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ABSTRACT

This paper argues for a more robust and encompassing understanding of the roles and functions of institutional research in higher education institutions in the context of fundamental shifts in the way decisions are being made in colleges and universities. In particular institutional researchers can no longer simply collect, analyze and disseminate information to support decision making. Institutional researchers must also become the information architects, the change agents, the consultants of choice in their respective institutions. The paper describes each of these new roles and recounts the continuing metamorphosis of the institutional research office. An early section explores the changing culture of decision making especially the increasing complexity of institutions and rapid rate of change they experience. Emerging from these is a decision-making culture more integrally intertwined with their constituents in making sense of the information provided to them. Further sections explore traditional research functions, the importance of involvement in the initial design and modification and enhancements to data stores, participation as change agents in the planning and process activities, and becoming internal consultants of choice who should serve a broad constituency in the institution. The paper closes by describing the metamorphosis of an institutional research office since the early 1980s. Contains 11 references.

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How it Ought to Be: Institutional Researchers' Roles as We Approach the 21st Century

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Jean Endo
Editor
Forum Publications

**How it Ought to Be:
Institutional Researchers' Roles as We Approach the 21st Century**

Abstract

What is institutional research? Because of a fundamental shift in the way decisions are being made in colleges and universities, we argue in this paper for a more robust and encompassing understanding of the roles and functions of institutional research in institutions of higher education. No longer can institutional researchers be content to merely collect, analyze and disseminate information to support decision making. In addition, institutional researchers must also become the information architects, the change agents, and the consultants of choice within their respective institutions. We describe each of these roles and recount the continuing metamorphosis of the office in which we work from one that focused heavily on the first function to one that plays an increasing role in all four.

How it Ought to Be: Institutional Researchers' Roles as We Approach the 21st Century

Just what is institutional research? Terenzini (1993) recounts a twelve floor elevator ride during an AIR Forum with a hotel guest who was curious about the name tags folks were wearing that provided insufficient time to answer this question. Muffo and McLaughlin's answer in their introduction to *A Primer on Institutional Research*. – “[w]e still don't have an easy, simple answer for spouses, parents, children, and other relatives” (1987, p. vi) – is equally troubling. While this may accurately reflect the collective angst and frustration felt by many practitioners of institutional research, it can hardly be seen as definitive.

Saupe (1990, p. 1) is far less equivocal, stating that institutional research is “research conducted within an institution of higher education to provide information which supports institutional planning, policy formation and decision making.” Peterson and Corcoran, taking a different and more enveloping tack, acknowledging that over the first twenty-five years the Association for Institutional Research was in existence there were changes, “see institutional research as an institutional function or activity in the middle – an intermediary function that links the educational, governance, and information functions of institutions of higher education” (1985, p. 1).

Terenzini (1993, p.3), building on the notion that institutional research has, and will continue to change over time has explained it as “‘organizational intelligence’ . . . construed . . . broadly to refer to the data gathered about an institution, to their analysis and transformation into information, and to the insight and informed sense of the organization that a competent institutional researcher brings to the interpretation of that information.”

From Saupe to Peterson and Corcoran to Terenzini there has been some broadening of what it means to be an institutional researcher and to do institutional research. We're

convinced, however, that an even more robust and encompassing understanding of the roles and functions of institutional research are necessary for its successful practice as we approach the beginning of the next century. For, beyond the first, traditional function of "collection, analysis and dissemination of information for decision making in higher education" (AIR Executive Committee, 1993, p. 4), institutional researchers must also be planners. And as planners, institutional researchers must function as information architects, change agents, and consultants of choice within their respective institutions.

The Changing Culture of Decision Making

To put it succinctly, we believe that there is a fundamental shift, a major change in culture, currently taking place throughout higher education with respect to how decisions are being made. There are a multiplicity of factors contributing to this shift. We'll limit our discussion to two that we find compelling and most evident in our own institution.

