Hitotsubashi University
Institute of Innovation Research

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IIR Working Paper WP#03-18

August 2003

Institute of Innovation Research
Hitotsubashi University

Tokyo, Japan
http://www.iir.hit-u.ac.jp

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August 30, 2003

ESCAPING THE RED QUEEN EFFECT IN COMPETITIVE STRATEGY - How managers can change industry rules by *sense-testing* their business models

By Sven Völpel, Marius Leibold, Eden Tekie and Georg von Krogh[1]

How can smart managers change industry rules and thereby escape the straitjacket of solely improving efficiency and facing direct competition? By applying a sense-testing tool in business model thinking and its reinvention.

Rationale of the Article

Most business models are based on traditional ways of strategy formulation and implementation, leading to incremental and not disruptive change in the nature of business and industry practices. The 'red queen effect' refers to the red queen's advice in Lewis Carroll's *Through the Looking Glass* in which she says that to stay in (competitive) place you have to run very, very hard and to get anywhere you have to run even harder. In today's knowledge and mobile environments we know that businesses cannot survive by just running harder, but especially by running different and 'smarter' than competitors. The article suggests a sense-testing tool for managers to enable disruptive innovation of business models, through corporate examples and case study evidence.

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1. Introduction

Despite increasingly fierce competitive landscapes, most managers assume that cost-cutting and other forms of improving efficiency will help them to counter direct competitiveness challenges. Thus, their first reaction to discontinuous competition is to "work harder", when what they need to do is "work differently". Several observers have commented that even though many companies work harder to improve themselves in increasingly competitive environments, results improve slowly or not at all.[i] This is a characteristic situation described as the "Red Queen effect".[ii] It is a "comfort trap" where "running harder" is easier to do, it is of an analytic-benchmark nature, it shows short-term success and is less risky in the near horizon, but ultimately holds long-term downfall.

Soon after 1995, Encyclopaedia Britannica, once regarded as the world's most comprehensive and authoritative encyclopaedia with the most aggressive and successful direct sales forces, was swiftly relegated to being sold at less than half of its book value. All this despite focusing on traditional key success factors, established core competencies, and working harder and harder, as if in response to competition from a traditional counterpart, rather than working different by responding to competition from a new rival – the CD-ROM. In less than five years, one of the greatest brand names in the English-speaking world, with a heritage of more than 200 years, was nearly destroyed by an inexpensive, plastic disk.[iii]

In contrast, despite scepticism about the sustainable competitive advantage of the espresso-bar concept, Starbucks, in only 11 years, enjoyed phenomenal growth and became one of the great retailing success stories of recent history by making exceptional coffee drinks, selling dark-roasted aromatic coffee beans, and trendy coffee-making equipment. The Starbucks brand is now regarded as one of the best known and strongest brand names in America, and the company has firmly established itself as the dominant retailer, roaster, and brand leader of speciality coffee in North America.[iv]

Why did Encyclopaedia Britannica fail while Starbucks succeeded? Our research over more than nine years has revealed the underlying principles. In hard times, most companies fail because managers and executives focus on only squeezing out efficiencies and working harder while our research revealed that, especially in a discontinuous (fast-changing, disruptive) environment, managers ensure survival or even prosperity if they work different with their business model. But how can they accomplish this? Companies need to *change industry rules* (the accepted way of doing business in the industry) by fundamentally questioning industry orthodoxy of conforming to useful but outdated traditional practices, lessons and experience.

The Red Queen effect is a situation where a company facing competition is more likely to improve its current practices in order to adapt to the changing competitive environment. However, in the current era of discontinuous change, solely achieving this will lead to poor performance while rivals that offer new customer value propositions by continuously changing their business models, thereby bucking industry rules, keep one step ahead of the competition.

This article describes the charms and traps of the “Red Queen” in the conventional way of analysing business strategy, and contrasts it with business model thinking and strategy reinvention. Finally, this paper provides a practical *sense-testing* tool for developing, evaluating, and adapting new business models.

2. Why Traditional Ways of Analyzing and Deciding on Business Strategy Lead mainly to Incremental Change and “Comfort Traps”

The conventional process of environmental analysis, generating strategy options, formulating and implementing strategy, and gearing for contingencies, encourages businesses to adjust to the future they anticipate rather than proactively reshaping and building the future they aspire. In such a way, formal planning hinders organizational changes by promoting strategies that are repetitions of the past or copied from others in the industry. This is an illustration of strategies converging and clustering around a certain “industry orthodoxy”, or generally accepted industry norms for doing business.[v]

Relative Stable Industry Conditions of the Past Era's

Traditional approaches are useful for generating strategies for businesses experiencing low levels of uncertainty. But such environmental stability of the industrial era has been replaced by major discontinuities that have essentially altered many existing industry structures, resulting in radically shortened life cycles of products/services and strategies. As a result, conforming to defined internal and industry boundaries may cause a company to ignore opportunities and threats arising in an interconnected, knowledge-intensive competitive environment.

