

HOW THE OPERATOR APPLIES THE CONCEPTS OF CORPORATE PLANNING IN WESTRAIL

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ABSTRACT:

As part of the overall development of Corporate Planning in Westrail, attention has been directed towards implementation of the process within the Traffic (Operating) Branch. This Branch is the functional unit responsible for the running of train, bus and road services; the staffing of stations; and the catering services associated with passenger transport. Action taken by the Operator aims to meet the challenge of providing Westrail operating services in a way that is both cost and task effective and at the same time meets Corporate 'customer need' Objectives. The various concepts of the Corporate Planning process, particularly the ability to obtain feed-back on action through measuring performance, have been introduced to Head Office Administrators and District Managers. The overall development of Corporate Planning within the Branch is discussed with specific reference to relatively simple systems for deriving information on the consequences of asset utilisation decisions.

A problem is to set practicable standards for rolling stock performance and then compare actual fleet achievements. In particular, the utilisation of wagons and brakevans will be discussed and a system for monitoring their location and use will be described. These systems are to provide more reliable data on which to establish day to day actions, leading to soundly based asset replacement and acquisition strategies.

Application of the Corporate Planning process within the Operating Branch is seen as a valuable means of ensuring that Operators continue to contribute (with knowledge of the extent of their contribution) towards the attainment of Corporate Objectives.

CORPORATE PLANNING IN WESTRAIL

INTRODUCTION

Over the past decade, in response to changing economic circumstances, Westrail has sought to redirect organisational effort towards more efficient and more effective business performance. One of the means used to do this was the introduction, in 1972, of Corporate Planning. The characteristics of Westrail's corporate planning, as currently practised, and an application of how the process is applied in action were discussed in previous Australian Transport Research Forum papers. (1) (2)

"Two distinguishing characteristics of corporate planning in Westrail are that it is designed to be dynamic, and so flexible and responsive, and that there is a hierarchy of planning in which each management level has objectives and performance measures related to corporate objectives". (2)

The dynamic nature of the process is illustrated in the diagram: "Corporate Planning and Operations: The Interaction" first published in the paper by Grimwood and Brindal (1975) and reproduced as Figure 1.

Emphasis in this paper is on the second characteristic. The paper deals with the translation of the concepts of corporate planning through each level of the management hierarchy leading to operator action.

An approach for the staged introduction of Corporate Planning within the operating branch was formulated and implemented. From this it became evident that the operator was concerned with improving his ability to demonstrate the level of efficiency in resource utilisation being achieved. For Westrail the benefit of this approach would be a more precise matching of resources to task. Operating needs focused attention firstly on the brakevan fleet and subsequently on the wagon fleet. The application of the concepts of Corporate Planning within the operating branch have indicated, to the authors, that Westrail has derived net benefits and that the effort involved in overcoming the implementation difficulties is justified.

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- 1 Grimwood and Brindal (1975) "Pricing and Investment where both are Semi Regulated: The Management Dilemma" ATRF 1975.
 - 2 Grimwood and Georgiades (1976) "Corporate Planning in Action Application to Freight Rate Strategy". ATRF 1976.