In general, the environment in which all of higher education functions is becoming more and more complex and the pace of this change is escalating rapidly. Some of this increasing complexity is from expanded and highly particularized governmental intervention into the operational affairs of colleges and universities. Recent examples include the Student Right To Know and State Postsecondary Review Entity legislation as well as the burgeoning interest in the indirect cost recovery of federally sponsored research. A much more welcome, but often just as perplexing, form of increasing complexity is that which is attributable to the growing diversification of the general population which serves as the base from which our institutions draw their students, faculty, and staff.

This increasing complexity is compounded by the growing financial constraints facing just about every college and university, the explosive pace of technological

advancements, and the changing nature of consumer expectations. The calls for doing more with less and becoming better without being bigger seem to grow daily, both from outside and from within academe. This growing complexity and general escalating change in the environment mitigates against the possibility that any individual, or small core group of individuals, can possibly bring the necessary depth of knowledge and breadth of experience to today's and tomorrow's decisions. Few would argue that these have not been phenomena contributing to the rising incidence of "strategic planning" at colleges and universities.

Additionally, much as many would like to argue philosophically against the relevance and applicability of Total Quality Management (TQM) within higher education, we believe this too is a reflection of the need to change the culture of decision making. Even with the rather limited success TQM has enjoyed so far within colleges and universities -- in all of its combinations and permutations -- it is nevertheless contributing to an increasing expectation of participatory and data-based decision making.

Individually, and in combination, these factors and others are promoting a shift in decision making away from being conducted in a closed, hierarchical, autocratic fashion by a limited number of individuals. Instead, decisions on college and university campuses are increasingly being made in a more open, collaborative, and distributed fashion.

The individuals charged with making decisions still exist, they are still remunerated handsomely to make them, and they are being increasingly held accountable for their results. More and more, however, these individuals are growing in their awareness of their own limitations, the rapidly changing environment in which decisions are made, and the value of engaging the eventually effected parties earlier on in the process. These individuals have always needed decision support assistance, but the very character of that assistance is changing with the changing culture of decision making.

Why Planning and Research are Inextricably Linked

Hence, the crux of what institutional research is all about, as we conceive of it, is supporting decision making, and as the culture of decision making is changing so must the character of the decision support provided by the institutional research function. As we will describe in more detail below, this support of decision making takes a variety of interrelated forms. Nevertheless, decision making, as well as the information and research support that undergirds decision making needs context. By context we not only mean that institutional researchers must be sure to bring a historical, institutional, cultural, environmental, and political backdrop to the information they provide to decision makers. More importantly, by context, we also mean that there must be a sense of priorities so that choices can be made among alternatives. This latter type of context makes it possible for decision making and decision support activities to be focused on matters of most importance.

This need for a sense of priorities is a call for planning, and planning is at its heart decision making about future, inter-related activities. This "future" decision making not only needs to be informed with information, but the planning activities themselves need to be planned and facilitated through all of their phases. Hence, we believe planning support is a logical extension of the more traditional institutional research role of decision support.

Let us be clear here, however. Just as institutional researchers in providing decision support are not the decision makers, so too institutional researchers providing planning support should not be the planning decision makers or "strategists", as Mintzberg (1994) calls them. This distinction is critical because "strategic thinking", per se, must be the province of the decision makers. These decision makers are "strategists" in need of "vision" which is:

unavailable to those who cannot 'see' with their own eyes. Real strategists get their hands dirty digging for ideas, and real strategies are built from the

occasional nuggets they uncover. These are not people who abstract themselves from the daily details; they are the ones who immerse themselves in them while being able to abstract the strategic messages from them. (Mintzberg, 1994, p. 111)

Accordingly, institutional researchers as “planners should make their contribution around the strategy-making process rather than inside it . . . [t]hey should act as catalysts who support strategy making by aiding and encouraging managers to think strategically.” (Mintzberg, 1994, p. 108)

