MARKETING OPTIMIZATION

MM – 102

GENERAL OBJECTIVES OF THE SUBJECT
At the end of the course, Individuals will examine the principles of Marketing Optimization apply them within the companies need critically reflect Marketing behavior within companies *and* their impact on the development of this course.

2. MARKETING OPTIMIZATION

2.1 Marketing Optimization
2.2 Social Environment
2.3 Economic Environment
2.4 Technological Environment
2.5 Regulatory Environment

2.1 <u>Marketing Optimization</u>

"Optimization" is a term frequently cited by marketers, academics, consultants and software vendors. In the context of marketing analytics, just what do they mean by "optimization"? Having been hands-on practitioners in all of the major approaches to "marketing optimization", ETS Marketing Science introduces a framework for selecting the approach that is right for you.

Broadly speaking, we can define "optimization" as "the act of rendering the most favorable or desirable outcome". We can further define "marketing optimization" as "the marketing process for maximizing a specified business outcome". However, the various practitioners of marketing analytics impart a great deal of confusion by differing, not only in the process for conducting marketing optimization, but in the outcome as well.

What do we optimize?
The designated outcome to be optimized can be an:

(1) **aggregate business result** such as:
   a. revenue
   b. profit
   c. units sold
   d. market share
   e. new accounts
   f. store traffic, and
   g. leads generated or some

(2) **customer or prospect behavior** associated with purchase, retention, or cross-sell. A firm typically selects the outcome for optimization based on its prevailing strategic (brand or product level) or tactical (program or campaign level) goals. If, for instance, the firm's objective were to increase national market shares, then the firm's optimization efforts would focus on national market shares. Regardless, most firms can benefit from both approaches. (Emissions Trade Scheme (ETS)

offers a unique combined approach that optimizes customer response and aggregate business results simultaneously via the Optimizer framework.)

A Customer Relationship Management (CRM) analytics firm focuses primarily on optimizing customer or prospect behavior. A Marketing Mix Modeling firm focuses primarily on optimizing an aggregate business result. Except for ETS Marketing Science, marketing analytics consulting firms typically focus primarily on either customer or aggregate business results, but not both. The disparate analytics expertise and data requirements make a dual focus, of both CRM and Marketing Mix Modeling analytics, hard to come by.

<u>How do we optimize?</u>

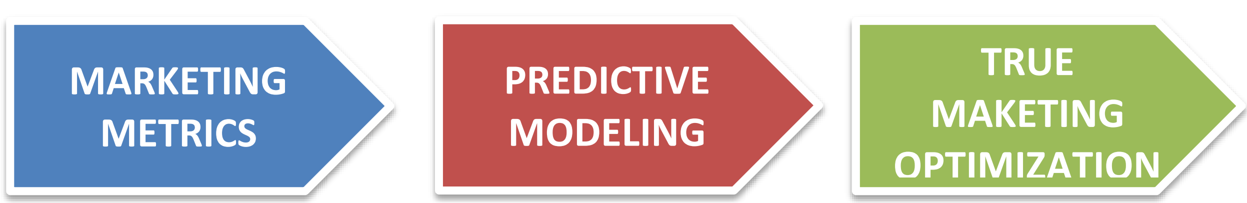
The “process” is defined by the specific sequence of steps needed achieve a specified outcome of marketing optimization. While the process includes operational steps such as data warehousing, our discussion will focus primarily on the analytical steps. There are three primary categories by which optimization analytics can be classified (in the sequence of increasing sophistication):

1) **Iterative Response to Marketing Metrics** – Management react on an iterative basis to ongoing tracking, measurement and reporting of program level or corporate wide marketing performance.

2) **Statistical Predictive Modeling** – Statistical or mathematical models, based on historical marketing data and/or customer/prospect profiles, are used to predict (that is, forecast or simulate) specific customer behavior or business result.

3) **True Marketing Optimization** – Specialized mathematical algorithms (such as linear or nonlinear programming) are applied to the aforementioned Statistical Predictive Models to compute the specific budget allocation and/or customer treatment that would yield the highest (hence optimal) business result possible for a given constrained or unconstrained budget.

We should note that any of the three categories could be further classified as either customer behavior or aggregate business result focused. ETS Marketing Science places these categories in the **Marketing Optimization Continuum:**



MARKETING OPTIMIZATION

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The Marketing Optimization Continuum can be thought of as an evolutionary continuum in the sense that a firm needs to master each step in succession in order to achieve True Marketing Optimization.

Marketing Metrics

What is often called marketing optimization is nothing more than an iterative marketing management process of reacting to latest available marketing performance metrics. **Systems integration and reporting solutions vendors most frequently define marketing optimization under this category.**

Despite the simplicity, the timely delivery of accurately compiled and intuitively transformed business data enhance the likelihood of effective management response. In addition, statistical predictive modeling, which is the next evolutionary step in marketing analytics sophistication, can be facilitated only if the firm has a firm grasp of its marketing data. The primary categories of analytics associated with "marketing metrics", in a likely sequence, include:

1) **Exploratory Data Analysis** – EDA is a well known statistical discipline used to formulate meaningful metrics from raw data or assess data quality. Statistical trending and data visualization also fall under the EDA umbrella. Data Integration and normalization strategies cannot be effectively formulated without this exploratory stage used to gain preliminary insights on data.

