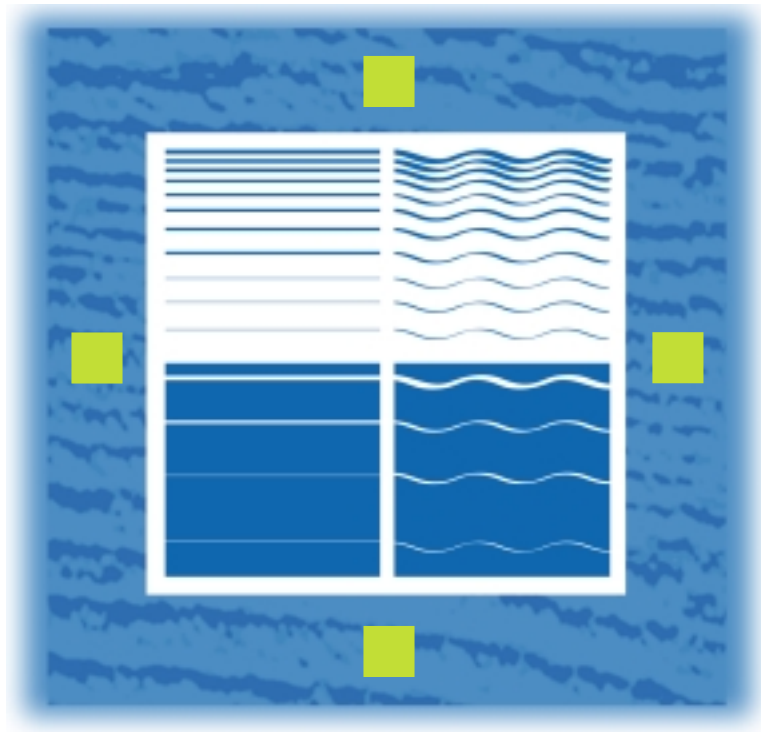


THE FUTURE OF THE INTERNET IN HEALTH CARE: Four Scenarios for 2005



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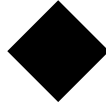
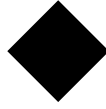


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Part I

SCENARIO PLANNING

EXECUTIVE SUMMARY

The Internet has already changed health care substantially—and in the next few years it will bring much more change. Organizations and individuals from all parts of the industry need to prepare ourselves for these events. But the directions in which the Internet will propel health care are uncertain.

This report describes a powerful method for anticipating this uncertain future of the Internet in health care, and for preparing for it. The method is “scenario planning,” which enables us to construct flexible and diverse responses to our changing industry. In this report, you will find the results of scenario planning exercises that were developed during a conference conducted by the Institute for the Future to understand the future of the Internet in health care.

These scenarios are particularly valuable for their ability to deal with the uncertainty that characterizes the future. We use a method that allows us to “accept uncertainty, try to understand it, and make it part of our reasoning,” in the words of Pierre Wack, an internal planner from Shell. The futures contained here are expressed as stories, with plots, heroes, winners, and losers. By using them, we can work to build the futures that we want.

In constructing these scenarios, we analyzed the following driving forces:

- The goals and behavior of consumers
- The importance of the privacy of health information
- Trends in health care goods and services
- Payment
- Capital flows
- Technology
- Regulation
- Quality and outcomes measurement
- Sources of innovation

In the future, as these forces emerge in the marketplace, we will be able to identify them as indicators of the direction of change.

The Internet has already changed health care substantially — and in the next few years it will bring much more change.

Four Scenarios for the Future

We found that health care and the Internet are likely to take one of four broad, categorical paths in the future, each forming a quadrant in a matrix: UniNet (simple system, rapid adoption), IslandNets (complex system, slow adoption), MultiNets (complex system, rapid adoption), or CentralNet (simple system, slow adoption). Here are more detailed descriptions of these categories:

UniNet. In the first scenario, health care is organized into a relatively simple system that has adopted the Internet and information technology quickly and comprehensively.

In this scenario, one platform of data exchange has emerged as the way to conduct Internet-based business in health care. Health care providers and health insurance plans have recognized the cost reduction that comes with administrative simplification and when alternatives for face-to-face care are reimbursed, meeting consumers' demand for technology solutions that they see everywhere else in their lives. The trend toward consolidation has increased the relative power of the few players left in each sector. The market regulates itself and is doing a decent job of it. Aggregators of services and goods are winners, offering decent deals to those who buy online.

IslandNets. In this scenario, health care has evolved into a complex, fragmented system, and it only moves slowly toward adopting the Internet and information technology.

In this scenario, despite efforts to integrate Internet-based health care products and services, non-health-care industry types have lacked the staying power needed to exist within the complex, fragmented health care space. Information fiefdoms remain islands that resist integration and therefore, quality is still immeasurable. Proactive, connected, Internet-savvy consumers who are unable to find what they want are frustrated and revert to shopping outside of traditional providers—even via the black market.

CentralNet. In this scenario, the health care market is consolidated and simple. There is slow movement among consumers and professionals toward adopting Internet-based technologies.

In 2002, a high-profile, celebrity death caused by unregulated online prescriptions or herbals scared consumers and health care providers away from using the Internet for health care. Federal regulators and entrenched health care powerhouses work together to regulate and tax health e-commerce almost out of existence. Smaller health care

organizations and physicians survive only if they play with the few remaining big guys. The only place where the Internet is making any headway is in administrative simplification, and it's slow at that.

MultiNets. In this scenario, the health care market is complex and fragmented. There is rapid movement among consumers and professionals toward adopting the Internet.

Unafraid and empowered consumers have pushed the health care market to innovate, and the fragmented market has plenty of room for any dotcom with an interesting health care idea, creating a glut of products and services. Large players are too slow to meet consumers' desire for choice, and smaller, more agile dotcoms are very responsive to consumer needs and demands. Regulation varies depending on what issues have received the greatest amount of media coverage. Privacy has not been resolved, and there is a certain amount of caution in using the Internet for health purposes—but the trade-off is too great not to use the Internet.

Applying Scenario Planning

Scenario planning, and the four previously described scenarios, can be used as valuable resources by boards of directors, by planning staffs, and by operations and other staff members. Scenarios can extend planning horizons that otherwise often stop at the three- to five-year horizon. They can widen and deepen environmental forecasts that normally are shortchanged in organizational planning processes. They can be used to develop a map of relevant Internet issues so that interconnections among issues can be seen more clearly and priorities set more intelligently.

This report also describes two other, related, planning methods. These are SWOT—the Strengths, Weaknesses, Opportunities, and Threats analysis; and Skunk Works—a method for predicting what competitors and other outside organizations are likely to do and for seeing how the industry appears to people from outside the organization.

REFLECTING ON POSSIBLE FUTURES

Explosive growth and frenetic change characterize the e-health sector—and they demand a carefully reasoned response. Millions of investment dollars are pouring in to e-health organizations even though many of them do not have an apparent revenue model; established health organizations fear the encroachment of online pure-plays into their markets. The projected increase in online business-to-business models and the chaos of today's fragmented health care system combine to create new opportunities for all sectors of the industry.

Scenarios can widen and deepen environmental forecasts that normally are short-changed in organizational planning processes.

The projected increase in online business-to-business models and the chaos of today's fragmented health care system combine to create new opportunities for all sectors of the industry.

