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**Studies in Management and Accounting for the**

# **FOREST PRODUCTS INDUSTRIES**

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**Information Systems Planning  
in Weyerhaeuser Company**

by E. M. Baker

- Lack of computer application development or enhancements to meet user's needs.
- The majority of the current application systems were 15 to 20 years old. The businesses and operating units have changed significantly in the last 15 years but the supporting applications had not.
- As a result of those two previous issues, the Region users did not look at the Region computer resources as a viable tool for providing information for business decisions.
- There was little emphasis placed on having the various Region computers communicate with each other.
- The Region lacked an information systems plan to keep management informed and guide the Region in terms of computer hardware technology and application systems software.

In order to address the Region issues and recognizing that a business-by-business systems plan was not complete, interim strategies were developed until a detailed comprehensive plan was created.

Three basic strategies were established for the Willamette Region:

1. Evolve from centralized data entry to interactive data entry from terminals located within the various Region operations, i.e. presently all weigh slips are sent to the Region office for entry versus the chip weigh station having a terminal to input data on each load of chips. This strategy provides for single entry of data by people familiar with the operations with ability to edit, test and correct data, create daily operating statistics and reports from the terminal.
2. A strategy to provide automated linkages between systems. This eliminates duplicate entry of data into different systems, provides for sharing files between systems and reduces multiple handling of paperwork.
3. A strategy to develop a 3-5 year systems development and implementation plan with a 18-month action plan. The plan is to provide a comprehensive road map for information systems within the Region with recommendations for hardware acquisitions, network communications plan and support/maintenance plan and coordination.

Each of these strategies is planned to provide the Region with accurate, reliable, timely information upon which to base business and operating decisions.

## APPLICATION SYSTEMS PLANNING PROCESS

It has to be emphasized that this planning process when completed produces a document designed to aid in making systems decisions, but it is not an application design document for a specific program or programs. It is intended to provide a comprehensive framework of the systems environment within the business or Region and will be updated on an annual basis.

The application planning process for Weyerhaeuser has a four-phased planning approach which describes in detail:

- The tasks to be performed in each phase.
- The mechanics in executing the tasks with suggested aids.
- The logic and interrelationship between the four phases of planning.

The following is a brief outline of the four phases.

### A. Phase I—Planning Environment

The purpose of Phase I is to develop and document an understanding of the operating environment of the business or Region for which the plan is developed.

Key elements of Phase I are:

1. Defining the scope of the plan—establish well-defined boundaries, i.e. process control computers will be outside the scope of the plan but all business computers will be within the plan.
2. Setting a time schedule, completion date, and identifying members for planning team.
3. Identify the basic functions and responsibilities of the business and the managers responsible for each function.
4. Interview the managers responsible for the major functions of the business to develop a list of information sources (present reports) and problems associated with this information.

Examples of information problems:

- Excessive time and manual effort for reporting.
- Lack of exception reporting.
- Difficult to analyze trends.
- Reports not in needed format.
- No ad hoc or flexible reporting capability.
- Reconciliation difficulties and unnecessary data duplication

## **B. Phase II— Information Systems Requirements**

The purpose of Phase II is to identify the information requirements of the business unit. This phase includes the existing and future relationships between business functions and present application systems.

Key elements of Phase II are:

1. Develop current information flows between the business functions, including information both internal and external to the business unit (both manual and automated information flow).
2. Develop System Requirements—by using the information from the interviews of managers and present information flows between functions, and development target system requirements.

## **C. Phase III — Requirements Analysis**

The purpose of Phase III is to analyze existing information systems and to evaluate the effectiveness of those systems in satisfying the requirements identified in Phase II.

Key elements consist of:

1. Describe existing systems—describe each system that supports the business, documenting the inputs and outputs, interfaces with other systems, and any problems or deficiencies.
2. Identify problems and desirable changes with the existing systems in relation to desired capabilities and operating efficiency, and problems with current computing technology support for the business.
3. Identify potential changes and assess alternatives, costs, benefits and risks.

Cost should include staff, computing, and other charges, for both development and production support, including hardware expense.

Benefits should include measurable savings, in dollars and staffing, return on investment, as well as qualitative gains.

Risks should include the dollar and labor investment required; the calendar time required; the dependencies on other organizations and systems; newness of technology and knowledge and experience of the persons involved.

## **D. Phase IV — Proposed Plan of Action**

The purpose of Phase IV is to provide an action plan to implement the recommendations and priorities contained in Phase IV.

As business or Regions complete their total information system plan they will naturally develop different priorities and recommendations to be part of their action plan, but at least three basic "deliverables" will result:

1. A business or Region technology plan which should standardize its approach to computing and assuring the capabilities of communication between computers.
2. A business or Region application systems project plan which addresses the total needs and proposes a rational strategy for implementing the proposed changes.
3. A budget plan—a budget is prepared to chart the costs related to sustaining the current systems and the incremental cost for additional information processing systems. This budget plan is essential in management's decision making process to determine the future direction for information systems.

## **SUMMARY**

The computer marketplace covers literally thousands of hardware and software products. Hundreds of new or improved products come on the market every year, and all purport to be the panacea of all earthly problems. Hardly any of these computer manufacturers can communicate well with each other, therefore it was essential that Weyerhaeuser stabilize and then standardize its approach to computing.

A basic assumption was inherent in the Willamette Region's decision to develop an Information Systems Plan—that computers and data are expensive, valuable resources which need to be effectively and efficiently managed and controlled. Through the Information Systems Plan which is reviewed and updated annually the Region has developed a coordinated approach for future systems and the management of those systems.

### **Monographs published to date:**

“The Rush to LIFO: Is it Always Good for Wood Products Firms?” issued in December 1974 and published in condensed form on the April 1975 issue of Forest Industries. This monograph was revised and reissued in January 1976.

“Accounting and Financial Management in the Forest Products Industries: A Guide to the Published Literature,” issued in June 1975. (A supplement to this monograph was issued in March 1977 and January 1981).

“A Decision Framework for Trading Lumber Futures,” issued in October 1975.

“Capital Gains Tax Treatment in the Forest Products Industries,” issued June 1976.

“Measurement Difficulties in the Log Conversion Process,” issued June 1976.

“Capital Budgeting Practices in the Forest Products Industry,” issued March 1978.

“A Reporting and Control System for Wood Products Futures Trading Activities, issued July 1978.

“Selected issues of Financial Accounting and Reporting for Timber,” issued November 1978.

“Pool Log Transfer System,” issued August 1979.

“Fundamentals of Financing Major Timber Acquisitions” issued February 14, 1980.

“LIFO Inventories in the Forest Products Industry,” issued July 1980.

“Accounting Treatment for Wood Products Futures Trading Activities,” issued October 1981.

“Accounting Controls for a Forest Products Firm,” issued January 1981.

“Log Inventory Controls,” issued April 1981.

“A Reporting and Planning System for a Wood Products Operations,” issued November 1981.

“Boise Cascade’s Productivity Improvement Program,” issued January 1982.

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This series of monographs is published by the School of Business, Oregon State University, to disseminate information, research findings, and informed opinion about current problems and opportunities in the management of, and accounting for, enterprises in the forest and wood products industries.

Additional information about these Studies may be obtained from the program director, Dr. Robert E. Shirley, at the School of Business, Oregon State University, Corvallis, Oregon 97331.