2) **Data Integration / Normalization** – Marketing data, which typically reside in disparate silos under different aggregations, need to be integrated into a central depository and normalized (transformed) into common scales before meaningful reports and tracking can be generated.

3) **Reporting and Tracking** – In conjunction with EDA, fully integrated and normalized data are summarized into the appropriate plots, chart, tables, or financial metrics to convey intuitive insights into marketing performance.

Predictive Modeling

Tracking, measurement, and reporting is a prerequisite to marketing optimization, but this iterative approach can only point to the right direction. Only occasionally does this approach come close to achieving true optimal allocation of marketing resources.

The next evolutionary step in marketing optimization is Predictive Modeling based on historical marketing data and or customer/prospect profiles. These are statistical models in the sense that such models are largely associated with probabilities (of purchase for instance). We will discuss in detail the two primary types of predictive models – **Customer Targeting Models** and **Marketing Mix Models.**

Customer Targeting Models

Customer Targeting Models are used to isolate the profiles of the most profitable customers or prospects. Although targeting models are usually associated with individual marketing programs or campaigns at a tactical level, targeting models can also be used strategically when making broad customer policies. Examples of targeting models include:

1) **Response models** designed to assess the probabilities of achieving a desired customer response to specific marketing messages and offers.

2) **Hazard models (survival analysis)** to predict when a customer is likely to exhibit a specified behavior such as attrition or repeat purchase.

3) **Customer valuation (lifetime value) models** designed to estimate the lifetime financial values of individual customer relationships. Customer Targeting Models are the prevalent types of models used under the Customer Relationship Management (CRM) umbrella.

Marketing Mix Models

Although Marketing Mix Modeling has been the subject of extensive academic research for several decades, it did not gain momentum commercially until the data processing technology advancements made in the late 80s. A Marketing Mix Model is a specialized form of econometrics model used to determine the contribution of individual Marketing efforts to a given overall business result. For instance, ***a marketing mix model can determine the percentage contribution of the respective marketing activities including but not limited to advertising, promotion, pricing, direct marketing, public relations, competitor response, and economic variables to overall sales.*** The special appeal to Marketing Mix Modeling is that all of the relevant variables that affect a given business result are considered within a single model.

True Marketing Optimization

The aforementioned first two components of the Marketing Optimization Continuum do not constitute true optimization from ETS Marketing Science's point of view, though many other practitioners of marketing analytics will have you believe otherwise. These two components do, however, help management and analysts make better incremental decisions by gaining intelligence from insightful marketing metrics before building predictive models used to simulate or forecast business results for varying budget allocations, pricing, or offers to customers. These techniques do not, however, answer the following question:

"Exactly how much should I spend on each component of the marketing mix and what specific offers should I make to my customers so that our overall profits are maximized for the next fiscal year?"

True Marketing Optimization answers this question. From a mathematical point of view, the models built at the Predictive Modeling stage of the Marketing Optimization Continuum require additional mathematical algorithms to compute the optimal budget allocations or customer treatments. Without True Marketing Optimization analytics, the user of predictive models are restricted to simulating a limited range of scenarios, but could not possibly test all scenarios to discover the single scenario where a specified business result is maximized, that is, optimal.

2.2 Social Environment

What is Social Media Optimization (SMO)? With the help of the World Wide Web, we have been telling stories through video, audio and now we are doing it with the help of interactivity. Discovering content has passed beyond the old way we used to broadcast information. Our ability of steering all the influential conversations is not enhanced by social network, these living media through which people exchange information, experience and expectations.

For years now, Search Engine Optimization (SEO) for websites has been honed into a fine art with entire companies devoting considerable effort to defining best practices and touting the value of SEO for raising a site's performance on organic search listings. While I believe in the power of SEO, there is a new offering we have started providing to clients which we call Social Media Optimization (SMO). The concept behind SMO is simple: implement changes to optimize a site so that it is more easily linked to, more highly visible in social media searches on custom search engines (such as Technorati), and more frequently included in relevant posts on blogs, podcasts and blogs. Here are 5 rules we use to help guide our thinking with conducting an SMO for a client's website:

1. **Increase your linkability** – This is the first and most important priority for websites. Many sites are "static" – meaning they are rarely updated and used simply for a storefront. To optimize a site for social media, we need to increase the linkability of the content. Adding a blog is a great step, however there are many other ways such as creating white papers and thought pieces, or even simply aggregating content that exists elsewhere into a useful format.

