS FROM THE STUDY

#### A. FINDINGS

In the course of the analytic effort undertaken by Practical Concepts Incorporated (PCI) to develop and test basic evaluation model for institutional development projects, PCI determined that:

1. The P/C/I Model for the Assessment of Organizational Viability Appears to be Practical

In the course of this study PCI developed and tested a model for evaluating institutional viability. The model, and the associated practical measurement and analysis techniques, can be used to apply the P/C/I concepts to real projects, to conduct an assessment, and to arrive at a series of conclusions concerning the viability of the organization studied.

The conceptual difficulties involved in the development of the model and the associated measurements were not problems arising from the case materials in health and family planning on which the model tests were conducted. The projects PCI tested to demonstrate model utility were in the health and family planning areas, however the conceptual problems to be dealt with in development of the model were of a more general nature, e.g., the sponsor relationship between AID and the organizations assessed, and the fact that the organization's final clients were often outside of the AID environment.

(In addition to the six tests of the model PCI ran on health and family planning related projects, PCI staff members in the course of their own work applied these concepts to projects outside of the health and family planning sphere. In these cursory tests of the

model, no difficulties were found in applying the concepts to projects designed to develop organizations in other sectors.)

2. The P/C/I Model and AID's Institution Building Concepts and Literature are Complementary, not Competitive

The institution building theorists, beginning with Milton Esman, have developed for AID a set of ideas and guidelines to assist in the development of institutions. The key concepts used by AID from this literature are in logical framework terms, outputs. These concepts include: doctrine, program, leadership, etc., as defined by the institution building theorists.

Little work has been done by the institution building theorists at the purpose level. It is at this level that we measure the success of a project. Project success for an institution includes, as a part of the end-of-project-status, the notion of viability or continued survival. At this level only Esman himself seems to have addressed the issue. Esman defined a series of ideas which might be used to assess success of an institution building project. Neither he nor his followers ever fully developed these ideas.

The P/C/I Model developed by Practical Concepts Incorporated complements the use of Esman's output level institution building ideas by providing a series of clearly independent measures of viability at the purpose level. The P/C/I Model advances the state-of-the-art in purpose level measurement of organizational viability. While the P/C/I Model subsumes many of the ideas put forth by Esman, it goes beyond this work by (1) organizing the concepts in a way that can be measured, and (2) actually proceeding to define measures and analysis techniques which AID project managers can use.

3. The P/C/I Model is a Natural Complement to AID's Current Evaluation System

As noted in the prior finding, Esman's institution building concepts generally apply at the output level. The P/C/I Model is a full-scale measurement system for assessing viability at the purpose level of a Logical Framework, where the purpose of the project is to develop and foster the growth of an institution or organization.

The P/C/I Model, added to standard AID evaluation practice, forces clear use of the horizontal logic for a project which has an institution as its purpose. The P/C/I Model reinforces concepts already well known to AID managers around the world.

B. CONCLUSIONS

From these findings, PCI draws three conclusions about the model it has developed for assessing organizational viability:

1. The P/C/I Model is potentially a general tool which can be used to assess viability of organizations sponsored by AID irrespective of sector.
2. The P/C/I Model is appropriate for AID and reaffirms AID's current approach to evaluation.
3. The P/C/I Model provides assessment outputs which will facilitate Mission planning. The model which has been developed meets the requirement put forth in the study scope of work: organizational viability assessments must assist AID Missions in answering management questions about institutions such as the following:

#### VI-4

- "When a new program is being undertaken, is an existing institution capable of assuming additional responsibility?
  
- After a period of assistance to an institution, what are the areas of weakness requiring special attention?
  
- When has an institution reached the point where it can continue to operate effectively without outside help?"

C. RECOMMENDATIONS

AID evaluators need a practical and simple method for assessing organizational viability. The P/C/I Model meets that need.

AID program operators need prompt assessments of the viability of their institution-building projects. A field test and demonstration of the P/C/I Model can meet that need.

AID policy makers need an objective basis for deciding which, if any, of the competing methods of organizational assessment -- the P/C/I Model, peer reviews and similar normative processes, or the "Esman" model -- should be incorporated in AID evaluation guidelines.

A P/C/I demonstration, organized to provide objective comparisons, can meet those needs.

Therefore, PCI recommends that AID select two or three projects where there is a felt need for a viability assessment, and demonstrate the P/C/I Model to provide immediate feedback to the cognizant USAIDs as well as refine and prove the value of practical tools for use by USAID officers.

Rigorous field testing can prove the practicality of the P/C/I Model, and its predictive value. The recommended field test will compare the results of alternative models, assessment techniques, and of alternative evaluators (AID, and PCI). The results of that test will include both immediate and direct benefit to the organizations chosen for the demonstration, and should generate conclusive evidence as to the best methods for AID use.

Additional outputs of the recommended test would include:

- simpler and more specific instruments for data collection;
- simplified methods of statistically valid data processing;
- guidelines for selection and orientation of LDC interviewers;
- guidelines for AID/W role in maintaining and processing a centralized data base.

To enhance the value of such tests, PCI's test plan\* recommends that the P/C/I Model assessments be compared to the best available alternatives (e.g., subjective judgements and such models as the Esman/Thorsen model) with the criteria for comparison being:

- ability to predict and detect viability;
- ability to recommend practical AID strategies;
- reliability;
- simplicity and utility as perceived by AID officers.

