The founders of Prime Restaurants Inc. (Prime) created a niche in the casual dining market in 1980 when they opened their first Casey's restaurant in Sudbury, Ontario. The focus was to provide good food at the right price so that restaurant-goers could still afford to go out for dinner in economic downturns, thereby buffering the restaurant from the effects of a changing economy. Since the first restaurant opened, the company has grown to include the well-known brands of Casey's, Pat & Mario's, East Side Mario's, Finn MacCool's, D'Arcy McGee's, Paddy Flaherty's, Bier Markt, and Tir nan Óg. With significant growth in the past decade, the Prime group of restaurants included about 154 locations in 2010. Some of these restaurants are corporate-owned, but the growth is due mostly to franchising. Prime has received many awards and honours for its work, including being named one of Canada's 50 Best Managed Companies for many consecutive years, the Pinnacle Award for Restaurant Company of the Year, the Ontario Restaurant News Restaurant of the Year award, as well as others.

A company doesn't grow this quickly, or this well, without having the right information available at the right time. Managerial accounting is a tool to help managers sort through mountains of data, decide what data are necessary, and make the best decisions possible using the data. This text will introduce you to many of the concepts used by those who will make managerial accounting decisions.

Source: www.primerestaurants.com

Introduction to Managerial Accounting

Learning Objectives

- **1** Identify managers' four primary responsibilities.
- **2** Distinguish financial accounting from managerial accounting.
- **3** Describe organizational structure and the roles and skills required of management accountants within the organization.
- **4** Describe the roles of the three professional accounting designations in Canada and use their ethical standards to make reasonable ethical judgments.
- **5** Discuss and analyze the implications of regulatory and business trends.
- **6** Describe a lean production system.
- **7** Describe and use the costs of quality framework.

As the Prime story shows, managers use accounting information for much more than preparing annual financial statements. They use managerial accounting (or management accounting) information to guide their actions and decisions, for example, when building a new restaurant. In this chapter, we will introduce managerial accounting and discuss how managers use it to fulfill their duties. We will also explore how managerial accounting differs from financial accounting. Finally, we will discuss the regulatory and business environment in which today's managers and management accountants operate.

What Is Managerial Accounting?

1 Identify managers' four primary responsibilities.

As you will see throughout the book, managerial accounting is very different from financial accounting. Financial accounting focuses on providing stockholders and creditors with the information they need to make investment and lending decisions. This information takes the form of financial statements: the balance sheet, income statement, statement of shareholders' equity, and statement of cash flows.

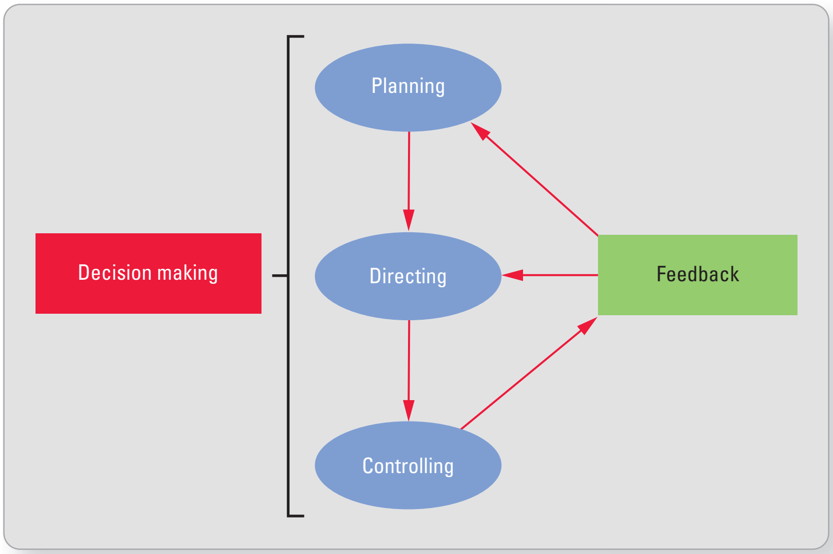
Managerial accounting focuses on providing internal management with the information it needs to run the company efficiently and effectively. This information takes many forms, depending on management's needs.

To understand the kind of information managers need, let us first look at their primary responsibilities.

Managers' Four Primary Responsibilities

Managerial accounting helps managers fulfill their four primary responsibilities, as shown in Exhibit 1-1: **planning**, **directing**, **controlling**, and **decision making**.

EXHIBIT 1-1 Managers' Four Primary Responsibilities



- Planning involves setting goals and objectives for the company and determining how to achieve them. For example, one of Prime's goals is to always use quality products and ingredients in order to keep customers coming back. One strategy for Prime to achieve this goal would be to establish good relationships with its suppliers. Prime's management team could incorporate new technology to improve communication between the restaurants and their suppliers. Managerial accounting translates plans such as these into budgets—the quantitative expression of a plan. Management analyzes the budgets before proceeding to determine if its integration plans make financial sense.
- Directing means overseeing the company's day-to-day operations. Management uses product cost reports, product sales information, and other managerial accounting reports to run daily business operations. Prime uses product sales data to determine which menu items are generating the most sales and then uses that information to adjust menus and marketing strategies.
- Controlling means evaluating the results of business operations against the plan and making adjustments to keep the company pressing toward its goals. Prime uses performance reports to compare each restaurant's actual performance against the **budget**, and then it uses that *feedback* to take corrective actions if needed. If actual costs are higher or lower than planned, management may revise its plans or adjust operations. Perhaps the

newly opened restaurants are not generating as much income as budgeted. As a result, management may decide to increase local advertising to increase sales.

- Management engages in decision making while it plans, directs, and controls operations. Prime must decide where to open new restaurants, which restaurants to refurnish, what prices to set for meals, what entrées to offer, and so forth. Because Prime is in business to generate profits for its owners and operators, management must consider the financial impact of each of these decisions. Managerial accounting gathers, summarizes, and reports cost and revenue data relevant to each of these decisions.

A Road Map: How Managerial Accounting Fits In

This book will show you how managerial accounting information helps managers fulfill their responsibilities. The rest of the text is organized around the following themes:

1. **Managerial Accounting Building Blocks** Chapter 1 helps you understand more about the management accounting profession and today's business environment. Chapter 2 teaches you some of the language that is commonly used in managerial accounting. Just as musicians must know the notes of the musical scale, management accountants *and* managers must understand managerial accounting terms to effectively use managerial accounting information to run the business. With the building blocks presented and new terminology introduced, it is time to provide the tools for case study analysis. The Case Analysis Appendix is designed to guide you through the process of taking complex, integrated information, determining the critical problems in real-life scenarios, and solving these problems effectively. This appendix can be used throughout the rest of the textbook as you attempt to solve the cases presented with the chapters.
2. **Determining Unit Cost (Product Costing)** How does a company decide how high to set its prices? It must first figure out how much it costs to make its product or deliver its service. Prime must calculate the cost of each item on the menu to set prices high enough to cover costs and generate a profit. This is tougher than it sounds. Prime's cost to prepare each meal includes more than just the cost of the ingredients. Prime's cost also includes the chefs' and servers' wages and benefits, restaurant lease payments, property taxes, utilities, business licences, and so forth. Chapters 3, 4, and 5 discuss how businesses determine their product costs. Once management knows its product costs, it uses that information for decision making, planning, directing, and controlling.
3. **Making Decisions** Before Prime opened any restaurants, management determined how many meals each would have to serve just to break even—that is, just to cover costs. Management had to understand how costs behave before it could calculate a *break-even* point. Chapters 6 and 7 discuss how costs behave and how managers use cost behaviour knowledge to make good decisions and accurate forecasts. Then, Chapter 8 walks you through some very common business decisions, such as *outsourcing* and pricing. For example, should Prime outsource its fruit smoothies—that is, have another company make them? Many restaurants do. Chapter 12 shows you how managers decide whether to invest in new equipment, new locations, and new projects.
4. **Planning** Budgets are management's primary tool for expressing its plans. Chapter 9 discusses all of the components of the *master budget* and the way a large company like Prime uses the budgeting process to implement its business goals and strategies.
5. **Controlling and Evaluating** Management uses *budget variances*—the differences between actual costs and the budget—to control operations. Chapter 10 shows how management uses variance analysis to determine how and where to adjust operations. Chapter 11 discusses other tools that management can use to determine whether individual segments of the company are reaching the company's goals.

Differences Between Managerial Accounting and Financial Accounting

2 Distinguish financial accounting from managerial accounting.

Managerial accounting information differs from financial accounting information in many respects. Exhibit 1-2 summarizes these differences. Take a few minutes to study the exhibit, and then we will apply it to Prime.

Prime's financial accounting system is geared toward producing annual and quarterly consolidated financial statements that will be used by potential franchisees and creditors to make investment and lending decisions. The financial statements objectively summarize the transactions that occurred between Prime and external parties during the previous year.

EXHIBIT 1-2 Managerial Accounting versus Financial Accounting

MANAGERIAL ACCOUNTING	ISSUE	FINANCIAL ACCOUNTING
Internal users such as managers.	Who are the primary users of the information?	External users, such as creditors, stockholders, and government regulators.
To help managers plan, direct, and control business operations and make business decisions.	What is the purpose of the information?	To help external users make investing and lending decisions.
Any internal accounting report deemed worthwhile by management.	What is the primary accounting product?	Financial statements.
Management determines what it wants in a report, and how it wants it formatted. Reports are prepared only when management believes the benefit of using the report exceeds the cost of preparing the report.	What must be included in the report, and how must it be formatted?	The standards to use for financial reporting must be chosen: International Financial Reporting Standards (IFRS) or Accounting Standards for Private Enterprise (ASPE).
While some information is based on past transactions, managerial accounting focuses on the future. It provides information on both external and internal transactions.	What is the underlying basis of the information?	The information is based on historical transactions with external parties.
The data must be relevant.	What information characteristic is emphasized?	The data must be reliable and objective.
Segments of the business, such as products, customers, geographical regions, departments, and divisions.	What business "unit" is the report about?	The company as a whole (consolidated financial statements). Limited segment data is provided in the footnotes.
It depends on management's needs. Some reports are prepared daily, while others may be prepared only one time.	How often are the reports prepared?	Annually and quarterly.
There are no independent audits. However, the company's internal audit function may examine the procedures used in preparing the reports.	Does anyone verify the information?	Independent certified public accountants audit the annual financial statements of publicly traded companies and express an opinion on the fairness of the financial information they contain.
No authoritative body requires managerial accounting reports.	Is the information required by an outside group/ government agency?	Yes. Each province has its own securities commission that requires publicly traded companies to issue annual audited financial statements.
Management carefully considers behavioural implications when designing the managerial accounting system.	Is there any concern over how the reports will affect employee behaviour?	The concern is about adequacy of disclosure; behavioural implications are secondary.

Publicly accountable enterprises[1] must, as of January 1, 2011, use **International Financial Reporting Standards (IFRS)**, while private enterprises have an option. Prime is a privately held company; therefore, management can voluntarily select IFRS guidelines or **Accounting Standards for Private Enterprises (ASPE)**.[2] Prime's financial statements are useful to its potential franchisees and creditors, but they do not provide management with enough information to run the company effectively.

Prime's managerial accounting system is designed to provide its managers with the accounting information they need to plan, direct, control, and make decisions. No ASPE- or IFRS-type standards or audits are required for managerial accounting since this information will only be used internally. Prime's managers tailor the company's managerial accounting system to provide the information they need to help them make better decisions. Prime must weigh the benefits of the system (information that helps managers make decisions that increase profits) against the costs to develop and run the system. The costs and benefits of any particular managerial accounting system differ from one company to another. Different companies create different systems, so Prime's system will differ from Bombardier Inc.'s system.

In contrast to financial statements, most managerial accounting reports focus on the *future*, providing *relevant* information that helps managers make profitable business decisions. For example, before putting their plans into action, Prime's managers determine if their plans make sense by quantitatively expressing them in the form of budgets. Prime's managerial accounting reports may also plan for and reflect *internal* transactions, such as the daily movement of beverages and dry ingredients from central warehouses to individual restaurant locations.

To make good decisions, Prime's managers need information about smaller units of the company, not just the company as a whole. For example, management uses revenue and cost data on individual restaurants, geographical regions, and individual menu items to increase the company's profitability. Regional data help Prime's management decide where to open more restaurants. Sales and profit reports on individual menu items help management choose menu items and decide what items to offer on a seasonal basis. Rather than preparing these reports just once a year, companies prepare and revise managerial accounting reports as often as needed.

When designing the managerial accounting system, management must carefully consider how the system will affect employees' behaviour. Employees try to perform well on the parts of their jobs that the accounting system measures. If Prime restaurant

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[1]The following definitions have been adopted for the purposes of determining which Part of the *CICA Handbook* applies to a reporting entity:

a. A **publicly accountable enterprise** is an entity, other than a not-for-profit organization or a government or other entity in the public sector, that:
   i. has issued, or is in the process of issuing, debt or equity instruments that are, or will be, outstanding and traded in a public market (a domestic or foreign stock exchange, or an over-the-counter market, including local and regional markets); or
   ii holds assets in a fiduciary capacity for a broad group of outsiders as one of its primary businesses. Banks, credit unions, insurance companies, securities brokers/dealers, mutual funds, and investment banks typically meet the second criterion above. Other entities may also hold assets in a fiduciary capacity for a broad group of outsiders because they hold and manage financial resources entrusted to them by clients, customers, or members not involved in the management of the entity. However, if they do so for reasons incidental to a primary business (as, for example, may be the case for travel or real estate agents, cooperative enterprises requiring a nominal membership deposit, or sellers that receive payment in advance of delivery of the goods or services, such as utility companies), that does not make them publicly accountable.

b. A private enterprise is a profit-oriented entity that is neither a publicly accountable enterprise nor an entity in the public sector.

c. A not-for-profit organization is an entity, normally without transferable ownership interests, organized and operated exclusively for social, educational, professional, religious, health, charitable, or any other not-for-profit purpose. A not-for-profit organization's members, contributors and other resource providers do not, in such capacity, receive any financial return directly from the organization.

d. A pension plan is any arrangement (contractual or otherwise) by which a program is established to provide retirement income to employees. *Source:* Canadian Institute of Chartered Accountants, www.cica.ca/privateenterprises/item33672.aspx.

[2]ASPE guidelines were previously known as Canadian Generally Accepted Accounting Principles (GAAP).

managers were evaluated only on their ability to control costs, they may use cheaper ingredients or hire less experienced servers. Although these actions cut costs, they can hurt profits if the quality of the meals or service declines as a result.

What Role Do Management Accountants Play?

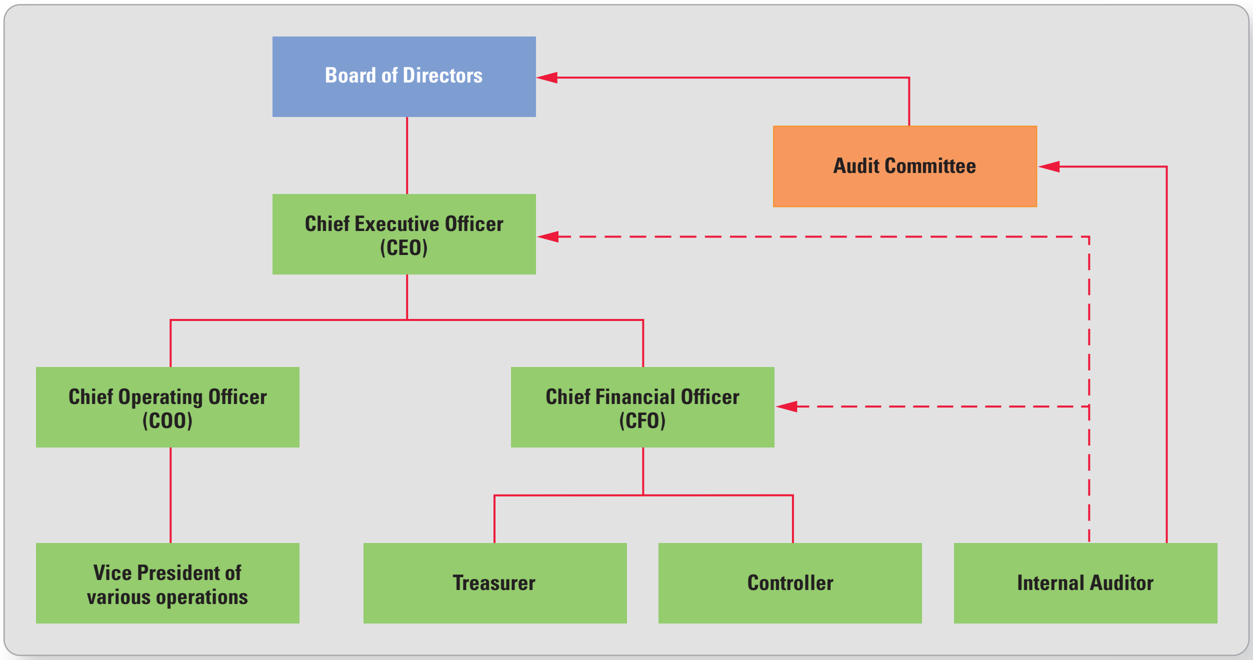
3 Describe organizational structure and the roles and skills required of management accountants within the organization.

Let us now look at how management accountants fit into the company's organizational structure, at how their roles are changing, and at the skills they need to successfully fill their roles. We will also look at their professional associations and their ethical standards.

Organizational Structure

Most corporations are too large to be governed directly by their shareholders. Therefore, shareholders elect a **board of directors** to oversee the company. Exhibit 1-3 shows a typical organizational structure with the green boxes representing employees of the firm and the orange and blue boxes representing nonemployees.

EXHIBIT 1-3 Typical Organizational Structure



The board meets only periodically, so it hires a **chief executive officer (CEO)** to manage the company on a daily basis. The CEO hires other executives to run various aspects of the organization, including the **chief operating officer (COO)** and the **chief financial officer (CFO)**. The COO is responsible for the company's operations, such as research and development (R&D), production, and distribution. The CFO is responsible for all of the company's financial concerns. The **treasurer** and the **controller** report directly to the CFO. The treasurer is primarily responsible for raising capital (through issuing stocks and bonds) and investing funds. The controller is usually responsible for general financial accounting, managerial accounting, and tax reporting.