Thus, we believe that institutional research not only entails a “traditional” decision support role, but also a planning support role. On this premise, we are convinced that institutional research offices and institutional researchers need to fulfill four roles to most effectively serve their institutions:

- A. Research support: data collection, analysis, and dissemination;
- B. Information architects;
- C. Change agents – planning and process architects; and
- D. Internal consultants of choice

Research Support: Data Collection, Analysis, and Dissemination

This role of institutional research has been well documented by the likes of Saupe (1990), Fincher (1977), and Muffo and McLaughlin (1987). Institutional researchers collect, compile, manipulate, analyze, synthesize, report and disseminate a vast array of vital data pertaining to a particular institution. A significant component of this function is the reporting of census and quasi-assessment data to comply with the demands of external regulatory agencies at the national and state levels that are also often of value in informing internal planning and decision making processes. In addition, voluntary data sharing consortia as well as routine and ad hoc surveys that come from hither and yon most naturally fall within the purview of institutional research offices to coordinate or complete.

In general, the institutional research office should serve as an information clearinghouse for both internal and external audiences. To most effectively fulfill this role institutional researchers must be adept at soliciting, structuring, and synthesizing data from a multiplicity of typically incongruous sources. They must assess the needs of their requesters, assist them in framing their questions in the most meaningful manner, and then translate the relevant available data into useful information. Under the best of all circumstances this information -- even if initially requested from external sources -- should inform and support the home institution in policy management and decision making.

Unfortunately, what seems like an ever increasing proportion of our data collection, analysis, and dissemination efforts are targeted at requests that are only at best tangential to what's important and relevant to the institution. The proliferation of mass circulation college guides, published rankings, "best buy" analyses, external regulators, and narrowly-targeted ad hoc queries -- that all have a slightly different twist on their "similar" requests -- siphons a significant proportion of time away from institutionally relevant research. This is time that could be more usefully spent on prospective research that monitors institutional vital signs to assist decision makers in assessing when appropriate progress toward goals is being made or when a change in policy or practice is necessary to stimulate progress.

In our own office we still don't have the kind of control over the time allocated to routine and ad hoc data requests that we'd like to have, but over the past five years we've learned to say no (internally and externally) far more often. Part of the reason for this is because two years ago we were required to reduce the number of full-time equivalent staff in the office from ten to eight. Even without this reduction in numbers, we would have needed to begin to be more selective in what we did because two major new initiatives were independently inaugurated at this same time -- university-wide

strategic planning and a quality improvement program -- both of which we were significantly involved in.

Judiciously saying no has made it possible for us to be engaged in several on-going and one-time analytical activities that have fueled important executive decision making activities. These include routine and critical analytical projects that would have otherwise been subject to a scaled back effort like the on-going enrollment planning modeling done in our office that for the past five years has produced targets within one percent of actuals. More importantly, however, saying no has also permitted us the luxury of conducting -- in collaboration with representatives of the faculty -- a detailed analysis of faculty retirement patterns in the absence of mandatory retirement. This study led our institution to forego costly large-scale early retirement programs or consideration of "capping" institutional contributions toward retirement as some of our sister institutions with defined contribution programs have done (Magner, 1993). We have also worked with the Department of Athletics and the College of Architecture, Art, and Planning to develop large scale budget models of their operations to assist them in making better resource allocation decisions. Saying no also provided us the flexibility to provide the integrated human resource headcount and space allocation inventory information necessary to provide a major component of the baseline information that fueled the institution's development of a strategic framework for campus precinct development.

Being judicious about the ad hoc requests we agree to fulfill has also freed up time to be more actively engaged in substantive stakeholder analysis work. We continue to pursue several home-grown and institutional specific research projects. Examples include a bi-annual undergraduate post-grad survey, a one-time major survey of faculty, staff, and students in support of our strategic planning efforts, (Paper Author, 1994), a pilot senior exit interview with senior administrative staff, and a collaboration with colleagues in our human resources operation on a staff campus climate survey.

