Management Information Systems
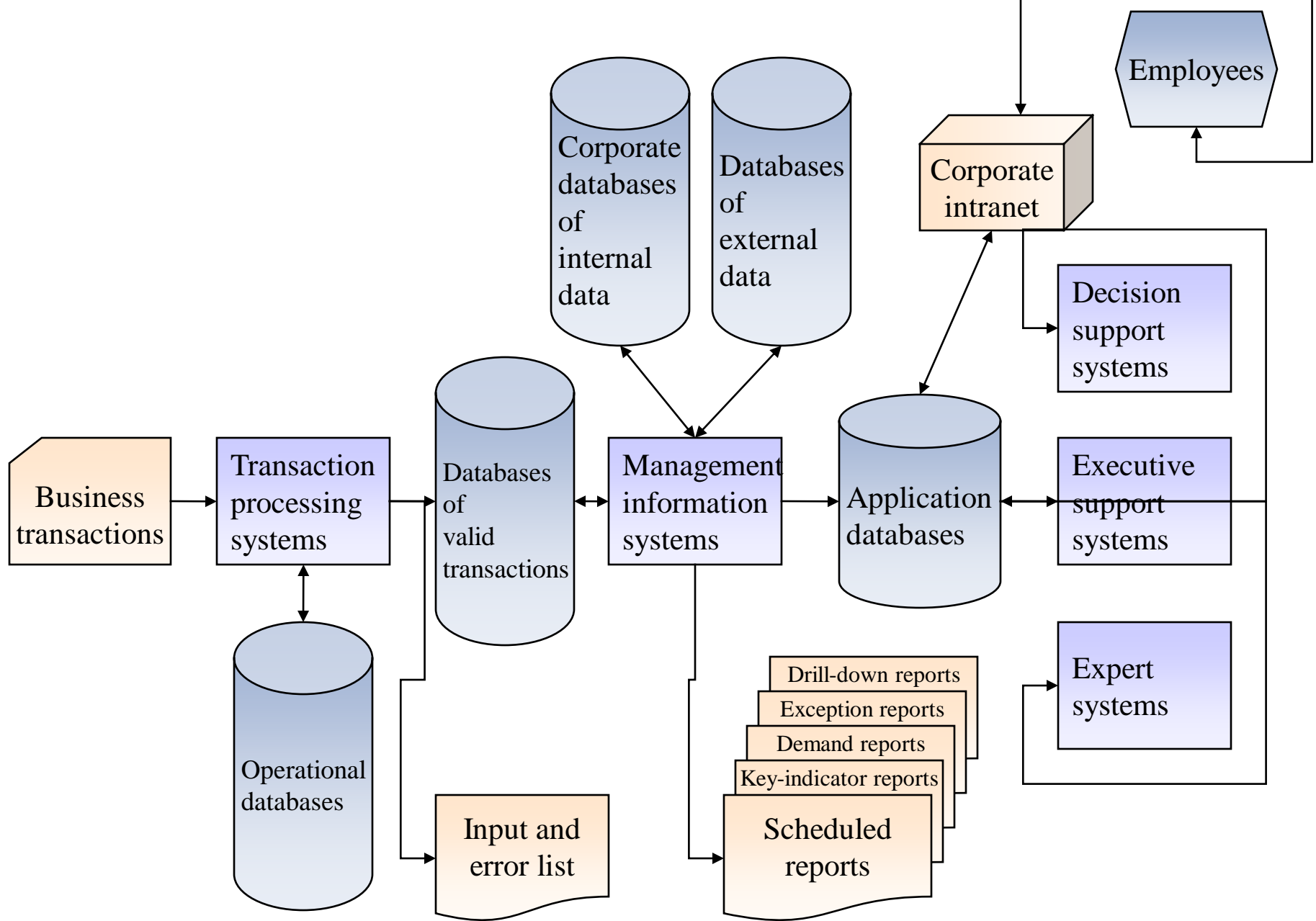
Management Information Systems (MIS)

❑ Management information system (MIS)

- An MIS provides managers with information and support for effective decision making, and provides feedback on daily operations

- Output, or reports, are usually generated through accumulation of transaction processing data

- Each MIS is an integrated collection of subsystems, which are typically organized along functional lines within an organization

