

*Global Life Sciences
Biotech; Pharmaceuticals; Medical Products, Equipment, & Supplies*

Healthcare 2020

Business Development In A Transitioning Industry

Accelerating Innovation, Maximizing Growth & Earnings

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*Transforming the care of life & the life sciences
Creating exceptional value for individuals, families, & communities*

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Formulating comprehensive healthcare solutions
using latest technologies
that deliver highest quality of care at lowest total-cost

- DIAGNOSTICS ● PHARMACEUTICALS ● DEVICES ● SUPPLIES ● EQUIPMENT ● BIOTECH

Presentation Outline

Executive Summary	Pg. 3
Healthcare Industry Overview	Pg. 5
Expanding Healthcare Product Markets	Pg. 10
Evolving Marketing Essentials	Pg. 11
Evolving Network of Sales Influencers	Pg. 12
Expanding Healthcare Service Markets	Pg. 13
Changing Continuum of Care	Pg. 14
Accelerating Discovery & Innovation	Pg. 15
Information Imperative in Healthcare	Pg. 9
Strategies for Business & Market Expansion	Pg. 16
Business Development for Maximizing Value	Pg. 18
Overview of Momentum Business Development	Pg. 19

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Executive Summary

- **Healthcare 2020** identifies the important issues for succeeding in 21st century healthcare. This is a "*Think Piece*" for senior management of all business segments in the healthcare industry. Our objective is to help company management successfully meet the most important challenges of the next decade:
 - *Building patient-care leadership.*
 - *Increasing innovation, growth & earnings.*
 - *Enhancing value for shareholders & stakeholders.*
- To achieve all this would be a monumental challenge in any industry, at anytime. However, in healthcare there is an added challenge because the above objectives must be achieved in a dynamic and fast changing environment. Success in this environment requires bold new approaches for growth, and **Healthcare 2020** offers one such perspective.
- Corporate success in any area will, more-and-more, will depend on succeeding along the continuum of patient care. This is driven, among other factors, by new information technologies that are integrating the industry's value-added spectrum.

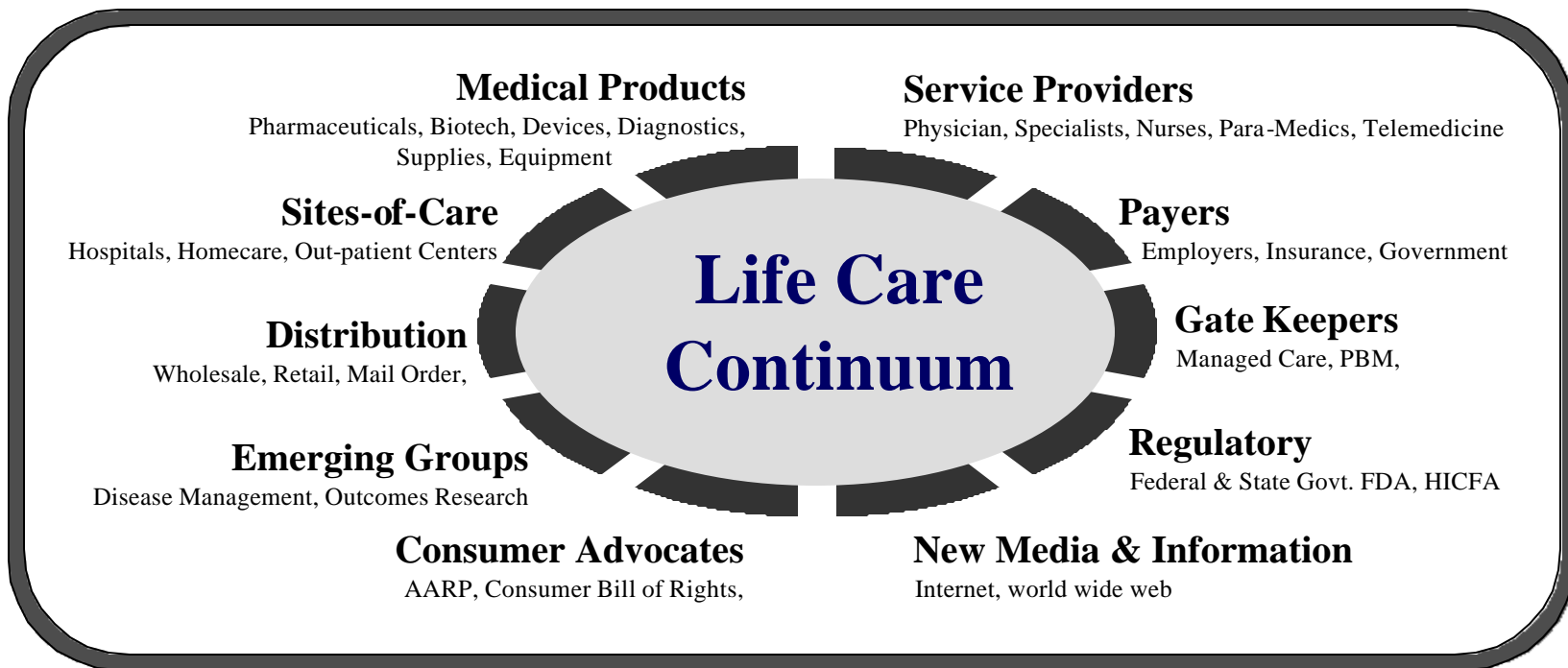
Executive Summary (continued)