The Toronto Stock Exchange (TSE/TSX) requires that the members of a board of directors for a listed company have sufficient experience in the industry and in governing public companies. It also requires that at least two board members are independent of the firm. However, for those organizations looking to go public in the United States, the New York Stock Exchange (NYSE) requires that listed companies have not only an external auditor but also an **internal audit function**. The role of the internal audit function is to ensure that the company's internal controls and risk management policies are functioning properly. The internal audit department reports directly to the **audit committee**, a subcommittee of the board of directors. The audit committee oversees the internal audit function as well as the annual audit of the financial statements by independent auditors. Both the internal audit department and the independent auditors report directly to the audit committee for one very important reason: to ensure that management will not intimidate them or bias their work. However, since the audit committee meets only periodically, it is not practical for the audit committee to manage the internal audit function on a day-to-day basis. Therefore, the internal audit function also reports to a senior executive, such as the CFO or CEO, for administrative matters.

When you look at the organizational chart pictured in Exhibit 1-3, where do you think management accountants work? It depends on the company. Management accountants have competencies in finance and accounting, strategic thinking, decision-making, and communication that make them valuable in managerial positions throughout the company. These same competencies also make managerial accountants valuable on **cross-functional teams**. Cross-functional teams consist of employees representing various functions of the company, such as R&D, design, production, marketing, distribution, and customer service. Cross-functional teams are effective because each member can address business decisions from a different viewpoint. These teams often report to various vice presidents of operations. Management accountants often take the leadership role in the teams. Lillie Cruikshank, the vice president of the Business Technology Centre at Sobeys Inc., describes her career as a management accountant as follows:[3]

> Being a CMA (Certified Management Accountant) has provided me with the business management skills that help me connect the dots between strategy and action. We're in a highly competitive environment. We have to control costs while providing our customer with the best food offering.

The Changing Roles of Management Accountants

Technology has changed the roles of management accountants. Management accountants no longer perform routine mechanical accounting tasks; computer programs perform those tasks. Yet management accountants are in more demand than ever. Company managers used to view management accountants as "scorekeepers" or "bean counters" because they spent most of their time recording historical transactions. Now, they view management accountants as internal consultants or business advisors.

Why is this important?

Management **accountants** act as internal business advisors. They provide the **financial** information and in-depth **analysis** that managers need to make good business **decisions**.

Does this mean that management accountants are no longer involved with the traditional task of recording transactions? No. Management accountants must still ensure that the company's financial records adequately capture economic events. They help design the information systems that capture and record transactions, and they make sure that the information system generates accurate data. They use professional judgment to record nonroutine transactions and make adjustments to the financial records as needed. Management accountants still need to know what transactions to record and how to record them, but they let technology do most of the routine work.

Freed from the routine mechanical work, management accountants spend more of their time planning, analyzing, and interpreting accounting data and providing decision support. Because their role is changing, management accountants rarely bear the job title "management accountant" any more; they may be referred to as business management support, financial advisors, business partners, analysts, or simply managers. Here is what two management accountants have said about their jobs:[4]

> We are looked upon more as business advisors than just accountants, which has a lot to do with the additional analysis and forward-looking goals that we are setting. We spend more of our time analyzing and understanding our margins, our prices, and the markets

[3]www.creativeaccountants.org

[4]*Counting More, Counting Less: The 1999 Practice Analysis of Management Accounting*, Institute of Management Accountants, Montvale, NJ, 1999.

> in which we do business. People have a sense of purpose; they have a real sense of "I'm adding value to the company." (Caterpillar, Inc.)
>
> Accounting is changing. You are no longer sitting behind a desk just working on a computer, just crunching the numbers. You are actually getting to be a part of the day-to-day functions of the business. (Abbott Laboratories)

The Skills Required of Management Accountants

Because computers now do the routine "number crunching," do management accountants need to know as much as they did 20 years ago? The fact is, management accountants now need to know *more!* They have to understand what information management needs and how to generate that information accurately. Therefore, management accountants must be able to communicate with the computer/IT system programmers to create an effective information system. Once the information system generates the data, management accountants interpret and analyze the raw data and turn them into *useful* information management can use.[5]

> Twenty years ago we would say, "Here are the costs and you guys need to figure out what you want to do with them." Now we are expected to say, "Here are the costs and this is why the costs are what they are, and this is how they compare to other things, and here are some suggestions where we could possibly improve." (Caterpillar, Inc.)

Today's management accountants need the following skills:[6]

- Solid knowledge of both financial and managerial accounting
- Problem-solving and decision-making skills
- Knowledge of how a business functions
- Ability to lead and to work on a team
- Professionalism and ethical standards
- Oral *and* written communication skills

The skills shown in Exhibit 1-4 are crucial to these management accountants:

> We're making more presentations that are seen across the division. So you have to summarize the numbers...you have to have people in sales understand what those numbers mean. If you can't communicate information to the individuals, then the information is never out there; it's lost. So, your communication skills are very important. (Abbott Laboratories)
>
> Usually when a nonfinancial person comes to you with financial questions, they don't really ask the right things so that you can give them the correct answer. If they ask you for cost, well, you have to work with them and say, "Well, do you want total plant cost, a variable cost, or an accountable cost?" Then, "What is the reason for those costs?" Whatever they're using this cost for determines what type of cost you will provide them with. (Caterpillar, Inc.)

Chapter 2 explains these cost terms. The point here is that management accountants need to have a solid understanding of managerial accounting, including how different types of costs are relevant to different situations. Additionally, they must be able to communicate that information to employees from different business functions.

Professional Associations

4 Describe the roles of the three professional accounting designations in Canada and use their ethical standards to make reasonable ethical judgments.

There are three professional accounting designations in Canada. Should you decide to pursue a career in accounting, you would be wise to obtain your credentials in one of these designations. The Society of Management Accountants of Canada governs the **Certified Management Accountants (CMAs)**; **Chartered Accountants (CAs)** are regulated by the Canadian Institute of Chartered Accountants (L'Ordre des comptables in Quebec); and the Certified General Accountants Association of Canada awards members the **Certified General Accountant (CGA)** designation. The Chartered **Public Accountant** (CPA) designation is a title that may be used to bring the three designations together.

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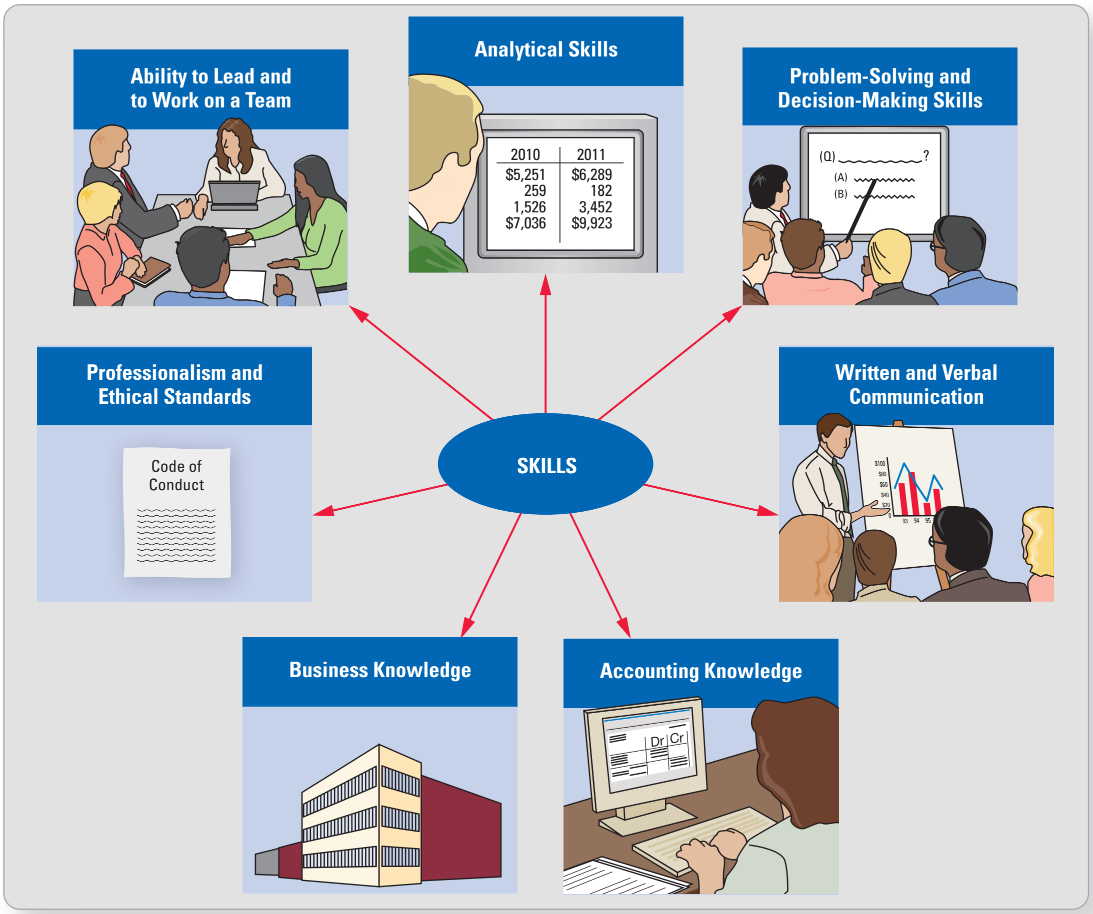
[5] *Counting More, Counting Less: The 1999 Practice Analysis of Management Accounting*, Institute of Management Accountants, Montvale, NJ, 1999.

[6] Gary Siegel and James Sorenson, *What Corporate America Wants in Entry-Level Accountants*, Institute of Management Accountants, Montvale, NJ, 1994.

Currently, the CMAs, CAs, and CGAs are in the process of merging, nationally and provincially. At the time of the writing of this textbook, the CMAs and CAs have agreed they will both use the CPA designation nationally, while all three designations have agreed to this in Quebec. Although the three designations are looking toward a time when they may all operate under the same CPA title, each designation still has its own identity. In order to understand the roles of each body of accounting professionals, the following statements have been taken from the governing organizations' websites:

CMA: "Certified Management Accountants (CMAs) do more than just measure value—they create it. As the leaders in management accounting, CMAs actively apply a unique mix of financial expertise, strategic insight, innovative thinking, and a collaborative approach to help grow successful businesses."[7]

EXHIBIT 1-4 The Skills Required for Management Accountants



CA: "We are Canada's most valued, internationally recognized profession of leaders in senior management, advisory, financial, tax, and assurance roles."[8]

CGA: "CGAs work throughout the world in industry, commerce, finance, government, public practice, and other areas where accounting and financial management is required. CGA clients range from major corporations and industries to entrepreneurs. Their expertise is valued in the public sector, government, and the corporate world."[9]

For more information on each of the designations and the process for obtaining credentials, go to their websites: www.cpacanada.ca and www.cga-canada.org. Although not all individuals who work in a management accounting role have a CMA designation, the CMA designation is specifically designed to foster the skills necessary for management accountants.

[7]*Source*: www.cma-canada.org
[8]The Canadian CAs and CMAs have merged and are working together to operate the CPA Canada professional association. Their unified website is www.cica.ca. The provincial level bodies of the three organizations are in varying levels of unification and more information can be found on their websites.
[9]www.cga-canada.org

Why is this important?

At the **root** of all business relationships is **trust**. Would you put your **money** in a bank that you didn't trust, invest in a company you knew was "**cooking the books**," or loan money to someone you thought would never pay you back? As a **manager**, your trust in the other party's **ethical** behaviour, and vice versa, will be a vital component of the business **decisions** you make.

Ethics

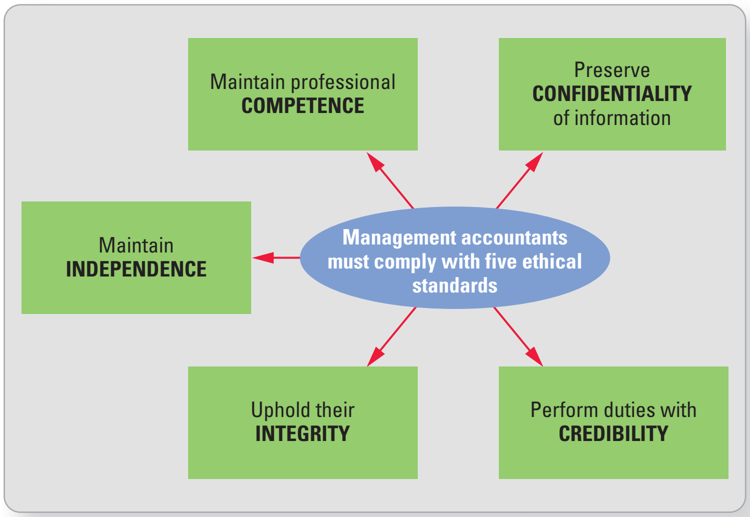
Management accountants continually face ethical challenges. Our accounting bodies have developed principles, standards, and codes of ethics to help management accountants deal with these challenges. You will find information regarding the ethical principles, standards, and codes for each designation on their websites. The principles and standards remind us that each designation expects its professional accountants to exhibit the highest level of ethical behaviour. We will examine the code of professional conduct created by the Society of Management Accountants, since the focus of this designation is on management accounting.

The Society of Management Accountants for each province has a code of conduct or code of professional ethics. Let's look at the Ontario *Code of Professional Ethics* as an example. It is separated into five general categories:

- Acting with responsibility, loyalty, honour, and integrity
- Maintaining independence of thought and action
- Assuring confidentiality and transparency
- Behaving in a professional manner with courtesy, good faith, and credibility
- Maintaining competence in one's work and advancing the profession

We have summarized these ethical standards in Exhibit 1-5 and placed the full *Code of Professional Ethics* for the Society of Management Accountants of Ontario in Exhibit 1-6.

EXHIBIT 1-5 Summary of Ethical Standards



To resolve ethical dilemmas, management accountants should first follow their company's established policies for reporting unethical behaviour. If the conflict is not resolved through the company's procedures, the management accountant should consider the following steps:

- Discuss the unethical situation with the immediate supervisor unless the supervisor is involved in the unethical situation. If so, notify the supervisor at the next higher managerial level. If the immediate supervisor involved is the CEO, notify the audit committee or board of directors.
- Discuss the unethical situation with an objective advisor.
- Consult an attorney regarding legal obligations and rights.

EXHIBIT 1-6 The Society of Management Accountants of Ontario Code of Professional Ethics

I. A Member will act at all times with:

1. responsibility for and fidelity to public needs;
2. fairness and loyalty to such Member's associates, clients and employers; and
3. Competence through devotion to high ideals of personal honour and professional integrity.

II. A Member will:

1. maintain at all times independence of thought and action;
2. not express an opinion on financial reports or statements without first assessing her or his relationship with her or his client to determine whether such Member might expect her or his opinion to be considered independent, objective and unbiased by one who has knowledge of all the facts; and
3. when preparing financial reports or statements or expressing an opinion on financial reports or statements, disclose all material facts known to such Member in order not to make such financial reports or statements misleading, acquire sufficient information to warrant an expression of opinion and report all material misstatements or departures from generally accepted accounting principles.

III. A Member will:

1. not disclose or use any confidential information concerning the affairs of such Member's employer or client unless acting in the course of his or her duties or except when such information is required to be disclosed in the course of any defence of himself or herself or any associate or employee in any lawsuit or other legal proceeding or against alleged professional misconduct by order of lawful authority of the Board or any committee of the Society in the proper exercise of their duties but only to the extent necessary for such purpose;
2. inform his or her employer or client of any business connections or interests of which such Member's employer or client would reasonably expect to be informed;
3. not, in the course of exercising his or her duties on behalf of such Member's employer or client, hold, receive, bargain for or acquire any fee, remuneration or benefit without such employer's or client's knowledge and consent; and
4. take all reasonable steps, in arranging any engagement as a consultant, to establish a clear understanding of the scope and objectives of the work before it is commenced and will furnish the client with an estimate of cost, preferably before the engagement is commenced, but in any event as soon as possible thereafter.

IV. A Member will:

1. conduct himself or herself toward other Members with courtesy and good faith;
2. not commit an act discreditable to the profession;
3. not engage in or counsel any business or occupation which, in the opinion of the Society, is incompatible with the professional ethics of a management accountant;
4. not accept any engagement to review the work of another Member for the same employer except with the knowledge of that Member, or except where the connection of that Member with the work has been terminated, unless the Member reviews the work of others as a normal part of his or her responsibilities;
5. not attempt to gain an advantage over other Members by paying or accepting a commission in securing management accounting or public accounting work;
6. uphold the principle of adequate compensation for management accounting and public accounting work; and
7. not act maliciously or in any other way which may adversely reflect on the public or professional reputation or business of another Member.

V. A Member will:

1. at all times maintain the standards of competence expressed by the Board from time to time;
2. disseminate the knowledge upon which the profession of management accounting is based to others within the profession and generally promote the advancement of the profession;
3. undertake only such work as he or she is competent to perform by virtue of his or her training and experience and will, where it would be in the best interests of an employer or client, engage, or advise the employer or client to engage, other specialists;
4. expose before the proper tribunals of the Society any incompetent, unethical, illegal or unfair conduct or practice of a Member which involves the reputation, dignity or honour of the Society; and
5. endeavour to ensure that a professional partnership or company, with which such Member is associated as a partner, principal, director, officer, associate or employee, abides by the Code of Professional Ethics and the rules of professional conduct established by the Society.

Source: Courtesy of CMA Ontario.

Examples of Ethical Dilemmas

Unfortunately, the ethical path is not always clear. You may want to act ethically and do the right thing, but the consequences can make it difficult to decide what to do. Let us consider several ethical dilemmas in light of the *Code of Professional Ethics*.

Dilemma #1

> Ileana Spilca is examining the expense reports of her staff who counted inventory at Canadian Car Parts' distribution centre in Brampton, Ontario. She discovers that Mike Flinders has claimed but not included hotel receipts for over $1,000 of accommodation expenses. Other staff, who also claimed $1,000, did attach hotel receipts. When asked about the receipts, Mike admits that he stayed with an old friend, not in the hotel, but he believes that he deserves the money he saved. After all, the company would have paid his hotel bill.

By asking to be reimbursed for hotel expenses he did not incur, Flinders violated the CMA's integrity standards (disloyalty to the employer and dishonour in the action). Because Spilca discovered the inflated expense report, she would not be fulfilling her ethical responsibilities of integrity and credibility if she allowed the reimbursement.