The Future of the Internet in Health Care: Four Scenarios for 2005 will help readers step back, reflect on possible futures, think about their Internet strategy, and weigh options for action. The Institute for the Future (ITF) has created a set of scenarios for 2005: pictures of the health care world that take into consideration how important, but uncertain, driving forces may interact to create winners and losers in the Internet world.

The set of scenarios will explore how the Internet will affect, change, and perhaps transform health care in 2005 by answering the following research questions:

- How will the Internet act as a tool to enable new business growth for health organizations and their competitors? What will the new entrants into the e-health market look like and how will they threaten your business?
- How will driving forces such as new consumers (defined here as those with more education, income and access to technology) and the shift from defined benefit to defined contribution push health and health care products and services online? How will incumbent health care organizations and newly established businesses take advantage of, or be blindsided by, newly created market pressures?
- Where will innovation in health care come from in the future and how can health organizations tap into that innovation?
- Some business applications will move online at a different pace than clinical applications. How do health care organizations separate those worlds and decide where to focus first?

This report was originally written as a workbook for Health Care Horizons members attending the research conference, *The Future of the Internet in Health Care: Four Scenarios for 2005*. It was presented June 14–16, 2000, in San Francisco. The report builds on the original workbook by incorporating the results of the conference.

Though conference attendance and direct work with experts are the most productive ways to learn about this research, this report is designed to facilitate the process an organization might use as a part of its strategic planning. The section, “How to Use This Study” (page 39) explains how different levels of management can most effectively use this approach to strategic planning.

INTRODUCTION TO SCENARIO PLANNING

When Herman Kahn coined the phrase “scenario planning,” in the 1960s, he was composing scenarios at the RAND Corporation on the future of nuclear war. He was, in his own words, “thinking the unthinkable” as a way of playing out the potential outcomes of nuclear war.

War game theory has been the theme of a great many business best-sellers, such as *The Art of War* and *The Art of Management*, *The New Machiavelli*, and *The Book of Five Rings*. Scenario planning is borne out of the need to anticipate and plan—as did the samurai warrior or Florentine prince—for the unexpected.

In fast-moving markets—particularly those driven by technological change, the whims of Wall Street, and the quirks of fickle 21st-century consumers—scenario planning is a crucial strategic planning tool. It helps organizations “think the unthinkable.” The scenario planning (SP) process forces us to think through the driving forces that shape our operating environments: competition, legislation, labor markets, and consumers, among others. We then decide which of the driving forces are most important to our organizations, and bear the most uncertainty. SP also forces us to ponder wild cards—those low-probability but potentially high-impact events—that blow our assumptions out of the water.

The Role of Uncertainty in Scenario Planning

While Kahn can be considered the grandfather of SP, Royal Dutch Shell was the father. Shell adopted SP techniques for the long-term forecasting of energy markets. During the oil crisis of 1973, it was the results of SP that helped the company prevail over its competitors. Shell’s internal scenario-planning champion, Pierre Wack, wrote, “Too many forces work against the possibility of getting the right forecast. Accept uncertainty, try to understand it, and make it part of our reasoning.”

Scenario planning accepts—even celebrates—uncertainty. SP presumes that, while many aspects of the future are predictable, there are uncertainties that prevent us from doing straight-line extrapolation of trends. SP lets us systematically think about uncertainty by considering multiple alternative futures. These futures are expressed as stories, with plots, heroes, winners, and losers. When employed most fruitfully, the practice of scenario planning is more Disney than Harvard Business School. Remember that Kahn and his team termed the process “scenario” planning; scenarios are the basic plotlines of movies. Kahn, one of the RAND war gaming team, used the word “scenario” because he liked the emphasis on creating a story or myth.

“Fortune prefers the prepared mind...”

— Louis Pasteur

“It is not what we don’t know that gets us into trouble; it is what we know that ain’t so.”

— Will Rogers

Scenarios and Strategy

If we “do” scenario planning right, and spread the lessons of the scenarios and their indicators to colleagues and management teams, we can begin to recognize the future as it unfolds and identify key signals of change in a timely way. This enables organizations to make necessary course corrections when they will be most useful: during, not after, a sea change in a market.

Furthermore, we can use scenarios as test beds for corporate strategy and ask ourselves these questions: How does our strategy play out in each scenario? Where are we vulnerable? Can we turn a weakness into an opportunity? By playing out our strategy against each scenario, we can test the robustness of the strategy and retool it to help us navigate uncharted waters. And what’s more uncharted than the role of the Internet in health care at the start of the new millennium?

SCENARIO PLANNING METHODOLOGY

Senario planning derives from the observation that, given the difficulty of knowing precisely how the future will play out, a good strategy to adopt is one that plays out well across several possible futures. To shape a robust strategy, several scenarios are created such that each scenario is mutually exclusive. Each future scenario models a distinct, plausible world in which health organizations might one day have to compete. IFTF’s scenario planning methodology used for *The Future of the Internet in Health Care: Four Scenarios for 2005* is described below.

Set the Context: Identify Critical Issues and Driving Forces

In this first phase, we elicited input from the IFTF team to identify the critical issues related to the effects of the Internet on health care. The goal of this task was to make the driving forces visible so that, as they emerge in the environment, they can be identified as indicators of the direction of change. We aggregated the driving forces for the four scenarios into broad categories of consumers, privacy, health care services, health care goods, payment, capital flows, technology, regulation, quality, and innovation. Each driving force was viewed in the unique context of each of the four scenarios through a set of similar questions. The factors that are common to all scenarios and relatively predictable are not given as much weight as those that play out differently and separate the scenarios. The scenarios are useful not as forecasts of what will be, but as consistent pictures of what might result from the interplay of this

particular set of driving forces. For each driving force in each scenario, we asked some of the questions delineated on pages 8–9.

Each driving force can be defined across a continuum from “low” to “high.” For example, taking the first driving force, “Consumers,” you should think about this force ranging from a low level of consumer demand for customer service, choice, control, brands and information to a majority of consumers making such demands.

We focused our discussion on two critical driving factors that we believed would be most important in determining the effect of the Internet on health care in 2005: the rate of adoption of Internet-based technology, and the complexity and fragmentation of the health care market.

Scenario planning derives from the observation that, given the difficulty of knowing precisely how the future will play out, a good strategy to adopt is one that plays out well across several possible futures.

DRIVING FORCES

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Consumers

- How do health care providers and services meet new consumers for customer service, choice, control, brands and information?
- Do non-traditional health care providers (e.g., complementary and alternative medicine practitioners) make significant inroads with consumers? Do Complementary and Alternative Medicine (CAM) services supplant or complement non-CAM services?
- What is the level of patient satisfaction with the health care system and how is that manifested?
- How significantly tiered are consumers by access to health insurance and health care?

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Privacy

- Who protects health information online and how is it done?
- Is privacy of health information heavily regulated and enforced?
- How much confidence do consumers have in the privacy of their health information?
- What are the market forces guiding use of personal information collected online?
- Health Care Services:
 - How are the bulk of health care services distributed—face-to-face, or remotely?
 - Do clinicians embrace or resist telemedicine and remotely delivered care?
 - How do health care providers differentiate themselves?
 - How do health care providers incorporate information technology into the practice of medicine?