2. **Make tagging and bookmarking easy** – Adding content features like quick buttons to "add to del.icio.us" are one way to make the process of tagging pages easier, but we go beyond this, making sure pages include a list of relevant tags, suggested notes for a link (which come up automatically when you go to tag a site), and making sure to tag our pages first on popular social bookmarking sites (including more than just the homepage).

3. **Reward inbound links** – Often used as a barometer for success of a blog (as well as a website), inbound links are paramount to rising in search results and overall rankings. To encourage more of them, we need to make it easy and provide clear rewards. From using Permalinks to recreating similarly, listing recent linking blogs on your site provides the reward of visibility for those who link to you.

4. **Help your content travel** - Unlike much of SEO, SMO is not just about making

changes to a site. When you have content that can be portable (such as PDFs, video files and audio files), submitting them to relevant sites will help your content travel further, and ultimately drive links back to your site.

5. **Encourage the mashup** – In a world of co-creation, it pays to be more open about letting others use your content (within reason). YouTube's idea of providing code to cut and paste so you can imbed videos from their site has fueled their growth. Syndicating your content through RSS also makes it easy for others to create mashups that can drive traffic or augment your content.

Social marketing is particularly useful in removing barriers that prevent behavior change. At any given time, only a percentage of your target audience will be ready to take action. It's important to understand this when setting realistic expectations of what a campaign can accomplish or what an audience will accept.

SOCIAL MARKETING IS:	SOCIAL MARKETING IS NOT:
☑ A social or behavior change strategy ☑ Most effective when it activates people ☑ Targeted to those who have a reason to care and who are ready for change ☑ Strategic, and requires efficient use of resources ☑ Integrated, and works on the "installment plan"	☒ Just advertising ☒ A clever slogan or messaging strategy ☒ Reaching everyone through a media blitz ☒ An image campaign ☒ Done in a vacuum ☒ A quick process

The **social forces** of the environment include the demographic characteristics of the population and its values. Changes in these forces can have a dramatic impact on marketing strategy.

- ➢ Shifting of social networks and social media to mainstream forms of communication for consumers
- ➢ Increasing expectation for authentic and experiential relationships with companies and brands
- ➢ Growing concern for environmental impact and sustainability

Demographics - Describing a population according to selected characteristics such as age, gender, ethnicity, income, and occupation is referred to as **demographics**. Several organizations such as the Population Reference Bureau and the United Nations monitor the world population profile, while many other organizations such as the U.S. Census Bureau provide information about the American population.

The World Population at a Glance the most recent estimates indicate there are 6.7 billion people in the world today, and the population is likely to grow to 9.35 billion by 2050. While this growth has led to the term *population explosion*, the increases have not occurred worldwide; they are primarily in the developing countries of Africa, Asia, and Latin America. In fact, India is predicted to have the world's largest population in 2050 with 1.76 billion people, and China will be a close second with 1.44 billion people.

For marketers, global trends such as these have many implications. Obviously, the relative size of countries such as India and China will mean they represent huge markets for many product categories. Elderly populations in developed countries are t**he U.S. population s**tudies of the demographic characteristics of the U.S. population suggest several important trends. Generally, the population is becoming larger, older, and more diverse. In 2010, the U.S. population is estimated to be 310 million people.

Generational Cohorts - A major reason for the graying of America is that the 76 million **baby boomers**—the generation of children born between 1946 and 1964—are growing older. Baby boomers are retiring at a rate of 10,000 every 24 hours, and they will all be 65 or older by 2030. ***Their participation in the work force has made them the wealthiest generation in U.S. history, with an estimated $1 trillion in annual buying power***. While boomers represent a diverse group in terms of their age and life stages, one commonality is their interest in health, wellness, and appearance. Companies that target boomers will need to respond to their interests in fitness, retirement housing, financial planning, and their appearance. The baby boom cohort is followed by ***Generation X, which includes the 15 percent of the population born between 1965 and 1976. This period is also known as the baby bust, because the number of children born each year was declining***.

This is a generation of consumers who are ***self-reliant, supportive of racial and ethnic diversity, and better educated than any previous generation***. They are not prone to extravagance and are likely to pursue lifestyles that are a blend of caution, pragmatism, and traditionalism. In terms of net worth, Generation X is the first generation to have less than the previous generation. As baby boomers move toward retirement, however, **Generation X is becoming a dominant force in many markets**. Generation X, for example, is replacing baby boomers as the largest segment of business travelers. In response, hotel companies are creating new concepts that appeal to the younger market. Surveys of Generation X travelers indicate they want casual, tech-friendly lodging with 24-hour access to food and drinks, so Hyatt Corporation is building 400 new Hyatt Place all-suite hotels featuring free wireless Internet, flat panel high-definition televisions, a 24-hour guest kitchen, a fitness center, and remote printing.

The generational cohort labeled **Generation Y** includes the 72 million Americans born between 1977 and 1994. This was a period of increasing births, which resulted from baby boomers having children, and it is often referred to as the ***echo-boom* or *baby boomlet***. *Generation Y exerts influence on music, sports, computers, video games, and especially cell phones. Generation Y views wireless communication as a lifeline to friends and family and was the first to use Web-enabled mobile phones to stream video, send and receive text messages, play games, and access e-mail.* They are strongwilled, passionate about the environment, and optimistic. This is also a group that is attracted to purposeful work where they have control.