Dilemma #2

> As the accountant of Entrée Computer, you are aware of your company's weak financial condition. Entrée is close to signing a lucrative contract that should ensure its future. To do so, the controller states that the company must report a profit this year (ending December 31). He suggests, "Two customers have placed orders that are really not supposed to be shipped until early January. Ask production to fill and ship those orders on December 31 so we can record them in this year's sales."

The resolution of this dilemma is less clear-cut. Many people believe that following the controller's suggestion to manipulate the company's income would violate the standards of competence, integrity, and credibility. Others would argue that because Entrée Computer already has the customer orders, shipping the goods and recording the sale in December is still ethical behaviour. You might discuss the available alternatives with the next managerial level in order to determine what course of action would be warranted.

Dilemma #3

> As a new accounting staff member at the YMCA, your supervisor has asked you to prepare the yearly GST/HST Report, which the government uses to determine its reimbursement to the charity for allowable GST/HST expenditures. The report requires specialized knowledge that you do not believe you possess. The supervisor is busy planning for the coming year and cannot offer much guidance while you prepare the report.

This situation is not as rare as you might think. You may be asked to perform tasks that you do not feel qualified to perform. The competence standard requires you to perform professional duties in accordance with laws, regulations, and technical standards; but laws and regulations are always changing. For this reason, the competence standard also requires you to continually develop knowledge and skills. Accounting professionals are required to complete annual continuing professional education (which varies by designation) to fulfill this responsibility. However, even continuing professional education courses will not cover every situation you may encounter.

In this case, advise your supervisor that you currently lack the knowledge required to complete the GST/HST Report. By doing so, you are complying with the competence standard that requires you to recognize and communicate any limitations that would preclude you from fulfilling an activity. You should ask for training on the report preparation and supervision by someone experienced in preparing the report. If the supervisor denies your requests, you should ask him or her to reassign the GST/HST Report to a qualified staff member.

Dilemma #4

> Your company is negotiating a large multiyear sales contract that, if won, would substantially increase the company's future earnings. At a dinner party over the weekend, your friends ask you how you like your job and the company you work for. In your enthusiasm, you tell them not only about your responsibilities at work but also about the contract negotiations. As soon as the words pop out of your mouth, you worry that you have said too much.

This situation is difficult to avoid. You may be so excited about your job and the company you work for that it is difficult to keep information from unintentionally slipping out during casual conversation with friends and family. The confidentiality standard requires you to refrain from disclosing information or using confidential information for unethical or illegal advantage. Was the contract negotiation confidential? If so, would your friends invest in company stock in hopes that the negotiations increase stock prices? Or were the negotiations public knowledge in the financial community? If so, your friends would gain no illegal advantage from the information. Cases such as those involving Martha Stewart remind us that insider trading (use of inside knowledge for illegal gain) has serious consequences. Even seemingly mundane information about company operations could give competitors an advantage. Therefore, it is best to disclose only information that is meant for public consumption.

Unethical versus Illegal Behaviour

Finally, is there a difference between unethical and illegal behaviour? Not all unethical behaviour is illegal, but all illegal behaviour is unethical. For example, consider the competence standard, which states that management accountants have a responsibility to provide decision-support information that is accurate, clear, concise, and timely. Failure to follow this standard is unethical but in most cases not illegal. Now, consider the integrity standard, which states that management accountants must abstain from any activity that might discredit the profession. A management accountant who commits an illegal act is violating this ethical standard. In other words, ethical behaviour encompasses more than simply following the law. The CMA's ethical concepts include honesty, fairness, objectivity, and responsibility—concepts that are much broader than what is codified in the law.

Decision Guidelines

MyAccountingLab **Visit MyAccountingLab to access audio versions of these Decision Guidelines that you can listen to right on your computer or download and transfer to your mobile device.**

Prime made the following considerations in designing its managerial accounting system to provide managers with the information they need to run operations efficiently and effectively.

Decision	Guidelines
I need information that will help me make decisions and determine the future of the organization. The information provided by the financial accounting system doesn't seem to provide what I really need. Is there something else that I can use?	Managerial accounting provides information that helps managers plan, direct, and control operations and make better decisions. The information has a • *future* orientation • focus on *relevance* to business decisions
I've been told that I don't need to follow ASPE or IFRS guidelines when I create my managerial accounting system. What do I use as guidelines for how to establish a managerial accounting system?	Managers design the managerial accounting system so that the benefits (from helping managers make wiser decisions) outweigh the costs of the system.
Where should management accountants be placed within the organizational structure?	In the past, most management accountants worked in isolated departments. Now, management accountants are deployed throughout the company. CMAs are trained in strategic leadership and planning, which may be the reason why 58% of CMAs are employed as managers or senior analysts while an additional 11% hold the position of president or vice president (CMA Management, www.dvtail.com/publications/cmamanagement/CMA_09_MediaKit.pdf).

continued

Decision	Guidelines
I'm considering hiring a management accountant for my organization. What skills should I be looking for in this individual?	Because of their expanding role within the organization, most management accountants need financial and managerial accounting knowledge, problem-solving and decision-making skills, knowledge of how a business functions, the ability to lead and to work on teams, knowledge of professional and ethical standards, and written and oral communication skills.
I have encountered an ethical dilemma. Are there some guidelines or principles that I can use to help me make an appropriate decision?	The CMA's overarching ethical principles include the following: • Integrity • Credibility • Confidentiality and Transparency • Competence • Independence

SUMMARY PROBLEM 1

Requirements

1. Each of the following statements describes a responsibility of management. Match each statement to the management responsibility being fulfilled.

Statement	Management Responsibility
1. Identifying alternative courses of action and choosing among them	a. Planning
2. Running the company on a day-to-day basis	b. Decision making
3. Determining whether the company's units are operating according to plan	c. Directing
4. Setting goals and objectives for the company and determining strategies to achieve them	d. Controlling

2. Are the following statements more descriptive of managerial accounting or financial accounting information?

a. Describes historical transactions with external parties
b. Is not required by any authoritative body, such as the provincial Securities Commissions
c. Reports on the company's subunits, such as products, geographical areas, and departments
d. Is intended to be used by creditors and investors
e. Is formatted in accordance with ASPE or IFRS

3. Each of the following statements paraphrases an ethical responsibility. Match each statement to the standard of ethical professional practice being fulfilled. Each standard may be used more than once or not at all.

Responsibility	Standard of Ethical Professional Practice
1. Do not disclose company information unless authorized to do so.	a. Competence
2. Continue to develop skills and knowledge.	b. Confidentiality
3. Do not bias the information and reports presented to management.	c. Integrity
4. If you do not have the skills to complete a task correctly, do not pretend you do.	d. Credibility

Responsibility	Standard of Ethical Professional Practice
5. Do not base decisions for the organization on what might serve your own personal interests best.	e. Independence
6. Avoid actual *and* apparent conflicts of interest.	

▪ SOLUTIONS

Requirement 1

1. (b) Decision making
2. (c) Directing
3. (d) Controlling
4. (a) Planning

Requirement 2

a. Financial accounting
b. Managerial accounting
c. Managerial accounting
d. Financial accounting
e. Financial accounting

Requirement 3

1. (b) Confidentiality
2. (a) Competence
3. (d) Credibility
4. (a) Competence
5. (c) Integrity
6. (e) Independence

What Regulatory and Business Issues Affect Today's Management Accountants?

5 Discuss and analyze the implications of regulatory and business trends.

The business world is continually changing. Let us look at some of the current regulatory and business issues that affect managers and the managerial accounting systems that support them. These issues include the **Sarbanes-Oxley Act (SOX)**, International Financial Reporting Standards (IFRS), **Extensible Business Reporting Language (XBRL)**, and the shifting economy. After considering these issues, we will look at some of the tools companies use to compete in the global marketplace.

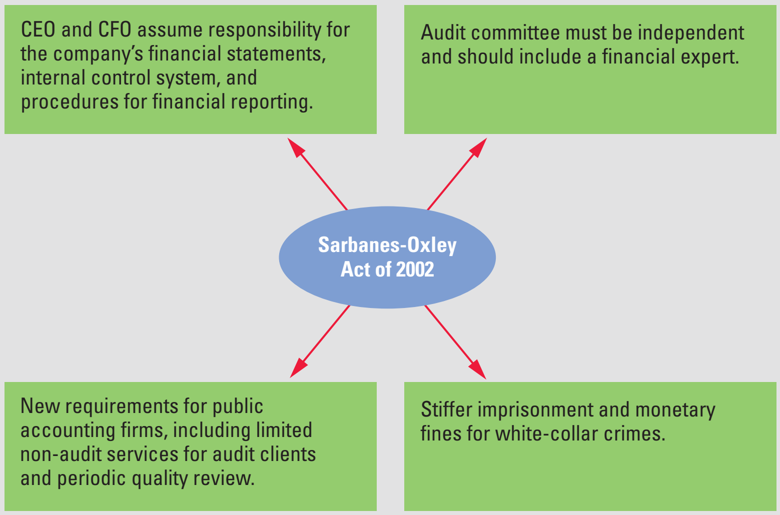
Sarbanes-Oxley Act of 2002

As a result of corporate accounting scandals, such as those at Enron and WorldCom, the U.S. Congress enacted the Sarbanes-Oxley Act of 2002 (SOX). The purpose of SOX is to restore trust in publicly traded corporations, their management, their financial statements, and their auditors. SOX enhances internal control and financial reporting requirements and establishes new regulatory requirements for publicly traded companies and their independent auditors. Publicly traded companies have spent millions of dollars upgrading their internal controls and accounting systems to comply with SOX regulations.

Although this legislation originated in the United States, it has had a major impact on Canadian financial reporting practices. Our standards have incorporated many similar features with respect to auditor independence and internal controls. Canadian companies make up the largest group of foreign companies on the U.S. stock exchanges. As well, approximately 15% of the Toronto Stock Exchange listings also have a U.S. stock exchange listing, which means that a large number of Canadian public firms need to adhere to the regulations of SOX. Because of this large number of companies, we will briefly cover some of the elements of SOX.

As shown in Exhibit 1-7, SOX requires the company's CEO and CFO to assume responsibility for the financial statements and disclosures. The CEO and CFO must certify that the financial statements and disclosures fairly present, in all material respects, the operations and financial condition of the company. Additionally, the CEO and CFO must accept responsibility for establishing and maintaining an adequate internal control structure and procedures for financial reporting. The company must have its internal controls and financial reporting procedures assessed annually.

EXHIBIT 1-7 Some Important Results of SOX



Source: Based on information from http://fmcenter.aicpa.org/Resources/Sarbanes-Oxley+Act/Summary+of+the+Provisions+of+the+Sarbanes-Oxley+Act+of+2002.htm.

Why is this important?
SOX puts more pressure on companies, their **managers**, and their auditors to ensure that **investors** get financial information that **fairly reflects** the company's **operations**.

SOX also requires audit committee members to be independent, meaning that they may not receive any consulting or advisory fees from the company other than for their service on the board of directors. In addition, at least one of the members should be a financial expert. The audit committee oversees not only the internal audit function but also the company's audit by independent public accountants.

To ensure that public accounting firms maintain independence from their client companies, SOX does not allow public accounting firms to provide certain non-audit services (such as bookkeeping and financial information systems design) to companies during the same period of time in which they are providing audit services. SOX has also increased the maximum penalties for white-collar crimes such as corporate fraud. These penalties include both monetary fines and substantial imprisonment. For example, knowingly destroying or creating documents to "impede, obstruct, or influence" any federal investigation can result in up to 20 years of imprisonment, a fine, or both.[10] The same penalties apply to Canadians who control the activities of organizations traded on the U.S. stock markets. The conviction of Montreal-born Conrad Black in July 2007 for obstructing justice and defrauding shareholders of his former newspaper company, Hollinger International, is a clear example of this regulation being enforced.

In 2003, the **Canadian Securities Administrators (CSA)** published rules regarding the need for the CEO and the CFO to sign, and authorize the accuracy of, annual reports. The new CSA rules, which have been implemented over a span of about four years, also specify the role of the audit committee on boards of directors, internal controls, and a number of other rules. These CSA rules are similar to the SOX requirements in many ways. Canadian

[10]Visit www.AICPA.org to learn more about SOX.

regulations differ from the U.S. regulations in that they recognize specific features of our Canadian financial market. Three major differences between the Canadian and U.S. markets that affected the design and implementation of the CSA rules are the following:

1. Each province is responsible for securities regulations, whereas in the United States it is a federal mandate.
2. A much larger percentage of Canadian public firms have a controlling shareholder.
3. Canadian public firms are more likely to be smaller and younger than U.S. public firms.

The Criminal Code of Canada was amended in 2004 to increase the penalties of market-related offences. For example, "every one who, by deceit, falsehood or other fraudulent means, whether or not it is a false pretence within the meaning of this Act, with intent to defraud, affects the public market price of stocks, shares, merchandise or anything that is offered for sale to the public is guilty of an indictable offence and liable to imprisonment for a term not exceeding fourteen years."[11]

International Financial Reporting Standards (IFRS)

As a result of globalization, the need for consistent reporting standards for all companies in the world has grown. In response, the securities commissions of many countries have recently moved to adopt International Financial Reporting Standards (IFRS) for all publicly traded companies within the next few years. In Canada, this adoption took place in 2011. Currently, a company operating in several different countries often must prepare several sets of financial statements using different accounting standards. These companies will only need to prepare one set of financial statements if all the countries have adopted IFRS. While the transition to IFRS may be time consuming and expensive, in the long run it should actually save companies money and make the markets more efficient. You can keep abreast of current IFRS developments and implications for accounting information at www.IFRS.org.

Extensible Business Reporting Language (XBRL)

Wouldn't it be nice if managers, analysts, investors, and regulators could easily access public company information over the Internet without having to *manually* read pdf documents and extract the data they need for decision making? Extensible Business Reporting Language (XBRL) enables companies to release financial and business information in a format that can be quickly, efficiently, and cost-effectively accessed, sorted, and analyzed over the Internet. XBRL uses a standardized coding system to "tag" each piece of reported financial and business data so that it can be read by computer programs rather than human eyes. For example, *Sales Revenue* would be tagged with the same code by all companies so that a computer program could extract *Sales Revenue* information from an individual company or a selected group of companies.

XBRL has several advantages:

- It decreases the need for laborious, manual searches though corporate reports for specific pieces of information.
- It decreases the time companies spend converting their financial information into various government-prescribed formats.
- It allows managers to easily compare their results to those of other companies and to industry averages.
- Investors and managers can "slice and dice" financial information however they want to suit their decision-making needs.
- It should promote the more consistent use of financial terminology, since all data must be tagged using a preset, yet extensible, classification system.

Canadian organizations began filing their annual financial statements using XBRL codifications on a voluntary basis in May 2007. The financial statements are filed in both XBRL format and pdf format on the online database for Canadian public companies,

[11]Criminal Code of Canada, section 380 (2), http://canlii.org

SEDAR.com. The CSA actively encourages participation of companies in the voluntary implementation because of the benefits that may be realized through the improved access to information. You can keep abreast of XBRL developments at www.XBRL.org and www.securities-administrators.ca/.

Shifting Economy

In the last century, North American economies have shifted away from manufacturing toward service. Service companies provide health care, communication, transportation, banking, and other important benefits to society. Service companies now make up the largest sector of the Canadian economy. Statistics Canada reports that in 2012, services producing industries comprised 72% of the gross domestic product (GDP) and employed 78.9% of the labour force. Even companies that traditionally carried out manufacturing, such as Bombardier Inc., are shifting toward selling more services. Bombardier Inc. has added an entire line of services for the transportation division including maintenance, refurbishment and modernization, and technology.

Managerial accounting has its roots in the industrial age of manufacturing. Most traditional managerial accounting practices were developed to fill the needs of manufacturing firms. However, since the Canadian economy has shifted away from manufacturing, managerial accounting has shifted, too. The field of managerial accounting has *expanded* to meet the needs of service and merchandising firms as well as manufacturers. For example, consider the following.

1. Manufacturers still need to know how much each unit of their product costs to manufacture. In addition to using this information for inventory valuation and pricing decisions, manufacturers now use cost information to determine whether they should outsource production to another company or to an overseas location.
2. Service companies also need cost information to make decisions. They need to know the cost of providing a service rather than manufacturing a product. For example, banks must include the cost of servicing chequing and savings accounts in the fees they charge customers. And hospitals need to know the cost of performing appendectomies to justify reimbursement from insurance companies and government.
3. Retailers need to consider importing costs when determining the cost of their merchandise. Because many goods are now produced overseas rather than domestically, determining the cost of a product is often more difficult than it was in the past. Management accountants need to consider foreign currency exchange, shipping costs, and import tariffs when determining the cost of imported products.

How Do Companies Compete in Today's Global Marketplace?

The barriers to international trade have fallen over the past decades, allowing foreign companies to compete with domestic firms. Firms that are not highly efficient, innovative, and responsive to business trends will vanish from the global market. However, global markets also provide highly competitive domestic companies with great opportunities for growth.

Globalization has several implications for managerial accounting:

- Stiffer competition means managers need more accurate and timely information to make wise business decisions. Companies can no longer afford to make decisions by the "seat of their pants." Detailed, accurate, and real-time cost information has become a necessity for survival.
- Companies must decide whether to expand sales and/or production into foreign countries. To do so, managers need comprehensive estimates of the costs of running international operations and the benefits that can be reaped.
- Companies can learn new management techniques by observing their international competitors. For example, the management philosophy of **lean production**, first developed in Japan by Toyota, is now being used by many North American companies to cut costs, improve quality, and speed production.

In the following sections we will briefly describe several tools that companies use to compete in the global marketplace. How do managers decide which of these initiatives to undertake? They use **cost–benefit analysis**, which weighs the expected costs of taking an action against the expected benefits of the action.

Sustainability, Social Responsibility, and the Triple Bottom Line

In recent years, there has been an increasing awareness and growing interest in **sustainability** and social responsibility by both consumers and corporations. Sustainability is most often defined as the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.[12] Others define it as an expansion on the golden rule: "Do unto others (including future generations) as you would have them do unto you."[13] The first definition focuses more on environmental responsibility, while the second definition recognizes the additional component of social responsibility. As a result, many companies are beginning to adhere to the notion of a **triple bottom line**. The triple bottom line recognizes that a company's performance should not only be viewed in terms of its ability to generate economic profits for its owners, as has traditionally been the case, but also by its impact on people and the planet. Thus, sustainability can be viewed in terms of three interrelated factors that influence a company's ability to survive and thrive in the long-run: profit, people, and planet.