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Health Care Goods

- What are the primary distribution channels for health care goods?
- How consolidated is the health care goods market?
- Do health care vendors reach out to patients to customize their interaction?

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Payment

- How are health care providers and vendors paid for their services?
- What risk-sharing mechanisms are used and with whom?
- Which health insurance benefits are most prevalent?
- What is the level of cost-sharing with patients in paying for products and services?



Capital Flows

- What are the sources of funding into health care organizations?
- How much funding comes from institutional, venture capital and other sources?



Regulation

- How heavily is health care regulated in this scenario?
- Which sectors of health care are the most regulated?
- Does the market regulate itself or does the government do the bulk of regulation?



Innovation

- What/who are the main sources of health care innovation in medical technology and services?
- How is innovation diffused?



Technology

- How integrated are health care information and medical technology in the delivery of care?
- What are the standards for electronic data interchange and who establishes them?
- What are the incentives for providers to adopt information technology?
- What kinds of technology are developed and adopted for health applications?



Quality

- How is the quality of health care defined and understood in this scenario?
- What are typical quality initiatives and how are they implemented?
- How is quality measured? What metrics are used? How are they tracked, by whom and with what feedback mechanisms?

We focused on two critical driving factors: the rate of adoption of Internet-based technology and the complexity and fragmentation of the health care market.

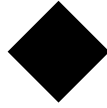
Map the Driving Forces: Uncertainty and Importance

In this second phase, we categorized the driving forces into several groups: those that are foregone conclusions—that is, those issues we cannot change or influence, such as demographics and natural resource constraints—and those that are unpredictable but that can be influenced. The uncertainty lies in whether you can predict with some level of comfort where you believe the continuum will lie in 2005. It is important to focus on these driving forces as being important to your core business and highly uncertain. We then arrayed the key driving factors in a two-by-two matrix made by an intersection of the two most important and most uncertain driving forces: rate of technology adoptions, and complexity and fragmentation of the health care market. This matrix provides the constructs for the scenarios.

Develop the Scenarios: Possible Futures

We elaborated on the scenarios outlined in the matrix and developed them into stories. To create the most useful stories, the team considered the rate of technology change, the life cycles of products, the regulatory environment, and other important industry issues and constraints. Each scenario describes outcomes, trends, and health care winners and losers, and each is mutually exclusive.

This report lays out the groundwork for scenario planning and gives a basic description of how to use it for strategic planning. The methodology is easy to apply and is scalable, depending upon the resources devoted to it. More information and assistance in scenario planning within your organization can be obtained from organizations such as Institute for the Future and Global Business Network.



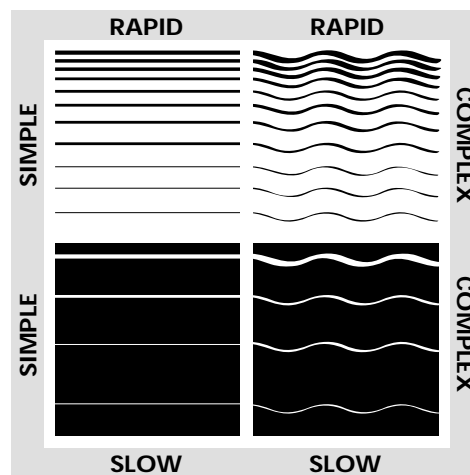
Part II

THE SCENARIOS

THE SCENARIO MATRIX

As we mapped the most uncertain and most important driving forces for the impact of the Internet on health care in 2005, we used two axes to create a two-by-two matrix:

- The X-axis: the overall complexity of the organizational structure of the health care system. This is represented as a continuum from a “simple,” consolidated market with fewer, larger players to a “complex,” highly fragmented market with many players of varying size and power.
- The Y-axis: the rate of adoption of Internet-based technologies by health care stakeholders. This continuum ranges from slow or piecemeal technology adoption by clinicians and health care organizations at an aggregate level to rapid adoption at all levels.



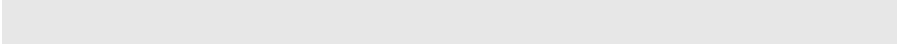
FOUR SCENARIOS FOR 2005 AT A GLANCE

UniNet (simple system, rapid adoption)

In this scenario, one platform of data exchange has emerged as the way to conduct Internet-based business in health care. Health care providers and health insurance plans have recognized the cost reduction that comes with administrative simplification and when alternatives for face-to-face care are reimbursed, meeting consumers' demand for technology solutions that they see everywhere else in their lives. The trend toward consolidation has increased the relative power of the few players left in each sector. The market regulates itself and is doing a decent job of it. Aggregators of services and goods are winners, offering decent deals to those who buy online.

IslandNets (complex system, slow adoption)

In this scenario, despite efforts to integrate Internet-based health care products and services, non-health-care industry types have lacked the staying power needed to exist within the complex, fragmented health care space. Information fiefdoms remain islands that resist integration and therefore, quality is still immeasurable. Proactive, connected, Internet-savvy consumers who are unable to find what they want are frustrated and revert to shopping outside of traditional providers—even via the black market.

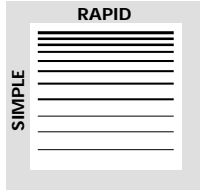


CentralNet (simple system, slow adoption)

In 2002, a high-profile, celebrity death caused by unregulated online prescriptions or herbals scared consumers and health care providers away from using the Internet for health care. Federal regulators and entrenched health care powerhouses work together to regulate and tax health e-commerce almost out of existence. Smaller health care organizations and physicians survive only if they play with the few remaining big guys. The only place where the Internet is making any headway is in administrative simplification, and it's slow at that.

MultiNets (complex system, rapid adoption)

Unafraid and empowered consumers have pushed the health care market to innovate, and the fragmented market has plenty of room for any dotcom with an interesting health care idea, creating a glut of products and services. Large players are too slow to meet consumers' desire for choice, and smaller, more agile dotcoms are very responsive to consumer needs and demands. Regulation varies depending on what issues have received the greatest amount of media coverage. Privacy has not been resolved, and there is a certain amount of caution in using the Internet for health purposes—but the trade-off is too great not to use the Internet.



The organization of health care services has been consolidated in strong health care organizations after years of chaos.

THE SCENARIOS: NARRATIVE, DRIVERS, CONTENTS, AND IMPLICATIONS

UniNet (simple system, rapid adoption)

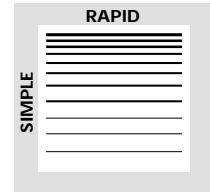
Assumptions: The health care market is *consolidated* into a *simple* structure. There is *rapid* movement among consumers and professionals toward adopting the Internet.

Scenario: Consumers are challenging the health care industry to match the convenience and informed autonomy they have experienced in shopping and investing on the Internet. Those who are healthy feel secure and safe using the Internet and trust that their health care data will be used for their benefit and not exploited inappropriately for nefarious gain. They demand the ability to enroll in health plans, check their benefits, and make appointments on the Web. They expect information customized to their health history so that they may participate fully in health care decisions. They expect providers to respect their time and provide care by secure e-mail when appropriate, to avoid unnecessary face-to-face visits with the attendant battles with traffic and time spent in waiting rooms.