- **Healthcare 2020** focuses on all segments of the industry: products, services, materials, and information systems. It is based on an integrated view of business development for increasing growth, earnings, and shareholder value.
- This is an industry-level perspective for creating real, sustained, lasting growth in business value. More detailed information on any business segment, or customized information for a specific company, can be developed by individual request.
- **Healthcare 2002** is focused on accelerated innovation, growth, earnings and shareholder value – as the global transformation of healthcare continues to change all its market-segments.
- The recommendations are based on proprietary research and analysis of information from more than 300 companies that represent the full range of segments in the healthcare business.

Patient-care leadership and maximizing stakeholder value requires innovative non-traditional business development as healthcare's transformation continues by new technologies, demographic changes, financial/economic pressures, and consumer awareness

Healthcare Industry Overview

*Increasing complexity & interconnectedness of healthcare segments
requires new approaches for successful innovation & competitive leadership*



Increasing integration with other industries such as telecommunications needs to be incorporated into growth strategies for new businesses

Healthcare Industry Overview (continued)

- In the next decade business success in any area will be increasingly influenced by changes occurring along the full continuum-of-patient-care, because of two industry forces
 - Expansion in alternative sites-of-care.
 - Increasingly complimentary and interchangeable treatment options (e.g., in Otolaryngology between devices, pharmaceuticals, surgical intervention)
- For identifying new growth opportunities understanding the full continuum-of-patient-care and changes occurring in it is important because of closer interconnections between provider/consumer segments..
- "Managed Care has changed the market focus to outcomes, value, and total cost of therapy, and most recently, to quality of care. As a result, non-pharmacological approaches like devices, are substituting drug therapies. One example is in cardiology." *Dr. Jeremy N. Ruskin, Harvard Medical School, Piper Jaffery Conference.*
- The future of managed care is uncertain in terms of consumer reform and physician response.
- Extensive emerging issues : disease management, alternative site-of-care, health information networks, telemedicine, and bioinformatics; indicate that the continuing turbulent transition of the industry will be continuing.

**Spiraling healthcare costs for aging populations around the world
make continuing changes and further cost-containment a certainty**

Expanding Healthcare Product Markets

*Trend toward integrated solutions requires new approaches
 for identifying and developing successful new businesses*

Pharmaceuticals		
Diagnostics	LIFE CARE Healthcare Wellness Fitness	Equipment
Supplies		Devices
Instruments		Personal Care
Nutritionals		Fitness Products
Ophthalmic Products		Dental Products

- Life cycles of product segments need to be managed from an integrated solutions perspective as substitution between segments increases.
- Opportunities for bundling healthcare products are likely to be more focused within therapeutic categories.
- Consumer advertising and promotion of patented, insurance-covered, products is changing demand.
- Tougher competition is getting companies to act boldly and think of new strategies. As an example, Omnicare (Robertson) is using the Internet and Office Depot to market its HMO plans. This type of seemingly maverick behavior was unthinkable until recently.