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\* Submitted under separate cover.

Based upon the ability of the balance sheet approach to immediately meet the needs of Mission staff, we recommend that the Agency focus the demonstration on that approach, undertaking a program in which AID officers actually use the balance sheet approach in real-life LDC situations.

However, because of the potential importance of the other two methods of assessing organizational viability, and the ability of a sophisticated team to perform all three approaches simultaneously, it is recommended that the demonstration of the balance sheet approach include further experimentation with the effect/feedback and the transaction analysis approaches.

We recommend, then, the following sequence of activities:

1. AID choose two or three demonstration sites and organizations for testing these models;
2. PCI teams, in cooperation with AID/W staff, be deployed to each of those sites to:
  - a) Redundantly perform the balance sheet analysis;
  - b) Independently perform the transactional analysis and effect/feedback analysis.
  - c) Provide advice and guidance to the AID/W and USAID teams.
3. During the period that PCI teams are on-site, AID staff perform the balance sheet analyses of the same organizations, following brief orientation by PCI.
4. Analyze and compare results from all of the above.

Based on the above, AID staff will be able to personally test and use the balance sheet model, and the results of their analyses can be compared to the balance sheet analysis developed by PCI, to the two other forms of analysis, and such other alternatives as AID subjects to test.



## APPENDIX A

### BACKGROUND CASE STUDIES

In this section PCI presents two case studies which were undertaken during the course of the development of the P/C/I measurement tools. These two studies provided a preliminary test of the model concepts and provided insights required to fully develop the P/C/I measurement and analysis tools.

The case studies themselves are different in format -- the staff members asked to undertake their development were only given the basic P/C/I concepts as guidance. The cases deal with:

- (1) A Latin American health delivery system;
- (2) An interactive television network which supports biomedical communications and health service delivery.

(1) CASE STUDY ONE: LATIN AMERICAN HEALTH CENTER

This case study is presented in four parts:

- (A) Impressionistic Narrative:  
A Poor Farmer's Visit to a Latin American Health Center;
- (B) "Images" of Health Center, as held by Various Sectors of the Center's Human Environment;
- (C) Itemization of Transactions between a Latin American Health Center and its Environment;
- (D) A Narrative Summary of the Health Center Objectives.

(A) Impressionistic Narrative: A Poor Farmer's Visit to a Latin American Health Center

One approach we used to gain insight into the determiners of an organization's viability was to examine in detail the visit of a poor farmer to a health center in a small Latin American country. The following is an impressionistic narrative based on the observations of a Practical Concepts Incorporated staff member who visited a number of Latin American health centers. The protagonist, a poor farmer, is named Juan Campos. We have tried to explain his contact with the health center from his point of view, however we do not pretend to have access to his mind.

Juan Campos approaches the health center. Juan has been suffering from diarrhea for the last three days, and has intermittently had a fever which has interrupted his work with a bitter taste in his mouth and chills at odd intervals as well as the other discomforts of his condition, Juan has decided to trek through the vegetation to seek treatment at the "sanidad" (or local health center).

Knowing that he truly is sick, the fever particularly scares him. Juan comes to the center, weakened from sleepless nights and a long walk overland to the town.

Juan approaches the only new building in the small village of Davao. The swine litter the street, freshly mudded since it's the season of the rains. The center itself is a one-story edifice with windows made of glass slats and a plaque near the entrance explaining something about all this being possible through a loan from the United States.

Juan enters the Health Center.

Juan is seated. He waits an hour and a half. Then he leaves the center momentarily to relieve himself. He returns and waits another hour. He is then motioned to come to the window.

In a somewhat depersonalized manner the auxiliary asks for his number. (Each family has a number and all records are filed under the same). Juan fortunately knows the number used by

his family (to have forgotten would make it impossible to find his record as the center does not file the numbers according to name or have any means of cross-checking name for number). He explains his difficulty and is asked to wait to see the doctor.

After a half hour, he is called back to the doctor's examining room and is greeted by a young man of 23 years.

Although somewhat inexperienced, the doctor recognizes his symptoms as malaria but explains to Juan that he has no laboratory in which to take the necessary samples to determine the correctness of diagnosis. The nearest laboratory is some 15 KM away, the bus fare being 2 cords (30¢) each way. The doctor realizes that Juan cannot go so he decides to give him medicine to treat malaria. Fortunately the center has such medicine at a reasonable price. Juan, however, has no money. His impecunity is assessed and pills are given to him at no charge. Juan is instructed to take the pills at given intervals for a given period of time.

He leaves the center.

Juan returned home and took the pills as directed for 2 days. His symptoms disappeared and he soon felt much better. He thereupon stopped taking the medicine. His symptoms reappeared. The doctor obviously gave him the wrong medicine. Next time he will go to the hospital where they can take tests.

### Background Information for the Impressionistic Narrative

To put the previous impressionistic narrative into proper context, we collected background information which might shed light on it. Following is a presentation of that background information.