To move toward environmental sustainability, companies are introducing "green initiatives"—ways of doing business that have fewer negative consequences for the earth's resources. They've also recognized the need to be socially responsible—carefully considering how their business affects employees, consumers, citizens, and entire communities. Many companies have introduced means of giving back to their local communities, by monetarily supporting local schools and charities. Businesses are now viewing sustainability and social responsibility as opportunities for innovation and business development. These initiatives not only allow a company to "do the right thing," but they also can lead to economic profits by increasing demand for a company's products and services.

In every chapter of this text, you will see a special section illustrating how management accounting can help companies pursue environmentally sustainable and socially responsible business practices. These sections will be marked with a green recycle symbol and will also point you to corresponding homework problems. In addition, the online chapter for sustainability (found on MyAccountingLab) will introduce you to the newly emerging field of environmental management accounting.

Tools for Time-Based Competition

The Internet, electronic commerce (e-commerce), and other new technologies speed the pace of business. Think about your last trip to the grocery store or hardware store. Did you use the self-scanning checkout? Retailers install expensive self-scanning technology to cut labour costs and give shoppers an alternative to standing in checkout lines. Some studies have shown that, on average, the self-scanning checkout process is really not faster. However, shoppers *perceive* the checkout time to be faster because they are actively engaged rather than passively standing in line. Businesses are doing whatever they can to shorten the time customers have to wait for their orders. Why? Because *time* is the latest competitive weapon in business.

Advanced Information Systems

Many small businesses use QuickBooks or Sage Simply Accounting software to track their costs, prepare reports, and present information needed to run the business. But large companies are turning to enterprise resource planning (ERP) systems that can integrate all of a company's worldwide functions, departments, and data. ERP systems such as SAP, Oracle, and PeopleSoft gather company data into a centralized data warehouse. The system feeds

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[12]1987 World Commission on Environment and Development, www.un.org/documents/ga/res/42/ares42-187.htm
[13]Gary Langenwalter, *Business Sustainability: Keeping Lean but with More Green for the Company's Long Haul*, 2010, AICPA, Lewisville, Texas.

the data into software for all of the company's business activities, from budgeting and purchasing to production and customer service.

Advantages of ERP systems include the following:

- Companies streamline their operations before mapping them into ERP software. Streamlining operations saves money.
- ERP helps companies respond quickly to changes. A change in sales instantly ripples through the ERP's purchases, production, shipping, and accounting systems.
- An ERP system can replace hundreds of separate software systems, such as different software in different regions, or different payroll, shipping, and production software systems.

ERP is expensive and requires a large commitment of time and people. For example, major installations at Fujitsu and Allstate cost each of these companies approximately $40 to $60 million. However, the expected benefits from the system are greater, with Allstate reporting to have saved $100 million in processing costs within 18 months.[14]

E-commerce

To survive in a competitive, globally wired economy, companies use the Internet in everyday operations such as budgeting, planning, selling, and customer service. Just as you and I may use the Web to place orders for merchandise, companies use business-to-business e-commerce to complete transactions with each other. Electronic purchases between businesses are often untouched by human hands, generate little if any paper, and avoid the time and cost of processing paperwork.

E-commerce is also an important means of **supply-chain management**, where companies exchange information with suppliers to reduce costs, improve quality, and speed delivery of goods and services from suppliers to the company itself. For example, companies that supply component parts to Dell use the Internet to access Dell's daily inventory levels and current demand for parts. Access to real-time information lets suppliers automate the size of the next day's shipment, which in turn helps Dell cut order-to-delivery times and control costs.

STOP & THINK

Electronically billing customers has become popular. Analysts estimate the following:

1. Companies save $7 per invoice by billing customers electronically.
2. The average large company issues 800,000 invoices a year.
3. The average cost of installing an e-billing system is $500,000. Should companies that issue 800,000 invoices a year consider e-billing?

Answer: Yes, these companies should consider e-billing. Comparing expected benefits to costs reveals significant expected net benefits from e-billing:

Expected benefits:	
800,000 invoices × $7 savings per invoice	$5,600,000
Expected costs:	
Installation of e-billing system	(500,000)
Net expected benefits	$5,100,000

Traditional Production Systems

6 Describe a lean production system.

Traditional production systems are often described as "push" systems. Once the production schedule for the period has been determined, products are "pushed" through the manufacturing process and then stored in finished goods inventory until sold. Traditional systems often keep large inventories of raw materials, work in process, and finished goods on hand. Why?

[14]R. Banham, "Better Budgets: Replacing a whim and a prayer with relevant data," *Journal of Accountancy*, February 2000, www.journalofaccountancy.com/Issues/2000/Feb/BetterBudgets.htm

1. Companies often buy more raw materials than they need because the materials may be of poor quality. As a result, the materials may not be usable or may break during production and require replacement.
2. Companies often make products in large batches to spread set-up costs over many units. As a result, companies often buy large quantities of raw materials and then have large quantities of finished units.
3. Companies often keep extra work in process inventory *between* departments so that each department will have something to continue working on in the event production stops or slows in an earlier department. For example, in Exhibit 1-8, we see the series of production steps required to produce drill bits from bar stock (the raw materials). If the company keeps some work in process inventory *between* the grinding and smoothing operations, the smoothing operation can continue even if the shaping or grinding operations slow or come to a halt as a result of machine breakdown, absence due to sick workers, or other production problems.

Why is this important?

To survive in the **global marketplace**, businesses must quickly respond to customer **demand**, providing high-quality products and **services** at a reasonable price.

EXHIBIT 1-8 Sequence of Operations for Drill-Bit Production

Companies often keep large inventories to protect themselves from uncertainty. Large raw material inventories protect against delayed deliveries from suppliers. Large finished goods inventories protect against lost sales if customer demand is higher than expected. These are all valid reasons for keeping large inventories. So why are large inventories a problem?

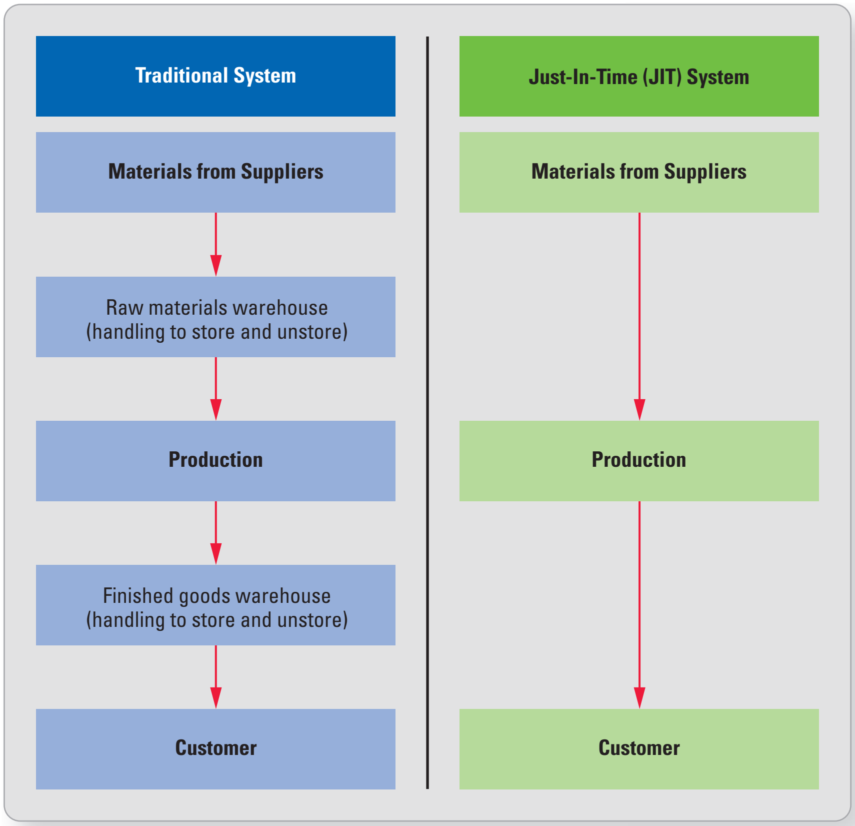
1. Inventories use cash. Companies incur interest expense or forgo interest revenue on that cash. If a company has to borrow money to pay for inventory, it incurs interest expense on the loan. Even if a company uses its own cash to fund the inventory, it misses the opportunity to earn interest on that cash. In other words, if the cash were not used to purchase excessive inventory, the company could invest it and earn a return.
2. Large inventories often hide quality problems, production bottlenecks, and obsolescence. Inventory may spoil, be broken or stolen, or become obsolete as it sits in storage and waits to be used or sold. Companies in the high-tech and fashion industries are particularly susceptible to inventory obsolescence. What would a computer manufacturer do with computer chips purchased six months earlier? The chips are obsolete and unusable.
3. The activities of storing and taking items out of storage are very expensive. ABC and ABM have helped uncover the cost of these non-value-added activities.

Because of the problems associated with large inventories, many companies are now striving to use lean production systems that keep inventories to a minimum.

Lean Production Systems

Lean production is both a philosophy and a business strategy of manufacturing without waste. One primary goal of a lean production system is to eliminate the waste of time and money that accompanies large inventories. Therefore, lean companies adopt a **just-in-time (JIT)** inventory philosophy. As the name suggests, JIT inventory focuses on purchasing raw materials *just in time* for production and then completing finished goods *just in time* for delivery to customers. By doing so, companies eliminate the waste of storing and unstoring raw materials and finished goods, as pictured in Exhibit 1-9.

EXHIBIT 1-9 Traditional System versus JIT System



For example, Dell workers receive orders via a monitor and assemble a desktop computer every 3–5 minutes. Most days, workers finish more than 25,000 computers, which ship directly to customers. However, the plant rarely holds more than two *hours* of inventory![15] How do they do it?

Most companies that adopt lean production have several common characteristics that help minimize the amount of inventory that is kept on hand yet enable the company to quickly satisfy customer demand. These characteristics are described next.

Production Occurs in Self-Contained Cells

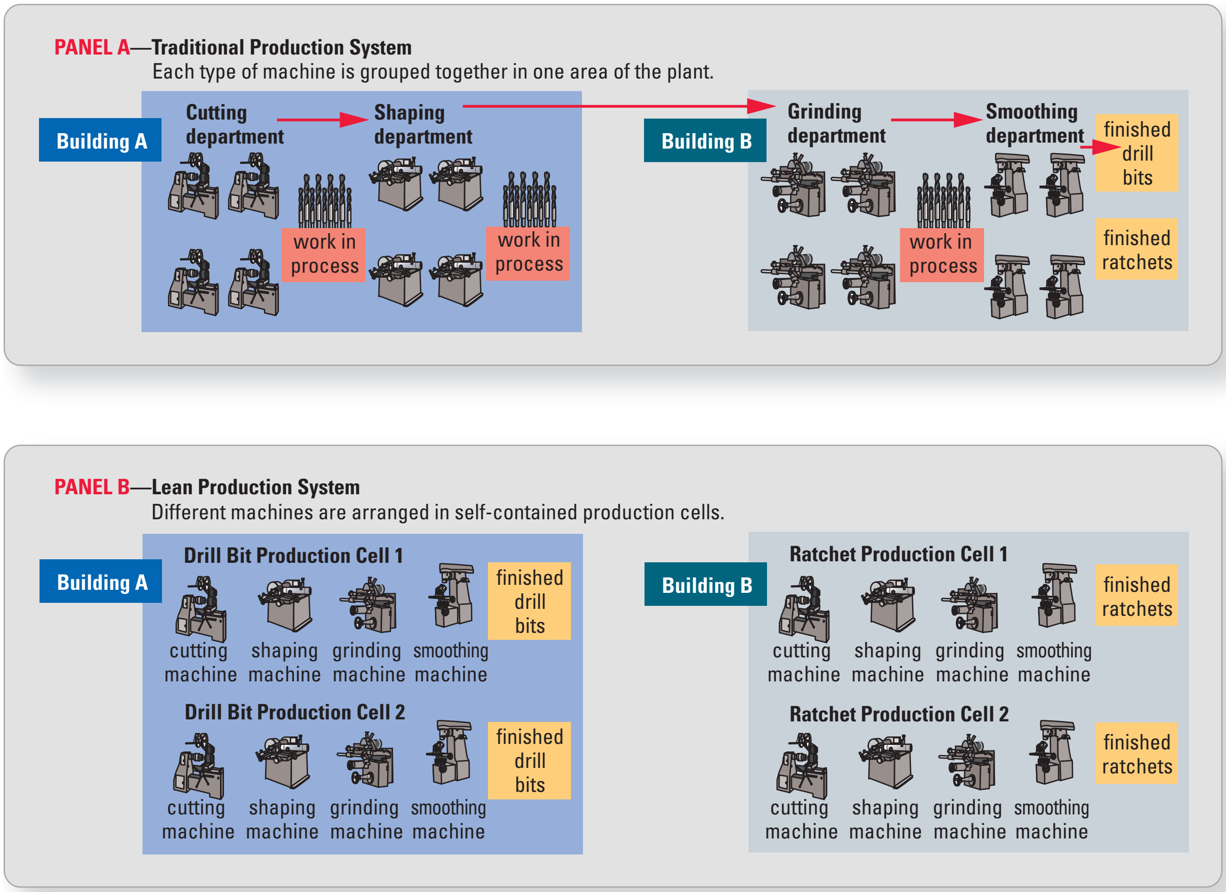
A traditional drill-bit manufacturer would group all cutting machines in one area, all shaping machines in another area, all grinding machines in a third area, and all smoothing machines in a fourth area, as illustrated in Panel A of Exhibit 1-10. After switching to lean production, the company would group the machines in self-contained production cells, or production lines, as in Panel B of Exhibit 1-10. The goal is continuous production without interruptions or work-in-process inventories. These self-contained production cells minimize the time and cost involved with physically moving parts across the factory to other departments.

Broad Employee Roles

Employees working in production cells do more than operate a single machine. They also conduct maintenance, perform set-ups, inspect their own work, and operate other machines. For example, look at Panel B of Exhibit 1-10. A worker in Drill Bit Production Line 1 would be cross-trained to operate all of the machines (cutting, shaping, grinding, and smoothing) in that cell. This cross-training boosts morale and lowers costs. Employees who perform a number of duties rather than one repetitive duty tend to have higher job satisfaction.

[15]Kathryn Jones, "The Dell Way," *Business 2.0*, February 2003, www.business2.com

EXHIBIT 1-10 Equipment Arrangement in Traditional and Lean Production Systems



Small Batches Produced Just in Time

Lean companies schedule production in small batches *just in time* to satisfy customer needs. As a result, they do not need to carry extra finished goods inventory. In this "demand-pull system," the customer order—the "demand"—triggers the start of the production process and "pulls" the batch through production. Each order, even if very small, is usually its own batch. Even raw materials are usually not purchased until a customer order is received. The demand-pull system extends back to suppliers of materials who end up making frequent, small deliveries of defect-free raw materials just in time for production. The lean "pull" system replaces the traditional "push" system in which large quantities of raw materials are "pushed" through the production process to be stored in finished goods inventory until sold.

Shortened Set-up Times

Since the product is not started until a customer order is received, lean companies must focus on reducing the time it takes to set up the machines used for more than one product. Employee training and technology helped Toyota cut set-up times from several hours to a few minutes. This increases flexibility in scheduling production to meet customer orders, which, in turn, increases customer satisfaction and company profits.

Shortened Manufacturing Cycle Times

Lean companies must also produce their products very quickly. Dell's manufacturing cycle time is 3 to 5 minutes. GED Integrated Solutions, a window manufacturer, used to require 3 weeks to complete an order. GED has cut manufacturing cycle time to 3 to 5 days. Within 6 years of adopting lean production, Harley-Davidson reduced the time to produce a motorcycle by 77%. Shorter manufacturing times also protect companies from foreign

Why is this important?

In order to **compete** and remain **profitable**, manufacturers must cut costs by becoming as **efficient** as possible. **Lean** production has become an important tool for cutting costs, especially the costs associated with carrying inventory.

competitors whose cheaper products take longer to ship. Delivery speed has become a competitive weapon.

Emphasis on Quality

Lean companies focus on producing their products right the *first* time, *every* time. Why? First, they have no backup stock to give to waiting customers if they run into production problems. Second, defects in materials and workmanship can slow or shut down production. Lean companies cannot afford the time it takes to rework faulty products. Lean companies emphasize "building in" quality rather than "inspecting in" quality (that is, hoping to catch defective units through sample inspections).

Total Quality Management

All companies, not just lean producers, must deliver high-quality goods and services in order to remain competitive. **Total quality management (TQM)** is one key to succeeding in the global economy. The goal of TQM is to delight customers by providing them with superior products and services. As part of TQM, each business function examines its own activities and works to improve performance by *continually* setting higher goals.

ISO 9001:2008

Many firms want to demonstrate their commitment to continuous quality improvement. The International Organization for Standardization (ISO), made up of 157 member countries, has developed international quality management standards and guidelines. Firms may become **ISO 9001:2008** certified by complying with the quality management standards and undergoing extensive audits of their quality management processes. The prestigious certification gives firms a competitive advantage in the global marketplace since many companies will conduct business only with certified firms.

The certification does not only apply to manufacturing firms. Service firms account for over 32% of all certificates issued. The Standards Council of Canada actively encourages Canadian participation in national and international standards such as the ISO through its mandate from the Standards Council of Canada Act. This act was established in 1985 and enables the Council to complete a variety of programs and services including accrediting organizations that meet specific Canadian standards of quality and assisting Canadians and Canadian organizations, both financially and administratively, that wish to seek voluntary standardizations in and outside Canada. For more information regarding the Standards Council of Canada and its programs and services, please refer to their website: www.scc.ca.

Supply-Chain Management

Because there are no inventory buffers, lean production requires close coordination with suppliers. These suppliers must guarantee *on-time delivery* of *defect-free* materials. Supply-chain management is the exchange of information with suppliers and customers to reduce costs, improve quality, and speed delivery of goods and services from the company's suppliers, through the company itself, and on to the company's end customers. Suppliers that bear the ISO 9001:2008 certification have proven their ability to provide high-quality products and thus tend to be suppliers for lean manufacturers.

