



**Strategy as Diligence: Putting Behavioral Strategy into Practice**

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Abstract:	<p>Researchers in behavioral strategy are producing new insights on strategic decision making. At the same time, a few pioneering companies are discovering ways to put behavioral strategy into practice. This paper draws on behavioral research and strategy practice to present an approach called diligence-based strategy. In markets comprised of people rather than rational economic agents, the analysis of competitive advantages matters less than the diligent execution of fundamental activities. Diligence-based strategy offers an applied method for formulating and executing strategy in organizations, showing how managers can leverage technology and management discipline to drive business success in the 21st century.</p>



# STRATEGY AS DILIGENCE: PUTTING BEHAVIORAL STRATEGY INTO PRACTICE

## ABSTRACT

Researchers in behavioral strategy are producing new insights on strategic decision making. At the same time, a few pioneering companies are discovering ways to put behavioral strategy into practice. This paper draws on behavioral research and strategy practice to present an approach called diligence-based strategy. In markets comprised of people rather than rational economic agents, the analysis of competitive advantages matters less than the diligent execution of fundamental activities. Diligence-based strategy offers an applied method for formulating and executing strategy in organizations, showing how managers can leverage technology and management discipline to drive business success in the 21<sup>st</sup> century.

Key words: Diligence, behavioral strategy, strategy process

## INTRODUCTION

In 2014, Concha y Toro UK (CyT) – an importer-distributor of wines made in Chile, Argentina and California – faced a crisis in competitive strategy. Global distributors with established brands were moving aggressively into the UK market, smaller entrants were experimenting with new business models, and downstream consolidators were shifting the balance of power to a few large corporate retailers. Confronted with the threat of eroding market share, declining profit margins, and an ageing business model, CyT executives knew something had to change.

But CyT did not follow the conventional path for managing large-scale strategic change. Executives did not articulate a crisis or launch a strategic audit of market trends or competitive threats; and the company made no attempt to revolutionize its market strategy or business model. Instead, executives turned their attention to a small number of ordinary business activities such as procuring inputs, managing customer relationships, and developing people. Then, leveraging stakeholder relationships, internet technologies, and social media, the company commissioned a new system for monitoring capabilities in fundamental activities for CyT and its competitors. From this platform, executives developed improved systems for goal-setting, measurement, and allocating resources to the everyday fundamentals of business success.

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3 This renewed commitment to mastering and executing the fundamentals of business success  
4 – supported by empirical data, internet technologies, and new analytical methods – transformed  
5 strategy-making at CyT. By deliberately shifting management attention from the traditional  
6 abstractions of “big strategy” to the daily realities of fundamental business practice, CyT  
7 executives generated a powerful body of longitudinal data for sensing market shifts, tracking  
8 competitive activity, setting priorities for investment, and defining new strategic initiatives.  
9 According to one CyT executive, the shift was “a complete game-changer. Without question, it  
10 revolutionized the way we think about strategy.”<sup>1</sup>

11  
12 Competitive and technological conditions in the 21<sup>st</sup> century are changing the way companies  
13 conduct their strategy processes. The pace of competition requires executives to strategize and  
14 act at the same time, to bring internet technologies into the strategy process, and to focus on a  
15 few highly-leveraged activities that drive business outcomes. In these conditions, some  
16 executives find that the traditional building blocks of business strategy – analyzing industries,  
17 choosing the scale and scope of the firm, positioning for competitive advantage, seeking  
18 differentiated resources and capabilities – have outlived their usefulness. The strategic shift now  
19 underway at CyT – and in larger consumer companies like PepsiCo and Mars – heralds the  
20 arrival of something genuinely new, a significant movement that transcends the particulars of any  
21 method or technique. It may indeed signal a landmark shift in the attitudes of top executives  
22 toward the practice of strategic management.<sup>2</sup>

23  
24 The magnitude of the signal is faint but its outlines are clear. Executives no longer believe in  
25 sustainable competitive advantage as a concept. They have little patience for impressive  
26 platitudes or drawn-out strategy talk. They attend relentlessly to what they can control, while  
27 rejecting the notion that strategy and operational excellence, or strategy formation and execution,  
28 are separable things. They rely more on measurement and evidence, and less on opinions and  
29 persuasion. They view strategy as a continuous process involving decisions and actions, not as a  
30 periodic process involving only decisions. They value hard data and quantification but also

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3 organization culture, which they construe as shared meaning and disciplined performance  
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5 management. They challenge firm boundaries by embracing open organization, user  
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7 communities, and social media. Learning through trial and error, executives are carving out a  
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9 novel set of strategy principles founded on data, communication technology, and the relentless  
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11 measurement and control of the fundamental activities that determine business success.  
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14 In developing this approach, managers have paid less attention to academics and consultants  
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16 than to practitioners in other competitive domains. For example, one source for diligence-based  
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18 strategy is the “moneyball” phenomenon, in which baseball executive Billy Beane used advanced  
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20 statistics and activity monitoring to overthrow traditional methods of evaluating baseball talent.<sup>3</sup>  
21  
22 In the past decade these techniques have spread through business, sports and other domains. In  
23  
24 professional golf, PGA and LPGA touring pros keep a close eye on GPS-enabled competitive  
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26 statistics for driving distance, driving accuracy, and average distance from the pin, and on  
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28 technology-enabled swing statistics for clubhead speed, spin rate and launch angle.<sup>4</sup> Young  
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30 golfers attend premium academies in Florida, Arizona and Dubai, and study with world-class  
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32 coaches, nutritionists, fitness instructors and psychologists. These players maximize performance  
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34 by applying the new power of technology, statistics, and sports science to the mastery of  
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36 fundamental activities that have always determined success in golf: driving, iron play, hazard play,  
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38 putting, and the mental game.  
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43 Companies like CyT bring this approach to business competition by focusing on the  
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45 fundamental activities that drive success in any business: activities like developing new products,  
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47 building stakeholder relationships, managing supply chains, serving customers and managing  
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49 culture. This approach is “diligence-based” because it values data, measurement, and behavioral  
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51 perseverance above large-scale strategic ambitions like industry transformation and sustained  
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53 competitive advantage. It is “strategy” because it permeates every aspect of organizational  
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55 strategy, from goal-setting and strategy formation through resource allocation and day to day  
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57 execution.  
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3 This paper describes the principles of diligence-based strategy and provides a method for  
4 putting these ideas into practice. It draws theoretical inspiration from cognitive psychology and  
5 behavioral research, while rejecting the rationality and efficiency assumptions that entered the  
6 theory and practice of strategic management through economics. Assuming that markets are  
7 comprised of human beings rather than rational economic agents, diligence-based strategy shows  
8 the consequences of bringing realistic assumptions about human behavior to the practice of  
9 strategic management.  
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## 18 19 **THE CHESS SYNDROME**

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21 As practiced by large companies and taught in business schools, strategic management is  
22 largely an art or science of the intellect. Corporations and strategy consultancies employ  
23 sophisticated analytical tools for understanding markets and internal resources, and MBA  
24 students learn general theories and techniques for industry analysis, competitive positioning, and  
25 the internal analysis of the firm. The tools of strategic analysis are widely disseminated and  
26 embedded in the strategy processes of companies.  
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35 In using these tools, strategists are vulnerable to a state of mind that might be called the  
36 “chess syndrome”: the belief that the purpose of strategy is to analyze and choose strategic  
37 moves. Through training and experience, business strategists learn to assess industry structures,  
38 recognize patterns in industry and competitive trends, evaluate a company’s competitive  
39 position, develop and evaluate strategic options, judge probabilities and payoffs of future events,  
40 and choose the scale, scope, and competitive position of the firm. Because these tasks are  
41 cognitive and analytical, they suggest parallels between business strategy and other domains in  
42 which competitive positioning plays an essential role – most notably chess, in which the analysis  
43 of competitive moves is paramount.<sup>5</sup>  
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54 The problem is that chess and business are very different games. Chess grandmasters like  
55 Magnus Carlsen and Garry Kasparov have extraordinary gifts for recognizing patterns and seeing  
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3 deeply into potential lines of play. But these mental gifts constitute *the whole game of chess*.

