

Management, Scientific, and Technical Consulting Services

(NAICS 5416)

SIGNIFICANT POINTS

- This industry ranks among the fastest growing through the year 2014; however, job competition should remain keen, with the most educated and experienced workers having the best job prospects.
- This industry is one of the highest paying.
- About 25 percent of all workers are self-employed.
- About 72 percent of workers have a bachelor's or higher degree; 59 percent of all jobs are in managerial, business, financial, and professional occupations.

Nature of the Industry

Management, scientific, and technical consulting firms influence how businesses, governments, and institutions make decisions. Often working behind the scenes, these firms offer resources that clients cannot provide themselves. Usually, one of the resources is expertise—in the form of knowledge, experience, special skills, or creativity; another resource is time or personnel that the client cannot spare. Clients include large and small companies in the private sector; Federal, State, and local government agencies; institutions, such as hospitals, universities, unions, and nonprofit organizations; and foreign governments or businesses.

The management, scientific, and technical consulting services industry is diverse. Almost anyone with expertise in a given area can enter consulting. Management consulting firms advise on almost every aspect of corporate operations, including marketing; finance; corporate strategy and organization; manufacturing processes; information systems and data processing; electronic commerce (e-commerce) or business; and human resources, benefits, and compensation. Scientific and technical consulting firms provide technical advice relating to almost all nonmanagement organizational activities, including compliance with environmental and workplace safety and health regulations, the application of technology, and knowledge of sciences such as biology, chemistry, and physics.

Larger consulting firms usually provide expertise in a variety of areas, whereas smaller consulting firms generally specialize in one area of consulting. *Administrative management and general management consulting services* firms, for example, offer advice on an organization's day-to-day operations, such as budgeting, asset management, strategic and financial planning, records management, and tax strategy. A manufacturing firm building a new factory might seek the help of consultants to determine in which geographic location it would incur the lowest startup costs and how to build the equipment and design the building layout in order to increase workplace safety and reduce human error. A family opening a new restaurant might hire a consulting firm to help develop a business plan, provide tax advice, or develop occupational safety and health systems for employees, such as providing slip resistant floors and shoes. Consulting firms also might advise clients in the implementation and use of the latest office technology or computer programs

that could increase office productivity. (For information on consulting firms that are engaged primarily in developing computer systems and computer software, see the statements on computer systems design and related services, and software publishing, elsewhere in the *Career Guide*.) Some clients might turn to consulting firms to manage the financial aspects of their business. Consultants may provide insight into why a division of the company is not profitable or may recommend an investment strategy that meets the client's needs. (For information on firms that engage in buying and selling financial assets, see the statement on securities, commodities, and other investments, elsewhere in the *Career Guide*.)

Effective management of a client's human capital is the primary work of consulting firms that offer *human resources consulting services*. Firms that focus on this area advise clients on effective personnel policies, employee salaries and benefits, employee recruitment and training, and employee assessment. A client with high employee turnover might seek the help of a consulting firm in improving its retention rate. Consulting firms also might be asked to help determine the appropriate level of employer and employee contributions to health care and retirement plans. Increasingly, firms are outsourcing, or contracting out, the administrative functions of their human resources division to human resources consulting firms that manage timekeeping and payroll systems and administer employee benefits.

One human resources consulting specialty is *executive search consulting*, or *executive recruiting*. Firms in this industry are typically referred to as "*headhunters*." Executive search consulting firms are involved in locating the best candidates for top-level management and executive positions. Clients hire executive recruiters in order to save time and preserve confidentiality. Executive search firms keep a large database of executives' resumes and search this database for clients in order to identify candidates who would likely complement the client's corporate culture and strategic plan. Information on these candidates is then submitted to the clients for their selection. Executive search consulting firms also might conduct prescreening interviews and reference and background checks. Some executive search consulting firms specialize in recruiting for a particular industry or geographic area, while others conduct general searches. (For information on firms that provide employment services to job-seekers at all employment levels, see the statement on employ-

ment services, elsewhere in the *Career Guide*.)