Emerging substitution between products (e.g., in cardiology between pharmaceutical and devices) requires a ‘total solutions’ approach for growth

Evolving Marketing Essentials

Requirements for marketing health care products and services are getting more complex as new groups emerge and influence product choices

Clinical Trials Study Plan	PBM Strategy	Managed Care Strategy	Consumer Information & Education
Investigating Doctors Quality of Patient Recruitment Data Quality	Expanding Network of Marketing Imperatives		Traditional Marketing Mix
Outcomes Research	Regulatory Approval FDA, Payers	Outcomes Research comparative trials	Emerging Segments E.g., telemedicine
Increasing complexity is creating new groups of influences			

- Internet & new information technologies allow coordination along the continuum-of-care and require new approaches for business development.
- Third party payers are changing dramatically and getting tougher. They have become a critical business issue since they can exclude reimbursement even for FDA approved products.
- Outcome focused marketing is substituting lower cost alternatives for high-cost products, professional-services and site-of-care
- Balancing the conflicting demands of the market influencers will be important for success.
- New framework to evaluate research and marketing portfolios at disease level is important.

Improving the quality-of-life of patients in a cost-effective manner, preferably with an outcome guarantee, will be important for success

Evolving Network of Sales Influencers

Evolving continuum-of-care, increasing gate keepers and continued cost containment pressures will increase the complexity of selling

Providers			Third Party Payers
Primary Care Physicians	Specialists	Other Care Givers	
Managed Care Organizations	Network of Sales Influencers		Disease / Outcome Management
Pharmacy Benefit Managers			Buying Groups Hospitals & Trade
Distribution			
Wholesale – Retail – HME - Mail Order - Internet			

- Physicians are still important for sales - but other groups are also influencing patient's choice of technologies and products.
- New technologies must meet the changing needs of the sales influencers.
- A challenge for pharmaceutical companies' will be persuading payers that drug therapy can be cost effective and better than other treatment options.
- Information technology is an important factor in the emerging system of integrated healthcare delivery and in all other segments of the market.
- Incorporating future telecommunication developments in the sales strategy will be important for success.
- Near-term forecasts for the industry are positive and more encouraging for diversified companies.

Success requires satisfying multiple influencers about cost-effectiveness & quality of care

Expanding Healthcare Service Markets

Healthcare service markets will continue to increase and transform delivery patterns driven by new technologies, and economic, social, and political pressures

Providers Site-of-Care	Clinical Services	Custom Fitting	Pharmacies Distribution	Payers & Gate Keepers
Physicians Hospitals Outpatient Care Sub-Acute Care Assisted Living Long-Term care Therapeutic Category Focused Centers (e.g., cancer care, sleep centers)	Diagnostic Tests Pathology Laboratories	Hearing, Ophthalmic & Dental Products, Prosthesis	Retail Mail Order E-Commerce	Insurance Companies Managed Care (HMOs, PPOs, etc.) Large Corporations (self Insured) Workers Compensation Medicare Medicaid VA
LIFE CARE SERVICES				
	Fitness Centers	Media & Publishers	Information Services	
	Institutional (e.g., YMCA), Corporate & Independent	IMS, PDR, Internet e.g., Dr.Koop	Physician Driven Computing, Telemedicine	

- New niches are developing along the continuum of care, e.g., Assisted Living. This is a rapidly expanding sector because of demographic trends and cost containment
- Seven managed care companies generated over 80% of the revenue (\$60 billion in 1997) of all publicly owned HMOs.
- Physician consolidation continues. The *Journal of American Medical Association* (August 21, 1996) noted that for the first time the number of physicians working in medical group practices exceeds the number in solo practices.
- Hospitals continue to face cost pressures from managed care - and this will lead to more reorganizing. However, well-run hospitals will succeed.

