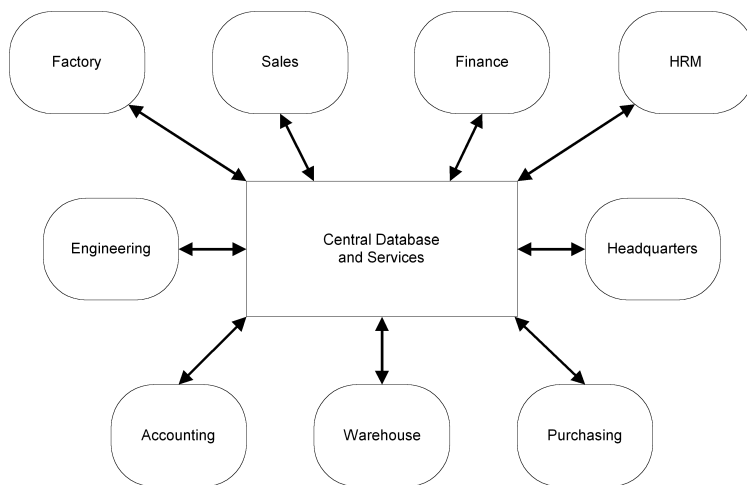


## Enterprise Resource Planning System

“As the name suggests, the objective of [ERP] systems is to provide seamless, real-time information to all employees who need it, throughout the entire organization (or enterprise). ERP extends the idea of a central database to all areas within an organization” (Meredith and Shafer, p. 278). ERP is the newest resource planning system to undergo investigation by numerous manufacturing companies. The ERP system is built upon computer client/server architecture. Information from all aspects of the company—including sales, finance, human resources, accounting, production, engineering, etc.—is stored on a central database. Functional groups use software that pertains to their duties within the organization but store their data in the same location as everyone else. Figure 2.7 shows an example ERP system.



**Figure 2.7:** Typical ERP system. *Source:* Meredith and Shafer 1999, p. 278.

“Clearly, this approach eliminates the incompatibility created when different functional departments use different systems, and it also eliminates the need for people in different parts of the organization to reenter the same information over and over again into separate computer systems” (Meredith and Shafer 1999, p. 279).

Resource planning systems provide manufacturers with a competitive advantage. MRP, MRP II, and ERP systems help manage both increasingly complex product designs and decreasing product-to-market cycle times. In fact, a resource planning system for residential construction should deliver two needed interactions. First, an MRP, MRP II, or ERP system will help develop the information flow between independent-demand (home sales) and dependent-demand items (BOM). A parts-explosion process for home building will enable a detailed take-off, material ordering, and scheduling process based on customer orders. Second, a resource planning system will enable increased communication between entire business units. Production must be able to communicate with human resources, marketing, sales, and management teams. Alignment among these usually independent functional groups will be the key to increasing productivity, cost-effectiveness, and quality in the construction industry. When home sales, a customer-driven activity, can drive marketing, production, and accounting functions, savings in company overhead will arise. This change will lead to customer savings in the long run.