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5 Choosing a good chess move is intellectually complex but behaviorally trivial: when a decision is  
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7 made the player reaches across the board and moves the piece to a new square. Implementation  
8  
9 is swift and unproblematic, and unexpected events never get in the way. Chess players never  
10  
11 think about strategy execution because chess strategies never fall apart between thinking and  
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13 doing.  
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16 Ease of execution distinguishes chess from domains of human activity that require both  
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18 thinking and doing, such as mountain climbing. In the past 60 years, mountain climbers have  
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20 discovered 18 different routes up Mount Everest. Most of these routes have been tried more  
21  
22 than once, and every experienced climber knows which ones offer the greatest probability of  
23  
24 success. As it happens, 99% of climbers choose the Southeast Ridge from Nepal or the North  
25  
26 Ridge from Tibet. Statistics show that the Southeast Ridge yields slightly higher success rates and  
27  
28 fewer deaths, but taking weather and other factors into account, many climbers prefer the North  
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30 Ridge and the success rate there is reasonably high.  
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34 Unlike chessmasters, climbers of Mount Everest must consider strategy execution, both  
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36 during the climb and while planning the climb. In chess there are 24 possible moves at the  
37  
38 opening and 10.9 million possible positions by the seventh move. In climbing Everest there are  
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40 only two feasible moves at the start and movement is continuous and effortful. The two feasible  
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42 paths up the mountain are widely known, and climbers do not agonize over the choice of paths.  
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44 Indeed most climbers choose their paths implicitly before deciding whether to go on the  
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46 expedition at all, knowing that the decision entails *equifinality of choice* (climbers can reach the top  
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48 on either path), *randomness* (which may hinder or assist the climb), and *continuous interaction with*  
49  
50 *external forces* (such as weather, sherpas, equipment, and other climbers).<sup>6</sup>  
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54 These characteristics radically alter the strategy process from beginning to end. Success in  
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56 climbing Everest does not depend on choosing the right path but on the climber's capacity to  
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58 deal with the conditions of the actual climb. Climbers still have to make choices, but the critical  
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3 choices do not involve the analysis of paths. They involve mastering the fundamentals of  
4 mountain climbing, assembling and managing the right team of people, and anticipating and  
5 dealing with the conditions of the climb.  
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10 Diligence-based strategy assumes that business strategy is not contemplative like chess, but  
11 expeditionary like going up Everest. Problems in business strategy are characterized by  
12 equifinality, randomness and continuous interaction with external forces. In business  
13 competition, the range of strategic options is always constrained by external conditions and past  
14 choices, and executives seldom face a large number of feasible paths; in many cases the actual  
15 number of feasible paths is one.<sup>7</sup> In business strategy, good decisions sometimes fail, bad  
16 decisions succeed, margins for error are large, and the conditions of implementation can erase or  
17 reverse the core assumptions on which positioning decisions were based. Companies do not fail  
18 every time an executive chooses the wrong path, and it often happens that the human and  
19 economic conditions of competition – poor implementation of a bad decision, poor decisions by  
20 competitors, a favorable demand shift, a lucky change in government regulation, a corporate  
21 takeover – allow executives to profit from their own mistakes.<sup>8</sup>  
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36 This does not mean that business strategists should never think about competitive moves, or  
37 should avoid strategy tools like decision analysis or scenario analysis. But they should recognize  
38 that analyzing and choosing competitive moves does not determine a company's success or  
39 failure, any more than choosing a good exercise program determines a person's level of fitness.<sup>9</sup>  
40 Almost any fitness program will get results if a person actually does the work, and no fitness  
41 program will get results if they do not. When implementation is hard, success depends less on  
42 chess-like mental virtuosity than on Everest-like diligence in executing a small number of  
43 fundamental activities that are familiar to everyone who plays the game. In allocating scarce top  
44 management attention, strategy executives should remember that firm performance does not  
45 come from clever choices but from relentless attention to the fundamental drivers of business  
46 success.  
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## BEHAVIORAL FOUNDATIONS

Theories and concepts in strategic management bear the strong imprint of microeconomic theory.<sup>10</sup> Strategy theories share with economics the assumption that a company cannot beat its rivals by adopting widely available practices that are known to improve business performance. Strategy theories assume that homogeneous companies perform homogeneously, so a company cannot win by imitating its competitors. It can try to do the same things better, but “strategy is not operational excellence”:<sup>11</sup> if a company adopts a profit-making practice, its rivals – which are rational, observant, and open to new ideas – will copy the practice and the market will return to the zero-profit equilibrium. The only way a company can gain a performance edge is by building sustainable competitive advantages protected by barriers to imitation.

These kinds of assumptions are useful to economists studying prices and outputs in market competition. However, they are not empirical truths about actual markets comprised of human beings. We know, for example, that neither individuals nor groups conform to the assumptions of rational actor theory, that people imitate bad practices as well as good ones, and that companies neither observe nor imitate each other in the ways assumed by economic theory.<sup>12</sup>

Empirical evidence shows that companies often fail to copy the observable best practices of other companies. The literature is vast, but a few examples indicate the direction of the evidence.<sup>13</sup> For example, Salter found that copper mining companies took as long as 20 years to adopt widely available cost-saving rail technologies, and Johnston found that management consultants produced efficiency gains as high as 200% by helping their clients install boilerplate management control systems. Primeaux showed that the adoption of cost efficient technologies varied substantially among large electric utility providers, and Kamberoglou and colleagues, in a study of Greek banks, found large differences in the adoption of fundamental management practices. In a field experiment of Indian textile producers, Bloom and colleagues offered free consulting services and found that the adoption of basic business practices – quality control,



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3 inventory management, and HR processes – produced large gains in productivity and  
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5 profitability compared to a control group; and in a sample of more than 700 companies in the  
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7 US, UK, France and Germany, Bloom and Van Reenen found large variations in fundamental  
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9 management practices, reporting a “long tail of badly managed firms” with “surprisingly bad  
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11 management practices.” (2007, p. 1386)

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14 According to conventional theories, these disparities in basic management practices should  
15  
16 not occur. A company should not beat the competition by performing commodity-like activities  
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18 that can be performed by anyone in the market. Companies are not supposed to leave money on  
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20 the ground, or find it there.<sup>14</sup> If this happened even to a moderate degree, competitive markets  
21  
22 would be inefficient and unpredictable. A company with competitive advantages might go out of  
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24 business by failing to implement “hygiene” activities, or a company without competitive  
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26 advantages might beat the competition by diligently implementing ordinary activities. Such  
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28 outcomes would contradict widely held beliefs about strategic management theory and practice.

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31 More realistic assumptions about market behavior can be found in the emerging literature on  
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33 behavioral strategy. According to Powell, Lovallo and Fox, behavioral strategy “aims to  
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35 strengthen the empirical integrity and practical usefulness of strategy theory by grounding  
36  
37 strategic management in realistic assumptions about human cognition, emotion, and social  
38  
39 interaction.”<sup>15</sup> Drawing insights from cognitive and social psychology, behavioral strategy  
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41 challenges the behavioral assumptions of microeconomic theory by treating market efficiency  
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43 and decision rationality as empirical questions to be observed and tested in the actual behavior of  
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45 market participants.<sup>16</sup>

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48 Behavioral research shows that human market participants do not behave like rational  
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50 economic agents. Real people are in many ways more impressive than economic agents. They are  
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52 capable of passion, benevolence, insight and perseverance. They have moral and aesthetic ideals,  
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54 and they exhibit altruism, trust, reciprocity, compassion, justice, loyalty, and love. As in the  
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3 *Moneyball* story, people in organizations make seemingly absurd creative leaps that can transform  
4 an enterprise and alter the dynamics of market competition.  
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7 At the same time, real people make silly mistakes and misperceive obvious features of their  
8 environments.<sup>17</sup> They display envy, hubris, narcissism and overconfidence. People have limited  
9 memories and attention spans, unconscious needs and drives they cannot control, and at the  
10 deepest neural level they are hard-wired for self enhancement and short-term thinking. Research  
11 shows that executives pay too little attention to competitors and too much attention to  
12 themselves, leading to competitive blind spots, delusional optimism, cognitive myopia, and a  
13 “not invented here” mentality. At the group level, people are susceptible to conformity,  
14 obedience, propaganda, envy, and stereotyping. At the organizational level, companies drift  
15 imperceptibly into inertia and automatic behavior, taking on rigid and politicized chains of  
16 command, and cultural norms and ideologies that impede change. At higher levels of collectivity,  
17 entire sectors fail to perceive new technologies or threats of entry, and executives follow the  
18 collective sway of “the latest big thing.”  
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33 By bringing psychological realism to competitive market assumptions, behavioral research  
34 provides an alternative view of the drivers of firm success and failure. Real companies behave  
35 paradoxically, giving lip service to profit maximization while neglecting profit opportunities,  
36 committing unforced errors, and blindly following what other companies are doing. Executives  
37 promote generous programs of corporate philanthropy while committing moral, social and  
38 political blunders that are costless to avoid. Companies squander sustainable competitive  
39 advantages in product design by their inability to perform basic tasks like delivering goods to  
40 customers. They support local communities while exploiting their environments, and they incur  
41 reputational damage by violating simple accounting rules and government regulations. They copy  
42 the best practices of other companies and their worst practices too. The most successful  
43 enterprises become inert, complacent, and unresponsive to external events.  
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3 Diligence-based strategy helps managers navigate competition and strategy in markets  
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5 comprised of people. As one management scholar put it, much of what we observe in markets  
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7 does not stem from economic barriers or cognitive biases, but involves a kind of  
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9 “blockheadedness” that seems psychologically pointless – as when a global automobile producer  
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11 commits a blatant, self-sabotaging lapse in moral judgment.<sup>18</sup> By definition, companies cannot  
12  
13 imitate the inimitable competitive advantages of their rivals; but they can avoid making unforced  
14  
15 moral errors and destroying their own reputations. If unconscious drives and cognitive biases are  
16  
17 hardwired into the executive brain, then people cannot eliminate them; but they can enact  
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19 “nudges” and collective processes that mitigate shortcomings, especially biases due to limitations  
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21 of individual memory, attention and learning.<sup>19</sup> Seeing competitive markets from a behavioral  
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23 point of view suggests that market opportunities exist for companies that can avoid unforced  
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25 errors and execute on the fundamentals of business success.  
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29 Research in behavioral strategy suggests that companies can be destroyed by their own  
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31 competitive strengths, by a kind of “curse of competitive advantage.”<sup>20</sup> For example, research  
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33 shows that past success provides one of the most fertile breeding grounds for individual and  
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35 social biases, including executive hubris, delusional optimism, overconfidence, competition  
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37 neglect, learning myopia, groupthink, corporate inertia, and cultural stagnation.<sup>21</sup> Evidence  
38  
39 suggests that competitive advantages may carry the psychological seeds of their own destruction,  
40  
41 as when Polaroid founder Edwin Land’s technological obsessions, which drove the early success  
42  
43 of the company, blinded Polaroid to new market developments in digital photography.<sup>22</sup>  
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45 Competitive advantages are psychologically salient to executives and tend to attract large  
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47 resource allocations even when returns to investment are declining, or when disruptive  
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49 innovators are making them obsolete. Competitive strengths are good to have and companies  
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51 should cultivate them; but behavioral research reminds us that the pursuit of outsized  
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53 competitive advantages can impair the company’s vigilance against executive hubris, market  
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55 shifts, and systemic weaknesses in ordinary activities.<sup>23</sup>  
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3 The role of the chief executive is to maximize the performance of the enterprise. This task  
4 should not be displaced by something else, such as competitive positioning or the pursuit of real  
5 or imagined competitive advantages. An executive's primary task is to know the levers that drive  
6 business performance and to operate those levers, whatever they may be. For a few companies  
7 this may include the exploitation of big competitive advantages. But how can companies without  
8 competitive advantages improve competitive performance? And how can companies with  
9 competitive advantages avoid the curse of competitive advantage? The next section presents a  
10 diligence-based method for maximizing enterprise performance.  
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## 20 21 **A METHOD FOR DILIGENCE-BASED STRATEGY**

