Chapter VII

The Conversion Cycle

Conversion Cycle Activities

The conversion cycle spans a range of activities — product design, production planning and control, and cost accounting. Product design is a collaborative activity and can involve a number of specialists from different functional areas. Production planning and control involves planning production by optimizing factors such as customer demand, availability of materials and labor, capacity constraints, distribution constraints and storage constraints, to mention a few. Planned manufacturing activities are carried out by processing raw materials though a combination of machines and humans and creating a finished product. The cost accounting system provides data useful for evaluating production function, determining product costs and generating information for inventory valuation for external reporting purposes.

The twin objectives of quality and cost reduction have been a holy grail for manufacturing organizations. The last few decades have seen a number of methodologies, such as material requirements planning (MRP), manufacturing resource planning (MRP II), Just in Time (JIT), Robotics and Six Sigma, which strived to achieve these objectives. The conversion cycle is most visible in manufacturing organizations; however, the service industry has also benefited from conversion cycle concepts and theories. The conver-
Exhibit 1. The conversion cycle

![Diagram of the conversion cycle]

The conversion cycle interfaces with different functions and departments in the organization, such as purchasing, marketing and finance. Initial efforts for quality and cost management focused on connecting different departments and streamlining internal operations of organizations.

As organizations succeeded in squeezing costs from internal operations and improved product quality, their attention turned to activities and entities external to the organization. Suppliers who supplied raw materials, carriers who moved goods, distribution networks who distributed goods and customers who fueled demand; all of these external entities came under intense scrutiny. The field of SCM that comprehensively deals with all these activities was born in the 1970s, but gained prominence during the 1990s. SCM deals with the entire gamut of sourcing, production planning and control, and distribution activities to begin with! SCM, a complex field, has many definitions, many interpretations, many perspectives and no single departmental owner.

The role of accounting in the production cycle has also changed over the years. Initial involvement of accountants with the conversion cycle was primarily in determination of product costs and inventory valuation. Changes in the conversion cycle caused changes in cost accounting systems. Accountants grappled with devising measurements that align incentives of the production department with corporate objectives. Cost accounting systems evolved to measure activities (Activity-Based Cost accounting, or ABC), product costs at the design stage (target costing), quality of products and defect rates, and effects on inventory due to JIT philosophy, among other things. Financial measurements for determining relative profitability of products and advising on product mix, product pricing and special decisions such as make or buy have also seen accountant involvement.

So what are exact changes due to digital accounting in the production area, especially as they intersect accounting? The Internet has been used as an enabler or facilitator in implementing accounting processes; however, the Internet has not been used to substantively alter cost accounting processes in the conversion cycle. However, there has been a number of significant developments in managing the production function due...