However, we are increasingly turning to consortial research to help contextualize our executive decision making and policy management. We have made heavy use of our affiliation with the Consortium on Financing Higher Education (COFHE) to study what our graduating seniors and alumni seven and ten years since graduation believe to have been the major benefits and limitations of their undergraduate experience. We have also made occasional use of participation in faculty salary surveys conducted by the Higher Education Research Institute (HERI), and have collaborated with institutional research colleagues at Brown, Dartmouth, and Yale on research that looked into what contributes to students' persistence as science majors (Strenta et al., 1994).

In addition, we have begun to make periodic use of information that we can more reliably gather and cost effectively purchase than compile on our own. For example, in order to provide better information to individuals involved in recruiting and retaining faculty and staff we work with Runzheimer International to develop comparative cost of living indexes that account for the full range of factors that influence the relative buying power of a particular salary figure.

We have also begun to produce a new vehicle for communicating with our campus constituencies -- *IPR Reports* -- that takes a step beyond simply disseminating information to the campus to serving as a catalyst for campus dialogue. Our first issue dealt with what we could reasonably expect to take place with the end of mandatory retirement for faculty. The second issue, which is currently in development, will look at historical trends in graduation rates at our institution and highlight those areas where we will need to focus attention in order to continue to improve.

The reader will note that we have devoted a considerable amount of space to describing our continuing role in what we view as "traditional" institutional research decision support. This data collection, analysis, and dissemination function is still a major component of what we do. However, it has been augmented with an ever

increasing involvement with planning activities, and in particular with fulfilling roles as information architects, change agents, and consultants of choice.

Information Architects

While at first this may seem a natural extension of the first role of the institutional researcher it does differ in several significant ways. First, and foremost, is that in the vast majority of cases, institutional researchers are consumers and users rather than owners or responsible administrators of the data they need to fulfill their obligations. Hence it is imperative that they be actively engaged in the initial design and subsequent modifications and enhancements to the data stores they rely on for raw data. This is critical because most of the major data stores (student information, personnel, research, faculty, payroll, accounting, budgeting, facilities, equipment inventory, etc.) have been or are created for somewhat parochial transaction purposes, without enough thought to how they may need to be utilized for broader analytical and decision support purposes. The role of the institutional researcher here is to bring a university-wide, analytical perspective to these systems and assist the individual system "owners" in creating computer systems and data stores that will be complementary; permitting timely, accurate, and reliable point-in-time and historical information development.

Planning requires information and institutional researchers have a relatively unique contribution to make in information management. In carrying out both its planning and decision support role, the institutional research office is perhaps the only support function within a typical institution of higher education that carries with it a vested interest in a multi-functional view of issues. Institutional research must inherently bring a systems perspective to its work.

The institutional research office must care, for instance, how to maintain registrar data in a way that allows measurement of faculty productivity as well as the production of student transcripts. Traditionally, the registrar and human resource data bases have been transaction oriented, but measuring faculty productivity is an analytical process

that requires these two -- all too often -- stand-alone systems to be integrated. Thus, since by presupposition institutional research must take an integrated, systems view to its work, no other office on a college or university campus is better suited to identify what information is important and to define what capabilities should be made available for analytical purposes.

In our own situation we are in the process of creating an institutional data administrator function. We view the data administration function as one of planning, and coordinating efforts to define, organize and develop institutional data, particularly data used for decision support. The data administrator conceptualizes a unified and logically integrated view of the institution's data resources and maps this view to user and system needs at different levels within the organization. Our plan is to have this function reporting within the planning rather than the information resources area, because planning is a more logical place for taking such a comprehensive and integrated view of the institution's information needs.