Are There Any Drawbacks to a Lean Production System?

While companies such as Toyota, Carrier, and Dell credit lean production for saving them millions of dollars, the system is not without problems. With no inventory buffers, lean producers are vulnerable when problems strike suppliers or distributors. For example, Ford cut production of its SUVs in response to the tire shortage resulting from Firestone's tire recall. It also had to shut down five of its U.S. plants when engine deliveries from Canadian suppliers were late due to security-related transportation delays in the wake of the World Trade Center attacks.

How Do Managers Improve Quality?

7 Describe and use the costs of quality framework.

As discussed previously, lean companies strive for high-quality production. Poor-quality materials or defective manufacturing processes can slow or even shut down production. Since a lean production system only produces what is currently needed, it is essential that production consistently generates high-quality products.

To meet this challenge, many companies adopt total quality management (TQM). The goal of TQM is to provide customers with superior products and services. Each business function in the value chain continually examines its own activities to improve quality and eliminate defects and waste. Those companies that have already adopted ABC have a head start. They have already identified their primary activities, so now they can concentrate on making those activities more efficient or finding ways to eliminate any non-value-added activities.

Most companies find that if they invest more in the front end of the value chain (R&D and design), they can generate savings in the back end of the value chain (production, marketing, distribution, and customer service). Why? Because carefully designed products and manufacturing processes reduce manufacturing time, inspections, rework, and warranty claims. When world-class companies such as Bombardier adopt TQM, they *design* and *build* quality into their products rather than having to *inspect* and *repair* later, as many traditional manufacturers do.

Costs of Quality

As part of TQM, many companies prepare **Cost of Quality Reports**. Cost of Quality Reports categorize and list the costs incurred by the company related to quality. Once managers know the extent of their costs of quality, they can start to identify ways for the company to improve quality, while at the same time controlling costs.

Quality-related costs generally fall into four different categories: **prevention costs**, **appraisal costs**, **internal failure costs**, and **external failure costs**. These categories form the framework for a Cost of Quality Report. The following provides a brief description of each.

1. Prevention costs are costs incurred to *avoid* producing poor-quality goods or services. Often, poor quality is caused by the variability of the production process or the complexity of the product design. To reduce the variability of the production process, companies often automate as much of the process as possible. Employee training can help decrease variability in nonautomated processes. In addition, reducing the complexity of the product design or manufacturing process can prevent the potential for error: the fewer parts or processes, the fewer things that can go wrong. Frequently, companies need to literally "go back to the drawing board" (the R&D and design stages of the value chain) to make a significant difference in preventing production problems. For example, Dell reengineered its assembly process to cut in half the number of times humans touch the hard-drive. As a result, the hard-drive failure rate dropped 40%. Likewise, Hewlett-Packard was able to reduce its defect rate by significantly reducing the number of parts that went into a desktop printer.
2. Appraisal costs are costs incurred to *detect* poor-quality goods or services. Intel incurs appraisal costs when it tests its products. One procedure, called burn-in, heats circuits to a high temperature. A circuit that fails the burn-in test is also likely to fail in customer use. Nissan tests 100% of the vehicles that roll off its assembly lines. Each vehicle is put through the paces on Nissan's all-terrain test track. Any problems are identified before the vehicle leaves the plant.
3. Internal failure costs are costs incurred on defective units *before* delivery to customers. For example, if Nissan does identify a problem, the vehicle is reworked to eliminate the defect before it is allowed to leave the plant. In the worst-case scenario, a product may be so defective that it cannot be reworked and must be completely scrapped. In this case, the entire cost of manufacturing the defective unit, plus any disposal cost, is an internal failure cost.

4. External failure costs are costs incurred because the defective goods or services are not detected until *after* delivery is made to customers. For example, Toyota recalled almost 4,000,000 vehicles in 2009 and 2,300,000 vehicles in 2010 because of a problem with the accelerator pedal, which had the potential to cause the cars to accelerate uncontrollably and cause crashes. Along with incurring substantial cost for repairing or replacing the recalled pedals and other parts, the publicity of this defect could cause significant damage to the company's reputation. Damage to a company's reputation from selling defective units to end customers can considerably harm the company's future sales. Unsatisfied customers will avoid buying from the company in the future. Even worse, unsatisfied customers tend to tell their neighbours, families, and friends about any poor experiences with products or services. As a result, a company's reputation for poor quality can increase at an exponential rate. To capture the extent of this problem, external failure costs should include an estimate of how much profit the company is losing due to having a reputation for poor quality.

Exhibit 1-11 lists some common examples of the four different costs of quality. Most prevention costs occur in the R&D and design stages of the value chain. In contrast, most appraisal and internal failure costs occur in the production element of the value chain. External failure costs occur in the customer service stage. Managers make trade-offs among these costs. Many prevention costs are incurred only periodically, while internal and external failure costs are ongoing. One expert estimates that $0.08 spent on prevention saves most manufacturers $1.00 in failure costs.

EXHIBIT 1-11 Four Types of Quality Costs

Prevention Costs	Appraisal Costs
Training personnel	Inspection of incoming materials
Evaluating potential suppliers	Inspection at various stages of production
Using better materials	Inspection of final products or services
Preventive maintenance	Product testing
Improved equipment	Cost of inspection equipment
Redesigning product or process	
Internal Failure Costs	**External Failure Costs**
Production loss caused by downtime	Lost profits from lost customers
Rework	Warranty costs
Abnormal quantities of scrap	Service costs at customer sites
Rejected product units	Sales returns and allowances due to quality problems
Disposal of rejected units	Product liability claims
Machine breakdowns	Cost of recalls

Prevention and appraisal costs are sometimes referred to as "conformance costs" since they are the costs incurred to make sure the product or service conforms to its intended design. In other words, these are the costs incurred to make sure the product is *not* defective. On the other hand, internal and external failure costs are sometimes referred to as "non-conformance costs." These are the costs incurred because the product or service *is* defective.

The costs of quality are not limited to manufacturers. Service firms and merchandising companies also incur costs of quality. For example, public accounting firms spend a lot of money providing ongoing professional training to their staff. They also develop standardized audit checklists to minimize the variability of the audit procedures performed for each client.

These measures help to *prevent* audit failures. Both audit managers and partners review audit work papers to *appraise* whether the audit procedures performed and evidence gathered are sufficient on each audit engagement. If audit procedures or evidence are deemed to be lacking (*internal failure*), the audit manager or partner will instruct the audit team to perform additional procedures before the firm will issue an audit opinion on the client's financial statements. This parallels the "rework" a manufacturer might perform on a product that is not up to par. Finally, recent audit failures, such as those at Enron and WorldCom, illustrate just how expensive and devastating *external failure* can be to a public accounting firm. The once prestigious international firm Arthur Andersen & Co. actually went out of business because of the reputation damage caused by its audit failure at Enron.

Why is this important?

Businesses compete with each other on the basis of price and quality. Costs of Quality reports help managers determine how they should spend money to ensure that consumers get the best quality product for the price.

Now that we have examined the four costs of quality, let us see how they can be presented to management in the form of a Cost of Quality Report. Let us assume Candent Dental Laboratory, a manufacturer of dental appliances and products, is having difficulty competing with Shaw Group because it does not have the reputation for high quality that Shaw Group enjoys. To examine this issue, management has prepared the Cost of Quality Report shown in Exhibit 1-12.

EXHIBIT 1-12 Candent's Cost of Quality Report

	Costs Incurred	Total Costs of Quality	Percentage of Total Costs of Quality (rounded)
Prevention Costs:			
Employee training	$ 125,000		
Total prevention costs		$ 125,000	6.1%*
Appraisal Costs:			
Testing	$ 175,000		
Total appraisal costs		$ 175,000	8.5%
Internal Failure Costs:			
Rework	$ 300,000		
Cost of rejected units	50,000		
Total internal failure costs		$ 350,000	17.0%
External Failure Costs:			
Lost profits from lost sales due to impaired reputation	$1,000,000		
Sales return processing	175,000		
Warranty costs	235,000		
Total external failure costs		$1,410,000	68.4%
Total costs of quality		$2,050,000	100%

*The percentage of total is computed as the total cost of the category divided by the total costs of quality. For example: 6.1% = $125,000 ÷ $2,050,000.

Notice how Candent identifies, categorizes, and quantifies all of the costs it incurs relating to quality. Candent also calculates the percentage of total costs of quality that are incurred in each cost category. This helps company managers see just how *little* they are spending on conformance costs (prevention and appraisal). Most of their costs are internal and external failure costs. The best way to reduce these failure costs is to invest more in prevention and appraisal. Candent managers can now begin to focus on how they might be able to prevent these failures from occurring.

Using the Costs of Quality Framework to Aid Decisions

After analyzing the Cost of Quality Report, the CEO is considering spending the following amounts on a new quality program:

Inspect raw materials	$100,000
Reengineer the production process to improve product quality	750,000
Screen and certify suppliers	25,000
Conduct preventive maintenance on plant equipment	75,000
Total costs of implementing quality programs	$950,000

Although these measures will not completely eliminate internal and external failure costs, Candent expects this quality program to *reduce* costs by the following amounts:

Reduction in lost profits from lost sales due to impaired reputation	$ 800,000
Fewer sales returns to be processed	150,000
Reduction in rework costs	250,000
Reduction in warranty costs	225,000
Total cost savings	$1,425,000

According to these projections, Candent's quality initiative will cost $950,000 but result in total savings of $1,425,000—for a net benefit of $475,000. When performing a cost–benefit analysis, some companies simply compare all of the projected costs ($950,000) with all of the projected benefits ($1,425,000) as shown previously. Other companies prefer to organize their cost–benefit analysis by cost category so that managers have a better idea of how the quality initiative will affect each cost category.

Exhibit 1-13 shows that by increasing prevention costs (by $850,000) and appraisal costs (by $100,000), Candent will be able to save $250,000 in internal failure costs and $1,175,000 in external failure costs. In total, Candent expects a net benefit of $475,000 if it undertakes the quality initiative. By spending more on conformance costs (prevention and appraisal costs), Candent saves even more on nonconformance costs (internal and external failure costs).

The analysis shown in Exhibit 1-13 appears very straightforward. However, quality costs can be hard to measure. For example, design engineers may spend only part of their time on quality. Allocating their salaries to various activities is subjective. It is especially difficult to measure external failure costs. The largest external failure cost—profits lost because of the company's reputation for poor quality—does not even appear in the accounting records. This cost must be estimated based on the experiences and judgments of the Sales Department. Because these estimates may be subjective, TQM programs also emphasize nonfinancial measures such as defect rates, number of customer complaints, and number of warranty repairs that can be objectively measured.

EXHIBIT 1-13 Cost–Benefit Analysis of Candent Proposed Quality Program

	Additional (Costs) and Cost Savings	Total New (Costs) or Cost Savings
Prevention Costs:		
Reengineer the production process	$(750,000)	
Supplier screening and certification	(25,000)	
Preventive maintenance on equipment	(75,000)	
Total additional prevention costs		$ (850,000)
Appraisal Costs:		
Inspect raw materials	$(100,000)	
Total additional appraisal costs		(100,000)
Internal Failure Costs:		
Reduction of rework costs	$ 250,000	
Total internal failure cost savings		250,000
External Failure Costs:		
Reduction of lost profits from lost sales	$ 800,000	
Reduction of sales returns	150,000	
Reduction of warranty costs	225,000	
Total external failure cost savings		1,175,000
Total savings (costs) from quality program		$ 475,000

Decision Guidelines

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Lean Production and the Costs of Quality

Dell, a worldwide leader in PC sales, is famous for its complete commitment to both the lean production and TQM philosophies. The following are several decisions Dell's managers made when adopting these two modern management techniques.

Decision	Guidelines: Traditional	Guidelines: Lean Production
If we want to change from a traditional production system to a lean production system, what factors do we need to consider in our decision?	Like machines grouped together	Production cells
	Longer set-up times	Shorter set-up times
	Larger batches	Smaller batches
	Higher inventories	Lower inventories
	Individuals do fewer tasks	Individuals do a wider range of tasks
	Longer manufacturing cycle times	Shorter manufacturing cycle times
	Emphasis on using sample inspections to limit the number of defective products sold	Emphasis on building in quality
	Many suppliers	Fewer, but well-coordinated, suppliers

SUMMARY PROBLEM 1

We know that we would like to improve our costs of quality but are not sure how to start. How can we divide the costs in order to better understand them and determine where best to spend funds on improvement strategies? The total costs of quality can be divided into the following:

1. Prevention costs
2. Appraisal costs
3. Internal failure costs
4. External failure costs

By separating the costs into these categories, decisions can be made about what measures might have the most impact.

How do we decide on which costs of quality to focus? Investment in prevention costs and appraisal costs reduces internal and external failure costs and has the greatest long-term effect.

SUMMARY PROBLEM 2

The CEO of Edmonton Auto Parts (EAP) is concerned with the quality of its products and the amount of resources currently spent on customer returns. The CEO would like to analyze the costs incurred in conjunction with the quality of the product.

The following cost information was collected from various departments within the company:

Warranty returns	$120,000
Training personnel	10,000
Litigation on product liability claims	175,000
Inspecting 10% of final products	5,000
Rework	10,000
Production loss due to machine breakdown	45,000
Inspection of raw materials	$ 5,000

Requirements

1. Prepare a Cost of Quality Report. In addition to listing the costs by category, determine the percentage of the total cost of quality incurred in each cost category.
2. Do any additional subjective costs appear to be missing from the report?
3. What can be learned from the report?

▪ SOLUTIONS

Requirement 1

	Costs Incurred	Total Costs of Quality	Percentage of Total Costs of Quality (rounded)
Prevention Costs:			
Personnel training	$ 10,000		
Total prevention costs		$ 10,000	2.7%*
Appraisal Costs:			
Inspecting raw materials	$ 5,000		
Inspecting 10% of final products	5,000		
Total appraisal costs		$ 10,000	2.7%
Internal Failure Costs:			
Rework	$ 10,000		
Production loss due to			
machine breakdown	45,000	$ 55,000	14.9%
Total internal failure costs			
External Failure Costs:			
Litigation costs from product			
liability claims	$175,000		
Warranty return costs	120,000		
Total external failure costs		$295,000	79.7%
Total costs of quality		$370,000	100%

*The percentage of total is computed as the total cost of the category divided by the total costs of quality. For example: 2.7% = $10,000 ÷ $370,000.

Requirement 2

Because the company has warranty returns and is involved in product liability litigation, it is very possible that the company suffers from a reputation for poor-quality products. If so, it is losing profits because it is losing sales. Unsatisfied customers will probably avoid buying from the company in the future. Worse yet, customers may tell their friends and family not to buy from the company. This report does not include an estimate of the lost profits arising from the company's reputation for poor-quality products.

Requirement 3

The Cost of Quality Report shows that very little is being spent on prevention and maintenance, which is probably why the internal and external failure costs are so high. The CEO should use this information to develop quality initiatives in the areas of prevention and appraisal. Such initiatives should reduce future internal and external failure costs.

Decision Guidelines

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The Changing Regulatory and Business Environment

Successful companies respond to changes in the regulatory and business environment. Here are some of the decisions managers need to consider.

Decision	Guidelines
I'm a Canadian corporation. Do I need to worry about SOX?	Publicly traded Canadian companies that are listed on the U.S. stock market must comply with SOX. However, Canadian regulations, similar in nature to SOX, have been implemented for the domestic market. These regulations have been designed and recommended by the Canadian Securities Administrators and implemented by the securities organizations for each province and territory.
I'm a Canadian company, but I have operations in other countries as well. How will IFRS help me?	Companies that operate in more than one country will no longer be required to prepare multiple financial statements using different standards for each country. Rather, they will prepare one set of financial statements in accordance with International Financial Reporting Standards (IFRS).
In the past, I have been able to find information about companies on the Internet, but it took a long time to organize it. Can XBRL reduce the time it would take to do so?	XBRL will allow managers to more easily obtain and analyze publicly available financial data from their competitors, from companies they may wish to purchase, or from companies in which they may want to invest.
I would like to take my Canadian company into the global market. What might help me compete?	The use of advanced information systems, e-commerce, supply-chain management, lean production, and TQM will help a company to compete more effectively. Also, consider becoming ISO 9001:2008 certified.
How do I know if new initiatives such as international expansion, ERP, lean production, and TQM will be worth it in the long run?	By using cost–benefit analysis—comparing the estimated benefits of the initiative with the estimated costs—you will see whether or not the benefits of the project exceed its costs. You can then determine the best alternative for your situation.

SUMMARY PROBLEM 3

EZ-Rider Motorcycles is thinking about expanding into Germany. If gas prices increase, the company expects more interest in fuel-efficient transportation, such as motorcycles. As a result, the company is considering setting up a motorcycle assembly plant on the outskirts of Berlin.

EZ-Rider Motorcycles estimates it will cost $850,000 to convert an existing building to motorcycle production. Workers will need training, at a total cost of $65,000. The additional costs to organize the business and to establish relationships are estimated to be $150,000.

The CEO believes the company can earn sales profits from this expansion (before considering the costs in the preceding paragraph) of $1,624,000.

Requirement

Use cost–benefit analysis to determine whether EZ-Rider should expand into Germany.

▪ SOLUTION

The following cost–benefit analysis indicates that the company should expand into Germany:

Expected Benefits:		
Expected profits from expansion sales		$ 1,624,000
Expected Costs:		
Conversion of building to manufacturing plant	$850,000	
Workforce training	65,000	
Organizing business and establishing relationships	150,000	
Total expected costs		(1,065,000)
Net expected benefits		$ 559,000

END OF CHAPTER

Learning Objectives

1. Identify managers' four primary responsibilities.
2. Distinguish financial accounting from managerial accounting.
3. Describe organizational structure and the roles and skills required of management accountants within the organization.
4. Describe the roles of the three professional accounting designations in Canada and use their ethical standards to make reasonable ethical judgments.
5. Discuss and analyze the implications of regulatory and business trends.
6. Describe a lean production system.
7. Describe and use the costs of quality framework.

ACCOUNTING VOCABULARY

Accounting Standards for Private Enterprises (ASPE) (p. 7) Reporting guidelines appropriate for organizations that do not fit the definition of publicly accountable. These guidelines replace the Generally Accepted Accounting Principles (GAAP) and have been available for early adoption since 2009.

