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### **"Prescription for Successful MRP II Implementation: Complementary Changes in Departmental Roles and Relationships"**

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Converting, Inc. is a second-generation, family-owned manufacturer of disposable table top products used in the home and away-from-home parties and celebrations. Typical customers are small party shops and larger retailers such as K-Mart. Customers are located in the U.S. and sixteen other countries. During a five year period up to 1992, sales increased at an annual rate of 18.5%. Knowing that incredible growth can cripple an organization, Converting's management recognized that operational changes were needed to deal with the demands of increased inventory space, resource capacity, and expanded product offerings. The previous method of dealing with growth was to merely add more warehouse space.

The initial efforts in dealing with this growth started in 1992 and consisted of operational interviews and documentation of all internal procedures and policies. Converting's CFO and Data Processing Manager undertook these efforts. Organizational planning and communication were the most salient deficiencies noted. Planning activity within Converting consisted of an annual meeting where representatives from all of the major departments, marketing, sales, manufacturing, and purchasing converged to form a plan for the upcoming year. This annual event was the only time during the year that any type of forecasting was attempted. Interdepartmental communication for the balance of the year was minimal or nonexistent. As a result, Converting maintained its competitive advantage of shipping within 72 hours of order receipt by maintaining excessive inventory. The internal analysis also revealed that Converting's very "mechanical" business process consisted of twenty-five steps, including redundancies in the inventory process.

After the primary problems were identified, upper management recognized that Converting needed a long-term solution to maintain its goals of growth, quality, and service. An external consultant assisted in the transition by acting as "the change agent." Educating management was the first step, including overviews of formal business planning and Manufacturing Resource Planning (MRP II). At the conclusion of the education sessions, Converting's management group voted unanimously to adopt MRP II as its long-term solution. MRP II, a comprehensive information system, assists managers in manufacturing, purchasing, marketing, finance, and engineering to develop and monitor an overall business plan while recognizing sales objectives, manufacturing capabilities, inventory capacities, and cash flow constraints.

The concepts of MRP II were very new to the manufacturing group and thus management sent the vital members of this group to a series of courses conducted by the American Production and Inventory Control Society (APICS) on the details and theory of MRP II. Converting management considered this education an excellent preparation for the upcoming implementation stages. The primary subjects presented by APICS included:

- Development of the Request for Proposal
- Software demonstrations
- Software selection
- Implementation
- Problem resolution

The subjects listed above also represent the five remaining phases of implementing MRP II. During Request for Proposal (RFP) development, management chose to utilize its current hardware, an IBM AS/400 system. Literature from ten software vendors was obtained and reviewed. From the original ten, three were selected as potential providers and sent RFPs. The returned proposals were analyzed and scored. One proposal failed to meet Converting's needs. The remaining two vendors were invited to Converting to conduct software demonstrations. Demonstration evaluation at Converting was not only performed by the appointed software evaluation team, but by every member of the future implementation team.

The main focus of software selection isolated three prominent factors: (1) simplicity, (2) straight forwardness, and (3) flexibility. The software selected must not only match Converting's business process, but a "people fit" was also required. Harris Data Systems met both requirements and provided sufficient system support as well. Prior to selecting Harris, however, management chose to let the implementation group vote on whether or not to go forward and whether or not they thought that Harris met its needs. The group voted unanimously to select Harris.

During the next step, an aggressive and reasonable phase implementation plan was developed. The first phase included implementation of the planning modules. The second phase included the implementation of the execution modules to organize the data in a more usable form. Implementation of "cycle counting" was also included in the second phase. The third and final phase of implementation consisted of adopting RF data collection procedures on the shop floor by the work force. RF data collection reduced redundancies within the inventory process, increased accuracy of inventory records, and eliminated delay by as much as 27 hours.

Successful adoption of MRP II eliminated Converting's problems of insufficient planning and communication. With MRP II, each department accessed required information immediately rather than with a previous average delay of sixteen hours. The system also permitted Converting to sustain its competitive advantage of reduced service times. Previously, 97 % of orders were filled in 72 hours, now 98% are completed in 48 hours. In addition, Converting was able to continue its transition from a small-organization to a medium-sized organization without increasing its inventory capacity.

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