

IVEY BUSINESS JOURNAL

IMPROVING THE PRACTICE OF MANAGEMENT

Best Practice

Strategic planning in a complex environment: The health-care example

By Greg Williams, Joy Mabon, Bev Heim-Myers

January/February 2006
Reprint # 9B06TA07

Ivey Business Journal Online is published by Ivey Management Services, a division of the Richard Ivey School of Business.
For subscription information, please contact: ibjonline@ivey.ca
www.iveybusinessjournal.com

To order copies or request permission to reproduce materials, please contact: Ivey Publishing, Ivey Management Services
c/o Richard Ivey School of Business, The University of Western Ontario, London, Ontario N6A 3K7
Tel: (519) 661-3208, Fax: (519) 661-3882, Email: cases@ivey.uwo.ca

Copyright © 2006

Ivey Management Services prohibits any form of reproduction, storage or transmittal of this material without its written permission.
This material is not covered under authorization form CanCopy or any other reproduction rights organization.

Best Practice

Strategic planning in a complex environment: The health-care example

When the Heart and Stroke Foundation of Ontario set out to design a new model for health care funding, it ended up challenging the Foundation's leadership to think differently about how their business worked. What emerged was a new way of doing business that managers in many other settings and industries can apply.

By Greg Williams, Joy Mabon, Bev Heim-Myers

Greg Williams is Director of Planning and Portfolio Management at the National Cancer Institute of Canada

Joy Mabon is a Senior Consultant at Wood Mackenzie Ltd. in Boston

Bev Heim-Myers is a Senior Manager, Heart and Stroke Foundation of Ontario.

In Canada, as in other countries with well-developed voluntary sectors, health charities (foundations) that raise dollars from the public and then allocate them to health research have played an important role in developing a vital research capacity and supporting key innovations.

One example is the Heart and Stroke Foundation of Ontario (HSFO), whose mission is to reduce the risk of premature disability and death from heart disease and stroke by raising funds for research and health promotion. In 2001, HSFO engaged in a systematic review of its own research enterprise, a response to indications that serious changes were afoot in the health-research environment.

Understanding these changes was deemed critical to the Foundation's continued effectiveness. It was also due diligence. The non-profit sector had been increasingly emphasizing accountability, including the need to demonstrate a clear return on investment, to both donors and beneficiaries - in this case, those Canadians suffering

from the effects of cardiovascular disease and stroke (CVD). It was expected that the strategic review would achieve three goals: describe the historical return of HSFO's investment of approximately \$30 million a year in CVD research, systematically assess trends in the research and broader social and economic environments, and establish a strategic positioning for the organization's research business that would guide it to 2020.

This article describes what could be considered a bestpractice strategy case in a health research environment. Lessons learned will be of particular interest to managers setting strategy in the complex and interconnected worlds of health research, health care and public health. However, it will also interest any manager seeking to "raise the bar" when designing strategic planning processes that hope to make the best use of evidence and guide stakeholders through decision making in complex business environments.

THE POTENTIAL RETURN ON INVESTMENT FROM CVD RESEARCH

Cardiovascular and cerebrovascular diseases are the biggest killers of Canadians. CVD also represents the largest portion of direct health care costs and lost productivity. In North America, significant gains were made in the latter decades of the 20th century in reducing the impact of CVD, in part, due to technological innovations that grew from health research. For example, in the United States, the return from investments in CVD research is estimated to have been \$500 billion a year between 1970-1990.

However, this same era of technological advance also saw the emergence of an obesity epidemic, with origins planted firmly in culture and lifestyle. Other familiar problems like hypertension have remained a significant source of suffering, as have premature death and related costs despite the availability of effective treatments and proven clinical guidelines. Also high on a list of

contemporary challenges is an aging population that is driving the increase in all major chronic diseases including CVD, cancer, and diabetes. Rising incidence of disease will create increased demand and unprecedented pressure on our technology-dependent health care system. It is also probable that the impact of chronic disease on our aging workforce will dampen productivity and constrain tax revenues.

Health research can and should yield insight into how to best address these challenges and others. However, this requires strategic investments, namely those in the right types of research by the right means and at the right time.

THE PROCESS AND THE EVIDENCE

The strategy-development and planning process took 16 months. Important decisions included the selection of a strategic positioning by the board of directors. A consulting team developed five potential, positioning strategies for the board to consider. Once an appropriate strategy had been chosen, a high-level implementation plan was created. It included three different investment scenarios for the future of the research portfolio; each was distinguished by varying degrees of risk relative to the speed of implementation and the use of financial reserves available from the Foundation's investment portfolio.