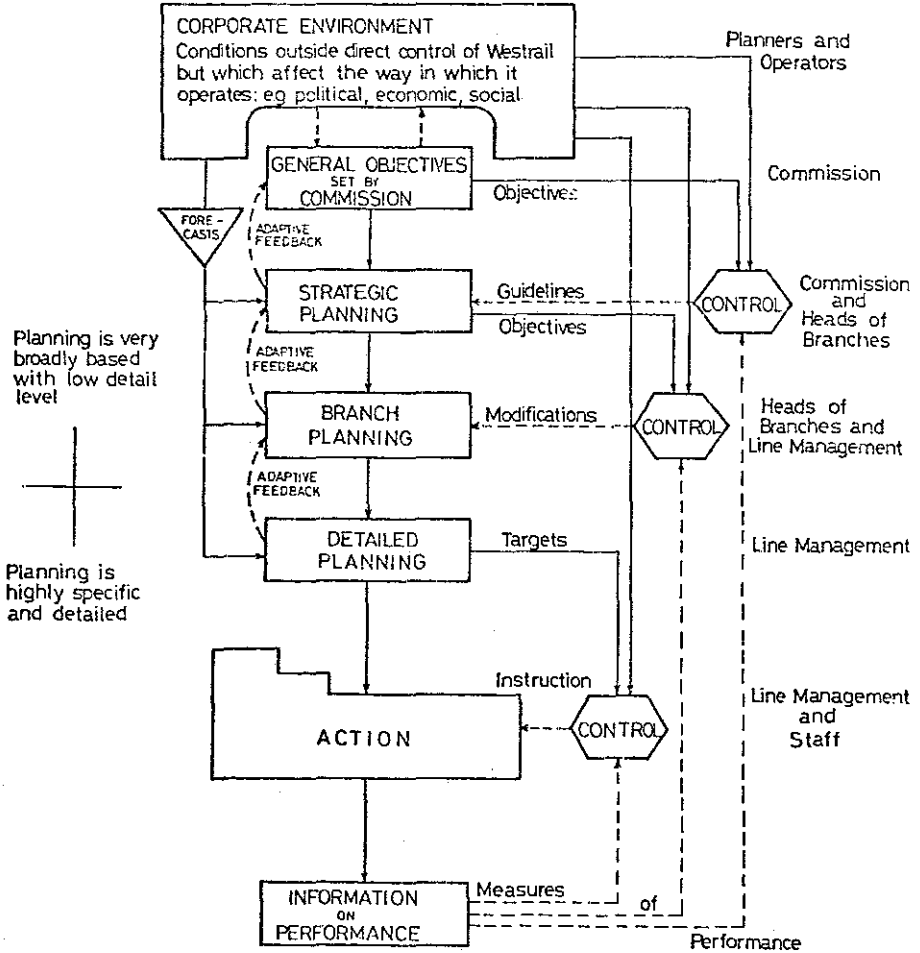


Figure 1

CORPORATE PLANNING & OPERATIONS
THE INTERACTION

CORPORATE PLANNING IN WESTRAIL

THE APPROACH TAKEN

The framework outlined in Figure 1 identifies the setting of organisational objectives as a prime requirement ⁽¹⁾. This, therefore, was the first task undertaken by Westrail's Strategic Planners (The Commissioner, Assistant Commissioner, and Branch Heads).

The corporate objectives were the focus of the approach taken within the operating branch to introduce the concepts of corporate planning to the operators. A committee of managers in both operating and staff roles was formed to define and implement an approach. Responsibility for co-ordinating the effort was allocated to a manager, in a staff role, who was able to devote all of his time to this task. Responsibility for developing corporate planning in the Branch remained with the Chief Traffic Manager. The approach developed by the committee is described in Figure 2. It involved working through five stages:

Stage 1: Identify the task.

With the aim of maximising their contribution towards the achievement of the corporate objectives the operating branch set itself the following objectives:

- . To provide, at minimum cost, the transport operational services required to achieve the corporate objectives.
- . To implement, at minimum cost, the activities of the branch necessary to achieve the strategies determined by the Commission.

Stage 2: Identify the resources needed to perform the task.

The resources needed to perform the task define some of the necessary conditions for the achievement of the objectives. Having the necessary resources does not guarantee achievement of the objectives, but not having the necessary resources does mean that the objectives cannot be achieved.