**Successful new products must deliver individual solutions for each market segment
 They must meet needs of an increasing number of all groups influencing product choice**

Accelerating Discovery & Innovation

Innovation leadership requires expertise in leveraging e-technologies to manage complex network of strategic alliances with independent, cutting-edge, R&D and customer organizations

Genomics Bioinformatics	High-throughput screening Combinatorial chemistry
Identify function of gene responsible for a specific disease. Locate exact targets on the gene for pharmaceutical intervention	Identify chemical compounds that interact with the targets on the gene. Optimize chemical leads for pre-clinical drug development
<p>Important Advantages</p> <ul style="list-style-type: none"> ● Focused development on specific gene targets, unlike the more cumbersome and random approach used earlier. ● Accelerated development by moving from novel gene fragments to candidate molecules in a few months rather than several years. ● Significant cost savings as new compounds are synthesized in parallel and at less than \$1 per compound, while the traditional system is done one-at-a-time and costs ore than \$200 per compound. ● Wider patent protection because entire families of molecules can be patented, (unlike single molecules at present). 	
This information feeds directly into pre-clinical development for NDA	

- R&D's front end challenge has been reduced by the FDA accelerating approvals and pharmaceutical companies improving their internal operations and costs.
- The innovation challenge has shifted to the back-end : to enable the speeding up of research and the identification of new targets in which new technologies like genomics, will play an important role.
- Risk of market acceptance of new technology has increased for manufacturers, as payers are shifting it away from themselves by requiring prior-authorization and limiting reimbursement.
- Scrutiny by payers' will increase. They are independently assessing the benefits of new FDA approved technologies to evaluate demonstrable and measurable improvement in outcomes.

Markets will rewards successful and accelerated R&D, consistently delivers new and cost-effective treatment, by a listing on the Pharmacy Benefit Manager formularies

Information Imperative in Healthcare

Healthcare is an information driven business from early discovery, to clinical trials, to the management of payer and provider organizations, to post use long-term studies

Healthcare Segment	Information Driver
Patients & Families	Internet
Providers (Physicians, etc.)	Electronic Patient Records
Managed Care	In/Out Patient Decision Support Systems
Third Party Payers	Disease Management
Regulators	Clinical Data Repositories
Site-of-Care (e.g., hospitals etc.)	Integrated Delivery Systems
Pharmaceutical & Medical Product Cos.	Bioinformatics, Genomics,
EMT	Ambulatory Clinical Information Systems

- The role of the internet will surely be beyond what anyone can expect. Therefore, close customer relationships are essential.
- As physicians and hospitals become more closely aligned, and managed care exerts greater cost containment pressure, the need for better information systems to manage clinical information will increase. Example to track and manage therapy-effectiveness, quality of care and financial risk.
- Information technologies are changing healthcare and are adding new segments (such as disease management and telemedicine) to the patient-care-continuum. These new segments are just emerging and their evolution will need to be well understood for managing profitable business development.

Increasing inter-connections with other industries such as telecommunications and e-commerce, requires new perspectives for creating real and lasting increase in value

Strategies for Business & Market Expansion

*Aligning strategies with the changing continuing of care is challenging,
but important, for sustained increase in growth and earnings*