Oversight of the process was provided by a task force reporting to the board of directors. Perspectives and expertise in this group were diverse, and included senior management, board members, and leaders in the scientific community and the community at large. Two external consulting firms provided research, analysis and strategic planning support. The Chair of the Task Force was a successful entrepreneur who was, at the time, a Dean of a Toronto business school. In addition, a Clinical Expert Panel of internationally recognized CVD leaders was created to review the research and analysis that supported the strategy and to comment on the strategy itself. For objectivity, the Foundation invited a Canadian leader in cancer research and control to sit on the expert panel.

A distinctive feature of this strategy exercise was the significant investment in building the evidence-base. A blended approach of quantitative and qualitative methods helped address key questions described in the following section.

1. What are the perceived trends shaping the global

health research environment and how are our leading organizations in health research adapting their practices?

A global benchmarking study of sixteen research funding agencies in Australia, Canada, Sweden, the United Kingdom, and the United States was conducted. Quantitative and qualitative data were collected on research-investment levels, organizational priorities, priority-setting processes, evaluation practices and methods for communicating the impact of the research.

2. How do we assess the performance of our research investment and practices?

A review of the literature describing the best practices used to assess research performance was completed and informed the development of evaluation methods.

3. What and who have we been investing in?

Using the Foundation's databases, an historical analysis of research funding was completed to understand the historical investment patterns.

4. What is the relative quality of that investment?

Using bibliometric assessment, a standard method for evaluating the output of health research investments, the Foundation evaluated the relative standing of HSFO funded researchers compared to researchers in the same disciplines in other G7 countries. In almost all disciplines, HSFO funded researchers scored above G7 averages, and in some disciplines these researchers were global leaders.

5. What impact have we had and what enabled it?

Two in-depth case studies isolated examples of research initiatives in which the Foundation had invested and the outcome had been an irrefutable change in the standard of CVD care. These case studies highlighted both the enabling conditions of successful innovation and the barriers encountered.

6. How does the research community - the Foundation's means of determining impact - view trends, gaps and opportunities? What are its funding priorities?

A web-based survey (response rate >20%) was used to

determine the perceptions that 368 Canadian CVD researchers held about gaps, opportunities, priorities and research trends important to CVD.

7. What trends are highly important to the future and also highly uncertain? i.e. where must our strategy be especially resilient?

A scenario-planning process was used in which the board and invited experts rehearsed strategy development and tactics in five different scenarios of the world of CVD research and health care in 2020. The scenarios were based on intensive research and validated by the scientific community.

NEW CONCEPTUAL MODELS OF HOW THE 'BUSINESS' WORKS

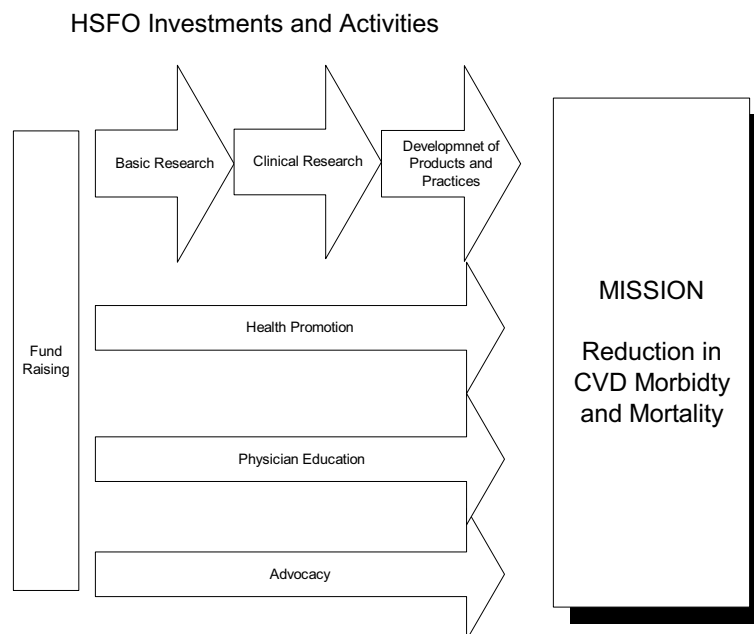
The strategy that emerged from this process was informed by a stronger understanding of what HSFO actually did and how well it did so. Moreover, the Foundation developed a clearer picture of where the opportunities lay for future research investment. These insights were grounded in evidence and aided by a new conceptual model which later became known as “the Mission Value Chain”.