1 These have been defined in Grimwood and Georgiades (1976).

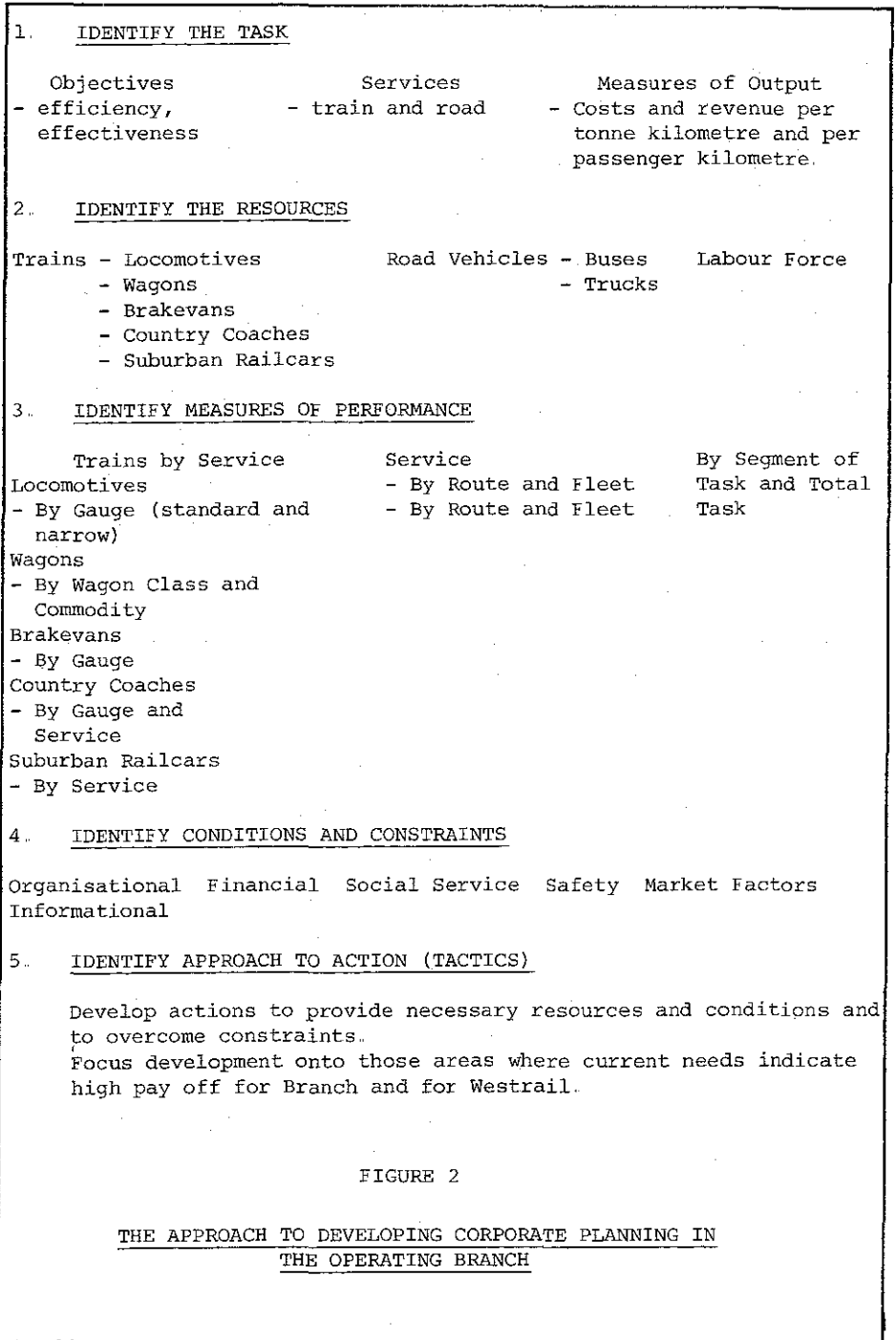


FIGURE 2

THE APPROACH TO DEVELOPING CORPORATE PLANNING IN
THE OPERATING BRANCH

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Stage 3: Identify the means for measuring progress.

Performance measures were needed in order to measure progress towards the attainment of the objectives. This task was to become the focal point of the development and is discussed in more detail in the third section of the paper.

Stage 4: Identify external constraints and necessary conditions.

In this stage an attempt was made to identify externally imposed conditions that inhibit the Branch's ability to meet its objectives; and internal conditions necessary, though not necessarily sufficient, to ensure achievement of the objectives.

Stage 5: Identify an approach to implementing Westrail Strategies.

The aim of this stage was to identify the means (i.e. tactics) for implementing corporate strategies.

The approach appeared to be formidable but was generally accepted. Implementation of the approach yielded several insights. Importantly:

- there was a need for more precise knowledge relating to the utilisation of assets and for improved techniques in portraying the level of resource utilisation achieved.
- emphasis would need to be on the performance of the most important aspects of the branch's function - trains and their components (locomotives, wagons, and brakevans).
- the branch would need to further develop its expertise in analysing performance and in presenting the findings.

Thus there was a clear indication that the efforts of the branch would be most productive in the areas of improving control of resources and measuring operating performance. Processes for identifying Capital Requirements had already been introduced to the branch. The major effort in introducing the corporate planning concepts, was, therefore, in relation to extending resource control and measuring operational performance.

MEASURING OPERATIONAL PERFORMANCE

The operating branch has always measured its operating performance to ensure that operating services are performed efficiently. The contribution of the corporate planning approach has been to trigger a review of existing systems and to establish whether they adequately reflect effectiveness (contribution to corporate achievement) as well as efficiency (cost effectiveness). The review identified existing reporting systems, the information they provided and how it was being used. The need for a two-tier system of measures was also established. At branch level measures of branch contribution to corporate achievement were needed. At line level measures were needed that would indicate whether branch actions were producing the desired results. If not the measures would need to point to the problem areas requiring attention. It was envisaged that historical data would be used as it was judged that these would be sufficiently timely to direct attention to trouble spots.