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24 This section describes a framework and method for diligence-based strategy. The method  
25 combines elements of the processes followed by companies like CyT and Mars, along with  
26 frameworks the author has developed independently over a period of years. This approach has  
27 been put into practice by companies in industries such as financial services, professional services  
28 and consumer goods, and is applicable to many others. It does not rely on assumptions specific  
29 to the profit sector, and has been employed in government and non-for-profit organizations, and  
30 in developed and emerging economies.  
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39 The method will be described under five headings: (1) Activities, (2) Strategic Capital, (3)  
40 Priorities, (4) Dynamics, and (5) Measurement.  
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### 44 **(1) Activities**

45 In diligence-based strategy, the basic unit of analysis is the activity. An activity is something  
46 people do, like developing new services, communicating with suppliers, and processing insurance  
47 claims. When a company undertakes an activity, the activity becomes a receptacle for executive  
48 attention, capital investment, resource allocation, strategic initiatives, learning, capability and  
49 mastery.  
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3 As something people do, an activity is observable, measurable, and manageable. It is not an  
4 intangible or unobservable asset, and it is not a “key success factor” or any other kind of  
5 “factor.” An activity is both a noun and a verb, a kind of organizational gerund (a noun ending in  
6 –ing). As a noun, it is something we observe and measure; as a verb, it is a vehicle for getting  
7 things done: managing, learning, communicating and improving. Activities can always be  
8 expressed as –ing words, and this is how they are expressed in a diligence-based model.  
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16 Managers can choose their industries and strategies, and can partially determine what drives  
17 business success – for example, by choosing a particular business model. But every domain of  
18 human activity operates within a deep structure of competitive performance, a performance  
19 function that determines whether a participant succeeds or fails.<sup>24</sup> This function is not defined by  
20 participants but by the “rules of the game,” which reward some activities and punish others.  
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Players do not observe this function directly, but discover it by experience, learning, and trial and  
error. People may construe the performance function differently (e.g., from a realist or  
interpretivist perspective), but the performance function is exogenous, serving as a hard  
constraint on enterprise performance.<sup>25</sup>

The performance function is composed of fundamental activities: that is, the crucial activities  
that drive competitive success. By a process of hypothesis-testing and trial and error, executives  
discover which activities drive performance for the enterprise, the relative importance of these  
activities, and their responsiveness to different levels and types of investment.<sup>26</sup>

To initiate diligence-based strategizing, executives should set initial goals or “anchor points”  
for the organization. Typically, this involves identifying enterprise-level goals for growth,  
profitability, innovation, and market coverage, to be revisited later in the strategy process. To  
bridge these goals with fundamental activities, executives should also develop a definition of the  
enterprise – that is, a very short (and provisional) description of the nature and scope of the  
enterprise. From these two foundations – goals and a definition of the enterprise – executives  
can move forward with the diligence-based process.

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3 To identify fundamental activities, executives should ask: What are the fundamental activities  
4 that drive success in our business? According to the goals and definitions we have set for the  
5 enterprise, what activities have we committed ourselves to performing and mastering?  
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10 Fundamental activities must satisfy two criteria: (1) Mastery of the activities contributes  
11 significantly to organizational performance; and (2) Managers can allocate resources to the  
12 activities, measure them, and monitor outcomes. In applying these criteria, executives should not  
13 expect to find a large number of fundamental activities, and experience suggests that a “rule of  
14 five,” give or take one or two, provides a good balance of breadth and depth for most  
15 enterprises (in later stages, the method introduces sub-activities that take the analysis to any  
16 desired level of detail). If a company has five fundamental activities, it is often the case that two  
17 or three have an external orientation (such as serving customers), and two or three take an  
18 internal view (such as managing internal culture).  
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29 The list of fundamental activities can include activities unique to the organization as well as  
30 generic-sounding activities that would drive success in any organization or sector. For example,  
31 generic-sounding activities may include:  
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- 35 - Serving customers
  - 36 - Developing new products (or services)
  - 37 - Improving brand recognition
  - 38 - Building external relationships
  - 39 - Benchmarking best practice
  - 40 - Managing the supply chain
  - 41 - Procuring inputs
  - 42 - Distributing products
  - 43 - Communicating
  - 44 - Developing our people
  - 45 - Managing technology
  - 46 - Managing internal systems and processes
  - 47 - Managing costs
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52 It should also be noted that diligence-based strategy can be applied at any unit of strategic  
53 analysis – for example, in a department, project, business-unit or corporate parent. In corporate  
54 strategy, highly diversified firms like GE and Tata Group have shown that it is possible, by  
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3 focusing on a handful of fundamental activities at the corporate level (e.g., evaluating and  
4  
5 integrating acquisitions) and the business-unit level (e.g., managing talent, installing new business  
6  
7 systems), to create corporate value across a broad range of business units.<sup>27</sup>  
8

## 9 10 (2) Strategic Capital

11  
12 Having identified a handful of fundamental activities, executives must then assess how these  
13  
14 activities work together to drive business success. This constitutes the performance function of  
15  
16 the enterprise. A company's capabilities in its fundamental activities work together according to  
17  
18 the performance function – for example, by summation or multiplication – to create total  
19  
20 strategic capital (TSC), which is the company's total capability in its fundamental activities.  
21

22  
23 For ease of exposition, consider an organization that has two fundamental activities, called  
24  
25 Making (M) and Selling (S). In naming M and S as fundamental activities, executives affirm that  
26  
27 M and S work together to drive performance for the company. This has specific consequences  
28  
29 for the strategy process: M and S will be treated as the company's primary strategic variables;  
30  
31 executives will set goals for the mastery of M and S; the strategy process will determine resource  
32  
33 allocations for M and S; and the company will commit itself to the continuous measurement,  
34  
35 monitoring and management of M and S.  
36

37  
38 Diligence-based strategizing does not employ “box and arrow” models involving linear or  
39  
40 circular systems of relationships among activities, as in value chain analysis or activity systems.<sup>28</sup>  
41  
42 These models can be useful, but the accurate ones have many boxes and feedback loops and can  
43  
44 be difficult to use in practice. The simple ones are easy to use but offer fewer insights. The  
45  
46 diligence-based method takes a different approach, focusing on the form of the performance  
47  
48 function through which activities create total strategic capital for the enterprise.  
49

50  
51 In principle, fundamental activities could produce total strategic capital in many ways: for  
52  
53 example, if M and S represent the company's degree of mastery of Making and Selling, the  
54  
55 performance function could be *additive* ( $TSC = M + S$ ); *strongest link* [ $TSC = \max(M,S)$ ];  
56  
57 *multiplicative* ( $TSC = M \times S$ ); or *weakest link* [ $TSC = \min(M,S)$ ]. In the additive function, the  
58  
59  
60

1  
2  
3 company could compensate for a deficiency in M by becoming very good at S (or vice versa); in  
4  
5 the strongest link function, the company could focus on one activity and completely ignore the  
6  
7 other. Either of these models might produce an impressive “competitive advantage” in a single  
8  
9 activity.

10  
11 However, for most enterprises the relevant form of performance function is not additive or  
12  
13 strongest link, but multiplicative.<sup>29</sup> The multiplicative function implies that activities are not  
14  
15 substitutes, but work together in a complementary and supportive way. For example, if the  
16  
17 function is multiplicative, a company cannot compensate for poor manufacturing by becoming  
18  
19 extremely good at selling: if the company’s numerical ability for M is zero, then zero multiplies  
20  
21 through the performance system as a whole, and the company’s total strategic capital is zero.<sup>30</sup> In  
22  
23 general, the multiplicative function tends to reward balanced capabilities in the fundamental  
24  
25 activities.

26  
27  
28  
29 Multiplicative performance has large consequences for management practice. In the search  
30  
31 for competitive advantage, most companies tend to over-invest in strengths and under-invest in  
32  
33 weaknesses. They do this in the mistaken belief that competitive advantage comes from  
34  
35 strengths instead of from the performance system as a whole. But this is almost never the case:  
36  
37 in a multiplicative performance system any source of competitive advantage can be nullified by  
38  
39 weaknesses in other activities.

40  
41  
42 In diligence-based strategy, it is important for managers to gain an intuitive feel for  
43  
44 multiplicative performance. This does not require a mathematical understanding, but rather an  
45  
46 intuitive capacity for making resource allocation decisions in a multiplicative system. This is best  
47  
48 seen in a numerical example, as in Figure 1.

49  
50  
51  
52 – INSERT FIGURE 1 ABOUT HERE –  
53  
54

55 Figure 1 shows two companies, Ruby and Indigo. On a scale from 0 to 10, where 0 denotes  
56  
57 no capability in an activity and 10 denotes complete mastery, Ruby rates 2 in Making and 8 in  
58  
59



1  
2  
3 Selling; and Indigo rates 6 in Making and 4 in Selling. Ruby has a relative advantage in Selling and  
4  
5 Indigo has a relative advantage in Making. If Making and Selling are unweighted – that is, equally  
6  
7 important to performance – then an additive performance function will produce the same total  
8  
9 strategic capital for the two companies ( $2 + 8 = 6 + 4 = 10$ ). In a weakest link function, Indigo  
10  
11 will have more TSC (Indigo's  $S = 4$ ; Ruby's  $M = 2$ ); in a strongest link performance function,  
12  
13 Ruby will have more TSC ( $S = 8$ ); and in a multiplicative function, Indigo will have more TSC ( $6$   
14  
15  $\times 4 = 24$ , compared with  $2 \times 8 = 16$ ).