Marketing consulting services firms provide assistance to firms in areas such as developing new products and pricing, forecasting sales, planning and implementing a marketing strategy, and improving customer service. A pharmaceutical firm, for example, might seek advice as to whether it should remove a drug from the market, or a retail clothing chain might seek advice regarding the most effective way to market and sell its clothes—in a direct-mail or online catalog or over the telephone. Clients also might seek the help of a marketing consultant to set up business franchises or license their products.

Another specialty within management consulting is *process, physical distribution, and logistics consulting services*. Firms in this industry specialize in the production and distribution of goods, from the first stages of securing suppliers to the delivery of finished goods to consumers. Such firms give advice on improvements in the manufacturing process and productivity, product quality control, inventory management, packaging, order processing, the transportation of goods, and materials management and handling. A domestic manufacturing firm might hire a logistics consulting firm to calculate shipping rates and import duties for goods being exported or to determine the most cost-effective method of shipping products. Consulting firms in this industry also advise on the latest technology that links suppliers, producers, and customers together to streamline the manufacturing process. Finally, firms in the industry might suggest improvements to the manufacturing process in order to utilize inputs better, increase productivity, or decrease the amount of excess inventory.

While some management consulting firms specialize in a particular business process, others provide a range of business services specific to one industry, such as health care. Many professionals—for example, doctors—lack the business expertise to manage their practice effectively. Consultants advise these clients regarding the same management issues as they do other businesses, such as staff recruitment, compensation and benefits, asset management, marketing, and other business operations. Some consultants offer advice on matters pertaining directly to the industry in question—for instance, for the health care industry, compliance with biohazard removal and patient confidentiality regulations, avoidance of malpractice suits, and methods of dealing with managed care and health insurance companies. Industries such as legal services, telecommunication, and utilities also have consulting firms that specialize in specific issues.

Scientific and technical consulting services firms provide services similar to those offered by management consulting firms, but the information is not management related. One of the largest specialties in scientific and technical consulting services is *environmental consulting services*. Environmental consulting firms identify and evaluate environmental problems, such as inspecting sites for water contaminants, and offer solutions. Some firms in the industry advise clients about controlling the emissions of environmental pollutants, cleaning up contaminated sites, establishing a recycling program, and complying with government environmental laws and regulations. A real estate developer, for example, might hire an environmental consulting firm to help design and develop property without damaging natural habitats, such as wetlands. A manufacturing or utilities firm might hire environmental consultants to assess whether the firm is meeting government emissions standards, in order to avoid

penalties before government regulators inspect the property in question. Finally, many government agencies contract work out to environmental consulting firms to assess environmental contamination in a particular geographic area or to evaluate the costs and benefits of new regulations.

Occupational safety consulting services firms provide services similar to those offered by government agencies and private businesses, identifying workplace safety hazards and ensuring that employers are in compliance with government worker safety regulations. Safety consulting firms might identify hazardous materials or systems that may cause illness or injury, assess safety risks associated with machinery, investigate accidents, and assess the likelihood of lawsuits resulting from safety code violations. Some might specialize in a particular type of hazardous material, while other consultants might specialize in a particular industry's safety, such as that of construction, mining, manufacturing, health care, or food processing. As with environmental consulting firms, many government agencies contract work out to safety consulting firms for help with safety engineering, technical projects, and various kinds of assessment.

Security consulting, by contrast, seeks to ensure the safety and security of an organization's physical and human assets that may be threatened by natural or human-made disasters. Clients might hire security consulting firms to assess a building's security needs. The firms may then protect the building against theft and vandalism by installing security cameras, hiring security guards, and providing employee background checks. Other security consultants study a building's design and recommend measures to protect it from damage from fires, tornadoes, floods, earthquakes, or acts of terrorism. Security consultants also may recommend emergency evacuation procedures in the event that these disasters occur. Increasingly, clients are hiring security consulting firms to protect their confidential computer records against hackers and viruses. Most recently, government agencies have hired security consulting firms to advise them on how to protect national monuments and the national transportation, utility, and defense infrastructure—airports, bridges, nuclear reactor plants, water treatment plants, and military barracks—against terrorism.