The Mission Value Chain is a systematic mapping of the Foundation’s activities and investments in relation to the ultimate aim of achieving considerable progress in attaining the HSFO’s mission - reducing CVD morbidity and mortality. The research portion of the value chain begins with the earliest phases of discovery and moves through the application of those findings to the development of interventions, and to their evaluation and application to reduce suffering and death from CVD. The tool evolved from a fairly simple rendering, as depicted in Figure 1, to a mapping that now identifies twenty-four distinct loci of activity for investment. The Mission Value Chain promoted a shared view of the complete range of the organization’s activities and investments in a way that

underscored the dynamic nature of the business of impacting human health while orienting all these activities in a single direction: towards Mission. Although HSFO has most significantly invested in the basic science end of the value chain, there were clear examples of this investment translating into real change in health care and real impact for patients. While it is a complex journey and a challenging goal, the Mission was real and achievable.

However, the value chain representation is somewhat limited by its linearity. To more fully understand the process by which research is produced and translated into health

Figure 1. Simplified Version of the Mission Value Chain



outcomes and impact, one needs to consider the complicated and multidimensional nature of the relationships between the relevant people and organizations. To describe the dynamic context of its research investments, HSFO adopted the concept of “the research ecosystem”. The system is populated by a variety of organizations and entities including: universities, teaching hospitals, other funding agencies, commercial enterprises, government, and the public, etc. Like many systems, the research ecosystem is characterized by high degrees of interdependence. For example, the researchers in whom

the HSFO invests reside largely at universities and teaching hospitals. Therefore, the success of the Foundation's investments depends heavily on the infrastructure and operations of these institutions. Conceived this way, it then makes sense to critically observe the relative 'health' of this system and the nature of the intrinsic relationships. What are the conditions within the system that support successful research? Some of these are "hardware", like access to technology and equipment, while others are more qualitative, like concentrations of required expertise in geographical "hubs", the presence or absence of leadership or the amount of time available for real communication that builds trust and enables collaboration.

THE NEW STRATEGY

"Creating Movement along the Value Chain" is the strategic positioning selected by the HSFO's board of directors. The strategy that flows from this positioning is grounded in both of the above conceptual models. The Mission Value Chain supports the analysis of gaps and opportunities for investment. The research strategy describes the role of the Foundation, namely to identify and make strategic investments that promote the evolution of research into applications that can help improve the CVD health of Canadians

In particular, HSFO became interested in addressing research gaps and opportunities in the "later value chain" that might have an impact on CVD morbidity and mortality in the short term to mid term. Hypertension offers an example. Effective therapies and guidelines to control hypertension exist, but physician and patient compliance with these guidelines remains a problem. Research into the behavioral dimensions of controlling hypertension could yield more effective strategies that would have an impact in the near future.

In selecting new programs to support the implementation of the strategy, HSFO chose conditions that made the value chain work efficiently, and that promoted the health of the research ecosystem. People enable research. Thus, in identifying new programs, the Foundation chose to support endeavours that are critical to a healthy research ecosystem and promote efficiency of the value chain.

However, the strategy recognizes the historical importance and impact of its investments in quality basic research. HSFO will therefore continue to support this

key area of activity as the platform for innovation in more applied areas.

LESSONS LEARNED

1. The old way of doing business is no longer sufficient

Foremost among the lessons learned from this strategic planning process is the understanding that traditional means of funding health research, on their own, were no longer sufficient. Historically, most academic health research has been funded under a paradigm described as "investigator-driven."

This is a bottom-up process in which researchers submit detailed proposals based on the research questions they deem most relevant. Proposals are reviewed and scored by panels of scientific peers. Funding cut-offs are typically in the 18-25% range at most granting agencies, meaning the chances of being funded are usually less than one in four. These are highly competitive processes. Investigator-driven research is more than a way of doing business; it has become a powerful cultural edifice and some research-funding organizations resist allocating research dollars any other way. To its credit, this means of funding research has promoted excellence in science in Canada and elsewhere.

The question for HSFO however, was not, "Does the investigator-driven model fund excellent science?" Bibliometric analysis had already demonstrated that it did. The question rather was, "Does the investigator-driven model alone fund the science we need now, or in the near future, to address an array of increasingly complex health problems. like the obesity epidemic or the control of hypertension?" But peer review, like any form of competitive adjudication has its limitations. Studies have shown that there exists a tendency to favor those scientific communities and disciplines that are already strong. When viewed from the perspective of allocative efficiency, one can discern a bias to maintain the patterns of historical funding. How then do we promote the development of a broader range of scientific excellence to solve problems that are of a truly trans-disciplinary nature like those mentioned above?