Sources of Management Information

Schematic

Outputs of a Management Information System

❑ **Scheduled reports**
- Produced periodically, or on a schedule (daily, weekly, monthly)

❑ **Key-indicator report**
- Summarizes the previous day's critical activities
- Typically available at the beginning of each day

❑ **Demand report**
- Gives certain information at a manager's request

❑ **Exception report**
- Automatically produced when a situation is unusual or requires management action

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Scheduled Report Example

Daily Sales Detail Report						
						Prepared: 08/10/xx
Order #	Customer ID	Sales Rep ID	Ship Date	Quantity	Item #	Amount
P12453	C89321	CAR	08/12/96	144	P1234	$3,214
P12453	C89321	CAR	08/12/96	288	P3214	$5,660
P12453	C03214	GWA	08/13/96	12	P4902	$1,224
P12455	C52313	SAK	08/12/96	24	P4012	$2,448
P12456	C34123	JMW	08J/13/96	144	P3214	$720

Key Indicator Report Example

Daily Sales Key Indicator Report			
	This Month	Last Month	Last Year
Total Orders Month to Date	$1,808	$1,694	$1,014
Forecasted Sales for the Month	$2,406	$2,224	$2,608

Demand Report Example

Daily Sales by Sales Rep Summary Report	
	Prepared: 08/10/xx
Sales Rep ID	Amount
CAR	$42,345
GWA	$38,950
SAK	$22,100
JWN	$12,350

Exception Report Example

Daily Sales Exception Report – ORDERS OVER $10,000 Prepared: 08/10/xx						
Order #	Customer ID	Sales Rep ID	Ship Date	Quantity	Item #	Amount
P12453	C89321	CAR	08/12/96	144	P1234	$13,214
P12453	C89321	CAR	08/12/96	288	P3214	$15,660
P12453	C03214	GWA	08/13/96	12	P4902	$11,224
…	…	…	…	…	…	…
…	…	…	…	…	…	…

Outputs of a Management Information System

Drill Down Reports
Provide detailed data about a situation.

Earnings by Quarter (Millions)			
	Actual	Forecast	Variance
2ND Qtr 1999	$12.6	$11.8	6.8%
1st Qtr 1999	$10.8	$10.7	0.9%
4th Qtr 1998	$14.3	$14.5	-1.4%
3rd Qtr 1998	$12.8	$13.3	-3.0%

Etc. See Figure 9.2

Characteristics of a Management Information System

- ❑ Provides reports with fixed and standard formats
    - ▪ Hard-copy and soft-copy reports
- ❑ Uses internal data stored in the computer system
- ❑ End users can develop custom reports
- ❑ Requires formal requests from users

Management Information Systems for Competitive Advantage

❑ Provides support to managers as they work to achieve corporate goals

❑ Enables managers to compare results to established company goals and identify problem areas and opportunities for improvement

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MIS and Web Technology

❑ Data may be made available from management information systems on a company's intranet