Scientific and technical consulting firms also advise on a diverse range of issues relating to the physical and social sciences—issues having to do with agriculture, biology, chemistry, economics, energy, and physics. Agricultural consulting firms might advise on different farming techniques or machinery that increases agricultural production. Economic consultants might develop forecasting models and advise clients about the potential for a recession or an increase in interest rates that could affect business decisions. Energy consultants might advise clients on how to reduce costs by implementing energy-saving machinery. Finally, biological, chemical, and physics consultants might give theoretical or applied expertise in their chosen field.

Management, scientific, and technical consulting has grown rapidly over the past several decades, with businesses increasingly using consulting services. Using consultants is advantageous because these experts are experienced, are well trained, and keep abreast of the latest technologies, government regulations, and management and production techniques. In addition, consultants are cost effective, because they can be hired temporarily and can perform their duties objectively, free of the influ-

ence of company politics.

The vast majority of firms in the management, scientific, and technical consulting industry are small, primarily because new firms can enter the industry quite easily. Licensing, certification, and large capital outlays seldom are necessary for an individual to become a consultant, and the work can be quite lucrative for those with the right education, experience, and contacts. As a result, many wage and salary workers in management, scientific, and technical consulting services eventually leave established firms to go into business for themselves. In addition, after developing specialized expertise, people working in other industries often start their own consulting businesses, and some experienced workers perform consulting work after retiring.

Working Conditions

Working conditions in management, scientific, and technical consulting services are generally similar to those of most office workers operating in a team environment. The work is rarely hazardous, with a few exceptions—for example, environmental or safety consultants who inspect sites for contamination from hazardous materials. In 2003, the industry had only 1.1 injuries and illnesses per 100 full-time workers, compared with an average of 5.0 throughout private industry.

Not all employees in this industry work under identical conditions. In 2004, workers in the industry averaged 35.0 hours per week, a little above the national average of 33.7. However, many consultants must meet hurried deadlines, which frequently requires working long hours in stressful environments. Consultants whose services are billed hourly often are under pressure to manage their time very carefully. Occasionally, weekend work also is necessary, depending upon the job that is being performed. In addition, some projects might require many executives and consultants to travel extensively or live away from home for extended periods of time. However, new technology—such as laptop computers with remote access to the firm’s computer server and videoconferencing machines—allow some consultants to work from home or conduct meetings with clients in different locations, reducing some of the need for business travel.

Most firms encourage employees to attend employer-paid time-management classes. The classes teach participants to reduce the stress sometimes associated with working under strict time constraints. Also, with today’s hectic lifestyle, many firms in this industry offer or provide health facilities or clubs that employees may use to maintain good health.

Table 1. Percent distribution of wage and salary employment in management, scientific, and technical consulting services, 2004

Establishment type	Employment
Management, scientific, and technical consulting, total	100.0
Administrative management and general management consulting	36.8
Marketing consulting	13.6
Human resources and executive search consulting	12.9
Other management consulting	10.8
Process, physical distribution, and logistics consulting	9.3
Environmental consulting	8.1
Other scientific and technical consulting	8.5

Employment

The management, scientific, and technical consulting services industry had about 779,000 wage and salary workers in 2004; an additional 256,000 workers were self-employed and unpaid family workers, comprising 25 percent of all jobs in this industry. Table 1 details how employment is broken down among the different segments of the industry.

The vast majority of establishments in the industry were fairly small, employing fewer than 5 workers (chart 1). Self-employed individuals operated many of these small firms. Despite the prevalence of small firms and self-employed workers, large firms tend to dominate the industry. Approximately 54 percent of jobs are found in the 4 percent of establishments with 20 or more employees, and some of the largest firms in the industry employ several thousand people.

Although employees in this industry work in all parts of the country, many workers are concentrated near large urban centers.



Occupations in the Industry

Most management, scientific, and technical consulting services are fairly specialized; still, the industry comprises a variety of occupations (table 2). Some of these occupations, such as *environmental engineers*, are specific to only one segment of the industry, whereas others, such as *secretaries and administrative assistants*, can be found throughout the industry.

