PINE VALLEY FURNITURE COMPANY
BACKGROUND

PVF manufactures high-quality wood furniture and distributes it to retail stores throughout the United States.

Its product lines include dinette sets, stereo cabinets, wall units, living room furniture, and bedroom furniture. In the early 1990s, PVF's founder, Alex Schuster, started to make and sell custom furniture in his garage. Alex managed invoices and kept track of customers by using file folders and a filing cabinet. By 1994, business expanded and Alex had to rent a warehouse and hire a part-time bookkeeper.

PVF's product line had multiplied, sales volume had doubled, and staff had increased to 50 employees. By 2000, PVF moved into its third and present location. Due to the added complexity of the company's operations, Alex reorganized the company into the following functional areas:

- Manufacturing, which was further subdivided into three separate functions—Fabrication, Assembling, and Finishing
- Sales
- Orders
- Accounting
- Purchasing

Alex and the heads of the functional areas established manual information systems, such as accounting ledgers and file folders, which worked well for a time. Eventually, however, PVF selected and installed a network server to automate invoicing, accounts receivable, and inventory control applications.

When the applications were first computerized, each separate application had its own individual data files tailored to the needs of each functional area. As is typical in such situations, the applications closely resembled the manual systems on which they were based. Three computer applications at PVF are depicted in Figure 3-1: order filling, invoicing, and payroll. In the late 2000s, PVF formed a task force to study the possibility of moving to a database approach. After a preliminary study, management decided to convert its information systems to such an approach. The company

upgraded its network server and implemented a centralized database management system. Today, PVF has successfully deployed an integrated, company-wide database

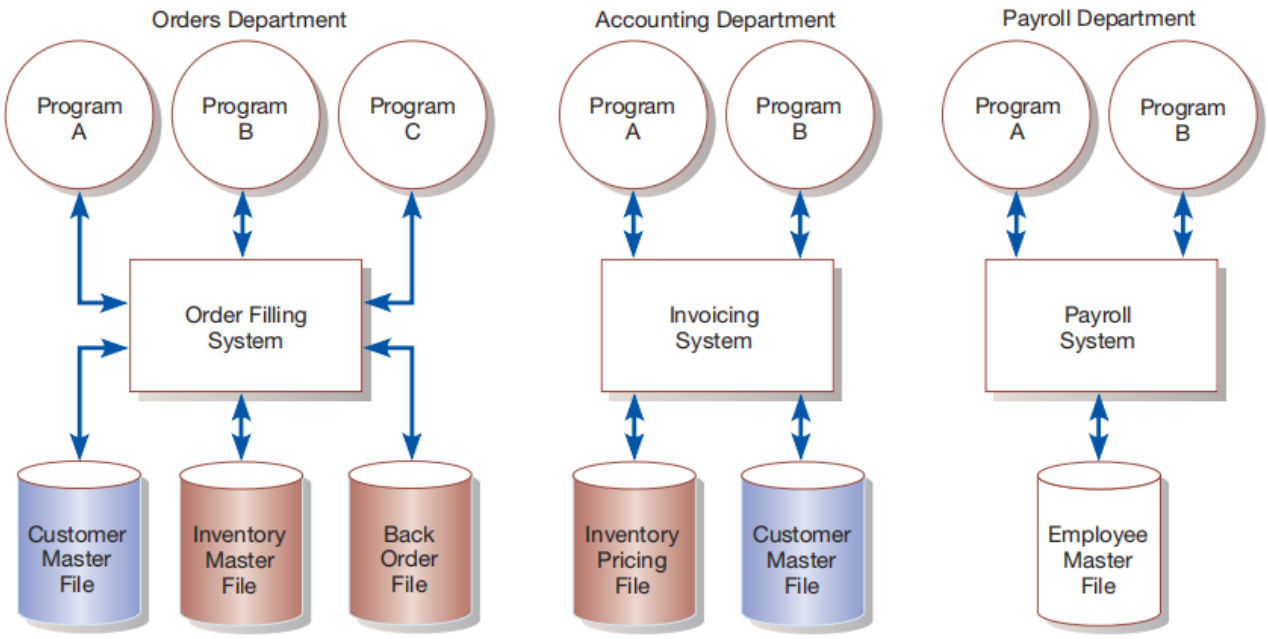

FIGURE 3-1
Three computer applications at PVF: order filling, invoicing, and payroll

(Hoffer, Jeffrey A.; Venkataraman, Ramesh; Topi, Heikki, Modern *Database Management*, 11th Ed., ©2016, p. 8. Reprinted and electronically reproduced by permission of Pearson Education, Inc., New York, NY.)

and has converted its applications to work with the database. However, PVF is continuing to grow at a rapid rate, putting pressure on its current application systems.