In addition, we are moving toward establishing data warehousing capabilities to fulfill the need for accurate and accessible analytical data stores. Institutional research plays a unique role in the sense that we do not claim ownership of any data, yet in our planning and research role we require access to data from many operating systems. Historically, cumbersome mainframe protocols and reporting languages impeded our ability to access and manipulate data and to make it available to anyone other than the central executive staff. With the advent of the data warehouse, we will be able to streamline this process and make the data stores and the reporting capabilities more readily available to colleges and units. And with one source of data, accessible to all relevant parties, we should be able to diminish the long and tortuous arguments about whose data is "right" and invest this time in developing better plans and decisions.

Change Agents – Planners and Process Architects

The third role that institutional researchers need to be playing is that of planning process designers and facilitators. In this capacity, institutional researchers need to serve as active catalysts of change in their support of the institution's decision makers/strategists.

In a somewhat similar vein to the way that data collection, analysis, and dissemination activities are necessary to support decision making, planning support requires process design and process management expertise – skills not typically in the gunnysack of senior administrative officers at colleges and universities. And even if they did possess or develop these skills, for any number of reasons senior administrative officers either do not have or are reluctant to make the time necessary to design, manage, and facilitate a complex, collaborative planning process that instills the openness necessary for effective strategy making. These activities are often considered to be part and parcel of the collegial faculty environment from which most senior administrators are drawn. Quite the contrary, even though it is not rocket science, these specialized design and facilitation skills need to be cultivated in order to apply them effectively. And it is our contention, inasmuch as this process management is a critical component of the planning support necessary to decision support, that this role can naturally be seen as an integral component of the function of an institutional research office.

Part of this role is fulfilled by providing process management support for the development and maintenance of institutional strategic vision, at both macro- and micro-levels. In as much as there are few functions on a college or university campus that are not easily prone to balkanization and parochialism, institutional researchers need to be firmly ensconced in the position of providing and encouraging an institution-wide perspective to the issues of the day. The other key role to be played is in the more general facilitation of planning processes. Facilitation is required to create

level playing fields, breadth of vision, full participation, and buy-in to the final outcomes of group decision making. Institutional researchers, as facilitators, assist those who would not normally sit down and consult with one another to talk prior to decisions being made, rather than complaining about others decisions or defending their own actions after the fact.

In our own situation, it has been quite natural to extend these design and process support skills in serving other areas. We have facilitated task forces for the Provost, and have actively participated in the design and facilitation of our institution's Quality Improvement Program (QIP; TQM in sheep's clothing). We have also assisted several of our colleges and units in designing and facilitating their own change efforts.

While about half of our colleagues had a natural proclivity toward this type of activity, none of us had had much significant experiential familiarity with what it would take to carry out this role. We have invested heavily in both on-campus and off-campus training to better prepare ourselves and our colleagues to function as facilitators. This training has been selected to provide continuing education about tools to assist in problem solving methodologies as well as to be better prepared to assist individual and teams to work through troublesome group dynamics.

Internal Consultants of Choice

As a natural extension of the combination of the three roles described above, institutional researchers can also function as the consultants of choice for their central administration, colleges, and administrative units in such areas as planning, data administration, group process management, quality improvement, and survey research.

Although often housed centrally, particularly as consultants of choice, institutional researchers should serve a much broader constituency. One of the fundamental fallacies in planning support and institutional research, or in any centralized function for that matter, is the presumption that it exists to serve the central administration. This

creates an instant credibility problem. Rather, planning should be conceived and perceived to serve everyone, otherwise a lack of buy-in can create barriers to implementation. Plans and strategies should be crafted so that the individuals responsible and accountable for implementation are allowed some discretion in developing their particularized action plans. This action planning, however, also requires process management skills and those skills can be delivered through the central planning and institutional research support function, either through consultation or training.

Taken separately, or much more usefully in combination, we can make available a rather unique combination of skills -- data collection, statistical analysis, information design, survey research, process design, and group facilitation. Having this array of talents and skills available has propelled our office into the middle of a number of significant institutional endeavors even though we had no inherent subject specific expertise. For instance, when there was a need to develop a forward looking plan for library space needs that would attempt to take into account the potential for saving square footage through more aggressive use of the digital storage and retrieval the Provost called on our office to coordinate and facilitate this process (Paper Author, 1993).

