

Integrated Operations System and Its Philosophy

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The modernization of any large corporate structure has many mechanical and technical problems, but the human element is one of the most crucial problem areas. Therefore, a modernization process demands that management update its philosophy as well as its physical procedures to make employees receptive to major changes. The restructuring of the physical processes for the state's transportation needs was based on a decision that the most efficient system is one that integrates all modes of transportation: land, water, and air. To effectively implement such a system, management must take great care to ensure that employees and citizens understand that, despite temporary disruptions, the long-range program will operate more efficiently and conserve more of the taxpayers' resources. To this end, we have formulated 16 principles to aid in reducing the major stumbling blocks of both the physical and psychological innovations. They are designed to assure not only management but all employees and citizens that they will not be lost in a bureaucratic shuffle.

•OUR NATION has undergone rapid technological changes, accompanied by the development of a vast transportation network. As we recognize the complexities of our transport system, we are forced to develop new public policies for transportation and to use more sophisticated methods of analysis to solve problems. If we are to control the transportation system and to better its reputation with the public, our task is clear: Find ways to move more people and more material of lower value more miles at less cost. As government leaders, we must play a major role in promoting this effort. This is a brief, but large and demanding, order.

Our hands are not completely free to act, however. The proliferation of state services as well as the complexity of problems faced has outstripped many of our old problem-solving techniques. Because of this, organized government is under attack. We are experiencing dissatisfaction, suspicion, and rebellion, because we who represent government often do not measure up to the demands of the time. We witness unfulfilled promises, the proliferation and overlapping of agencies, illogical responses, and just plain incompetency.

Meanwhile, government continues to grow; the problems we face intensify; the daily work load increases. To modernize our governmental machine, we must resolve these problems. We have already begun the necessary reorganization of the physical structure, but that is not enough. We have to include the human element and provide for the growth of the individual employee.

As leaders we must help create a sense of rejuvenation in government. We have the opportunity to lead in the establishment of a philosophy for management with purpose, pride, and sense of belonging and fulfillment. In short, we must do our best to make government work and, moreover, make government make sense to the governed.

Many of the problems of government are a result of the unprecedented growth of new programs and the complexities of administering them. These problems are multiplied by the lack of qualified managers and intensified diligence in administration. Administration, it seems, totally loses the personal touch with the taxpayer.

The transportation industry is especially characterized by its rapid growth (an annual rate of 10 percent). As the arterial system of our world, it is the communications link connecting commerce, agriculture, and industry. A smooth-running transportation network provides for our comfort and is one of the tremendous advantages of modern living. Therefore, we are dealing with needs borne of both desire and economic necessity.

As the second largest fiscal activity in our state, transportation has a budget of over \$300,000,000 and more than 4,000 employees. Moreover, it is the state's most obvious service in the public eye. Our responsibility, therefore, is to provide a major public service. It is imperative that we understand our tasks, work together, and lead the way to improved and responsive government.

THE INTEGRATED STRUCTURE OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION

In the past decade, the emphasis of transportation was on highways and highway travel. Now highways are only one part of a new and larger system that includes roadways, vehicles, and driver activities as controlled by environmental, legal, and situational factors. In turn, this concept is a division of the entire transportation system concerned with the total movement of people and goods, whether it be by air, water, or land.

Therefore, a segmented transportation policy will not work today. Each transportation mode must be treated with regard to the total transport system. One just cannot plan and construct highway, air, rail, or water facilities without considering the overall regulatory climate or integrating private investment, economic growth, social changes, and environmental factors.

As a result of a citizen's study committee, Wisconsin passed a general reorganization act in 1967, which combined three previously existing agencies into the new Wisconsin Department of Transportation: (a) the State Highway Commission, headed by three full-time administrators; (b) the Motor Vehicle Department, headed by an appointed director; and (c) the Aeronautics Department, headed by a full-time director and a part-time commission. This new organization was activated in August 1967.

The statutory powers and duties of the Highway Commission and the Division of Motor Vehicles were retained by those divisions, but they were subject to five functions assigned to the Office of the Secretary of the Department of Transportation: program coordination, budgeting, planning for all modes, controlling the internal organization, and related management responsibilities. The entire Aeronautics Division is controlled directly by the Office of the Secretary. The planning function includes active participation in federal regulatory cases before the ICC and the CAB.

With the governor's approval, the Division of Business Management was created. A steering committee lead self-analytical studies to determine what administrative services should be retained by each division and what services could best be performed on a department-wide basis. This resulted in establishment of four department-wide service bureaus in the Division of Business Management: Systems and Data Processing, Personnel, Management Services, and Management Analysis. A Division of Planning was also created and staffed by those individuals who understood the planning capabilities that had accumulated over the past decade in the Division of Highways.

Regardless of the organizational structure, the need still exists to arrange and integrate all these activities in order to operate with the most responsible problem-solving tools.

There are common-sense goals in restructuring the entire administrative system. One is to provide management with timely, reliable, and useful information that will keep decision-making at the lowest possible organizational level. By establishing a firm basis for planning more efficient systems in the future, one avoids the critical situation of outgrowing the capabilities of the present system. We must imperatively update our organization as necessary.

There are other fundamental reasons why we need to review and improve our operations, including the following:

1. Increased operating efficiency with the proper tools will make it possible to handle greater work loads without proportionate increases in staff.
2. Employees and the transportation industry must gain proficiency in the new, coordinated areas to effectively control the growing complexity of problems.
3. Such improvements will make government as understandable and responsive to citizens as possible.

To produce these results, we have implemented a new systems approach.

During the past few years, there has been great interest on the part of governmental agencies in the systems approach to the solution of problems and the implementation of planning and budgetary analysis techniques.