16  
17  
18 In the multiplicative performance function, Ruby should not allocate its next unit of resource  
19  
20 to its strongest activity (Selling): a one unit capability improvement in Selling would improve  
21  
22 Ruby's TSC from 16 ( $2 \times 8$ ) to 18 ( $2 \times 9$ ), whereas a one unit capability improvement in Making  
23  
24 would improve Ruby's TSC from 16 ( $2 \times 8$ ) to 24 ( $3 \times 8 = 24$ ). Thus, the multiplicative system  
25  
26 rewards balanced capabilities in a company's fundamental activities.

27  
28  
29 The “principle of balanced capabilities” can be hard to put into practice. People prefer to  
30  
31 invest in the capabilities that made them successful in the first place, and organizational politics  
32  
33 and cultural inertia make it hard for executives to invest away from current strengths. Executives  
34  
35 are also susceptible to cognitive biases that promote continuity in investment decisions, such as  
36  
37 the endowment effect, loss aversion, confirmation bias, and the “curse of knowledge.”<sup>31</sup> By  
38  
39 focusing on multiplicative performance, diligence-based strategy guides executives into a  
40  
41 balanced consideration of the organization's portfolio of fundamental activities. Executives who  
42  
43 gain an appreciation for multiplicative performance can avoid common behavioral biases and  
44  
45 make better overall judgments in resource allocation.<sup>32</sup>

### 46 47 48 **(3) Priorities**

49  
50 Resource allocation decisions hinge on three factors: a company's capabilities in its  
51  
52 fundamental activities; the relative strategic priorities of these activities; and the extent to which  
53  
54 the activities yield capability improvements in response to new resource allocations. This is  
55  
56 illustrated numerically in Appendix A, which shows the relative priorities of Making and Selling  
57  
58  
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1  
2  
3 for Ruby and Indigo, and gives a numerical calculation of resource allocations for four  
4 performance functions. As shown in Appendix A, activities in a multiplicative system are  
5 complementary and mutually supportive, so that weak activities multiply through the  
6 performance system as a whole. The Appendix and accompanying tables (A1 and A2) show how  
7 the principle of balanced capabilities is adjusted for the effects of strategic priorities in relation to  
8 existing capabilities.  
9  
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11  
12  
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16  
17 – INSERT APPENDIX A ABOUT HERE –  
18  
19

20  
21 As an aid to management intuition, the conclusions in Appendix A can be reduced to two  
22 relatively simple heuristics for allocating resources to activities in a multiplicative system:  
23

24 *Heuristic 1: Managers should allocate resources to fundamental activities in proportion to their relative priorities.*

25  
26  
27 *Heuristic 2: Managers should allocate above-normal resources to any activity in which the company has low*  
28 *capability relative to its priority.*  
29

30 Using Heuristic 1, a company with two activities to which it has assigned equal priority (.5)  
31 should allocate resources equally; if the priorities are .7 and .3, the company should allocate  
32 resources 70% to the former, 30% to the latter. Most of the time, this heuristic aligns with the  
33 intuitions of managers and is relatively easy to follow.  
34  
35  
36  
37

38 However, a company's capabilities can fall out of alignment with priorities, especially if the  
39 company does not measure or monitor its fundamental activities. In these circumstances,  
40 managers should not allocate resources according to priorities. Heuristic 2 says that managers  
41 should allocate above-normal resources to any activity that has fallen below its relative priority.  
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43  
44  
45  
46  
47 This was shown in Appendix A, where Ruby's relative capability in Making (2/10, or .20) had  
48 fallen short of its relative priority (.30). According to Heuristic 2, Ruby maximizes total strategic  
49 capital by allocating resources to Making, the activity with low capability in relation to its priority.  
50  
51  
52  
53

54 In practice, it is Heuristic 2 that presents the most difficulty for managers. Executive  
55 attention is naturally drawn to the salience of existing strengths and areas of high priority. But an  
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3 activity of moderate priority that has become a weakness may deliver greater returns to  
4 investment. The intuition to invest in strengths and top priorities can lead executives astray:  
5  
6 sometimes the best investments are neither strengths nor priorities, but neglected yet  
7  
8 fundamental activities in which priorities and capabilities have fallen out of alignment. Heuristic  
9  
10 2 urges executives to evaluate the full range of fundamental activities, with a view to closing gaps  
11  
12 between capabilities and priorities. Investing in the highest priority activities would produce good  
13  
14 decisions if the performance function were additive, and indeed the resource allocation heuristic  
15  
16 for additive functions always follows Heuristic 1: *Allocate resources to the highest-priority activity*. But if  
17  
18 the performance function is multiplicative, resource allocations follow Heuristic 1 only if  
19  
20 capabilities are perfectly aligned with priorities, which is not generally the case; in most  
21  
22 circumstances, managers should compare relative capabilities with relative priorities and allocate  
23  
24 according to Heuristic 2 (also see Sidebar: Additive and Multiplicative Performance).  
25  
26  
27  
28  
29

30 – INSERT SIDEBAR ABOUT HERE –  
31  
32

33 These conclusions assume that all activities yield the same capability improvements in  
34 response to resource allocations; in other words, that capability improvements can be achieved at  
35 the same cost for all activities. In practice, this is seldom the case: as companies improve their  
36 capabilities, further improvements tend to become costlier and more difficult to achieve at the  
37 margin. In learning and experience curves with a fixed upper limit (like a 0 to 10 scale),  
38 improving from 9 to 10 is harder than improving from 3 to 4. Thus, managers must consider the  
39 comparative responsiveness of fundamental activities to new resource investments at the margin.  
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48 This problem corresponds exactly to the standard economic problem of optimizing factors of  
49 production in the maximization of output.<sup>33</sup> However, managers do not need to perform these  
50 calculations. The essential point for managers is that the effect of “diminishing marginal  
51 improvements” makes it even more imperative that they attend carefully to weaknesses in  
52  
53 fundamental activities: the existence of low-cost, unexploited learning opportunities means that  
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resources often yield greater returns on investment – that is, greater relative increases in total strategic capital – when allocated to weaker activities.

Figure 2 shows how the diligence-based method displays capabilities for a hypothetical consumer products company with five fundamental activities. The figure uses three methods for displaying activities: column chart, radar chart, and bar chart. In practice, the author uses a column chart, but companies like CyT and Mars use bar charts. The five activities are: Developing New Products, Improving Manufacturing Productivity, Developing Internal Culture, Marketing to Consumers, and Building Relationships with Retailers.

– INSERT FIGURE 2 ABOUT HERE –

The three charts in Figure 2 present the same information in different formats, indicating the extent of the company’s capability for each activity on a scale from 0 (no capability) to 10 (complete mastery). The column and bar charts also show total strategic capital (TSC), which is calculated using the multiplicative function, weighted by priorities.<sup>34</sup> Relative priorities are represented as proportions, and are shown in the table at the bottom of Figure 2.

#### (4) Dynamics

In determining resource allocations, managers should look for discrepancies between the priority of activities and existing capabilities. If relative priorities and capabilities are aligned, then Heuristic 1 applies and the company can allocate resources in proportion to priority (adjusted for costs). If not, as in Table 1, managers should examine the magnitudes of any discrepancies and determine which activities are candidates for above-normal resource allocation. In Table 1, capabilities are significantly lower than priorities for two activities – Developing Culture and Building Relationships with Retailers – and also for Developing New Products.<sup>35</sup>

– INSERT TABLE 1 ABOUT HERE –

1  
2  
3       Once the basic framework of activities and priorities is established, the diligence-based  
4  
5 method gives managers a versatile platform for tracking industry and competitive dynamics, and  
6  
7 for driving organizational change. The method's measurement disciplines (discussed below) are  
8  
9 designed to bring the company into closer contact with its customers and suppliers, allowing  
10  
11 managers to sense competitive shifts and anticipate new trends in business models and  
12  
13 technologies. Comparisons with rivals give managers new insights into the latest industry  
14  
15 standards for quality and capability, showing them which companies are raising the bar on  
16  
17 fundamental activities (managers at CyT analyze competitors using charts like those in Figure 2,  
18  
19 overlaying the profiles of rivals onto those of the organization). Indeed, diligence-based thinking  
20  
21 encourages capability innovation by prompting executives to monitor the frontiers of capability  
22  
23 advance in its sector, and by providing methods and measures for evaluating the impacts of new  
24  
25 technologies and business practices.<sup>36</sup>

26  
27  
28       The method's emphasis on activities leads naturally to discussions of organizational  
29  
30 boundaries: if the company has a chronic weakness that responds poorly to investment, the  
31  
32 activity becomes a candidate for outsourcing; if the company excels in an activity that responds  
33  
34 well to investment, managers can explore business models for maximizing its impacts; if rivals  
35  
36 are launching new activities (such as building online communities for crowdsourcing), managers  
37  
38 can consider reshaping the company's profile of activities.

