

**AN OVERVIEW OF
STRATIFIED SYSTEMS THEORY:**

**Implications For Organization
Design and Effectiveness**

BACKGROUND

Stratified Systems Theory [SST] is a set of concepts and principles, rigorously researched over a forty year period, that enables senior management in organizations to more effectively relate all aspects of leadership, work, and human resourcing into a coherent whole.

SST is the culmination of research begun in the late 1940's by Elliot Jaques, a noted English (although former Canadian) social scientist. Dr. Jaques is currently Visiting Research Professor of Management Science at George Washington University in Washington, DC. His work has focussed on the practical application of concepts and principles dealing with individual development and the organization of work in hierarchical institutions.

The research work began in Great Britain shortly after World War II in a company called Glacier Metals. Interestingly, the initial problem was seen as a "pay equity" issue between male workers returning from military service and "non-traditional" employees [i.e. women] who continued working on a permanent basis at the conclusion of the War. Not satisfied to deal with the problem as simply one of compensation, Jaques and his colleagues began to ask more fundamental questions such as, "What is it about the nature of work that causes us to pay people differentially?" The initial findings to this question, and others, have been replicated and validated in 27 countries with over a quarter of a million individual jobs evaluated in all kinds of work organizations - industrial, financial, government, social service, and military.

WHAT ARE THE MAJOR FINDINGS?

The *first major discovery* is something we tend to know intuitively, namely, that if you have a hierarchical organization, the higher you move up the hierarchy the more the jobs become less specified and the time-frame of their output gets longer. In other words, at increasingly higher organizational levels, getting things done becomes more ambiguous and the work requires the jobholder to exercise greater amounts of discretion. In validating this, Jaques developed a way to measure the differences in what we now understand to be the *level of complexity of jobs*: low complexity at the bottom of an organization, and high complexity at the top.

The research shows that, even in the largest multinational organizations, there are *only seven real or discrete levels of work complexity* from the CEO, or equivalent, [labelled Stratum VII] to those working at "front line" or "entry-type" positions [Stratum I]. The major implication of this for the effective design of organizations is that there is a real hierarchy of work complexity that underlies any surface structure we see. Further, it says that there should be one level of structure, and one level of management [Stratum II and above], for each real level of work complexity: The rationale for this notion of real levels of work is driven by the need for both organizations and individuals to ensure that work at every level has, or is given, "meaning". That is to say, each level up the hierarchy must truly add value to the work at the level below it by providing a broader context, a bigger context of complexity and timeframe. SST provides extensive descriptions of what the nature of work is and the thinking process required for each of the seven stratum of work complexity, all of which are observable and/or measurable factors.

The *second major discovery* in SST has to do with individual development. Again, it is something we seem to know intuitively, namely that not everyone can function equally well in work at the various levels or Strata. Some people are very comfortable and effective working with the degree of ambiguity involved in general management and with making the kinds of decisions required at this level of complexity. Some people are not. The research shows that people operate in unique "modes" as regards their capacity to effectively manage complexity. Further, it is evident that this capacity grows with age but that the growth rates people have are not the

Relationships can be made between the cognitive capacity of individuals and the hierarchy of complexity in jobs. Having information about both in a given organization enables individuals to be appropriately matched to work requirements. This is of significant benefit to the individual in terms of job satisfaction and sense of real contribution and to the organization in terms of overall effectiveness of its management system.

A *third major set of findings* revolves around compensation [reward] and what has been called, in SST terms, *felt fair pay*. What the research has proven is that people desire [although usually never get] a pay system with a "fair and just" pattern of pay differentials, that is, equitably increasing pay levels with increasing levels of work complexity. More specifically, some of the criteria for this pay system include:

- pay equity based upon differentials in pay related to measured differentials in level of work.
- pay brackets tied to the level of work in each role.
- pay brackets that are not too wide.
- roles in the same level of work carrying the same pay bracket.
- people moving within their pay bracket in accordance with recognized merit.

Research has proven time and again that people generally seek a level of work complexity that matches their cognitive capacity and that they want differentially equitable pay for that work. It is important, then, that a pay system be established to support an organization structure that reflects the real level of work complexity and the matching of individual cognitive capacity to work level. SST research has provided several guidelines for accomplishing the creation of a felt fair reward system.