Overall, traditional approaches to strategy-making are inconsistent and inappropriate with the discontinuities that have taken place - and are taking place - in the business environment. These approaches discount the voice of the people in the company who deal with the daily business, and restrain the organization's speed, flexibility and responsiveness due to focus on analysing a static present situation and predicting the future. Conventional approaches to strategic management might be suitable and adequate during stable industry conditions, but such constant and continuous state of the environment is exceptional in the present time where survival and sustainable competitive advantage comes from thinking radically and by changing the rules of the organization and/or industry.

The Impact of Greater Discontinuities

The new era of the knowledge economy and mobile society has resulted in industry structures that are fundamentally different from traditional ones and challenge the competitive advantages that depended on such structures. [vi] Analytic approaches, therefore, should complement the proactive and creative standpoint needed to overcome the competitive pressures arising from the radical changes taking place in the business environment. Employing industry systemic review as an ongoing process and integral part of "revolutionary thinking" can enable organizations to create innovative and successful disruptive strategies.

It is important to note that companies should not have a focus on singular strategies, as the traditional approach has been fond to do. As already mentioned, it is difficult to predict the business landscape because of the diversity and complexity in the increasingly turbulent environment. Consequently, managers should continuously exploit new opportunities through innovation and experimentation, seeing that the environment and competitors' strategies constantly change. Having a set of multiple and diverse "robust adaptive" strategies will provide companies to have the flexibility they need to choose from a variety of options destined to keep them one step ahead of the competition.[vii]

The Need for Holistic Thinking in Today's World

Successful businesses are those that evolve rapidly and effectively. Yet innovative businesses have to attract resources, bringing in together capital, partners, suppliers, and customers to create cooperative networks. Accordingly, a company should not be viewed as a member of a single industry but as part of a "business ecosystem" that operates across a variety of industries. This implies that in a business ecosystem, companies work both cooperatively and competitively to generate new products, satisfy customer needs, and incorporate future innovations.[viii]

The competitive landscape is constantly shifting as a result of competitive or collaborative moves. The shape and movement of this landscape therefore depends on the actions of an organization and those of the other organizations with which it interacts. This implies that single moves can be ineffectual without proactive participation of those other organizations in a company's business system. This is when co-evolution, in the broader context of industry ecosystem activities, takes place. Business organizations co-evolve competitively and collaboratively by adapting to and co-shaping their environments, either by reacting to new business models or by proactively creating them.[ix]

3. The Attractiveness and Comfort Trap of the Red Queen Effect in Formulating Business Strategy

A company facing competition is likely to initiate a search for ways to improve its performance. Often, this search results in learning that is likely to increase the company's competitive strength, which in turn prompts learning in its rivals – consequently making rivals stronger competitors and thus again triggering learning (search for improvements) in the first company. In this way, organizations learn over time as a response to competition, which in turn intensifies competition in a self-reinforcing process.[x]

The "Red Queen" effect could have positive and negative impacts, or consequences.[xi] Through an incremental but constant and self-reinforcing process, a company gains long-term advantages, especially of strategic capabilities and enhanced performance, and increases its resilience in the face of direct competition and gain more in competitive experience. However, organizations could face two major constraints because of the "Red Queen" practice. Firstly, organizations are constrained by their history, i.e. lessons learned in the past. Organizations tend to respond to new developments using norms that were learned under previous and different environmental condition, hindering their performance by doing precisely what worked well under different circumstances. The second constraint is when organizations are facing a group of rivals that do not share the organization's co-evolutionary history – history adapted from competition with others. This prevents some forms of adaptation to its new rivals. Similarly, trying to adapt to new (indirect) rivals may require major alterations in responses to its earlier (direct) rivals.

Another important point is that after the emergence of a fundamental innovation, people/organizations experiment with radical modifications to find ways to improve it. As better methods or ways are found, it becomes increasingly harder to make further improvements, so variations become more modest. Consequently, growth in that sector slows down and markets become saturated.[xii]

Therefore, "Red Queen" thinking and practices can be detrimental under conditions such as: new rivals entering a market (thereby increasing the variance in an organization's competitive experience); limitations in improvement/modification (the rate of finding improvements considerably slows as “peaks” of fitness are attained); and intense head-to-head competition (rivals have likewise adapted and become stronger competitors).

The Red Queen Effect as a Comfort Trap

In spite of discontinuity in the business environment, many companies (especially established ones) find it difficult to let go of industry orthodoxy, i.e. discarding conventional beliefs and established ways of doing business. In such situations, companies find themselves trapped in a “catch-22” of solely improving themselves rather changing the “rules of the game”. While established (incumbent) companies struggle with improving efficiencies, (mainly) upstarts and new entrants to an industry capture their bulk of the customer base and niche of the existing (or new) market.