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40  
41       The diligence-based method facilitates concrete, evidence-driven strategy conversations that  
42  
43 connect market positions to the dynamic challenges of putting them into practice. It can be used  
44  
45 in conjunction with a broad range of established techniques for analyzing options for strategic  
46  
47 investment, including methods for alternative generation, probability and payoff estimation,  
48  
49 decision making, and evaluation of uncertainty (such as scenario planning).<sup>37</sup> The method  
50  
51 provides a strategic audit trail of capability improvement and an early-warning system for  
52  
53 technological and market shifts. In practice, companies like CyT find that the benefits of  
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3 diligence-based strategizing increase over time, yielding dynamic comparisons with rivals and a  
4  
5 longitudinal evidence record of resource allocations and outcomes.<sup>38</sup>  
6

### 7 **(5) Measurement**

8  
9 Diligence-based strategy requires systems of activity measurement and performance  
10 management, along with management and communication practices for supporting these  
11 systems. These systems do not have to be costly or highly formalized, or developed all at once.  
12  
13 The culture and mission of some organizations will suggest a lighter touch, whereas other  
14 organizations may take a more robust approach. Whether the method is robust or light-touch,  
15  
16 the crucial requirement is to place fundamental activities at the heart of organizational strategy.  
17  
18  
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22  
23 To put a measurement system into place, managers should identify the component sub-  
24 activities that form the basis for the organization's fundamental activities. Sub-activities supply  
25 the observability and specificity required for effective measurement. For example, the  
26  
27 fundamental activity "developing new products" may be composed of sub-activities like  
28 researching new product technologies, seeking ideas from customers, developing product  
29 prototypes, and pilot-testing with customers. The activity "developing our people" may be  
30 composed of sub-activities like holding weekly meetings with employees, developing a career  
31 plan for each employee, involving people in strategy conversations, and linking individual goals  
32 to organizational outcomes. As with fundamental activities, five sub-activities seems to be a  
33 manageable number in practice (at CyT the number ranges from four to seven).  
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44 Sub-activities can be measured using the same numerical scales employed for fundamental  
45 activities. This enables managers to combine the capability ratings for sub-activities into a  
46 composite capability rating for the fundamental activity as a whole. Thus, for example, CyT uses  
47 ratings for four sub-activities – managing brand reputation, providing brand marketing support,  
48 creating innovative product packaging, and managing new product launches – to derive a 0 to  
49  
50  
51  
52  
53 100 rating for the fundamental activity "supporting consumer marketing."<sup>39</sup>  
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2  
3 To obtain these ratings, CyT works closely with external consultants to gather detailed  
4 feedback from external stakeholders.<sup>40</sup> For the activity “supporting consumer marketing,” the  
5 most crucial and informed stakeholders are the five largest retail supermarkets in the UK  
6 through which CyT distributes its products. Using web-based surveys of multiple respondents in  
7 each retailer – supported by follow-up contacts by phone, Skype or face to face – CyT managers  
8 work with the consulting team to compile a detailed profile of CyT’s capabilities for each sub-  
9 activity. At the same time, the surveys produce comparative ratings for CyT’s seven largest  
10 competitors, allowing managers to use comparative bar charts and other forms of analysis.  
11 Retailers also receive feedback from the surveys, which improves data reliability and retailer  
12 response rates.  
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24 In diligence-based strategy, managers should use every available technology and data source  
25 to compile data on the company’s activities. This varies by sector, and from one activity to  
26 another. For externally-facing activities, sources include quantitative data from online databases,  
27 a dedicated website for data gathering, web surveys, blogs, social media feeds, and data provided  
28 by consultancies and industry experts; for internally-facing activities, they include blogs,  
29 anonymous surveys, open forums, and data obtained in performance appraisal systems; for  
30 activities related to efficiency or productivity, they include numerical data for input, output, and  
31 defect rates. Companies lacking a strong track record of customer or stakeholder engagement  
32 can use diligence-based strategy as the catalyst for launching new programs of technology-  
33 enabled communication with customers and suppliers.  
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46 An organization that has four sub-activities for each of five fundamental activities will collect  
47 data for 20 sub-activities. This is achievable for most organizations. For presentation, each  
48 fundamental activity is charted and these charts are supported by charts for each sub-activity.  
49 This becomes the documentation for resource allocation and strategic decision making. At CyT  
50 each fundamental activity has its own chart, which gives the ratings for each sub-activity (like the  
51 horizontal bar chart in Figure 2). As supporting documentation, each sub-activity has a chart  
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3 showing how the sub-activity was measured. These pages, along with summary charts and  
4  
5 conclusions, constitute the playbook for diligence-based strategizing at CyT.  
6  
7

## 8 9 **SUMMARY AND CONCLUSION**

10  
11 Diligence-based strategy offers a theoretically-grounded philosophy of strategic management,  
12  
13 and an applied method for formulating and executing strategy in organizations. Drawing on  
14  
15 psychology and behavioral strategy, the theory and method are founded on the premise that  
16  
17 organizations achieve superior performance not by thinking about how to obtain competitive  
18  
19 advantages, but by the thoughtful doing of activities fundamental to success.  
20

21  
22 Diligence-based strategy did not appear all at once, and is still in development.<sup>41</sup> Its  
23  
24 foundations reach at least to the 1950s, when social scientists Herbert Simon and James March  
25  
26 introduced concepts such as bounded rationality, group identification, and political bargaining to  
27  
28 the study of organizations. In the 1960s, Harvard economist Harvey Leibenstein developed the  
29  
30 concept of “x-inefficiency,” showing the prevalence of inefficiency in firms and competitive  
31  
32 markets. Behavioral economists like Amos Tversky and Daniel Kahneman challenged  
33  
34 mainstream economic assumptions about decision rationality, showing the impacts of cognitive  
35  
36 biases on strategic decision making. In strategic management research, scholars observed the  
37  
38 misleading effects of adopting the efficiency and equilibrium assumptions of economic theory,  
39  
40 and Bromiley and Rau developed a “practice-based view” of strategy. For executive strategists,  
41  
42 Amar Bhide wrote about the importance of “hustle,” Pfeffer and Sutton highlighted the  
43  
44 “knowing-doing gap,” Frery and colleagues wrote on “the innovative use of ordinary resources,”  
45  
46 and executives like Lou Gerstner of IBM, Andy Grove of Intel, and Larry Bossidy of Allied  
47  
48 Signal wrote best-selling books linking strategy to the execution of fundamentals.  
49

50  
51  
52 It is possible to argue from historical evidence that the most successful companies – from  
53  
54 GE to Intel to Google – have always practiced diligence-based strategy, and that scholarly work  
55  
56 in behavioral strategy has come very late to the game. The diligence-based approach works in  
57  
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1  
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3 practice because it does not demand the impossible from executives, but focuses on things  
4  
5 managers can actually control. Executives cannot control genius, luck or the imitation of  
6  
7 inimitable competitive advantages. But they can produce outcomes indistinguishable from  
8  
9 genius, luck or competitive advantages by focusing diligently on things they can control.  
10

11 The diligence-based approach does not reject traditional approaches to strategy, but urges  
12  
13 managers to think carefully about how these methods are used. Economics-based methods  
14  
15 neglect the human and behavioral realities of strategic management, and are poorly adapted to  
16  
17 environments characterized by social complexity, political uncertainty, and economic  
18  
19 inefficiency. In prioritizing the pursuit of competitive advantages, older methods focus executive  
20  
21 attention on the pure cognition of goal setting, understanding industry structures, planning  
22  
23 competitive positions, and analyzing resource advantages. By focusing executive attention on  
24  
25 people and behavior, diligence-based strategy helps executives drive performance in human  
26  
27 environments that reward diligence, perseverance, and a capacity for getting things done.  
28  
29

30  
31 From an economic point of view, someone might ask: Is diligence-based strategy really  
32  
33 strategy? Isn't strategy concerned with setting goals, choosing products, setting price and quality  
34  
35 levels, deciding whether to enter markets, and making acquisition decisions? Isn't strategy "big"?  
36  
37

38 From a diligence-based perspective, strategy is what executives do to create successful  
39  
40 outcomes, whatever this may entail. If success entails goal-setting and making big decisions, then  
41  
42 this is what executive strategists should do. But in human markets characterized by equifinality of  
43  
44 choice, randomness, and difficult and uncertain implementation, success tends to depend less on  
45  
46 "big strategy" than on the relentless management of disciplined action.  
47

48 The purpose of diligence-based strategy is to help managers develop and deliver effective  
49  
50 strategies. It is not an operational or tactical program, a checklist of factors, or a boxes-and-  
51  
52 arrows system of transactions. Diligence-based strategy can equally promote market disruption  
53  
54 or manufacturing productivity, market exploration or resource exploitation, radical innovation or  
55  
56 systems efficiency. Ironically, many executives find that only by thinking "small" – focusing on  
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3 business fundamentals rather than big strategic moves – can a company discover and enact the  
4  
5 big moves traditionally associated with competitive strategy, such as developing new  
6  
7 technologies and capturing market opportunities. If the method seems more operational than  
8  
9 conventional strategy models, the problem may ultimately rest with conventional models.  
10  
11 Strategy is about creating successful outcomes, and it is possible that the old dogma that  
12  
13 separated strategy from operations, and strategy formation from strategy execution, has outlived  
14  
15 its usefulness in strategic management.  
16

17  
18 The diligence-based method is not tied to a particular industry or geography, or to the profit  
19  
20 sector. It can be used in all organizations and in sub-units at all levels. It is adaptable to the  
21  
22 pursuit of financial or non-financial goals. Technology-enabled measurement of fundamental  
23  
24 activities provides a powerful guide and “nudge” to human performance in every domain of  
25  
26 activity. The diligence-based approach facilitates strategy-making in business, sports and politics,  
27  
28 and can help individuals plan for personal or career success. In all areas of life, diligence-based  
29  
30 strategy points the way to superior performance by showing people how to capture opportunities  
31  
32 in a world comprised of other people very much like themselves.  
33  
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35

## 36 NOTES

37  
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39  
40 <sup>1</sup> We gratefully acknowledge the support of the CyT management team, especially Nicola Hale  
41 and Alastair Collier, who gave generously of their time and supplied access to the CyT strategy  
42 process and documentation.  
43

44 <sup>2</sup> The new approach borrows some elements from existing strategy and operational frameworks,  
45 recombining them in new ways. For example, CyT’s emphasis on activities is reminiscent of  
46 value chains and activity systems, and its emphasis on measurement and execution resembles  
47 TQM, Six Sigma and the balanced scorecard system. See: M.E. Porter, *Competitive Advantage* (New  
48 York: Free Press, 1985); M.E. Porter, “What is Strategy?,” *Harvard Business Review*, (November-  
49 December 1996): 61-78; R.S Kaplan and D.P. Norton, *The Balanced Scorecard: Translating Strategy*  
50 *into Action* (Boston: Harvard Business School Press, 1996). At the same time, the new approach  
51 has its own theory, method and behavioral assumptions, as described in the paper.  
52  
53

54 <sup>3</sup> M. Lewis, *Moneyball: The Art of Winning an Unfair Game* (New York, NY: W.W. Norton, 2003).  
55

56 <sup>4</sup> For example, see T. Hulse, “A Whole New Ball Game?” *Business Life*, (May, 2015): 30-31.  
57  
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<sup>5</sup> See, for example, G. Kasparov, *How Life Imitates Chess* (London: William Heinemann, 2007).