HOW CAN THESE FINDINGS BENEFIT AN ORGANIZATION?

Proper application of SST concepts, principles and guidelines can assist in *building the most efficient and effective management system possible* - one that requires the *best structure* staffed by *capable people*, employing the *best tools* to perform *critical work* for which they are *well rewarded*

Specifically, the following can be accomplished:

- establishing the required *organization structure* - the right number of levels - and learning how to keep to it.
- understanding the fundamental *accountabilities* and *authorities* needed by real managers.
- measuring *level of responsibility* objectively - from CEO to shop and office floor.
- establishing the *essential functions* required at corporate levels, and at each level throughout the organization.
- getting tasks of the right order of *complexity* at each level of organization.
- developing *systematic information, planning and control* processes specific to each organization level.
- helping managers to appraise the *personal effectiveness of subordinates* and to relate these appraisals to fair pay.
- developing a *fair differential pay structure* tied to organizational levels and to measured differentials in level of work.
- appraising the *potential capability* of people in a just manner for career development and for the growth of a rich talent pool.
- recognizing the work of *individually contributing specialists* and positioning them at levels in the organization where their creativity and innovation can pay off.
- integrating approaches to *leadership and delegation* that ties leadership and management into one working entity.

WHAT IS WORK?

THERE'S CONFUSION ABOUT WHAT IS MEANT BY "WORK" -- For example:

That was tough **WORK** doing the **WORK** I was given to do at **WORK**.

my effort

my tasks or
assignments

my place
of work

THIS LEADS TO SOME DEFINITIONS:

TASK= an assignment to produce specified output [including quantity and quality] within a maximum targeted completion time, with allocated resources and within specified limits [policies, procedures, laws, budget, etc.]

ROLE= the position occupied in the organization.

WORK= the use of discretion and judgement in making decisions, while carrying out a task -- backed up by Knowledge, Skills, Temperament [tendency to behave in certain ways] and Wisdom [soundness of judgement] -- and driven by Values [what one knows to be important].

THIS DEFINITION IS THE KEY TO OBJECTIVELY MEASURING THE LEVEL OF **WORK** OF A ROLE -- HOW BIG A JOB -- HOW MUCH RESPONSIBILITY.

Prescribed Limits -- Laws, etc.

RESOURCES AND METHODS

Cognitive Process
[discretion/judgement/decision]

TASK GOAL

RESOURCES AND METHODS

Policies, Rules, Regulations, etc.

TARGET COMPLETION TIME [Time span of the work]

WORK IS.....

LEVEL OF WORK

MEASURING LEVEL OF WORK HAS ALWAYS BEEN DIFFICULT. JOB EVALUATION SCHEMES ARE SUPPOSED TO DO IT, BUT THEY DONT. INSTEAD, JOB EVALUATION COMMITTEES SUBJECTIVELY COMPARE ROLES, OR THEY RATE CERTAIN FACTORS -- ALSO BY SUBJECTIVE JUDGEMENTS.

SUCH SCHEMES SANCTION CURRENT BIASES ABOUT WHICH KINDS OF WORK ARE MORE IMPORTANT THAN OTHERS.

For example, the number of subordinates that report to a person is a very serious bias for it says, "People who don't have any subordinates to manage don't have any real responsibility."

THE PROBLEMS ARISING FROM THESE SUBJECTIVE, INACCURATE RATING METHODS CAN BE OVERCOME BY THE USE OF "TIME-SPAN MEASUREMENT".

TIME SPAN MEASUREMENT

ANY TASK HAS BOTH A WHAT TO BE ACCOMPLISHED
[output, goal, objective] AND A BY WHEN.