Therapeutic category leadership is important for sustained success



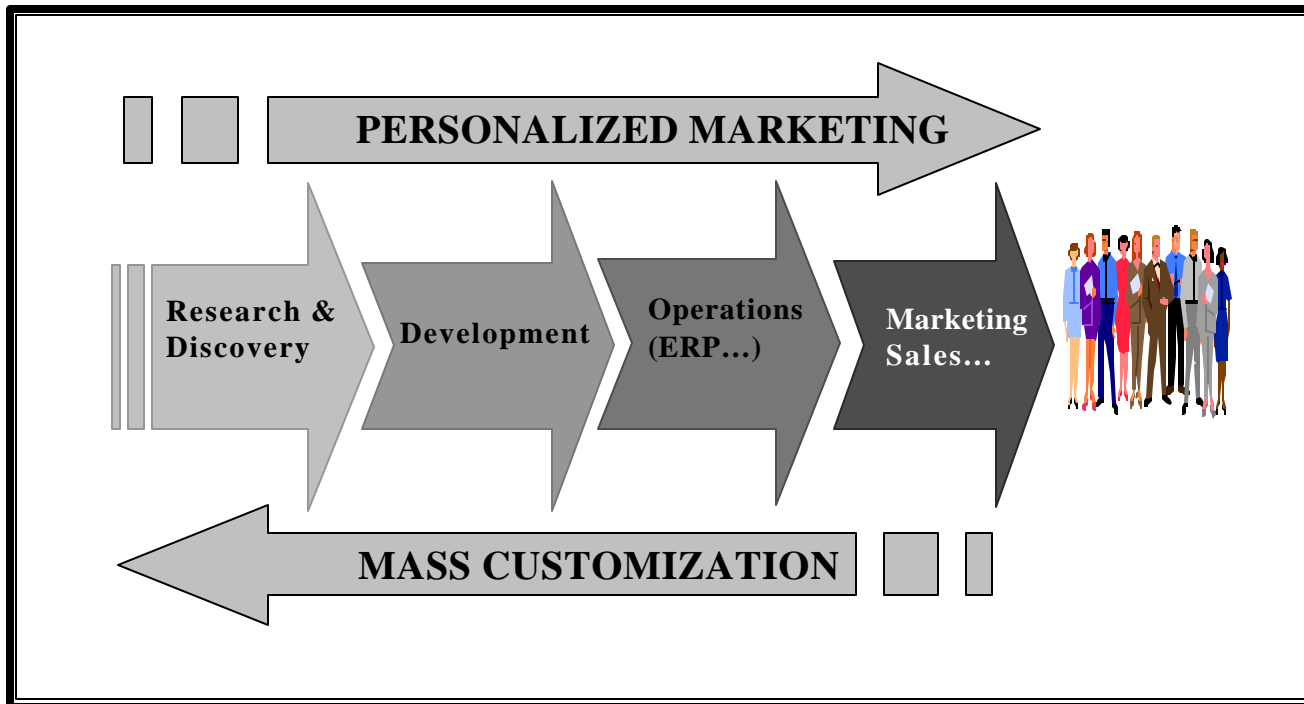
Strategies must integrate at multiple levels, from discovery to manufacturing and marketing, to post-recovery patient follow-up

Strategies for Business & Market Expansion (continued)

- Balancing business/market focus with broad-based access to opportunities is necessary to maintain an appropriate level of risk. However, this will be challenging as changes continue in every segment of the healthcare business.
- Another challenge will be to quickly identifying new growth areas as emerging technologies integrate and change the industry.
- Business/Market Expansion strategies must integrate at multiple levels:
 - *Horizontal integration* across divisions/groups to maximize leverage of the firm's market position with customers and emerging technologies.
 - *Vertically link* strategies for products, therapeutic categories, and functions, into corporate strategy to maximize consistency with corporate vision.
 - *Diagonally link* to other industries that influence healthcare, for example telecommunications impacting healthcare in the development of telemedicine.
 - *International Integration* of strategies across countries to maximize returns during patent life of drugs & products.
- Accelerating new business/market development in every area will be challenging, because success in any one area will be increasingly influenced by changes along the full continuum-of-patient-care.
- New technologies will involve more ethical, moral and security issues in strategy and management. Example cloning of the adult lamb and implanting of human genes in animals

Strategies for Business & Market Expansion (continued)

Integration Is Key To Success



To maximize **E-Venture** returns, all initiatives must provide leverage along the full value added continuum of the business

Business Development to Maximize Value

Building shareholder value in the turbulent healthcare environment is challenging

- In transitioning and integrating industries like healthcare, there are many new opportunities for growth. However, to be successful, requires dramatically new and non-traditional approaches.
- Successful value maximization requires close alignment with the multiple changes occurring and the new emerging groups that are impacting product choice.
- Identify growth opportunities across segments will offer accelerated growth.
- Information technology is an important factor driving changes throughout the value continuum.
- Rapidly understanding and leveraging influences of the new technologies from other industries will be important for maintaining and achieving competitive advantage.
- As consolidation continues in healthcare, the importance of developing international opportunities for continued growth in earnings will increase.
- Leveraging the experience of other industries that have already emerged from similar transitions will be advantageous for rapidly developing profitable new business solutions

The large number of emerging issues – e-solutions, disease management, integrated healthcare, alternative site-of-care, health information networks, telemedicine, and bioinformatics – indicate that the turbulent transition of the industry will be continuing



Focus

MOMENTUM Business Development is a specialist in one area, starting new technology ventures that rapidly expand & quickly become financially viable.