Another example has been the heavy involvement of our office in the institution's nascent efforts with quality improvement. While the operational support for QIP has generated from the office of the Senior Vice President (to whom our institutional research office has no direct reporting capacity), we have played a significant role in developing the manner in which we have rolled out this process on the campus and have volunteered significant effort (in the form of nearly a quarter of two of our more senior staff) to serve as facilitators of five of the first wave of teams chartered by the institution. In addition, because of our in-house expertise in survey research and

statistical analysis, we have become a resource for QIP teams developing data gathering methodologies to gauge customer satisfaction and baseline performance indicators.

The Metamorphosis of an Institutional Research Office

In the early 1980s, the office in which we work was almost exclusively focused on only the first of the four roles we described above. Even in the realm of research support while there was plenty of data collection and some analysis there wasn't nearly enough substantive dissemination. There were occasional glimpses of the other three planning functions, but clearly no sustained effort in any of them. Since that time, in a very conscious fashion, the office has been re-engineered to extend its breadth and its depth. This has been accomplished through the use of both overt and covert strategies. As turnover occurred within the office, searches were conducted to bring new skills and talents into the group that would assist us as we stretched into new areas rather than simply to replace the departing individual.

As we consciously began to move into the planning arena we started inside the office, providing opportunities for professional development and skill enhancement. We also conducted periodic retreats for the office as a whole to build consensus on a revised mission and vision for the office as well as to engage in substantive team building activities.

We cut our teeth on smaller, strategic projects that permitted us to gain vital institutional confidence and enabled us to play an increasingly larger role. And as this confidence built over time, we were able to not only take on larger, more important, and more critical projects, we were also given license to push and challenge the institution's decision makers in a way that half a decade ago would have been unthinkable.

The library space planning project we described earlier was the first substantive, albeit limited, initiative in which we were involved; working in collaboration with colleagues in the library system and the information technology area on behalf of the

Provost. This was closely followed by a much more expansive role in shepherding the institution as a whole through its decennial reaccreditation self-study and site-visit. While this may seem a commonplace activity for the institutional research office to be engaged in, it was new territory at our institution. In fact, while ten years earlier the institution had been criticized for its limited and perfunctory planning activities in the most recent review we were cited for exemplary planning and decision support.

We've earlier discussed the strategy of selectively saying no in order to make time available for other more critical activities. We cut back extensively on the number of regular and ad hoc external requests which we answered. If we didn't anticipate the need to be a good citizen so that the requester would return the favor later, or if we simply saw no benefit to our institution in participating we would "just say no." For instance, we stopped filling out the College and University Personnel Administrators (CUPA) salary surveys since we participated in others that gave us a more direct point of comparison with our comparators. As well, we withdrew from participation in the Higher Education Data Sharing (HEDS) group because there were not enough comparator institutions involved to justify our continuing effort.

We also said no internally. We completely abandoned preparing what were known as quarterly indicators for executive staff, after seeing a steady decline in attendance at and interest in the review meetings held in conjunction with their publication. We found that the month's worth of effort on the part of two or three people who prepared each set of quarterly indicators obviously didn't produce much that influenced decision makers because after a year of non-production no one even noticed we had stopped.

After our initial forays into planning support proved successful we began to lobby within the institution for a greater routine presence in the mainstream of decision making in order to be more cognizant of both the emerging issues and the context surrounding them. This led to engagement in the several standing administrative decision making bodies on the campus including the Executive Budget Group, the

Operating Plans Committee, the Administrative Data Processing Systems Advisory Committee, the Campus Planning Committee, etc. We also began to be invited participants in special committees of the institution, including the Design Team and Transition Team of the Quality Improvement Process, the Steering Committee of the Classification Review Study, the Provost's Committee on Retirement, etc.