Population Shifts A major regional shift in the U.S. population toward Southern and Western states is under way. From 2007 to 2008, the populations of Utah, Arizona, Texas, North Carolina, and Colorado grew at the fastest rates in the nation. Nearly a century ago each of the top 10 most populous cities in the United States was within 500 miles of the Canadian border. Today, seven of the top 10 are in states that border Mexico. Last year, Texas gained more people than any other state—its population increased by almost 500,000!

Populations are also shifting within states. In the early 1900s, the population shifted from rural areas to cities. From the 1930s through the 1980s, the population shifted from the cities -to suburbs. More recently, the population began to shift again, from suburbs to more remote suburbs called *exurbs*. Today, 30 percent of all Americans live in central cities, 50 percent live in suburbs, and 20 percent live in rural locations.

To assist marketers in gathering data on the population, the Census Bureau has developed a classification system to describe the varying locations of the population. The system consists of two types of *statistical areas*:

- **A *metropolitan statistical*** *area* has at least one urbanized area of 50,000 or more people and adjacent territory that has a high degree of social and economic integration.

- A ***micropolitan statistical*** *area* has at least one urban cluster of at least 10,000 but less than 50,000 people and adjacent territory that has a high degree of social and economic integration.

If a metropolitan statistical area contains a population of 2.5 million or more, it may be subdivided into smaller areas called *metropolitan divisions.* In addition, adjacent metropolitan statistical areas and micropolitan statistical areas may be grouped into *combined statistical areas*. There are currently 363 metropolitan statistical areas, which include 83 percent of the population, and 577 micropolitan areas, which include 10 percent of the population.

Racial and Ethnic Diversity - A notable trend is the changing racial and ethnic composition of the U.S. population. Approximately one in four U.S. residents is African American, American Indian, Asian, Pacific Islander, or a representative of another racial or ethnic group. Diversity is further evident in the variety of peoples that make up these groups. For example, Asians consist of Asian Indians, Chinese, Filipinos, Japanese, Koreans, and Vietnamese.

For the first time, the 2000 Census allowed respondents to choose more than one of the six race options, and more than 4 million reported more than one race. Hispanics, who may be from any race, currently make up 15 percent of the U.S. population and are represented by Mexicans, Puerto Ricans, Cubans, and others of Central and South American ancestry. While the United States is becoming more diverse, suggests that the minority racial and ethnic groups tend to be concentrated in geographic regions.

The racial and ethnic composition of the United States is expected to change even more by 2025. Between 2008 and 2025, the Hispanic population will grow from 44 million to more than 68 million, or almost 20 percent of the total population. The number of Asians in the United States will also double to 24 million, or 7 percent of the population, and the African American population will be approximately 45 million, or 13 percent of the population. The new Census category, *multiracials*,
currently makes up 2.4 percent of the population, but because of the limited information about this group, growth forecasts are difficult to make. Overall, the trends in the composition of the population suggest that the U.S. market will no longer be dominated by one group and that non-Hispanic Caucasians will be a declining majority over the next two decades.

While the growing size of these groups has been identified through new Census data, their economic impact on the marketplace is also very noticeable. By 2012, Hispanics, African Americans, and Asians will spend $1.20 trillion, $1.13 trillion, and $670 billion each year, respectively. *To adapt to this new marketplace, many companies are developing* ***multicultural marketing*** *programs, which are combinations of the marketing mix that reflect the unique attitudes, ancestry, communication preferences, and lifestyles of different races*. Because businesses must now market their products to a consumer base with many racial and ethnic identities, in-depth marketing research that allows an accurate understanding of each culture is essential.

The information allows companies to combine their multicultural marketing efforts with regional marketing activities. Consider, for example, that 48 percent of Asian Americans live in Los Angeles, New York City, and San Francisco, and that two-thirds of Hispanics live in Florida, Texas, and California. The Texas-based Multi-Cultural Agency of the Year, Dieste, for example, uses its expertise to create regional Hispanic campaigns for Nationwide, Hershey, Pizza Hut, Pepsi, and Nissan. Similarly, companies such as General Mills, Sears, and Tag Heuer are using mobile marketing to reach geographic concentrations of ethnic groups ontheir cell phones. Occasionally, these campaigns transcend race and ethnicity. The McDonald’s “I’m Lovin It” campaign, for example, was a message rooted in hip-hop culture and intended for African American consumers and eventually gained popularity with all audiences around the world.

Culture a second social force, **culture**, incorporates the set of values, ideas, and attitudes that are learned and shared among the members of a group. Because many of the elements of culture influence consumer buying patterns, monitoring national and global cultural trends is important for marketing.