Compared with other industries, the management, scientific, and technical consulting services industry has a relatively high proportion of highly educated workers. About 42 percent have a bachelor’s degree, compared with 20 percent of workers throughout the economy. Around 30 percent have a master’s or higher degree, compared with 10 percent of workers throughout the economy. Certain jobs may have stringent entry requirements. For example, some management consulting firms prefer to hire only workers who have a master’s degree in business administration (MBA). Other positions can be attained only after many years of related experience.

Table 2. Employment of wage and salary workers in management, scientific, and technical consulting services by occupation, 2004 and projected change, 2004-14.
(Employment in thousands)

Occupation	Employment, 2004		Percent change, 2004-14
	Number	Percent	
Total, all occupations	779	100.0	60.5
Management, business, and financial opportunities	258	33.1	67.6
Top executives	34	4.4	64.8
Marketing and sales managers	8	1.1	77.2
Human resources, training, and labor relations specialists	27	3.5	69.4
Management analysts	95	12.3	66.2
Accountants and auditors	15	2.0	65.6
Financial analysts and advisors	7	0.9	57.0
Professional and related occupations	202	25.9	67.3
Computer programmers	9	1.2	35.6
Computer software engineers	23	2.9	98.0
Computer support specialists	9	1.2	66.2
Computer systems analysts	13	1.6	82.9
Engineers	26	3.4	66.8
Drafters, engineering, and mapping technicians	7	0.9	67.4
Environmental scientists and specialists, including health	11	1.5	16.9
Market research analysts	13	1.7	66.2
Environmental science and protection technicians including health	6	0.7	54.4
Designers	7	0.9	65.0
Service occupations	15	1.9	62.9
Sales and related occupations	55	7.1	55.8
Sales representatives, services	16	2.0	64.1
Sales representatives, wholesale and manufacturing	9	1.2	66.2
Telemarketers	13	1.7	30.1
Office and administrative support occupations	205	26.3	46.1
Supervisors, office and administrative support workers	14	1.7	50.7
Bookkeeping, accounting, and auditing clerks	18	2.3	49.6
Customer service representatives	27	3.4	69.6
Secretaries and administrative assistants	52	6.7	41.2
Data entry and information processing workers	10	1.3	22.9
Office clerks, general	36	4.7	48.0
Transportation and material moving occupations	20	2.6	57.7

Note: May not add to totals due to omission of occupations with small employment

In management, scientific, and technical consulting services, workers in management and business and financial operations occupations, and in professional and related occupations, combined make up 59 percent of employment. These same occupational groups account for about 30 percent of workers across the entire economy. These groups of workers comprise a disproportionate share of jobs in the industry, because workers with education and experience in business management and workers with scientific, engineering, and other technical backgrounds conduct most of the consulting work in this industry.

Top executives, the largest managerial occupation in the industry, includes both the highest-level managers—such as chief executive officers and vice presidents—and many top managers with diverse duties. In consulting firms, top executives

with partial ownership and profit-sharing privileges might be referred to as partners. Top-level managers or partners shape company policy, often with the help of other executives or a board of directors. They oversee all activities of the firm, coordinate the duties of subordinate executives and managers, and often bear ultimate responsibility for a firm's performance. Mid-level managers or partners may oversee all the activities of one department or all the activities of one or more clients.

Management analysts, also called *management consultants*, is the largest occupation in the management consulting industry. Their work is quite varied, depending on the nature of the project and the client's needs. In general, consultants study and analyze business-related problems, synthesizing information from many sources, and recommend solutions. The solutions can include overhauling a client's computer systems, offering early retirement incentives to middle managers, recommending a switch in health plans, improving just-in-time inventory systems, hiring public relations firms, or selling troublesome parts of businesses. Because of the varied nature of these jobs, firms hire workers with diverse backgrounds, such as engineering, finance, actuarial science, chemistry, and business. Many firms require consultants to have an MBA, whereas others hire workers who have only a bachelor's degree. Many workers have experience in other industries prior to entering management consulting work.