1. What did Juan know about the Health Center before he visited it?

Juan has never met with a private doctor. His first experience with modern-medicine entailed a visit to a hospital some 20 KM from his home where an uncle was taken after breaking a leg. Sometime thereafter, a "nurse" had visited the Campos' home to announce that the Health Center was giving "vaccines against polio". Although he didn't understand what the "nurse" meant by either "vaccine" or "polio", he thanked the visitor and promised to go to the Health Center. This was Juan's second and last (up until this point) exposure to modern medicine.

The talk around the neighborhood was that the centers gave milk but you had to take the child each time to be weighed. Quite a bother but usually you only had to bring the child in the first time. For a while, after the disaster, it was understood that medicines were being given free -- but that was many months ago and now they charge for medicine -- in fact they have very little medicine and usually give you a prescription to have filled.

## 2. What is the center like physically?

Greeting Juan is a large room with low benches around the finely cracked walls (plaster did not dry properly). The benches are strewn with women holding children, and several older men and women -- all of whom have been waiting for an hour or two. There are pictures on the wall of a father holding his son's hand with the caption -- El niño es un tesoro (a child is a treasure) and other cartoon-like figures who are preparing food or defecating in the open with a caption explaining that such conduct leads to disease and parasites.

The center's reception desk is behind a glass window where an auxiliary nurse (2 years of training) -- whose duties include screening patients as to their ills, assisting the doctor, weighing children and dispensing milk -- keeps records of all patient actions.

## 3. What is the Doctor like?

The Doctor (unknown to Juan) has done most of his work on cadavers and has little experience in medical work outside of the school. He is putting in his six months (this particular doctor has extended another six because there are still no hospitals in the big city for him to enter as an intern or otherwise) of obligatory service. Fortunately Juan is here in Davao rather than Juarez where the doctor comes for two hours a day (if that much) and quickly returns to his private practice in a city some 30 KM away.

(B) "Images" of Health Centers as Held by Various Sectors of the Centers' Human Environment

Another approach we used to gain insight into the determiners of an organization's viability was to characterize, in impressionistic fashion, the "Images" of Health Centers in a small Latin American country, which are held by various sectors of the Health Center's human environment. We do not present that the following "Images" are the true ones. They are the "Images" that seemed probable based on observation of the Health Centers in operation. (We are using "Image" here in a very loose sense, and it includes aspects of what we call Connotation elsewhere -- in particular in "A Guide to Assessing Institutional Viability.")

I. HEALTH CENTER IMAGE AS HELD BY THE TOWNSPEOPLE:

For the most part, those who can afford private medical care or who have access to care through insurance plans (work-programs, social security, veteran benefits) do not frequent the health centers. Those persons in these categories who do visit the centers do so (1) in cases of emergency when the physician at the center is the only one available, (2) when vaccinations are given without charge, or (3) in the hopes of getting medicine at reduced prices.

The situation is somewhat complicated by the fact that those living near hospitals know that consultations are given for a fixed fee and that all medicines are included in that fee. The hospitals, however, do charge for any laboratory work. Thus any person able to afford a flat fee can be assured of getting whatever medicine may be necessary (a marked contrast to the lack of medicines in the health center and the more than likely result of the patient receiving a prescription to fill at his own expense, albeit without paying for the consultation).

Since these health centers are located in the most rural areas, they represent the only source of medical services particularly when the

physician comes to the center from a distant point for a scheduled number of hours per day. In those cases where the center physician is a resident in the town, he may provide services after health center hours in his private clinic. Knowledge of these centers by those in the immediate surrounding area is enhanced by (1) the fact that it is the only new building in the town, (2) many participated in its construction, and (3) the very action in construction served as propaganda. In those areas where a health center of some sort existed prior to the AID financed buildings, the awareness of medical services had a longer standing. The building was often accompanied by loud-speakers in the town explaining the new center and what it offers.

Random samples of interviewing with patients and non-patients left the impression that almost without exception the inhabitants of the towns know of its existence and had some idea of the services offered. The perceptions taken as a whole would be (1) that the physicians do the best they can (2) that the major service offered is vaccinations, (3) that medicine is sold at reduced prices, (4) that there is very little medicine for sale, and (5) that without laboratories the diagnoses are "hit and miss."

Those who did not frequent the centers (had means to go elsewhere) knew very little of the services offered.

Because of the omnipresent AID monies (if it's new it's from AID) there is the view that medical services provided through the centers are "coming" to them. There is resentment when medicines are not available and when doctor hours do not coincide with the time of visit. It is difficult to make an assessment as to the psychology of "poor" people. The whole system of priorities and acceptable levels of treatment bear little relation to an average American's view of the subject. They are not simply people without money.

At best, health care (preventive care in any case) is unheard of among the rural population, the basic facts of diet balance and disease

prevention being little understood. The rural health centers are often the first contact for education on such subjects -- an educational process best characterized through happenstance talks in the center rather than an organized campaign of community education. Malnutrition need have no place if the proper foods which in fact are available were consumed. As pointed out, eggs and milk produce diarrhea, thus they are sold to buy wheat gruel which gives no stomach disorders but gives little nutritional value.

Past campaigns by "do-good" organizations which come through and offer services and foodstuffs until they are exhausted have been of dubious value. They stir hope, provide lunches, etc. and then fade. The educational efforts by visiting medical personnel from the capital are sporadic and are not followed up by either the devices (e.g., for birth control) or access to them.