Appraisal Costs (p. 27) Costs incurred to *detect* poor-quality goods or services.

Audit Committee (p. 9) A subcommittee of the board of directors that is responsible for overseeing both the internal audit function and the annual financial statement audit by independent public accountants.

Board of Directors (p. 8) The body elected by shareholders to oversee the company.

Budget (p. 4) Quantitative expression of a plan that helps managers coordinate and implement the plan.

Canadian Securities Administrators (CSA) (p. 18) The CSA is an organization made up of securities regulators from each province and territory. The goal of the CSA is to provide guidance in making securities regulations more consistent across the country.

Certified Management Accountant (CMA) (p. 10) A professional certification issued by the Society of Management Accountants to designate expertise in the areas of managerial accounting; economics; and business finance, leadership, and strategy. The CMA designation is one of three accounting designations in Canada.

Certified General Accountant (CGA) (p. 10) A professional certification issued by the Certified General Accountants Association of Canada to designate expertise in the areas of financial management in industry, commerce, finance, government, and public practice. The CGA designation is one of three accounting designations in Canada.

Chartered Accountant (CA) (p. 10) A designation, signifying a professional association of accountants, issued by the Canadian Institute of Chartered Accountants to indicate expertise in the areas of public accounting, senior management, audit, and tax. The CA designation is one of three accounting designations in Canada.

Chief Executive Officer (CEO) (p. 8) The position hired by the board of directors to oversee the company on a daily basis.

Chief Financial Officer (CFO) (p. 8) The position responsible for all of the company's financial concerns.

Chief Operating Officer (COO) (p. 8) The position responsible for overseeing the company's operations.

Controller (p. 8) The position responsible for general financial accounting, managerial accounting, and tax reporting.

Controlling (p. 4) One of management's primary responsibilities; evaluating the results of business operations against the plan and making adjustments to keep the company pressing toward its goals.

Cost–Benefit Analysis (p. 21) Weighing costs against benefits to help make decisions.

Cost of Quality Report (p. 27) A report that lists the costs incurred by the company related to quality. The costs are categorized as prevention costs, appraisal costs, internal failure costs, and external failure costs.

Cross-Functional Teams (p. 9) Corporate teams whose members represent various functions of the organization, such as R&D, design, production, marketing, distribution, and customer service.

Decision Making (p. 4) One of management's primary responsibilities: identifying possible courses of action and choosing among them.

Directing (p. 4) One of management's primary responsibilities: running the company on a day-to-day basis.

Extensible Business Reporting Language (XBRL) (p. 17) A data-tagging system that enables companies to release financial and business information in a format that can be quickly, efficiently, and cost-effectively accessed, sorted, and analyzed over the Internet.

External Failure Costs (p. 27) Costs incurred when the company does not detect poor-quality goods or services until *after* delivery is made to customers.

Internal Failure Costs (p. 27) Costs incurred when the company detects and corrects poor-quality goods or services *before* making delivery to customers.

International Financial Reporting Standards (IFRS) (p. 7) The provincial Securities Commissions have recently moved to adopt IFRS for all publicly traded companies within the next few years. In many instances, IFRS vary from ASPE.

Internal Audit Function (p. 8) The corporate function charged with assessing the effectiveness of the company's internal controls and risk management policies.

ISO 9001:2008 (p. 26) A quality-related certification issued by the International Organization for Standardization (ISO). Firms may become ISO 9001:2008 certified by complying with the quality management standards set forth by the ISO and undergoing extensive audits of their quality management processes.

Just-in-time (JIT) (p. 23) An inventory philosophy first pioneered by Toyota in which a product is manufactured *just in time* to fill customer orders. Companies adopting JIT are able to substantially reduce the quantity of raw materials and finished product kept on hand.

Lean Production (p. 20) A philosophy and business strategy of manufacturing without waste.

Planning (p. 4) One of management's primary responsibilities: setting goals and objectives for the company and determining how to achieve them.

Prevention Costs (p. 27) Costs incurred to *avoid* poor-quality goods or services.

Public Accountant (p. 10) A professional accountant who investigates and audits, or prepares, the financial statements of an organization.

Publicly Accountable Enterprise (p. 7) An organization that fits the definition of "publicly accountable" for the purposes of determining the reporting standards that must be followed.

Sarbanes-Oxley Act of 2002 (SOX) (p. 17) A congressional act in the United States that enhances internal control and financial reporting requirements and establishes new regulatory requirements for publicly traded companies and their independent auditors.

Supply-chain Management (p. 22) Exchange of information with suppliers to reduce costs, improve quality, and speed delivery of goods and services from suppliers to the company itself and on to customers.

Sustainability (p. 21) The ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.

Treasurer (p. 8) The position responsible for raising the firm's capital and investing funds.

Total Quality Management (TQM) (p. 26) A management philosophy of delighting customers with superior products and services by continually setting higher goals and improving the performance of every business function.

Triple bottom line (p. 21) Evaluating a company's performance not only by its ability to generate economic profits, but also by its impact on people and the planet.

QUICK CHECK

1. (Learning Objective 1) Which of the following is *not* one of the four primary responsibilities of management?
   a. Controlling
   b. Costing
   c. Directing
   d. Planning

2. (Learning Objective 2) Which of the following about managerial accounting is *true*?
   a. IFRS and ASPE require managerial accounting.
   b. Internal decision makers use managerial accounting.
   c. Public accountants audit managerial accounting reports.
   d. Managerial accounting reports are usually prepared on an annual basis.

3. (Learning Objective 2) Which of the following is *not* a characteristic of managerial accounting information?
   a. Emphasizes relevance
   b. Focuses on the future more than the past
   c. Provides detailed information about parts of the company, not just the company as a whole
   d. Emphasizes reliability

4. (Learning Objective 3) What company position is in charge of raising the firm's capital?
   a. Director of internal audit
   b. Controller
   c. COO
   d. Treasurer

5. (Learning Objective 3) Which of the following statements is *true*?
   a. The COO reports to the CFO.
   b. The treasurer reports to the CEO.
   c. The internal audit department reports to the audit committee.
   d. The controller reports to the internal auditor.

6. (Learning Objective 3) In addition to accounting knowledge, management accountants must possess all of the following skills *except*
   a. written communication skills.
   b. knowledge of how a business functions.
   c. computer programming skills.
   d. analytical skills.

7. (Learning Objective 4) A management accountant who refuses an expensive gift from a software salesperson meets the ethical standard of
   a. credibility.
   b. confidentiality.
   c. integrity.
   d. competence.

8. (Learning Objective 5) Which of the following is *not* one of the provisions of the Sarbanes-Oxley Act of 2002?
   a. The company's auditors assume responsibility for the financial statements.
   b. The penalties (i.e., prison time and fines) for corporate fraud were increased.
   c. At least one audit committee member should be a financial expert.
   d. The CEO and CFO must certify that the financial statements fairly present the company's operations and financial condition.

9. (Learning Objective 6) All of the following tools help companies compete in today's market *except*
   a. JIT.
   b. KJD.
   c. ERP.
   d. TQM.

Quick Check Answers

1. b, 2. b, 3. d, 4. d, 5. c, 6. c, 7. c, 8. a, 9. b

SHORT EXERCISES

S1-1 Roles of managers *(Learning Objective 1)*

Describe the four primary responsibilities of managers and the way they relate to one another.

S1-2 Contrast managerial and financial accounting *(Learning Objective 2)*

Managerial accounting differs from financial accounting in several areas. Specify whether each of the following characteristics relates to managerial accounting or financial accounting.

- **a.** Reports tend to be prepared for the parts of the organization rather than the whole organization.
- **b.** Primary users are internal (for example, company managers).
- **c.** It is governed by Accounting Standards for Private Enterprises (ASPE) or International Financial Reporting Standards (IFRS).
- **d.** Two main characteristics of data are reliability and objectivity.
- **e.** Reports are prepared as needed.
- **f.** It is not governed by legal requirements.
- **g.** Primary users are external (i.e., creditors, investors).
- **h.** It is focused on the future.
- **i.** Reporting is based mainly on the company as a whole.
- **j.** Reports are prepared usually quarterly and annually.
- **k.** Information is verified by external auditors.
- **l.** It is focused on the past.
- **m.** A main characteristic of data is relevance.

S1-3 Accounting roles in the organization *(Learning Objective 3)*

The following is a list of job duties or descriptions. For each item, specify whether it would most likely describe the duties or responsibilities of someone working for the treasurer, the controller, or in the internal auditing department.

- **a.** Perform cash counts at branch offices.
- **b.** Prepare journal entries for month-end closing.
- **c.** Issue company stock.
- **d.** Ensure that the company's internal controls are functioning properly.
- **e.** Create an analysis about whether to lease or buy a delivery truck.
- **f.** Calculate the cost of a product.
- **g.** Issue company bonds.
- **h.** Ensure that company risk management procedures are being followed.
- **i.** Work with various departments in preparing operating budgets for the upcoming year.
- **j.** Oversee accounts payable activities.
- **k.** Invest company funds.
- **l.** Report to the audit committee of the board of directors *and* to a senior executive, such as the CFO or CEO.
- **m.** Prepare company tax returns.

S1-4 Role of internal audit function *(Learning Objective 3)*

The following table lists several characteristics. Place a check mark next to those items that pertain directly to the internal audit function and its role within the organization.

Characteristics	Check (✓) if related to internal auditing
a. Helps to ensure the company's internal controls are functioning properly	❑
b. Reports to treasurer or controller	❑
c. Required by the Toronto Stock Exchange if company stock is publicly traded on the TSE	❑
d. Reports directly to the audit committee	❑
e. Ensures that the company achieves its profit goals	❑
f. Is part of the Accounting Department	❑
g. Usually reports to the senior executive (CFO) or (CEO) for administrative matters	❑
h. Performs the same functions as independent certified public accountants	❑
i. External audits can be performed by the internal auditing department	❑

S1-5 Importance of ethical standards *(Learning Objective 4)*

Explain why each of the five broad ethical concepts in the CMA's *Code of Professional Ethics* is necessary.

S1-6 Violations of ethical standards *(Learning Objective 4)*

The CMA's *Code of Professional Ethics* (Exhibit 1-6) requires management accountants to meet standards regarding the following:

- Competence
- Independence
- Confidentiality
- Integrity
- Credibility

Consider the following situations. Which guidelines are violated in each situation?

a. You tell your brother that your company will report earnings significantly above financial analysts' estimates.

b. You see that other employees take home office supplies for personal use. As an intern, you do the same thing, assuming that this is a "perk."

c. At a conference on e-commerce, you skip the afternoon session and go sightseeing.

d. You fail to read the detailed specifications of a new general ledger package that you asked your company to purchase. After it is installed, you are surprised that it is incompatible with some of your company's older accounting software.

e. You do not provide top management with the detailed job descriptions they requested because you fear they may use this information to cut a position from your department.

S1-7 Identify current competitive tools *(Learning Objective 5)*

Companies are facing a great amount of change in every facet of their operations today. To remain competitive, companies must keep abreast of current developments in several areas. You recently got together with a group of friends who work for different companies. Your friends share information about their current challenges in adopting new tools or complying with new regulations. Excerpts from the conversation are presented in the following section. Tell whether each excerpt describes XBRL, ISO 9001:2008, e-commerce, the Sarbanes-Oxley Act (SOX), or enterprise resource planning (ERP) systems.

a. Suzanne: My company is working to demonstrate its commitment to continuous quality improvement. We are currently undergoing an extensive audit of our quality management processes. We hope to gain a competitive advantage through this process.

b. Ying: We have just installed a system at our company that integrates all of our company's data across all systems. We have one central data warehouse that contains information about our suppliers, our customers, our employees, and our financial information. The software retrieves information from this single data warehouse and all systems are integrated. The process of implementing this system has been very expensive and time-consuming, but we are reaping the benefits of being more streamlined, of being able to respond more quickly to changes in the market, and of not having several different software systems operating independently.

c. Steve: I just started a new job in the Auditing Department. My new duties include assisting in the development of testing procedures and methods for determining the effectiveness of internal controls. I also oversee the testing for assurance of compliance with corporate policies. I am coordinating the review of securities filings for the Yukon Superintendent of Securities with our external auditors. I also am responsible for preparing periodic compliance status reports for management, the audit committee, and the external auditors.

d. Keisha: We have been working on a system to tag all of the financial information in our quarterly and annual reports so that our financial information can be shared easily. We will be able to attach a tag to each piece of financial information. For example, we can tag "net profits" wherever it appears in the financial reports. Any user accessing the financial reports would then be able to download the numbers for "net profits." Our shareholders and the analysts will be able to retrieve the information they need quickly, efficiently, and cost effectively.

e. Roland: My company has been shifting much of its purchasing system to the Internet. We are able now able to complete many of our business-to-business transactions via the Web, which generates little or no paperwork, lessens the chance of error, and decreases the costs of each transaction.

S1-8 Understand key terms *(Learning Objectives 6 & 7)*

Listed below are several terms. Complete the following statements with one of these terms. You may use a term more than once, and some terms may not be used at all.

Internal failure costs	Appraisal costs	External failure costs	Lean production	Prevention costs
a. _______________ are incurred to avoid producing poor-quality goods or services.				
b. The philosophy and business strategy of manufacturing without waste is called _______________.				
c. _______________ are costs incurred to detect poor-quality goods or services.				
d. _______________ are costs that arise from product defects that are discovered before the product is shipped to the customer.				
e. The costs of providing warranty service are _______________.				

S1-9 Identify lean production characteristics *(Learning Objective 6)*

Indicate whether each of the following is characteristic of a lean production system or a traditional production system.

a. Management works with suppliers to ensure defect-free raw materials.

b. Products are produced in large batches.

c. Large stocks of finished goods protect against lost sales if customer demand is higher than expected.

d. Suppliers make frequent deliveries of small quantities of raw materials.

e. Set-up times are long.

f. Employees do a variety of jobs, including maintenance and set ups, as well as operating machines.

g. Machines are grouped into self-contained production cells or production lines.
h. Machines are grouped according to function. For example, all cutting machines are located in one area.
i. Suppliers can access the company's Intranet.
j. The final operation in the production sequence "pulls" parts from the preceding operation.
k. Each employee is responsible for inspecting his or her own work.
l. There is an emphasis on building in quality.
m. The manufacturing cycle times are longer.

S1-10 Classifying costs of quality *(Learning Objective 7)*

Classify each of the following quality-related costs as prevention costs, appraisal costs, internal failure costs, or external failure costs.

1. Reworking defective units
2. Litigation costs from product liability claims
3. Inspecting incoming raw materials
4. Training employees
5. Warranty repairs
6. Redesigning the production process
7. Lost productivity due to machine breakdown
8. Inspecting products that are halfway through the production process
9. Incremental cost of using a higher-grade raw material
10. Cost incurred in producing and disposing of defective units

S1-11 Quality initiative decision *(Learning Objective 7)*

Wharfedale manufactures high-quality audio speakers. Suppose Wharfedale is considering spending the following amounts on a new quality program:

Additional 20 minutes of testing for each speaker	$ 600,000
Negotiating with, and training suppliers to, obtain higher-quality materials and on-time delivery	300,000
Redesigning the speakers to make them easier to manufacture	1,400,000

Wharfedale expects this quality program to save costs as follows:

Reduce warranty repair costs	$200,000
Eliminate inspection of raw materials	400,000
Reduce rework (fewer defective units)	650,000

It also expects this program to avoid lost profits from the following:

Lost sales due to disappointed customers	$850,000
Lost production time due to rework	300,000

1. Classify each of these costs into one of the four categories of quality costs (prevention, appraisal, internal failure, external failure).
2. Should Wharfedale implement the quality program? Give your reasons.

S1-12 Categorize different costs of quality *(Learning Objective 7)*

Millan & Co. makes electronic components. Michelle Millan, the president, recently instructed Vice President Pablo Tapia to develop a total quality control program: "If we don't at least match the quality improvements our competitors are making," she told Tapia, "we'll soon be out of business." Tapia began by listing various costs of quality that Millan incurs. The first six items that came to mind are listed below. Classify each item as a prevention cost, an appraisal cost, an internal failure cost, or an external failure cost.

1. Costs of electronic components returned by customers
2. Costs incurred by Millan & Co.'s customer representatives travelling to customer sites to repair defective products
3. Lost profits from lost sales due to reputation for less-than-perfect products
4. Costs of inspecting components in one of Millan & Co.'s production processes
5. Salaries of engineers who are designing components to withstand electrical overloads
6. Costs of reworking defective components after discovery by company inspectors

EXERCISES Group A

E1-13A Managers' responsibilities *(Learning Objective 1)*

Categorize each of the following activities according to which management responsibility it fulfills: planning, directing, controlling, or decision making. Some activities may fulfill more than one responsibility.

a. Management conducts variance analysis by comparing budget to actual.
b. Management reviews hourly sales reports to determine the level of staffing needed to service customers.
c. Management decides to increase sales by 10% next year.
d. Management uses information on product costs to determine sales prices.
e. To lower product costs, management moves production to Mexico.

E1-14A Define key terms *(Learning Objectives 1 & 2)*

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

Budget	Creditors	Managerial accounting	Planning
Controlling	Financial accounting	Managers	Shareholders

a. Companies must follow IFRS or ASPE in their _______ systems.
b. Financial accounting develops reports for external parties such as _______ and _______.
c. When managers evaluate the company's performance compared to the plan, they are performing the _______ responsibility of management.
d. _______ are decision makers inside a company.
e. _______ provides information on a company's past performance to external parties.
f. _______ systems are not restricted by IFRS or ASPE but are chosen by comparing the costs and the benefits of the system.
g. Choosing goals and the means to achieve them is the _______ function of management.
h. _______ systems report on various segments or business units of the company.
i. _______ statements of public companies are audited annually by public accountants.

E1-15A Identify users of accounting information *(Learning Objective 3)*

For each of the following users of financial accounting information and managerial accounting information, specify whether the user would primarily use financial accounting information, managerial accounting information, or both.