A classic example of a company wedged in such a trap was Encyclopaedia Britannica. From being regarded as the world’s most comprehensive and authoritative encyclopaedia in the early 1990’s, with the industry’s most efficient and successful direct sales force, it was swiftly relegated to being sold at less than half of its book value. And all this due to not competition from a traditional counterpart but a new rival – the CD-ROM.[xiii] Another example is the MP3 phenomenon that has changed the record industry. As a freely available technical standard for the compression and transmission of digital audio, it was suddenly possible to download entire collection of pirated music and albums through the Internet. This cost the music industry in billion of dollars, and no matter how the recording industry scrambled to be in control again, the rules of the game had already been irrevocably changed.[xiv] Sears, Roebuck & Co., once one of the world’s largest organizations and America’s leading retailer, is another instance of a company unable to respond early to the threats posed by discount department stores such as Wal-Mart, K-Mart, and Toys-R-Us. Sears was in the catalogue business (thereby extensively ignoring online business for a long time) and had drifted to a condition of denial and complacency reactions of “too small to worry about” or “not a problem in my region”. It was too little too late by the time Sears included Wal-Mart and others among its competitor benchmarks.[xv]

The above examples demonstrate situations where established companies failed to properly respond not only to technological changes, but also to competitors and customers that at the time seemed apparently irrelevant to their respective businesses. It is not easy for companies to pre-emptively "cannibalize" or destroy still profitable business and cut off long-term relationships with their suppliers and customers -- Christensen's well known "innovator's dilemma".[xvi] Nevertheless, it is a dilemma organizations must address for their continued sustainability and long-term performance.

Hence, for companies locked in a "Red Queen" race, involving a head-to-head competitive pack, sustainable competitive advantage comes to those who move beyond improving efficiencies/performance to radically changing their business models to stay ahead. Critical questions that arise are: How exactly do companies and smart managers successfully change industry rules? Does it always make sense for a company to break the rules or are there other choices? How does one handle the tension between existing and new business models, and their divergent company requirements? Charitou and Markides [xvii] indicate that if established companies are to respond by embracing competitors' radical strategies, they run the risk of jeopardizing their existing business and strategies. Some companies respond by focusing on their existing businesses, others by adopting the new strategy while holding on to their existing ones. Again there are some that ignore the innovation or new strategy, whereas others completely embrace the innovation. These authors point out that every organization needs to resolve its own specific response depending on the unique circumstances confronting it.

While the one purpose of this article is to highlight the negative impact of the "Red Queen" effect in a highly uncertain and disruptive environment, the next sections provide guidelines in changing industry rules for numerous companies and managers (including leading and established organizations) that find it difficult to consider a different or even "radical" way of doing business. The box below indicates key questions to provide a basis for starting to consider how to escape the "Red Queen" effect.

Does your strategy change industry rules?

1. In your company, where do you just "work harder" where you should "work differently"? Are there strategies that focus solely on improving processes and systems while results show little difference or none at all (reaching a point of diminishing returns)?

2. Is your company committed to discovering new ideas and innovations? Does your company continuously strive to create new customer propositions (new products/services/customer experiences)? Is offering new customer value number one on your list in developing business models?

3. Does your company co-evolve collaboratively and competitively in creating (or responding) to radical strategies? Does it network and configure itself with other companies and individuals (including customers) in search for value creation? Does it react in time to what other firms, customers, etc. do, or even anticipate what they will do, by engaging and co-evolving with important members of the business ecosystem?

4. Does top management have a mechanism that enables/encourages members of your company to be creative and innovative? Does it listen to the "voice of the people" at all levels of the company? Are employees encouraged to speak up without worrying about reprisal from top management? Can they easily voice what changes are needed? Do all employees contribute to the process of making your company a "better company"?

5. Is there a diverse population of people of top executives and other members in your company – those with various past experiences and perspectives, newcomers, different age groups, etc? Does your company make sure it benefits from these different skills and knowledge?

6. Does your company have a diverse, but related, "robust adaptive" strategies? Does it continuously explore and exploit new opportunities and ideas that it keeps in its portfolio? Do the strategies evolve over time and with changes in the business environment?

7. Is the portfolio of strategies closely monitored and decisions made in good time regarding their feasibility (i.e. whether to commit to them or abandon them)? Do managers make sure they are not a drain on resources (e.g. human and financial)?

4. The Necessity of Expanding Strategy to Business Model Thinking

It is essential to grasp the dimensions, perspectives, and core issues of business models if one is to comprehend the creation of new business models and changing the rules of how business is done in the (traditional) industry. Having a comprehensive and cohesive understanding of a business model and its key elements can provide important sources of competitive advantage. Several authors have attempted to define the term business model, and its core dimensions.[xviii] Although different in perspectives and number of dimensions, it seems that some consensus of the nature of a business model and the systemic thinking under-girding it can be used for our purposes.

Nature of a Business Model

The term "business model" can be defined as:

> The particular business concept (or way of doing business) as reflected by the business's *core value proposition(s) for customers*; its *configurated value network* to provide that value, consisting of *own* strategic capabilities as well as *other* (e.g. outsourced/allianced) value networks; and its *leadership and governance enabling capabilities* to continually sustain and reinvent itself to satisfy the multiple objectives of its various stakeholders.