2.3 Economic Environment

Economic forces - The component of the environmental scan, the **economy**, pertains to the ***income, expenditures, and resources that affect the cost of running a business and household***. We'll consider two aspects of these economic forces: a macroeconomic view of the marketplace and a microeconomic perspective of consumer income.

Macroeconomic Conditions - Of particular concern at the macroeconomic level is the inflationary or recessionary state of the economy, whether actual or perceived by consumers or businesses. In an inflationary economy, the cost to produce and buy products and services escalates as prices increase. From a marketing standpoint, if prices rise faster than consumer incomes, the number of items consumers can buy decreases. This relationship is evident in the cost of a college education. The National Center for Public Policy and Higher Education reports that since 1980 college tuition and fees have increased 440 percent while family income rose less than 150 percent. The share of family income required to pay for tuition at public four-year colleges rose from 12 percent in 1980 to 24 percent today.

Whereas inflation is a period of price increases, recession is a time of slow economic activity. Businesses decrease production, unemployment rises, and many consumers have less money to spend. The U.S. economy experienced recessions from 1973–75, 1981–82, 1990–91, and in 2001. Most recently, a recessionary period began in 2008 and may become the longest in recent history.

Consumer expectations of an inflationary and recessionary U.S. economy are an important element of environmental scanning. Consumer spending, which accounts for two-thirds of U.S. economic activity, is affected by expectations of the future. The two most popular surveys of consumer expectations are the Consumer Confidence Index, conducted by a nonprofit business research organization called the Conference Board, and the Index of Consumer Sentiment, conducted by the Survey Research Center at the University of Michigan.

The surveys track the responses of consumers to specific questions about their expectations, and the results are reported once each month. For example, the Index of Consumer Sentiment asks, "Looking ahead, do you think that a year from now you will be better off financially, worse off or just about the same as now?" The answers to the questions are used to construct an index. The higher the index, the more favorable are consumer expectations. The consumer expectations surveys are closely monitored by many companies, particularly manufacturers and retailers of cars, furniture, and major appliances.

Consumer Income - The microeconomic trends in terms of consumer income are also important issues for marketers. Having a product that meets the needs of consumers may be of little value if they are unable to purchase it. A consumer's ability to buy is related to income, which consists of gross, disposable, and discretionary components.

Gross Income - The total amount of money made in one year by a person, household, or family unit is referred to as **gross income** (or "money income" at the Census Bureau). While the typical U.S. household earned only about $8,700 of income in 1970, it earned about $50,233 in 2007. When gross income is adjusted for inflation, however, income of that typical U.S. household was relatively stable. In fact, inflation-adjusted income has only varied between $40,442 and $50,641 since 1968.
Disposable Income - The second income component, **disposable income**, is the money a consumer has left after paying taxes to use for necessities such as food, housing, clothing, and transportation. Thus, if taxes rise or fall faster than income, consumers are likely to have more or less disposable income. Similarly, dramatic changes in prices of products can require spending adjustments. In recent years, for example, as the price of gasoline increased and declined dramatically, consumers found themselves adjusting their spending in other categories. In addition, the decline in home prices has had a psychological impact on consumer who tend to spend more when they feel their net worth is rising and postpone purchases when it declines. During a recessionary period, spending, debt, and use of credit are all expected to decline.

Discretionary Income The third component of income is **discretionary income**, the money that remains after paying for taxes and necessities. Discretionary income is used for luxury items such as a Regent cruise. An obvious problem in defining discretionary versus disposable income is determining what is a luxury and what is a necessity.

The Department of Labor monitors consumer expenditures through its annual Consumer Expenditure Survey. In 2007, consumers spent about 12 percent of their income on food, 34 percent on housing, and 4 percent on clothes. While an additional 24 percent is often spent on transportation, health care, and insurance, the remainder is generally viewed as discretionary. The percentage of income spent on food and housing typically declines as income increases, which can provide an increase in discretionary income. Discretionary expenditures can also be increased by reducing savings. The Bureau of Labor Statistics has observed that since the 1990s the savings rate has been declining and recently reached zero. That trend was reversed in 2008 when the government issued stimulus checks designed to improve the economy, and consumers saved the money rather than spend it. Economists predict that the savings rate will now increase to approximately 5 percent.

2.4 Technological Environment

Technological forces in our society is in a period of dramatic technological change. technology, the third environmental force, refers to inventions or innovations from applied science or engineering research. Each new wave of technological innovation can replace existing products and companies.

Technology of Tomorrow - Technological change is the result of research, so it is difficult to predict. Some of the most dramatic technological changes occurring now, however, include the following:

- Cloud computing will allow businesses and consumers to access software applications directly from third parties over the Internet and "pay as they go."
- Researchers are developing a wireless power process to transmit power to electrical products without interconnecting wires.
- Advances in nanotechnology, the science of unimaginably small electronics, will lead to smaller microprocessors, efficient fuel cells, and cancer-detection sensors.
- Biotechnology and agricultural genome research is being used to develop genetically modified crops to create enough food for a growing world population.