The approach to measuring the performance of the branch involved three steps:

- . Identifying the resources under branch control.
- . Documenting current procedures for controlling the resources and for showing how efficiently and effectively they were being utilised.
- . Reviewing with the person responsible for controlling each particular resource the practicability of improving the process in terms of: better data faster and cheaper; more effective communication of information; discarding of unnecessary data collection.

Figure 2 contains a checklist of the resources used by the branch and the types of performance measures being developed. Progress has been made in all but two of the resource areas nominated. The two exceptions are Labour and Trains. Procedures for measuring these resources are currently under review.

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The approach is best illustrated by the following examples:

Brakevan Performance

A brakevan is a railway vehicle, attached to every train, in which the Guard travels. The role of the guard is to ensure the safety of the train in event of an emergency i.e. derailment, accident etc. The replacement cost of a brakevan is roughly \$80,000 making the brakevan a not inexpensive piece of equipment.

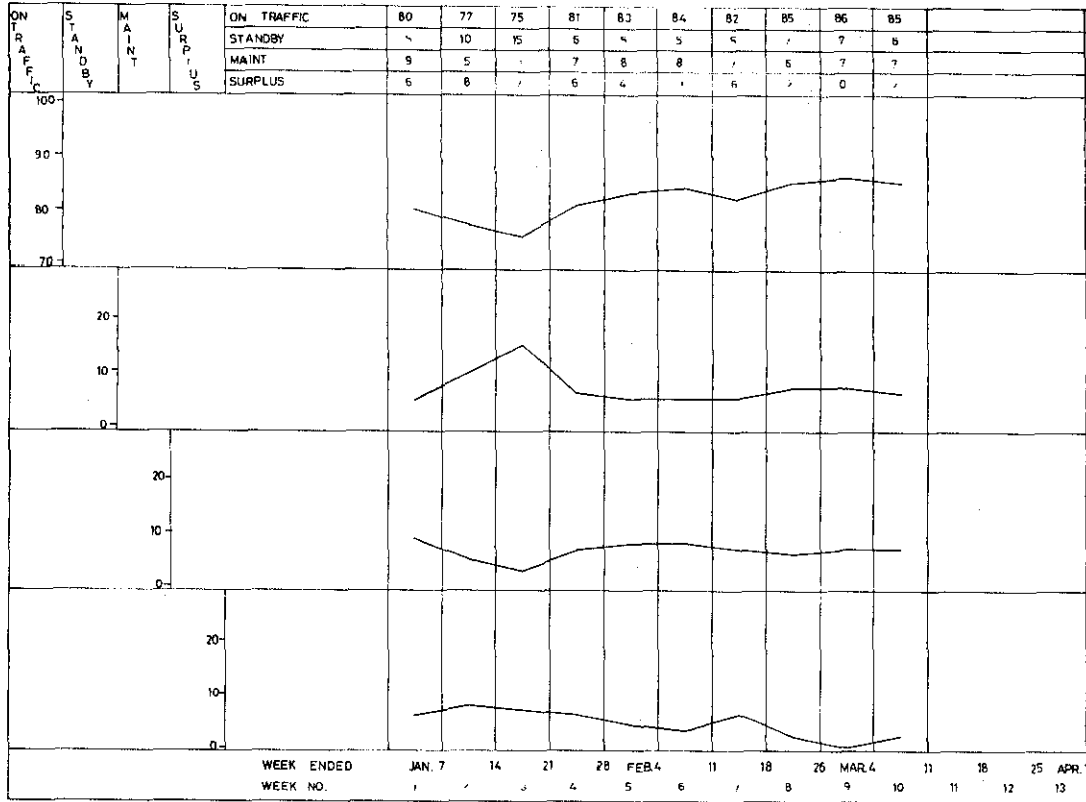
Westrail now operates about 150 general purpose brakevans. Assessments of minimal fleet size to meet requirements had been undertaken in the past. However changes in the traffic task and in operational methods meant that these assessments were judged not to be of sufficient accuracy to meet management requirements.