Privacy issues have been resolved as providers and payers compete to demonstrate how securely health care information is kept. There have been several high-profile cases of health care workers losing their jobs for violations of privacy guidelines. The chronically ill remain somewhat cautious with their data for fear of discrimination.

The organization of health care services has been consolidated in strong health care organizations after years of chaos. Health plans have recognized that, to maintain their power in the marketplace, they must do more than manage risk and streamline administrative processes. Health plans have acquired many of the business-to-business e-commerce companies that were making their first splash in 2000. The result is a highly rational and automated health care market, where services can be obtained online and providers have access to population data that allows them to reliably ensure completion of planned care.

Alternative medicine therapies are also reimbursed, which entices large pharmaceutical companies to consolidate the nutraceutical industries, to profit from new “accepted” methods of treatment. Although health plans dominate the industry, large pharmaceutical companies implement a merger model that consolidates the pharmaceutical sector, which includes R&D, home health equipment, and all other medical accessories.



Consolidation of health plans and consolidation in the pharmaceutical sector facilitate alternative business models that would continue to promote profitable growth. Cross-sectional acquisition becomes a viable model at this point. Mergers and acquisitions, such as Abbott and BlueCross BlueShield, take place.

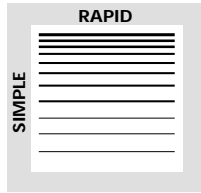
Payers have agreed to reimburse alternatives to one-on-one, face-to-face care models. Group visits, provision of guidance to Web chat rooms, and visits by e-mail all are rewarded appropriately.

George W. Bush is starting his second term, leading his Republican congressional majority in monthly golf outings and knowing that his friends in the insurance industry have only benign intentions. There is clearly no need for consumer protection legislation. Besides, he argues, the industry is changing at Internet speed and government just needs to know how to get out of the way so the market can solve any problems.

Rapid development has been facilitated by private agreements early on to adopt common standards for security, data definition, vocabulary, and transfer protocols. Before it was purchased by Blue Cross Blue Shield of America (which has restructured as a national organization known as a for-profit plan with a heart), Healtheon had played a major role in creating these standards.

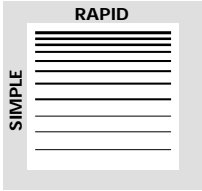
This setting of high consolidation, consumer demands with a secure environment, and high alignment among consumers, providers, and payers leads to very rapid innovation. The health plans, following the example of Cisco and BlueCross BlueShield, have acquired and taken over all new companies that have promising new ideas so that they can be well compensated and integrated into the greater whole.

This benign, highly organized, well-informed environment has been a boon to quality of care. All providers write their orders online, which initiates automated checking for drug interactions, inappropriate therapies, and thoroughness of care. Population measures for prevention have never been higher. Costs for chronic diseases have plummeted.



Drivers

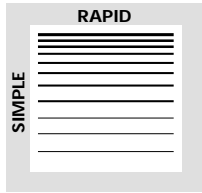
- The Health Insurance Portability and Accountability Act (HIPAA) succeeds and one set of standards drives integration of information.
- Consumers demand the same convenience from the health care system that they experience in other sectors.
- Demand for diminished practice variation as a quality indicator increases with better integration of data.
- Internet usage explodes in every sector and population.
- Return on investment (ROI) from information systems shows unambiguous cost savings.



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Characteristics of the Scenario

- One set of data standards and a common platform are used by all players.
- Market players drive consolidation and implement aggregated systems.
- Health plans have automated the business end of health care.
- Defined-benefit environment.
- Health care is linked up and down the supply chain.
- Limited consumer choice among health care organizations. Companies compete on ability to customize and secure data.
- Tiering exists but is less extreme than in other scenarios, and consumers use cash to opt out of the system.
- Purchases occur online and outside of traditional health care providers.
- Alternatives for face-to-face care are reimbursed.
- Government functions primarily as a payer and therefore regulates heavily, although ineffectively. Technology assessment remains beyond the capability of the federal government.
- Providers embrace the Internet. Clinicians and medical groups manage their own large data sets to conduct population-based health management.
- Health care payers and providers use comprehensive Electronic Medical Records (EMRs) to manage all aspects of care.
- Large established companies quickly acquire small innovative companies.



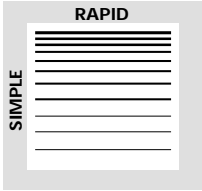
Implications For Stakeholders

Patients

- Limited choice of plans, but many choices of providers, since all providers are in all networks.
- Higher quality of care. Higher standardization of care results in lower costs to consumers, but greater availability of pharmaceuticals and medical technology could offset savings to increase costs.
- Good access to information because of Internet and EMRs. Transparency of information results in informed utilization of services.
- Data-privacy trade-off. Increased trust by patients because of increased accountability in the health care system. Strong privacy practice becomes a marketing tactic.

Providers

- Rapid throughput on new drug development for some products.
- Oversupply of providers means survival market for physicians trying to gain contracts with the major players. Providers have an incentive to be “good performers” and reduce regional variability of care.
- Clinicians succeed by leveraging information and medical technology to become more efficient (e.g., by providing care remotely).
- Patients are directed to Centers of Excellence.
- Ability to capture data, measure quality, and pay for performance of clinicians. Regardless of form, payment mechanisms support outcomes improvement.

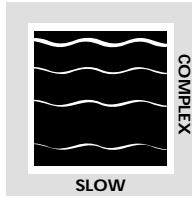


Payers

- Limited competition creates a stronger drive for efficiencies.
- Big, strong payers dominate pay-for-performance negotiations with providers and effectively wholesale health care services.
- Using technology and data integration to gain efficiencies and improve health plan margins. Innovation in benefit design is limited because fewer players split the market.

Policy

- Active policy role in the development and enforcement of standards to reduce practice variation and clearly define roles and responsibility in medical management of patient care.
- Market-driven standards and standards created by federal mandate such as HIPAA diminish the need for heavy-handed, activist regulation.
- Anti-trust policy a focus.
- Regulation continues to lag in responding to market innovation.
- Policy initiatives seek to establish baseline health insurance coverage.



The “web” in health care services remains in the plumbing, back offices, and supply chains, and only touches on the critical patient-care processes at the heart of medicine.

IslandNets (complex system, slow adoption)

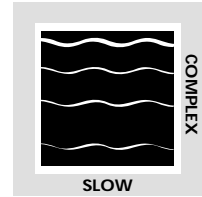
Assumptions: The health care market is fragmented and complex. There is slow movement among consumers and professionals toward adopting the Internet.

Scenario: Consumers are neither forceful nor unorganized activists. They do not take as much advantage of Internet technology in health care as they do in other e-commerce sectors. Their behavior is influenced in part by physicians, who are still resistant to involving patients in shared decision making, and by the strong economy and employers’ reluctance to shift from a defined-benefit to a defined-contribution payment model for health insurance.

Consumers continue to be interested in obtaining health information via the Internet, but do not embrace more innovative e-health ventures such as direct-to-consumer insurance purchasing arrangements because they’re happy with the status quo. Consumers continue to be worried about privacy issues and are wary of the Internet because protections seem weak and “horror” stories abound about compromises in promised security and privacy protections.