Some of these trends in technology are already seen in today's marketplace. Google, for example, has developed a cloud computing collection of software including e-mail and word processing called Google Apps. A new company called Powercast is manufacturing holiday lights that run on wireless power, and MIT has developed "WiTricity," which can power a TV from across a room.

Nanotechnology is used in the Samsung flash memory chips that are part of the iPod nano. Other technologies such as organic LED televisions, online meeting services, and customized music services are likely to replace or substitute for existing products and services such as plasma screen televisions, business travel, and radio.

Technology's Impact on Customer Value - Advances in technology have important effects on marketing. ***First, the cost of technology is plummeting, causing the customer value assessment of technology-based products to focus on other dimensions such as quality, service, and relationships.*** *PC Magazine* publishes an article titled, "The Best Free Software," each year to tell readers about companies that give their software away, with the expectation that advertising or upgrade purchases will generate revenue. A similar approach is used by many U.S. cellular telephone vendors, who charge little for the telephone if the purchase leads to a long-term telephone service contract.

Technology also provides value through the development of new products. Recent examples that generated extraordinary consumer interest include Nintendo's Wii, Activision's *Guitar Hero* series, and Apple's iPhone. A new version of Amazon's electronic book reader, Kindle, also received attention from many consumers. The new product provides a high-resolution display, holds as many as 1,500 books, and offers a "text-to-speech" feature that allows readers to listen to books. Other new products likely to be available soon include injectable health monitors that will send glucose, oxygen, and other clinical information to a wristwatch-like monitor, LED lights that look like traditional fluorescent light bulbs, and Bluetooth-enabled speakers and video cameras. Technology can also change existing products and the ways they are produced. Many companies are using technological developments to recycle products through the manufacturing cycle several times.

Electronic Business Technologies - The transformative power of technology may be best illustrated by the rapid growth of the **marketspace**, an information- and communication-based electronic exchange environment mostly occupied by sophisticated computer and telecommunication technologies and digitized offerings. Any activity that uses some form of electronic communication in the inventory, exchange, advertisement, distribution, and payment of goods and services is often called **electronic commerce**. Network technologies are now used for everything from filing expense reports, to monitoring daily sales, to sharing information with employees, to communicating instantly with suppliers.

Many companies have adapted Internet-based technology internally to support their electronic business strategies. ***An intranet, for example, is an Internet-based network used within the boundaries of an organization. It is a private network that may or may not be connected to the public Internet.*** *Extranets*, which use Internet-based technologies, permit communication between a company and its supplier, distributors, and other partners (such as advertising agencies).

Competitive Forces - The component of the environmental scan, **competition**, refers to the alternative firms that could provide a product to satisfy a specific market's needs. There are various forms of competition, and each company must consider its present and potential competitors in designing its marketing strategy.

Alternative Forms of Competition - Four basic forms of competition form a continuum from ***pure competition to monopolistic competition to oligopoly to pure monopoly***. At one end of the continuum is *pure competition*, in which there are many sellers and they each have a similar product. Companies that deal in commodities common to agribusiness (for example, wheat, rice, and grain) often are in a pure competition position in which distribution (in the sense of shipping products) is important but other elements of marketing have little impact.

In the second point on the continuum, *monopolistic competition*, ***many sellers compete with substitutable products within a price range***. For example, if the price of coffee rises too much, consumers may switch to tea. Coupons or sales are frequently used marketing tactics. *Oligopoly*, a common industry structure, occurs when a few companies control the majority of industry sales. The wireless telephone industry, for example, is dominated by Verizon, AT&T, Sprint, and T-Mobile, which have 81, 75, 50, and 32 million subscribers, respectively. Similarly, the entertainment industry in the United States is dominated by Viacom, Disney, and Time Warner, and the major firms in the U.S. defense contractor industry are Boeing, Northrup Grumman, and Lockheed Martin.

Critics of oligopolies suggest that because there are few sellers, price competition among firms is not desirable because it leads to reduced profits for all producers. The final point on the continuum, *pure monopoly*, occurs when only one firm sells the product. Monopolies are common for producers of goods considered essential to a community: water, electricity, and cable service. Typically, marketing plays a small role in a monopolistic setting because it is regulated by the state or federal government. Government control usually seeks to ensure price protection for the buyer, although deregulation in recent years has encouraged price competition in the electricity market. Concern that Microsoft's 86 percent share of the PC operating system market is a monopoly has led to lawsuits and consent decrees from the U.S. Justice Department and fines and ongoing investigations from the European Union.

Components of Competition - In developing a marketing program, companies must consider the factors that drive competition: entry, bargaining power of buyers and suppliers, existing rivalries, and substitution possibilities. Scanning the environment requires a look at all of them. These factors relate to a firm's marketing mix decisions and may be used to create a barrier to entry, increase brand awareness, or intensify a fight for market share.