In 1976 the currently employed brakevan control system was established with the following principles and method:

- 1.. The Westrail network was divided into 'brakevan districts' each district being controlled by a 'brakevan depot'.
- 2.. Each 'brakevan depot' prepared a plan of deployment for general purpose brakevans.
- 3.. After the proposed utilisation was approved by a central controller additional units were allocated for maintenance and other contingencies.
- 4.. Each brakevan depot operated autonomously with the allocated units at their disposal. However, details of utilisation for the previous day were reported to a central location.
- 5.. Brakevans were identified by individual vehicle number and by location and status.
- 6.. The control centre compared actual and planned utilisation of brakevans at the respective depots.
- 7.. Imbalance of brakevans or other factors such as seasonal district peak tasks were the signals for re-location of brakevans by the control centre.
- 8.. A progressive report of brakevan utilisation was maintained. Figure 3 is an example.

NUMBERS HAVE BEEN STANDARDISED TO ADD TO 100

QUARTER - 1 JAN. 78 TO 1 APR. 78



WESTRAIL 'Z' CLASS BRAKEVAN FLEET
UTILISATION TABLE AND GRAPH
ANALYSIS OF DEMAND ON PEAK DAY OF EACH WEEK

FIGURE 3

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The information obtained from implementing this control system will lead to the establishment of a replacement programme on a proved fleet size. Furthermore, maintenance resources which had been committed to an aged and redundant segment of Westrail's rolling stock could be directed to essential revenue earning vehicles.

This was an example of introducing a control system that provided accurate and timely information which was used to identify more precisely resource requirements and to improve the utilisation of the existing fleet.

Wagon Performance

Westrail's wagon fleet numbers in excess of 11,500 vehicles. A small number of wagons, the bulk commodity carriers, carry a large percentage of the annual tonnage and are closely controlled in their movements. The fleet of general purpose wagons has a mixed task and, therefore, are more difficult to control. Allocation difficulties are also experienced with specific wagon types which are in short supply (oil tankers, for example).

The benefits derived from the brakevan control system indicated that improvements in wagon control procedures would also be worthwhile.

Thus impetus was given to the implementation of a wagon control system. Still in its developmental stage the control system is described at Figure 4. The following features describe the system:

1. The general wagon fleet was grouped by wagon classes of similar characteristics.
2. The wagons at all locations and in transit were identified including their status (refer to Figure 5 for an example) at 0500 hours each day.
3. Wagon information was reported to district offices.
4. District offices collated the data transmitting it to a central control office by 0800 each day.
5. At the central office wagon information was summarised by location and status.
6. The same information concerning wagons was available to the respective stations, district offices and the central control office.
7. Deployment of wagons was arranged on the basis of the daily wagon data.