❑ Employees can use browsers and their PC to gain access to the data

Functional Aspects

❑ MIS is an integrated collection of functional information systems, each supporting particular functional areas.
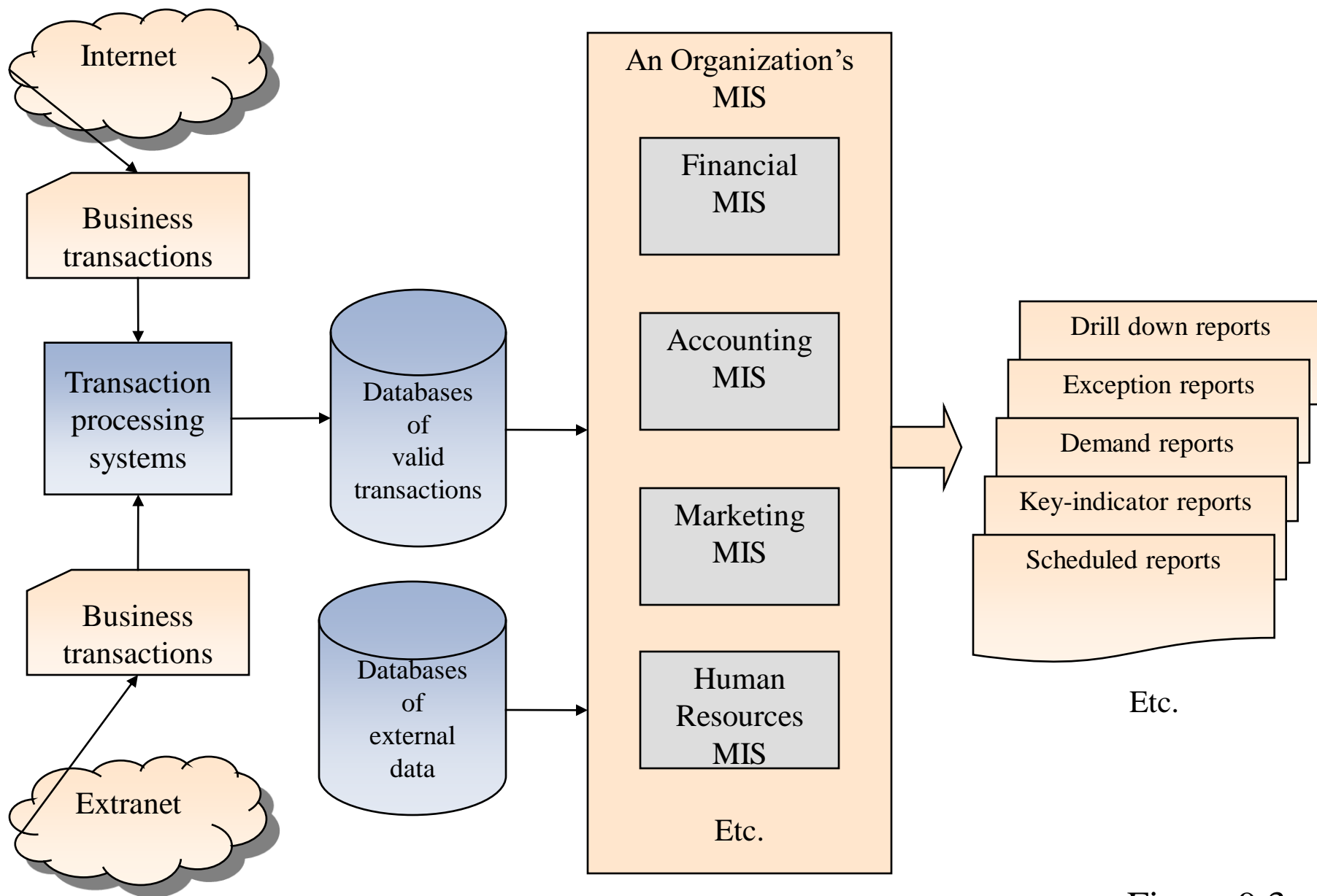
Schematic ➡

