

# Appendix N

## Thinking Processes

---

Strategic Thinking

Breakthrough Thinking: The Limited Information Collection Principle

Breakthrough Thinking: The Uniqueness Principle

Breakthrough Thinking: The Regularity Concept

## Strategic Thinking

**Strategic thinking** is thinking which incorporates some or all of the principles and functions of the strategic planning process, especially the identification of strategic issues, the formulation of a vision of the organization/system in the future and a strategy for achieving the vision. It may be carried out by individuals or groups.

Strategic thinking is “portable” in the sense that it can be done anywhere, under any conditions and in any time frame. It may involve as little as applying one strategic principle during the course of a single meeting. However it is applied, though, strategic thinking is best done from a thorough understanding of the strategic planning process and how its various steps relate to each other and contribute to **strategic solutions**. It is possible to have strategic thinking without having a complete strategic planning process, but it is not possible to have strategic planning without strategic thinking.

Strategic thinking involves:

- Understanding that **how** people go about finding solutions is more often more important than the solutions themselves
- Understanding the difference between tactical and strategic approaches to problem-solving and planning
- Knowing who to involve, how they should be involved and when they should be involved in seeking strategic solutions
- Having the skills necessary to collect, organize and understand an appropriate amount of data and information on internal and external environments
- Being able to identify truly **strategic issues** from the wide spectrum of issues raised
- The ability to envision the organization/system in the future or to create a “target” toward which efforts will be directed and to share this vision with others
- Knowing how to “expand the solution space” to seek a sufficient number of innovative and feasible alternative strategies for achieving the desired organization/system or target
- Understanding how and when to apply appropriate steps or functions of strategic thinking as situations require

## **Breakthrough Thinking**

### **The Limited Information Collection Principle**

Don't become an expert about the problem – become an expert on the solution.

Successful leaders and planners know that it is impossible for data to be accurate, and that it is impossible to get all the data. They also recognize that collecting data and information is never neutral or objective, and that how data are categorized, who makes the observations, and whether or not the purpose for the information is clear all significantly affect the value and usefulness of the data that is collected.

An indiscriminate amassing of information that is central to “finding out all that is to know” not only wastes time, energy, and money, it can also seriously hinder problem solving by burying planners under an avalanche of irrelevant, unmanageable detail. This is sometimes referred to as “analysis paralysis.” A contributing element to the “pack rat” approach to gathering information is the subconscious idea assumption that gathering information is the equivalent of accomplishing something. Conventional approaches to planning (and unbounded information collection) will show progress with little real accomplishment.

To apply the limited information collection principle, first identify, in a hierarchy, the purposes of the information the planning team thinks it needs to collect about the problem or system. Awareness of purposes will enable the planning team to determine what information is really relevant. Gather only the information that is relevant to promoting solutions, not submerging them. Ian Mitroff is credited with saying that what should be sought is the “absolute minimum, essential information to illuminate the broader dimensions.”

The validity of the limited information collection principle lies in the fact that in any problem situation, factual details are of secondary significance; the framework and setting are what govern possible breakthroughs. The limited information that is actually needed is better defined from questions that arise from the contextual probing of uniqueness, purposes, the solution-after-next, and systems principles.

The conventional quest for “hard data,” “objective facts,” and “solid measurements” can also inhibit effective interpersonal collaboration. Successful leaders and planners seek and share information with a wide variety of individuals. Information and data are meaningless without ideas and wisdom to shape their collection and interpretation. By providing meaning to data and information, leaders help their groups develop *shared* meanings and interpretations of the real world, and through these, also develop group cohesiveness and effectiveness.

The limited information principle relies considerably on the important concept of “tolerance for ambiguity.” Since all the information cannot be collected, and since the accuracy of information is often subject to dispute, leaders and experts learn to think of data as a *guide* to forming their thoughts and ideas. They then fill gaps with additional information as needed. Since the amount of relevant data may be quite small, this approach is preferable to amassing data and then trying to pull out what is relevant.

Information collection, by its very nature, focuses on the past and present status of things. *This does not qualify it as a guide for the future.* Extrapolations, too, present problems in that they assume that the underlying data will continue to reflect today's supposed reality into the future. In fact, the data may not even truly represent what exists now. Often, planning projects proceed with little or no good information about the future.