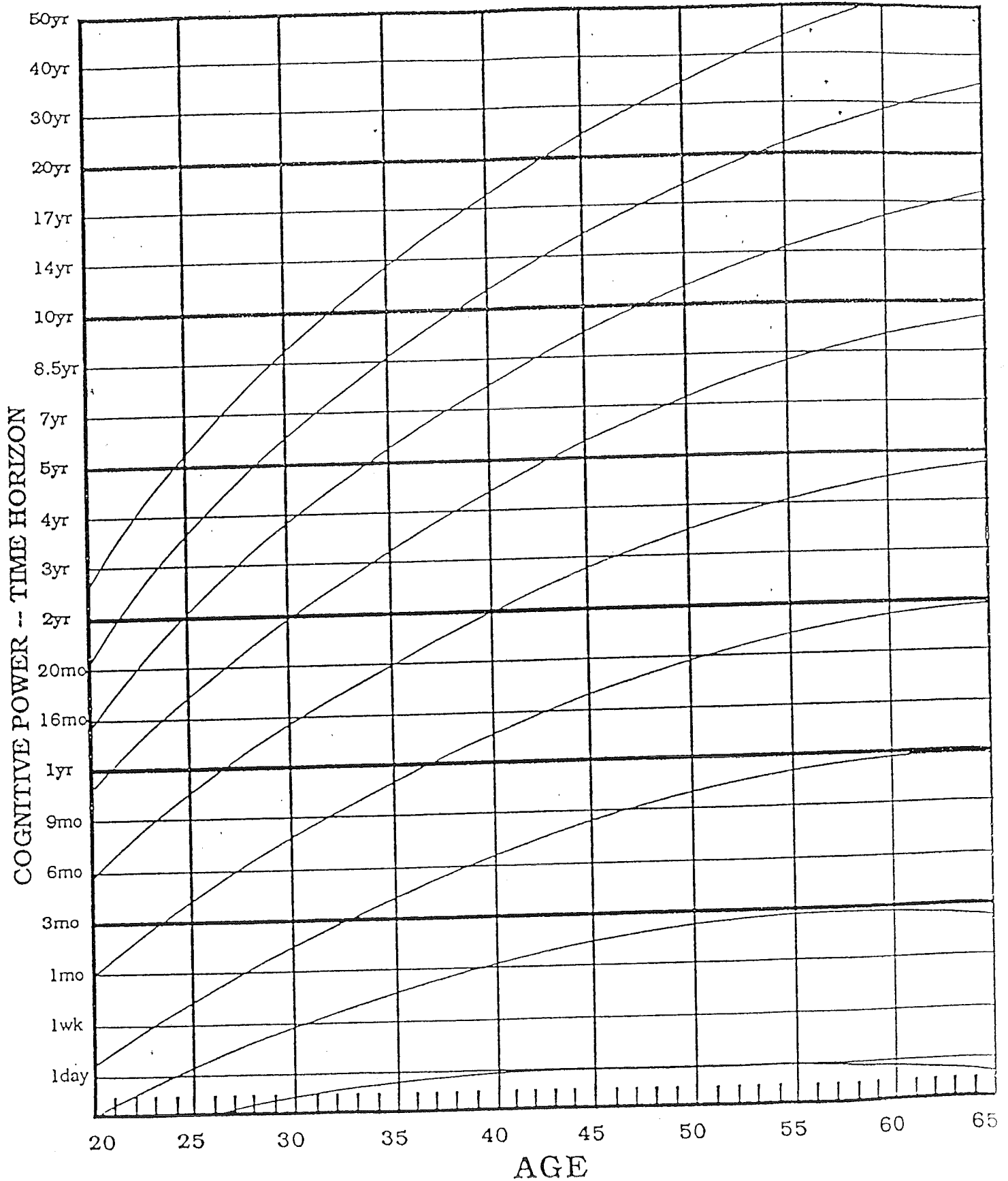
THE BY WHEN IS THE LONGEST TARGET-
COMPLETION-TIME FOR THAT PARTICULAR TASK.

THE LONGEST TARGET-COMPLETION-TIMES OF THE
TASKS THAT MAKE UP THE ROLE GIVE A DIRECT
MEASURE OF THE LEVEL OF WORK FOR THAT ROLE.

THIS IS CALLED THE TIME-SPAN OF DISCRETION FOR
THE ROLE OR JOB.