The inherent conservatism within the health care service industry remains solid and hard to overcome. Legacy systems suppliers, health care providers, and insurers all attempt to thwart health care “New Economy” attempts to gain the brand loyalty of consumers. The “web” in health care services remains in the plumbing, back offices, and supply chains, and only touches on the critical patient-care processes at the heart of medicine. The only exception is in the disease management arena, where the connectivity advantages of the Internet do take hold. This is because health plans and physicians who are “at risk” recognize the financial savings to be gained from substituting Web-based, remote disease monitoring for face-to-face care.

Health e-commerce makes some headway, but the lack of compelling financial incentives (i.e., minimal out-of-pocket expense) for consumers means that they do not become prudent buyers for prescription drugs, medical technologies, or other durable health care goods. A very modest Medicare drug benefit is in place, but only for very poor seniors.



There is very slow growth in employers' shift to defined-contribution health insurance plans, so the traditional health insurance model prevails. There are a few exceptions in the disease management area, although pressures still exist to constrain payments for telemedicine and other "online" clinical and self-care services. Entrenched players continue to attempt to control regulatory processes, so that innovation is curbed.

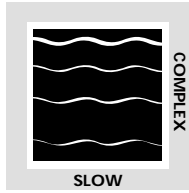
The e-health players and "newcos" have such a hard time capturing any of the vast patient-services insurance dollars that investment in innovations tied to the Internet languishes. The capital that was once abundant for e-health companies dries up because of a lack of real innovation in the industry; new ideas emerge only from the periphery of established companies.

The bloom is off of the Internet rose. There are some clear gains in the administrative and Electronic Data Interchange (EDI) areas of health care, and data processing and business-to-business move forward, but they are largely transparent to the actual transaction of medical care. Intel abandons its annual e-health conferences and investment banks begin to put their resources into other emerging markets.

Regulatory activity remains relatively high and continues to be influenced by the lobbying forces of providers and other entrenched interests. Innovation in Internet activity for patient care is slow and conservative, restricted by state laws that protect the status quo. All regulation is at the state level, not the federal, as Congress remains very conservative and is still influenced by the wealthy lobbying groups.

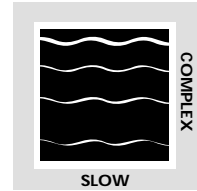
Quality is a double-edged sword that continues to be swung on only one edge—and aggressively—by providers to slow progress. Well-publicized incidents of abuse of online pharmacy services, in particular, compound the problem. Consumers still define quality solely by recognizing brand names such as the Mayo Clinic and Johns Hopkins.

The New Economy and innovation in health care are still undernourished through lack of financial investment. New forms of health services, emphasizing models with greater patient and consumer involvement, are slow to develop. Consumers continue to bemoan poor service levels in health care, but very little changes, even as the rhetoric continues. The lack of financial incentives for consumers to demand better service retards growth and change.



Drivers

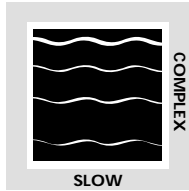
- HIPAA fails to create data standards and EDI still is not widespread.
- A significant economic downturn occurs.
- A major breach of confidence and health care incumbent pressure result in a high degree of regulation that kills innovation and slows e-health development.
- No clear business model for e-health care emerges and capital goes elsewhere.



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Characteristics of the Scenario

- Out of fear and territorialism, entrenched players and doctors throw up barriers to using the Internet.
- Strong industry lobbies push for high regulation of e-health and the Internet.
- There is no significant shift from defined benefit to defined contribution.
- Health insurance reimbursement occurs only for face-to-face care and not for physicians using the Internet.
- The health care market and clinical care provision remain complex and highly fragmented.
- Regionally focused, branded health care organizations (e.g., Mayo Clinic) are islands of quality health care.
- Consumers are somewhat concerned about privacy, but they do not know where to direct their concerns.
- There is little consumer enthusiasm for the Internet because they are frustrated and can't find what they want.
- Traditional health care providers don't meet consumer demands, and consumers use cash to upgrade or opt out of the system by using complementary and alternative medicine.
- Inroads of Internet technology adoption have happened only in supply-chain management and insurance administration. There has been little to no integration of clinical data.
- The lack of innovation and a clear business model in e-health thwarts venture and institutional investment.



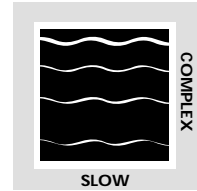
Implications For Stakeholders

Patients

- Increasing tension between what new consumers want and what doctors want to provide. Frustrated, knowledgeable consumers opt out of traditional health care provision and experiment with online options, achieving mixed success.
- There's a lot of health information out there, but it's not well organized and consumers are frustrated.
- The new success of a consumer-centric entity leads change rather than the failure of traditional stakeholders.
- The majority of consumer still view choice as a proxy for quality.
- Technology adoption is uneven, and traditional patients are happy with the status quo.

Providers

- Physician power keeps health care practice similar to today.
- Non-physician care providers step in to meet high consumer demand including: pharmacists, CAM providers, and e-businesses that help consumers navigate the complex health care system.
- With more uninsured, self-paying patients and greater tiering of those who have insurance, a secondary, cash-based health care system grows.
- The few physicians who adopt technology attract new consumers and patients who view technology as a proxy for quality. Technological innovation and technology adoption happen randomly.
- Pharmaceutical companies fear alternative medicine and supplements will enter the market and take "traditional" customers.

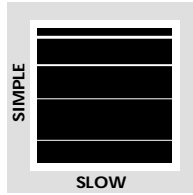


Payers

- Reimburse only for face-to-face encounters in a production model for physicians.
- Plans encourage clinicians to adopt technology.
- Responding to consumer frustration, innovative plans play health care concierge role, helping them navigate the health care system.
- Defined-benefit environment with lower-level coverage overall.
- Low innovation in insurance products with traditional benefit packages, and some managed care to push down costs.
- Employer purchasers encourage standardization and streamlining to increase value of their investment in health care.

Policy

- Traditional health care players dictate policy and as such, policy favors the status quo.
- Activist groups attempt to inform policy because of frustrated consumers. Consumer dissatisfaction aids their push for increased consumer-focused regulation, resulting in less innovation.
- Most policy is issue-based and narrow, leaving room for interpretation and confusion.
- Push for regulation to standardize health care and use of the Internet is quashed by traditional health care players.



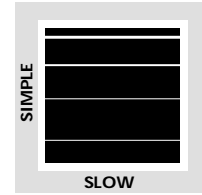
CentralNet (simple system, slow adoption)

Assumption: The health care market is consolidated and simple. There is slow movement among consumers and professionals toward adopting Internet-based technologies.

Scenario: The year is 2005 and consumers are concerned about safety risks that they may encounter if they use the Internet for anything more than searching for health information. This concern stems from a recent event in which an online consumer suffered severe renal complications due to overconsumption of a Goldenseal/parthenium herbal extract marketed as an “approved” cancer-fighting drug by an unlicensed virtual “pharmacy.” This is just one in a series of events that highlights the real risks associated with clinical consultation in an online environment and, consequently, the general public eschews using the Web for anything more than searching for basic health information.