Entry - In considering the competition, a firm must assess the likelihood of new entrants. Additional producers increase industry capacity and tend to lower prices. A company scanning its environment must consider the possible **barriers to entry** for other firms, which are business practices or conditions that make it difficult for new firms to enter the market. Barriers to entry can be in the form of capital requirements, advertising expenditures, product identity, distribution access, or the cost to customers of switching suppliers. The higher the expense of the barrier, the more likely it will deter new entrants. For example, Western Union and Moneygram dominate the $7 billion money transfer market because of their huge distribution networks of branch offices and global pickup locations. Potential competitors find it difficult to enter the market because lack of distribution limits consumer access.

Power of Buyers and Suppliers a competitive analysis must consider the power of buyers and suppliers. Powerful buyers exist when they are few in number, there are low switching costs, or the product represents a significant share of the buyer's total costs. This last factor leads the buyer to exert significant pressure for price competition. A supplier gains power when the product is critical to the buyer and when it has built up the switching costs.

Existing Competitors and Substitutes - Competitive pressures among existing firms depend on the rate of industry growth. In slow-growth settings, competition is more heated for any possible gains in market share. High fixed costs also create competitive pressures for firms to fill production capacity. For example, airlines offer discounts for making early reservations and charge penalties for changes or cancellations in an effort to fill seats, which represent a high fixed cost.

Small Businesses as Competitors - While large companies provide familiar examples of the forms and components of competition, small businesses make up the majority of the competitive landscape for most businesses. Consider that there are approximately 27 million small businesses in the United States, which employ half of all private sector employees. In addition, small businesses generate 60 to 80 percent of all new jobs annually and 50 percent of the gross domestic product (GDP). Research has shown a strong correlation between national economic growth and the level of new small business activity in the previous years.

2.5 Regulatory Environment

Regulatory forces for any *organization, the marketing and broader business decisions are constrained, directed, and influenced by regulatory forces.* **Regulation** consists of restrictions state and federal laws place on business with regard to the conduct of its activities. Regulation exists to protect companies as well as consumers. Much of the regulation from the federal and state levels is the result of an active political process and has been passed to ensure competition and fair business practices. For consumers, the focus of legislation is to protect them from unfair trade practices and ensure their safety.

Protecting Competition

Major federal legislation has been passed to encourage competition, which is deemed desirable because it permits the consumer to determine which competitor will succeed and which will fail. The first such law was the *Sherman Antitrust Act* (1890). Lobbying by farmers in the Midwest against fixed railroad shipping prices led to the passage of this act, which forbids:

1) contracts, combinations, or conspiracies in restraint of trade and
2) actual monopolies or attempts to monopolize any part of trade or commerce. Because of vague wording and government inactivity, however, there was only one successful case against a company in the nine years after the act became law, and the Sherman Act was supplemented with the *Clayton Act* (1914).

This act forbids certain actions that are likely to lessen competition, although no actual harm has yet occurred. In the 1930s, the federal government had to act again to ensure fair competition. During that time, large chain stores appeared, such as the Great Atlantic & Pacific Tea Company (A&P). Small businesses were threatened, and they lobbied for the *Robinson-Patman Act* (1936). This act makes it unlawful to discriminate in prices charged to different purchasers of the same product, where the effect may substantially lessen competition or help to create a monopoly.

Product-Related Legislation - Various federal laws in existence specifically address the product component of the marketing mix. Some are aimed at protecting the company, some at protecting the consumer, and at least one at protecting both. A company can protect its competitive position in new and novel products under the patent law, which gives inventors the right to exclude others from making, using, or selling products that infringe the patented invention. The federal copyright law is another way for a company to protect its competitive position in a product.

The copyright law gives the author of a literary, dramatic, musical, or artistic work the exclusive right to print, perform, or otherwise copy that work. Copyright is secured automatically when the work is created. However, the published work should bear an appropriate copyright notice, including the copyright symbol, the first year of publication, and the name of the copyright owner, and it must be registered under the federal copyright law. Digital technology has necessitated additional copyright legislation, called the *Digital Millenium Copyright Act* (1998), to improve protection of copyrighted digital products. In addition, producers of DVD movies, music recordings, and software want protection from devices designed to circumvent antipiracy elements of their products.

There are many consumer-oriented federal laws regarding products. The various laws include more than 30 amendments and separate laws relating to food, drugs, and cosmetics, such as the *Infant Formula Act* (1980), the *Nutritional Labeling and Education Act* (1990), new labeling requirements for dietary supplements (1997), and proposed labeling guidelines for trans fats (2006). Various other consumer protection laws have a broader scope, such as the *Fair Packaging and Labeling Act* (1966), the *Child Protection Act* (1966), and the *Consumer Product Safety Act* (1972), which established the Consumer Product Safety Commission to monitor product safety and establish uniform product safety standards. Many of these laws came about because of **consumerism**, a grassroots movement started in the 1960s to increase the influence, power, and rights of consumers in dealing with institutions. This movement continues and is reflected in growing consumer demands for ecologically safe products and ethical and socially responsible business practices. One hotly debated issue concerns liability for environmental abuse.