Other management and business and financial operations occupations include *administrative services managers*, who typically administer a consulting firm's support services. These managers oversee secretaries, data entry keyers, bookkeepers, and other clerical staff. In the management consulting services industry, they also often supervise a client's clerical and support staff and do consulting work in that area. *Advertising, marketing, promotions, public relations, and sales managers* oversee the consulting firm's marketing and sales departments, researching and targeting new clients and also helping on consulting projects having to do with marketing. *Computer and information systems managers* ensure that the consulting firm's computer and network systems are fully operational and oversee other computer and technical workers, such as computer support specialists. These managers might also supervise certain consulting projects involving computer and information technology. *Financial managers* prepare financial statements and assess the financial health of firms. Often, they must have at least a bachelor's degree in accounting or finance. *Human resources, training, and labor relations managers and specialists* supervise the activities of a consulting firm's human resources department, managing personnel records, payroll, benefits, and employee recruitment and training. These managers might also supervise projects for clients in the human resources consulting industry. In scientific and technical consulting firms, *engineering and natural sciences managers* oversee the engineers and scientists working for their consulting firms. *Accountants and auditors* monitor firms' financial transactions and often report to financial managers. More recently, accountants and auditors have been involved in consulting projects for clients involving the preparation of financial statements, tax strategy, budget or retirement planning, and the implementation of accounting software.

Workers in professional and related occupations are employed mainly in the scientific and technical consulting portion of the industry. Many of these workers are engineers and scientists who utilize their expertise through consulting. For example,

environmental engineers and *environmental scientists and geoscientists* are employed by environmental consulting firms to evaluate environmental damage or assess compliance with environmental laws and regulations. Other engineers, such as *agricultural, biomedical, chemical, mining and geological, nuclear, and petroleum engineers*; and physical and life scientists, such as *agricultural and food scientists, biological scientists, chemists, materials scientists, and physicists and astronomers*, are employed by consulting firms specializing in their scientific disciplines. *Architects* and *civil and industrial engineers* are sometimes employed by safety and security consulting firms to assess the construction of buildings and other structures, such as bridges, and to make recommendations regarding reinforcing these structures against damage.

Other professional and related workers include *economists, market and survey researchers, and lawyers*. Economists are employed by economic consulting firms to conduct economic research and advise clients on economic trends. Market and survey researchers are mainly employed by marketing consulting firms to conduct surveys and research on various topics. Lawyers are employed in virtually all management, scientific, and technical consulting industries to represent their consulting firms in case of a lawsuit and to advise the firms, as well as clients, on changes in laws and regulations pertaining to their areas of expertise.

Designers in this industry are mostly *graphic designers* who use a variety of print, electronic, and film media to create designs that meet clients' commercial needs. Using computer software, these workers develop the overall layout and design of magazines, newspapers, journals, corporate reports, and other publications. They also may produce promotional displays and marketing brochures for products and services and may design distinctive company logos for products and businesses. An increasing number of graphic designers develop material to appear on Internet homepages.

The rapid spread of computers and information technology has generated a need for highly trained computer specialists to design and develop new hardware and software systems and to incorporate new technologies. *Systems analysts* design new computer systems or redesign old systems for new applications. They solve computer problems and enable computer technology to meet their organization's particular needs. For example, a systems analyst from a management consulting firm might be hired by a wholesale firm to implement an online inventory database. *Computer software engineers*, by contrast, can be involved in the design and development of software systems for the control and automation of manufacturing, business, and management processes. Other computer specialists include *computer support specialists*, who provide technical assistance, support, and advice to customers and users, and *database administrators*, who work with database management systems software and determine ways to organize and store data. Computer specialists such as systems analysts, computer scientists, and computer engineers sometimes are referred to simply as "consultants."

Technical workers also include *computer programmers*, who write programs and create software—often in close conjunction with systems analysts—and *engineering technicians*, who aid engineers in research and development. Like systems analysts and engineers, these workers are found primarily in the business and management consulting segments of the industry.