In most planning efforts expending significant amounts of time, effort, and money are unaffordable luxuries. At the heart of the limited information collection principle is finding the appropriate balance between available resources and truly necessary information. Using this principle can mean that solutions are found more quickly, and with fewer planning and development costs.

#### Purposes and Objectives of the Limited Information Collection Principle

1. Focus efforts on collecting only the necessary information for a particular project.
2. Provide meaning to the existing information.
3. Encourage networking for obtaining information, contacts, and results.
4. Avoid disorganization.
5. Lessen the preparation of many unneeded and unread documents and the arguments over differing measurements, interpretations, and analysis.
6. Avoid the institutionalization of information collection as an end in itself without regard to purposes.
7. Maximize the use of time, effort, and resources.

#### Underlying Assumptions Behind the Limited Information Collection Principle

1. Information is only a representation of the real world.
2. The future cannot be predicted from "perfect" knowledge about the present.
3. Relevant information is more important than accurate information.
4. Collecting information about a system or problem is not a value-free or neutral process.

#### **Reference**

Nadler, Gerald and Shozo Hibino, *Breakthrough Thinking: The Seven Principles of Creative Problem Solving*, Revised 2<sup>nd</sup> Edition. Prima Publishing, Rocklin, CA, 1994.

## **Breakthrough Thinking**

### **The Uniqueness Principle**

Each problem is unique and may require a unique solution.

One of the most frequent and serious mistakes in problem solving and planning and design is assuming that one problem or situation is identical to another. No matter how similar two situations may appear on the surface, they almost certainly differ in terms of time, place, people involved, surrounding conditions, and the purpose of the solution.

Effective problem solvers consider uniqueness so important because they know that individual human beings involved in seemingly identical situations are always different, and thus affect possible solutions differently. Cultural diversity and conflicting values are always present in different organizations, indeed at various levels within a single organization, and in all parts of a given project. Each level and every part is unique and must be approached as such from the outset.

A prime tenet in Breakthrough Thinking, thus, is that every problem is unique, and if an effective solution is to be found, the problem must be treated as unique from the very beginning.

Axioms:

1. No two situations are alike.
2. Each problem is embedded in a unique array of related problems.
3. The solution to a problem in one organization will differ in some way from the solution to a similar problem in another organization.

Why people try to liken a problem to an already familiar one is easy to see, and using an already achieved solution to a problem as a model for solving another seems like an efficient way of proceeding. It gives planners a feeling of objectivity – a highly valued but overrated criterion in problem solving and prevention. More often than not, however, this type of linkage turns out to be illusory and costly.

If planners incorporate in their solution the distinct needs, interests, abilities, limitations, and power of all stakeholders, they can maximize the quality and effectiveness of their solution, increase the likelihood of implementation, and make the most effective use of time and resources.

Another danger in adopting a solution from somewhere else is that it becomes very easy to neglect to develop transitional steps. The problem and the solution operate like before and after snapshots that say “This is where we are and this is where we want to be.” But the two snapshots don’t provide instructions for getting from what is to what is desired. Without such a map everyone is likely to get lost.

Applying the Uniqueness Principle is done not through a step-by-step process but rather by keeping an open frame of mind and adopting a style of reasoning that greets every problem or opportunity with the certainty that it is different from all others. Some specific techniques are available to help planners think in terms of differences rather than similarities:

- When a problem is first approached, practice identifying its unique features rather than its similarities with other situations. Challenge similes, analogies, metaphors, and “successful” solutions to similar situations whenever they arise in discussions.
- Force everyone to *not* agree on what the problem is when a problem situation is first discussed. Don’t even talk about possible solutions or comparisons with other situations. Make everyone believe *this* situation is unique, and then trace through possible consequences of the unique aspects of the situation. Try to solve each problem from scratch.
- Discuss the purposes of working on the problem. This can encourage everyone to consider a range of purposeful activities in which planners may wish to engage. Examining the larger purposes of a unique organization may open minds to breakthrough solutions.
- Ask about what conditions would be ideal to work effectively on this problem. Try not to let presumed constraints limit thinking or encourage finding a quick and easy solution.
- Challenge with the search for purposes both the stated and implied assumptions of the people who originally present the problem.