From HSFO's perspective, this requires a shift from supporting purely investigator-driven research selected by peer review to a more strategic, portfolio management approach that views the entire research spectrum in the context of the Mission Value Chain. If one considers

where the value chain is constrained, one can identify gaps and opportunities for funding. By thinking about a particular gap in the context of the ecosystem, one can begin to elucidate “the how” of addressing it. Is it, for example, addressed by investing in people, networks, mentorship or partnerships? Or is it best addressed by targeted project funding? What is going on in the system? Will potential investment impact that dynamic? This type of thinking and investment criteria do not obviate the need for the more traditional, long-term investment in scientific achievement through investigator-driven research. Rather, it is a necessary compliment. The challenge for HSFO, and many of its peers, is to determine how best to allocate its funds along the value chain in a way that optimizes the balance between demonstrable impacts on its mission in the short term, and sustained or enhanced gains in the long term.

2. Train for the future to understand your current business

In reviewing the process four years later, HSFO managers and volunteer leaders agreed that one of the most important elements of the strategic review was the scenario-planning exercise. Scenario planning has many well-documented applications and advantages. For example, it has a tendency to shift the centre of gravity in a group dynamic. In this particular case, a closer appreciation of the value brought to the table by the diverse perspectives of business leaders, managers and scientific leadership was evident by the end of the workshop. All groups left with a stronger understanding of the business and a stronger sense of ownership of the process.

Scenarios are not a blunt tool. When applied in scientific business, they must not only appear logical and coherent to a layperson but also plausible to the scientific community. That means a heavy upfront investment in secondary and primary research, the latter based on expert interviews. Expert validation is also a critical step. If the scenarios fail the plausibility test the exercise will not work.

3. Don't underestimate the importance of qualitative data

There is a propensity in both science and business to privilege quantitative analysis over qualitative analysis. However, critical insight came from the qualitative research

that supported this strategy exercise. For example, while the bibliometric analysis HSFO commissioned provided a concrete, numerical measure of how HSFO researchers ‘measured up’ globally, it did not say anything about the impact of that investment or determine why it had been successful. These insights only came from two case studies with robust methods, including a systematic review of the literature and structured interviews with key informants.

4. The utility of the right conceptual models

The time taken to think about the business in different ways by exploring new or adapted models, like the Mission Value Chain and the research ecosystem, was an important investment for the organization. Both models contributed to a stronger, more broadly shared understanding of the Foundation's business. These models also provided a helpful context for interpreting the findings from evaluation. In addition to understanding how its investment was contributing to the achievement of the Mission, HSFO developed more certainty about how well it was doing. Both models have outlived the strategic planning process and have been applied in the Foundation's ongoing work. The Mission Value Chain, for example, was applied to the challenge of hypertension when developing a Foundation wide AIM.

5. Invest in stakeholder management

As illustrated by the ecosystem concept, HSFO works in a complex environment of many interdependent relationships. Its decisions have implications for many and are watched accordingly. The voluntary sector does share some of the characteristics of its government counterparts. Politics and communications can either ‘make or break’ an otherwise good idea. HSFO therefore adopted a matrix-based approach to engage all of its stakeholders as it validated its strategy and moved into the implementation phase. This highly deliberate process was considered a critical success factor to the effective implementation of the strategy.

6. Evaluation - A necessity but far from easy

One of the distinctive features of Vision 20/20 was the creation of a comprehensive evaluation framework that hardwired the research business for future, ongoing evaluation. The global benchmarking component of the strategy process had revealed an important trend, in the

world of health research funding, towards taking evaluation more seriously. This trend corresponds to a broader current in the philanthropic world of increased accountability to donors to demonstrate the impact of their investment. Developing an “ROI” for a non-profit research enterprise is not a straightforward task. If indicators of performance are to be meaningful, they must be based on sound logic, have some real correspondence to what they purport to measure and also be able to be interpreted by decision-makers. Developing a set of performance indicators for the research portfolio that are analogous to revenue-expenditure ratios for financial performance takes time and resources.

In some circles, the mention of strategic planning causes eyes to glaze over. Many of us have endured badly designed and executed processes that pull managers and precious organizational resources away from the daily work of running the business. Strategic planning can, and should be, an important investment for businesses that are successful and struggling alike.

Vision 20/20 demonstrates the power that an effective strategy and development process can bring to an organization that most would already have regarded as highly successful. It provided a balance of tools, evidence and insight that at once challenged the Foundation’s leadership to think differently about how their business worked while building the confidence to take some new direction to “get ahead of the curve.”

What emerged was a new way of doing business that would both protect and nourish HSFO’s legacy as a highly regarded basic research enterprise. At the same time it would focus the organization’s leadership and resources on opportunities that might hasten the achievement of the Mission and reduce the risk of premature death and disability from heart disease and stroke. These and other lessons we learned are universal and can, to a greater or lesser extent, be applied by managers in many other environments and industries. ■

Jane Cooke-Lauder, Chris Serjak, Elizabeth Mulholland, Paul Carder and Laura Syron contributed to the preparation of this article.