On the political front, Al Gore is into his second term in the White House and Democrats have gained a tenuous two-vote majority in the House of Representatives. The Senate has remained in Republican control since the 1990s. Despite the fact that HIPAA privacy standards were implemented in 2001, attempts by the government to regulate Internet-based health care products and services have failed because of strong lobbying efforts by the pharmaceutical and insurance industries. Health industry lobbyists in Washington, D.C., and Internet companies across the nation have banded together to form a coalition to fight Internet regulation. They argue that any type of government regulation of the Internet will stifle innovation and extinguish its economic vitality. As a result, they have earned a loyal backing among Republicans and economically conservative Democrats in the House.

To gain a more secure market presence, health care goods and services organizations consolidate. As a result, little innovation is occurring beyond the amalgamation of bricks-and-mortars because all of the energy is focused on integrating entrenched organizations. Contracting with the government has become the most secure business model among health industry players. Baby boomers are reaching Medicare age, and



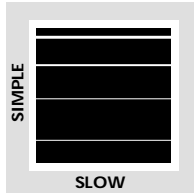
companies see huge financial benefits in contracting with the government to provide goods and services to this population. For example, hospitals and suppliers are merging into monolithic health care repositories that thrive using government contracts. Likewise, pharmaceutical companies have consolidated into a few entities competing to control the flow of drugs to the Medicare, Medicaid, and private insurance markets. The outcome of this consolidation is limited consumer choice of pharmaceutical products.

The fight for insurance-covered lives remains strong among insurers. Health plans, however, have not branched out to provide new types of services via the Internet, and they continue to play the role of traditional insurer. Factors responsible for this stagnation in the insurance market include physicians' inability to manage risk or market their services effectively, and consumers' lack of demand for Internet-driven health plan efficiencies. Consumers prefer the traditional personal "touch" of medicine and are not eager to receive care provided online—especially in light of the recent tragedy involving the online health consumer's death. It is no surprise that payment for health services is reserved primarily for face-to-face interactions.

Physicians and hospital administrators are hesitant to use the Web for anything more than "back-office" administrative or personal purposes. Physicians are not using the Internet for clinical purposes, in part because they have left "computer issues" to their administrative colleagues, but also because they see the Internet as a time-consuming "extra" that doesn't hold much value for them beyond personal purposes. Furthermore, they are averse to e-mailing patients due to liability and time-constraint concerns.

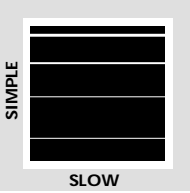
This reluctance of the health care market to embrace the Internet means that investment capital for e-health innovation is drying up. Health care has proven it is impervious to changes spurred by the Internet in other sectors, mainly due to consumer fear and provider hesitancy. The entrenched business customs among health care players have trumped Internet activity. As a result, dotcoms are on the fringes of the health care business environment. Despite consolidation, regional variation in practice patterns and quality remains, and population health management potential cannot be achieved. In this scenario, not much has changed from the current state of affairs, and the entrenched players have successfully protected their turf from Internet upstarts.

Health care has proven it is impervious to changes spurred by the Internet in other sectors, mainly due to consumer fear and provider hesitancy.



Drivers

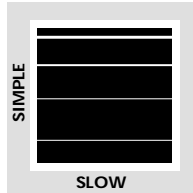
- Efficiencies (such as economies of scale) promised by consolidation are not realized.
- Consumer fear of using the Internet for e-health care is substantiated by a number of egregious health information abuses. Intense lobbying results in heavy regulation.
- Lack of investment in e-health initiatives.
- Entrenched players protect their turf and thrive.



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Characteristics of the Scenario

- Multiple barriers to market entrants include lack of capital, consumer fear, and high cost of entry.
- Strong relationships exist between the powerful public and private sectors.
- E-health dotcoms remain fringe players.
- Little to no investment capital for e-health innovation.
- Consumers are concerned about using the Internet for anything beyond information for health care.
- Incumbent health care organizations pressure for regulation focus on new e-health companies.
- Consolidation of health care goods and services limits consumer choice.
- Doctors remain unable to manage financial risk and they are unable to effect change in the market.
- Doctors interact with Internet for personal use and aren't given incentives to use the Internet for health care.
- Payment is provided only for face-to-face clinical interactions.
- Defined-benefit model is still in effect.
- Government pays for a large portion of health care delivered in the United States. Public programs are expanded.
- Mergers and acquisitions continue slowly, without reducing duplication.
- No investment capital is directed to e-health innovation.



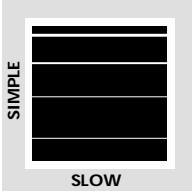
Implications For Stakeholders

Patients

- Choice is constrained within plans, but there is broad choice of providers.
- CAM is paid out-of-pocket and consumers increasingly utilize these services and cash-based services as the large, lethargic, bureaucratic system fails to meet their needs.
- Tiering still exists but is less significant than in other scenarios. Some consumers buy up from basic coverage to increase their access to services.

Providers

- Reimbursement for physicians has decreased and controls on how they practice have increased, dictated by how much they're paid. Physicians lose power, and some are driven out of practice.
- With little data or ability to measure the quality of care and disgruntled physicians, health care provision hovers around the lowest common denominator.
- Hospitals continuing to merge regionally.
- Vertical consolidation across sectors in goods and services creates a new form of superpower in retail.
- Clinical research and innovation lags or moves offshore to less regulated environments.
- A secondary, boutique system of health care services serves patients who are dissatisfied with the primary system.

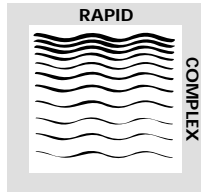


Payers

- Health plans use the Internet to streamline administrative processes. Defined-benefit environment remains.
- Large governmental role as payer translates into single payer-like environment. Costs are more controlled and services are more limited.
- Health plans consolidate and downsize to better serve the biggest payer, the government.
- Innovation is possible only in administration and infrastructure.
- Large employers distinguish themselves by providing an unusual employee benefit, private health insurance.

Policy

- Government is a big payer and as such, drives regulation for consumer protection.
- E-health newcos are main targets for regulation, as entrenched players have a strong relationship with government.



The Internet allows both big institutional players and small e-health dotcoms to compete via customization of services.

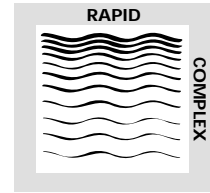
MultiNets (complex system, rapid adoption)

Assumptions: The health care market is complex and fragmented. There is rapid movement among consumers and professionals toward adopting the Internet.

Scenario: New consumers have made their presence felt in online health care. They are empowered by discretionary income, education, and experience with the Internet. The customer service, choice, and information they demand are available in this diverse and fragmented market. They are using their buying power to search among the many choices of products and services for traditional health care and alternative medicine. Consumers are unafraid of abuse of their personal health information or don't know enough about it to be afraid. Those shopping for health care online see some of the trade-offs and are willing to make them for better customer service.

In such a competitive market, where there is excess service capacity, consumers rule. Using data to target marketing is one way organizations protect their slice of the pie. The Internet allows both big institutional players and small e-health dotcoms to compete via customization of services. The plethora of e-health dotcoms is unorganized and unregulated; it represents both niche and general players, and appears in every sector of health care.