The prime conception of rural inhabitants is that the health center is for emergency needs, vaccinations (when good propaganda is done or when personnel come to houses to vaccinate), and free milk. Because there is no experience with a number of doctors, a comparison between doctors would be rare. The physician at the center is the doctor and can be compared only when there has been a previous physician or the person in question has received services elsewhere.

Those who have contact with the center (for whatever reason) have no concept of the importance of follow-up procedures. Repeated visits were the rarity with the exception of those being treated for T.B. who had been in hospitals and know the importance of regular treatment. Repeat visits were most often recorded for children -- they often had to be brought in to be weighed at regular intervals, with milk being refused for failure to bring the child.

II. HEALTH CENTER IMAGE AS HELD BY THE "PATIENT"

1. Medical help is primarily for emergencies.
2. The health centers provide little in the way of medicines (since the patients must pay for them).
3. The community education function is at a minimum.
4. The economic level of patients is such that thinking of an "alternative source" for help is unrealistic (transportation is also a factor).
5. The benefits are not necessarily expected to be long-lasting. Prescribed use of medicines (number of pills over number of days) is not always followed.
6. The doctors are not a fixture of the towns (since many are doing social service and are replaced every six months to a year).
7. The patients' primary associations are with the local auxiliary nurse who has lived in the town and who has the most contact with the people.
8. The importance of the individual is not stressed. Many now have to wait for long periods and when the center is closed, they must seek help elsewhere or do without.
9. The center itself seems disassociated with any known form of services, i.e., it is obviously not part of the mayoralty (alcaldia), nor does it have any connection with traditional services in hospitals. A guess is that the people have no idea from whence come the medicines, why they are priced as they are, why certain kinds of treatment are given and others are not. There is no participation of any kind ... with the exception of those who get paid for helping to build it, those from the town (e.g., guard and auxiliary) who get paid for working there, and the alcaldia which sometimes makes improvements or provides some form of services (electricity, payment for services for those who cannot afford even the most modest ...).

**III. HEALTH CENTER IMAGE AS HELD BY THE CENTER STAFF**

**A. THE DOCTOR**

The doctor sees the center's mission as:

1. providing care on an as-needed basis;
2. setting a tone of concern and competence in the center;
3. gaining confidence of townsmen in value of medical care;
4. upgrading quality of services;
5. increasing awareness of availability of medical services.

The doctor sees the program of the center as:

1. reception center for those unable to get care elsewhere;
2. keeping a semblance of order in health control efforts (vaccinations);
3. doing minimum of care to meet emergencies;
4. serving as distribution point for milk;
5. offering focus for public health programs (latrines, garbage collection).

The doctor sees his role as:

1. catalyst in making center staff responsive to needs of the community;
2. most competent technician for services;
3. overseer of activities in general (overall responsibility);
4. example of good health habits in personal life (home, family care).

The doctor sees public health as:

1. little understood by townspeople;
2. without support from the Ministry of Health;

3. resisted by townspeople when it interferes with customary actions (pigs in street);
4. best investment of effort to at least reach the young (e.g., in school).

**B. THE NURSE OR NURSE AUXILIARY**

1. She feels she has the key responsibility for the center inasmuch as she screens patients, keeps records, dispenses milk, diagnoses when the doctor is not there, oversees any patient education, gives talks to schools -- the embodiment of the center.
2. She often is the only continuous link between the health center and the community since the doctors change.
3. She perceives herself as overworked and responsible for too much in the center to have time for any real work in the community. This varies when there is a larger staff. But in any case, the community work always comes last. Most conceive of themselves as dedicated to what comes into the center and have little interest in larger projects in the community.
4. In some instances the lack of support from the Ministry of Health is apparent which does not tend to reinforce the importance of the position (must go all the way to the capital to get salary checks).

**C. THE SANITATION INSPECTOR**

1. He feels commitment to the community but knows that success depends not on the authority of the center in bringing about changes in sanitary practices (although in theory there are sanctions for failure to follow prescribed measures) but on his personal relations with town members and his ability to make his suggestions palatable.
2. He usually has a short training course on sanitary measures and must be satisfied with small changes over time. Many town people feel that past customs (pigs loose) should not be changed and resent suggestions to the contrary.
3. He will identify with the center to encourage attendance of those whom he visits that are in need of help.

**D. THE LAB TECHNICIAN**

1. Where such a person exists, his perception may range from feeling part of a team to a technical person with no other responsibility.

2. He is often undertrained and feels lack of capacity to do all the necessary tests.
3. He cannot help feeling inferior since basic equipment is not supplied preventing proper use of his time.

E. THE GUARD

1. It's a job that is great for a young man with no family and little ambition or a married man to supplement his income or a small child who helps his family.
2. His role is basically perceived to prevent pilferage.

F. THE STAFF IN GENERAL

As a group, the members of the center consider themselves as fairly autonomous pieces of a puzzle. They feel the obligation to put in a required number of hours and will usually stay longer if necessary. They feel impotent both collectively and individually to make a difference in the basic causes of the health problems, malnutrition and ignorance of basic health habits.

There is no pressing sense of mission. They are glad to have the jobs; work is almost non-existent in the area, particularly with the outflow of people from the capital after a recent disaster. They receive a minimal amount of supervision -- nurse supervisor comes maybe one time per year, the Ministry of Health inspector perhaps one time per year, and no doctor supervisor to my knowledge.