<sup>6</sup> Equifinality applies when more than one path leads to the same end. The concept was introduced to systems theory by Ludwig von Bertalanffy and is a standard concept in open systems theories of organization. See L. von Bertalanffy *General Systems Theory* (New York, NY: George Braziller, 1968); D. Katz and R.L. Kahn, *The Social Psychology of Organizations* (2<sup>nd</sup> Edition) (New York, NY: John Wiley and Sons, 1978).

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50 In the above article, Fay compares the process of human discovery to playing the board game  
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52 four pegs of different colors, which are covered by a shield. On each turn, the player guesses the  
53 code and receives information about the correctness of guesses. Fay writes: "The cosmos  
54 consists of an unknown but causally operative structure which is objectively 'there'; science is the  
55 attempt to replicate this structure through a process of hypothesis formation and testing; and a  
56 true theory is one which exactly duplicates the pre-existing structure." (p. 36)

Both Fay and Karl Weick argued that people in the real world cannot be sure that the “underlying code” actually exists; or if it exists, whether people can discover it. Fay writes: “There isn’t any One True Map of the earth, of human existence, of the universe, or of Ultimate Reality, a Map supposedly embedded inside these things; there are only maps we construct to make sense of the welter of our experience, and only us to judge whether these maps are worthwhile for us or not.” (p. 38).

The diligence-based approach can accommodate either a realist interpretation (“there is a real underlying code”) or a constructionist or “pragmatist” interpretation (“the underlying code is not objectively real, but constructed by people as an aid and analogy for problem-solving”).

<sup>26</sup> Under equifinality of choice, industry landscapes allow more than one path to high performance. For example, a firm might achieve the same success using a strategy of (a) equally-weighted capabilities in distributing and marketing, or (b) unequally weighted capabilities in producing and serving customers. Diligence-based strategy assumes that executives can choose (a) or (b) as the company’s strategy or business model (or they can choose others), and they can choose freely among all feasible allocations of resources. However, as in economic theory, executives cannot in the short run choose the extent to which any business model is rewarded by the environment. This is a feature of the environment, which decision makers must learn by allocating resources to activities and observing their effects.

In practice, the performance function is both uncertain (at any point in time) and potentially unstable (over time). Executives can reduce uncertainty by engaging in market search, gathering information from a variety of sources, and observing the effects of resource allocations (as described in the text).

<sup>27</sup> Jack Welch’s philosophy of “Ponder less and do more” is consistent with diligence-based strategy. See: J. Welch with S. Welch, *Winning* (New York: Harper Business, 2005), p. 166.

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<sup>29</sup> In a multiplicative performance function, activities complement each other, whereas in an additive function they are substitutes. For example, if more efficient production increases the payoffs to a sales training program, the performance function is multiplicative.

Complementarity in organizations is discussed in J. Roberts, *The Modern Firm* (Oxford: Oxford University Press, 2007). An argument for the multiplicative function in human competition can be found in D.K. Simonton, “Talent and its Development: An Emergenetic and Epigenetic Model,” *Psychological Review*, 106/3 (1999): 435-457 (See also Simonton’s sources on multiplicative performance and “emergenetic” processes, p. 438). The standard economic framing for multiplicative factors of production is the “Cobb-Douglas production function” and its variants. There is a vast theoretical and empirical literature, the original statement being: C.W. Cobb and P.H. Douglas, “A Theory of Production,” *The American Economic Review*, 18 (Supplement, 1928): 139–165.

Although the most common performance function in organizations is multiplicative, hybrid combinations are possible: for example, a multiplicative function with one additive activity.

<sup>30</sup> This differs from a weakest link model, in which TSC always matches the company’s capability in its worst activity. For example, if Company A has capabilities rated 2 and 3, and Company B has capabilities rated 1 and 9, Company A is the higher performer in a weakest link model (2 is



the lowest-rated activity), but Company B is the higher performer in a multiplicative model ( $1 \times 9 = 9$  exceeds  $2 \times 3 = 6$ ).

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Jeffrey Pfeffer and Robert Sutton argued that companies do many things that effectively sabotage their own efforts to learn and improve, such as fostering cultures in which people feel pressured and afraid to fail, and "dumping technology on the problem," i.e., adopting formal knowledge management programs that decouple learning from tacit forms of human interaction and organizational values. Their prescriptions for learning – e.g., encouraging experimentation, and embedding change programs in organizational culture and values – apply equally to the diligence-based method. See J. Pfeffer and R. Sutton. "Knowing What to Do is Not Enough: Turning Knowledge into Action," *California Management Review* 42/1 (1999): 83-108.

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On the "curse of knowledge," a term credited to behavioral economist Robin Hogarth, see: C. Camerer, G. Loewenstein, and M. Weber, "The Curse of Knowledge in Economic Settings: An Experimental Analysis," *Journal of Political Economy* 97/5 (1989): 1232-1254. The intuitive version of the argument is that people find it hard to unlearn what they already know, or to take actions that require ignoring what they know (or think they know).

<sup>32</sup> How can managers know if their organization's performance function is multiplicative? The best way to evaluate the function is to ask: Would a capability reduction in one of our core activities reduce our effectiveness in other activities? Note that this is not the same as asking whether a capability reduction in a core activity would make the company worse off, to which the answer should be "yes" (if a manufacturer becomes less capable of procuring quality components, this will hurt the company even if the performance function is additive). But if the same decline hurts the company secondarily by reducing the effectiveness or efficiency of the manufacturing process (say, due to higher error rates), or makes the sales task more costly (due to lower product quality), or creates a ripple effect in customer service (due to reputational decline or higher warranty costs), then the system is multiplicative. This means that lower capability in one activity has negative spillover effects for other activities, reducing their effectiveness and multiplying through the performance system as a whole. In a similar way, an improved capability in one activity can have positive spillovers for other activities and positive multiplier effects for the performance system as a whole.

From a behavioral point of view, managers can ask: How effectively could we carry on our business without direct communication or coordination across core activities? Could our activities be conducted in a "stand-alone" or purely modular way? The multiplicative performance function assumes that core activities are not modular but complementary, requiring communication and behavioral coordination.

<sup>33</sup> The standard treatment for two variables in microeconomics is to represent relative input costs as a line overlaid on the map of production isoquants, with optimal production at the point of tangency (see Sidebar). These calculations can be performed algebraically for any number of activities. On the other hand, the diligence-based method does not require these kinds of mathematical calculations. The main point for managers is to appreciate that cost tradeoffs play a role in resource allocation decisions in a multiplicative system.

<sup>34</sup> Scaling from 0 to 10 is not essential; CyT uses a scale from 0 to 100, and the minimum could be set at one rather than zero.

<sup>35</sup> Quantitative analysis using the weighted multiplicative model, assuming equal costs of capability improvement for all activities, shows that one unit of added capability has the greatest impact on total strategic capital when applied to Developing Culture (TSC rises by .36), followed by Building Relationships with Retailers (+.27), Developing New Products (+.22), Improving Productivity (+.09), and Marketing to Consumers (+.06).

<sup>36</sup> For example, if distributing products is a fundamental activity for Company A, and Company B introduces a more efficient system for distributing products, the “bar” for competitive mastery rises and Company A’s relative capability declines. Thus, a company’s capability can decline from 6/10 to 4/10 even if its absolute capability is unchanged; or its capability can remain the same despite absolute improvements in capability. This “red queen effect” requires executives to attend closely to the frontiers of capability mastery in its sector.

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<sup>38</sup> This is consistent with the concept of “dynamic capabilities,” but derived from different assumptions. Diligence-based strategy is not trying to explain “why certain firms build competitive advantage in regimes of rapid change” (Teece, Pisano and Shuen, 1997, p. 516), and it does not employ the distinction between baseline capabilities and “dynamic capabilities.” In diligence-based strategy, managers maximize performance not by creating “higher-order” capabilities, but by managing fundamental activities. This is perhaps more consistent with the Eisenhardt-Martin view of dynamic capabilities. See, for example:

D.J. Teece, G. Pisano and A. Shuen, “Dynamic Capabilities and Strategic Management,” *Strategic Management Journal*, 18 (1997): 509-533.

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7 <sup>39</sup> When combining ratings for sub-activities, managers can use their own discretion in deciding  
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9 ratings; a better method is to weight the sub-activities according to priority and use a weighted  
10 average (CyT uses this method); if the sub-activities support each other in a multiplicative  
11 system, the weighted multiplicative method can also be used, as discussed earlier.  
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13 <sup>40</sup> Consultants can play a number of roles in the diligence-based method, including process  
14 facilitation, research design, data gathering, analysis, interpretation, and providing templates for  
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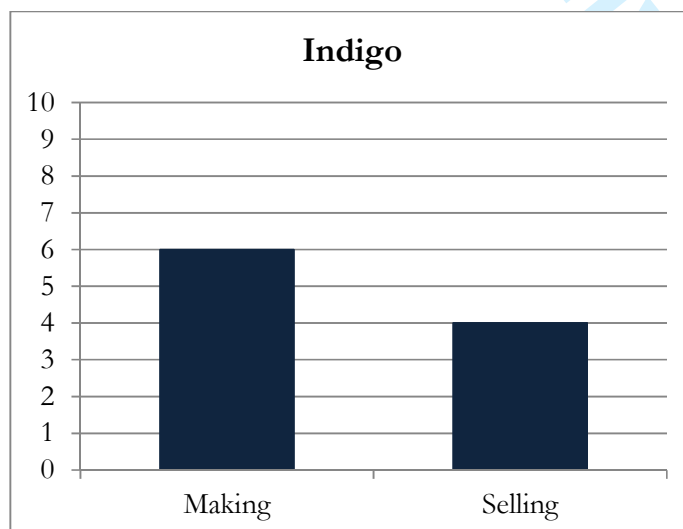
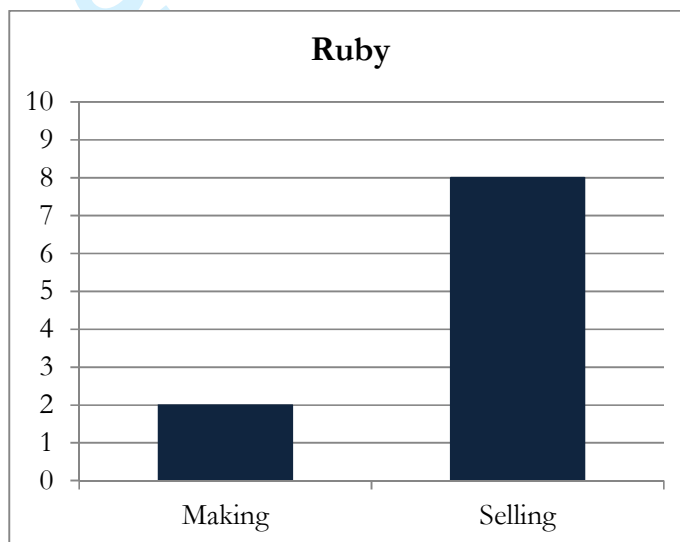
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FIGURE 1:  
COMPARING RUBY AND INDIGO