This definition proposes the basic generic elements in business models to be:

- new customer value proposition(s);
- a value network configuration for that value creation; and
- leadership capabilities that ensure the satisfaction of relevant stakeholders.

Creating and offering new customer value proposition is the basis from which viable and successful business models can be created. Being first to offer such value will give an organization "monopoly profits" by achieving high returns before competitors start imitating and catch up. Being a first (or early) mover in responding to environmental change can give a firm major competitive advantage by creating a critical mass.[xix] For example, FedEx attempted to offer a new customer value proposition by offering overnight delivery services. This strategy was feasible and succeeded to the point that industry incumbents were forced to adapt to the new industry structure and offer similar services.[xx]

"Systemic" Business Model Thinking

From a business ecosystem viewpoint, the strategy focus of an individual firm is to co-evolve with the other players in the business community and to build co-opted capabilities in the ecosystem. Such systemic thinking is the basis of a business ecosystem mindset, with an understanding of the phenomena within the context of a larger whole.

The co-evolutionary process of interdependently collaborating in co-shaping the business landscape has led to a shift to a new strategic management paradigm - "systemic strategic management". This is the co-shaping of organizational value propositions through systemic organizational capabilities.[xxi] Industry clusters, for example, illustrate groups of competing, collaborating and interdependent businesses working in linked industries and other important entities (although concentrated in a geographic region, such as Silicon Valley). Clusters attract innovation and investment; enable technology and knowledge transfer; and foster opportunities for start-up companies.[xxii]

5. Applying *Sense-Testing* to Your Business Model: a Tool to Dramatically Reinvent Your Business Model – and to Change Industry Rules

Andy Grove of Intel has used the term "strategic inflection point" to describe the point (timing, place, extent) of discontinuous change in industry structure, where businesses subtly but discontinuously shift from the old business model to the disruptive new business model, thereby fundamentally changing industry dynamics. [xxiii] In most situations, industry inflection points emerge initially too small to be discerned, but then overwhelm the industry in such a way that leaves it essentially altered (as evidenced by Encyclopaedia Britannica and MP3). This is mostly due to the inter-connectivity and networked nature of the "knowledge economy", and the emergence of critical mass over time. How well a business anticipates and recognizes such a transition, and how soon it adapts to the new rules, determines its future and sustainability.

In theory, it is easy to understand how the competitive landscape has changed and how crucial it is to constantly and radically renew one's business model. In actuality, however, it is challenging for established businesses to sever existing lucrative businesses, physical assets, customers and suppliers, and to "break the rules". How do managers go about in understanding and "sensing" new business models for strategy inflection? – we propose a *sense-testing* approach.

What is *Sense-Testing*?

Sense-making could be defined as the conceptual or constructed "mental frames" that are used as filters and references to interpret cues picked up from events and objects. For instance, identities are constructed in the process of sense making. But since the "world" is constantly in the process of reconstruction, identity construction is a continuous activity whereby individuals look for ways and targets with which to identify. Organizational sense-making has, therefore, come about as the result of the need to make sense of the complex and discontinuous changes in the environment, and the limitations of conventional strategies and managerial approaches to “doing business in the industry”.[xxiv]

A systemic sense-testing tool (see figure below) helps companies grasp the concept of adapting and creating business models for strategic inflection. This tool enables managers to discern if the rules of the game could be dramatically changed, and, if so, if they can become the ‘new industry’ leader in actually changing the “rules of the game”.

The four key dimensions described in the sense-testing tool affect the development of a potentially reinvented business model. These are: sensing reinvention of customer value propositions; sensing the impact and/or reinvented utilization of technology; sensing the reinvention of industry value chains and/or business system infrastructure, and sensing the sustainability of the potential reinvented business model.

- *Customer sensing*: Research indicates that the creation of dramatically new customer value propositions and/or sensing potential breakthrough change in customer behaviour are the initial driving forces behind sound new business models. Does the value proposition dramatically improve/satisfy customers’ needs and wants, or does it create new customer segments? And if it does so, is customers’ ease of transition/acceptance slow and difficult, or fast and swift?
- *Technology sensing*: This indicates the relative strength, direction and impact of technology on new customer value propositions and the business network. Is the available technology still efficient in communicating and delivering new customer value propositions? Or is it becoming obsolete, and perhaps even a new and better technology is being developed (e.g. the Internet replacing catalogue and mail order)? When a new business model is proposed, does the available or proposed technological infrastructure enable quick organizational reconfiguration? (see the next point about reconfiguration).