They consider themselves a resource to help with problems and not a, an agent of change in the town and its surrounding area. They service those who enter but make little effort to go outside the center except on the most structured efforts, e.g., vaccinations, visits to schools, etc.

They are people who have come together by circumstance. Only the auxiliary has had formal training in public health (and a short course

at best) with the inspector being responsible for sanitation practices after a brief orientation period.

They are working with people who have had little contact with the world of medicine and who have no concept of preventive care.

#### IV. HEALTH CENTER IMAGE AS HELD BY THE MINISTRY OF HEALTH

1. As a basic doctrine, PUBLIC HEALTH is not stressed in medical schools nor does it have a particularly high place in the government except through the Ministry of Health. All other efforts are through the hospitals. Rural health is stressed by AID.
2. AID wants to give money for health. It is not a high government priority but since loans are made on a 40 year pay-back basis, health becomes a relatively cheap investment.
3. People learn by example. Send a crew of health workers who live cleanly and some of it will rub off.
4. All people understand the value of health measures. Thus, provide passive care to the rural people and they will seek it out.
5. However little the centers do they are at least not a negative factor, so something good is gained no matter how high the per unit cost.
6. The Ministry of Health has been charged with the responsibility for administering the health centers and for providing necessary support in terms of supervision, transportation, supply of medicine and assuring necessary staff presence. AID viewed its commitment as limited to purchase of ground, construction of centers, equipment in centers, and an initial arrangement to have medicines made available to the centers.
7. The Ministry of Health has not to date given the health centers top priority -- a condition not wholly attributable to the disaster since supervision of personnel and medicines was at a minimum prior to the disaster. AID required that a mandatory social service law be passed for doctors (6 months)

prior to being permitted to enter medical practice. There may also be similar requirements for nurses and nurse auxiliaries.

8. Municipal government: range from excellent working relationship with the center to complete disinvolvement. Rarely is it opposed to the center. It is simply not aware of the center's workings.

(C) Itemization of Transactions Between a Latin American Health Center and Its Environment

A. Transactions Between a Patient and the Health Center:

1) He will come to the center for one or more of the following:

- (1) because he is sick
- (2) because a child is sick
- (3) for a one-time difficulty (e.g. injury, cold, tooth extraction)
- (4) for continuous treatment (tuberculosis)
- (5) to get milk
- (6) for emergency care
- (7) for inoculations

2) The system used to include him in center records:

- (1) by name
- (2) by number
- (3) as a family
- (4) as an adult
- (5) as a vaccine recipient
- (6) as a school child
- (7) as a recipient for milk
- (8) as a householder whose premises are being inspected
- (9) as someone slaughtering an animal and instructed as to health requirements
- (10) as someone being informed of vaccine day at center

3) The patient will be greeted by a variety of staff including:

- (1) Nurse
- (2) Nurse Auxiliary
- (3) Doctor
- (4) Social Worker
- (5) Guard
- (6) Secretary
- (7) Inspector

4) The center will offer the following types of services:

- (1) provide direct medical care (set bone, sew, clamp)
- (2) provide medicine: for price or gratis
- (3) provide some form of education in public health, sanitary measures, mothers club, family planning information
- (4) Dental care
- (5) prescriptions when no medicine is available
- (6) laboratory exams
- (7) minor surgical procedures (transplant)
- (8) vaccines
- (9) Family planning devices
- (10) X-rays
- (11) ambulance

**B. Transactions with Individuals at the Health Center.**

**1) With the nurse auxiliary:**

- {1}** She asks his problem.
- {2}** She checks his record.
- {3}** She says whether the doctor is in.
- {4}** She asks Juan to wait.
- {5}** She gives him medicine.
- {6}** She charges for the medicine.

**2) With the doctor:**

- {1}** He diagnoses and writes a prescription.
- {2}** He treats Juan if he has the necessary implements.

**3) With the social worker:**

- {1}** She visits homes to explain the center's services.
- {2}** She gives lectures at the center on nutrition and family planning.

**4) With the sanitation inspector:**

- {1}** He visits homes to inspect sanitary facilities.
- {2}** When an animal is slaughtered, he checks for proper sanitation methods.
- {3}** He tells people to burn their garbage.
- {4}** He tells people to keep their swine penned up.
- {5}** He tells people to have their dogs innoculated against rabies.
- {6}** He encourages people to come to the center when they have health problems.

C. Itemized Listing of Health Center "Income" and "Output"

1) Charges: Income

1. fixed rates set by Ministry of Health are charged for each individual medicine
2. some charge at a set rate (2 cords) for whatever medicine is given
3. if no purchase of medicine is made than no charge is made
4. if any medicine is purchased then a 1 cord charge is added to cover the cost of supply items needed by the center (cotton, isopropyl alcohol)
5. centers also receive milk at no cost to center
6. centers receive contributions from (1) the town-alcalde (mayor) who pays for some patients and (2) in-kind contributions (electricity, building materials) from the community
7. all salary money comes from the Ministry of Health
8. medicines are donated -- resulting from earthquake (AID et al)
9. AID gives equipment to centers upon request
10. receive concrete to make latrines.
11. paper supplies for records provided by Ministry of Health.