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Figure 9.3

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Financial MIS

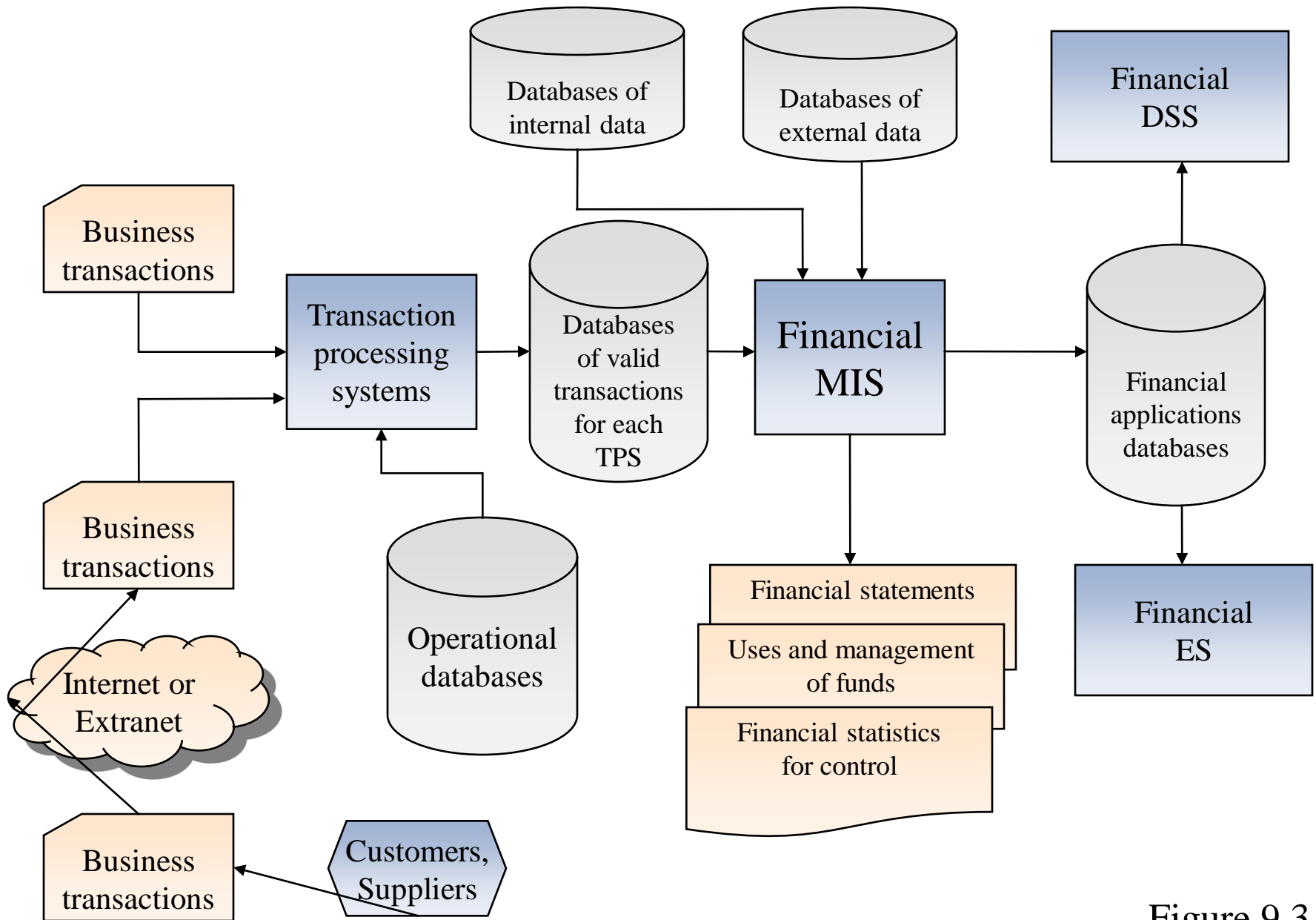❑ Provides financial information to all financial managers within an organization.

Schematic ➜

Figure 9.3

Inputs to the Financial Information System

❑ Strategic plan or corporate policies
- Contains major financial objectives and often projects financial needs.

❑ Transaction processing system (TPS)
- Important financial information collected from almost every TPS - payroll, inventory control, order processing, accounts payable, accounts receivable, general ledger.
- External sources
- Annual reports and financial statements of competitors and general news items.

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Financial MIS Subsystems and Outputs

❑ Financial subsystems

- Profit/loss and cost systems
- Auditing
- Internal auditing
- External auditing
- Uses and management of funds