Office and administrative support positions in management, scientific, and technical consulting services resemble those in other industries, and account for 26 percent of industry employment. Particularly numerous are *secretaries* and *administrative assistants* and *bookkeeping, accounting, and auditing clerks*, who record and classify financial data. The industry also employs many *supervisors* and *managers of office and administrative support workers*, who oversee the support staff, often reporting to administrative services managers.

Management, scientific, and technical consulting services firms do not produce any goods and, as a result, employ relatively few services, sales, and production workers, who, together with the remaining occupational groups, make up only about 18 percent of industry employment.

Training and Advancement

Training and advancement opportunities vary widely within management, scientific, and technical consulting services, but most jobs in the industry are similar in three respects. First, clients usually hire consulting firms on the basis of the expertise of their staffs, so proper training of employees is vital to the success of firms. Second, although employers generally prefer a bachelor's or higher degree, most jobs also require extensive on-the-job training or related experience. Third, advancement opportunities are best for workers with the highest levels of education.

Most consulting specialties provide a variety of different ways to enter the profession. Whereas very few universities or colleges offer formal programs of study in management consulting, many fields provide a suitable background. These fields include most areas of business and management, such as marketing and accounting, as well as economics, computer and information sciences, and engineering. Some schools offer programs in logistics and safety that relate directly to consulting jobs in those areas. Some college graduates with a bachelor's or master's degree and no previous work experience are hired right out of school by consulting firms and go through extensive on-the-job training. The method and extent of training can vary with the type of consulting involved and the nature of the firm. Some college students might have an advantage over other candidates if they complete an internship with a consulting firm during their studies. Other workers with related experience are hired as consultants later in their careers. For example, former military or law enforcement workers often work for security consulting firms. Similarly, some government workers with experience in enforcing regulations might join an environmental or safety consulting firm. Consultants in scientific fields often have a master's or doctoral degree, and some previously have taught at colleges and universities.

Most organizations require their employees to possess a variety of skills. To a large extent, a degree is only one desired qualification; workers also must possess proven analytical and problem-solving abilities, excellent written and verbal communications skills, experience in a particular specialty, assertiveness and motivation, strong attention to detail, and a willingness to work long hours if necessary. Consultants also must possess high ethical standards, because most consulting firms and clients will contact references and former clients to make sure that the quality of their work was of the highest standard.

Management and leadership classes and seminars are available throughout the United States. Some are hosted by volun-

teen senior executives and management experts representing a variety of businesses and industries. A number of large firms invest a great deal of time and money in training programs, educating new hires in formal classroom settings over several weeks or even months, and some even have separate training facilities. Small firms often combine formal and on-the-job training.

The Institute of Management Consultants USA, Inc. (IMC USA), offers a wide range of professional development programs and resources, such as meetings and workshops that can be helpful for management consultants. The IMC USA also offers the certified management consultant (CMC) designation to those who meet minimum levels of education and experience, submit reviews from clients, and pass an interview and exam covering the IMC USA's code of ethics. Management consultants with a CMC designation must be recertified every 3 years.

Other areas of specialization, such as logistics and safety, also offer certification programs for professionals, but these programs are not necessarily designed for consultants. Still, consultants might find it beneficial to receive designations from these programs as well. Although certification is not mandatory for management consultants, it may give a jobseeker a competitive advantage.

Entry-level positions within the management consulting industry involve very little responsibility at the beginning. Striving for and displaying quality work results in more responsibility. Most management consulting firms have two entry-level positions. Workers who hold bachelor's degrees usually start as research associates; those with graduate degrees generally begin as consultants. Successful workers progress through the ranks from research associate to consultant, management consultant, senior consultant, junior partner, and, after many years, senior partner. In some firms, however, it is very difficult for research associates to progress to the next level without further education. As a result, many management consulting firms offer tuition assistance, grants, or reimbursement plans so that workers can attain an MBA or some other degree.

Almost all workers in management consulting services receive on-the-job training; some have prior work experience in a related field. Most managerial and supervisory workers gain experience informally, overseeing a few workers or part of a project under the close supervision of a senior manager. Workers who advance to high-level managerial or supervisory jobs in management services firms usually have an extensive educational background. Less commonly, some large firms offer formal management training.