The computer-based applications at PVF support its business processes. When customers order furniture, their orders must be processed appropriately: Furniture must be built and shipped to the right customer and the right invoice mailed to the right address. Employees have to be paid for their work. Given these tasks, most of PVF's computer-based applications are located in the accounting and financial areas.
The applications include order filling, invoicing, accounts receivable, inventory control, accounts payable, payroll, and general ledger. At one time, each application had its own data files. For example, there was a customer master file, an inventory master file, a back-order file, an inventory pricing file, and an employee master file. The order filling system used data from three files: customer master, inventory master, and back order. Today, however, all systems are designed and integrated through a company-wide database in which data are organized around entities, or subjects, such as customers, invoices, and orders.

PVF, like many firms, decided to develop its application software in-house; that is, it hired staff and bought the computer hardware and software necessary to build application software suited to its own needs. (Other methods used to obtain application software were discussed in Chapter 2.) Although PVF continues to grow at a rapid rate, market conditions are becoming extremely competitive, especially with the advent of

the Internet and the Web. Let's see how a project manager plays a key role in developing a new information system for PVF.

In the rest of this section, we describe the process followed by Juanita Lopez and Chris Martin during the development of PVF's Purchasing Fulfillment System. Juanita works in the Order department, and Chris is a systems analyst.

Juanita observed problems with the way orders were processed and reported:

Sales growth had increased the workload for the Manufacturing department, and the current systems no longer adequately supported the tracking of orders. It was becoming more difficult to track orders and get the right furniture and invoice to the right customers. Juanita contacted Chris, and together they developed a system that corrected these Order department problems.

The first **deliverable**, or end product, produced by Chris and Juanita was a System Service Request (SSR), a standard form PVF uses for requesting systems development work. Figure 3-2 shows an SSR for a purchasing fulfillment system. The form includes the name and contact information of the person requesting the system, a statement of the problem, and the name and contact information of the liaison and sponsor.

This request was then evaluated by the Systems Priority Board of PVF. Because all organizations have limited time and resources, not all requests can be approved.

Pine Valley Furniture
System Service Request

REQUESTED BY Juanita Lopez DATE October 1, 2020

DEPARTMENT Purchasing, Manufacturing Support

LOCATION Headquarters, 1-322

CONTACT Tel: 4-3267 FAX: 4-3270 e-mail: jlopez

TYPE OF REQUEST

[X] New System
[ ] System Enhancement
[ ] System Error Correction

URGENCY

[ ] Immediate – Operations are impaired or opportunity lost
[ ] Problems exist, but can be worked around
[X] Business losses can be tolerated until new system installed

PROBLEM STATEMENT

Sales growth at PVF has caused greater volume of work for the manufacturing support unit within Purchasing. Further, more concentration on customer service has reduced manufacturing lead times, which puts more pressure on purchasing activities. In addition, cost-cutting measures force Purchasing to be more aggressive in negotiating terms with vendors, improving delivery times, and lowering our investments in inventory. The current modest systems support for Manufacturing/Purchasing is not responsive to these new business conditions. Data are not available, information cannot be summarized, supplier orders cannot be adequately tracked, and commodity buying is not well supported. PVF is spending too much on raw materials and not being responsive to manufacturing needs.

SERVICE REQUEST

I request a thorough analysis of our current operations with the intent to design and build a completely new information system. This system should handle all purchasing transactions, support display and reporting of critical purchasing data, and assist purchasing agents in commodity buying.

IS LIAISON Chris Martin (Tel: 4-6204 FAX: 4-6200 e-mail: cmartin)

SPONSOR Sal Divarlo, Director, Purchasing

---------- TO BE COMPLETED BY SYSTEMS PRIORITY BOARD ----------

[ ] Request approved Assigned to
Start date
[ ] Recommend revision
[ ] Suggest user development
[ ] Reject for reason

The board evaluates development requests in relation to the business problems or opportunities the system will solve or create; it also considers how the proposed project fits within the organization's information systems architecture and long-range development plans. The review board selects those projects that best meet overall organizational objectives (we learn more about organizational objectives in Chapter 4.)

In the case of the Purchasing Fulfillment System request, the board found merit in the request and approved a more detailed feasibility study. A **feasibility study**, which is conducted by the project manager, involves determining if the information system makes sense for the organization from an economic and operational standpoint. The study takes place before the system is constructed. Figure 3-3 is a graphical view of the steps followed during the project initiation of the Purchasing Fulfillment System.