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Manufacturing MIS
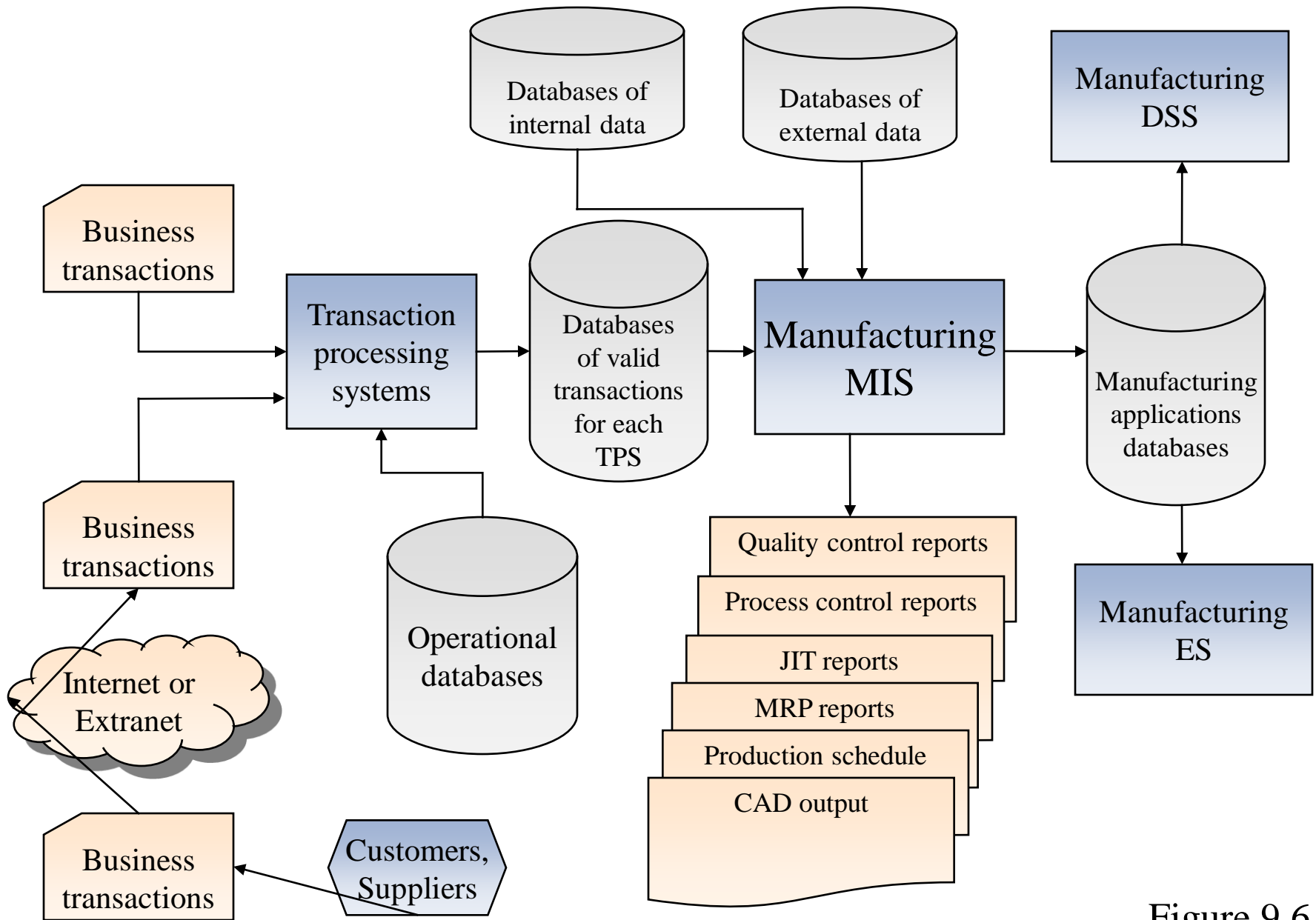
Schematic →

Figure 9.6

Information and Organizations

Inputs to the Manufacturing MIS

❑ Strategic plan or corporate policies.
❑ The TPS:
  ▪ Order processing
  ▪ Inventory data
  ▪ Receiving and inspecting data
  ▪ Personnel data
  ▪ Production process
❑ External sources

Manufacturing MIS Subsystems and Outputs

❑ Design and engineering

❑ Master production scheduling

❑ Inventory control

❑ Manufacturing resource planning

❑ Just-in-time inventory and manufacturing

❑ Process control

❑ Computer-integrated manufacturing (CIM)