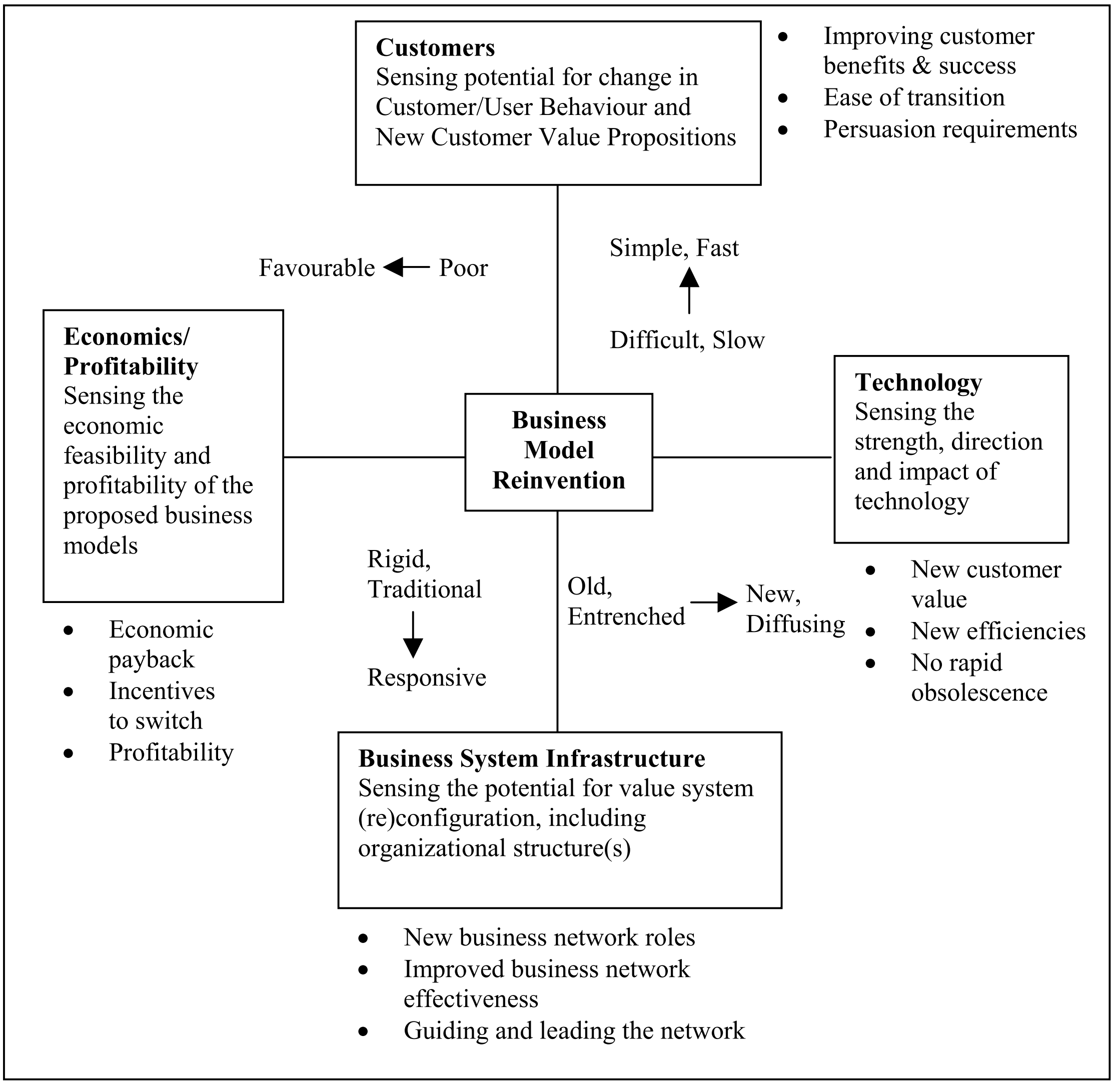

Figure: Sense-testing Key Elements of Business Models for Industry Inflection

- *Business infrastructure sensing*: The business environment is a "networked economy" consisting of various business systems, where a company co-evolves with selected organizations (suppliers, competitors, etc.) and individuals (customers, employees, etc.) in creating/responding to new business models. Is the company (internally) reconfigured and organized in such a way that enables it to offer new value propositions? Is the (external) value system configured with the necessary suppliers, customers, even competitors and other critical stakeholders? Simply put, this sense-testing refers to the relative responsiveness of the traditional business network to reconfiguration, or the options for reinvention of business systemic infrastructure (internal and external).

- *Economics/profitability sensing*: The proposed strategy/strategies should be evaluated as sustainable and relatively inimitable by competitors. They should be economically feasible if they are to sustain the company and support other strategies get under way. Economic payback is also needed to make it possible for the company to experiment with opportunities and innovation without shortage of funds. The proposed strategy may not be groundbreaking and a particularly lucrative undertaking, and every model may not turn out to be economically feasible in the end, and that is why it is important to have a diverse (robust) range of strategies to minimize the risk of unsustainable strategies.

Looking at the four sense-testing dimensions in conjunction, the higher the acceptance potential of the value proposition that appeals to a larger customer base, the higher the acceptance of new technological standards and business infrastructures, and the greater the sustainability and profitability of the new business model, then the greater the likelihood of the success of a new business model. These four elements can be used by managers in determining which business models from the pool of strategies are feasible and possess acceptable success probabilities.