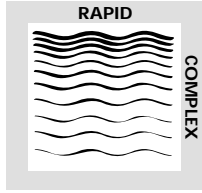
The few large players that remain are too slow to meet consumer desire for choice, and smaller, more agile dotcoms are very responsive to consumer needs and demands in a fast-moving market. Health care is characterized by disconnected stakeholders who rarely collaborate and are territorial and protective. Fragmentation also contributes to the data chaos. Electronic medical records are successful only with the full, active participation of the patient in creating a personal medical record (PMR).



In 2002, the information overload in online health and the desire of many large employers to get out of health care caused a shift from defined benefit to defined contribution. This created the need for a new agent, the health care broker, who aggregates services and product lines for customized consumer packages. Seeking choice, patients walk from one vendor or clinician to another if they don't get the products and services they want. They are pushing the health plans to expand their options and help them sort through the chaos.

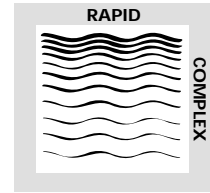
Consumers have embraced wireless technology and the personal computer is pushed aside by Personal Digital Assistants (PDAs) and cellular phones as primary interfaces with the Internet. Open, wide broadband Internet connections have changed the individual's relationship with it to one of "always on." Sensors play a key role in facilitating the complex communications of disease management. Consumers are using technology as a proxy measure for quality, and doctors who go online attract many new consumers. Doctors in groups have the infrastructure and support to build EMRs that remain homegrown and regionally diverse.

Regulation varies depending on what issues have received the greatest amount of media coverage. It also varies by state and the power of stakeholders in a region. Privacy has not been resolved and there is a certain amount of caution in using the Internet for health purposes, but the trade-off is too great not to use the Internet. The Republican-led Congress, in the name of economic efficiency, takes a laissez-faire approach to Internet innovation. This strategy has been very successful in other industries and promotes venture-funded as well as institution-funded innovation.



Drivers

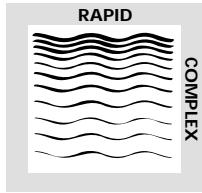
- Strong consumer demand for Internet-related products and services and strong market economy.
- Legislation supporting innovation and technology to increase patient safety after reports similar to the seminal 1999 Institute of Medicine medical error report.
- Ubiquitous, inexpensive, easy access to the Internet.
- ROI studies show unambiguous cost savings and increased productivity with technology adoption.



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Characteristics of the Scenario

- Wired wins. Household penetration of Internet access on par with TVs.
- Broadband connections and wireless interfaces abound.
- Agenting comes of age with a new role, the health care broker—an aggregator and filterer of services and products for consumers. The broker provides customer service and helps consumers maintain choice and control.
- Consumers control their own data and health in a defined-contribution environment.
- Focus shifts from the physician-plan relationship to the patient-provider relationship.
- Empowered consumers enjoy choice of products and services in traditional and alternative medicine.
- Fearless, healthy consumers trade some data for better customer service.
- Only savvy consumers will define quality based on outcomes data; most will still define quality as convenience and service.
- Privacy is difficult to navigate and companies use privacy to differentiate themselves in the market.
- Heavily tiered, market-based health care means those with cash win.
- There is no single standard for data, which leads to data chaos.
- Clinicians who adopt technology win. There are a number of regional; homegrown EMRs created by medical groups.
- PMR is adopted more quickly than the EMR.
- Wraparound services augment clinical management but are not well integrated.



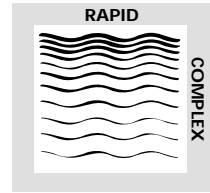
Implications For Stakeholders

Patients

- Patients have a wide choice of goods, services, and benefit packages.
- Most consumers define quality as convenience and service.
- Patients seek information and knowledge from a "trusted source." Health care information agents will facilitate navigation of health and health care and use online services to meet their needs.
- Patients are somewhat concerned about the privacy of their health information and trust that government-approved Web sites are appropriately monitored for privacy violations.
- Patients expand their perspective beyond "health care" and their interaction with traditional clinicians to "health" incorporating nutrition, wellness, and CAM.

Providers

- There is a split in the provider community, and entrepreneurial doctors and those who adopt technology are successful. Many physicians are given the incentive to get online quickly—and they do.
- Consumer-centric doctors and those who embrace empowered, informed patients attract new consumers as patients.
- Hospitals differentiate themselves by doing outreach, providing a variety of community services and streamlining their efficiencies by using the Internet.
- Pharmaceutical companies try to maintain power and hold off market entry from nutraceutical and herbal companies by using e-detailing and direct-to-consumer advertising.



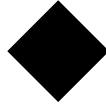
Payers

- Defined-contribution environment creates new consumer demands for information about services.
- Payers develop sophisticated techniques to market to younger, healthier, low-risk consumers.
- Health plans are challenged in their former role and morph into the role of infomediary, disseminating information, accrediting the services they pay for and benchmarking the services of the providers they pay.

Policy

- The government lags behind the pace of innovation and is reactive rather than proactive.
- Privacy matters. Privacy standards are spotty at first but increase in importance with the increase in e-commerce.
- The Federal government focuses on regulating privacy, safety net policy and the definition of basic benefit packages. State regulation focuses on operational issues of licensure, risk and accountability.

Scenario planning is traditionally done in the context of a particular organization with a particular problem to solve. Often scenarios are created as alternative solutions to the problem. The scenarios in this report are set within the general health care landscape so that they may be applied more broadly by all health care stakeholders. The four scenarios we describe in this report may give readers hope or instill a sense of dread. They are a set of possible futures that organizations can plan for or plan against. To really “work” the scenarios, you may want to tailor each scenario to your unique environment and your organization’s challenges.



Part III

APPENDIX

HOW TO USE THIS STUDY

Scenario planning is a unique way to handle a basic human dichotomy: We can never really know what the future will look like, yet we must make decisions today on the basis of assumptions about that future. Scenario planning is a means of exploring opposing viewpoints about the future with groups of knowledgeable participants. We can use the insights gained to identify and set priorities for our current activities. Our goal with this study is to engage readers in a process of examining their assumptions about the future so they can prioritize the choices they must make today.

We have taken a glimpse of several possible futures. In scanning the environment, we identified driving forces that create change and growth in health care and rated them by importance and uncertainty. We selected the two most uncertain and important with regard to the future of the Internet and health care as the axes of the scenario planning matrix, and developed the four scenarios by adding the remaining driving forces back into the matrix and playing each one out in the unique environment of the scenario.

The scenarios depicted here tell the story of only four possible futures. Many other stories could be told about the future of the Internet and health care by selecting other driving forces as the axes of the scenario planning matrix. Each organization can determine the relative importance of the driving forces from its unique strategic perspective. An organization that is dependent on consumers sharing information, such as the purveyor of online personal health records, may choose the privacy of health information as one of the two driving forces to create a matrix with four stories very different from the ones we've created. A heavily regulated organization may choose the regulatory environment as one of its top two. Each of the example scenarios illustrates different purposes at three different organizational levels.

The information contained in the scenarios can be used as points of departure for creating a “best-guess” trajectory or for extending the scenarios to develop forecasts of direct relevance.

Boards and Top Management

The scenarios, in original or abbreviated form, can be used effectively by boards and senior management to identify the best motives for incorporating the Internet into the organization. A good venue might be an Internet-focused annual retreat or “planning workshop” with presentations and small-group meetings in which attendees’ active participation is encouraged. Both information and process are relevant here.