❑ Quality control and testing

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Marketing MIS

❑ Supports managerial activities in product development, distribution, pricing decisions, and promotional effectiveness
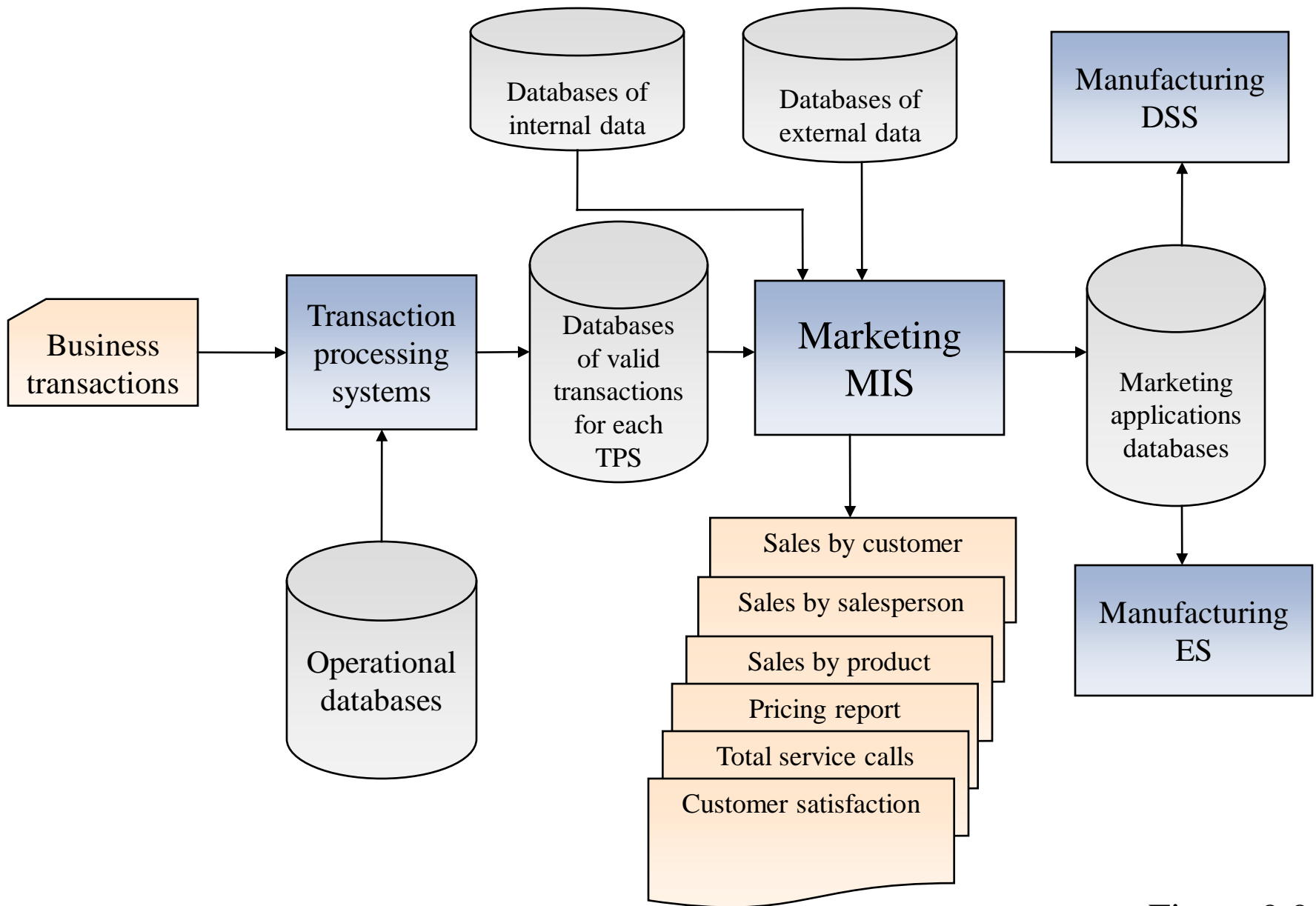
Schematic

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Figure 9.9

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Inputs to Marketing MIS

❑ Strategic plan and corporate policies

❑ The TPS

❑ External sources:

  ▪ The competition

  ▪ The market

Marketing MIS Subsystems and Outputs

❑ Marketing research

❑ Product development

❑ Promotion and advertising

❑ Product pricing

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Human Resource MIS

❑ Concerned with all of the activities related to employees and potential employees of the organization
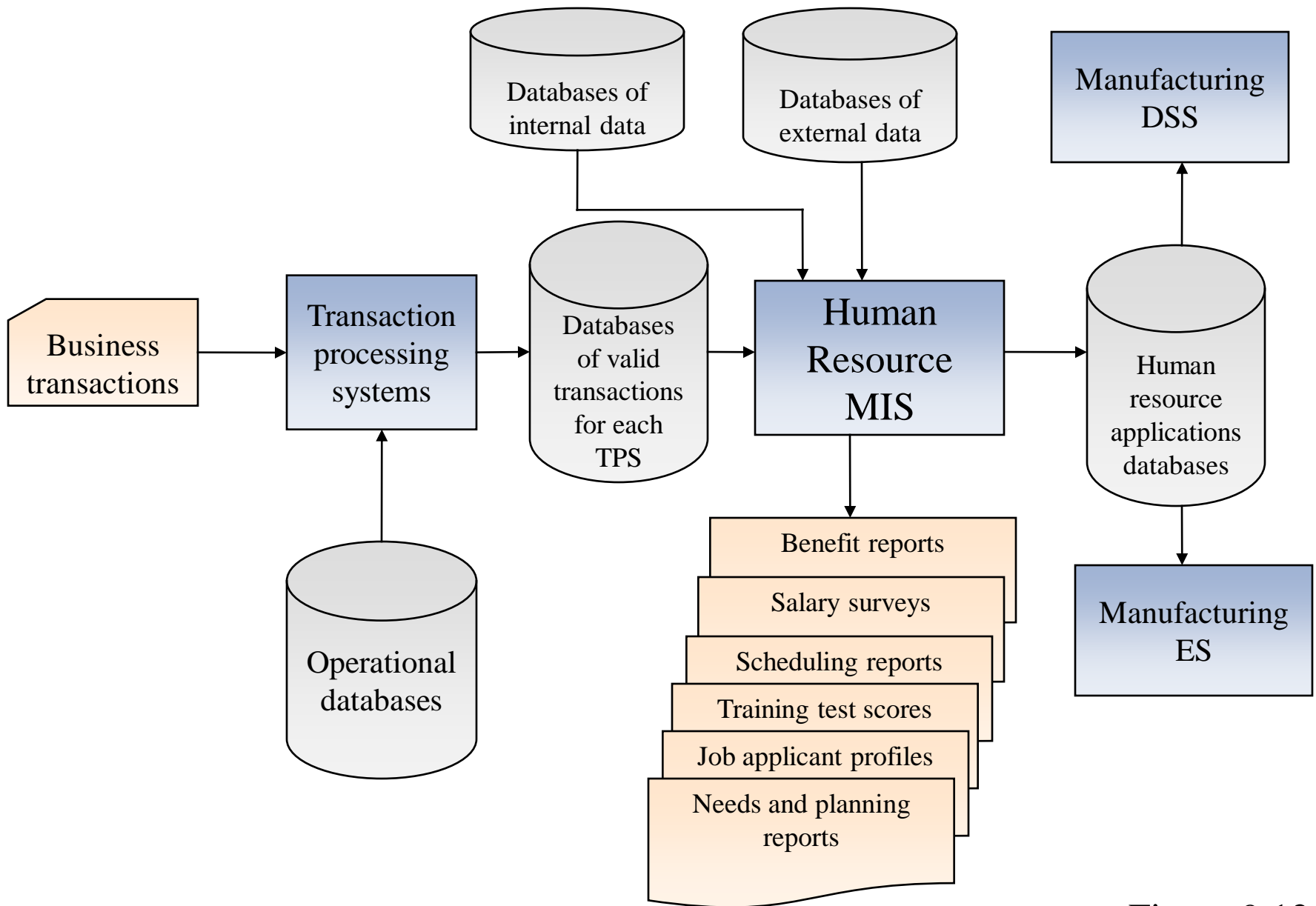
Figure 9.12

Information and Organizations

Inputs to the Human Resource MIS

❑ Strategic plan or corporate policies

❑ The TPS:

- ▪ Payroll data

- ▪ Order processing data

- ▪ Personnel data

❑ External sources

Human Resource MIS Subsystems and Outputs

❑ Human resource planning

❑ Personnel selection and recruiting

❑ Training and skills inventory

❑ Scheduling and job placement

❑ Wage and salary administration

Other MISs

❑ Accounting MISs

 ▪ Provides aggregated information on accounts payable, accounts receivable, payroll, and other applications.

❑ Geographic information systems (GISs)

 ▪ Enables managers to pair pre-drawn maps or map outlines with tabular data to describe aspects of a particular geographic region.

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End of Chapter 9

Chapter 10