The management, scientific, and technical consulting services industry offers excellent opportunities for self-employment. Because capital requirements are low, highly experienced workers can start their own businesses fairly easily and cheaply; indeed, every year, thousands of workers in this industry go into business for themselves. Some of these workers come from established management, scientific, and technical consulting services firms, whereas others leave industry, government, or academic jobs to start their own businesses. Still others remain employed in their primary organizations, but have their own consulting jobs on the side.

Outlook

Between 2004 and 2014, wage and salary employment in the management, scientific, and technical consulting services industry is expected to grow by 60 percent, much faster than the 14 per-

cent growth projected for all industries, ranking the industry as the fifth fastest growing industry in the economy. All areas of consulting should experience strong growth. Still, despite the projected growth in the industry, job competition should remain keen because the prestigious and independent nature of the work and the generous salary and benefits attract more jobseekers than openings every year. Because of the high degree of competition, those with the most education and job experience will likely have the best prospects.

Projected job growth can be attributed primarily to economic growth and to the continuing complexity of business. A growing number of businesses means increased demand for advice in all areas of business planning, as consultants draft business plans and budgets, develop strategy, and determine appropriate salaries and benefits for employees. The expansion of franchised restaurants and retail stores will spur demand for marketing consultants to determine the best locations and develop marketing plans. The expansion of business also will create opportunities for logistics consulting firms trying to link new suppliers with producers and to get the finished goods to consumers. Finally, businesses will continue to need advice on compliance with government workplace safety and environmental laws. Clients need consultants to keep them up to date on the latest changes in legislation affecting their businesses, including changes to tax laws, environmental regulations, and policies affecting employee benefits and health care and workplace safety. As a result, firms specializing in human resources, environmental, and safety consulting should be in strong demand.

The increasing use of new technology and computer software is another major factor contributing to growth in all areas of consulting. Management consulting firms help clients implement new accounting and payroll software, whereas environmental and safety consulting firms advise clients on the use of computer technology in monitoring harmful substances in the environment or workplace. Consulting firms also might help design new computer systems or online distribution systems. One of the biggest areas upon which technology has had an impact is logistics consulting. The Internet has greatly increased the ability of businesses to link to and communicate with their suppliers and customers, increasing productivity and decreasing costs. Technology-related consulting projects have become so important that many traditional consulting firms are now merging with or setting up joint ventures with technology companies so that each firm has access to the other's resources in order to serve clients better.

The trend toward outsourcing and mergers also will create opportunities for consulting firms. In order to cut costs, many firms are outsourcing administrative and human resources functions to consultants specializing in these services. This should provide opportunities in human resources consulting for firms that manage their clients' payroll systems and benefits programs. At the same time, increasing competition has led to more business mergers, providing opportunities for consulting firms to assist in the process.

Globalization, too, will continue to provide numerous opportunities for consulting firms wishing to expand their services, or help their clients expand, into foreign markets. Consulting firms can advise clients on strategy, as well as foreign laws, regarding taxes, employment, worker safety, and the environment. The growth of international businesses has created numerous opportunities for logistics consulting firms, because now

businesses have an international network of suppliers and consumers, which requires more coordination.

An increasing emphasis on protecting a firm's employees, facilities, and information against deliberate acts of sabotage will continue to create numerous opportunities for security consultants. These consultants provide assistance on every aspect of security, from protecting against computer viruses to reinforcing buildings against bomb blasts. Logistics consulting firms also are finding opportunities helping clients secure their supply chain against interruptions that might arise from terrorist acts, such as the disruption of shipping or railroad facilities. As security concerns grow, rising insurance costs, as well as the threat of lawsuits, are providing added incentives for businesses to protect the welfare of their employees.

Growth in management, scientific, and technical consulting services might be hampered by increasing competition from non-traditional consulting firms, such as investment banks, accounting firms, technology firms, and law firms. As consulting firms continue to expand their services, they will be forced to compete with a more diverse group of firms that provide similar services.