2) Output of Center Resources:

1. medicines are either sold or given away without charge
2. milk is distributed without charge
3. doctor time spent with patients
4. nurse time/auxiliary time
5. inspector time
6. social worker time
7. laboratory technician time
8. use of miscellaneous equipment (surgical supplies, cotton)
9. deterioration of building and equipment and maintenance of the same
10. use of X-ray materials
11. family planning literature
12. use of miscellaneous materials

(D) Health Center Objectives

Table B-1 presents in logical framework terms a list of the health centers' objectives.

TABLE B-1

<p><b>Goal:</b></p> <p>Improved health status of poor people</p>
<p><b>Purpose:</b></p> <ol style="list-style-type: none"> <li>1. Fill current needs of poor people for curative and preventive medical care.</li> <li>2. Viable organizations which will detect and fill future medical needs of poor people.</li> </ol>
<p><b>Outputs:</b></p> <ol style="list-style-type: none"> <li>1. Building construction, medical equipment, vehicles, medicines, staff, administration.</li> <li>2. Leadership, doctrine, programs, resources, internal structure, linkages.</li> </ol> <p>There is, of course, considerable overlap between #1 and #2.</p>
<p><b>Inputs:</b></p> <ol style="list-style-type: none"> <li>1. Activities directed at solving current, specified problems.</li> <li>2. Institution building activities.</li> </ol>

**(2) CASE STUDY TWO: INTERACTIVE TELEVISION**

A major test area for developing and verifying PCI's approach to assessing organizational viability was an Interactive Television Network covering medical service organizations over a small rural area.

During our contact with the Interactive TV Network (which we will call ITV), we tested the managerial value of the P/C/I Organizational Viability concepts. We were not able to perform the actual measurements required by P/C/I, but we continually thought about the project in P/C/I terms, and this helped us focus P/C/I on areas amenable to managerial action.

**Background of ITV**

ITV was initiated as a demonstration project in bio-medical communications. The Network serves as a technical link providing inter-institutional sharing access among two medical centers and three community hospitals. Presently, most programs are of the medical education variety designed for physicians, nurses and other allied health professionals.

(A) Organizational Viability Assessment #1

In January, 1974, Practical Concepts Incorporated (PCI) conducted an organizational review of ITV. This review, presented below, was developed based on interview data and ITV documentation. The interview materials used by PCI were gathered in the course of a six month association with ITV during which PCI conducted an evaluation of the Network's effectiveness. The approach used to describe the status of ITV as an organization is based on the P/C/I Model of Organizational Viability developed by PCI.

1.. ITV: Its Image, Purchasables, and Connotationa. Image

The image of the Network -- or the definition of what business ITV is in -- has both internal and external dimensions. As of January 1973, a good deal more was known about the internal Network image than about its image in the marketplace.

(1) ITV's Internal Image

During its 1973 evaluation of the Network as a demonstration project, and again in early 1974, PCI attempted to elicit a definition of ITV's "business" from the ITV staff. The responses on both of these occasions were mixed, and included:

- Survival of the project as a key (and the only general) concern;
- The Network provides television technology to institutions;
- The Network provides medical education and services to institutions;

- The ITV project is a demonstration of the feasibility of using interactive television to provide medical education and services.

It is important to note here that the majority of the statements made relate to what we have defined as the organization's program: What it is doing now rather than its long term rationale, or doctrine. The statements made at that time relating to doctrine appeared to be two: Explicitly the project's doctrine was survival; implicitly there was a staff hope that the Network would grow and eventually link many organizations.

## (2) The Market Image of ITV

During the 1973 evaluation, the PCI staff had also interviewed individuals within the two organizations having the longest association with the Network.

The results of those interviews indicated that:

- (a) At each site there are two quite different markets: the organization itself and the individuals within the organization.

The institutional market is not highly concerned with specific products; it is however concerned with its ability to provide goods and services desired by the organization staff and clients. The individual market, on the other hand, has little interest in the process of service provision, but is intimately involved with the content, quantity and quality of the services provided by the Network and by alternative sources of the same services.

- (b) The nature of the organizational markets at the Medical Center and the community hospital were themselves different.

While the community hospital fit a conventional description of a "buyer" of goods and services, the Medical Center tended to view itself as a "seller" of services, including programs on ITV.

In this construction, it became apparent that the Medical Center, to the degree it was a "buyer," was a buyer of audience and market, rather than a buyer of a conventional product line of programs.

From the evaluation interviews, it was possible to make one strong statement about what business ITV is in -- as far as its customers are concerned, and that is of course the primary issue: ITV is not primarily in the TV business.

Rather, it is in fact in the business of providing local hospitals with access to Medical Center skills and personnel, and a way of enhancing the image and meeting regional medical responsibilities for the medical centers.

ITV is a means to the above ends. Where alternative means are available, they must necessarily be in competition with those means; e.g., the telephone, and personal visits.

Broadly speaking then, ITV image was that of an organization in the bio-communications business, but as one which had limited its approach to bio-communications to the single medium of interactive TV.

b. Connotation

Connotation is the affective dimension of attitudes toward an organization, including the commitment of members of the organization to organizational objectives. It is a form of energy which can be expended to create purchasables and image, and to regenerate itself. If the image of the organization is well defined, the energies of the staff can and will be channeled to affirm the organization's doctrine and carry out its programs.