There are numerous companies (mainly start-ups and new market entrants) that have redefined their businesses in a radical way and successfully "transcended" traditional industry competitors. These include: Dell Computer (structuring a "direct sales" value chain of build-to-order manufacturing), Amazon.com (creating virtual stores that offer millions of new, used and collectible items), Starbucks (America's speciality coffee retailer, see the box "Starbucks – Redefining Customer Experience" below), Cisco Systems (manufacturing and selling scalable, standards-based networking and communication products that cover a wide range of customers' networking needs), IKEA (a global leader in a wide range of modern home furnishings and accessories), Nokia (world leader in mobile communications – services including mobile telephony design to the manufacture and installation of broadband and multimedia network equipment).

Case: Starbucks – Redefining Customer Experience[xxv]

Starbucks has recreated the "Italian espresso-bar" experience. From a local company it grew into a national success by concentrating on creating customer value proposition around freshly brewed espressos, cappuccinos, lattes, and a wide selection of other fancy beverages. It also offers a variety of fresh pastries and other food items, sodas, juices, teas, and coffee-related products and equipment. Its ever-growing customer base includes young, tech-savvy customers to moms with strollers to people who were combining work and a coffee break. Its stores accommodated a stream of over 5 million customers per week by 1998. Loyal customers patronized a Starbucks store 15 to 20 times a month, spending up to $50 monthly. Some customers were Starbucks fanatics, coming in daily.

By 1997, Starbucks' success was prompting a number of ambitious rivals to scale up their expansion plans. Starbucks' closest competitor is Second Cup. Other small local and regional chains that aspired to grow into rivals of Starbucks include New World Coffee, Coffee People, Coffee Station, Java Centrale, and Caribou Coffee. In addition, numerous restaurants were picking up on the growing popularity of specialty coffees and started to serve a range of coffee drinks to their customers. The company also faced competition from nationwide coffee manufacturers such as Kraft General Foods, Procter & Gamble, and Nestle.

The company was constantly engaged in efforts to develop new ideas, new products, and new experiences for customers that belonged exclusively to Starbucks. Senior executives emphasized the importance of always being open to re-inventing the "Starbucks experience".

The company's efforts to greatly increase its sphere of strategic interest via its joint ventures, its move to sell coffee in supermarkets, and the possibility of marketing fruit-juice drinks and candy under the Starbucks label represented an ongoing drive to continually reinvent the way Starbucks did business.

In order to sustain the company's growth and make Starbucks a strong global brand, Senior executive Howard Schultz believed that the company had to challenge the status quo, be innovative, take risks, and alter its vision of who it was, what it did, and where it was headed. Under his guidance, management was posing a number of fundamental strategic questions: What could Starbucks do to make its stores an even more elegant "third place" that welcomed, rewarded, and surprised customers? What new products and new experiences could the company provide that would uniquely belong to or be associated with Starbucks? What could coffee be - besides being hot or liquid? How could Starbucks reach people who were not coffee drinkers? What strategic paths should Starbucks pursue to achieve its objective of becoming the most recognized and respected brand of coffee in the world?

Business model thinking, and application of the sense-testing tool in reinventing a business model, is aptly illustrated by how a major Australian wine company, BRL Hardy, reinvented its business model, thereby changing the rules of the global wine industry (see illustration box below).

Illustration: Applying the Sense-Testing Tool - How BRL Hardy reinvented its business model from a wine exporter to a global wine brand company[xxvi]

The Australian wine company BRL Hardy increased its 1991 international sales of US$31 million to US$178 million in 1998 when they realized the opportunity to build up a global wine brand, something previously unimagined in the highly-fragmented global wine industry. The Old World (European) wine industries of France, Spain, Italy, Germany and others are so fragmented in producers, cultivars and brands that it confuses consumers and retailers alike. A large supermarket store in Europe sells hundreds of different types and brands of wine made by a huge variety of producers, from the Old World and New World wine producers. The New World wine producers are from countries such as the USA, Australia, New Zealand, Chile and South Africa.

In most Old World wine countries, wines are labeled according to region, sub-region, and even village. In addition to that a vineyard in France can be further categorized according to its historical quality classifications such as the Premier Grand Cru, the (ordinary) Grand Cru, and so on. The world famous wine region Bordeaux alone has over 12,000 producers. Italy has over a million separated wine-growing units in private ownership. In Australia on the other hand, just four companies dominate 80% of the local wine industry, making for a more consolidated industry. It is this power of larger scale that allows New World wine producers to build up brand strength and distribution capability. The major wine importing countries are the United Kingdom and Western European countries such as Germany, Holland and Sweden, where the range of wine brands have proliferated five-fold in the past ten years.

In the early 1980's BRL Hardy found itself "trapped" in the shrinking market of the lower quality and price segment of the major wine importing markets, especially the UK. The business model was an "export company" model, built on significant quantities of low-margin wine products, with the large supermarket chains in the UK having the power to dictate wine styles, quantities, timing and prices. In world terms, BRL Hardy was a relatively small and entrepreneurial entity. Steve Millar, the managing director at the time, decided that the only way out would be to "change the rules of the game" and to come up with a new business model. He sensed that wine consumers were frustrated with the proliferation of wine brands and their lack of knowledge of relative wine qualities and service. He further sensed that there was no real global wine brand, while these were commonplace in soft drinks, beer and some high-alcohol spirits. He surmised that a global wine brand would make things easier for suppliers and customers, and could "free" him from the stifling power of large retailers.