The information contained in the scenarios can be used as a point of departure for creating a “best-guess” trajectory or for extending the scenarios to develop forecasts of direct relevance to the organization’s use of the Internet. Also, the workshop processes can be replicated in small-group sessions.

One of the most useful end products from these exercises is the development of a shared vision to guide the organization’s future development with respect to Internet use. Say a hospital system wants to develop a more coherent view of health information technology change in the next 5 to 10 years. In trying to set long-term directions for the system, it has become clear that the different department managers bring quite different “world views” of both the external environment shaping health care information technology (IT) and of the hospital system itself. What they all want is an opportunity to construct an overall information technology framework within which a common vision of using IT for health and health care may evolve. A one-day “mind-stretching” retreat might be organized in the following way:

Before the meeting, each member is given a 10-page summary of the basic scenarios focusing exclusively on the environmental driving forces. These include demography, cost analyses, role of government, and role of technology. Omitted from this summary is any information on how these contrasting external environments may change the use of health information technology itself.

In the first two hours of the retreat day, the environmental scenarios are described in detail to the full group. Ample opportunity is provided for questioning assumptions, the number of scenarios, the positioning of the scenarios, and possible wild cards. Participants may reposition the scenarios, change basic assumptions, and fill in important gaps. The only restriction is that they aggregate their perceptions into a specific number of scenarios. This is the buy-in stage of the process.

After the morning break, the group is challenged to flush out the scenarios with discussion of issues specific to the organization. If the scenarios resemble the original ones presented, a great deal will turn on the rate of IT adoption by the organization and its business partners. The group will discuss the range of possibilities within the scenarios without discussing the implications for their business.

Other scenario planning matrixes are possible and also are discussed. The afternoon is devoted to assessing the impact of the chosen scenarios on the health IT and the future of the Internet for this organization.

Organization-Wide or Association Planning Staffs

Most organizations have developed their own strong internal capabilities for forecasting and planning. For such organizations and groups, the study can be used to augment and extend internally available information and processes. This may be done in several ways:

- Extending planning horizons that often stop at the three- to five-year horizon
- Widening and deepening environmental forecasts that normally are shortchanged in organizational planning processes
- Developing a map of relevant Internet issues so that interconnections among issues can be seen more clearly and priorities set more intelligently

But perhaps the most important contribution that the study can make at this level is in helping to develop a clearer framework for connecting environmental and industry or business scenarios to the organization's option-generating and decision-making processes. A useful—and currently popular—vehicle for doing this is the issue construct. Analyses of issues can provide two kinds of information:

- Links back to the scenarios that identify high value-added information that needs to be collected or monitored
- Links forward to stimulate the generation of options or choices for confronting issues effectively

For example, health care planners at federal, state, or county levels are generally quite familiar with the most important public policy issues confronting them. Public sector planners and administrators struggle with such issues as they come up: They temporize, they fire-fight, they improvise, and they hold their breath. What they generally lack—and desperately need—is an opportunity to view those issues from a more strategic standpoint; that is, the interrelationship of issues, their likely future trajectories, the tradeoffs that may be made, and the priorities for addressing them.

The starting point here is a set of key issues. Either in small-group settings or more formal workshops, the initial set can be expanded by using the specific scenarios as backdrops for a more extended and integrated view of the health care system. The first

result may be an “issue map” showing how the issues stem from particular environmental drivers and how they are related to each other. To this may now be added a timeline, extending 5 to 10 years or more, that shows how different issues develop over time. These are the first steps for estimating resource allocation requirements (money, personnel, programs) in aggregate form and for suggesting priorities.

Using the scenarios, a number of “what if” questions are posed that are traced through the issue map. The result is the ability to see more coherently and explicitly the trade-offs to be evaluated when faced with limited resources. Without the kind of “global view” that is provided by the scenarios and associated issues, such choices are obscure at best and unexamined at worst.

Line or Operating Managers

Clinic or hospital CEOs, divisional managers, or group heads are usually concerned with more regionalized or localized strategic issues—and associated options or choices—that confront them:

- How much should we use the Internet for marketing?
- Should we joint venture with an e-tailer?
- How can we use the Internet to develop prevention and wellness programs that will be attractive and profitable?

For such choices, the study can provide a valuable reality check and framework, provided that appropriate links are constructed. The steps in this process include:

- Identifying the key external trends affecting each regional or local issue or choice
- Determining whether regional or local trends are consistent with or different from national trends
- Identifying the factors that account for the differences and similarities
- Collecting historical data on regional or local trends and using these as a basis for making provisional forecasts that are extensions or variants of the original scenarios
- Engaging line managers in workshops for evaluating issues and choices in the context of both local and national trends

By using such processes, line/operating managers can build useful bridges between national macro-environmental forecasts and the specific choices they face.

In small-group meetings or workshops, line managers and their staffs may be led through processes for examining the implications of such choices. The starting and ending point is the decision to be made. In between, the evaluation of the choice requires leading the group to underlying assumptions for each scenario about the use of the Internet for health care and the external drivers shaping it. The key is that these assumptions “fit together” and are not the result of hit-or-miss selections of data or deliberate attempts to shape the outcome to suit preconceived perceptions.

SWOT analyses uncover unspoken assumptions and differences of opinion.

EXERCISES

SWOT Analysis for UniNet

The goal of a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is to think about an organization in the context of a scenario and attempt to achieve a comprehensive perspective of the organization's strengths, weaknesses, opportunities and threats given each scenario's unique set of characteristics. SWOT analyses uncover unspoken assumptions and differences of opinion. Strengths and weaknesses refer to an organization's internal capacity. Opportunities and threats refer to external conditions. While the scenarios in this study are plausible, they are unlikely to play out exactly as described. Instead, scenarios serve as a lens through which to view an organization's strategic direction. To do a SWOT analysis, bring together a group of individuals from different departments in the organization to brainstorm answers to the questions below. When finished brainstorming, refine each list to the top three to five answers and compare the results against your organization's information technology strategy.

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1. Strengths

What core competencies does your organization have that will enhance its performance in this scenario?

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2. Weaknesses

What characteristics of your organization will hinder your success in this scenario?

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3. Opportunities

What characteristics of the health care environment in this scenario could create opportunities for your organization? What are some of those opportunities?

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4. Threats

What characteristics of the health care environment in this scenario could threaten your business? What are some of those threats?

Skunk Works Exercise

Large corporations, such as Hewlett-Packard (HP), have created “Skunk Works” in an effort to address the changes in the business environment brought on by new technology. The leadership at HP recognized the organization’s large size made it bureaucratic and slow-moving—not responsive enough to the changing environment. By creating a Skunk Works, a small, flexible, innovative company designed to target HP’s market in a different way, using different strategy and different tools, HP challenged itself to address the core threats to its business. HP gave the Skunk Works management the flexibility and resources to create a viable company and in return achieved an understanding of how their competition might target their business and customers.

Given the likelihood of the scenario happening, create the strategic plan for a new company that will be successful in this scenario. Create a company that might be built as a spin-off or acquired outright by another organization. Answer the following questions:

- What is the company’s vision?
- What is its business objective?
- Who is the target market?