- THE LONGER THE TIME-SPAN OF A ROLE, THE HIGHER THE WORK LEVEL.
- ANY ROLES WITH THE SAME TIME SPAN [NO MATTER THE OCCUPATION] HAVE THE SAME LEVEL OF WORK. -- [and should also have equal pay!]
- TIME-SPAN MEASURES CANNOT BE FALSIFIED SINCE THEY REFLECT HOW THE WORK IS ACTUALLY DONE. THE JOB-HOLDER'S VIEW OF TIME-SPAN IS EASILY VERIFIED BY THE MANAGER OR OTHERS WHO KNOW THE ROLE.

DEVELOPMENT OF PEOPLE'S COGNITIVE POWER



SPAN OF CONTROL

ABOUT 60 YEARS AGO, A SIMPLISTIC NOTION OF SPAN-OF-CONTROL HAVING NO BASIS IN THEORY OR IN FACT APPEARED. IT STATED THAT THE IDEAL SPAN SHOULD BE ABOUT 3 -- 6 SUBORDINATES, IF THE MANAGER WAS TO BE EFFECTIVE.

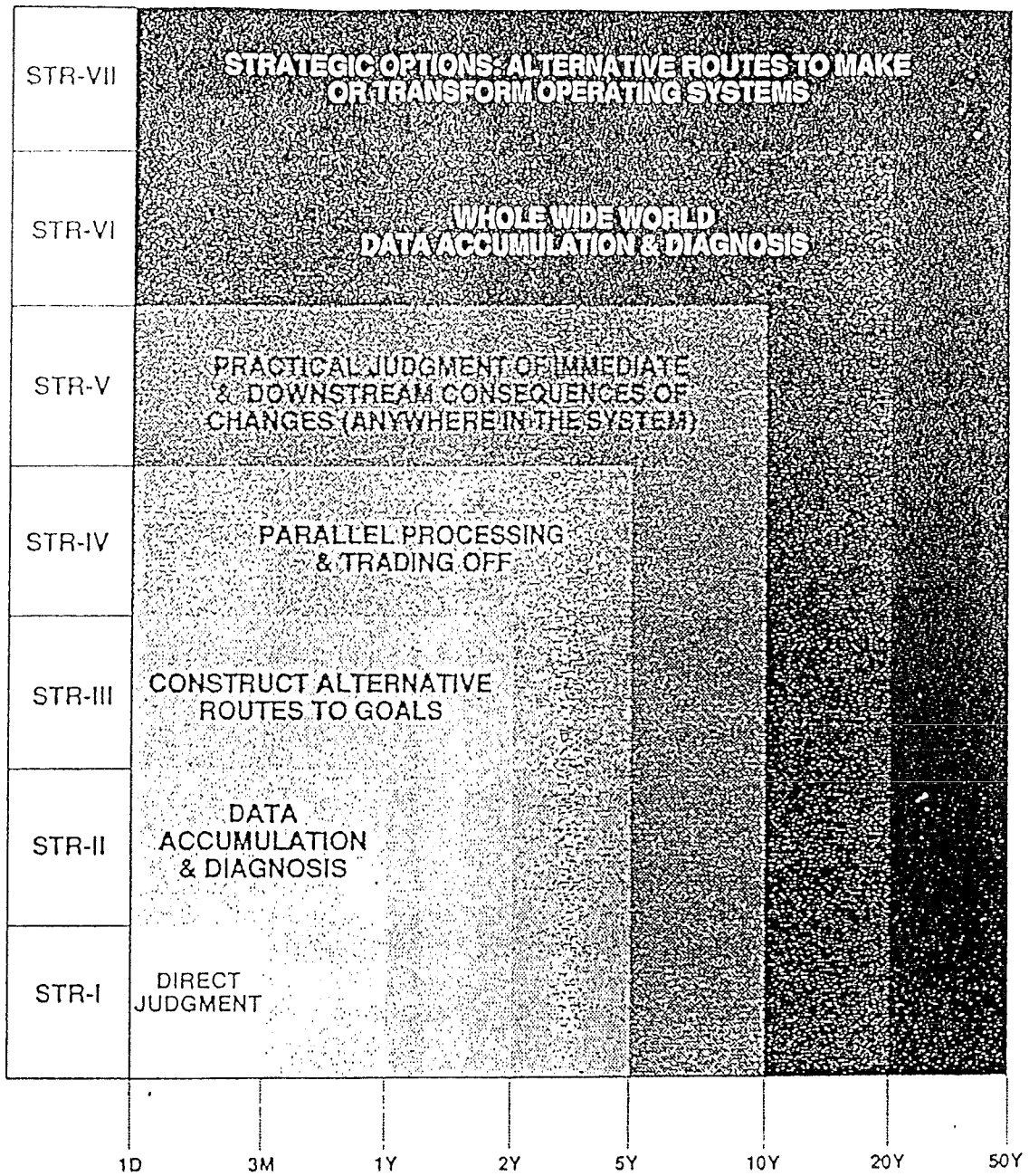
IT HAS HAD THE WIDESPREAD AND DEVASTATING EFFECT OF DOING MORE TO PRODUCE TOO MANY ORGANIZATIONAL LEVELS THAN ANY OTHER FACTOR EXCEPT OUR JOB EVALUATION SYSTEMS.