A key issue was the eventual realization by BRL Hardy that the major knowledgeable wine customer need, or customer wine value proposition, was made up of three elements: well known global image; consistency of quality and availability; and “value-for-money”, including affordability and competitive pricing. Once it is was clear that something had to be dramatically changed, it was important to have the necessary prerequisites to engage in disruptive change. In 1991, for example, Christopher Carson, an experienced international wine marketer, was appointed managing director of the company’s UK operations. Over the next 18 months, he pruned three-quarters of the items in the fragmented product line, replaced half his management team, and began building a culture around globalism, creativity and innovation, and global value chain configuration and management. It was realized that dynamic new organizational capabilities were needed, and Hardy embarked on a targeted strategic alliance building with companies in Italy, Spain and the USA. These alliances added essential expertise, infrastructure and finance. Several mistakes were made in the process, but nothing survival-critical, and these eventually contributed to the learning experience and overall value-added of the new business model.

The company started to focus on integrated wine production, supplementing their Australian product line by sourcing and supplying wine from around the world. By breaking the tradition of selling only its own wine, Hardy was able to build the scale necessary for creating strong global brands and negotiating on equal basis with large retailers. The advantages of global sense making to Hardy have been clear and powerful: The company’s range of wines – from Australia as well as France, Italy and Chile – responds to supermarket companies’ need to deal with only a few broad line suppliers. Simultaneously, the scale of operations has supported the brand development so vital to transforming products from the commodity range.

A radical corporate strategy, as in the case of BRL Hardy, is to introduce new business models that challenge an industry’s established rules of competition, or ways of doing business. Results have been outstanding. In Europe, the volume of Hardy’s brands has increased 12-fold in seven years, making it the leading Australian wine brand in the huge UK market, and number two overall to Gallo in the United Kingdom. Hardy has evolved from an Australian wine exporter to a truly global wine company, utilizing global scope and scale economies and drawing on knowledge and skills from many parts of the world.

How did BRL Hardy escape the “Red Queen” trap of working harder and harder, but with little or no growth in product margins and profitability? In essence, utilizing the sense-testing tool described above:

- *Sensing* potential for change in customer need satisfaction, and *testing* for ease of acceptance, persuasion requirements, and particular combination of overall customer value propositions.
- *Sensing* the direction and impact of technology on wine styles, wine qualities, customer communications, wine value chains, packaging and marketing, and *testing* for new customer value, new efficiencies and new perceptions through expert use of relevant technologies.

- *Sensing* the potential for disruptive value system reconfiguration, which would eventually destroy its old business model, and *testing* for new business network partners and roles, and what leadership qualities would be needed for global wine business ecosystem leadership?
- *Sensing* the economic feasibility and profitability of the new business model, and *testing* for economic payback on investment, incentives for distributors, and overall ROI and long term shareholder growth (with various risk assumptions).

From the above illustration and case examples a number of key managerial lessons emerge, as discussed below.

6. Key Lessons for Managers in Applying the Sense-Testing Tool

Six key managerial lessons in applying the sense-testing tool for development of disruptive new business models emerge:

1. They often arise in entrepreneurial entities or ventures

It is a matter of fact that most disruptive innovations whether according to products, services, processes or business models have been made by small, young starting companies rather than by the larger incumbents. This is true for any industry if it is Dell (computer), Amazon (book retailing), BRL Hardy (wine) or, for example, Ryanair which has been turning the airline industry upside down since the late 1990's. It seems that the entrepreneurial thinking that is very often the strategic basis for doing business in those companies fosters unconventional, creative solutions in order to survive in the presence of the larger established competitors, or to enter a tough and saturated market with a significant advantage over incumbents. Larger incumbents mostly lack the kind of thinking and the flexibility to incorporate such an entrepreneurial flair, and need to launch entrepreneurial incubators and experimental ventures.

2. They disruptively change the way of doing business

Once a disruptive new way of doing business has proved to be successful it will force other competitors to rethink both their strategies and business models in order to keep up with the development of a more challenging environment. While Amazon has been a positive example in regards to customer satisfaction and offers, it can be imagined that the effects of Ryanair might put larger airlines under even greater pressure (e.g. in regard to prices and overall customer value propositions) in future than they already have. BRL Hardy has disruptively changed the boundaries of global collaboration and knowledge sharing in the wine industry, away from only country-specific competition, brand proliferation and retailer power. The "rules of doing business" in the industry have been reinvented, with a new basis for competition – besides the old business models.

3. **They are guided by visionary leadership**

The role of visionary, creative and strong - but not limiting leadership - cannot be emphasized enough. Whether we are talking about entrepreneurs like Bill Gates, or to stick with the example above, like Michael Dell and Steve Millar. In any phase of the organisational life cycle, the right enabling and guiding leadership is essential if the organisation would be able to achieve ambitious goals, especially to disruptively change the way of doing business.