We help companies tackle two challenges:

- **Identifying and commercializing emerging technologies**
- **Developing and expanding new markets**

Our expertise is based on 25 years of experience in starting & managing high technology ventures, that includes CEO-level strategies and managing day-to-day operations at startup businesses.

Clients include Fortune 100 corporations such as Johnson & Johnson, Venture Capital firms such as JJDC, and entrepreneurs such as PrisMedical.

Business development assignments have been managed throughout the USA and Canada; as well as in Europe, Latin America, Asia & Africa.

Clients receive value in four ways:

- **Strategies & Plans** - combining high level opportunity scan with granular details for implementation success across business groups and industries.
- **Strategic Alliances** – identifying, researching, forming and managing alliances that meet multiple goals and, are invisible to consumers, thereby, building trust & loyalty.
- **Business Development** – developing new markets, customers, & products to rapidly expand the business and demonstrate financial viability.
- **Venture Management** – implementing plans and supporting venture executives in managing the day to day operations.

Successful new ventures have been established in in both B2B & B2C markets, in a number of industries – Healthcare, Financial Services, Building Materials, Energy, and Plastics.

Executive Background

Mr. Ravi C. Gupta is Principal of MOMENTUM Business Development. He has over 20 years of international experience in business strategy & new venture development. His background includes being a successful technology entrepreneur as well as senior positions at Johnson & Johnson and other Fortune 500 corporations.

Mr. Gupta has been leveraging emerging on-line technologies to accelerate business growth since the 1980s. In 1986 he was a pioneer in developing on-line strategies for integrated 24 hours global financial services. Later in 1995, he was one of the first to use Internet driven Knowledge Management for accelerating new business development at the Advanced Technology Group of Hoechst, the Fortune 100 corporation.

Mr. Gupta has extensive expertise in strategic alliances. In 1979 he developed his first alliance, between companies in England and communist Poland. That venture grew to become a successful diversification business in Britain. Mr. Gupta completed his first white paper on strategic alliances in 1986.

His industry expertise includes healthcare, financial services, building materials – all of which combine B2B & B2C. He has managed ventures throughout the USA and in Canada, Europe, S.America, Asia & Africa.

Before Momentum, Mr. Gupta's career included being head of Business Development in Telecom and Healthcare at the Advanced Technologies Group of Hoechst. Earlier, as Business Manager Trespa, he lead the North American venture for the Dutch company and was recognized for developing the fastest new venture in the company's history. Prior to that he was Vice President at First Asian Securities, a Wall Street investment bank. Earlier he was promoted as the youngest Regional Marketing Manager in T&N, UK.

Mr. Gupta's education includes an MBA from The Wharton School. He graduated with a Distinction in the Ph.D. seminar in Corporate Strategy.

Mr. Gupta was inducted into the *Who's Who In Finance & Industry in 1994* and *Forbes* magazine has featured him among *The Best & Brightest* in America.

Our Commitment

We will do whatever it takes to fully meet the business needs of our clients & partners. Our commitment is to always deliver real results that are complete, fully meet the customers' needs, and can be immediately implemented.

We aspire to be long-term allies with our clients and partners.

Our aim is to be known for delivering creative and complete solutions and caring about our clients' success long after the assignment is over. We are working towards being recognized as one of the best in our area of expertise, not necessarily as the biggest

Indicative of our delivering on this commitment are the following comments by senior executives from companies in the USA, Europe and Asia.

“Momentum’s solution is really valuable because it addresses the problem in totality. It gives us something that I can immediately implement ... it’s obvious that it’s based on great experience...It takes into account the practical challenges of running a business and delivering real bottom line results”

Frans van Voort
Royal Dutch Company
Pan-European Business Development Conference,
Venice, Italy, September 24, 1999.

**The above slides are a highly condensed version
of a very complex industry transformation underway.**

**I welcome the opportunity of sharing more details you,
and look forward to your email**

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