Total Strategic Capital: Ruby and Indigo			
Fundamental Activity	Ruby	Indigo	Winner
Making	2	6	
Selling	8	4	
TSC: Additive	10	10	Tie
TSC: Weakest Link	2	4	Indigo
TSC: Strongest Link	8	6	Ruby
TSC: Multiplicative	16	24	Indigo



**APPENDIX A:  
ALLOCATING RESOURCES TO ACTIVITIES**

Table A1 shows the relative priorities of Making and Selling for Ruby and Indigo, and gives a numerical calculation of resource allocations for four performance functions. These include two of the original four functions (Additive and Multiplicative) and two new functions that weight the capabilities by relative priority (Weighted Additive and Weighted Multiplicative).

– INSERT TABLE A1 ABOUT HERE –

To produce a numerical index for TSC that follows the original 0 to 10 scale, all functions are averaged.<sup>i</sup> Thus, the Additive function is the average of the two capabilities, and the Weighted Additive is the weighted average. Similarly, the Multiplicative function is the multiplicative average of the two capabilities (the “geometric mean”), and the Weighted Multiplicative is the weighted multiplicative average (the “weighted geometric mean”).<sup>ii</sup> Readers interested in the detailed calculations will find them in Table A1.

Turning to the resource allocation decision, Table A2 examines the alternatives for Ruby, comparing the results for a one-unit increase of Ruby’s capability in Making or Selling. Table A2 shows that if the performance function is Additive, it does not matter whether Ruby gains a one-unit capability in Making or Selling: the “New TSC” column shows that either will increase TSC to 5.50, an increase of 10%. If the performance function is Weighted Additive, Ruby prefers to gain a new unit of capability in Selling: this increases TSC from 6.20 to 6.90 (+11.3%), whereas a new unit of capability in Making increases TSC from 6.20 to 6.50 (+4.8%).

– INSERT TABLE A2 ABOUT HERE –

In either of the multiplicative functions, Ruby prefers to gain a new unit of capability in Making. Despite the fact that Ruby prioritizes Selling (priority = .7) over Making (priority = .3), and has more capability in Selling than Making, it should allocate resources to Making. In a multiplicative system, weak activities multiply through the performance system as a whole.

## NOTES

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<sup>i</sup> Averaging keeps the range of Total Strategic Capital within the 0 to 10 scale of the underlying capabilities. Thus, if the variables have values 6 and 8, the sum is 14, which is outside the 0 to 10 scale. Averaging the scores preserves the additive logic while making the scale more intuitive.

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<sup>ii</sup> Intuitively, an “additive mean” (or “arithmetic mean”) implies that the two variables are perfect substitutes for each other (to raise the mean, it does not matter which variable is increased); a “geometric mean” implies that the two variables are not perfect substitutes (increasing the lower value gives a different mean than increasing the higher value). Arithmetically, the “additive mean” adds the values and divides by the number of values, and the “geometric mean” multiplies the values and raises them to an exponent equal to  $1/(\text{the number of values})$ . If the two values are 8 and 2, the additive mean is  $(8+2)/2 = 5$ ; the geometric mean is  $(8 \times 2)^{1/2}$  (square root of 16) = 4.

**TABLE A1:  
COMPUTING TSC FOR RUBY AND INDIGO**

<b>Ruby: Capabilities and Priorities</b>		
<b>Fundamental Activity</b>	<b>Capability</b>	<b>Priority</b>
Making	2	0.30
Selling	8	0.70
<b>Performance Function</b>	<b>TSC Index</b>	<b>TSC Calculation</b>
Additive (Average)	5.00	$10 \div 2 = 5$
Weighted Additive (Weighted Average)	6.20	$2(.30) + 8(.70) = 6.20$
Multiplicative (Multiplicative Average)	4.00	$(2)^{.50} \times (8)^{.50} = 4.00$
Weighted Multiplicative (Weighted Multiplicative Average)	5.28	$(2)^{.30} \times (8)^{.70} = 5.28$

<b>Indigo: Capabilities and Priorities</b>		
<b>Fundamental Activity</b>	<b>Capability</b>	<b>Priority</b>
Making	6	0.20
Selling	4	0.80
<b>Performance Function</b>	<b>TSC Index</b>	<b>TSC Calculation</b>
Additive (Average)	5.00	$10 \div 2 = 5$
Weighted Additive (Weighted Average)	4.40	$6(.20) + 4(.80) = 4.40$
Multiplicative (Multiplicative Average)	4.90	$(6)^{.50} \times (4)^{.50} = 4.90$
Weighted Multiplicative (Weighted Multiplicative Average)	4.33	$(6)^{.20} \times (4)^{.80} = 4.33$

<b>Definitions of TSC Calculations</b>	
Additive (Average)	Average of the two Capabilities
Weighted Additive (Weighted Average)	Weighted average of the two Capabilities
Multiplicative (Multiplicative Average)	Product of the two Capabilities, equally weighted by exponents ("geometric mean")
Weighted Multiplicative (Weighted Multiplicative Average)	Product of the two Capabilities, exponents weighted by priority ("weighted geometric mean")



**TABLE A2:  
RESOURCE ALLOCATIONS FOR RUBY**

Total Strategic Capital (TSC) Adding One Unit of Capability in MAKING							
Performance Function	Making	Selling	Old TSC	New TSC	TSC Calculation	TSC Change	% Change
Additive	3	8	5.00	5.50	$(3 + 8) \div 2 = 5.50$	+ .50	10.0%
Weighted Additive	3	8	6.20	6.50	$3(.30) + 8(.70) = 6.50$	+ .30	4.8%
Multiplicative	3	8	4.00	4.90	$(3)^{.50} \times (8)^{.50} = 4.90$	+ .90	22.5%
Weighted Multiplicative	3	8	5.28	5.96	$(3)^{.30} \times (8)^{.70} = 5.96$	+ .68	12.9%

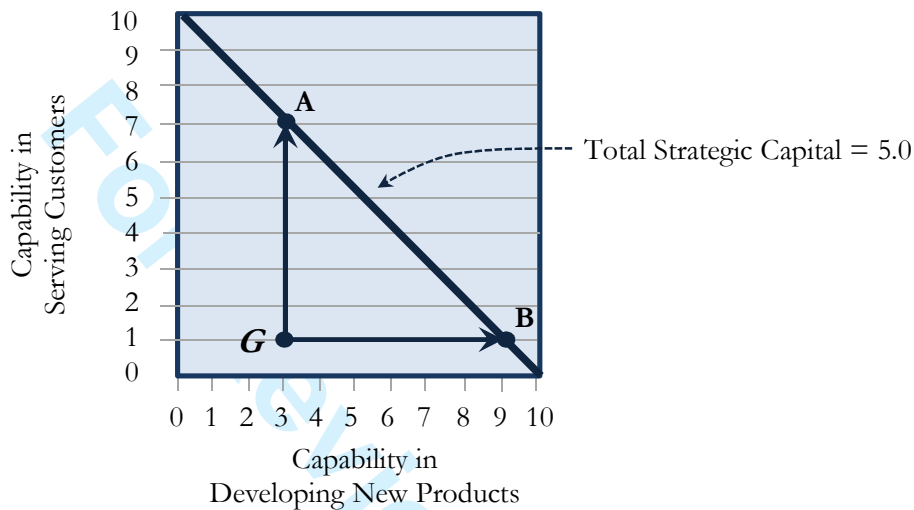
Total Strategic Capital (TSC) Adding One Unit of Capability in SELLING							
Performance Function	Making	Selling	Old TSC	New TSC	TSC Calculation	TSC Change	% Change
Additive	2	9	5.00	5.50	$(2 + 9) \div 2 = 5.50$	+ .50	10.0%
Weighted Additive	2	9	6.20	6.90	$2(.30) + 9(.70) = 6.90$	+ .70	11.3%
Multiplicative	2	9	4.00	4.24	$(2)^{.50} \times (9)^{.50} = 4.24$	+ .24	6.0%
Weighted Multiplicative	2	9	5.28	5.73	$(2)^{.30} \times (9)^{.70} = 5.73$	+ .45	8.5%

Definitions of TSC Calculations	
Additive (Average)	Average of the two Capabilities
Weighted Additive (Weighted Average)	Weighted average of the two Capabilities
Multiplicative (Multiplicative Average)	Product of the two Capabilities, equally weighted by exponents ("geometric mean")
Weighted Multiplicative (Weighted Multiplicative Average)	Product of the two Capabilities, exponents weighted by priority ("weighted geometric mean")

### SIDEBAR: ADDITIVE AND MULTIPLICATIVE PERFORMANCE

Managers should understand the difference between resource allocation in Additive and Multiplicative systems. An Additive function is illustrated below. Goldenrod Company has two activities – Developing New Products and Serving Customers – and managers have assigned them equal priority. The company’s starting capabilities are shown at point G (3,1).