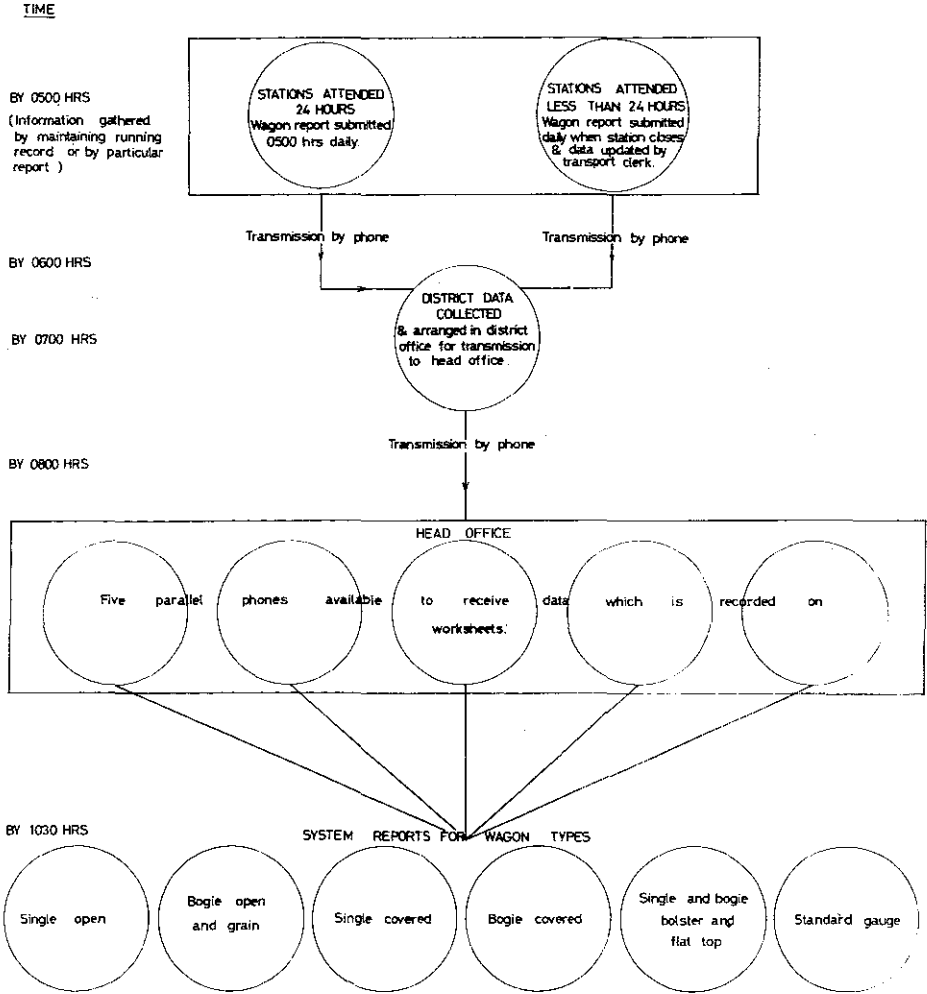


FIGURE 4
WESTRAIL WAGON CONTROL SYSTEM

A. ON TRAFFIC:

1. In Workshops
2. Ordered
3. Loading
4. In Transit
5. Transshipping
6. Waiting to Unload
7. Red carded
8. Other - Any reason causing a wagon to be in use or waiting to be used.

B. OFF TRAFFIC:

1. When the wagon has been stowed and is waiting and ready to be used.

C. TURNROUND TIME:

Turnround time for livestock wagons will not be reported as there is already a system for expediting each livestock transit. For this reason turnround time for livestock wagons is controlled in the best available degree and extended transit times is not a factor in livestock wagon utilisation.

D. REPORT:

Topics covered are to include the following:

1. Fleet shortage/surplus and reasons such as known causes of demand variation.
2. Suggest ways to overcome shortages or use surplus capacity.

FIGURE 5

DEFINITION OF TERMS FOR LIVESTOCK WAGONS

8. Completeness of the wagon statistics was obtained by comparing the number of each wagon group located each day with the number of wagons in the fleet. Accomplishment of between 85% and 95% of the total general wagon types was achieved.

The system has been in operation only a few months. However at this time improved wagon utilisation has already been achieved in identifiable areas of operation. Westrail now has a firm basis for collecting rolling stock control information using relatively simple methods. The authors are convinced that more effective utilisation of the wagon fleet will result.

THE IMPACT ON THE BRANCH OF THE CORPORATE PLANNING EFFORT

The process of introducing the concepts of Corporate Planning to the operating branch is an ongoing one. Significant progress has been achieved, yet much remains to be done. The influence on the branch of the corporate planning effort is difficult to assess. At best it is subjectively judged, by the authors and others. However some elements are clear cut. The problems to be overcome have been identified and the effect of the process on Branch Structure and Information Systems can be readily determined.

The difficulties encountered when introducing corporate planning are common to many organisations (1) and the Westrail Operating Branch is no exception. Major problems arise from the historically derived structure of the organisation and from the fact that Westrail is considered by many to be solely a public service institution. This makes it difficult to assign fiscal responsibility to individuals down the line in the management hierarchy.

Branch structure (in Head Office) is being changed to place even more emphasis on obtaining effective and efficient utilisation of resources. There is a move to more centralisation of information and control. Thus:

Although new information requirements had been demanded probably as few as three new positions were created. This was possible by replacing rather than superimposing on old systems and the change of emphasis on the importance of tasks to concentrate on identification and utilisation of resources.

1 Steiner and Schollhammer (1975) "Pitfalls in Multi-national Long Range Planning" Long Range Planning April 1975.

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Objective and quantitative evaluation of the employment of resources has led to marked savings (as with brakevans).

As part of the introduction of new reporting systems, all existing information systems were examined. People were encouraged to eliminate operational reports that did not stimulate a positive action. Measures of performance were prepared that compared actual and planned achievements. Where possible reasons for performance variation had to be indicated.

In summary, the Corporate Planning Approach has unified Branch efforts towards achieving the common corporate goal. Information systems, relating to rolling stock utilisation, have been improved leading to more effective performance.

CONCLUSION

A basic responsibility of the operating branch is to ensure that the services for which it is responsible are being provided as effectively and efficiently as possible. Through applying the concepts of corporate planning the operating branch has directed its efforts to improving its methods of performance measurement. This will help to ensure that the means exist to help managers in the branch to measure the extent to which they are contributing to both Branch and Corporate Objectives.

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