Always ask these specific questions:

- Have I approached this problem as if it were unique, even if my first impression tells me it isn’t?
- What people, timing, and organizational culture make this problem unique?
- Why am I inclined to force a fit between this unique problem and a “tried-and-true” solution from the past?
- Have I made the mistake of beginning my search for a solution by simply accepting the perceptions or assumptions of the people or person who presented the problem?

By considering the uniqueness of the situation at hand, planners will be better able to make the problem-solving process real and meaningful to everyone involved in designing an appropriate solution. Each problem is an opportunity to redesign, not just patch, a system. By building on the principle that their problem is unique, planners will be ready to initiate their planning effort by examining not their problem, but rather the *purpose* of their efforts – what they are trying to accomplish.

## Reference

Nadler, Gerald and Shozo Hibino, *Breakthrough Thinking: The Seven Principles of Creative Problem Solving*, Revised 2<sup>nd</sup> Edition. Prima Publishing, Rocklin, CA, 1994.

## Breakthrough Thinking

### The Regularity Concept

Don't allow unpredictable and infrequent irregularities to derail your project. Focus on the regularities of your situation rather than the occasional odd occurrence.

The concept of regularity is used as a guideline for designing the ideal system. *Regularity conditions* are the usual, expectable, or most significant eventualities implicit in a problem or a system. They can sometimes be identified by their higher frequency of occurrence or their overriding importance. *Irregularity conditions*, on the other hand, are the exceptional or unpredictable circumstances which may arise.

Conventional problem solvers usually try to develop a recommendation or solution that addresses all foreseeable contingencies. However, there are two problems with this approach. First, it is all but impossible to identify all the possible contingencies that could develop from a particular situation. Second, paying inordinate attention to the unusual leads to distorted answers for dealing with the usual, and tends to narrow rather than broaden the space in which possible solutions are sought.

As an example, a conference planner wouldn't tailor a luncheon menu for 500 to meet the needs of the one participant who is allergic to wheat and the two participants who are lactose intolerant. Instead, she would plan the menu with items that included wheat and dairy products, and then modify or add items to the menu that would provide suitable options for the individuals who would need alternative meals.

It is not difficult to spot time-wasting situations caused by failure to incorporate the regularity concept in system design: Standing in a department store checkout line, only to discover that the person ahead of you will be going through a lengthy process to return several items and open a charge account, for example, is a strong indication that the checkout operation was designed to handle all transactions, rather than just the standard ones, with atypical ones handled separately.

In conventional problem solving, when people try to discuss a proposed solution they try to find out what is wrong with it, and why it will not work. They waste time and resources initially talking about and planning for irregularities that occur in only a small percentage of cases. Sometimes, this behavior quickly escalates into a full-blown game of "What if," where participants try to outdo each other by adding more and more exceptional and unpredictable circumstances with which the system must contend. In the end, the system being designed becomes so complex and weighted down that implementation would be not only impractical, but impossible. Their time would be much better used to discuss and plan for regularities.

If a planning group can *initially* generate good alternative ideal solutions that work under expected and usual conditions, they will find it relatively easy *later* to either incorporate considerations for irregularity conditions into their recommended system in ways that maintain overall effectiveness and efficiency, or, if necessary, deal with them in a separate system. The planning group will also find that considering irregularity conditions in this way can provide the special consideration and effort that is often needed to insure that any special needs or

requirements necessary for success are provided. Additionally, going about planning this way can enable people to deal with new ideas and real-world conditions and complexities in a framework and at a rate they can handle.

Consideration of regularity and irregularity conditions takes into account the multiple purposes, multiple needs, and multiple solutions that produce multi-faceted solutions with alternatives ideal for various conditions.

### **References**

Nadler, Gerald and Shozo Hibino, *Breakthrough Thinking: The Seven Principles of Creative Problem Solving*, Revised 2<sup>nd</sup> Edition. Prima Publishing, Rocklin, CA, 1994.

Nadler, Gerald, *The Planning and Design Approach*. John Wiley & Sons, New York, 1981.