Connotation assessment is an internal parallel of image assessment for an organization. Connotation is regenerative when there is

clear agreement between individuals and the organization concerning what the individual is to do and the way in which his work relates to the program and doctrine of the organization.\*

In its 1973 and early 1974 discussions with the ITV staff, PCI recorded staff definitions of their relationship to the Network, as well as their definitions of the doctrine and program of the organization.

These interviews with the Network staff revealed not only the status of the organization's self-image but also elicited data on the way in which individuals perceived their work.

Table B-2 displays the perceptions of three Network staff members concerning ITV and their own work:

TABLE B-2

VIEW OF NETWORK IMAGE	VIEW OF INDIVIDUAL WORK
Doctrine: Survival (implicit) Program: Provision of television link	I make the TV link work
Doctrine: Survival (implicit) Program: Provision of medical education & services	I promote use of the system for Health Ed. & services
Doctrine: Survival (implicit) Program: Demonstrate and evaluate the TV approach	I collect evaluation data & facilitate the demonstration

\* This is an early conception of Morale which should not be confused with that subscribed to in Volume III "A Guide to Assessing Organizational Viability".

The display indicates that at that point in time each individual was reasonably well aimed, but not well targeted. Further, there was no necessary coherence imposed by the one non-ephemeral objective of "surviving". Thus, they were in trouble -- on the cocktail circuit as well as professionally.

c. Purchasables

ITV's status with respect to purchasables as of the end of 1973 can be stated simply: It was an organization operating on subsidy rather than one which regenerated its money supply (received payment for goods and services provided to customers).

ITV at this point in time viewed itself as having a long term potential to generate money once legislation was passed requiring the recertification of medical professionals. In the meantime ITV was attempting to survive on a grant basis -- from its current sponsor or some other federal sponsor. Very little had been done to define ITV's ability to regenerate its money supply based on goods and services provided to its current users -- the medical professionals and various organizations to which it was already linked.

At the end of 1973, the ITV organization was challenged to redefine itself and become viable. That redefinition, though required in the three dimensions of Image, Purchasables and Connotation, took on the greatest urgency in the area of purchasables: The sponsors altered the basis for its grant funding of ITV. The Sponsors determined that its grant funding of ITV would continue for two additional years -- but not for the purpose of demonstration. Rather the additional two year funding was designed by the Sponsors for a test of ITV's ability to become viable -- to develop a capacity to regenerate its Image, Purchasables and Connotation through valid transactions with customers, rather than surviving by subsidy.

(B) Organization Viability Assessment #2

The data on which the following assessments are based were obtained from:

- current individual users
- current organizational users
- ITV staff
- the Sponsor
- other potential individual and organizational users

The methods of data collection included:

- personal interviews with medical personnel
- personal interviews with hospital administrators
- personal interviews with Sponsor
- personal interviews with ITV staff
- the distribution of written questionnaires on three separate occasions during a three year period

ITV According to the P/C/I Model

1. Image

a. Internal

ITV's staff is not completely in agreement on the Network's doctrine. There is, however, agreement that the Network's program is communications with emphasis on bio-medical education.

b. External

Clients and potential clients are aware of ITV's program -- communications -- and are less aware of the Network's doctrine.

c. Bottom Line

ITV's program is agreed upon and shared both internally and externally. The Network's doctrine is not fully articulated, either internally or externally.

2. Connotation

a. Internal

ITV's internal connotation is basically high but unstable. Staff feel they are providing a valuable, needed service. Though excited by the ITV idea, there are currents of frustration, the result of insecurity, equipment and management problems.

b. External

ITV's external connotation differs according to which particular client is being examined. One must distinguish between "buyer" and "seller" institutions as well as individuals.

On the whole, the Network is considered to be "less than professional," and potentially more valuable than it has thus far demonstrated. The sponsor feels that ITV is performing a needed service, and performing it well.

c. Bottom Line

Clients consider ITV of marginal value. Internal connotation is high but unstable.

3. Purchasables

a. Internal

ITV is depending largely on the grant money to complete the upcoming broadcast season. User organizations have authorized

a total of 40K in cash for use in support of the technical communications link, as well as provision of certain resources in kind.

b. External

User organizations have authorized a total of 40K for use in support of the technical communications link in addition to some contributions in kind such as free space. Sufficient funds are available to both organizational and individual users to support the ITV Network, should the value of the Network induce these clients to commit the necessary resources. Sponsor will not extend subsidies past current close-off dates. Sponsor sees all ITV cash coming from federal government sources, with clients providing no rent for space.

c. Bottom Line

Strong possibility of financial difficulties in 1975 unless clients can be induced to commit major resources to Network support.

ITV's Plan for Development

Table B-3 presents a logical framework on ITV prepared by its staff.