If the company could gain six new units of capability, any point between A and B would be achievable. How should it apportion these units between Developing New Products and Serving Customers? In an Additive function, it does not matter: Goldenrod will achieve 10 total units of capability (TSC = 5.0) for any allocation on line segment AB.



A Multiplicative function is shown in the curve below. How should Goldenrod Company apportion six new units of capability? As before, any point on line segment AB is achievable. However, only one allocation – the allocation that takes them to point C – allows Goldenrod to achieve TSC = 5. Any other allocation places the company on a lower TSC curve.

To reach point C, Goldenrod must allocate two units to Developing new Products and four units to Serving Customers; then its capabilities in the two activities will be (5,5) and total strategic capital will be 5.

Resource allocations depend on the priorities of activities and the company’s existing capabilities. Goldenrod’s activities had equal priority, but its capabilities (3,1) were unequal. TSC could only be maximized by allocating more resources to the weaker capability.

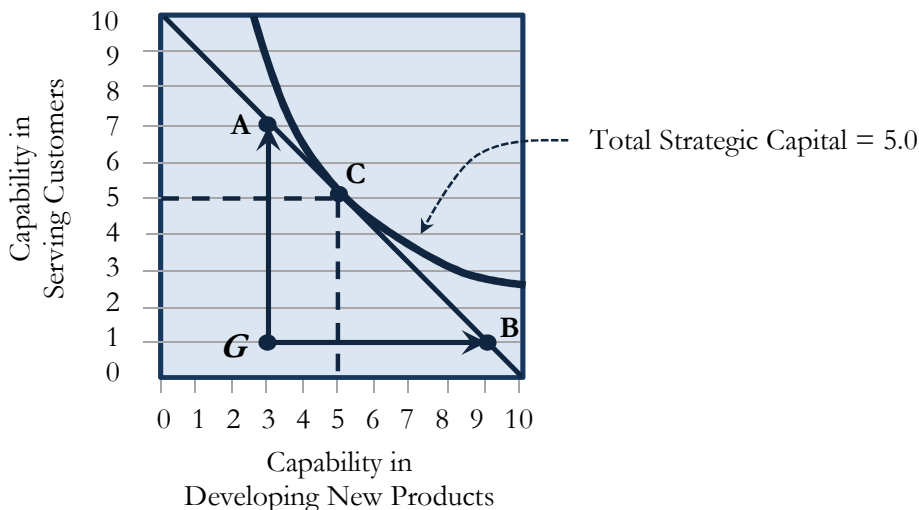
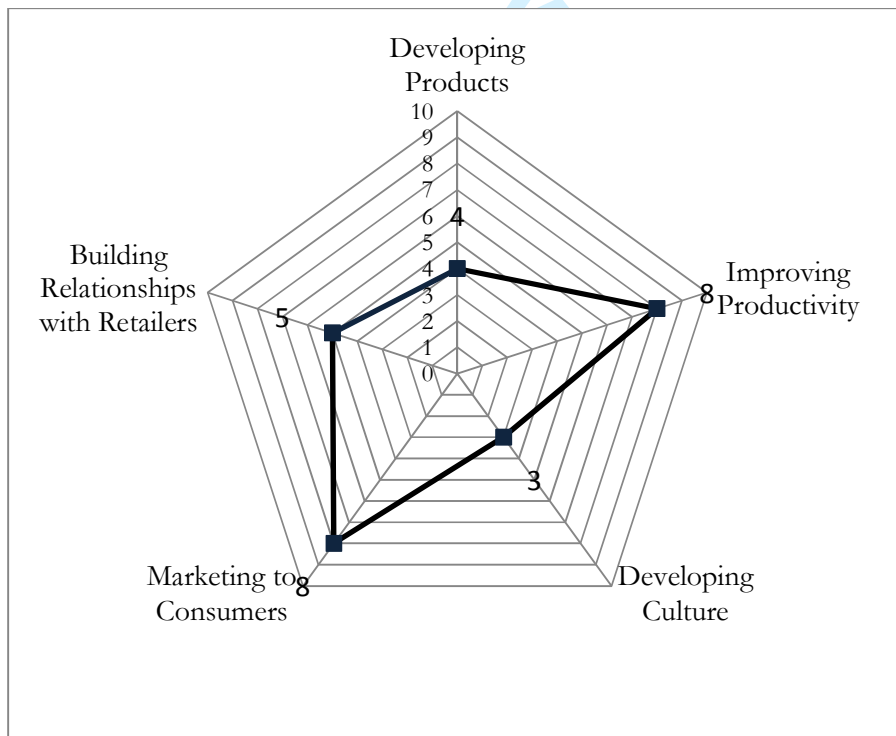
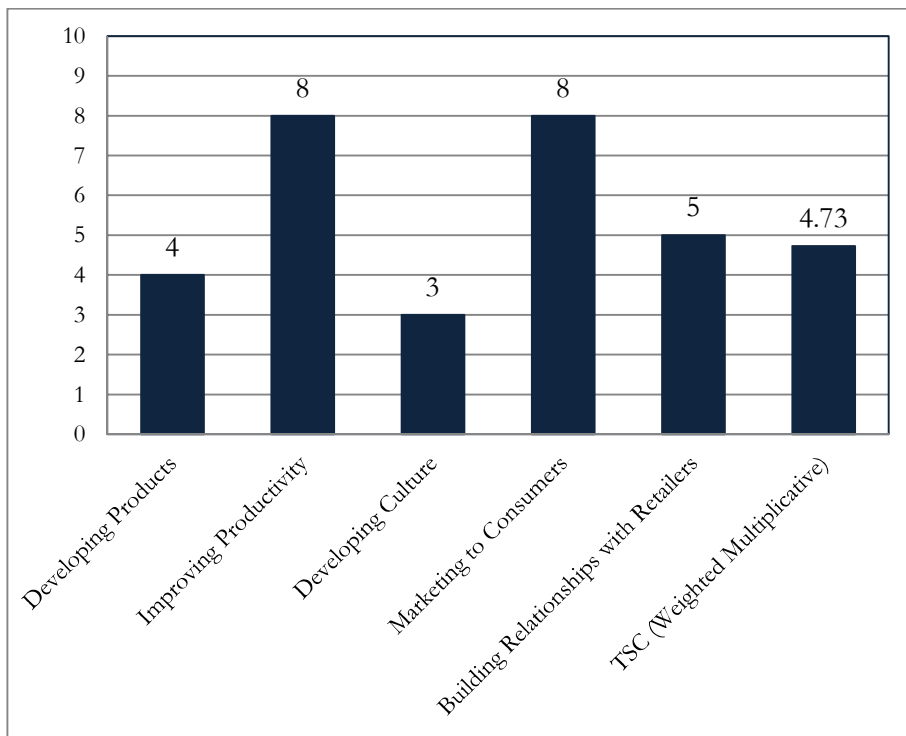
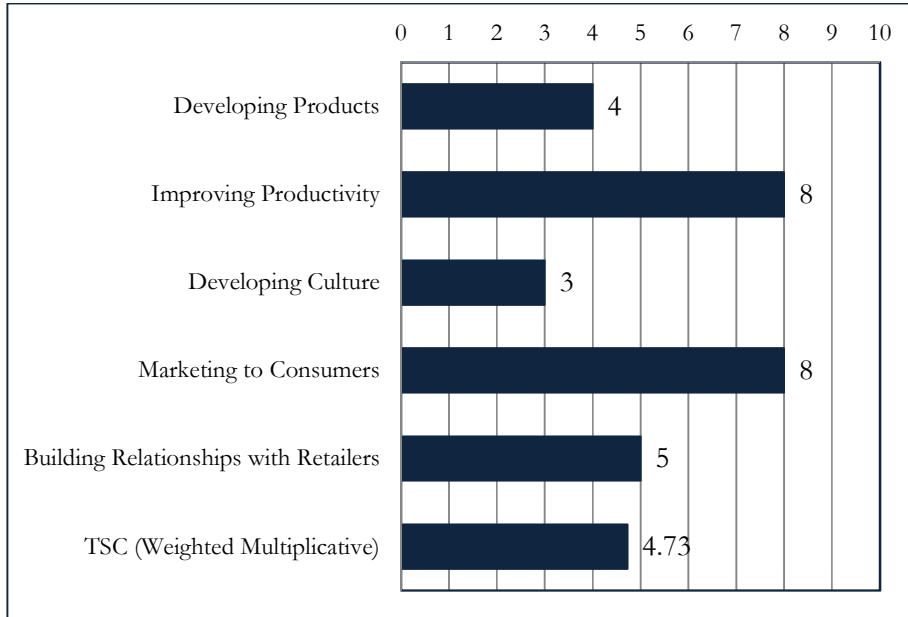


FIGURE 2:  
CHARTING DILIGENCE-BASED STRATEGY



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Capabilities and Priorities		
Fundamental Activity	Capability	Priority
Developing Products	4	0.20
Improving Productivity	8	0.15
Developing Culture	3	0.25
Marketing to Consumers	8	0.10
Building Relationships with Retailers	5	0.30
<b>Sum</b>	<b>28</b>	<b>1.00</b>

TABLE 1:  
ALLOCATING RESOURCES TO ACTIVITIES

Relative Capabilities and Priorities				
Fundamental Activity	Capability	Relative Capability	Relative Priority	Capability < Priority?
Developing Products	4	0.14	0.20	✓
Improving Productivity	8	0.29	0.15	
Developing Culture	3	0.11	0.25	✓
Marketing to Consumers	8	0.29	0.10	
Building Relationships with Retailers	5	0.18	0.30	✓
<b>Sum</b>	<b>28</b>	<b>1.00</b>	<b>1.00</b>	