Economic downturns also can have an adverse effect on employment growth in consulting. As businesses are forced to cut costs, consultants may be among the first expenses that businesses eliminate. Furthermore, growth in some consulting specialties, such as executive search consulting, is directly tied to the health of the industries in which they operate. Still, some consulting firms might experience growth during recessions because, as clients look to cut costs and remain competitive, they might seek the advice of consultants.

Earnings

Management, scientific, and technical consulting services is one of the highest paying industries. Nonsupervisory wage and salary workers in the industry averaged \$826 a week in 2004, compared with \$529 for workers throughout private industry. Median hourly earnings in the largest occupations in management, scientific, and technical consulting appear in table 3.

The data in the table do not reflect earnings for self-employed workers, who often are paid very well. Also, both managerial workers and high-level professionals can make considerably more than the industry average. According to the Association of Management Consulting Firms, the 2004 average total compensation (salary plus bonus or profit sharing) for research

Table 3. Median hourly earnings of the largest occupations in management, scientific, and technical consulting services, May 2004

Occupation	Management, scientific, and technical consulting services	All industries
General and operations managers	\$55.95	\$37.22
Management analysts	34.85	30.51
Accountants and auditors	25.82	24.41
Employment, recruitment, and placement specialists	25.39	19.80
Business operations specialists, all other ...	25.31	25.70
Executive secretaries and administrative assistants	17.69	16.81
Bookkeeping, accounting, and auditing clerks	14.98	13.74
Customer service representatives	13.57	12.99
Secretaries, except legal, medical, and executive	13.05	12.55
Office clerks, general	11.14	10.95

associates was \$52,482; for entry-level consultants, \$65,066; for management consultants, \$89,116; for senior consultants, \$123,305; for junior partners, \$191,664; and for senior partners, \$319,339.

According to a 2004 survey conducted by Abbot, Langer, and Associates, the median annual total cash compensation for junior consultants was \$40,000; for consultants, \$61,000; for senior consultants, \$80,250; for principal consultants, \$107,000; and for senior or executive vice presidents, \$235,135.

Besides earning a straight salary, many workers receive additional compensation, such as profit sharing, stock ownership, or performance-based bonuses. In some firms, bonuses can constitute one-third, or more, of annual pay.

Only about 2 percent of workers in management, scientific, and technical consulting services belong to unions or are covered by union contracts, compared with 14 percent of workers in all industries combined.

Sources of Additional Information

For more information about career opportunities in general management consulting, contact:

- Association of Management Consulting Firms, 3580 Lexington Ave., New York, NY 10168. Internet: <http://www.amcf.org>

For more information about career opportunities in executive search consulting, contact:

- Association of Executive Search Consultants, 500 Fifth Ave., Suite 930, New York, NY 10110. Internet: <http://www.aesc.org>

For more information about career opportunities in safety consulting, contact:

- American Society of Safety Engineers, 1800 E. Oakton St., Des Plaines, IL 60018. Internet: <http://www.asse.org>

For more information about the Certified Management Consultant designation, contact:

- Institute of Management Consultants USA, 2025 M St., Suite 800, Washington, DC 20036. Internet: <http://www.imcusa.org>

For more information about the Certified Investment Management Analyst designation, contact:

- Investment Management Consultants Association, 5619 DTC Parkway, Suite 500, Greenwood Village, CO 80111. Internet: <http://www.imca.org>

In addition, information on the following occupations found in the management, scientific, and technical consulting services industry appears in the 2006-07 *Occupational Outlook Handbook*:

- Accountants and auditors
- Administrative services managers
- Advertising, marketing, promotions, public relations, and sales managers
- Architects, except landscape and naval
- Bookkeeping, accounting, and auditing clerks
- Commercial and industrial designers
- Computer and information systems managers
- Computer programmers

- Computer scientists and database administrators
- Computer software engineers
- Computer support specialists and systems administrators
- Computer systems analysts
- Economists
- Engineering and natural sciences managers
- Engineers
- Environmental scientists and hydrologists
- Financial managers

- Graphic designers
- Human resources, training, and labor relations managers and specialists
- Lawyers
- Management analysts
- Office and administrative support worker supervisors and managers
- Secretaries and administrative assistants
- Top executives