



Intelligence for the pharma industry

Guest Opinion: Using Systems Thinking to Design New Marketing Models

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Business managers today must deal with complexity, change, and diversity that's accelerating at an exponential, unprecedented rate.

Complexity stems from the nature of problems that rarely present themselves individually. Instead, they come connected to other problems and behaviors from many players interwoven in webs; the closer you examine the problem, more and more stakeholders seem to be involved.

Change is the hallmark of our time. Industries, if they are to remain viable, have to keep pace with continual, rapid, often seismic turbulence in their operating environments. Competition is global, intense and fueled by the onward march of innovation. Governments impose new regulations. Customers are fragmented, inundated, harder to reach, and radically change their preferences over shorter periods of time. Transformations in society and in ways of thinking impose the great challenge of designing novel kinds of business strategies with whole new standards of effectiveness. The rules of the game have morphed so completely that the game itself is unrecognizable.

But recognizing and responding to this is hardly enough to stay ahead of the curve. In a world of dynamic complexity and constant evolution, managers must tackle a great diversity of problems simultaneously and make decisions using limited, often ambiguous, information. The organization's stock of knowledge has to be captured and distributed efficiently so that policy-makers recognize patterns faster than competitors. This requires putting in place flexible, adaptive structures that can respond quickly to feedback from the marketplace. Organizational processes must be elegant, effective and served by the latest developments in information technology. And personnel have to be inspired by managers with transformational leadership qualities.

Simple, conventional, off-the-shelf solutions will fail in this context. They won't work because they are not holistic or creative enough to address the complex world we now live in, a world where everything is connected to everything else.

They are not holistic because they focus on the parts rather than on the whole. In doing so, they miss the crucial interactions between the parts. They fail to recognize that isolating and optimizing performance of one part will have consequences elsewhere, consequences that can even damage the whole. This fault is known as 'suboptimization' brought about by process re-engineering, balanced scorecard, benchmarking and other management fads that tackle only one element of an organization relevant to its performance. At other times, even if more parts are considered, there is the distinct likelihood that they are all viewed from the same perspective, with entrenched assumptions and a historical experience that's no longer relevant to address modern times. This blunts creativity.

Systems thinking is a quietly growing field that managers are turning to for ideas. With roots in disciplines as varied as engineering, cybernetics, philosophy, and ecology, systems thinking is a new way of looking at how the world works that differs markedly from the

traditional, reductionist, analytic view. It delivers a level of perspective on problem situations that goes beyond responding only to events, and begins looking at strategies with higher leverage that can alter patterns of behavior. Systems thinking managers know that simple solutions are bound to fail when pitched against complex problem situations. They are willing to work with more complicated ideas that, at first acquaintance, may be more difficult to understand. This is because systems thinking is a new paradigm and does everything possible to encourage entirely new modes of action.

Holism emphasizes the study of wholes before that of the parts. It does not try to break down organizations or business units into parts in order to understand them and intervene in them. It concentrates its attention instead at the organizational level and on ensuring that the parts are related properly together so that they serve the purposes of the whole. In fact, the most complex behaviors usually arise from the interactions among the components of a system, not the complexity of the components themselves.

Being holistic also means approaching problems ready to employ a systems vocabulary as a new language of integration and interaction. This has almost nothing to do with discovering new information technology applications per se, but with a set of integrative concepts and a practical approach to studying and working with multidisciplinary capabilities. Systems thinking is being applied to subject areas as diverse as environmental change, anthropology, and disease management for medicine. In business, it is being used to address key issues of competitiveness, creativity and productivity across a range of industries, from financial services to automotive to pharmaceutical. (One of the most promising areas of research in the pharmaceutical industry is through a 'systems biology' approach to drug discovery.) It can be applied at the tactical or strategic level and serve all functional groups – vision and leadership, marketing and sales management, product research, manufacturing, business intelligence, information technology, customer relationship management -- within an organization.

Tactical Systems

One specific application of systems thinking is to marketing. Using the concept of tactical systems as a metaphor for a new marketing model, a tactical system connects a set of marketing and sales components -- brand communications, sales force automation, advertising and promotion, and CRM technology – in a way that actively generates synergy among all its dimensions. It addresses the semantic problem, the technical problem, and the effectiveness problem of multiple stages of marketing activity and multiple decision-makers within one framework. It synchronizes marketing and sales. As part of the process to designing a tactical system, assumptions about business strategy, creative and message strategy, marketing resource management and the criteria for measuring value are surfaced, tested, and evolved to support the whole.

Designing a tactical system is an iterative process that consists of three distinct, but inter-related platforms: (i) structure (defining the boundary of the system, the components to integrate and their relationships); (ii) function (defining the business objectives of the system and its outputs); and (iii) process (defines the specific sequence of activities and know-how required to produce the outcomes). The vision is to produce an order-of-magnitude improvement in the throughput of the system compared to an ad-hoc ROI collected from separate pieces.

The starting point for designing a tactical system begins with a unifying component at the field level, perhaps an abstract on a clinical study presented at an annual meeting of a state medical society. The clinical study presentation has news value for all print and broadcast media in the state, creating an opportunity to connect a publicity component to the data presentation. Knowing the time period of the publicity campaign allows the advertising media plan to be directed locally and in the same time sequence. Satellite symposia can reach all of the hospital and health systems in the state simultaneously. The data warehouse of an organization can be tapped for direct marketing to all potential customers in the state at the same time. Sampling management can be coordinated in the same framework. The process evolves as more components get added to the tactical system and their outputs synchronized, all designed to execute at the "push of a button" and create multiple message inputs to customers and prospects simultaneously. All component activities are conceived, tested, and funded within the boundary of the tactical system and at the field level.

Tactical systems take a holistic perspective: they back away from the reductionist tradition of buying and studying the value of individual pieces toward designing whole systems and looking at system effects -- coordinating connections and interactions between components, and the input to and output from the system, are the primary concerns. Tactical systems will create novel behaviors from the interaction of their constituent elements, emergent properties that weren't there previously in any of its parts alone. A behavior-based CRM strategy becomes the system of measurement that complements territory management and sales force automation technologies. The management information system captures new data sets about what has happened in the marketplace and lays out strategies for adaptive planning. Marketing resource management decisions are based on calibrating the tactical system via this feedback and the incremental effect of adding components to the system.

A New Path to Alignment

Contrary to popular belief, using a multidisciplinary approach to marketing and generating information from different perspectives is not the same thing as the ability to synthesize findings into a coherent whole. The nature of the beast has changed radically, creating an entirely new set of practical problems on many levels. What's needed is a new way of looking and thinking about marketing. Taking a systems thinking perspective -- a system of values, of ideas, of planning coordinated changes in motivation, knowledge, and understanding -- can offer the pharmaceutical industry a new path to marketing alignment and optimization.

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