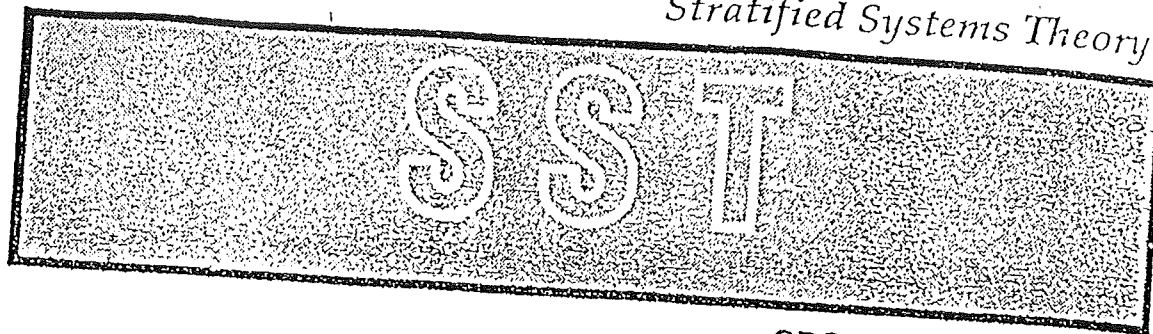
THERE IS PLENTY OF EXPERIENCE TO SHOW THAT, DEPENDING ON THE CIRCUMSTANCES, A LEADER CAN EASILY MANAGE UP TO 30-40 DIRECT SUBORDINATES. FOR EXAMPLE:

- A STRATUM III SUPERVISOR: A- 30 PRODUCTION MACHINISTS, or
B-Three 10-person Technician Teams,
[each with its own "peer" coordinator]
- A STRATUM IV PLANT MGR:
 - 4 Operations Group Managers
 - 4 Staff Group Managers
 - 5 Engineering & other Project Leaders

VIII	50Y	CORPORATE	Long-Term Social Mission Construct culture-values
VII	20Y	STRATEGIC	Set Long-Term operational perspective/culture-values
VI	10Y	DOMAIN	Gear corporate mission/culture-values with BU Mission and Development
V	5Y	GENERAL	<p>The big shift from general management to corporate strategic world wide environment</p>
IV	2Y	DOMAIN	
III	1Y	OPERATION	Mutual Recognition Leadership
II	3M	DOMAIN	Direct face-to-face Leadership
I	1D	DIRECT HANDS-ON WORK DOMAIN	Face-to-face } Peer Day-to-day } groups

LEVELS OF TASK COMPLEXITY BY STRATUM





INDIVIDUAL MATURATION BANDS	LEVELS OF TASK COMPLEXITY	ORGANIZATIONAL STRATA
MODE VII	CONSTRUCT COMPLEX SYSTEMS	VII CEO COO
MODE VI	OVERSEE COMPLEX SYSTEMS	VI EVP
MODE V	JUDGE DOWNSTREAM CONSEQUENCES	V Business Unit President
MODE IV	PARALLEL PROCESS MULTIPLE PATHS	IV GM
MODE III	CREATE ALTERNATIVE PATHWAYS	III Unit Manager
MODE II	DIAGNOSTIC ACCUMULATION	II First Line Manager
MODE I	OVERCOME OBSTACLES PRACTICAL JUDGMENT	I Shop & Office Floor