We have not yet completely fulfilled our vision for what we should be doing as institutional researchers. We have made good progress in redefining our role in research support and carving out a niche in process planning support. We have seen an intellectual acknowledgment of the need for our role as information architects, and have produced several small wins in this area, but there is clearly room for further development here. Our role as consultants of choice within the institution is also one where we have seen tangible evidence of growth, yet there is still further progress to be made. Our critical engagement with the university's strategic planning effort is helping to further shape our agenda in these later two arenas and will greatly augment their implementation.

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Figure 1. Decision support in a reactive decision making environment.

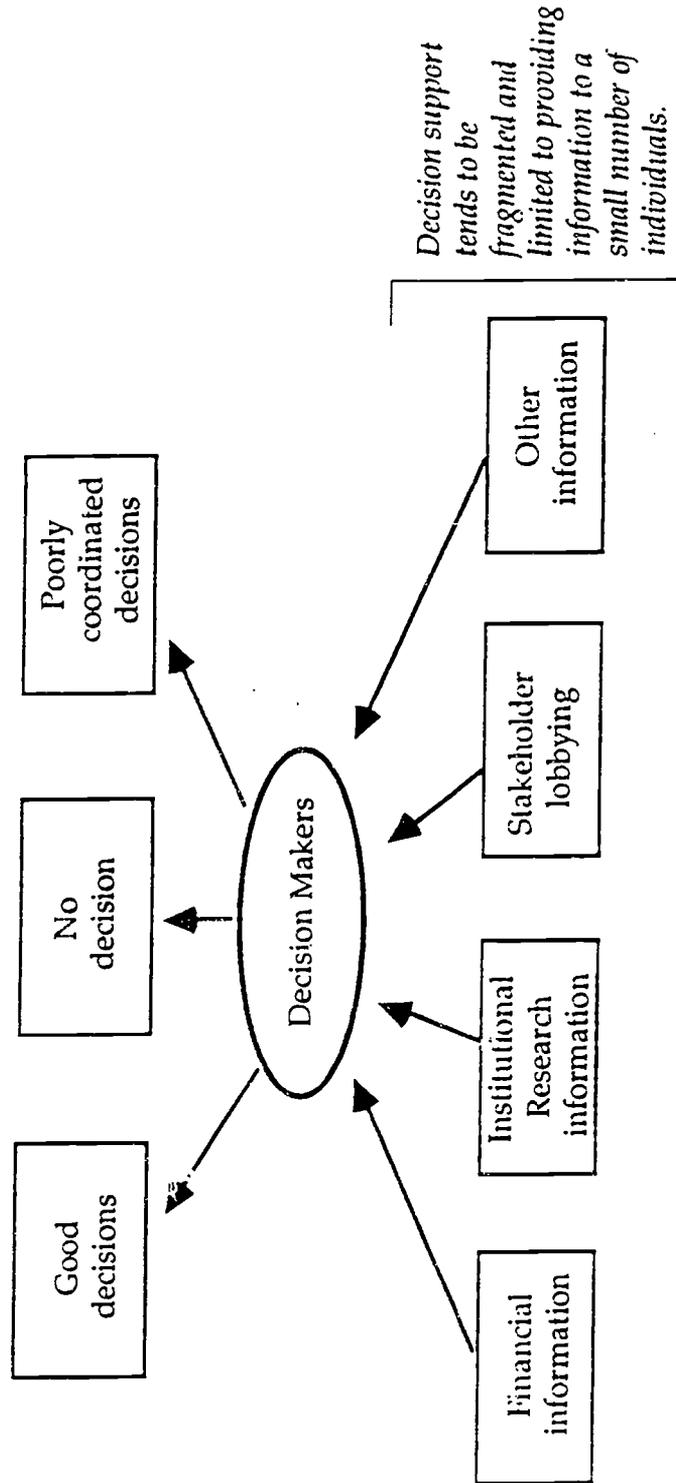
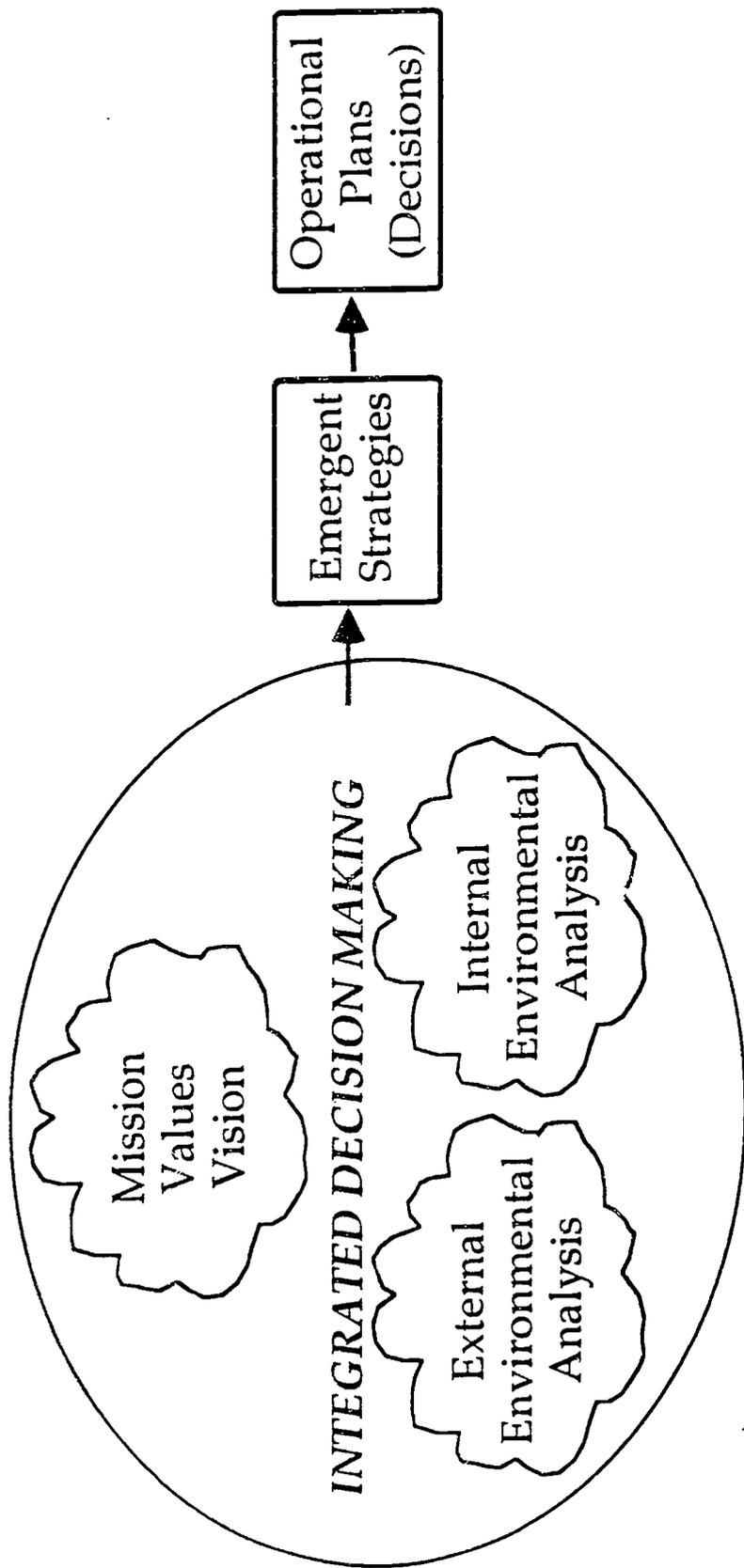


Figure 2. Decision support in a contextualized decision making environment.



Decision support required for entire process. It's all information based and requires a combination of data analytic skills and group design skills.