The Wisconsin Department of Transportation is proud to be a front-runner in applying this systems approach to government decision-making. To achieve this status, we identified our principal decision-making activities. We then arranged them in a logical, systematic manner. We call this effort our Integrated Operations System (IOS). The objective of the system is very basic: to improve the general levels of management within the department and the decision-making capability of our managers. This operation has three major management tools to assist the department in coordinating its tasks:

1. The Project Development System, which analyzes the technical information required to run a complete transportation program, i. e., the administrative rules and effective manufacturing methods.
2. The Planning System, which analyzes the social and economic information required to direct the transportation program in serving the needs of the state; this controls the operational rules and cost consequences of existing and proposed actions.
3. The Program Budget System, which analyzes the production information required to evaluate our department's ability in financially realizing the transportation program; it obtains and presents information pertaining to departmental operations.

Although these management tools are by themselves relatively simple, they do require a major change in management philosophy for orderly and effective implementation.

The recognition of the need for a fundamental change in management outlook in order to use these tools has led the Wisconsin Department of Transportation to emphasize the basic and establish new and imaginative management principles and policies. They are the key to the effective human understanding and physical establishment of an Integrated Operations System.

We have devoted over half of these principles and policies to help put the personal back into personnel. We know that without the support of the men and women who perform even the most basic of tasks, a sophisticated operation such as ours could never be an effective and efficient tool. Achievement is the goal. Organizational structure cannot be an end of itself; a team effort is the means. It is to promote this understanding and to clearly define our goals that we have set down these guidelines.

THE SIXTEEN PRINCIPLES

Continually Evaluate the Transportation Needs of the State and Recommend Changes to Satisfy These Demands

Needs rapidly change with the times; so to keep pace the department must plan ahead. What is adequate service today will not suffice tomorrow. Our services will be constantly updated to ensure that they are functioning in an efficient, effective manner.

Assign Priorities

The allocation of resources must be placed in a logical sequence. Priorities are being assigned to all areas to make certain that the taxpayer and the department get the most service for their money and time.

Create a Flexible Organization Structure

No two organizations are alike. To provide for management and employee flexibility, the organization must also be flexible. The level of individual effort will be increased if the employee knows that constructive answers exist to his problems.

Reduce the Cost of Established Services Through Better Work Methods, New Techniques, and Increased Production

The cost of established services must be reduced in order for the department to fulfill new program responsibilities. New demands and new priorities are established each year to maintain a high degree of efficiency and to ensure the best use of resources.

Operate on a Decentralized Basis

This will give the lowest level decision-maker the authority required to carry out his assigned responsibilities. This decentralization is also necessary because the department has unique responsibilities all over the state.

Inspire Department Managers to Continually Develop and Practice Self-Improvement

The implementation of major system changes can only be done with the support of all levels of management. Therefore, we have emphasized that managers should constructively criticize their operations and assist in the development of new improvements. A highly qualified staff will be made available to assist these managers with the implementation of major "self-improvement" programs.

Emphasize Flexibility and Alternation Among Management Personnel

To assume broader responsibilities, managers should be exposed to areas other than those for which they are directly responsible. When managers have a more comprehensive view of an entire operation, they are capable of facilitating their own tasks and understanding the problems of others. This should lead to increased teamwork and smoother production.

Give All Personnel Responsibility for Recommending Improvements

All employees will continue to make important recommendations for changes. We must create an atmosphere where these recommendations can be thoroughly and quickly evaluated. Sound suggestions must be acted on so implementation is speeded up.

Improve All Lines of Communication by Improving Formal Reporting

Reporting will be improved and extended by establishing formal reports only where needed. This formal reporting system will eliminate certain subordinate management levels. The communications role now played by these levels will be automatically provided by the new, improved reporting system. We also believe that a flat organization structure (that is, a limited number of subordinate supervisors) will provide for greater flexibility and effective response to changes.

Operate as Much as Possible as a Private Business

Employees will be rewarded to the greatest extent possible on the basis of their contribution to the entire department, not just on their personal goals and objectives, or those of their sections and division.

Establish an Atmosphere That Will Promote Positive Attitudes on the Part of All Employees

We must eliminate negativism by making an effort to say yes rather than no. New ideas and programs will never be tested if people cling only to the old way. Remember

that every old way was once a new way. A positive response may mean more work at first, but if a new program works, in the long run it should lessen the time and burdens of the task.

Provide Growth Opportunities for All Employees Through Training and Retraining

Staff requirements change with techniques and result in a greater emphasis on technical and professional work. All employees must be provided with the opportunities to upgrade themselves into these new and more challenging positions.

Have Managers Establish Goals for Each Employee and Each Function

These goals will help the employee to understand how he fits into the overall organization. The result should be improved individual motivation and continuing improvement and efficiency in the tasks being performed.

Establish New Standards of Performance for Employees

These new standards will increase motivation and morale by providing a measurement of the efficiency of the employee and by letting him know specifically what is expected in the task being performed.

Make Use of New Management Tools

Our new management tools include electronic data processing equipment, operations research techniques, work measurement techniques, and various types of engineering and law enforcement equipment.

Develop Guidelines and Standard Procedures for All Repetitive Functions to Ensure a Consistent Quality and Measurable Output of Work

The reporting of errors and exceptions through standard repeated actions is more timely and meaningful to management. In developing or controlling a system, the easiest way for managers to identify problem areas is through spotting exceptions to standard procedures. They are easy to detect and quickly understood.

It is our aim to fully implement these 16 fundamental management principles to ensure that the Department of Transportation remains young and innovative, a good place to work, and is fully responsive to the needs of the citizens of Wisconsin.