1. Potential shareholders
2. Loan officer at the company's bank
3. Manager of the Sales Department
4. Bookkeeping Department
5. Managers at regional offices
6. Canada Revenue Agency agent
7. Current shareholders
8. Toronto Stock Exchange analyst
9. News reporter
10. Company controller
11. Board of directors
12. Nova Scotia Securities Commission employee
13. External auditor (public accounting firm)
14. Internal auditor

E1-16A Classify roles within the organization *(Learning Objective 3)*

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

Audit committee	Board of directors	CEO	CFO
Treasurer	Controller	Cross-functional teams	COO

a. The _______ and the _______ report to the CEO.
b. The internal audit function reports to the CFO or _______ and the _______.
c. The _______ is directly responsible for financial accounting, managerial accounting, and tax reporting.
d. The CEO is hired by the _______.
e. The _______ is directly responsible for raising capital and investing funds.
f. The _______ is directly responsible for the company's operations.
g. Management accountants often work with _______.
h. A subcommittee of the board of directors is called the _______.

E1-17A Professional organizations and certification *(Learning Objective 4)*

Complete the following sentences:

a. The _______ is the professional association for management accountants.
b. The three professional accounting designations in Canada are ___________________, _________________, and ____________________.
c. The ____________ designation focuses on senior management, advisory, financial, tax, and assurance roles.
d. The ____________ designation focuses on accounting and financial management within industry, commerce, finance, government, and public practice.

E1-18A Ethical dilemma *(Learning Objective 4)*

Mary Gonzales is the controller at Automax, a car dealership. She recently hired Anik Cousineau as a bookkeeper. Cousineau wanted to attend a class on Excel spreadsheets, so Gonzales temporarily took over Cousineau's duties, including overseeing a fund for topping off a car's gas tank before a test drive. Gonzales found a shortage in this fund and confronted Cousineau when she returned to work. Cousineau admitted that she occasionally uses this fund to pay for her own gas. Gonzales estimated that the amount involved is close to $300.

Requirements

1. What should Gonzales do?
2. Would you change your answer to the previous question if Gonzales was the one recently hired as controller and Cousineau was a well-liked, long-time employee who indicated that she always eventually repaid the fund?

E1-19A Classify ethical responsibilities *(Learning Objective 4)*

According to the CMA's *Code of Professional Ethics* (Exhibit 1-6), management accountants should follow five standards: competence, independence, confidentiality, integrity, and credibility. Each of these standards contains specific responsibilities. Classify each of the following responsibilities according to the standard it addresses.

1. Refrain from using confidential information for unethical or illegal advantage.
2. Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
3. Communicate information fairly and objectively.
4. Recognize and communicate professional limitations that would preclude responsible judgment or successful performance of an activity.
5. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
6. Provide decision support information and recommendations that are accurate, clear, concise, and timely.
7. Abstain from engaging in or supporting any activity that might discredit the profession.
8. Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
9. Inform all relevant parties regarding the appropriate use of confidential information. Monitor subordinates' activities to ensure compliance.
10. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
11. Refrain from engaging in any conduct that would make it difficult to carry out duties ethically.
12. Keep information confidential except when disclosure is authorized or legally required.
13. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.

E1-20A Define key terms *(Learning Objective 5)*

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

E-commerce	Shift to service economy	Future
Sarbanes-Oxley Act of 2002	Just in time	ISO 9001:2008
Present	Lean production	Supply-chain management
IFRS	ERP	Cross-functional teams
Total quality management	XBRL	

a. _______________ is a language that uses a standardized coding system companies use to tag each piece of financial and business information in a format that can be quickly and efficiently accessed over the Internet.

b. _______________ involves the exchange of information with suppliers to reduce costs, improve quality, and speed delivery of goods and services from suppliers to the company and its customers.

c. The _______________ was enacted to restore trust in publicly traded corporations, their management, their financial statements, and their auditors.

d. The goal of _______ is to meet customers' expectations by providing them with superior products and services by eliminating defects and waste throughout the value chain.

- **e.** Most of the costs of adopting ERP, expanding into a foreign market, or improving quality are incurred in the _______; but most of the benefits occur in the _______.
- **f.** _______ serves the information needs of people in accounting as well as people in marketing and in the warehouse.
- **g.** Firms adopt _______ to conduct business on the Internet.
- **h.** Firms acquire the _______ certification to demonstrate their commitment to quality.
- **i.** ____________ is a philosophy that embraces the concept that the lower the company's waste, the lower the company's costs.
- **j.** ___________ is a data-tagging system that enables companies to release financial and business information in a format that can be quickly, efficiently, and cost-effectively accessed, sorted, and analyzed over the Internet.
- **k.** Canadian companies were required to adopt ______________ for all publicly traded companies by 2011, which differs from the ASPE that companies are currently required to use.
- **l.** Toyota first pioneered an inventory philosophy in which a product is manufactured ___________ to fill customer orders; companies are able to substantially reduce the quantity of raw materials and finished goods inventories.
- **m.** ________________ is a management philosophy of delighting customers with superior products and services by continually setting higher goals and improving the performance of every business function.

E1-21A Summarize the Sarbanes-Oxley Act *(Learning Objective 5)*

You just obtained an entry-level job as a management accountant at an international firm based in Winnipeg. Other newly hired accountants have heard of the Sarbanes-Oxley Act of 2002 (SOX), but do not know much about it (they attended a different university). Write a short memo to your colleagues discussing the reason for SOX, some of the specific requirements of SOX that will affect your company, and why this is applicable to the Canadian firm that you work for.

E1-22A Lean production cost-benefit analysis *(Learning Objective 6)*

Wild Rides manufactures snowboards. Mohammad Al-Zoubi, the CEO, is trying to decide whether to adopt a lean production model. He expects that adopting lean production would save $97,000 in warehousing expenses and $46,000 in spoilage costs. However, adopting lean production will require several one-time up-front expenditures: (1) $13,500 for an employee training program, (2) $37,000 to streamline the plant's production process, and (3) $8,000 to identify suppliers that will guarantee zero defects and on-time delivery.

Requirements

1. What are the total costs of adopting lean production?
2. What are the total benefits of adopting lean production?
3. Should Wild Rides adopt lean production? Why or why not?

E4-23A Differentiate between traditional and lean production *(Learning Objective 6)*

Briefly describe how lean production systems differ from traditional production systems using each of the following dimensions:

1. Inventory levels
2. Batch sizes
3. Set-up times
4. Physical layout of plant
5. Roles of plant employees
6. Manufacturing cycle times
7. Quality

E4-24A Prepare a Cost of Quality Report *(Learning Objective 7)*

The CEO of Salty Snackfoods is concerned about the amount of resources currently spent on customer warranty claims. Each box of snacks is printed with the guarantee "Satisfaction guaranteed or your money back." Since the claims are so high, she would like to evaluate what costs are being incurred to ensure the quality of the product. The following information was collected from various departments within the company:

Warranty claims	$420,000
Cost of defective products found at the inspection point	94,000
Training factory personnel	26,000
Recall of Batch #59374	175,000
Inspecting products halfway through the production process	55,000
Cost of disposing of rejected products	12,000
Preventive maintenance on factory equipment	7,000
Production loss due to machine breakdowns	15,000
Inspection of raw materials	5,000

Requirements

1. Prepare a Cost of Quality Report. In addition to listing the costs by category, determine the percentage of the total costs of quality incurred in each cost category.
2. Do any additional subjective costs appear to be missing from the report?
3. What can be learned from the report?

E4-25A Classify costs and make a quality-initiative decision *(Learning Objective 7)*

Chihooli manufactures radiation-shielding glass panels. Suppose Chihooli is considering spending the following amounts on a new TQM program:

Strength-testing one item from each batch of panels	$65,000
Training employees in TQM	30,000
Training suppliers in TQM	40,000
Identifying preferred suppliers who commit to on-time delivery of perfect quality materials	60,000

Chihooli expects the new program to save costs through the following:

Avoid lost profits from lost sales due to disappointed customers	$90,000
Avoid rework and spoilage	55,000
Avoid inspection of raw materials	45,000
Avoid warranty costs	15,000

Requirements

1. Classify each item as a prevention cost, an appraisal cost, an internal failure cost, or an external failure cost.
2. Should Chihooli implement the new quality program? Give your reason.

EXERCISES Group B

E1-26B Managers' responsibilities *(Learning Objective 1)*

Categorize each of the following activities according to which management responsibility it fulfills: planning, directing, controlling, or decision making. Some activities may fulfill more than one responsibility.

a. The store manager posts the employee time schedule for the next week so that employees know when they are working.
b. The manager of the Service Department investigates why the actual hours spent on a recent repair job exceeded the standard for that type of repair by more than 20%.
c. Management creates a sales budget for the upcoming quarter.
d. Top management selects a location for a new store.
e. Management is designing a new sales incentive program for the upcoming year.

E1-27B Define key terms *(Learning Objectives 1 & 2)*

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

Budget	Creditors	Managerial accounting	Planning
Controlling	Financial accounting	Managers	Shareholders

a. _______ systems are chosen by comparing the costs versus the benefits of the system and are not restricted by IFRS or ASPE.
b. Public accountants audit the _______ statements of public companies.
c. Financial accounting develops reports for external parties such as _______ and _______.
d. Companies must follow IFRS or ASPE in their _______ systems.
e. Decision makers inside a company are the _______.
f. Choosing goals and the means to achieve them is the _______ function of management.
g. _______ systems report on various segments or business units of the company.
h. When managers evaluate the company's performance compared to the plan, they are performing the _______ responsibility of management.
i. Information on a company's past performance is provided to external parties by _________________.

E1-28B Identify users of accounting information *(Learning Objective 3)*

For each of the following users of financial accounting information and managerial accounting information, specify whether the user would primarily use financial accounting information, managerial accounting information, or both.

1. Reporter from the *Globe and Mail*
2. Regional division managers
3. Manitoba Securities Commission examiner
4. Bookkeeping Department
5. Division controller
6. External auditor (public accounting firm)
7. Loan officer at the company's bank
8. Provincial tax agency auditor
9. Board of directors
10. Manager of the Service Department
11. Toronto Stock Exchange analyst
12. Internal auditor
13. Potential investors
14. Current shareholders

E1-29B Classify roles within the organization *(Learning Objective 3)*

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

Audit committee	Board of directors	CEO	CFO
Treasurer	Controller	Cross-functional teams	COO

a. Management accountants often work with _______.
b. The _______ and the _______ report to the CEO.
c. A subcommittee of the board of directors is called the _______.
d. Raising capital and investing funds are the direct responsibilities of the ___________.
e. Financial accounting, managerial accounting, and tax reporting are the direct responsibilities of the ________________.
f. The internal audit function reports to the CFO or _______ and the _______.
g. The CEO is hired by the _______.
h. The company's operations are the direct responsibility of the _____________.

E1-30B Professional organization and certification *(Learning Objective 4)*

Complete the following sentences:

a. The _______ is the professional association for management accountants.
b. The three professional accounting designations in Canada are __________________, ________________, and ___________________.
c. The ____________ designation focuses on senior management, advisory, financial, tax, and assurance roles.
d. The ____________ designation focuses on accounting and financial management within industry, commerce, finance, government, and public practice.

E1-31B Ethical dilemma *(Learning Objective 4)*

Claudia Chan is the controller at Sangood Kitchens, a large food and kitchen store. She recently hired Helen Smith as a bookkeeper. Smith wanted to attend a class on information systems, so Chan temporarily took over Smith's duties, including overseeing a fund for giving in-store cooking and product demonstrations. Chan discovered a shortage in this fund and confronted Smith about it. Smith admitted that she occasionally uses the fund to pay for her own store purchases. Chan estimated that the amount involved is close to $500.

Requirements

1. What should Chan do?
2. Would you change your answer to the previous question if Chan was the one recently hired as controller and Smith was a well-liked, long-time employee who indicated that she always eventually repaid the fund?

E1-32B Classify ethical responsibilities *(Learning Objective 4)*

According to the CMA's *Code of Professional Ethics* (Exhibit 1-6), management accountants should adhere to five standards: competence, independence, confidentiality, integrity, and credibility. Each of these standards contains specific responsibilities. Classify each of the following responsibilities according to the standard it addresses.

1. Keep information confidential except when disclosure is authorized or legally required.
2. Communicate information fairly and objectively.
3. Refrain from using confidential information for unethical or illegal advantage.
4. Inform all relevant parties regarding the appropriate use of confidential information. Monitor subordinates' activities to ensure compliance.
5. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
6. Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
7. Recognize and communicate professional limitations that would preclude responsible judgment or successful performance of an activity.

8. Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
9. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.
10. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
11. Abstain from engaging in or supporting any activity that might discredit the profession.
12. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
13. Provide decision support information and recommendations that are accurate, clear, concise, and timely.

E1-33B Define key terms *(Learning Objective 5)*

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

E-commerce	Shift to service economy	XBRL
IFRS	ERP	Future
Present	Just in time	ISO 9001:2008
Cross-functional teams	Lean production	Supply-chain management
Sarbanes-Oxley Act of 2002	Total quality management	

a. ________________ is a language that utilizes a standardized coding system companies use to tag each piece of financial and business information in a format that can be quickly and efficiently accessed over the Internet.

b. ________________ involves the exchange of information with suppliers to reduce costs, improve quality, and speed delivery of goods and services from suppliers to the company and its customers.

c. Toyota first pioneered an inventory philosophy in which a product is manufactured ____________ to fill customer orders; companies are able to substantially reduce the quantity of raw materials and finished goods inventories.

d. The ________________ was enacted to restore trust in publicly traded corporations, their management, their financial statements, and their auditors.

e. _________________ is a management philosophy of delighting customers with superior products and services by continually setting higher goals and improving the performance of every business function.

f. The goal of _______ is to meet customers' expectations by providing them with superior products and services by eliminating defects and waste throughout the value chain.

g. Most of the costs of adopting ERP, expanding into a foreign market, or improving quality are incurred in the _______, but most of the benefits occur in the _______.

h. _______ serves the information needs of people in accounting as well as people in marketing and in the warehouse.

i. Firms adopt _______ to conduct business on the Internet.

j. Firms acquire the _______ certification to demonstrate their commitment to quality.

k. _____________ is a philosophy that embraces the concept that the lower the company's waste, the lower the company's costs.

l. ____________ is a data-tagging system that enables companies to release financial and business information in a format that can be quickly, efficiently, and cost-effectively accessed, sorted, and analyzed over the Internet.

m. Canadian companies were required to adopt _______________ for all publicly traded companies by 2011, which differs from the ASPE that private companies are currently required to use.

E1-34B Summarize the Sarbanes-Oxley Act *(Learning Objective 5)*

At a family gathering, your grandmother comes to you and asks you, since you have taken many business classes, to explain the Sarbanes-Oxley Act of 2002 (SOX). She has heard about SOX on television and the Internet but does not really understand it. Explain to your grandmother the reason for SOX, some of the specific requirements of SOX, and why it is important in Canada.

E1-35B Lean production cost-benefit analysis *(Learning Objective 6)*

Snow Wonderful manufactures snowboards. John Gallagher, the CEO, is trying to decide whether to adopt a lean production model. He expects that in present-value terms, adopting lean production would save $95,000 in warehousing expenses and $48,500 in spoilage costs. However, adopting lean production will require several one-time up-front expenditures: (1) $12,500 for an employee training program, (2) $36,000 to streamline the plant's production process, and (3) $8,750 to identify suppliers that will guarantee zero defects and on-time delivery.

Requirements

1. What are the total costs of adopting lean production?
2. What are the total benefits of adopting lean production?
3. Should Snow Wonderful adopt lean production? Why or why not?

E1-36B Differentiate between traditional and lean production *(Learning Objective 6)*

Categorize each of the following characteristics as being more representative of either traditional manufacturing or lean production.

1. Quality tends to be "inspected-in" rather than "built-in."
2. Manufacturing plants tend to be organized with self-contained production cells.
3. The company maintains greater quantities of raw materials, work in process, and finished goods inventories.
4. Set-up times are longer.
5. High quality is stressed in every aspect of production.
6. Products are made in smaller batches.
7. Emphasis is placed on shortening manufacturing cycle times.
8. Manufacturing plants tend to group like machines together in different parts of the plant.
9. Set-up times are shorter.
10. Units are produced in larger batches.
11. The company strives to maintain low inventory levels.
12. Cycle time tends to be longer.

E1-37B Prepare a Cost of Quality Report *(Learning Objective 7)*

The CEO of Sweet Snackfoods is concerned with the amount of resources currently spent on customer warranty claims. Each box of snacks is printed with the guarantee "Satisfaction guaranteed or your money back." Since the claims are so high, she would like to evaluate what costs are being incurred to ensure the quality of the product. The following information was collected from various departments within the company:

Warranty claims	$436,000
Cost of defective products found at the inspection point	91,000
Training factory personnel	25,000
Recall of Batch #59374	175,000
Inspecting products when halfway through the production process	52,000
Cost of disposing of rejected products	11,000
Preventive maintenance on factory equipment	8,000
Production loss due to machine breakdowns	16,000
Inspection of raw materials	4,000

Requirements

1. Prepare a Cost of Quality Report. In addition to listing the costs by category, determine the percentage of the total costs of quality incurred in each cost category.
2. Do any additional subjective costs appear to be missing from the report?
3. What can be learned from the report?

E1-38B Classify costs and make a quality-initiative decision

(Learning Objective 7)

Clegg manufactures radiation-shielding glass panels. Suppose Clegg is considering spending the following amounts on a new TQM program:

Strength-testing one item from each batch of panels	$68,000
Training employees in TQM	30,000
Training suppliers in TQM	32,000
Identifying preferred suppliers who commit to on-time delivery of perfect-quality materials	60,000

Clegg expects the new program would save costs through the following:

Avoid lost profits from lost sales due to disappointed customers	$95,000
Avoid rework and spoilage	67,000
Avoid inspection of raw materials	57,000
Avoid warranty costs	16,000

Requirements

1. Classify each item as a prevention cost, an appraisal cost, an internal failure cost, or an external failure cost.
2. Should Clegg implement the new quality program? Give your reason.

PROBLEMS Group A

P1-39A Management processes and accounting information

(Learning Objectives 1 & 2)

Allison Hopkins has her own chain of music stores, Hopkins' Music. Her stores sell musical instruments, sheet music, and other related items. Music lessons and instrument repair are also offered through the stores. Hopkins' Music also has a website that sells music merchandise. Hopkins' Music has a staff of 80 people working in 6 departments: Sales, Repairs, Lessons, Web Development, Accounting, and Human Resources. Each department has its own manager.