4. **They posses an "open enterprise" mindset**

Original, creative and fresh ideas do not always come from within the single organization. Sometimes the radical "new-new" thing arises from external sources. Companies ready to be open to new influences from outside are those with the necessary mentality and courage to engage in necessary collaboration across borders, e.g. with customers, partners and even with traditional competitors.

5. **They are hard to imitate**

The question is what stops other computer manufactures to switch their business model to that of Dell's business model when it proves to be so successful? Why does the way of doing business of a disruptive model usually not become a model for the whole industry? In some cases this might happen, but more often the incumbent still stick to their old model and prefer only slight modifications. There might be several reasons for not doing so. Some are related to the entrepreneurial thinking and flexibility that those organizations might be lacking. But more often it is simply not possible to move out of the old structures even if they would like to because of existing contractual relationships and bargaining power of suppliers. Some industry players, e.g. retailers and even customers, might prevent a change in the business model and provoke retaliation if done against their will. On the other hand, the company might find it quite easy to distinguish themselves from the new competitor by their own way of doing things and benefit from the increased demand.

6. **Business model change opportunities appear only very seldom (sometimes only once during the "lifetime" of a organization)**

It is astonishing that most companies, whether small or big, young or old, seem to be able to do this "leap into the unfamiliar", the revolutionary way of doing business, just once in their existence or for a very limited number. There might be the danger that a former leader of innovation becomes a laggard and a victim of more innovative companies itself. On the other hand, this doesn't necessarily have to happen. The major lesson is to be able to perceive the business model change opportunity, and to be able to grasp it while it is still possible to do so. Continuous sense-testing of possible reinvention of an existing business model needs to be done.

7. Conclusion

Companies often respond to uncertainty by imitating other, usually competing, organizations. However, in an increasingly discontinuous environment, questioning the fundamental makeup of conventional mindsets is crucial for survival in the present, and especially to advance strongly in the future. For instance, had Sears, Roebuck & Co. fundamentally questioned their business model, they would possibly have succeeded in out-innovating their rivals such as Wal-Mart and Toys-R-Us. Best business practices and efficiency approaches and practices become vulnerable when the industry environment is ripe for dramatic reinvention, and companies should strive to be alert to take a possible lead in this, or at least be able to interpret such imminent changes for rapid adaptation and co-shaping of new customer value with other companies. Corporate survival in today's world depends on being ahead of the competitive pack in business model thinking and adaptation.

The “Red Queen” effect illustrates that companies could easily lapse into a dead-end street which brings them faster to failure if they just work harder or try to improve traditional industry key success factors. This need not be a terminal situation, however. Managers and executives can use numerous means to come up with creative and new strategic ideas by continuously challenging what their company is doing and why it is doing it. By doing so, they will be able to discover new ways of doing its business – reinventing its business models in timely, appropriate ways. Constantly searching for something new through experimentation with new ways of doing business, and reinventing old ways, will provide a wide range of options to choose from in dealing with the uncertainty of the environment.

Having a broad view of the business landscape and the company within, companies can co-evolve and co-shape customer value propositions that reinvent the company’s and industry’s rules. The sense-testing approach provided in this paper assists managers and executives in identifying, developing and evaluating the key dimensions of a future reinvented business model. This tool can help evaluate the chances of a proposed new business model making it or failing.

About our research

This study's conclusions are derived from two interrelated research streams. First, a seven-year quantitative and qualitative research study of more than 3000 interviews in collaborative studies and 64 expert interviews with leading authorities to, on the one hand, map patterns of the red queen effect and on the other hand purposeful managerial strategies to change industry rules. These studies include executives from firms such as Accenture, BCG, Cap Gemini Ernst & Young, DHL, McKinsey and Siemens, as well as scholars from institutions such as the Harvard Business School, Hitotsubashi University, IMD, MIT and the University of St. Gallen and a detailed case study of Siemens, one of the world's largest companies in terms of people.

Second, this study is grounded in our case research over the last nine years in large and small companies headquartered in North America (Accenture, Boston Consulting Group, Cap Gemini Ernst & Young, DHL, McKinsey), Europe (Bayer, BrainsToVentures, DaimlerChrysler, Infineon, Novartis, Roche, Siemens) and Asia (Motorola, NTT DoCoMo, Sony).

Case studies from a wide range of industries were used, including those from established organizations to new entrants into a market/industry, and from virtual, web-based companies to bricks-and-mortar and bricks-and-clicks ones. These comprise of IKEA, Old Mutual, Encyclopaedia Britannica, Dell, Wal-Mart, Amazon.com, e-Bay, Quicken, Microsoft, Xerox, Sony, Canon, Holcim, BP, GE, BRL Hardy, Kuoni Business Travel International, Unisys Switzerland, and Skandia Insurance.

Our focus was on strategy taking in today's rapidly changing, highly competitive business environment. The issue of the red queen effect and the need for companies to adapt their business model to change industry rules emerged from our research as the decisive factor on the edge of companies' success and failure.

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