One of the most recent changes in trademark law is the U.S. Supreme Court's ruling that companies may obtain trademarks for colors associated with their products. Over time, consumers may begin to associate a particular color with a specific brand. Examples of products that may benefit from the new law include NutraSweet's sugar substitute in pastel blue packages and Owens-Corning Fiberglas Corporation's pink insulation. Another recent addition to trademark law is the *Federal Dilution Act* (1995), which is used to prevent someone from using a trademark on a noncompeting product (e.g., "Cadillac" brushes).

Pricing-Related Legislation - The pricing component of the marketing mix is the focus of regulation from two perspectives: price fixing and price discounting. Although the Sherman Act did not outlaw price fixing, the courts view this behavior as *per se illegal* (*per se* means "through or of itself"), which means the courts see price fixing itself as illegal.
Certain forms of price discounting are allowed. Quantity discounts are acceptable; that is, buyers can be charged different prices for a product provided there are

differences in manufacturing or delivery costs. Promotional allowances or services may be given to buyers on an equal basis proportionate to volume purchased.

Distribution-Related Legislation - The government has four concerns with regard to distribution—earlier referred to as "place" actions in the marketing mix—and the maintenance of competition. The first, *exclusive dealing,* is an arrangement a manufacturer makes with a reseller to handle only its products and not those of competitors. This practice is illegal under the Clayton Act only when it substantially lessens competition. *Requirement contracts* require a buyer to purchase all or part of its needs for a product from one seller for a time period. These contracts are not always illegal but depend on the court's interpretation of their impact on distribution.

There are ten strategic questions that you can use to help work toward an initial marketing plan. These are:

1) What is the social [or health] problem I want to address?
2) What actions do I believe will best address that problem?
3) Who is being asked to take that action? (audience)
4) What does the audience want in exchange for adopting this new behavior?
5) Why will the audience believe that anything we offer is real and true?
6) What is the competition offering? Are we offering something the audience wants more?
7) What is the best time and place to reach members of our audience so that they are the most disposed to receiving the intervention?
8) How often, and from whom, does the intervention need to be received if it is to work?
9) How can I integrate a variety of interventions to act, over time, in a coordinated manner, to influence the behavior?
10) Do I have the resources to carry out this strategy alone; and if not, where can I find useful partners?

Key Social Marketing Concepts

Barriers - Hindrances to desired behavior changes that are identified by the audience. These may be factors external or internal to audience members (e.g., lack of proper health care facilities, the belief that fate causes illness and one cannot alter fate, lack of skill to use a condom correctly, etc.).

Benefits - Advantages that the audience identifies, which may or may not be directly associated with a behavior. These can be framed as the positive results, feelings, attributes, and so forth that the audience will obtain from the desired behavior change. Benefits are what you offer to the audience in exchange for the new behavior and can be thought of as "what's in it for them." For example, mothers (audience) will create a loving bond with their newborns (benefit) when they breastfeed for at least six weeks (behavior).

Competition - The behaviors and related benefits (see Benefits) that the target audience is accustomed to — or may prefer over — the behavior you are promoting. (*For example, using the elevator competes with taking the stairs because of ease and quickness; having potato chips with lunch competes with including a fruit and vegetable at each meal because of taste and low cost; formula feeding competes with breastfeeding because of convenience and participation by other family members.*)

Competition also encompasses the organizations and people who offer or promote alternatives to the desired behavior. For example, fast food restaurants offer less healthy food choices, infant formula makers promote their products to new mothers, and friends may encourage a college student to drink until drunk.

Determinants of Behavior - Factors (either internal or external to the individual) that influence an individual's actions or behaviors. Behavioral science theories and models list various determinants. For example, "degree of readiness to change" is a determinant within the transtheoretical, or stages of change, model. Examples of determinants from other theories/models include locus of control, self-efficacy, and perceived risk.

Exchange - The concept that people compare the costs and benefits (see Barriers and Benefits) of performing a behavior before actually doing it. The benefits must outweigh the costs in order for people to perform a behavior.

Exchange provides a way for you to understand the costs and benefits that a target audience (see Target Audience) associates with a desired behavior change. Apply this concept by offering the audience benefits they want in return for making the desired behavior change. For example, you give them a sense of being cool and accepted by their peers if they give you themselves as drug-free adolescents. (Programs also receive benefits, such as improved health status, increased immunization rates, or recognition and funding from the audience performing the behavior.)

Market Research - Research designed to enhance your understanding of the target audience's characteristics, attitudes, beliefs, values, behaviors, determinants, benefits, and barriers to behavior change in order to create a strategy for social marketing programs. Also called consumer or audience research. (See also Barriers, Benefits, and Determinants of Behavior.)

Market Strategy - A guiding plan of action for your entire social marketing program. Market strategy encompasses the specific target audience segments and influencing audiences (see Target Audience), the specific desired behavior change goal, the benefits you will offer (see Benefits), and the interventions that will influence or support the behavior change.