Requirements

1. For each of the six departments, describe at least one decision/action for each of the four stages of management (planning, directing, controlling, and decision making). Prepare a table similar to the following for your answer:

	Planning	Directing	Controlling	Decision Making
Sales				
Repairs				
Lessons				
Web Development				
Accounting				
Human Resources				

2. For each of the decisions/actions you described in Part 1, identify what information is needed for that decision/action. Specify whether that information would be generated by the financial accounting system or the managerial accounting system at Hopkins' Music.

P1-40A Ethical dilemmas *(Learning Objective 4)*

Kate Royer is the new controller for ED Software, which develops and sells educational software. Shortly before the December 31 fiscal year-end, Justin Torabi, the company president, asks Royer how things look for the year-end numbers. He is not happy to learn that earnings growth may be below 15% for the first time in the company's five-year history. Torabi explains that financial analysts have again predicted a 15% earnings growth for the company and that he does not intend to disappoint them. He suggests that Royer talk to the assistant controller, who can explain how the previous controller dealt with this situation. The assistant controller suggests the following strategies:

a. Persuade suppliers to postpone billing until January 1.
b. Record as sales certain software that is being held in a public warehouse awaiting sale.
c. Delay the year-end closing a few days into January of the next year so that some of next year's sales are included as this year's sales.
d. Reduce the allowance for bad debts (and bad debts expense).
e. Postpone routine monthly maintenance expenditures from December to January.

Requirement

Which of these suggested strategies are inconsistent with the standards described in the CMA's *Code of Professional Ethics*? What should Royer do if Torabi insists that she follow all of these suggestions?

P1-41A ERP cost-benefit analysis *(Learning Objective 5)*

As CEO of SeaSpray Marine, Bianca Saikaley knows it is important to control costs and to respond quickly to changes in the highly competitive boat-building industry. When IDG Consulting proposes that SeaSpray Marine invest in an ERP system, she forms a team to evaluate the proposal: the plant engineer, the plant foreman, the systems specialist, the human resources director, the marketing director, and the management accountant.

A month later, management accountant Mike Cobalt reports that the team and IDG estimate that if SeaSpray Marine implements the ERP system, it will incur the following costs:

a. $350,000 in software costs
b. $80,000 to customize the ERP software and load SeaSpray's data into the new ERP system
c. $125,000 for employee training

The team estimates that the ERP system should provide several benefits:

a. More efficient order processing should lead to savings of $185,000.
b. Streamlining the manufacturing process so that it maps into the ERP system will create savings of $275,000.
c. Integrating purchasing, production, marketing, and distribution into a single system will allow SeaSpray Marine to reduce inventories, saving $220,000.
d. Higher customer satisfaction should increase sales, which, in turn, should increase profits by $150,000.

Requirements

1. If the ERP installation succeeds, what is the dollar amount of the benefits?
2. Should SeaSpray Marine install the ERP system? Why or why not? Show your calculations.
3. Why did Saikaley create a team to evaluate IDG's proposal? Consider each piece of cost-benefit information that management accountant Cobalt reported. Which person on the team is most likely to have contributed each item? (*Hint:* Which team member is likely to have the most information about each cost or benefit?)

P1-42A E-commerce cost-benefit analysis *(Learning Objective 5)*

Sun Gas wants to move its sales order system to the Web. Under the proposed system, gas stations and other merchants will use a Web browser and, after typing in a password for the Sun Gas webpage, will be able to check the availability and current price of various products and place an order. Currently, customer service representatives take dealers' orders over the phone; they record the information on a paper form, and then manually enter it into the firm's computer system.

CFO Carrie Smith believes that dealers will not adopt the new Web system unless Sun Gas provides financial assistance to help them purchase or upgrade their PCs. Smith estimates this one-time cost at $750,000. Sun Gas will also have to invest $150,000 in upgrading its own computer hardware. The cost of the software and the consulting fee for installing the system will be $230,000. The web system will enable Sun Gas to eliminate 25 clerical positions. Smith estimates that the new system's lower labour costs will save the company $1,357,000.

Requirement

Use a cost-benefit analysis to recommend to Smith whether Sun Gas should proceed with the web-based ordering system. Give your reasons, showing supporting calculations.

P1-43A Continuation of P1-42A: revised estimates *(Learning Objective 5)*

Consider the Sun Gas proposed entry into ecommerce in P1-42A. Smith revises her estimates of the benefits from the new system's lower labour costs. She now thinks the savings will be only $933,000.

Requirements

1. What are the expected benefits of the web-based ordering system?
2. Would you recommend that Sun Gas accept the proposal?
3. Before Smith makes a final decision, what other factors should she consider?

PROBLEMS Group B

P1-44B Management processes and accounting information *(Learning Objectives 1 & 2)*

Dale Ohh has his own electronics retail chain, Circuit Pro. His stores sell computer parts, audio-visual equipment, consumer electronics, and related items. Custom computer building and electronics repair are also offered. In addition, Circuit Pro has a website to sell its merchandise. Circuit Pro has a staff of 90 people working in 6 departments: Sales, Customization, Repairs, Web Development, Accounting, and Human Resources. Each department has its own manager.

Requirements

1. For each of the six departments, describe at least one decision/action for each of the four stages of management (planning, directing, controlling, and decision making). Prepare a table similar to the following for your answer:

	Planning	Directing	Controlling	Decision Making
Sales				
Customization				
Repairs				
Web Development				
Accounting				
Human Resources				

2. For each of the decisions/actions you described in Part 1, identify what information is needed for that decision/action. Specify whether that information would be generated by the financial accounting system or the managerial accounting system at Circuit Pro.

P1-45B Ethical dilemmas *(Learning Objective 4)*

Kourtney Lystiuk is the new controller for Colours, a company that designs and manufactures sportswear. Shortly before the December 31 fiscal year-end, Lashea Lucas (the company president) asks Lystiuk how things look for the year-end numbers. Lucas is not happy to learn that earnings growth may be below 10% for the first time in the company's five-year history. Lucas explains that financial analysts have again predicted a 12% earnings growth for the company and that she does not intend to disappoint them. She suggests that Lystiuk talk to the assistant controller, who can explain how the previous controller dealt with this situation. The assistant controller suggests the following strategies:

a. Postpone planned advertising expenditures from December to January.
b. Do not record sales returns and allowances on the basis that they are individually immaterial.
c. Persuade retail customers to accelerate January orders to December.
d. Reduce the allowance for bad debts (and bad debts expense).
e. Ship finished goods to public warehouses across the country for temporary storage until Colours receives firm orders from customers. As Colours receives orders, it directs the warehouse to ship the goods to nearby customers. The assistant controller suggests recording goods sent to the public warehouses as sales.

Requirement

Which of these suggested strategies are inconsistent with the standards described in the CMA *Code of Professional Ethics*? What should Lystiuk do if Lucas insists that she follow all of these suggestions?

P1-46B ERP cost-benefit analysis *(Learning Objective 5)*

As CEO of AquaBoat Marine, Rick Wilson knows it's important to control costs and to respond quickly to changes in the highly competitive boat-building industry. When IDG Consulting proposes that AquaBoat Marine invests in an ERP system, he forms a team to evaluate the proposal: the plant engineer, the plant foreman, the systems specialist, the human resources director, the marketing director, and the management accountant. A month later, management accountant Matt Cook reports that the team and IDG estimate that if AquaBoat Marine implements the ERP system, it will incur the following costs:

a. \$360,000 in software costs
b. \$95,000 to customize the ERP software and load AquaBoat's data into the new ERP system
c. \$115,000 for employee training

The team estimates that the ERP system should provide several benefits:

a. More efficient order processing should lead to savings of \$185,000.
b. Streamlining the manufacturing process so that it maps into the ERP system will create savings of \$270,000.
c. Integrating purchasing, production, marketing, and distribution into a single system will allow AquaBoat Marine to reduce inventories, saving \$230,000.
d. Higher customer satisfaction should increase sales, which, in turn, should increase the present value of profits by \$155,000.

The team knows that because of complexity, some ERP installations are not successful. If AquaBoat Marine's system fails, there will be no cost saving and no additional sales. The team predicts that there is an 80% chance that the ERP installation will succeed and a 20% chance that it will fail.

Requirements

1. If the ERP installation succeeds, what is the dollar amount of the benefits?
2. Should AquaBoat Marine install the ERP system? Why or why not? Show your calculations.
3. Why did Wilson create a team to evaluate IDG's proposal? Consider each piece of cost–benefit information that management accountant Cook reported. Which person on the team is most likely to have contributed each item? (*Hint:* Which team member is likely to have the most information about each cost or benefit?)

P1-47B E-commerce cost–benefit analysis *(Learning Objective 5)*

West Coast Gas wants to move its sales order system to the Web. Under the proposed system, gas stations and other merchants will use a Web browser and, after typing in a password for the West Coast Gas webpage, will be able to check the availability and current price of various products and place an order. Currently, customer service representatives take dealers' orders over the phone; they record the information on a paper form, and then manually enter it into the firm's computer system.

CFO Yun Ma believes that dealers will not adopt the new Web system unless West Coast Gas provides financial assistance to help them purchase or upgrade their PCs. Ma estimates this one-time cost at $760,000. West Coast Gas will also have to invest $155,000 in upgrading its own computer hardware. The cost of the software and the consulting fee for installing the system will be $225,000.

The web system will enable West Coast Gas to eliminate 25 clerical positions. Ma estimates that the benefits of the new system's lower labour costs will have a present value of $1,370,000.

Requirement

Use a cost–benefit analysis to recommend to Ma whether West Coast Gas should proceed with the web-based ordering system. Give your reasons, showing supporting calculations.

P1-48B Continuation of P1-47B: revised estimates *(Learning Objective 5)*

Consider the West Coast Gas proposed entry into e-commerce in P1-47B. Ma revises her estimates of the benefits from the new system's lower labour costs. Ma now thinks the saving will be only $925,000.

Requirements

1. What are the expected benefits of the Web-based ordering system?
2. Would you recommend that West Coast Gas accept the proposal?
3. Before Ma makes a final decision, what other factors should be considered?

CAPSTONE APPLICATION PROBLEMS

APPLICATION QUESTION

A1-49 Ethical standards *(Learning Objective 4)*

The CMA's *Code of Professional Ethics* (Exhibit 1-6) can be applied to more than just managerial accounting. It is also relevant to postsecondary students. Explain at least one situation that shows how each CMA standard is relevant to your experiences as a student. For example, the ethical standard of competence would suggest that you do not cut classes.

ETHICAL ISSUE

I1-50 Ethical dilemma *(Learning Objective 4)*

Ricardo Valencia recently resigned his position as controller for Tom White Automotive, a small, struggling car dealer in Edmunston, New Brunswick, that sells automobiles made by a foreign manufacturer. Valencia has just started a new job as controller for Mueller Imports, a much larger dealer for the same car manufacturer. Demand for this particular make of car is exploding, and the manufacturer cannot produce enough cars to satisfy demand. The manufacturer's regional sales managers are assigned a certain number of cars. Each regional sales manager then decides how to divide the cars among the independently owned dealerships in the region. Because most dealerships can sell every car they receive, each dealer's objective to is receive a large number of cars from the regional sales manager.

Valencia's former employer, White Automotive, receives about 25 cars a month, and the dealership is not very profitable.

Valencia is surprised to learn that his new employer, Mueller Imports, receives over 200 cars a month. Valencia soon gets another surprise. Every couple of months, a local jeweller bills the dealer $5,000 for "miscellaneous services." Franz Mueller, the owner of the dealership, personally approves the payment of these invoices, noting that each invoice is a "selling expense." From casual conversations with a salesperson, Valencia learns that Mueller frequently gives Rolex watches to the manufacturer's regional sales manager and other sales executives. Before talking to anyone about this, Valencia decides to work through his ethical dilemma by answering the following questions:

1. What is the ethical issue?
2. What are my options?
3. What are the possible consequences?
4. What should I do?

TEAM PROJECT

T1-51 Interviewing a local company about ecommerce *(Learning Objective 5)*

Search the Internet for a nearby company that also has a webpage. Arrange an interview with a management accountant, a controller, or another accounting/finance officer of the company. Before you conduct the interview, answer the following questions:

1. What is the company's primary product or service?
2. Is the primary purpose of the company's website to provide information about the company and its products, to sell online, or to provide financial information for investors?
3. Are parts of the company's website restricted so that you need password authorization to enter? What appears to be the purpose of limiting access?
4. Does the website provide an e-mail link for contacting the company?

At the interview, begin by clarifying your answers to questions 1–4, and then ask the following additional questions:

5. If the company sells over the Web, what benefits has the company derived? Did the company perform a cost–benefit analysis before deciding to begin Web sales? Or, if the company does not sell over the Web, why not? Has the company performed a cost–benefit analysis and decided not to sell over the Web?
6. What is the biggest cost of operating the website?
7. Does the company make any purchases over the Internet? What percentage?
8. How has e-commerce affected the company's managerial accounting system? Have the management accountant's responsibilities become more or less complex? More or less interesting?
9. Does the company use Web-based accounting applications such as accounts receivable or accounts payable?
10. Does the company use an ERP system? If so, does it view the system as a success? What have been the benefits? The costs?

Prepare a report describing the results of your interview.

DISCUSSION & ANALYSIS

1. What are the four main areas of management's responsibility? How are these four areas interrelated? How does managerial accounting support each of the responsibility areas of managers?
2. What is the Sarbanes-Oxley Act of 2002 (SOX)? How does SOX affect financial accounting? How does SOX impact managerial accounting? Is there any overlap between financial and managerial accounting in terms of SOX impact? If so, what are the areas of overlap?
3. Why is managerial accounting more suitable for internal reporting than financial accounting?
4. A company currently has all of its managerial accountants reporting to the controller. What might be inefficient about this organizational structure? How might the company restructure? What benefits would be offered by the restructuring?
5. What skills are required of a management accountant? In what university courses are these skills taught or developed? What skills would be further developed in the workplace?
6. What is the Society of Management Accountants of Canada (CMA)? How could being in a professional organization help a person's career?
7. How might a Certified Management Accountant (CMA) certification benefit a person in his or her career? How does the CMA certification differ from the other two Canadian designations? What skills are assessed on the CMA exam?
8. What are the five ethical standards in the Society of Management Accountants' *Code of Professional Ethics?* Describe the meaning of each of the five standards. How does each of these standards impact planning, directing, controlling, and decision making?
9. How has technology changed the work of management accountants? What other business trends are influencing managerial accounting today? How do these other trends impact management accountants' roles in the organization?

10. What significant regulatory trends are affecting accounting in general today? How do these regulatory trends affect the field of managerial accounting?
11. Compare a traditional production system with a lean production system. Discuss the similarities and differences.
12. It has been said that external failure costs can be catastrophic and much higher than the costs of other categories. What are some examples of external failure costs? Why is it often difficult to arrive at the cost of external failures?
13. What are the four categories of quality-related costs? Name a cost in each of the four categories for each of the following types of organizations:
    a. Restaurant
    b. Hospital
    c. Law firm
    d. Bank
    e. Tire manufacturer
    f. University

APPLICATION & ANALYSIS

1-1 Accountants and Their Jobs

Discussion Questions

1. When you think of an accountant, who do you picture? Do you personally know anyone (family member, friend, relative) whose chosen career is accounting? If so, do they fit your description of an accountant or not?
2. Before reading Chapter 1, what did you picture accountants doing, day in and day out, at their jobs? From where did this mental picture come (e.g., movies, first accounting class, speaking with accountants, etc.)?
3. What skills are highly valued by employers? What does that tell you about what accountants do at their companies?
4. Chapter 1 includes quotes from CMAs and accountants at Sobey's, Abbott Laboratories, and Caterpillar. After reading these quotes and from what you know about accountants, how would you describe the role/job responsibilities of accountants?
5. Many, if not most, accounting majors start their careers in public accounting. Do you think most of them stay in public accounting? Discuss what you consider to be a typical career track for accounting majors.

Classroom Applications

Web: Post the discussion questions on an electronic discussion board. Have small groups of students choose two or three of the questions to discuss.

Classroom: Form groups of three or four students. Assign each group a question and give the students 5–10 minutes to prepare a short presentation of their group's response to the question. Have the group present to the class.

Independent: Students research answers to each of the questions, and then turn in a two- or three-page typed paper (12 point font, double-spaced with 2.5 cm margins), including references.

1-2 Ethics at Enron

Watch the movie *Enron: The Smartest Guys in the Room* (Magnolia Home Entertainment, 2005, Los Angeles, California).

Discussion Questions

1. Do you think such behaviour is common at other companies or do you think this was a fairly isolated event?
2. How important is the "tone at the top" (the tone set by company leadership)?
3. Do you think you could be tempted to follow if the leadership at your company had the same mentality as the leadership at Enron, or do you think you would have the courage to "just say no" or even be a whistle-blower?

4. Why do you think some people can so easily justify (at least to themselves) their unethical behaviour?
5. In general, do you think people stop to think about how their actions will affect other people (e.g., the elderly in California who suffered due to electricity blackouts) or do they just "do their jobs"?
6. What was your reaction to the psychology experiment shown in the movie? Studies have shown that, unlike the traders at Enron (who received large bonuses), most employees really have very little to gain from following a superior's directive to act unethically. Why, then, do some people do it?
7. Do you think people weigh the potential costs of acting unethically with the potential benefits?
8. You are a business student who will someday work for a company or own a business. How will watching this movie affect the way you intend to conduct yourself as an employee or owner?
9. The reporter from *Fortune* magazine asked, "How does Enron make its money?" Why should every employee and manager (at every company) know the answer to this question?
10. In light of the "mark-to-market" accounting that enabled Enron to basically record any profit it wished, can you understand why some of the cornerstones of financial accounting are "conservatism" and "recording transactions at historical cost"?
11. How did employees of Enron (and employees of the utilities company in Oregon) end up losing billions in retirement funds?

Classroom Applications

Web: Post the discussion questions on an electronic discussion board. Have small groups of students choose three to five of the questions to discuss among their group.

Classroom: Watch the movie before class. Once in class, form groups of three or four students. Assign each group a question and give the students 5–10 minutes to prepare a short presentation of their group's response to the question, which the group then presents to the class.

Independent: Students watch the movie and take notes. Students turn in a copy of their notes for full credit (without the notes students are only eligible for 1/2 credit). Leave notes handwritten. Students also turn in a two- to four-page typed paper describing their gut reactions to the movie. *Each paper should not be a summary of the movie; it should be the student's reaction to the movie.* Papers should try to address *most* of the questions.