TABLE B-3: ITV OBJECTIVES

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<b>GOAL:</b> Institutions & professionals in the areas utilize advanced bio-communications technology to solve medical & education-related problems in the region.	<b>MEASURES OF GOAL ACHIEVEMENT:</b> 1. 100% of institutions w/in range & with a recognized need for advanced 2-way communications purchase such communications through Network by '77. 2. Utilization of Network has demonstrable impact on education & medical problems to which institutions & professionals have applied it.	ITV records; "Expert" opinion; Surveys by Institutions & professionals to assess impact.	Concerning long-term value of program/project.
<b>PURPOSE</b> Create a viable organization capable of applying communications technology to a variety of health & education problems in rural areas	<b>CONDITIONS THAT WILL INDICATE PURPOSE HAS BEEN ACHIEVED: END OF PROJECT STATUS</b> *80% of available broadcast hrs (40) booked by paying clients by 10/75. *Total revenue from clients equals or exceeds total expenditures by 10/75. *Trend lines on income, program hrs & Network utilization are all positive & at adequate levels to predict continued viability over time. *Trend lines on Network use -- attendance & hrs -- are not negative for the period. *Customers identify & stimulate new uses of Network's communications capability. *Positive trend line on new users (institutional & ad hoc) joining the Network. *Staff committed to achieving Network objectives. *Clients place high value on Network (shown through continued & increasing monetary support).	*Contracts on file. *Program records. *ITV financial records. *Analysis of all preceding yrs' operations & financial records. *Records of regular ITV surveys of market knowledge of the Network & its capabilities. *Network records	*System will help break down barriers in communication. *System will not have an adverse effect on economic situation of physicians & other professionals. *System will provide more appropriate referrals in medical areas. *Institutions & professionals will use system to further health & education improvement.
<b>OUTPUTS</b> 1. Operating Microwave system. 2. Operating production system. 3. Effective marketing/sales system. 4. Effective management system. 5. Set of client-created (content) programs available through Network	<b>MAGNITUDE OF OUTPUTS NECESSARY &amp; SUFFICIENT TO ACHIEVE PURPOSE</b> 1a. Meets regulations. b. Technical capability of system maintained at 100% effectiveness. c. 24 hr/day operating capability. 2a. Program start/stop schedules (per TV Guide) met +/- 5%. b. Audience acceptance Schedules, audio/visual. c. Camera & audio quality maintained at 100% of potential over all programs. 3a. Sales contract signed. 1974: 7 contracts w/institutions totalling \$42,500 by 11/74, contract w/ad hoc & other users totalling minimum of \$10,000. 1975: 7-8 contracts w/institutions totalling \$75,000 by 11/75; contracts w/ad hoc & other users totalling minimum of \$25,000 4a. Network operates according to organization plans. b. All functions are clearly defined & key positions are filled by 1/75 5a. 30 hrs/wk booked by paying clients by 10/75 b. Product & client mix optimizes income c. Audience ratings indicate annual increase in program value.	1a. Passes inspection b. Meets local engineer's standards. c. ITV records/engineer's assessments 2a. ITV records b. Audience evaluation, ITV records. c. Audience evaluation, Expert opinion (local engineer) 3a. ITV records. b. ITV records. c. Results of market surveys.	*Studio will be scheduled by sponsor in 6 months *People will buy some prod services as well as tech services (60 at current institutions) *Network will function & will do quality production *TSU will be part of network (probability of dropout 10%)
<b>INPUTS</b> 1. Microwave System: a. Maintenance schedule. b. System performance criteria. 2. Production System: a. Prod. standards - audio/video. b. Prod. staff performance criteria. c. Prod. quality monitoring system. 3. Marketing System. a. Marketing/sales strategy. b. Sales schedule & Model format. c. Market info system 4. Management System. a. Legal status & FCC approval. b. Organization plan - functions & responsibilities. c. Performance oriented supervisory system. d. Staff training plans, as needed to support OUTPUTS 1, 2, 3. 5. Programs: a. Content quality control system. b. Lecturer training pkgs. c. Course development assistance pkgs.	<b>LEVEL OF EFFORT/EXPENDITURE FOR EACH ACTIVITY</b> 1a. Maintenance schedule set up. b. Current faults repaired. c. All changes in regulations immediately noticed & complied with. 2. Production quality standards developed. 3a. Annual sales strategy meeting of Network outlines (1) Sales plan -- customers & target incomes, & (2) Sets marketing budget/assisting market responsibilities & schedules. b. Annual assessment of needs of current customers re program topics, schedules, contact w/other Network institutions, etc. 4a. sponsor approval of compact by 9/1/74, FCC approval of cost sharing plans by 10/1/74 b. Organizational plan approved by INTERACT by 9/74 & Organizational Manual available by end of month c. In-house "contracts" w/each staff member re his functions & responsibilities, quarterly performance reviews of staff based on these "contract specifications" first review during first month of next operating year -- reviews 3 month performance during fall '74 5a. Programs selected for Fall '74 based on "ratings" developed by market survey in Spring. b. Lecturer Training Package ready by 9/1/74 *Certification of completion of lecturer training module required of all new lecturers as of 9/1/74; *Lecturer training module to be recommended for repeating lecturers based on Spring program ratings. c. Program assistance pkgs ready by 9/1/74; *Assistance pkg outlines made available to all lecturers as of 9/1/74 & continuously thereafter.		*Current faults can be repaired (engineers have found unique patentable solution) *ETV keeps towers up. (Probability of tower coming down 6% in 6mos 50% in 12 mos 100% in 24mos) *System will not break down *Changes in FCC regulations will not change to preclude any integral part of system *Engineer will remain on job.

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